

# 2017 Oncology Nursing Society Annual Congress: Podium Abstracts

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## Advanced Practice Podium Sessions

### 1

**A MULTI-DISCIPLINARY APPROACH TO THE COORDINATION OF CARE FOR ONCOLOGY PATIENTS UNDERGOING PERCUTANEOUS ENDOSCOPIC GASTROSTOMY TUBE PLACEMENT.** Stacy Stanifer, APRN, MSN, AOCNS®, Baptist Health Lexington, Lexington, KY; Betty Simms, RD, Baptist Health Lexington, Lexington, KY; Kathleen Stanley, RD, Baptist Health Lexington, Lexington, KY; Nancy Koepke, RN, Baptist Health Lexington, Lexington, KY; Amy Falke, RN, Baptist Health Lexington, Lexington, KY; Diane Keene, RN, Baptist Health Lexington, Lexington, KY

A multi-disciplinary approach to care coordination has been shown to reduce complications and improve patient outcomes for patients on long-term enteral feeding. Surgical placement of a percutaneous endoscopic gastrostomy (PEG) tube in oncology patients who are unable to maintain sufficient oral intake necessitates care coordination. While a multi-disciplinary approach has been recommended, there is little known about who should be a part of the team and how the process should be implemented. The purpose of this project was to identify multidisciplinary team members and develop process consistency and education for oncology patients who are receiving a PEG tube for supplemental nutrition. Led by a Certified Oncology Clinical Nurse Specialist (AOCNS), a multi-disciplinary team of nurses and dietitians from Endoscopy, Home Health/Home Infusion, Quality, Dietetics, Call Center, and Case Management, met monthly beginning in 10/2015, to identify key team members, develop patient education and a process that ensures patients receive appropriate care and education when PEG tube placement is indicated. Based on feedback from health professionals, patients and caregivers, modifications to the process have occurred in order to safely and effectively manage patients. Final patient education and process was disseminated to oncology and surgeon offices, pre-admission testing, endoscopy, call center, and home health/home infusion through short in-services led by oncology dietitian and CNS. Key players identified include the oncologist, oncology dietitian, surgeon, pre-admission testing RN, case management RN, home health/infusion RN, and call center RN. The process developed begins with pre-operative education in Pre-Admission testing; Case Management referral to Oncology Dietitian for nutritional evaluation and recommendations prior to surgery day; Case Management referral to Home Health/Home Infusion for provision of supplements, supplies and post-operative education prior to surgery day; and utilization of the Call Center 24 hours after discharge to ensure provision of supplies, reinforce care and maintenance of PEG tube, and to verify with patient who to contact should complications arise. A retrospective chart review from prior to education and process implementation will be compared to patient charts following implementation to evaluate care coordination and complications. A multidisciplinary team lead, by a Certified Oncology Clinical Nurse Specialist, is an effective way to implement improvements in the delivery of safe and effective care to oncology patients within a healthcare system.

### 2

**THE RELATIONSHIP BETWEEN ZINC AND QOL IN PATIENTS WITH UPPER GI CANCER ON CHEMOTHERAPY.** Edith Brucher, BSN, MSN, APN-BC, AOCNP®, Emory Winship Cancer Institute, Atlanta, GA; Tiffany Barrett, Emory Winship Cancer Institute, Atlanta, GA; Zhengjia Chen, PhD, Emory University, Atlanta, GA; Anqi Pan, Emory University, Atlanta, GA

The purpose of this study is to evaluate the prevalence of zinc deficiency and how zinc levels relate to the quality of life

(QOL) in patients with upper GI cancers receiving systemic chemotherapy. This is a study of gastric and pancreatobiliary cancer patients on their first 4 months of chemotherapy. The patients had routine labs (CBC, CMP), which include albumin, a zinc level, quality of life and symptom assessment surveys done at baseline (within 2 weeks of starting chemotherapy), at 2 months (+/- 2 weeks) and, at 4 months (+/- 2 weeks) into chemotherapy treatment. While there were no significant differences in prevalence of zinc deficiency among the 3 time points, there were significantly negatively associated corresponding changes in QOL as seen in: feeling of whether patient enjoys physical activities, how the patient usually feels, pleasure out of sex, way in which the patient approaches food. Other findings include the zinc level being significantly positively associated with: satisfaction of social contact at baseline only, the pleasure out of sex at baseline and 2 months, quality of life at baseline only. This is a pilot study aimed at evaluating the prevalence of zinc deficiency and how zinc levels effect the QOL in patients with upper GI cancers receiving systemic chemotherapy. The data collection was completed on 40 patients. Although the primary objective of a positive prevalence of zinc deficiency in gastric and pancreatobiliary cancer patients at diagnosis and after receiving chemotherapy is not statistically significant; a statistically significant association was found in relationship with QOL. There is a significantly positive association with: Satisfaction of social contact at baseline only, the pleasure out of sex at baseline and 2 months, quality of life at baseline only, troublesome sweating at baseline, from baseline to 2 months corresponding change in other skin problems. Conversely there is a significantly negatively associated corresponding changes in: feeling of whether patient enjoys physical activities, how the patient usually feels, pleasure out of sex, way in which the patient approaches food, quality of life (QOL), neutropenia grades at baseline only, rashes on face, and other skin problems.

### 3

**CANCER CONCERNS IN VETERANS: ARE YOU ASKING THE RIGHT QUESTIONS?** JoAnn Coleman, DNP, ACNP, AOCN®, GCN, Sinai Hospital, Baltimore, MD; Kamran Khan, MD, Sinai Hospital, Baltimore, MD

Throughout history, wartime toxin exposures have been implicated in the genesis of malignancy in veterans. Agent Orange and sulfur mustard gas are two toxins among many that have demonstrated this association. The Veterans Administration recognizes numerous malignancies to be associated with Agent Orange exposure: B-cell leukemia, Hodgkin's and non-Hodgkin's lymphoma, multiple myeloma, and soft tissue sarcomas. Advanced oncology practice nurses are very likely to encounter some of the 22 million veterans living today that may have been exposed to toxins during their military service. Each war time service period has differing characteristics affecting the health outcomes of veterans. During the Vietnam War, many soldiers were exposed to potential carcinogens, including Agent Orange. When these veterans returned home, they began to report numerous complaints that were often labeled as "stress induced". A similar scenario occurred when soldiers returned home from the Middle East during the Gulf War. Furthermore, whether soldiers during the most recent war in the Middle East were exposed to any toxins is undetermined and will be known with time. Ageing war veterans may not voluntarily provide information of previous wartime toxin exposures. Therefore, inquiring about these exposures is something advanced oncology practice nurses should be cognizant of when determining differential diagnosis. Advanced oncology practice nurses should conduct a careful history including the differing military eras and various effects of exposures the veteran may experience. Asking simple questions may uncover any wartime toxin exposures that could have numerous effects

on the health of veterans. Questions such as: “Have you ever served in the military and, if yes, have you been exposed to any toxins during your deployment”? Asking war veterans “what, how, where, and when” about exposure to toxins may uncover potential risk for malignancies. Advanced oncology nurses need to know the current information on military exposures, subtle signs and symptoms, as well as response or lack of response to standard treatments.

#### **4 THE ROLE OF THE NURSE PRACTITIONER IN THE MANAGEMENT OF THE ESOPHAGEAL CANCER PATIENT. Laura Pachella, RN, MSN, AGPCNP-BC, AOCNP®, MD Anderson Cancer Center, Houston, TX**

According to SEER data it is estimated that 16,980 new cases of esophageal cancer will be diagnosed in the United States in 2015, while 15,590 patients will die of the disease. Esophageal cancer causes a large amount of morbidity to patients through both the disease and the treatment. The optimal treatment for advanced esophageal cancer is a trimodality approach which includes chemotherapy, radiation, and surgical resection. Esophageal cancer is relatively rare in the United States, there are more members in ONS than there are expected new cases this year, however the incidence is rising. Oncology nurses and nurse practitioners will be called upon for their expertise and ability to safely guide patients through diagnosis, treatment, and survivorship. This presentation will evaluate the role of the nurse practitioner in recognizing the presentation of patients on diagnosis and supporting the patient through treatments. Nursing specific roles including the management of symptoms related to esophageal cancer and treatment, and long term survivorship issues will be highlighted. The nurse practitioner's role most acutely entails education to the patient on the side effects and expected outcomes related to treatment of esophageal cancer. Daily functioning may change in regard to diet, swallowing, bowel, and fatigue. Nutrition is a major issue as patients may have difficulty swallowing due to tumor or treatment effect. Surgical intervention with esophagectomy changes the anatomical and physiologic function of the esophagus. The appropriate education can prepare the patient for the recognition of symptoms and initiate interventions for mitigation and decreasing the severity of function. Reports on the most frequent adverse events and side effects related to esophageal cancer treatment from a large volume center will be presented. Patients often site quality of life as an important end goal in cancer treatment. It is widely published that patients with esophageal cancer who have their symptoms controlled report a better quality of life. Nurses who understand the full scope of side effects related to esophageal cancer and the quality of life data will be better able to manage these patients. Nurse practitioners will be able to diagnosis, treat the disease and symptom management of esophageal cancer.

#### **5 ONCOLOGY ACUTE CARE NURSE PRACTITIONERS: ONBOARDING EDUCATION FOR SUPPORT AND RETENTION. Gretchen Copeland, RN, Ed.D, OCN®, Mount Sinai Hospital, New York, NY; Denise O’Dea, ANP-BC, OCN®, Mount Sinai Hospital, New York, NY; Laura Butler, RN, MSN, OCN®, Mount Sinai Hospital, New York, NY**

Increasingly, oncology patient care is taking place in the ambulatory setting with a corresponding increase in acuity of inpatient care. Case mix index (CMI) reports show numbers similar to intensive care levels of care. These factors present clinicians and educators with unique challenges in onboarding and retaining inpatient nurse practitioners (NP’s). Knowledge and expertise are required in both cancer care and acute care

medicine, while support for professional growth is imperative for job satisfaction and retention. New NP’s especially those with no prior NP experience or no prior oncology experience require education and support to practice effectively with acutely ill oncology inpatients. Traditional orientation models featuring didactic instruction and clinical preceptors may be limited by increasingly finite education personnel and fiscal resources. The purpose is to provide support for new hire NP’s by experienced NP leadership using a variety of educational strategies. This project describes an alternate model for NP onboarding and orientation in a hematology/oncology inpatient setting of an NCI-designated comprehensive cancer center. The senior NP coordinated and implemented a six month orientation for four NP’s. While all had oncology staff nurse experience, only one had prior non-oncology NP experience. Adult learning theory and essential magnet components served as the structural framework for the NP orientation. Key elements of the orientation included: 1—Integrating didactic learning with supervised clinical using “Just in Time Teaching” 2—Peer learning: case presentations 3—Application of evidence based practice interventions, and 4—Retreat & Teambuilding Activities. Written participant program evaluations and group discussions were the primary program evaluation methods. Nursing leadership solicited feedback on NP clinical performance from patients, NP colleagues, physician colleagues, and nursing staff. Group work included patient case presentations, journal club discussion and drafting a case study manuscript for publication submission. This innovative orientation model for optimal onboarding of NP’s created a variety of high-quality learning and professional growth opportunities in the fast-paced area of inpatient oncology care. The program provides a promising way to support adult learning, NP skill development and professional integration in the care team ultimately promoting NP positions contributions to positive patient outcomes. Future recommendations include expansion of the model to additional NP services in the medical center, designing strategies to evaluate cost benefit outcomes and gathering job satisfaction and retention data over time.

#### **6 DEVELOPMENT OF THE INTAKE ONCOLOGY COORDINATOR PROGRAM. Christina Alsop, MSN, APRN, FNP-BC, AOCNP®, Renown Health, Reno, NV**

A patient seeks medical attention with their primary care provider (PCP) for a new symptom they have been experiencing. The PCP sees the patient and orders appropriate tests based on the patient’s symptoms. It may take 1-2 weeks for those tests to be completed. Based on the test results, if there is a concern for malignancy patient will then be scheduled for a biopsy, which may take another 2 weeks to be completed. At this time it has taken up to a month to obtain a diagnosis. If the diagnosis is positive for malignancy the patient will now be referred to a specialist, such as a medical oncologist, to begin treatment for their cancer diagnosis. Turn-around time to specialists may be 1-2 weeks, and patient will then need to complete staging work-up before the specialist is able to determine the treatment plan for their cancer. This example was quite frequent in our organization at Renown Health in Reno, Nevada, and quite frustrating. The Intake Oncology Coordinator (IOC) program was developed at Renown Health in attempt to rectify this problem within our organization by expediting work-up for suspicious findings for malignancy. The IOC is run by an advanced oncology certified nurse practitioner (AOCNP) with the assistance of a medical oncologist. At the time the PCP sees the patient and has an abnormal finding on labs or imaging, the patient will then be referred to the IOC program. Patients are seen in the IOC clinic within 1-3 days of the referral. IOC patients have been given priority within our organization in order to expedite work-up with either imaging or biopsy orders. Typical turn-around time



to diagnosis, benign or malignant, is within one week. If positive diagnosis for malignancy is obtained, the IOC then expedites the staging work-up while concurrently referring patients to the appropriate specialists. The development of the IOC program has provided patients within our organization a stream-lined, expedited workup to a cancer diagnosis, as well as staging and referrals to appropriate specialists. With the work and knowledge of the AOCNP the IOC program has flourished over the last 3 years. 357 patients have been seen, with approximately 50% of the patients diagnosed with cancer.

## **7 DECREASING VENOUS THROMBOEMBOLISM IN PATIENTS WITH HEMATOLOGIC MALIGNANCY THROUGH IMPLEMENTATION OF CLINICAL PRACTICE GUIDELINES: A QUALITY IMPROVEMENT PROJECT.** Karley Trautman, DNP, ANP-BC, University of Colorado, Aurora, CO; Chelsey Boggs, MS, AGANP-BC, University of Colorado, Aurora, CO

Venous thromboembolism (VTE) is a highly prevalent complication in patients with cancer with reported incidence rates ranging between 8-19%. Patients with VTE have at least a 2-fold increase in mortality compared to those without VTE, even after adjusting for staging. Because of this, there is a justifiable need to decrease the incidence of VTE by standardizing practice to align with the current evidence-based practice (EBP) guidelines while simultaneously not increasing bleeding risk in patients with thrombocytopenia. The aim was to decrease the rate of acute VTE and recurrent VTE in adults with hematologic malignancies by standardizing the risk assessment, use of prophylactic anticoagulation, and treatment duration of therapeutic anticoagulation without increasing bleeding risk in the inpatient and outpatient clinical settings at the University of Colorado Blood Cancers and Bone Marrow Transplant Program. The National Comprehensive Cancer Network (NCCN) VTE guidelines were used to develop a clinical practice guideline addressing standard VTE risk assessment, appropriate use of prophylactic anticoagulation, and standardized duration of therapeutic anticoagulation. Data was collected for 12 months prior to the implementation of the guideline and for 24 month post-implementation. As of the time of this writing, only 21 months of data has been collected without finalization of the statistics. Final data is still being collected completing 9/30/16. Final statistical analysis will be available by 12/1/16 and will be updated prior to presentation of the final project. All data is reflective up to 8/31/16. Overall VTE rates decreased from 13.4% to 12.8%, recurrence rate decreased from 42.2% to 40.0%, and bleeding risk improved from 18.6% to 6.8%. Percentage of inpatients receiving prophylactic anticoagulation increased from 12.9% to 40.3% and eligible outpatient myeloma patients receiving prophylaxis increased from 82.7% to 95%. Standardization and development of clinical practice guidelines improved VTE incidence and recurrence rates and improved overall adherence to EBP guidelines. Routine prophylactic anticoagulation did not increase bleeding risk in this patient population. EBP guidelines aid providers in making sound clinical decisions regarding the management of VTE in patients with hematologic malignancies. Quality improvement projects have a vital role in effective translation of EBP in practice.

## **8 A NURSE'S JOURNEY IN THE WORLD OF PRECISION MEDICINE.** Megan Hoffman, MSN, RN, CMSRN, AOCNS®, Moffitt Cancer Center, Tampa, FL

Pharmacogenomics is focused on understanding how genes affect individual responses to medications. At our NCI-Designated Comprehensive Cancer Center, an interdisciplinary group of team members have formed the Clinical Genomic Action Committee (CGAC). The purpose of this committee is to provide multidisciplinary assessment of complex clinical results and

diagnostics in order to promote and implement cancer genomics. A gap was identified in CGAC membership, as nursing was not represented. The purpose of this abstract is to describe the integration of the nurse's role in CGAC and future nursing roles in pharmacogenomics within our organization and globally. A master's prepared nurse was added to committee membership and contributes regularly. A patient list is distributed in advance, allowing the nurse to look at aspects of care and an opportunity to inform the medical approach. During meetings, patient cases are discussed and treatment options are proposed based on the results of the genetic testing. Prior to nursing involvement, decisions focused extensively on pathology and genetic expression. With the incorporation of nursing, the discussion has a more holistic approach. Additionally, the nurse has been involved in the creation of an educational video introducing patients to the value of genetic testing and its potential impact of their outcomes. Including the nursing perspective has resulted in several recommendations focused on the patient's functional status and its relation to depression, physical deterioration, and clinical trial eligibility. Recommendations have been made to consider the patient's basic needs and willingness to travel for clinical trials. This cancer center is at the forefront of implementing this revolutionary diagnostic testing. Although we have provided this service to thousands of patients, there is much work ahead. As this process and the population we serve grow, nursing will need to be at the frontline for information sharing with the patient. Nurses need to be prepared to discuss genetic testing, its value, and how it can be used to help guide treatment decisions. This knowledge can be applied in ways such as providing education about medications, including chemotherapy, and how these drugs can target their cancer specifically. In the future, emphasis needs to be placed on nursing education regarding pharmacogenomic testing and its translation to patient education.

## **9 OPTIMIZING ONCOLOGY PATIENT CARE THROUGH EFFECTIVE PHYSICIAN AND ADVANCED PRACTICE NURSE COLLABORATION IN AN OUTPATIENT ONCOLOGY SETTING.** Ronda Bowman, MHA, RN, OCN®, Oncology Hematology Care, Inc., Cincinnati, OH; Natasha Clinton, MSN, APRN, OCN®, Oncology Hematology Care, Inc., Cincinnati, OH

Optimizing collaborative practice between physician's and advanced practice nurses results in effective and efficient oncology patient care delivery. The significance and background are related to inconsistencies in the collaborative working relationships driven by individual physician preference versus data-drive, standardized care agreements. These inconsistencies can lead to higher cost of care, dissatisfied physician and advanced practice providers, and dissatisfied patients versus the opportunity for high-quality, cost-effective, and patient-centered collaborative practice. The purpose of this work is to demonstrate the impact and results of a standardized advanced practice nurse and physician collaborative relationship in an outpatient oncology setting. The standardized advanced practice nurse program's initial design and implementation occurred over the course of one year with intentional deliverables and expansion with measures of success through advanced practice nurse productivity, physician and advanced practice nurse satisfaction and patient satisfaction in their care. Interventions include enrollment, engagement, and buy-in of oncology physician department chiefs, standardize orientation and mentorship of advanced practice nurses, and practice operational guidelines that resulted in consistent utilization of advanced practice nurses for optimized effectiveness and efficiencies. The advanced practice nurse program for this outpatient oncology setting includes daily duties and schedule for on-treatment patient visits, same-day urgent visits, treatment

care planning visits, treatment summary and survivorship visits, procedures, hospital rounding, and oversight of the infusion suites. The advance practice nurse program includes multidisciplinary specialties of medical oncology, radiation oncology, gynecologic oncology, and bone marrow transplant services. The evaluation of the program includes data drive metrics that demonstrate and support a standardized advanced practice nurse collaborative relationship with physicians for effective and efficient outpatient oncology patient care. This outpatient oncology setting has demonstrated to be innovative in its practice and is positioned well for the upcoming value-based care from such programs as Oncology Medical Home and CMMI Oncology Care Model.

## **10 PATIENT INTERVIEWS AND STAFF FOCUS GROUPS IDENTIFY FACTORS THAT MAY CONTRIBUTE TO ONCOLOGY READMISSIONS.** Caroline Smithson, MSN, RN, AOCNP®, Duke Cancer Institute, Durham, NC; Sarah Wiegand, BSN, RN, OCN®, Duke University Health System, Durham, NC; Michelle Kasprzak, MSN, RN, OCN®, Duke University Health System, Durham, NC; Kim Slusser, MSN, RN, Emory Healthcare/Winship Cancer Institute, Atlanta, GA; Tracy Gosselin, PhD, RN, AOCN®, Duke University Health System, Durham, NC; Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Institute, Durham, NC

Hospital readmissions cause significant financial burden and strain on patients, families, and staff. Readmissions have been attributed to many factors including age, disease stage, and social support. However, literature is lacking on patient and healthcare team perceptions on factors that contribute to readmissions. The purpose is to identify factors that may contribute to readmissions for patients with solid tumors through patient structured interviews and staff focus groups. Twenty patients readmitted to a medical oncology unit for those with solid tumor diagnoses were interviewed. Two focus groups were held; 20 staff representing a multidisciplinary team participated. The nurse research team took field notes through the interviews and focus group sessions. All interviews and focus group sessions were recorded and transcribed for coding. Qualitative coding using comparative analysis was performed. The research team reviewed the transcripts and themes for agreement. Patients reported that their readmission chief complaint was the same as their prior admissions 85% of the time. The most common symptoms for admission were pain, nausea/vomiting, shortness-of-breath, electrolyte abnormalities, and infection (non-neutropenic fever). Themes for both patient interviews and staff focus groups were similar and involved communications regarding symptom management, lack of preparation for home care by patient and/or family, and having unrealistic expectations of needs at home. Staff felt they responded to changes in discharge plans too late in the hospitalization encounter, thus having referrals completed earlier may positively impact discharge readiness. While most patients felt their symptoms were not fully resolved by time of discharge, they did not voice concerns. Patients also reported difficulty managing medications and procedures at home despite discharge instructions. Patients felt that receiving a discharge follow-up phone call from nurses on the unit would be beneficial by reinforcing discharge instructions and discussing symptom management issues. Common themes presented from patients who had been readmitted within 30 days and the staff who provide care to these patients on this medical oncology unit. This has resulted multidisciplinary team discussions to improve consultation/referrals earlier and provide follow-up discharge calls. In addition, more emphasis is placed on patient/family participation in symptom management

patient education classes offered by staff. It is expected that these initiatives will reduce symptom management complication and readmissions, improve patient/family satisfaction, as well as staff satisfaction.

## **11 OPTIMIZING CHEMOTHERAPY ADMINISTRATION SAFETY: INTRA-PROFESSIONAL COLLABORATION OF ADVANCE PRACTICE NURSES.** Stephanie Jackson, MSN, AOCNS®, BMTCN®, Ronald Reagan UCLA, Los Angeles, CA; Joecelyn Densing, MSN, RN, UCLA Health, Los Angeles, CA; Lauren Fujihara, MN, RN, CNOR, CNS, UCLA Health, Los Angeles, CA

With continuous advancements in science, technology and medicine, our surgical patients are offered increasingly complex treatment options. This resulted in a need to standardize practices related to chemotherapy administration across multiple surgical specialty services. A collaborative group of advance practice nurses (Perioperative and Oncology Clinical Nurse Specialists and Oncology Resource Nurse) applied principles of LEAN methodology within a multidisciplinary team to create an evidence-based standard of practice to ensure optimal patient outcomes and a safe practice environment. This team of subject matter experts performed a needs assessment of this unique patient population, reviewed current practices, recognized opportunities for improvement, and developed a comprehensive plan to implement evidence-based changes. The advance practice nurses met with the perioperative specialty service line nurses to identify practices of chemotherapy administration and safe handling. It was recognized that different levels of knowledge produced variations in practice. To address the gap in knowledge, the educational plan consisted of two, 60-minute in-services to all perioperative nurses and surgical technologists by the oncology advance practice nurses. In addition, an intraoperative chemotherapy competency was incorporated into the annual skills lab. The competency included chemotherapy administration and safe handling processes based on the Oncology Nursing Society (ONS) and National Institute of Occupational Safety and Health (NIOSH) standards using teach back methodology. As the staff identified areas in need of further clarification, ancillary services were consulted to provide accurate information. Standardized processes and practices were instituted by the advance practice nurses by revising the policy and procedure; which addressed case scheduling, ordering of intraoperative chemotherapy, documentation and safe handling (preparation, administration, disposal and exposure/spill management). In addition, the perioperative specialty service line nurses incorporated the standardized processes into the service-specific doctors' preference cards. The oncology nursing practice implications have been increased knowledge and confidence of perioperative staff, promotion of value through reducing redundancy in efforts and workflows, and enhancement of patient safety across the continuum of care in the operating room. Through re-evaluation of the standard of practice and clinical staff feedback, we were able to evaluate compliance, sustainability; and furthermore identify opportunities for additional innovative processes related to chemotherapy safety in the operating room.

## **12 THE PROCESS OF ONCOLOGY NURSE PRACTITIONER PATIENT NAVIGATION: A GROUNDED THEORY APPROACH—CARVING THE ROLE.** Frances Johnson, PhD, Texas Woman's University, Houston, TX

Nurse practitioner (NP) navigation, in general, has been shown to achieve cost effective quality care, while saving millions of dollars. Research, though scant, has shown that oncology nurse practitioner navigators improve clinical outcomes. For purposes

of this dissertation, oncology NP navigators are nurse practitioners with a certification in oncology who utilize navigation processes to care for cancer patients along any aspect of the cancer care continuum. Navigation process is defined as “a series of actions or steps taken in order to achieve a particular end”. To date there are no standard measures of the process of oncology patient navigation or related clinical outcomes. Development of process and outcome measures is critically important in that the development of these measures is necessary for navigator program evaluation. The purpose of the study is to answer the question: What processes do oncology NP navigators use in caring for cancer patients? These findings are a section of my PH.D dissertation findings. Twenty oncology nurse practitioner navigators were interviewed through the use of a semi-structured script utilizing grounded theory methodology. Open Sampling, constant comparison, open coding, axial and selective coding were used through the use of NVivo software for qualitative analysis. The principles of credibility, transferability, dependability, and confirmability were used to determine the trustworthiness of the research. The goal of the process overall was guiding the patient through the system to survivorship care. The navigator program involved unique navigation processes, including novel approaches to patient care and program development. This included alliances with unique partnerships within the systems. Barriers and challenges to this process, as well as novel approaches to care were identified. This resulted in a well-defined set of concepts and theoretical framework for the process of ONP navigation that lays the groundwork for program evaluation and role delineation.

### **13 EXPOSING THE 21ST CENTURY TO NURSE PRACTITIONERS IN RADIATION ONCOLOGY.** Katie Bukolt, MSN, APRN, NP-C, AOCNP®, Texas Oncology Sammons Cancer Center Department of Radiation Oncology, Dallas, TX

Nearly two-thirds of cancer patients receive radiation during their treatment. Many patients receive combined radiation and chemotherapy, precipitating more intense acute symptoms and prolonged late side effects. Nurse practitioners effectively bridge gaps in complex patient care settings. There has been a relative paucity of nurse practitioners (NPs) in radiation oncology. Understanding the key elements of the radiation oncology NP role is paramount. Radiation nurse practitioners provide time-intensive supportive care to the weekly on-treatment physician visits. Same day emergent visits address needs in a timely fashion during treatment and in the weeks following treatment as toxicities peak. Comprehensive, evidenced based supportive care increases patient satisfaction and improves clinic flow. Elevated symptom burden may cause treatment interruptions and affect overall patient outcomes. Radiation NPs provide support and encouragement that many times enables patients to complete treatment. Nurse practitioners play a crucial role in providing comprehensive education in an individualized session. They review the general radiation process as well as specific details of acute and long term side effects. The radiation NP steps into this unique role allowing the patient to fully absorb the needed information. They also review and prescribe needed medications and provide appropriate referrals to necessary multidisciplinary services. This team approach reduces phone calls to the department and reduces the workload on clinic nurses. Radiation NPs provide follow-up care and continue to manage late and chronic side effects of treatment. They obtain thorough histories and physical assessments surveying for recurrent disease. NPs provide referrals, order and evaluate diagnostic imaging, provide support on survivorship issues, and collaborate with other members of the oncology team. The nurse practitioner also represents a cost benefit ratio for the practice by bringing in revenue for education, survivorship and follow up services. The role also enables the radiation oncologist to be more readily

available for consultations and treatment planning. Radiation nurse practitioners lead and educate as they share knowledge and clinical expertise of radiation treatment and of radiation effects with the multidisciplinary team caring for patients. The role of the nurse practitioner in radiation oncology continues to evolve. Very little evidence-based literature exists regarding this unique role. Increasing oncology patient population and the nursing profession requires an awareness of this important position, its implementation, and its impact on overall patient care.

### **14 IMPLEMENTATION OF A RAPID RESPONSE FEVER PROTOCOL FOR IMMUNOCOMPROMISED PATIENTS WITH HEMATOLOGICAL MALIGNANCIES: A QUALITY IMPROVEMENT INITIATIVE AT THE UNIVERSITY OF COLORADO HOSPITAL.** Glen Peterson, RN, DNP, ACNP, University of Colorado, Aurora, CO

Immunocompromised patients with Hematological Malignancies are at extremely high risk for developing serious complications and death related to infection and subsequent severe sepsis and septic shock. The timeliness of antibiotics and supportive care are of the utmost importance in preventing this problem and saving lives in oncology. The purpose is to improve the timeliness of antibiotics and supportive care interventions in patients with hematological malignancies presenting with fever or signs of serious infection requiring hospitalization for intravenous antibiotic therapy. A quality improvement study utilizing a pretest/posttest design analyzed data 12 months prior to intervention and 15 months after intervention. A Rapid Response Fever Protocol (RRFP) and order set was implemented in common patient care locations with staff, patient and provider education. Primary outcomes were time to provider order entry, volume resuscitation and antibiotic administration. Secondary outcomes of mortality, length of hospital stay (LOS), use of ICU resources and healthcare cost were evaluated. A total of 192 encounters were included, 73 pre-intervention and 119 post-intervention. The overall time to antibiotics, volume resuscitation and order entry improved from 174 (95% CI [149-199]), 87 (95% CI [59-115]) and 127 (95% CI [102-152]) minutes respectively to 59 (95% CI [48-70]), 56 (95% CI [40-72]) and 25 (95% CI [15-35]) minutes respectively and improved significantly in all locations ( $p < .001$ ,  $.001$ ,  $< .001$ ) in patients who received the intervention. Post-intervention analysis displayed a significant reduction in hospital LOS (8.06 days vs. 5.76 days (95% CI [.172-4.771],  $p = .026$ ) and ICU days were reduced in the intervention group (4.77 vs. 3 days) (95% CI [-5.503-9.041],  $p = .385$ ). Associated healthcare cost reduction was estimated at \$5,957 per encounter (N=63) totaling \$375,291 in approximate savings over a 15-month period. Eight patients died during the analysis, 7 of which had significant delays in antibiotics. Implementation of a Rapid Response Fever Protocol with staff, provider and patient education improves timeliness of antibiotics and supportive care interventions in immunocompromised patients with hematological malignancies and reduces hospital LOS, mortality and associated healthcare cost. The RRFP is a unique protocol used successfully in multiple areas in the hospital (inpatient unit, ED, infusion center) resulting in historically unequalled outcomes of reduced hospital LOS, ICU utilization, mortality and associated healthcare cost.

### **15 A REGIONAL CANCER CENTER'S EXPERIENCE WITH LUNG CANCER SCREENING.** Aimee Strong, MSN, AGACNP-BC, Centra Medical Group, Lynchburg, VA

Lung cancer is often diagnosed at a late stage. The goal of screening for lung cancer with low dose CT is to diagnose at an earlier stage, when more treatment options are avail-



able. The process can be cumbersome for providers as the reimbursement process requires specific, time consuming documentation which may prevent providers from offering screening. There is a high rate of incidental findings which providers may be uncomfortable managing. There is potential for patients to fall through the cracks with long-term follow up. Screening for cancer is also anxiety provoking for patients. Lung Cancer screening programs face a variety of challenges requiring collaboration of multiple departments including billing, registration, radiology, information technology, and marketing. Extensive PCP education is required on screening guidelines, including buy-in for referring patients to the screening clinic. Other challenges include complex reimbursement and documentation processes, design and implementation of patient tracking software options and education of insurance providers. A centralized program run by a NP with an oncology background can alleviate these issues while providing quality evidence based care. The Thoracic NP meets with patients for the face to face shared decision making visit and orders the CT. The NP directly follows up with patients for results, and manages all incidental findings, subsequent diagnostic procedures, referrals to specialty care while ensuring close communication with referring providers. The NP has access to weekly multidisciplinary thoracic conference to discuss significant findings and provides all longitudinal follow up regarding lung cancer screening. The development and implementation of our screening program has been a valuable learning experience. To date we have screened 22 patients, one of which was found to have a squamous cell lung cancer. While our program is still new, we expect our volumes to grow over the next year as we continue to market our program in the region directly to patients and PCP's. We anticipate that our patient and provider satisfaction related to this program will be high due to the expertise of our thoracic oncology nurse practitioner. Advanced practice providers in oncology are uniquely positioned to provide lung cancer screening. Our holistic approach to care, focusing on disease prevention and health promotion allows us to guide the patient through a potentially stressful screening process.

## **16 AN ONCOLOGY CLINICAL NURSE SPECIALIST IN A RADIOLOGY PRACTICE? Carrie Riccobono, MSN, RN, ACNS-BC, Froedtert, Waukesha, WI**

Cancer care is increasingly complex and fragmented. Screening guidelines for cancers are controversial, further breeding provider and public confusion and mistrust. Center For Diagnostic Imaging (CDI) & Froedtert & the Medical College of WI Cancer Center in Milwaukee, WI has partnered to develop a unique comprehensive breast imaging program that includes an Oncology CNS. This model incorporates advanced knowledge of the science of cancer nursing into the radiology practice. Interventions Within this specialized model the CNS: (a) Provides expert guidance and coaching to patients, families & other care providers to improve patient outcomes. (b) Provides patient teaching, directed at compliance with screening, diagnosis and treatment (c) Addresses perceived barriers to care and assess patients comprehensively (d) Improves patient satisfaction with their cancer care (e) Works in alliance with providers, patients and families to ensure knowledge, competence and self-efficacy (f) Provides comprehensive assessment utilizing NCCN Distress Thermometer (g) Identifies and communicates local, regional and national resources for patients (h) Collaborates with and mentors primary care providers & staff as an oncology expert (i) Helps patients navigate into a health care system that can provide their cancer care. Because of these interventions, patients are able to make empowered choices in treatment. Research supports the idea that uncertainty regarding poten-

tial cancer diagnoses may lead to psychological distress that persists throughout the diagnostic period until a diagnosis is given. Distress can interfere the ability to obtain necessary follow-up, possibly resulting in higher mortality after a confirmed cancer diagnosis. Experiences during the diagnostic period are believed to influence treatment outcomes once diagnoses are confirmed. The Institute of Medicine states the problem is not the lack of psychosocial services available to patients, but rather the lack of an organized proactive approach that links health care providers & patients to available evaluation, education, interventions and delivery approaches. The report noted that while accepted in principle, the biopsychosocial model of care that is needed for holistic evaluation of patients may not be "living" in the assessment of practitioners caring for cancer patients. This model of care is living in our practice! This progressive model of practice challenges the standard, partnering the expertise of the cancer expert with the radiology expert.

## **17 EVIDENCE-BASED MENTORING OF SURGICAL ONCOLOGY NURSES BY ADVANCED PRACTICE NURSES. Sarah Kincaid, MSN, RN, FNP-BC, CNL, The James Cancer Hospital, Columbus, OH; Lisa Parks, MS, RN, CNP, The James Cancer Hospital, Columbus, OH**

The increasing prevalence of diabetes and cancer worldwide has led to a growth in adverse health complications often related to poor management of these diseases. Although a vast amount of literature exists to help guide patients and families who may be newly diagnosed with diabetes and/or cancer, the time of diagnosis is not a period ideal for processing and retaining information well enough to modify lifestyle behaviors. On a surgical oncology unit in a Midwestern comprehensive cancer center, a post-pancreatectomy diabetes education program was developed through the interdisciplinary efforts of advanced practice nurses, staff nurses, diabetes educators, and dietitians to help ensure that the patient and family are engaged in hands-on learning personalized to their learning needs from their pre-operative appointment and continuing through the post-operative period. The purpose of this program is to increase health literacy in newly diagnosed diabetic oncology patients prior to hospital discharge in order to increase patient satisfaction, increase patient health literacy, and decrease hospital readmissions due to complications related to poor health management. The advanced practice nurses coordinated and facilitated the organization of a quality improvement workgroup engaging staff nurses, diabetes educators, and dietitians in developing an evidence-based checklist that case managers and staff nurses would utilize to ensure that newly diagnosed diabetics were literate in their new diagnosis. "Competencies" necessary for discharge include a basic understanding of diabetes and management, potential complications, sick day management, and demonstration of the ability to perform glucose checks and determine appropriate insulin dosing. The success of the program will be measured both qualitatively through patient surveys and quantitatively through readmissions data to determine areas of strength and areas of weakness in need of improvement. This project has allowed the interdisciplinary quality committee to encourage better health outcomes through evidence-based teaching methods. Advanced practice nurses are acting as mentors to the staff nurse committee members to support them in their professional development. Advanced practice nurses are trained to review the literature and foster the development of novel means of practice that are evidence-based. The ongoing mentorship between advanced practice nurses and staff nurses to develop and implement patient and family education will continue to facilitate better patient outcomes and nursing satisfaction.

## 18 MEASURING THE CURRENT NURSE PRACTITIONER WORKFORCE CARING FOR OLDER ADULTS WITH CANCER.

Lorinda Coombs, FNP-BC, AOCNP®, University of California, San Francisco; Wendy Max, PhD, University of California, San Francisco; Caroline Stephens, PhD, GNP, University of California, San Francisco; Tatjana Kolevska, MD, Kaiser Permanente, Vallejo, CA

Cancer is most frequently diagnosed in adults over age 65 years, and the incidence is expected to increase dramatically between 2010 and 2050. Estimates of the oncology workforce suggest there may not be enough oncology physicians in practice to care for these older patients with cancer. The lack of a sufficient cancer workforce will directly impact patient care and represents a significant public health issue. The National Cancer Institute (NCI) Surveillance and Epidemiology End Result (SEER) program provides information on cancer incidence, prevalence and mortality. The SEER dataset was linked to CMS claims for the first time in 1991 by matching individual identifiers from SEER to Medicare's master enrollment files and has been updated every three to four years. All members of the oncology workforce who provide care to patients with cancer and Medicare are in the dataset, including NPs and physician specialists, and may be identified by their National Provider Identification (NPI) number. Using the SEER-Medicare linked data, an analysis of secondary claims will be conducted. Nurse Practitioners (NP) play an integral role in cancer care delivery. NPs currently provide care to patients diagnosed with a wide range of malignancies and in various settings: for inpatient, outpatient and urgent care centers. They also perform many cancer related diagnostic and palliative procedures. No studies have examined the amount or type of cancer care provided by NPs. The purpose of this study is to describe the number of NPs providing care to older adults with cancer and the amount of care provided in a two-year period using SEER-Medicare linked dataset's most recently available data (2010-2011). All malignancies will be included in the analysis. This will be the first study to use objectively reported data on NP provided cancer care to any population. With the anticipated surge in the number of older adults with cancer, it may become the baseline measurement of the NP workforce against which later analyses are measured.

## 19 WORK FORCE SHORTAGE DILEMMA: DELIVERING QUALITY CANCER CARE THROUGH INTEGRATION OF MULTIDISCIPLINARY ADVANCED PRACTICE NURSE USING TEAM APPROACH. Michelle Lyn, AGPCNP, Mount Sinai Medical Center, New York, NY

There are multiple reasons why there's a shortage of health care professionals in Oncology. Driven by an aging and growing population, an improvement in cancer survival, and the expanded patient coverage as result of affordable care act, the demand for oncology care has increased significantly. According to the American Society of Clinical Oncology, demand for oncology services is "expected to rise 48% between 2005 and 2020." Provider shortages and staffing challenges persist within each medical center due to sick leaves, maternity leaves, and other unforeseen circumstances. The multidisciplinary nurse practitioner (NP) role was launched at Mount Sinai Health System to address provider shortage and the increased demand for oncology services. The multidisciplinary NP delivers high quality oncology care driven by evidence-based medicine. Patients meet with the multidisciplinary oncology NP and discuss diagnosis, treatment, symptoms, medication, and side effects of treatments. Patients are afforded access to specialized care without delays or compromise. Each specialty oncology team reported shortages of

providers to adequately service the number of patient visits scheduled. Based upon need, oncology nursing management assigned a multidisciplinary oncology nurse practitioner to each oncology specialty clinic. The multidisciplinary oncology NP performed the following: (a) Take history, perform physical exams, review labs, and imaging. (b) Create and modify treatment plan to address diagnosis, goals and safety in conjunction with oncologist (c) Provide teaching and counseling on side effects and symptom management (d) Provide end-of-life patient care with hospice/palliative care team. The multidisciplinary oncology NP was able to tailor functions to each team and meet specific team goals and needs. As result, new referrals were seen in a timely fashion, care was coordinated efficiently, patient satisfaction was maintained and there were no delays in patient care. There is an increasing need for an advanced practitioner that can function in a multidisciplinary capacity. Advanced practice nurses that have the necessary knowledge, skill, education and certification are able to provide quality patient care plus added value functions that are specific to each organization. The multi-disciplinary oncology NP is not only a solution to solving demands and shortages to oncology provider but a critical component for efficient and innovative oncology care systems.

## 20 THE CANCER NETWORK CLINICAL NURSE SPECIALIST: UNIFYING AND ELEVATING NURSING PRACTICE. Alexandra Verbeten, MSN, RN, ACNS-BC, AOCNS®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

The oncology patient's journey encompasses a multitude of experiences which require exceptional nursing care. Convenient, standardized, and evidence-based care are what the Froedtert and Medical College of Wisconsin Cancer Network strives to provide patients. In a cancer network spanning three hospitals and one free-standing clinic, nursing standardization was difficult to achieve. Patients and families identified differences in nursing practice, occasionally voicing concern. Furthermore, nurses who floated between locations struggled with inconsistencies in practice. The role of the network Clinical Nurse Specialist (CNS) was developed to assess the needs of the individualized sites and help unify ambulatory oncology nursing practice focusing on improving patient safety and practice standardization. Patients found it more convenient to seek academic medical care closer to home, and expected to receive the best, standardized nursing care available. The network CNS completed a comprehensive color-coded process comparison in which different aspects of nursing care were compared and evaluated against national standards. The CNS acted as a clinical expert, leader, consultant, and coach to work with staff at the system level to standardize nursing care. The CNS worked within all spheres of influence and collaborated with other specialized oncology CNS's to achieve desired outcomes. The majority of nursing practices have been standardized with modifications in workflows based on site needs. Nurses are more easily able to float between sites and patients have reported more uniform nursing care. A network-wide shared governance model was developed so nurses could openly discuss and work through practice differences. As a result of the benefits of having a CNS with a global view, other CNS and nurse educator positions have been changed to span the network in order to continually improve standardization and safety. Patients find it more convenient to seek care closer to home, and receive standardized care. The role of the CNS in ambulatory oncology is essential to the support and success of nurses. More oncology care is moving outpatient, and patients are able to receive care in a manner that is convenient for them. As a cancer network, nurses should be collaborating to provide the most evidence-based care to patients. Other organizations should utilize CNS's in the outpatient realm, spanning an entire organization to ensure they have a global view on nursing practice.



## 21

### **SURVIVING SPECIALTY SURVIVORSHIP START-UP: LESSONS LEARNED.** Leigh Minchew, DNP, APRN, WHNP-BC, USA Mitchell Cancer Institute, Mobile, AL

Survivorship is “a coordinated, interdisciplinary phase of cancer care for survivors that incorporates health promotion through prevention and detection of new cancers, cancer recurrence, or cancer spread”. The Commission on Cancer has mandated the establishment of a “continuum of care services” that includes patient navigation, psychosocial distress screening and survivorship care planning. In order to fulfill the requirements, organizations have worked tirelessly to develop survivorship programs that meet patients’ needs. Organizational goals to become CoC certified in the near future were also realized. Planning ongoing integrated care for patients who survive long-term increases patient satisfaction, especially when the oncologist and primary care provider communicate as a team. The gynecological cancer survivor has unique needs that may present and persist from diagnosis throughout years of cancer surveillance. However, many patients’ post-cancer care may lack important elements of follow-up necessary for early intervention. Establishing a timeline for care transition that helps to determine “when, where and which patients are followed”, and by whom, is necessary. Serving patients and families along the Gulf Coast, USA’s Mitchell Cancer Institute recently established a specialty survivorship clinic for gynecologic oncology services. Health system providers of various disciplines, including advanced practice nurses, have been integrated into the survivorship care model. Implementation of a formal survivorship care plan, incorporated into the patient portal, has evolved and become the primary means of communication between the oncologist and the community provider of primary gynecologic and medical care. Evaluation: Implementation of the Gynecologic Oncology Survivorship program has been noted successful in meeting the ongoing needs of gynecologic oncology patients. Successful transition of gynecological cancer survivors’ care to the primary medical home has also occurred on an individual basis when warranted. Patient satisfaction scores remain high. Successes and barriers to implementing an integrated survivorship program for gynecologic cancer survivors have been realized and will be discussed. Few gynecologic oncology-specific survivorship programs have been established. Specialty survivorship clinics offer opportunity to address unique needs of patients and their families.

## 22

### **ADVANCED PRACTICE PROVIDERS IN ONCOLOGY (APOS) KNOWLEDGE, ATTITUDE, AND PERCEPTIONS REGARDING ADVANCE CARE PLANNING (ACP).** Fedrick Barber, PhD, APRN, ANP-BC, AOCNP®, MD Anderson Cancer Center, Houston, TX

The American Cancer Society estimates that 1,658, 370 Americans will be diagnosed with cancer this year; and of those diagnosed, more than 589, 430 will die from their disease, yet, less than 50% of patients with cancer have written documents regarding their treatment preferences, and only 60% report having end of life discussions with their physician. At our cancer center, only 20% of patients with cancer have an advance directive. APOs play a critical role in the multidisciplinary collaborative practice of oncology and are in a unique position to educate patients and families in ACP. However, APOs’ knowledge, attitudes, and perceptions may impact their decision to initiate ACP discussions. The purpose of this quality improvement (QI) project was to describe the knowledge, attitudes, and perceptions of APOs in ACP discussions in patients with cancer; and to identify the difference in characteristics

(socioeconomic, religion, education, gender) in APOs regarding ACP discussions in patients with cancer. A quantitative non-experimental descriptive design was used to conduct this QI project. The EOLCDQII survey was delivered to all APOs at an urban cancer center via the Internet using Survey-Monkey. Summary statistics were used to describe the survey responses as a whole and by employment category (APRN vs PA). Wilcoxon rank-sum test, Fisher’s exact test, or chi-squared tests were used to compare responses by employment category. Seventy percent of APOs surveyed believe that ACP discussions should occur in the emergency room, or two days after hospitalization, or in the intensive care unit. The majority (70.5%) of the APOs felt that the emergency room physician should initiate ACP discussions. There were no significant differences by employment category except that APRNs identified a lack of knowledge about advance directives as a significant barrier to ACP discussions compared to PAs ( $p = 0.007$ ). These findings suggest priority should be given to strategies that educate APOs on ACP in patients with cancer. Little is known of APOs knowledge, attitudes, and perceptions regarding ACP discussions in patients with cancer. Previous ACP research has largely focused on primary care physicians, oncologists, and primary care APRNs, not APOs.

## 23

### **TIMING OF INITIAL PALLIATIVE CARE CONSULTATION IN ONCOLOGY PATIENTS.** Christy Mars, RN, MSN, ACNP, DNP, AOCN®, AHPCN, Memphis VA Medical Center, Germantown, TN

Palliative care should be a fundamental part of cancer care throughout the continuum of a person’s disease. The purpose of this scholarly project was to describe the point along an illness trajectory when initial palliative care consultation occurs for patients with cancer. A retrospective chart review was conducted for hospitalized oncology patients at the Memphis VAMC who received initial palliative care consultation between January 2014 and December 2014. Charts of 94 oncology patients who received initial inpatient palliative care consultation at the Memphis VAMC during the period of January 2014 and December 2014 were identified and reviewed for this project. The median interval between initial cancer diagnosis to initial palliative care consultation was 145 days. The median interval between initial palliative care consultation and death was 34 days. Initial palliative care consultation referral practices at the Memphis VAMC are late in the cancer trajectory, often in the last days, weeks or months of life. Identification of systematic triggers for clinicians to use to initiate palliative care consultation would be useful to integrate palliative care services earlier in the cancer trajectory at the Memphis VAMC.

## 24

### **THE CARE (CLINICAL ASSESSMENT AND RAPID EVALUATION) CLINIC: IMPROVING THE ONCOLOGY PATIENT EXPERIENCE AND OUTCOMES.** Katie Snell, AGNP-C, University of Colorado, Aurora, CO; MaryJane LaRoche, ANP, University of Colorado, Aurora, CO; Johanna Crock, AGNP, University of Colorado, Aurora, CO

Oncology patient visits are anticipated to increase annually as the population ages with an estimated 24,540 new cancer diagnoses in Colorado in 2015. This year, University of Colorado Anschutz Cancer Pavilion (ACP) visits have increased by 14%. Chemotherapy dose intensity impacts patient outcomes, especially treatment with curative intent, with symptom management helping achieve this oncology quality indicator. Timely and appropriate symptom management is vital for cancer patients. Limited same day appointment availability in oncology clinics leads to patients being inappropriately directed to the emer-

gency department (ED) to address issues such as fever, pain, and gastrointestinal symptoms that can be managed outpatient. In 2014, the ACP established the need for an advanced practice provider (APP)-led symptom management clinic. Baseline data collected from ED, inpatient admissions, and outpatient infusion visits along with National Comprehensive Cancer Network (NCCN) sites with similar clinics, reinforced the case for an acute symptom management clinic to address increased patient volumes. In February 2015, the CARE Clinic opened with limited hours staffing two APPs and an RN sharing busy infusion center resources. The global aim is to provide evidence-based symptom management to oncology patients with acute and chronic cancer and treatment related symptoms through improved access and quality care. Clinic goals include providing value-based care, avoiding unnecessary ED visits, reducing inpatient length of stay and readmissions, provision of multidisciplinary care, and enhancing cancer patient experiences and outcomes. By April, clinic hours expanded fulltime on weekdays and in February 2016 another APP was added. Resource utilization, referral sources, basic demographics, cancer type, chief complaint, diagnoses, billing level and disposition (including ED avoidance and direct admissions) are tracked to help characterize patients utilizing services. Patient and internal customer experiences are surveyed with future plans to utilize the Edmonton Symptom Assessment System (ESAS-r). These metrics reveal opportunities to improve oncology care through the development of evidence-based guidelines with cancer specific pathways. Patient surveys and staff feedback have been very positive. Quality improvement with PDSA (Plan-Do-Study-Act) cycles to refine clinic capabilities and needs is ongoing. By fourteen months, CARE Clinic services reached over 953 patient visits with 21% patient ED avoidance including direct admission.

## Clinical Practice Podium Sessions

### 25

**SUSTAINING PATIENT SATISFACTION WITH PAIN MANAGEMENT IN AN OUTPATIENT RADIATION ONCOLOGY DEPARTMENT: A MULTIDISCIPLINARY QUALITY IMPROVEMENT APPROACH.** Maureen Oliveri, MSN, RN, NYULMC, New York, NY; Adelina Cabrera, BSN, RN, OCN®, NYULMC, New York, NY; Kathleen Gumbs, BSN, RN, OCN®, NYULMC, New York, NY; Beverly Smith, DNP, NYULMC, New York, NY

The purpose is to sustain patient satisfaction with pain management at an urban academic medical center with over 4,000 radiation visits per year. Evidence has demonstrated pain associated with cancer or cancer treatment is undertreated. As the Centers for Medicare and Medicaid move toward a value-based model for payments, a health care organization's reimbursement will be based in part on performance on clinical quality process of care and patient satisfaction measures such as Press Ganey (PG). We decided to monitor our results from our multidisciplinary improvement project conducted in 2014 to measure sustaining patient satisfaction. Educating and communicating with the entire healthcare team, the patient and their caregivers allows prompt and safe pain management interventions. (a) Due to low Press Ganey scores regarding patients' pain management; we conducted a needs assessment and quality improvement initiative in 2014. (b) Dartmouth Microsystem Improvement methodology was utilized. (c) Educated medical staff to World Health Organization guidelines and the evidenced based medical center's standard of pain management. (d) Educated professional and supportive staff to consistently ask patients about their pain at each episode of care using the Wong-Baker FACES Pain Rating Scale. (e) Revised all clinical templates in the electronic medical record to

include assessment, intervention, and documentation of pain. (f) Distributed a patient education pamphlet regarding pain management prior to the initiation of radiation treatments. (g) Professional compliance was measured using monthly randomized chart reviews and professional feedback. 1. Initial findings: Assessment, intervention, and documentation of patients' pain: RN: Increased from 36% to 93%, MD: Increased from 24% to 88%. Patient satisfaction increased from 67% to 95%. 2015-2016 findings: RN: 96% MD: 86% Patient Satisfaction: 92%. 1. Our improvement goals have been sustained over the course of 3 years. 2. The multidisciplinary team approach prompted consistent intervention for reported pain scores of 4 and above. 3. The Oncology nurse played a pivotal role in the successful outcome of this process by empowering the nurse to use integrative pain management techniques and escalate pain rating to licensed independent practitioners. 4. The improvement was anchored in a new standard of care within the department, and our tertiary sites. 5. Pain management initiatives will have a continued positive impact on patient satisfaction that will be sustained with the implementation of Value Based Medicine.

### 26

**A QUALITY IMPROVEMENT INITIATIVE TO INCREASE PNEUMOCOCCAL VACCINATION RATES FOLLOWING ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION.** Carole Elledge, DNP, RN, AOCN®, Methodist Hospital, San Antonio, TX; Barbara Rush, MSN, RN, FNP-C, Texas Transplant Institute, San Antonio, TX; Taylor Cordell, BSN, RN, Methodist Hospital, San Antonio, TX; Azizeh Sowan, PhD, RN, University of Texas Health Science Center at San Antonio School of Nursing, San Antonio, TX

Immunizations are elemental in mitigating vaccine-preventable illnesses in hematopoietic stem cell transplant (HSCT) recipients. Reported rates of influenza-associated pneumonia in HSCT patients fall between 7 and 35%, compared to 2 to 8% in the general population, underscoring the risk for this vulnerable patient group. Guidelines published by the Centers for Disease Control and Prevention, the Infectious Disease Society of America and the European Group of Blood and Marrow Transplantation recommend serial re-immunizations upon recovery from HSCT. Other than seasonal influenza, pneumococcal and haemophilus B conjugated vaccines are the initial immunizations recommended within the first 6 months following HSCT. In our community-based program, <40% of allogeneic HSCT (aHSCT) recipients transplanted in 2014 received their initial pneumococcal vaccine within 1 year post-HSCT and of these, <60% completed the series. Surveys of the ambulatory nursing clinicians and providers highlighted opportunities to improve knowledge of the current guidelines as well as assessment and tracking processes surrounding post-transplant immunization for aHSCT recipients. The purpose is to improve pneumococcal vaccination rates by implementing and evaluating a multifaceted intervention to systematically assess vaccine readiness and track serial vaccine administration in aHSCT recipients. Eligible patients were evaluated +180 and +365 days following aHSCT during a pre-scheduled long-term clinic follow-up visit between August 11, 2016 and November 10, 2016. Four interventions were instituted during this time period: (a) a new tracking tool delineating transplant date, recommendations for all post-HSCT vaccinations and vaccines administered to date was filled out and available for provider review prior to the patient visit; (b) an "IMMUNIZATIONS" field was added to the provider dictation template to trigger a vaccine-eligibility assessment; (c) initial and ongoing education regarding vaccine indications following HSCT was conducted for the clinical staff; and (d) a re-designed workflow was initiated to alert the registrar and clinic staff that the patient was due for vaccinations at follow-up visits. Initial and

completed series rates and reasons for non-vaccination in our aHSCT recipients will be reported. Pre- and post-intervention data will be compared to assess impact. Discussion will include lessons learned and plans for programmatic implementation based on the results of this feasibility study.

## 27

**OPTIMIZING CARE OF THE FAMILY AT THE END-OF-LIFE IN THE HOSPITAL SETTING: PUTTING RESEARCH FINDINGS INTO CLINICAL PRACTICE.** Deborah Boyle, MSN, RN, AOCNS®, FAAN, UC Irvine Health, Huntington Beach, CA; Jordan Oliver, RN, OCN®, UC Irvine Health, Orange, CA; Cynthia Reyes, RN, OCN®, UC Irvine Health, Orange, CA

Despite advances in care delivered at home, the majority of Americans die in acute care. Existing research on determinants of quality end-of-life care have limitations, namely, that specific nursing actions are not distinguished from that of “the team” and the majority of research focuses on end-of-life care within home or hospice settings. The overarching goal of the research referred to in this presentation, was to create an evidence-based Acute Family Bereavement Support Protocol for hospital use that parallels perinatal and NICU family interventions when an infant dies. The purpose is to describe the clinical application of research findings that identified family preferences for nursing care at the end-of-life resulting from family interviews made after the death of a loved one. Via telephone, families were queried as to their preferences for specific nursing interventions during the peri-death trajectory using a 13-item survey resulting from a literature critique of nursing practices routinely provided by hospice nurses. A planning group from our unit-based practice council, unit nurse managers, nurse educator, and clinical nurse specialist, reviewed the research findings and devised a family support protocol template for pilot intervention. The protocol encompassed pre-and post-death nursing interventions that included: room signage, offering families a menu of nursing support options (i.e., desire for privacy, helping with nursing care), sharing advice about ways to say good-bye, creating a Memory Keepsake, performing an Honoring Ceremony post-death, escorting the family out of the hospital, and establishing a process for signing and sending a sympathy card one month post-death. We currently are in the pilot phase of this protocol’s implementation with plans to call the first 20 family members for their evaluation. Preliminary results are overwhelmingly positive. While dying in the hospital is often perceived as a predominantly oncology experience, our institutional data reveals that death in the ICU setting is more pervasive. Our MICU/CCU nursing staff have voiced interest in our project and will be participating in our pilot. We historically identify nurse quality metrics on infection, errors, falls and responses to codes, but rarely distinguish how well we provide nursing care at the end of life. This presentation will provide data on the future formulation of indices of nursing excellence at life’s closure.

## 28

**ACE IN THE HOLE: STRATEGIES FOR THE REDUCTION OF PATIENT WAIT TIMES UTILIZING AN INTERPROFESSIONAL AMBULATORY CLINICAL EVALUATION TEAM (ACE).** Mary Beth Collins, MSN, RN, Johns Hopkins Hospital, Baltimore, MD; Gina Szymanski, MSN, RN, Johns Hopkins Hospital, Baltimore, MD; MiKaela Olsen, MS, APRN-CNS, AOCNS®, Johns Hopkins Hospital, Baltimore, MD; Nancy MaGee, BSN, RN, OCN®, Johns Hopkins Hospital, Baltimore, MD; Lynne Trench, BSN, RN, Johns Hopkins Hospital, Baltimore, MD; Vanessa Kraft, BSN, RN, OCN®, Johns Hopkins Hospital, Baltimore, MD

Ambulatory Oncology patients at this NCI-designated cancer center traditionally experienced variable wait times resulting

in delays. Preparation for the next day patients’ visits was inconsistently performed by primary nurses. In the absence of a structured process for pre-screening patients for their infusion visits the pharmacy was reluctant to prepare drug in advance. The goal of this initiative was to prevent same day inefficiencies and reduce patient wait times by identifying and correcting issues prior to patients’ appointments. The Interprofessional team chose a goal of reducing treatment wait times to no more than 30 minutes beyond the patients’ scheduled appointment times. The ACE Team is a group of seasoned nurse clinicians and pharmacists with broad disease and treatment expertise who work collaboratively to ensure patients are ready for treatment, allowing medications to be prepared in advance. The ACE team partners with patients’ primary nurses to ensure effective coordination of care. A new rule requiring that treatment orders and notes be submitted 48 hours in advance of the patients’ appointment was developed and supported by the Oncology Medical Director. The ACE Team completes an extensive review of the patients’ treatment orders, notes, and laboratory values prior to the patients’ scheduled visits. ACE team consultation with the patients’ primary nurses is an essential part of the care coordination. Using a standardized, treatment-specific symptom checklist, patients are telephoned at home one day before their appointments. The checklist is completed by assessing for symptoms or toxicities that would modify or preclude administration of the planned treatment. After ACE RN review, a list of patients meeting pre-established criteria for having drug made in advance is submitted to the pharmacy ACE Team for a second safety review, so that drugs can be prepared the evening before the scheduled infusion visits. The ACE program has changed the treatment experience for providers, nurses and most importantly, our patients. This program has led to a significant reduction in wait times at our cancer center. Baseline wait times averaged 49.7 minutes and 32.7 minutes post-intervention. The ACE program has created a standardized approach for preparing to treat patients. Inclusive of safety checks and high reliability principles, this innovative program has enhanced our workflows and ensured safe drug administration.

## 29

**USING A PEDIATRIC RADIATION THERAPY TRAINING PROGRAM TO AVOID THE USE OF ANESTHESIA IN PEDIATRIC PATIENTS AGES 3–12 YEARS.** Danielle Crump, RN, BSN, OCN®, Johns Hopkins Hospital, Baltimore, MD; Nicole Mills, MSN, RN, Johns Hopkins Hospital, Baltimore, MD; Amanda Choflet, DNP, RN, OCN®, Johns Hopkins Hospital, Baltimore, MD

Anesthesia is often prescribed for the pediatric patient receiving radiation therapy (RT) due to the critical nature of positioning and immobilization during treatment. Strict adherence to immobilization minimizes radiation dose to normal tissues while treating the tumor and traditionally anesthesia has been used in pediatric patients in a routine fashion. However, the use of anesthesia carries independent risks and clinical implications that may be avoided with innovative techniques. The purpose of this project was to implement a pediatric training program that reduced the use of anesthesia for children over 3 years of age through familiarization with radiation therapy planning and treatment. Patients were assessed at consultation by the physician and nurse for inclusion in the training program. Patients who were felt to be appropriate candidates were scheduled for training sessions with the nurse. During these sessions, patients and their parents were familiarized with the radiation process through a tour of the simulation and treatment rooms, show and tell, immobilization mask making, play with radiation models, viewing videos, and usage of radiation treatment coloring books. Patients were also taught techniques to decrease stress during



treatment through the use of music and manipulatives. There were a total of 128 pediatric patients 0-12 years of age treated with RT from January 2012 thru September 2016. Of those patients, 18 were younger than 3 and did not qualify for training. Out of the remaining 110 patients, 92 (83.6%) completed the training program and were able to receive RT without the use of anesthesia. The use of familiarization with the nurse and radiation therapists through show and tell, play, videos, music, stress reduction techniques and rewards decreased the number of pediatric sedation cases in radiation therapy from 2012 through 2016. Anesthesia was necessary in all children under the age of three and seldom required in children 3-12 years of age after familiarization techniques and training were completed. This novel training program shows that treating pediatric patients without the use of anesthesia is feasible.

**30**  
**A SUCCESSFUL MULTIFOCAL TEAM-BASED INITIATIVE TO PREVENT CLABSI: OUTCOMES FROM THE ENGAGEMENT OF NURSES, NURSING ASSISTANTS, PATIENTS, FAMILIES, AND PHYSICIANS.** Jordan Oliver, RN, BSN, OCN®, UCI Medical Center, Orange, CA; Jennifer Hoff, RN, MSN, OCN®, CMSRN, UCI Medical Center, Orange, CA; Deborah Boyle, RN, MSN, AOCNS®, FAAN, UCI Medical Center, Orange, CA; Jennifer Yim, RN, BSN, CIC, UCI Medical Center, Orange, CA; Cynthia Reyes, RN, BSN, OCN®, CMSRN, UCI Medical Center, Orange, CA

Infection is a major cause of death in cancer patients. CLABSI, a nurse-sensitive quality indicator, has been the long-standing focus of investigation that to date, has not resulted in the identification of a definitive preventive approach. The purpose was to determine effectiveness of a unique multifocal, team-based initiative to reduce CLABSI rates on our 30 bed oncology unit. Results of a literature review, national benchmarking initiative, and ongoing evaluation of our internal CLABSI efforts, resulted in the development of a 3-part oncology-specific action plan that consisted of: (a) Nurse/physician collaboration on the evaluation of central lines via rounding, (b) Nursing assistants championing CHG bathing, (c) Nurse/patient/family engagement in central line cleansing via the “One, Two, Three: Count With Me” scrub the hub intervention. Unit CLABSI rates decreased from 4.66 to 1.33 per quarter. Currently, the unit has been CLABSI-free since May 2016. Compliance of daily CHG bathing improved from an average of 66% to >80% per month for 6 consecutive months. Nurse-led central line rounds demonstrate to patients and families the importance of quality patient care, and the staff’s vested interest in their safety. Nursing staff recognize central line rounds as an opportunity to collaborate as opposed to an audit. As designated CHG champions, nursing assistants feel empowered to help keep patients safe. This focus on nursing assistants was so successful it has been adopted into the annual house-wide nursing assistant skills classes. The “1,2,3: Count With Me” campaign enables patients and families to be active participants in their care and infection prevention. The counting activity has been translated into 5 languages allowing patients with English as a second language to participate fully. Three months after launch, nurses, patients and families remain engaged in the process. Patients now request healthcare providers in other clinical areas to count with them during hub cleansing, indicative of their investment in this novel campaign. Due to positive findings, the initiative is being expanded to the rest of our academic teaching hospital. While CLABSI is a nurse-sensitive indicator, numerous interfaces must be in place for a successful preventive outcome to evolve. Our project represents a unique corollary to nurse-directed patient/family-centered care. By sharing our experiences, colleagues will be empowered to replicate our intervention in their settings.

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**LEVERAGING TECHNOLOGY TO OPTIMIZE THE CARE OF PATIENTS TREATED WITH IMMUNOTHERAPY.** Monica Fradkin, RN, BSN, MPH, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Lisa Barbarotta, MSN, APRN-BC, AOCNS®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Emily Duffield, MSN, MPH, ANP-BC, Yale Cancer Center, New Haven, CT; Kelly Guttman, RN, BSN, OCN®, Smilow Care Center North Haven, North Haven, CT; Michelle Randall-Doran, RN, BSN, OCN®, Smilow Care Center, Torrington, CT, Laura Tuttle, PharmD, BCOP, Smilow Cancer Hospital at Yale New Haven, New Haven, CT

The discovery of immunotherapy has revolutionized the care of patients with cancer and is now considered the fourth pillar of cancer treatment. Cancer immunotherapy has a unique side effect profile marked by immune mediated adverse effects (irAEs). These irAEs require careful, proactive identification by patients, caregivers, and healthcare providers as well as prompt evidence based interventions. Inaccurate identification of irAEs can result in inappropriate management, premature delay or interruption in therapy, and patient and provider dissatisfaction. Optimal care of this population requires standardization in nursing assessment, management and patient education. The purpose is to improve the care of patients treated with immunotherapy by standardizing nursing assessment, patient identification, management of irAEs and patient education. Existing electronic medical record (EMR) technology was leveraged to standardize care and improve safety. An irAE specific nursing assessment flowsheet was developed to facilitate standardization of assessment and documentation to allow for trending of irAE severity. Multidisciplinary education was developed to raise awareness of irAE assessment, identification, and management. An interactive, web based patient and caregiver education tool is also being developed. An EMR alert was developed to assist in identifying patients on immunotherapy who present to non-oncology sites of care, such as the emergency department (ED). This intervention was intended to raise awareness that patients on immunotherapy are at risk for irAEs requiring expert management. Anticipated outcomes include early identification of irAEs by nurses, improved data collection via ability to trend irAE severity longitudinally and standardization in management of irAEs. Improvement in patient identification and management of patients being evaluated by non-oncology providers (i.e. ED) through novel alerts in the EMR identifying patients on immunotherapy and improved patient engagement and satisfaction through patient education materials. Use of technology can improve safety, standardize and streamline the care of patients treated with immunotherapy. Use of innovative patient education strategies can enhance the delivery of complex content and improve patient comprehension which may result in timely symptom recognition minimizing the need for treatment interruption or delay.

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**USING SIMULATION TO ENHANCE NURSING KNOWLEDGE AND CONFIDENCE FOR HYPERSENSITIVITY REACTIONS TO CHEMOTHERAPY.** Suize Allen, MSN, APRN, AGCNS-BC, AOCNS®, OCN®, Emory University Hospital Midtown, Atlanta, GA; Patricia Friend, PhD, APN-CNS, AOCNS®, AGN-BC, Loyola University-Chicago, Chicago, IL

Nearly all chemotherapy and biotherapy given for the treatment of cancer carry the potential for life-threatening hypersensitivity reactions (HSR). It is considered a high-risk, low-frequency event due to its irregular occurrence and potentially fatal consequences. Inpatient oncology nurses have

less exposure to chemotherapy administration and reactions. Neither student nursing education nor oncology inpatient floor experience covers safe management of a HSR. Although rare, oncology nurses must be familiar with these adverse events and know how to identify patients at risk and provide appropriate management. The specific aim of this quality improvement project was to enhance oncology nurses' knowledge and confidence level in recognizing and managing a hypersensitivity reaction to chemotherapy. A clinical nurse specialist student developed and implemented a 2-phase education module: e-learning module and case study with simulation utilizing the PDSA (plan, do, study, and act) quality improvement framework. Nursing knowledge was assessed by pretest and posttest using multiple choice questions. The unit nurses participated in a HSR identification and management simulation and competency was assessed. An e-learning education module, HSR case study, competency check-off, and low-fidelity simulation were developed for use. Pre-test and post-test with multiple choice questions was used to assess baseline knowledge while a Likert scale assessed pre-confidence and was repeated after simulation. Nursing knowledge improved from 66.5% pre-test to 92.5% post-test. Individually, this shows an average of 52% increase in the oncology nurses HSR knowledge base. Nursing confidence improved from 67% to 100% post simulation. Similarly, there was a 54% decrease in the anxiety level when handling HSR, dropping from 76% to 22%. Overall, following the educational intervention, most participants (94%) strongly agreed that they knew the signs and symptoms associated with a HSR and felt confident providing pharmacological symptom management, and 100% felt that the case study and simulation would improve their ability to safely care for patients. Unit-based simulation can be an effective educational intervention to deliver knowledge and allow oncology nursing staff to practice identification and management of high risk, low exposure events such as hypersensitivity reactions to infusional chemotherapy. The CNS student understood the fundamentals of and composed, implemented and evaluated simulation into this teaching module and as an education tool in the future.

### **33 INITIATING A CHEMOTHERAPY DISCHARGE TEACHING CLASS ON A MIXED MEDICAL ONCOLOGY UNIT. Julianne Brogren, MS, RN, CNL, OCN®, MD Anderson Cancer Center, Houston, TX**

On a 36-bed mixed medical oncology unit at a National Cancer Institute (NCI)-designated Cancer Center, a Clinical Nurse Leader (CNL) completed a microsystem analysis to determine the unit needs, trends, and areas for improvement. Results revealed that the unit's Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) score under the domain of Discharge Information was below the hospital average. Furthermore, the unit doesn't utilize a standardized discharge education plan. The purpose of this quality improvement project was three-fold: (a) develop a chemotherapy discharge teaching class, (b) establish high-risk criteria for post-discharge follow-up phone calls, and (c) increase the HCAHPS scores in the domain of Discharge Information by 10%. The CNL, in collaboration with the unit leadership team and patient education department, developed a standardized unit-based discharge education plan consisting of a chemotherapy discharge teaching class and guidelines for discharge follow-up phone calls. The interactive class was designed for adult learners and offered a review of medications, potential side effects, management at home, and when to seek emergency care. The class was offered daily by the unit CNL to patients receiving chemotherapy and their families. The staff nurses were also educated on the class content to reinforce instructions at discharge. Based on the patient's diagnosis, history, and treatment plan, the team established high-risk criteria for patients that warrant follow-up phone call within

72 hours of discharge. A chemotherapy discharge teaching class and high-risk discharge follow-up calls were successfully established, and are now supported by unit leadership as standard of practice performed by the CNL and charge nurse. HCAHPS scores went from an average of 88% pre-intervention to an average of 94% four months post-intervention. Immediate feedback from patients and caregivers attending the class was overwhelmingly positive. Literature supports patient-centered care as it promotes active patient participation in their care and health care decision-making. This project promoted patient centered care by allowing for individualized discussions and teaching of discharge instructions. Patients were able to ask questions on an open forum and receive follow up to ensure learning was adequate. Preparing patients to manage their care at home enhances patient safety, impacts unnecessary emergency center visits and unplanned readmissions, and patient satisfaction.

### **34 THE CRITICAL ROLES OF NURSING EDUCATION AND COACHING OF PATIENTS WITH VIRALLY ASSOCIATED OROPHARYNGEAL CANCER TO ENHANCE QUALITY OF LIFE AFTER CHEMORADIOTHERAPY. Jennifer Cerar, RN, CRRN, Moffitt Cancer Center, Tampa, FL; Linda Battiatto, MSN, RN, OCN®, Eli Lilly and Company, Indianapolis, IN; Katherine Bryant, BSN, RN, Eli Lilly and Company, Indianapolis, IN; Gloria Wood, BSN, RN, Moffitt Cancer Center, Tampa, FL**

Recent increases in incidence of oropharyngeal cancers (OPC) and survival have been reported in the last decades. These trends have been attributed to the increasing proportion of patients with human papillomavirus (HPV) positive (+) OPC. Patients with HPV-associated OPC have a better prognosis, with double the overall survival rate (54.6% vs 27.6% at 2 years:  $p < .001$ ). With these patients living longer, quality of life (QOL) becomes important. Treatment options include surgery or radiation therapy for early disease, or chemoradiotherapy for locally advanced disease. Long term effects of treatment may include: xerostomia, trismus, poor wound healing, dental extraction, taste disorders, chronic swelling of throat, difficulty swallowing, impaired thyroid function, and fibrosis. The purpose is to develop and provide educational material to empower nurses to teach and coach patients about self-care behavior that may improve their QOL after chemoradiotherapy. Nurses educated patients on treatment-related side effects that can affect many head and neck tissues and coached them on lifestyle management throughout their treatment course. This included following an algorithm that was developed for management and follow-up of common long term effects, and detailed handouts in their discharge instructions. Additionally, an educational tool was developed and is accessible in the patients' electronic medical records. This collaborative partnership between the patients and nursing staff helped patients become advocates for improving their health outcomes. A literature review supports the QOL benefits of education and coaching of oncology patients. Based on the reports, we hypothesize that our educational interventions and tools will enhance the QOL of patients with HPV (+) OPC after chemoradiotherapy. The population of HPV (+) OPC patient survivors is increasing. Oncology nurses must thoroughly assess for potential acute and long term effects in this patient population. A good understanding of the treatment effects impacting patient QOL is essential for nurses to effectively manage and support these patients. Through consistent evidence-based education and coaching, patients can take ownership of their potential lifelong treatment effects to foster active participation in their own survivorship and QOL. Nurses were provided with new tools to educate and coach patients about QOL issues after chemoradiotherapy to the oropharynx for the growing number of HPV (+) OPC patients.

### **SURVIVORSHIP CARE PLAN NEEDS FOR HEAD AND NECK CANCER PATIENTS.** Minoka Hicks, RN, BSN, BA, Duke Cancer Institute, Durham, NC; Jennifer Tenhover, NP, APRN, BC, AOCN®, Duke Cancer Institute, Durham, NC; Deborah H. Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Institute, Durham, NC; John Hillson, RN, BA, OCN®, Duke Cancer Institute, Durham, NC

In 2016, the estimated new cases of Larynx Cancer and Oral Cavity/Pharynx Cancer will be 12,430 and 48,330 respectively (NCI SEER). Many of these Head & Neck Cancer patients are treated with curative intent therapy. There are many long term physical and psychosocial symptoms that impact quality of life. The Institute of Medicine describes survivorship as a distinct phase of cancer care and recommends that all individuals receive survivor care plans (SCPs). The purpose of the project was to determine head and neck cancer patient's needs in early survivorship to better design individualized survivorship care plans. Head and Neck Cancer patients were given anonymous needs assessment surveys in medical oncology, radiation oncology and otolaryngology surgery clinics. Patient response goal is 30-50 individual patients. This survey addresses healthy lifestyle behaviors; knowledge of late and long term side effects; and health care follow up after treatment. The team utilizes the ACSO survivorship care plan (SCPs) template for minimum content but is striving towards a needs based individualized care plan. Needs survey results will be compiled by the multi-disciplinary team to develop a more detailed Head and Neck Cancer specialized care plan. Multi-disciplinary team will then create a clinical study to compare enhanced care plan verses the SCPs based on ACSO template. This project has implications for oncology nursing practice specific to symptom management and long term care of Head & Neck Cancer patients. Some of the long-term/late side effects include musculoskeletal changes, lymphedema of the neck, xerostomia, dental caries, osteonecrosis, hypothyroidism and depression/anxiety. Health promotion considerations include smoking cessation, alcohol cessation, promotion of healthy weight and nutrition, and promotion of physical activity/exercise. SCPs will include patient's primary care physician early in the recovery process to facilitate transition to focus on healthy lifestyle as opposed to cancer focused long term care. This is a pertinent topic as ACoS standards require all cancer survivors to receive SCPs at the end of curative cancer treatment with 100% of eligible patients by 2019. Oncology nurses are key members of the health care team and will be involved with creating and delivering many aspects of the SCPs.

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### **ADDRESSING CANCER EDUCATION, SCREENING AND TREATMENT DISPARITIES IN ASIAN INDIO WOMEN: OUTCOMES AND LESSONS LEARNED.** Sharon K. Byrne, DrNP, APN, NP-C, AOCNP®, CNE, MD Anderson Cancer Center at Cooper, Camden, NJ

According to the National Action Plan for Cancer Survivorship, culturally competent collaborative community-based care is a priority. The use of outreach workers and providers who have similar cultural backgrounds or display cultural competency improve trust in patient populations thus promoting access and follow-up care. A Cancer Outreach Project has provided culturally and linguistically appropriate cancer education, screening and referral services to Asian Indio women through an innovative dedicated clinic approach. This abstract will highlight program development, outcomes and lessons learned. A partnership was established between the Cancer Outreach Project and National Indio Cooperative En-

terprises, Inc. (NICE), a non-profit organization dedicated to service of the Asian Indian community to provide sustainable education and cancer screening to non-insured/ underinsured women. Services provided by an Asian-Indio lay navigator and an advanced practice nurse include clinical breast examination, Pap smear and pelvic exam, screening or diagnostic mammography/ultrasound as appropriate, fecal immunochemical testing (FIT) and referral for colonoscopy as per American Cancer Society guidelines. Patients with abnormal findings are referred to collaborating healthcare professionals for continued services through grant funding. With IRB approval, a retrospective review of outcomes has been conducted. To date, over 500 women have been received cancer prevention and awareness education. Two hundred and fifty- five individuals are part of the programs patient panel with the majority returning over a 2-7 year period for follow-up care. While many benign outcomes have been noted, eight cancers have been diagnosed through the program; (1) DCIS, (1) LICIS, (1) Stage I breast cancer, (1) Stage III breast cancer, (2) cervical cancers and (2) endometrial cancers. While many promoters and barriers to screening have been identified in the literature, this select population identified the availability of a dedicated setting with the lay navigator and established female provider, as a factor encouraging their participation. Nursing is a vital link in the planning, development, implementation and evaluation of cancer prevention and early detection community outreach efforts. They can impact the disparity related to screening through leadership, education, and practice with targeted populations. This innovative service delivery approach is a model that others can utilize to meet healthcare needs of a population that historically has not accessed the U.S. healthcare system until late in a cancer trajectory.

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### **T.U.M.S. TACKLING UNDESIRE MODIFIABLE SYMPTOMS: REDUCING HYPOCALCEMIA-ASSOCIATED ADVERSE EVENTS DURING STEM CELL COLLECTION.** Kari Smith, RN, BSN, OCN®, West Penn Hospital, Glenshaw, PA; Patricia Reiser, RN, OCN®, West Penn Hospital, Pittsburgh, PA; Neil Palmquist, RN, CRNI, West Penn Hospital, Pittsburgh, PA

Apheresis is a procedure performed to collect peripheral blood stem cells (PBSCs) from an individual. These cells are later infused during a PBSC transplant in patients who have undergone chemotherapy for the treatment of hematologic malignancies. Hypocalcemia related to citrate toxicity occurs as one of the most common adverse events (AEs) during PBSC collections. Studies report that 51% of all AEs experienced during stem cell collection are related to citrate toxicity. Apheresis staff noted an increased incidence of more severe AEs related to hypocalcemia and were interested in minimizing the frequency of these AEs. Nurses implemented an evidence based project to examine how oral calcium improved patient outcomes during apheresis. A literature review from the last five years included research on grading of AEs specific to hypocalcemia. Studies reported that other facilities were utilizing oral calcium carbonate during apheresis in addition to the standard Intravenous calcium gluconate replacement infused simultaneously during collection. Staff began tracking AEs during apheresis using the Common Terminology Criteria for Adverse Events (CTCAE) grading scale. The National Cancer Institute developed the CTCAE grading scale to standardize reporting of AEs. Data was collected from January 2013 thru December 2015 to assess the most common side effects of hypocalcemia. Nursing collaborated with pharmacy and physicians in January of 2014 to reintroduce the addition of oral calcium carbonate to those patients undergoing apheresis. Data revealed that the addition of oral calcium replacement during apheresis did decrease the severity of AEs related to hypocalcemia. There



was a clinically significant decrease in Grade 2 AEs from 25.4% in 2012 to 3.4% in 2015. There was also an elimination of Grade 3 AEs from 4.8% in 2012 to 0% reported in 2015. These findings provided evidence supporting best practice at this facility to utilize oral calcium carbonate during apheresis. Implications to practice also include increased patient comfort, improved patient safety, optimization of staffing resources, and decreased apheresis collection time. Finally, an accurate cell count collection significantly enhances outcomes for the PBSC recipient. An experienced nurse who performed apheresis in the 1990s recalled a bottle of TUMS® was provided to patients at bedside to alleviate symptoms. Would reintroducing the use of TUMS® in conjunction with calcium gluconate bring better patient outcomes?

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**A GUM CHEW INTERVENTION TO PREVENT PROLONGED POST-OPERATIVE ILEUS IN THE ABDOMINAL SURGICAL ONCOLOGY PATIENT POPULATION—AN EVIDENCE-BASED PRACTICE CHANGE.** Linda Chan, BSN, RN, OCN®, UT Southwestern Medical Center, Dallas, TX; Melissa Trevino, BBA, ADN, RN, OCN®, UT Southwestern Medical Center, Dallas, TX; Sharon LeRoux, BSN, RN, CMSRN, OCN®, UT Southwestern Medical Center, Dallas, TX

Readers will be able to describe key components of a gum chew intervention to prevent prolonged post-operative ileus. The cost of post-operative ileus (POI) is estimated at 750 million dollars annually in the United States. Beyond financial expenditure there is unmeasurable pain and suffering for patients. Yet, research suggests gum chewing may prevent prolonged post-operative ileus. UpToDate® lists gum chewing as a potentially effective strategy. Bedside nurses are ideally positioned to teach and encourage recovering patients to chew gum. The purpose is to implement an evidence-based practice change on a 32 bed surgical oncology unit involving gum chewing with aim to prevent prolonged POI in abdominal surgical oncology patients. Nursing services worked with attending physicians to include “may chew gum prn” in order sets. Gum chew teaching packets were created that define POI, inform that gum chewing may prevent prolonged POI, and provide regular or sugar free gum for the day. Disoriented patients and those who are unsafe to chew gum are excluded. Patients choose to participate or abstain. Nurses offer gum when patients are alert, oriented, and safe to chew gum irrespective of diet orders (NPO, Clear, or Regular). Nurses continue to offer gum until the first bowel movement occurs after surgery, then the intervention is discontinued. Nursing worked with Informatics to develop a computerized flowsheet to document gum chewing in the electronic health record. To increase awareness of gum chew status, a gum chew roll call by room number occurs at the nurse shift-change huddle. The shift-change nursing handoff also includes gum chew status. From April 2016 to August 2016, 159 patients on the surgical oncology unit had abdominal surgery, 74 chewed gum, and 85 did not chew gum. Per radiology report 15 patients developed prolonged POI. Of the 15 patients with POI, 5 chewed gum (6.8%), and 10 did not chew gum (11.8%). Gum chewing is a low cost intervention with little risk for alert, oriented, recovering abdominal surgical oncology patients who safely chew and swallow. This model is replicable in other surgical units. A retrospective research study is planned to compare current POI rates with rates prior to the evidence-based practice change.

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**EVIDENCE-BASED PRACTICE FOR SLEEP-WAKE DISTURBANCES IN ADULTS WITH CANCER.** Ann Berger, PhD, APRN, AOCNS®, FAAN, University of Nebraska Medical

Center, Omaha, NE; Grace Dean, PhD, RN, University at Buffalo School of Nursing, Buffalo, NY; Eilyn Matthews, PhD, RN, AOCNS®, CBSM, FAAN, University of Arkansas for Medical Sciences, College of Nursing, Little Rock, AR; Julie Otte, PhD, RN, OCN®, Indiana University School of Nursing, Indianapolis, IN; Margaretta Page, MS, RN, UCSF Neurosurgery Division of Neuro-Oncology, San Francisco, CA; Catherine Vena, PhD, RN, Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, GA

Adults with cancer frequently report several symptoms at diagnosis, during cancer treatment, following treatment, and as long-term survivors. When symptoms are moderate-severe, they affect the treatment schedule, functioning, and quality of life. The Oncology Nursing Society (ONS) Putting Evidence into Practice (PEP) program provides valuable resources to promote evidence-based practice for cancer-related symptoms. Sleep disturbances are often the second most reported symptom; only fatigue is reported more often. The Sleep-Wake Disturbance (SWD) team synthesizes the evidence to identify interventions to reduce SWD in adult patients with cancer (<https://www.ons.org/practice-resources/pep/sleep-wake-disturbances>). ONS centralizes literature searching and establishes specific inclusion and exclusion criteria for patient outcomes. Inclusion criteria for PEP are: (a) sample must include patients with cancer, (b) research articles must report results in specific outcome/topic of interest, (c) English language, (d) research studies, systematic reviews and professional consensus and evidence based guidelines included, and (e) reference addresses interventions. Exclusion criteria are: (a) gray literature, (b) descriptive studies, (c) studies using only qualitative methods. A 2016 search updated all literature pertaining to sleep disorders, sleep initiation and maintenance disorders, therapy, AND cancer. A team of nurse scientists and advanced practice nurses with expertise on this topic work with an ONS nurse scientist and staff to summarize and appraise the evidence. The SWD team meets annually to review and categorize evidence according to PEP classification schema and to prepare and post results on the ONS PEP website. Evidence, as synthesized in 2016, is strongest for the non-pharmacologic Cognitive Behavioral Interventions/approach (Recommended for Practice) and Exercise and Mindfulness Based Stress Reduction (Likely to Be Effective). No pharmacologic interventions for SWD meet these two levels of evidence. ONS supports annual ONS PEP work to inform clinical practitioners of the interventions with the strongest level of evidence for a variety of symptoms, including SWD. ONS supports clinicians who are implementing the changes through a variety of resources, conferences, and publishing venues. Stakeholders include the SWD team and technology team that launch the evidence on the website. Interventions for SWD that are Recommended for Practice and Likely to Be Effective can be accessed world-wide by clinicians for dissemination, implementation, and evaluation in local practices. Best practice recommendations are available 24/7 on the website.

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**THE NURSE'S ROLE IN THE GROWING ISSUE OF ABERRANT DRUG USE IN PALLIATIVE CARE PRACTICE.** Tonya Edwards, RN, BSN, MS, CCRP, MD Anderson Cancer Center, Stafford, TX; Joseph Arthur, MD, MD Anderson Cancer Center, Houston, TX; Suresh Reddy, MD, MD Anderson Cancer Center, Houston, TX; Eduardo Bruera, MD, MD Anderson Cancer Center, Houston, TX; Sriram Yennu, MD, MD Anderson Cancer Center, Houston, TX

Aberrant drug use among advanced cancer patients, while not well-defined in the literature, remains a risk for those

requiring opioid therapy, particularly those with a history of recreational drug use. Balancing effective pain management with safe opioid prescribing is essential to reducing the risk for opioid related death or toxicity in this population. An opportunity was identified to develop a tool nurses could use to assess for aberrant drug use among patients treated in a palliative care clinic. The purpose of this project was to create an evidence based assessment tool to evaluate for aberrant drug behaviors in cancer patients receiving pain management. This initiative involved the development of the BITES criteria to assess for behaviors consistent with potential aberrant drug use. These criteria include: Behavioral changes; Inappropriate refill requests; Telephone calls frequently for pain medication; Emergency visits frequently for additional pain management; Safety is compromised. The BITES criteria is utilized by nurses during telephone triage with patients to identify potential risk for aberrant drug use. A tiered approach is then used to stratify patients by risk to assess for and manage pain. The program outcomes were assessed using evaluating tools, CAGE, MDAS, ESAS scores. To date we have noted a reduction of noncompliance, few missed clinic visits, decreased in ER visits, less telephone calls, and decreased for early refills. Effective management in the advanced cancer population must also be balanced with a commitment to safety, particularly among patients with a history of or at risk for the development of aberrant drug use. Using a systematic, evidence-based assessment tool to consistently evaluate patient risk behaviors can contribute to the early identification of aberrant drug behaviors and an interdisciplinary approach to safe and effective pain management in this population. To date there is a dearth of literature and assessment tools for nurses to use in evaluating cancer patients receiving chronic opioid pain management for signs of aberrant drug use. This tool provides a baseline for such assessment, which, when coupled with a strategic tiered approach to interprofessional evaluation, may enhance the safety of pain management for cancer patients.

#### **41 STANDARDIZING CEREBELLAR ASSESSMENT AND DOCUMENTATION IN PATIENTS RECEIVING HIGH-DOSE CYTARABINE.** Mary Fournogerakis, BSN, RN, OCN®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Rebecca Martin, BSN, RN, OCN®, BMTCN®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

Patients receiving treatment for acute leukemia frequently receive chemotherapy regimens containing high-dose cytarabine during induction and consolidation. Unfortunately, irreversible neurotoxicity is a potential dose-limiting side effect. Early cerebellar assessment prior to cytarabine administration can help identify potentially reversible neurotoxicity. Chart audits identified a lack of consistency in documentation of cerebellar assessments. Variability was noted in the frequency, type, and number of tests performed, and thoroughness of documentation. The purpose is to develop an accessible, standardized workflow for the assessment and documentation of cerebellar function. A comprehensive literature review was completed to identify components of a cerebellar assessment. Collaboration occurred with the oncology physicians to define assessment components to include in the new standard. The following were included: level of consciousness, orientation, general motor response, rapid alternating movements, finger to nose, pupil assessment (PERRLA), nystagmus, general mobility, handgrip, dorsiflexion, plantar flexion, heel to shin, and patient signature. A standardized cerebellar assessment tool was created, with instructions on how to perform each test. The tool was presented to nursing Shared Governance council for approval. Once approved, the informatics team helped create an electronic documentation tool linked to the electronic medication ad-

ministration record (eMAR). This prompts the nurse that a cerebellar assessment is required for high-dose cytarabine. The data could be seen on the patient care flow sheet to allow for review of prior assessments, enabling the nurse to see if the assessment(s) had changed over time. Education was developed and presented to inpatient and outpatient oncology nursing staff. Education included training on the assessment tool as well as workflow and documentation expectations. Oncology nurses currently have a standardized method for assessment and documentation of cerebellar function. The tool improves efficiency by eliminating free text documentation. Nurses are able to compare historical assessments and promptly identify adverse reactions early to prevent irreversible neurotoxicity caused by high-dose cytarabine administration. Next steps would include expanding this assessment and documentation tool to other medications with the potential of neurotoxicity. It is important for oncology nurses to assess for potential side effects of the chemotherapies they administer. Standardized tools improve efficiency and thoroughness of documentation.

#### **42 NURSING IMPLICATIONS OF CHIMERIC ANTIGEN RECEPTOR T-CELL THERAPY.** Brenna Hansen, BSN, RN, OCN®, Center for Cancer Research, National Cancer Institute, Bethesda, MD; Stephanie Cotton, BSN, RN, Center for Cancer Research, National Cancer Institute, Bethesda, MD; Jennifer Brudno, MD, Office of the Clinical Director, Center for Cancer Research, National Cancer Institute, Bethesda, MD; James Kochenderfer, MD, Experimental Transplantation and Immunology Branch, National Cancer Institute, Bethesda, MD

Chimeric Antigen Receptor T cells (CAR T cells) are human T cells that are genetically modified to express a CAR immunoreceptor that allows the cells to target specific surface proteins on cancers. CAR T cells are an emerging therapy for acute lymphoblastic leukemia, chronic lymphocytic leukemia, lymphoma, and multiple myeloma. While the results for patients are promising, the side effects of the cells, while transient, may be severe or life threatening. The purpose of this abstract is to describe common side effects related to Chimeric Antigen Receptor T cells and highlight the significance of appropriate identification of symptoms by nursing. The most well-known side effect of CAR T cells is cytokine release syndrome (CRS). This syndrome is caused when the CAR T cells recognize the target on the patient's cancer and release cytokines. The most common expression of CRS that nurses need to assess for are fevers that can exceed 40 degrees Celsius and last several days along with hypotension that can become severe enough that the patient requires transfer to the intensive care unit for hemodynamic support. Other CRS related side effects to assess for include, but are not limited to: hypoxia, cardiac arrhythmias, acute kidney injury, cytopenias, and myalgia. Careful nursing assessment for neurological toxicities is also essential as these symptoms may or may not correspond directly with CRS. (Some examples of neurological side effects are headaches, confusion, tremors, ataxia, dysphasia, and seizures.) Nursing monitoring and recognition of these symptoms can allow early detection of CAR T-cell toxicities. Due to the potential severity of these side effects, nursing's ability to understand and identify signs and symptoms can allow them to play a vital role in early intervention and safe management of the patient by the multidisciplinary team. If symptoms become severe enough, a patient may require that the effect of the T-cells be tempered with tocilizumab or corticosteroids, however, this is avoided if possible to prevent damaging the anti-malignancy effect of the CAR T cells. Having established supportive care guidelines for adult patients receiving CAR T

cells can allow nursing to know what signs and symptoms to monitor for and communicate to the medical team to allow early intervention. This can help prevent confusion and provide clear guidelines in the patient's care.

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**THE CHALLENGES FOR NURSING EDUCATION WITH THE IMPLEMENTATION OF AN ENGINEERED CELL THERAPIES PROGRAM.** Kerry Hennessy, RN, MSN, AOCN®, Dana Farber Cancer Institute, Boston, MA; Teresa Mazeika, RN, BSN, OCN®, Dana Farber Cancer Institute, Boston, MA; Michaelle Renard, RN, MSN, OCN®, MT(ASCP), Brigham and Womens Hospital, Boston, MA

With a newly crafted infrastructure, the number of patients receiving Chimeric Antigen Receptor T Cells (CAR-T), a subset of Engineered Cell Therapy, at Dana Farber Brigham and Women's Cancer Center increased exponentially. This process crosses inpatient and outpatient venues requiring intensive coordination and integrated education for nurses, providers and support staff. As Engineered Cell Therapy options rapidly moved from bench to bedside, it was critically important to target the education initiative to nurses at all entry and re-entry points in both institutions where patients might present (inpatient units, ED, Intensive Care, and ambulatory follow-up clinics). CAR-T treatment involves coordination of care and services among many disciplines and requires recognition and intervention related to the unique side effects patients' experience. Nurse Educators, Managers and Clinical Specialists working together with the physician lead for Engineered Cell Therapies, developed a plan that provided education about this therapy modality, symptom management, nursing care and patient education. A module was created in the e-learning system consisting of two videotaped presentations, a review of the patient education materials and a post test. This was assigned to all nurses in the ambulatory setting and to those nurses on designated units in the inpatient setting. Emergency Room sessions presented information on this treatment protocol, and alerted nurses to importance of early recognition and action on key symptoms patients may present with, and the crucial protocol to follow regarding contacting the appropriate provider. As patients were enrolled in the outpatient setting and admitted for treatment, important concepts were reinforced using teaching materials created from protocol materials. As the experience caring for these patients increases, it is imperative to maintain best practice and update knowledge as it is acquired. The treatment protocols for cytokine release syndrome and the need for early recognition of neurologic toxicity have already been identified and emphasized. There are now T-cell vaccines outpatient. Recent findings suggest the addition of fludarabine in the conditioning regimen may increase the potential for cytokine storm. Our latest observations seem to indicate variations in symptom profiles based on source of cells, processing techniques or combination with other immune therapies (such as check point inhibitors). As more therapies are delivered, education content will morph beyond the basics and continue to do so as experience evolves!

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**DOES CHLORHEXIDINE BATHING REDUCE CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS?** Laura Johnson, MSN, RN, BMTCN®, The University of Chicago Medicine, Chicago, IL; Rachel Hensley, MSN, RN, CNL, OCN®, The University of Chicago Medicine, Chicago, IL; Jan Beschoner, APN, MS, CNS-BC, AOCN®, The University of Chicago Medicine, Chicago, IL; Victoria Noginskaya, BSN, RN, The University of Chicago Medicine, Chicago, IL;

**Emily Hagens, BSN, RN, OCN®, The University of Chicago Medicine, Chicago, IL**

Central line-associated blood stream infections (CLABSIs) cause over 30,000 infections per year, cost \$16,000-\$29,000 each, result in 24 extra hospital days, and have a mortality rate of 35%. Daily 2% chlorhexidine gluconate (CHG) baths for patients with central lines can reduce CLABSIs by 25-75%. However, most research has been performed in intensive-care settings and there is limited data examining oncology populations. The purpose of this evidence-based practice (EBP) project was to reduce CLABSI occurrences on two adult oncology units (Unit 1, solid tumor and Unit 2, hematology-oncology/stem cell transplant) using daily CHG bathing. Due to concerns for skin sensitivity, twice weekly CHG bathing was trialed on the units prior to implementation of daily CHG bathing. After a literature review of the efficacy of daily CHG wipes in the reduction of CLABSIs and how to successfully implement quality improvement projects, a multi-faceted plan was utilized including a champion team, staff education, and creation of patient education and instructions. Compliance was monitored through twice weekly bath completion audits and the champion team met weekly to discuss results. The audit results, CLABSI occurrences, and barriers to bath completion were discussed with staff at huddles and staff meetings. In the first month, audits of daily CHG bathing revealed bath completion compliance of 60% on Unit 1 and 49% on Unit 2. Audits were continued four months after implementation and indicated an increased compliance on each unit, 88% on Unit 1 and 78% on Unit 2. In the four months prior to implementation, the CLABSI rate on Unit 1 was 0.44 per 1,000 central line-days (1 CLABSI) and Unit 2 was 2.72 per 1,000 central line-days (7 CLABSIs). In the four months following CHG bathing implementation, CLABSI rates on Unit 1 and Unit 2 declined to 0 (0 CLABSIs) and 1.90 (5 CLABSIs), respectively. As a result of the findings of this EBP project, daily CHG bathing was determined to be safe and likely contributed to CLABSI reduction. Variations between units can likely be attributed to differences in patient population, work processes, and team engagement. Therefore, this practice will be sustained with oncology patients. However, further research is needed to determine the generalizability of these findings in oncology patients.

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**OPTIMIZING A FEBRILE NEUTROPENIC CLINICAL PATHWAY FOR CANCER PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT.** Kate Kempka, BSN, RN, Froedtert Hospital Clinical Cancer Center, Wauwatosa, WI; Tina Curtis, MSN, MBA, RN, NEA-BC, Froedtert Hospital, Wauwatosa, WI; Carolyn Oxencis, PharmD, BCPS, BCOP, Froedtert Hospital, Wauwatosa, WI; John Charlson, MD, Froedtert Hospital, Wauwatosa, WI; Daniel Mielnicki, MD, Froedtert Hospital, Wauwatosa, WI; Dave Atkinson, MSIA, LSBB, Froedtert Hospital, Wauwatosa, WI

Febrile neutropenia is an oncologic emergency, with a mortality rate quoted as high as 58%, requiring immediate medical evaluation and administration of empiric broad spectrum antibiotic. Current guidelines from the American Society of Clinical Oncology, Infectious Diseases Society of America, and the Surviving Sepsis Campaign recommend time-to-antibiotic administration of 60 minutes or less. Cancer patients with fever presenting to the adult Emergency Department (ED) in this Midwest academic medical center have historically not received antibiotics within the recommended 60 minute time frame. A manual review of 84 patients treated for neutropenic fever from January of 2013 to November of 2014 revealed an average time to antibiotic administration of 156 minutes. Using an existing neutropenic fever clinical pathway as a



starting point, a multidisciplinary team of physicians, pharmacists and nurses from both the ED and Cancer Center set forth to create an efficient, team oriented approach to rapidly identify adult cancer patients presenting with confirmed or suspected neutropenic fever. The team developed a process to facilitate appropriate antibiotic administration within 60 minutes of presentation. A "Suspected Neutropenic Fever Rapid Antibiotic Pathway" was implemented in April 2016 for cancer or bone marrow transplant patients presenting to the ED. Emphasis within the pathway is placed on identification of patients at high risk for neutropenic fever, appropriate antimicrobial selection, and the administration of antibiotic without waiting for laboratory values to result. Each case in which the 60 minute goal is not met prompts a group quality review, done via e-mail, within 48 hours of the visit. Findings and Interpretation: Using baseline data from the ED from January of 2015 to October of 2015, the median time to antibiotic administration was 150 minutes, similar to data pulled from January of 2013 to November of 2014. After implementation of the new neutropenic fever clinical pathway, median time from door to antibiotic administration dropped to 67.5 minutes. It is felt that the rapid case review is instrumental in promoting pathway adherence.

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**EXPANSION OF AN ONCOLOGY URGENT CARE CENTER (OUCC) TO REDUCE EMERGENCY DEPARTMENT VISITS AND HOSPITAL ADMISSIONS.** Sharon Krumm, PhD, Johns Hopkins Hospital, Baltimore, MD; Dawn Miller, MEd, MBA, PA-C, Johns Hopkins Hospital, Baltimore, MD; Kristen Reeb, CRNP, Johns Hopkins Hospital, Baltimore, MD; MiKaela Olsen, MS, APRN-CNS, AOCNS®, Johns Hopkins Hospital, Baltimore, MD; Gina Szymanski, MSN, RN, Johns Hopkins Hospital, Baltimore, MD; Bradley Burton, PharmD, Johns Hopkins Hospital, Baltimore, MD

Oncology patients often experience acute symptoms and toxicities following medical interventions or radiation treatments. Without alternatives readily available, emergency (ED) visits are the only resource. Establishment of an Oncology urgent care clinic staffed by Oncology nurse practitioners (NP) and physician assistants (PA) and Oncology Registered Nurses can effectively decrease ED visits and focus our attention on a patient-centered model of care delivery, while improving patient safety, continuity of care, and patient satisfaction. The purpose of this project was to evaluate whether an Oncology urgent care clinic (OUCC) decreased ED visits, hospital admissions, and length of stay among oncology patients undergoing radiation treatment +/-chemotherapy or within 90 days of completing treatment. Demographics of all patients treated in the OUCC will be presented with reason for visit and disposition from the OUCC. In April 2015 this OUCC was expanded to rapidly respond to medical and radiation oncology patients requiring acute care at an urban academic hospital. Hours of operation were lengthened to 12 hours per day, Monday thru Friday. Radiation oncology patients were identified as a population previously not served by this OUCC for study. Radiation oncology patients identified as being managed by the ED were analyzed and compared to monthly data post intervention, March to June 2015. ED visits, ED visits with admissions, and direct admissions were reduced in the initial three months of the expansion of the OUCC while a significant increase in OUCC patient volume was observed. An OUCC staffed with experienced Oncology Advanced Practitioners and RNs can provide a safer and more patient driven encounter; this will also deliver a more satisfying patient experience with decreased wait times and oncology specific attention. Future study includes an analysis of outcome measures regarding morbidity and mortality and patient satisfaction.

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**THE VALUE OF NURSE NAVIGATION IN IMPLEMENTING LUNG CANCER SCREENING USING LOW-DOSE COMPUTED TOMOGRAPHY.** Denise Norfolk, RN, Florida Hospital Memorial Medical Center, Daytona Beach, FL; Imelda Unto, RN, MSN, OCN®, Florida Hospital Memorial Medical Center, Daytona Beach, FL

There is a pressing need to improve lung cancer screening and care coordination in Flagler and Volusia counties in Florida because these counties have higher than the national incidence and mortality rates in lung cancer, and a higher than state average for chronic smokers. The US Preventive Services Task Force issued a final B-level recommendation in December 2013 indicating that individuals between the ages of 55 and 80 years who have a 30-pack-year smoking history and have smoked within the past 15 years should receive annual low-dose computed tomography (CT) lung cancer screening. The Centers of Medicare and Medicaid Services issued similar eligibility criteria. The lung cancer screening committee included 15 members, representing a broad range of expertise. This team was co-led by the Regional Administrator who is a nurse and the Lung Care Nurse Navigator. The committee discussed operational, clinical and system issues related to the implementation of CT lung cancer screening and developed recommendations for implementing CT lung cancer screening program for the East Florida Region of the Adventist Health System; a four-hospital initiative. The committee identified six main objectives that must be achieved to optimize the efficiency and effectiveness of implementing CT lung cancer screening: first, form the Pulmonary Program Governance Committee; second, accurately identify persons eligible for screening; third, identify and provide access to screening at authorized and qualified locations for eligible individuals; fourth, ensure appropriate care coordination for positive and negative screening results; fifth, monitor and support continuous quality improvement of screening programs; and lastly, offer and provide a smoking cessation program for all current smokers. The committee implemented a series of stakeholder-specific pathways in order to achieve these goals. The execution of the pathway to offer effective and efficient population-based CT lung cancer screening requires involvement and coordination of stakeholders across the health care system to address the procedural, data and infrastructural requirements that were recognized. The Lung Care Nurse Navigator' role was central in this project. A goal was set to complete a total of 50 screens this year per facility. One hospital has already surpassed this goal and the rest are over 50% above it.

## Leadership/Management/Education Podium Sessions

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**BACK TO BASICS: UTILIZING TEACH-BACK AS A STRATEGY TO IMPROVE PATIENT RETENTION OF EDUCATION.** Vicki Vann, MS, ARNP, OCN®, Moffitt Cancer Center, Tampa, FL; Regina White, RN, MS, OCN®, Moffitt Cancer Center, Tampa, FL

Patients' retention of healthcare information is a widely recognized problem that may cause negative outcomes from medication errors to missed appointments. Retention of information is particularly difficult for the oncology patient as they are susceptible to fatigue and other symptoms that make remembering a challenge during an office visit or hospitalization. The purpose of this project was to plan and implement a "back to basics" strategy in the way patient education was delivered, specifically changing from a passive approach of

delivering patient education to a method where the patient's retention was confirmed and validated using teach-back. The implementation targeted nursing and other clinical non-nursing staff (pharmacy, nutrition, rehab) and included the adoption of an organizational standard, the use of teach-back scripts, completion of a one-hour class, and the validation of teach-back competency. Training teach-back "super-users" assured that this method was used consistently. A teach-back committee was also formed to address organizational needs and issues. Teach-back became the focus of staff meetings, committees, nursing orientation, and newsletters. Patients receive a Press Ganey® survey post-discharge. The educational efforts directed towards staff focused on five key areas within the Press Ganey® survey. Tracking our ranking for these five areas served as the improvement metric for this project. These key areas were tracked for twelve months as staff educational efforts continued: (a) Management of chemotherapy side effects, (b) Home care instructions, (c) Educational materials provided, (d) Treatment plan explained in own words, (e) Information provided about medications. At the end of twelve months, our overall Press Ganey® ranking for these five areas had improved on average by 112%. When engaged in patient education, a "back to basics" strategy using a consistent teach-back approach was successful in improving patient's perceptions of having received and understood information. Utilizing the teach-back method serves as a strong reminder that if we want to make sure patients understand their healthcare instructions, we must teach, verify understanding, and always reinforce!

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**WHAT'S TAKING SO LONG? AN ORIGINAL PATIENT EDUCATION VIDEO TO IMPROVE THE ONCOLOGY PATIENT EXPERIENCE, PERCEPTION, AND KNOWLEDGE OF THE INFUSION PROCESS.** Lindsey Zinck, BSN, RN, OCN®, University of Pennsylvania Health System, Philadelphia, PA; Regina Cunningham, PhD, RN, AOCN®, NEA-BC, FAAN, University of Pennsylvania Health System, Philadelphia, PA; Rob Tobin, BSN, RN, OCN®, University of Pennsylvania Health System, Philadelphia, PA; Beth A. Smith, MSN, RN-BC, Hospital of the University of Pennsylvania, Philadelphia, PA; Paige Madison, BSN, RN, OCN®, University of Pennsylvania Health System, Philadelphia, PA, Donna Capozzi, PharmD, BCOP, Hospital of the University of Pennsylvania, Philadelphia, PA

Undergoing cancer treatment can be a stressful time. Patients preparing to receive infusion therapy frequently report anxiety related to expectations surrounding the infusion experience. Oncology nurses play a critical role in educating patients to alleviate fear regarding infusion treatment. At an academic cancer center seeing 85,000 outpatient infusion visits annually, with 6,000 of those visits being first time patients, an opportunity to develop consistency in education for patients beginning infusion treatment was identified through patient feedback and Press Ganey scores. An interprofessional team created an educational video to increase patient knowledge and improve the patient experience during infusion treatment. The rationale for the video development was also evidenced by frequent reports of patient dissatisfaction with wait times and the hypothesized connection that patients do not arrive to their infusion treatment with appropriate expectations related to the length of time necessary to safely complete the infusion process. Patient interviews were initially conducted to gain feedback regarding infusion education. An original script for the video was developed detailing the entire infusion procedure, with an emphasis on what to expect at each step of the process. The video script was reviewed by

various Patient and Family Advisors and also by interprofessional infusion team members. The 10 minute infusion patient education video was completed in September, 2016 and is now being implemented with patients undergoing their first infusion treatment. Providers are encouraging patients to view the video at the time of an office visit when treatment plans are being established. This will allow the infusion nurse to assess and build upon the patient's knowledge of the infusion process after viewing. Effectiveness of the infusion education video will be measured through patient interviews and Press Ganey scores measuring wait time and education. In addition to improving the patient experience, this video may also have a positive impact on nursing practice in the infusion suite by increasing consistency and efficiency in the patient education process. High quality patient education is a critical component in supporting patients undergoing infusion treatment. Evidence supports the benefit of providing patient education using a variety of teaching methods. The development of an original video as a tool for educating patients about the infusion process is an innovative solution for ensuring that patients receive relevant comprehensive education.

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**THE ROLE OF A CHEMOTHERAPY EDUCATION NURSE IN IMPROVING PATIENT SATISFACTION.** Kimberly Hermis, DNP, RN, OCN®, The University of Texas MD Anderson Cancer Center, Houston, TX; Natalie Sanchez, MSN, RN, PCCN, CNML, CPXP, University of Texas MD Anderson Cancer Center, Houston, TX; Kimberly Foster, BSN, RN, OCN®, University of Texas MD Anderson Cancer Center, Houston, TX

A new cancer diagnosis, complex chemotherapy regimens, and visiting the ambulatory treatment center (ATC) for the first time can overwhelm a patient. Education is a key component for patients receiving chemotherapy and aids in reducing patient anxiety, promotes patient safety, and improves patient satisfaction. Differences in teaching methods and teaching content plays an essential role in how much patients retain and understand information. A strategy used to enhance patient chemotherapy education and improve patient satisfaction was through the use of a Chemotherapy Education Nurse (CEN) serving in the role of chemotherapy educator within an ATC. The purpose of the RN chemotherapy educator is to standardize the education given to all patients undergoing chemotherapy, specifically patients receiving their initial chemotherapy dose. This role was developed during a patient satisfaction meeting when the team wanted to improve the Press Ganey scores related to chemotherapy education. During the 6 months before initiation of the CEN role, the mean scores for "explanation of what to expect during chemotherapy" and "explanation of managing chemo side effects" were 90.3 (48th percentile) and 90.8 (47th percentile), respectively. At the three month mark post implementation our scores were 91.5 (56th percentile) and 90.4 (44th percentile). During the first three months, the CEN used key words from the Press Ganey survey questions to determine areas for improving the role and effectiveness of teaching methods. Based on responses from patients, this allowed the CEN to modify teaching methods to meet the needs of the patient. Based on this patient-centered approach, scores improved at 6 months post implementation. The scores for "explanation of what to expect during chemotherapy" increased to 92.4 (76th percentile) and "explanation of managing chemo side effects" increased to 92.3 (78th percentile). By implementing the CEN role, patient chemotherapy education was standardized and improved patient satisfaction. This role can easily be replicated in various clinical areas to allow for a more patient centric educational experience.

**ENGAGING NURSES IN THE DEVELOPMENT OF A PATIENT-CENTERED EDUCATIONAL VIDEO SERIES.** Jackie Foster, MPH, RN, OCN®, National Marrow Donor Program/Be The Match, Minneapolis, MN; Lensa Idossa, MPH, National Marrow Donor Program/Be The Match, Minneapolis, MN; Stacy Stickney Ferguson, MSW, LICSW, National Marrow Donor Program/Be The Match, Minneapolis, MN; Heather Moore, MPH, CHES, National Marrow Donor Program/Be The Match, Minneapolis, MN; Robin LaRocco, RN, Winship Cancer Institute of Emory University, Atlanta, GA; Elizabeth Murphy, EdD, RN, National Marrow Donor Program/Be The Match, Minneapolis, MN

Collaboration and partnerships are important principles of patient-centered care. They can mutually benefit stakeholders and lead to better patient outcomes. Patients considering blood or marrow transplant (BMT), a highly complex therapy, face a steep learning curve. They receive an overwhelming amount of information, often in clinical language. An environmental scan revealed that the few video resources available online were age or center specific. Nurses provide patient education, yet few have the opportunity to participate in large-scale patient education resource development. It is crucial to collaborate with nurses in a deliberative process to create patient education resources. The purpose was to collaborate with BMT nurses to plan, develop, implement and evaluate ten easy-to-understand patient education videos that facilitate informed treatment decision-making. Through partnership with a U.S. transplant center (TC) and collaboration with a multidisciplinary patient education advisory group, of which 11 (69%) are nurses, a series of patient education videos were developed. Nurses served in various roles: patient advocates, health educators, reviewers, and project managers. They helped: (a) define essential topics; (b) manage project logistics; (c) coordinate hospital filming; (d) maintain patient privacy; and (e) identify a diverse group of BMT clinicians, recipients and caregivers to interview. An iterative process was used to gather feedback. The result is ten innovative bi-lingual patient education videos with closed-captioning for use at any TC. The videos are organized into topic-based chapters. Animation and interviews are used to explain complex topics. Successful collaboration is determined based on project effectiveness and partnership satisfaction. Video series evaluation will measure: outreach, overall satisfaction, and achievement of learning objectives. Since launching in January 2016, the English online video series was viewed 20,049 times. An online survey is planned for 2017. Annual online satisfaction survey is sent to BMT clinician partners to measure the extent to which they believe collaboration results in optimal BMT patient educational resources. In 2015 100% of respondents indicated that by working together we develop optimal resources. While thorough patient education is in place at TCs, patients and caregivers are often overwhelmed with information. Collaboration with nurses resulted in a video series that provides simple reinforcement of complex topics and can be tailored to a patient's information needs. Nurses are essential team members to create innovative resources to support patient-centered education.

**A NOVEL CANCER GENETICS EDUCATION PROGRAM FOR PRIMARY CARE NURSES.** Emily Edelman, MS, CGC, The Jackson Laboratory, Bar Harbor, ME; Therese Ingram Nissen, MA, The Jackson Laboratory, Bar Harbor, ME; Ava Nepaul, MA, MPH, CPH, Connecticut Department of Public Health Genomics Office, Hartford, CT; Kimberly Sandor, MSN, FNP, Connecticut Nurses Association, East Berlin,

CT; Karen Hanson, MS, MBA, CGC, American Society of Human Genetics, Bethesda, MD; Kate Reed, MPH, ScM, CGC, The Jackson Laboratory, Bar Harbor, ME

Nurses play a critical role in the provision of genetic and genomic services in cancer care. However, despite the recognized importance of genetics, many nurses have low confidence and insufficient knowledge to apply genomics to patient care. There is a dearth of accessible and effective cancer genetics training programs for the primary care clinician. We describe a novel approach to cancer genetics education for the non-geneticist nurse that applies best practices in adult education, is highly interactive and clinically relevant, and uses both in-person and digital delivery. The Jackson Laboratory and the American Society of Human Genetics developed a program for clinicians to improve clinical skills in assessing and managing genetic risk for cancer. This blended learning program includes six hours of in-person content and 12 months of digital communications to reinforce and build on workshop instruction. The in-person curriculum emphasizes skill-building through standardized patient and nurse interactions, followed by peer learning with case scenarios and expert feedback to tailor learning. Engagement is enhanced through use of gamification techniques that allow participants to anonymously measure their skills against their peers. The program addresses competencies related to assessing family history, assessing the clinical utility of testing, facilitating patient decision-making, and using guidelines to manage care. Digital follow-up includes cases, infographics, tools, and online CNE that support these competencies. Sixteen nurses were recruited through the Connecticut Nurses Association to participate in the two-part program in March and April 2016. Participants completed pre and post assessments of knowledge, attitudes, and confidence, which were analyzed by Fisher exact tests. Post-workshop, nurses demonstrated improved confidence in all areas of cancer genetics ( $p < 0.05$ ). Participants also demonstrated more positive attitudes regarding the benefit of genetic testing in cancer care ( $p = 0.04$ ). Of four digital communications thus far, an average of 35% participants visited the associated educational webpage. These results indicate that this training approach was effective in improving nurses' confidence in and attitudes about incorporating genetics into practice. We will continue to engage the participants in digital education and assess outcomes at six and twelve months. Based on this pilot, we seek to implement the program with additional nursing audiences. This program was sponsored by the Connecticut Department of Public Health-Genomics Office with funding provided by CDC Cooperative Agreement #DP5355-02.

**IMPLEMENTING A PROACTIVE APPROACH TO DISCHARGE PLANNING FOR STEM CELL TRANSPLANT PATIENTS USING LEAN SIX SIGMA METHODOLOGY.** Bernadette McQuigg, RN, BSN, MBA, OCN®, CHPN, Seidman Cancer Center, University Hospitals Cleveland Medical Center, Cleveland, OH; Christina Reeber, RN, BSN, OCN®, Seidman Cancer Center, University Hospitals Cleveland Medical Center, Cleveland, OH; Brooke Nutter, MSSA, LSW, Seidman Cancer Center, University Hospitals Cleveland Medical Center, Cleveland, OH; Deborah Liedtke, RN, MSN, OCN®, Seidman Cancer Center, University Hospitals Cleveland Medical Center, Cleveland, OH; Paolo Caimi, MD, Seidman Cancer Center, University Hospitals Cleveland Medical Center, Cleveland, OH; Lauren Brister, MSN, NP-C, AOCNP®, Seidman Cancer Center, University Hospitals Cleveland Medical Center, Cleveland, OH

Discharge planning of stem cell transplant (SCT) patients is a complex and dynamic process. The rapid changes in the plan of



care require frequent input from numerous disciplines. Oncology nurses play a pivotal role in the oversight of the discharge process. Nurses are charged with ensuring that all disciplines remain engaged in discharge planning. Our program's mean length of stay (LOS) for autologous and allogeneic transplants exceeded national benchmarks by 4 and 17 days, respectively. Increased LOS impacts the cost of care delivery, increases the risks for hospital acquired complications, and decreases overall patient satisfaction. Oncology nurses need to be proactive as possible with discharge planning. The purpose of this project was to utilize a multidisciplinary approach to improve timing and efficiency of the discharge process. The goal was to reduce length of stay, overall health care delivery costs and infection risk while improving satisfaction of SCT recipients. Lean Six Sigma methodology was utilized to address the problem of our SCT LOS rates. A nurse-led multidisciplinary team was formed to identify problems and provide solutions. The current discharge process was mapped to identify delays, barriers, and complications. A fishbone diagram was utilized to identify root causes of problems. The data were analyzed, solutions were identified and a future state process was developed. The new process relied on the collaboration, coordination, and education by oncology nurses to proactively plan for all anticipated needs and redefine plans as needed. A key nurse was assigned to round daily with the medical team and provide oversight of the discharge process. Over 12 months of using a proactive discharge process, the LOS for autologous and allogeneic SCT was reduced by 4 and 16 days, respectively. This resulted in reduced room and board costs of approximately \$320,000 annually. Additionally, our program was able to reduce and maintain our central line blood stream infection rate from 6.2 to 3.9 per 1000 line days while maintaining high scores of patient satisfaction in discharge information. Lean Six Sigma methodology is effective in improving dynamic, complex processes that involve numerous healthcare disciplines. Insight from multiple disciplines is key to identifying barriers and providing timely solutions. A proactive discharge approach led by oncology nurses improves patient outcomes and reduces healthcare costs.

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**THE MIDDLE EASTERN CANCER CONSORTIUM/ONCOLOGY NURSING SOCIETY PALLIATIVE CARE INITIATIVE: PARTNERING WITH NURSES FOR GLOBAL CHANGE.** Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT; Regina Fink, PhD, RN, AOCN®, FAAN, University of Colorado, Denver, CO; Barb Gobel, RN, MS, AOCN®, Northwestern Memorial Hospital, Chicago, IL; Susie Newton, RN, MS, AOCNS®, Quintiles, Dayton, OH; Lisa Kennedy Sheldon, PhD, APRN-BC, AOCNP®, FAAN, St. Josephs Hospital, New Bedford, NH

Palliative care (PC) is instrumental in improving symptoms, alleviating suffering, and enhancing quality of life; however, PC is under-recognized globally. The 2015 Quality of Death Index, which examines PC worldwide ranked more than half the countries below the 50th percentile. The World Health Organization also measures opioid consumption; numerous countries use little to no opioids to control pain. The Middle Eastern Cancer Consortium (MECC) is a unique organization uniting health care providers from Middle Eastern and North African countries in collaboration with the Oncology Nursing Society (ONS). MECC/ONS seeks to build PC capacity, improve nursing education, and showcase its PC program as a model for the world. Over the past five years, MECC/ONS has provided PC workshops to over 1000 nurses and other professionals from 19 countries. Four day workshops are designed to engage nurse participants in developing strategies to implement palliative care, facilitate leadership, and mentor research within their organizations,

communities, and countries. Teaching strategies utilizing Liberating Structures (Conversation Café, TRIZ, Improvs, and Appreciative Interviews) engage nurse participants. Ideas emerge that are culturally relevant, feasible and sustainable within individual environments. Mentoring activities include developing research projects, conducting needs assessments, writing manuscripts, and preparing presentations. PC has successfully expanded in the Middle Eastern and East African regions, and nurses have led the way in many countries. A nurse-initiated MECC/ONS needs assessment revealed that improved pain management services have been key facilitators of palliative care; opioid consumption has significantly increased. PC beds and units, and home care are also emerging in some countries. Professionals are beginning to disclose diagnoses and prognoses, and Do Not Resuscitate orders are increasing despite being controversial in some countries. Publications with nurse authors have ensued including one multisite survey, multiple manuscripts, journal supplements, and two textbooks. This endeavor has successfully brought nurses and other professionals together peacefully, in a region with many historical conflicts. In addition to palliative care education, the initiative has enhanced people-to-people trust and engagement, strengthened mentoring relationships, promoting advocating for patients, and built mutual confidence and respect among colleagues. Other nursing and health care organizations can use the MECC/ONS model to build regional relationships to successfully advance and strengthen nursing care globally.

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**BREATHING LIFE BACK INTO CHAPTER STATUS.** Heidi Bentos-Pereira, MSN, MBA, RN-BC, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Sylvia Wood, DNP, ANP-BC, AOCNP®, St Joseph's College, Brooklyn, NY

The Oncology Nursing Society has played a pivotal role in the development of oncology nurses across the nation. Nurses rely on local chapters as a primary source for communication regarding the availability of education, professional development and networking opportunities. When a local chapter of a professional nursing organization fails to maintain the minimum requirement to remain active, the chapter transitions into an inactive status, resulting in a significant disservice to nurses. Unfortunately, this scenario became the reality for oncology nurses in Suffolk County New York. The purpose of this abstract is to inspire and rejuvenate the passion for oncology nursing through participation at the local level. Dedicated nurses from diverse backgrounds and geographical locations answered the calling face the challenges of transitioning an inactive chapter into an active chapter. The Chapter board members are committed to sharing their experience and process in rejuvenating chapter activities in efforts to exceed the reputation of the past. In addition, the purpose is to ensure the future success of the Oncology Nursing Society's presence at the local level. Interventions Transforming into an active chapter began with a communal spirit of inquiry, collaborating toward a common goal: the need to breath life into an expired chapter. Leaders emerged committed to upholding the mission and vision of the ONS. The chapter board members formed over three months from January through April 2015 and conceptualized a process involving learning from the past, identifying a vision for the future and recognizing essential talent to lead the journey. The Suffolk board planned processes consistent with Change Theory and Goal Attainment System Theory. Roles were defined, a charter created and a structure emerged over the next six months. The Suffolk County ONS received Chapter status in October 2015. Accomplishments to date include recognition of a Member Recruitment Challenge Award, successful communication with 240 members, monthly program offerings including CE and informational dinner programs. In addition, the chapter made their first donation to the Oncology Nurs-

ing Foundation as well as participating in local charity events. Nurses have a social responsibility to lead change, represent their professional organizations and mentor future generations to ensure sustainability. Chapter success requires commitment, passion and professionalism. Chapter rejuvenation was guided by theory, leaders from diverse backgrounds and structure.

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**NAVIGATION PROGRAMS NEED INFORMATICS SYSTEMS TO IMPROVE PATIENT CARE, MEASURE OUTCOMES AND DEMONSTRATE VALUE.** Kris Blackely, RN, BSN, OCN®, Levine Cancer Institute, Charlotte, NC; Victoria Morris, BA, Levine Cancer Institute, Charlotte, NC; Derek Raghavan, MD, PhD, Levine Cancer Institute, Charlotte, NC; Marc Kowalkowski, PhD, Levine Cancer Institute, Charlotte, NC; Carol Farhangfar, PhD, MBA, Levine Cancer Institute, Charlotte, NC; John Green, MD, Stanly Regional Medical Center, Albemarle, NC

Navigation programs can be costly, underscoring the need to demonstrate the value of navigation services. Yet, there is little research evaluating patient outcomes. Difficulties collecting data consistently across multiple facilities, limits the ability to evaluate outcomes and cost benefit. Purpose To develop Informatics System (IS) solutions to: (a) support standardized navigation practice and data collection across multiple facilities, (b) help navigators manage large patient cohorts more effectively, and (c) capture metrics for management of a rapidly growing, multi-center navigation program. Two IS systems were developed; one within the electronic medical record (EMR) and one as a free standing tool. The EMR tool created a central location for navigator documentation including free text and discrete data fields. The second tool assisted navigators in managing large patient loads and facilitating timely intervention, enabling navigators to view patient appointments, ED visits and hospitalizations in “real time”. Development and implementation of these IS solutions took approximately 30 months. This included system design with staff involvement, piloting functionalities, customizing the graphical display of patient information, the creation of multiple operational reports according to disease types, and staff education. Data captured from these systems was successfully used to leverage additional staffing and conduct hypothesis-driven research to compare clinical outcomes of navigated and non-navigated patients. Research findings indicated that navigated patients had lower odds of hospital readmission (Odds Ratio=0.66, 95% CI 0.48,0.92) and that non-navigated patients had shorter median survival at 12 months post-diagnosis (Hazard Ratio=2.16, 95%CI 1.72, 2.71). Availability of patient information in these systems improved interdisciplinary communications for coordination of care across multiple settings. Implementation of two IS solutions provided critical tools to build and deliver patient navigation services and improve care coordination. Standardized data capture was utilized to evaluate patient outcomes and strategically address staffing and other operational requirements. These capabilities are essential to support the work of patient navigation and demonstrate value.

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**THE IMPACT OF IMPROVED INFUSION CHAIR UTILIZATION.** Roseanne DeRiso, RN, MA, OCN®, NYU Langone Perlmutter Cancer Center, New York, NY; Jessica Mayer, RN, MA, NYU Langone Perlmutter Cancer Center, New York, NY; Jacob Ramsey, MPH, MHA, NYU Langone Perlmutter Cancer Center, New York, NY; Joan Scagliola, RN, MSN, NYU Langone Perlmutter Cancer Center, New York, NY

The implementation of an electronic health record system allows for the accurate data analysis of patient flow into the

infusion suites. At our NCI designated cancer center, even though hours of operation for the infusion center begin at 8am and cease operations at 7:30pm, a peak in patient appointment times was noted between the hours of 10am and 1pm. This created a cascade of increased patient wait times and decreased nursing staff satisfaction. A team was assembled to review this data and attempt to flatten the curve of patients arriving for treatment. Two areas for improvement were identified: the percentage of coordinated same day physician visits and short visits, 15-30 minutes, for lab draws and injections post chemotherapy. The nursing and administrative teams met with disease management physician leaders to discuss their treatment protocols, frequency of administration and necessity of physician assessment prior to each infusion. These discussions allowed for safe transition to uncoordinated visits meaning patients could safely be treated without a same day physician visit, allowing earlier start times. The second intervention was the opening of a fast track unit for patients who needed vascular device access, or intravenous insertion, for blood draws prior to a physician visit. This eliminated time in an infusion chair. This project was able to identify change in practice while maintaining patient safety and increased patient and nurse satisfaction. Both interventions decreased wait times between 10 and 1. It also allowed for improved chair utilization. Data analysis shows sustained improvement in utilization and potential for increased patient and staff satisfaction. Infusion units facing increased demand for chair time need to seek new ways to coordinate patient care that maintains safety while increasing the efficient utilization of available resources.

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**ZOOMING IN THE CAMERA LENS ON ONCOLOGY INFUSION: PUTTING THE FOCUS ON RELATIONSHIP-BASED CARE.** Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Denise Portz, MSN, RN, ACNS-BC, AOCNS®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

In a large ambulatory oncology infusion setting, establishing nurse-patient relationships is challenging as nurses care for many patients with different disease types. One nurse rarely cares for the same patient for multiple treatments. Scheduling challenges also exist, both in the process and infusion schedule template. Patients wait for a significant amount of time, causing distress and dissatisfaction. In the infusion space, a dedicated outpatient Blood and Marrow Transplant program exists. Patients are admitted for transplant and discharged, much like an inpatient stay. While in the program, nurse-patient relationships are solidified due to fewer trained nurses providing specialized care. However, prior to entering the program and once discharged, patients are cared for by any infusion nurse within the clinic. The purpose was to trial a specialized malignant hematology infusion pod, staffed with dedicated nurses, allowing for the development of nurse-patient relationships across the continuum of care. Patients with malignant hematology diagnoses would receive care from the same team of nurses for standard chemotherapy, transplant, and supportive care. This continuity along with new scheduling options would contribute to increased patient satisfaction and positive clinical outcomes. The main intervention was the creation of a malignant hematology infusion area, which included: (a) Allocation of specific space within the infusion area (b) Identification and training of dedicated nurses (c) Development of a separate, chair-based schedule (d) Streamlined scheduling process. Nurses had more accountability for patient flow and clinical care. Outcome/Evaluation: Significant improvement in patient's perceptions of time spent waiting, and simplicity in appointment scheduling as measured by a satisfaction survey. The number of individual nurses that cared for a single

patient decreased by 62%. Objective wait times decreased by 17% without increasing wait times for non-pod patients. Patient interviews revealed positive comments regarding the change. Creation of a schedule that considers both treatment start time and duration positively impacts actual wait times. Scheduling all appointments together and allowing patients to leave with a complete list of future appointments contributes to patients' perceptions of simplicity. Reducing the number of nurses a patient interacts with during their course of care fosters an environment where the nurse can better know the patient, assess changes in the patient's condition over time, and provide a support system allowing for relationship development and improved follow-through.

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**BOLD MOVES TO ACHIEVE OUTSTANDING INPATIENT SATISFACTION: AN NCI-DESIGNATED ACADEMIC CANCER HOSPITAL'S TRANSFORMATION.** Wendy Rowehl Miano, DNP, RN, AOCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Deborah Liedtke, MSN, OCN®, UH Seidman Cancer Center, Cleveland, OH; Karen Hess, RN, BSN, UH Seidman Cancer Center, Cleveland, OH; Vickie Thomas-Januska, BSN, MBA, BC-NE, UH Seidman Cancer Center, Cleveland, OH; Sara Scott, BSN, OCN®, UH Seidman Cancer Center, Cleveland, OH

Inpatient experience service standards and leadership accountability in inpatient setting enable an organization to achieve and sustain outstanding satisfaction results. In December 2015, this NCI-designated cancer hospital's patient satisfaction, as measured through Press Ganey's HCAHP survey (Hospital Consumer Assessment of Health Care Providers and Systems) fell below institution targets in six of eight domains. Despite ongoing initiatives, patient satisfaction scores, a key metric for hospital reimbursement, did not improve. The cancer hospital's president and director of nursing led bold moves modeling leadership engagement, articulating key expectations, and providing support to front line staff. The purpose of this project was to implement targeted patient satisfaction performance improvement through clear delivery of patient service standards, engaged leaders and staff. Three core strategies were executed by hospital senior leaders and inpatient managers in January 2016. Establishing and communicating inpatient service standards, key behaviors for each staff member, and multidisciplinary leader presence and daily patient rounding demonstrated the core principles, executing bold moves to achieve outstanding patient satisfaction results. Targeted practice changes included responsiveness of hospital staff, purposeful rounds, pain management, and medication education as key deliverables. Leadership rounds were focused on admissions and patients prior to discharge in order to access key deliverables. Key performance indicators and weekly dashboards were shared at both hospital and division level. Engagement of oncology nursing staff has led to unit based interventions. At the end of 3rd Quarter, 2016, year to date, seven of eight domains are well above institution targets. Recognition and celebrations have been hosted by senior hospital leadership. Bold, clear expectations and visible leaders interacting with staff, patients, and families have contributed to sustained high scores. Sustaining high scores in patient satisfaction requires systematic service standard processes, clear metrics, and senior leadership accountability. When leaders step forward, boldly to model service expectations, collaborate and reward staff, and publish key performance and behavior indicators, outstanding patient satisfaction results are achievable and sustainable.

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**MOVING QUALITY IMPROVEMENT EFFORTS, ABSTRACT DEVELOPMENT, PRESENTATIONS, AND RESEARCH**

**INTO APPLIED HEALTHCARE PRACTICE THROUGH A TRANSFORMATIONAL LEADERSHIP MODEL.** Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX

Quality improvement (QI) efforts, abstract development for presentation, and formal research are expectations of healthcare professionalism, especially among nursing in Magnet-designated facilities. The theoretical skills are minimally taught in many healthcare programs or are long-forgotten in the realities of most multidisciplinary practices. For healthcare team members to continuously improve work and care, attempt and excel at abstract writing, grow into research efforts, and disseminate results contributing to the evidence base, leaders must intentionally role-model behaviors and assist team members' professional growth. Within the Baylor Scott & White McClinton Cancer Center, no frontline healthcare team members : inclusive of nursing - had submitted an abstract for professional consideration nor were they routinely engaged in active patient QI or research efforts. Incoming leadership encouraged the multidisciplinary team to publish and present QI work within two years, much to the skepticism of the team. Leaders used both directive and participative methods to move professionalism forward. Team member's annual performance goals incrementally moved them through growth of QI, abstract-writing, presentations, and research development. Via transformational relationships, leaders and team members custom-selected project work to align with QI and accreditation needs as well as team members' passions. Leaders encouraged team members, spurred thinking through intellectual stimulation and questioning, and supported them through formal and informal education. Within three years of operations, 20 multidisciplinary team members: inclusive of various oncology nursing subspecialties - have submitted 14 abstracts for state-wide or national presentation, with 7 accepted and presented to date, and 6 currently-pending abstracts. Of the 20 team members, the initial abstract submission was a first-experience for 19 individuals, of whom 9 are associates-prepared; 7 are baccalaureate-prepared; and 3 are masters-prepared. Four team members now have formal research projects pending institutional IRB approval. Since initiation of efforts to increase the number of abstracts written, submitted, and accepted for presentation in the regional cancer center, the initiatives have been replicated in other areas of the system. Conducting care QI initiatives and then writing and submitting the results for presentation is less intimidating when the behaviors and skills are role-modeled and supported within a proactive, visionary environment. Leaders can replicate similar work to enhance team members' professionalism, moving QI work, abstract writing, professional presentations, and research from theory to practice.

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**A PROFESSIONAL NURSE DEVELOPMENT MENTORSHIP PROGRAM IN AN ONCOLOGY INFUSION CENTER.** Janice Kolsovsky, RN, BSN, OCN®, Stanford Healthcare, Redwood City, CA; Margaret Hawn, RN, BSN, OCN®, Stanford Healthcare, Redwood City, CA; Diane Martinez, RN, BSN, OCN®, Stanford Healthcare, Redwood City, CA; Denise Roldan, RN, MSN, OCN®, CNS, Stanford Healthcare, Palo Alto, CA; Angela Rodriguez, MSN, RN, CNS-BC, OCN®, Stanford Healthcare, PA

Stanford Health Care offers a professional nurse development program (PNDP) based on Patricia Benner's domains of practice for clinical nurses (CN). It entails a portfolio with very specific requirements. It encompasses the CN's achievements in the past year including education advancement, committee/community work, leadership roles and written exemplars



highlighting Benner's domains as proficient or expert. Despite management encouragement in the Oncology Infusion Treatment Area (ITA), nurses were reluctant to pursue the PNDP. Four years after inception, only 3% of nurses in the ITA had presented portfolios. A supportive nursing need had been identified. A unit specific mentoring program was developed in collaboration by ITA RNs who had completed the process in order to assist their colleagues with a challenging process. The mentoring program provided five once a month meetings which coincided with the portfolio due dates in February, June or October 1st. Each month focused on a specific part of the portfolio to help nurses track completion by the due dates. This included review of the points indicating proficient or expert, cover letters, resume, exemplars and verification letters with "homework" due at the next meeting. Leadership/management made the provision for the staff nurses to attend the program during work hours. Since inception in 2013, the number of ITA PNDP applicants/recipients has risen from 4 to 15. By end of 2015, the total ITA percentage of PNDP nurses was 24% compared to the hospital percentage of 5%. The ITA achieved the highest number of CN III and CN IV's compared to all units hospital wide. This program accomplishment was recognized by hospital leadership and deemed valuable to nursing. It has been adopted by the PNDP division of nursing education and became hospital-wide. The mentoring program has increased nurse's desire to engage in unit/hospital wide committees focusing on service improvement, research and nursing practice. This program has inadvertently increased the number of certified nurses hospital wide. Specifically, the percentage of ITA oncology certified nurses increased from 30% to 60% and continues to increase as more ITA oncology nurses seek certification. The PNDP mentoring program supported ITA nurses to achieve their professional development goals based on the program requirements. This program has been implemented and is now available, year round, to all nurses in any patient care setting.

#### 64 **SONGS FOR THE SOUL: A PROGRAM TO ADDRESS NURSES' GRIEF.** Carolyn Phillips, MSN, RN, ACNP-BC, AOCNP®, University of Texas at Austin

Oncology nurses can experience great joy in caring for their patients. But, nurses also experience great loss when their patients die. Grieving these losses is imperative to being able to continue to work with compassion. Songs for the Soul (S4S) combines the healing effects of expressive writing, storytelling, and music to help nurses address the grief and suffering they experience in their jobs. S4S is a 7-week program. The first six weeks involve a weekly expressive writing workshop to explore various topics related to the nursing experience. Each nurse produces a short story that reflects one of those deeply felt experiences. During the seventh week, each nurse works with a songwriter to turn the story into a healing song. At the end of the week, a performance showcases each nurse reading her story, followed by the songwriter performing the nurse's song. At the beginning of the program, participating nurses expressed that they did not believe they had a "story to tell" or could write. Throughout the 6-week writing workshop, the nurses learned how much they had to say. Common themes emerged from the nurses' stories, including: unprocessed grief from experiences they had never shared personally or professionally; conflict from balancing professional boundaries with personal relationships, such as when family members or friends become patients, or when a rapport forms with long-term patients; the desire to provide care with an open heart and the resulting shame felt when emotional exhaustion occurs; and the use of music to support and enhance the grieving process. Nurses recognized they were not alone in their grief. They explained that the collective experience of writing and sharing their stories, and hearing their

songs performed, honored the patients, valued their work, and deepened their emotional healing. Nurses need time and space to grieve the losses that routinely occur at work. Without the professional recognition that time and space are required for mourning, the negative effects of repeat grief accumulate. S4S created a safe space for nurses to share their losses. The use of storytelling through music created an expression of their experiences that matched the intensity of their caregiving.

#### 65 **UTILIZING A COLLABORATIVE NURSING RESEARCH NETWORKING APPROACH TO CREATE A LEARNING NEEDS ASSESSMENT PROJECT.** Marianne Jerla, BSN, Roswell Park Cancer Institute, Buffalo, NY; Theresa Zielinski, RN, MS, OCN®, Frontier Science, Amherst, NY; Marcus Sikorski, RN, MSN, ANP-BC, Roswell Park Cancer Institute, Buffalo, NY; Kimberlee Blik, RN, MS, CNML, Arnot Ogden Medical, Elmira, NY

A collaboration of nurses identified a nursing practice learning need through casual discussions at a local ONS chapter meeting. The focus was to identify ways nurses could better understand Response Evaluation Criteria in Solid Tumors (RECIST 1.1) and how increasing nursing knowledge of this could serve to improve quality of care. This led to a plan to measure perceived gaps in nursing knowledge and practice. The purpose of this quality improvement project is to develop a learning needs assessment survey to gain a better understanding if a knowledge gap exists among nurses regarding RECIST 1.1 criteria. A Plan-Do-Check-Act (PDCA) methodology was used to develop the project: Plan: The group will develop a nursing learning needs assessment tool by November 30, 2016. General topics of the questions will include: identifying patient treatment status changes utilizing RECIST 1.1, the impact of any knowledge deficit in the development of care plans and interdisciplinary clinical discussions. DO: A group of 10-15 (approximately 10%) members from a local ONS Chapter interested in participating in the learning needs assessment survey will be identified. This survey link will be sent via email to the participants. Check: The group will use the Survey Monkey aggregation functions to assist with trend analysis for the qualitative and quantitative data collected. Quantitative data will be collected using a Likert based scale. The survey responses will be evaluated by December 30th 2016. We anticipate that the data analysis will show that a gap exists in nursing knowledge regarding RECIST 1.1 criteria. If a gap does exist, we will implement an educational program to address the specific gaps identified. A collaborative nursing research networking approach is the first step in successfully identifying strategies to implement a learning needs assessment survey to measure a gap in clinical nursing knowledge. Implications for oncology nurses include: how informal discussions can lead to formal research, fostering collaboration of patient care teams, improving the oncology nurse's ability to evaluate and discuss treatment responses with patients and family to promote quality nursing care. We anticipate the results of this project to be a launching pad for future course development and research about utilizing RECIST 1.1 criteria and translating its use into oncology clinical nursing practice.

#### 66 **INNOVATION IN CHEMOTHERAPY EDUCATION: USING STANDARDIZATION AND TEACHBACK TO IMPROVE NURSE CONFIDENCE AND PATIENT KNOWLEDGE.** Katrina Fetter, MSN, RN, OCN®, LG Health/Penn Medicine, Lancaster, PA; Annie Lattanzio-Hale, BSN, RN, OCN®, LG Health/Penn Medicine, Lancaster, PA

Patient and family education is the foundation of quality patient care and management. Effective education tailored

to patients' learning needs, health literacy, and prescribed treatment regimen has significant implications for patients' ability to navigate treatment effects. Many of this institution's clinic nurses had little oncology experience resulting in patient education sessions that provided generalized materials about chemotherapy and inconsistent information. This was the impetus for developing an interdisciplinary oncology patient education committee. The committee's purpose was to make patient education more meaningful and provide evidence-based, standardized education throughout the organization while incorporating individualized needs. Algorithms were designed for common drugs and treatment regimens. They outlined the type of drug, more common and less common side effects that would be reviewed with the patient, and key points needing review but not fitting into a side effect category. Algorithms served as a reference for nurses about what to cover during the session and helped them identify what literature to compile and place in the patient's education binder. Education is focused on the more common side effects and evidence-based information sheets for symptom management are included under labeled tabs. The nurse uses a chemotherapy education checklist that offers scripting to outline education session goals, assess the patient's current knowledge, and provide teachback examples to confirm understanding. Using the binder, nurses in the infusion center reinforce concepts presented at the initial education. The process is being continuously evaluated. Outcomes were assessed pre-intervention and at two months post-implementation. Nurses were given surveys pre and post intervention. Results show increased nurse confidence in the information taught with 89% stating they are very confident compared to 60% pre-intervention. Nurses showed improvements in frequency of teachback utilization with over 75% using teachback "all" or "most" of the time. Patient recall of information was also assessed. Pre-intervention response to a fever threshold question was correct 35% of the time compared with 58% post-intervention. Knowledge of nausea and vomiting prevention increased with 45% answering correctly compared to 70% post-intervention. Providing effective chemotherapy education is challenging. This project demonstrates that standardizing education can positively impact nursing confidence and patient recall. Patient complications could also be decreased through this enhanced knowledge of self-care. This project can be replicated to improve education and outcomes at other oncology institutions.

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**IMPROVING ORAL ASSESSMENTS AND IMPLEMENTING PREVENTATIVE LOW LEVEL LASER THERAPY IN HEMATOPOIETIC STEM CELL TRANSPLANT PATIENTS TO PREVENT ORAL MUCOSITIS.** Erin Bartell, BSN, CCRN, UPMC Shadyside, Pittsburgh, PA; Ashley Layton, BSN, OCN®, UPMC Shadyside, Pittsburgh, PA; Sharon Hanchett, MSN, RN, OCN®, UPMC Shadyside, Pittsburgh, PA; Annette Quinn, MSN, UPMC Shadyside, Pittsburgh, PA; Carly Rowe, BSN, UPMC Shadyside, Pittsburgh, PA

Oral mucositis (OM) is one of the most incapacitating side effects experienced by hematopoietic stem cell transplant (HSCT) patients. 75% of HSCT patients experience mouth ulcers within 3-5 days after transplant when receiving myeloablative conditioning treatment. It is recommended that Low Level Laser Therapy (LLLT) be used in HSCT patients conditioned with high dose chemotherapy, specifically Busulfan, in order to prevent OM. LLLT is used in conjunction with a sodium bicarbonate toothpaste and normal saline mouth rinse regimen. OM not only affects patients physical abilities like eating, swallowing, and talking, but also social and emotional aspects of life. If left untreated, OM ulcerations can lead to life threatening systemic infections in immunocompromised patients.

The purpose was to educate nurses to complete a thorough oral assessment, which included recognizing the differences between stomatitis and mucositis and documenting the assessments objectively using the National Cancer Institute Toxicity Scale. Additionally, education encompassed training nurses to use the THOR LLLT machine and be competent in performing treatments and patient education. Nursing education was done by a representative from THOR, LLLT machine manufacturer. A team of "Super Users" was created to administer LLLT and performance of 1:1 education to bedside nurses regarding OM care was conducted. By collaborating with radiation oncology and the informatics department a nursing task and form was initiated to alert staff on treatment days. A policy, skills checklist, and nursing protocol/guideline were also created to assist in education per current literature. Comparison of pre and post tests showed an 11.25% improvement following education. Chart audits demonstrate compliance of daily oral assessments and administration of LLLT using the proper protocol. Preliminary qualitative assessments through patient interactions suggest that patients' quality of life is improved through the use of LLLT. LLLT is a viable treatment option for the prevention of OM. Through education and training on the administration of LLLT, nurses gained further knowledge and skill on assessing and preventing OM. In the future, incorporating OM education during nursing orientation is suggested. As a high capacity cancer institute, this education model and choice of therapy can be further expanded to other oncology populations for treatment and prevention of OM.

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**DEVELOPING NURSES COMPETENCY AND CONFIDENCE IN MANAGING RADIATION DERMATITIS AMONG BREAST CANCER PATIENTS UTILIZING A SKIN CARE ALGORITHM.** Danielle Raya, RN, CNIV, Duke University Hospital, Durham, NC; Rustica Cerillo, MAN, RN, BSN, CNIII, Duke University Hospital, Durham, NC

Breast cancer patients treated with radiation experience varying degrees of radiation dermatitis which impacts their quality of life. The importance of vigilant skin care and extensive patient teaching highlighted a need for further nursing education. The development of an easy-to-follow nursing skin care algorithm has standardized how skin care is delivered to our breast cancer patients. Develop and implement a skin care algorithm to enhance nursing competency and confidence in identifying and managing radiation dermatitis. The initial steps to this process included: (1) Recognizing common skin changes, (2) Identifying available supplies for skin care, (3) Reviewing the current skin care practice in the unit per the recommendations of the physicians and wound care nurse (4) Creating a nurse friendly algorithm based on existing recommended practice and (5) Algorithm was approved by Radiation Oncologists treating breast cancer. Once approved, the nursing staff was educated on using the algorithm along with a picture board displaying varying degrees of radiation dermatitis and the recommended skin care practice. Questions were addressed during the presentation. After implementation, a survey was conducted among nurses, radiation therapists, and breast radiation oncologists. The majority of nurses (75%) report that the algorithm increases their confidence and provides sufficient guidance in managing radiation dermatitis. Nurses commented in the survey: "I have to use the algorithm to remind me how to proceed" and "I love the algorithm!" Radiation therapists also observed that patients appear more comfortable and satisfied after receiving nursing care and education to address their skin issues. All breast radiation oncologists are very satisfied with the current skin care provided by the nursing team. The algorithm empowers the entire nursing team to provide consistent and quality management of radiation dermatitis among breast

patients. The algorithm further allows for consistency without compromising patient care due to staff turnover, vacation, or sick time. The overall positive outcome has led to the consideration of creating additional site specific skin care algorithms for other disease groups that experience radiation dermatitis.

## **69 DEVELOPMENT AND EVALUATION OF AN ONCOLOGY CONTINUUM OF CARE ORIENTATION PROGRAM TO INTEGRATE INPATIENT AND OUTPATIENT ONCOLOGY CARE.**

**Tina Tillman, MSN, RN, FNP, CNS, OCN®**, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; **Rhonda Hjelm, MSN, RN, OCN®**, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; **Deborah Forsythe, RN, OCN®**, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; **Melissa Lanner, BSN, RN**, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; **Linda Tupper, RN, OCN®**, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; **Dori Holnagel, MBA**, Memorial Hospital Presbyterian, Newport Beach, CA

Oncology care is primarily delivered in the outpatient setting. Services include multidisciplinary tumor boards, multidisciplinary team management, clinical services (radiation oncology, infusion) and psychosocial support programs. Inpatient nurses routinely expressed frustration while preparing their patients for discharge or for outpatient services, delivered at a community based outpatient cancer center. Up to date knowledge about available resources for both staff their patients lead to a sense of segregation from the continuum of care. The purpose of this performance improvement initiative was to provide an experiential opportunity for inpatient RN's to learn about the breadth of oncology resources, services and support available to them and their patients. Meetings were held with a core group of inpatient and outpatient oncology RN's, nurse educator, and cancer services leadership. Discussions lead to the development of the oncology continuum of care orientation (OCCO) pilot program. An assessment by the Oncology Nurse Navigators and inpatient RN's identified multiple resources and services of which staff was not aware. The group determined which services would add value to the nurses' knowledge base and ability to care for their oncology patients, and content of the orientation was identified. A pre and post survey was then developed to measure knowledge acquisition. A total of 53 nurses have participated in this program, with a 92% return of voluntary surveys. Analysis of the pre and post surveys showed a consistent increase in nurses' knowledge on all criteria measured. The criteria included knowledge regarding: site specific tumor boards, radiation oncology multidisciplinary team, oncology navigation, outpatient support services, and clinical flow of the oncology patient experience. RN participation in the OCCO program has integrated the inpatient and outpatient oncology teams with the same objective, to enhance the patient experience. Increased communication across the continuum resulted in improving nurses' ability to educate their patient about oncology services and nurse navigator referrals. This program has been so successful that other units on the periphery of oncology care, such as the surgical floor, ER, and specialty units are now included as participants. The nurse educator has also proposed this as an optional program for newly hired staff after their six month evaluation.

## **70 ONCOLOGY CARE IN A DEDICATED OBSERVATION UNIT: INNOVATIONS IN THOUGHT AND IMPLEMENTATION.**

**Janine Kennedy, MA, CNS, AOCNS®, OCN®**, Memorial Sloan Kettering Cancer Center, New York, NY; **Kerry Fellows, BSN, RN-BC, CEN**, Memorial Sloan Kettering Cancer Center,

**New York, NY; Jennie Matays, MS, RN, CNS, CCRN, CCNS**, Memorial Sloan Kettering Cancer Center, New York, NY

From symptom management to oncologic emergencies, patients receiving oncology treatment often require emergency care and potential admission. At a National Comprehensive Cancer Center, there was a subset of patients presenting for emergency care who did not require inpatient admission, but rather could have symptom management and control within 24 hours. Observation care is a well-defined treatment and assessment service to render a safe disposition to home within a specified timeframe. The Urgent Care Center (UCC) at this Cancer Center developed an innovative Oncology Observation program to meet this population's needs. Within the changing healthcare arena, oncology nurses must be educated on regulatory requirements and practice standards. Observation care provides decreased length of stay and healthcare costs, while increasing patient satisfaction. Due to increases in UCC visits, inpatient boarding in the UCC, and identification of patients being discharged within 24 hours, an Observation Unit for oncology patients was imperative for flow, satisfaction, and compliance. In 2014, a virtual observation program was initiated on several inpatient units while the Observation Unit was under construction. In January 2015, a nine bed observation unit, Clinical Decision Unit (CDU), opened. This unit, designed by a multidisciplinary team, provides observation patients with a quiet and healing environment. Focusing on achieving individualized clinical outcomes within a defined timeframe, patients work closely with a dedicated medical and nursing team to achieve these goals and discharge within 24 hours. In 2015, 2125 patients were placed in observation. Projected volume for 2016 is 2300 patients. There has been a consistent 30% admission rate from observation, which is marginally higher than the national average of observation programs. The most common diagnoses placed in observation are fever, gastrointestinal disorders, cardiac symptoms, cellulitis, and respiratory insufficiency. Patients with breast, lung, and colon cancers were most frequently placed in observation. A dedicated observation program for oncology patients is an innovative way to provide optimal individualized care, focused on meeting outcomes within a defined timeframe. This program was successfully implemented which led to decompression of the UCC, decreased hospital admissions less than 24 hours, and improved patient satisfaction

## **71 A NURSING LED IMPLEMENTATION OF A HOMEBOUND STEM CELL TRANSPLANT PROGRAM.** Elizabeth Rodriguez, DNP, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Christopher Brooks, MS, RN, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY; Nicole LeStrange, MSN, NP, AOCNP®, Memorial Sloan Kettering Cancer Center, New York, NY; Lindsay Donofrio, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Katie Hambricht, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

Hematopoietic stem cell transplantation (HSCT), a treatment commonly provided to patients with hematological malignancies, can safely be delivered in the outpatient setting. With the incidence of hematological malignancies on the rise, access to care becomes a prominent concern. Although a widely accepted model for care, considering alternate settings to outpatient clinics for care delivery is important. At this Center, a clinical trial opened to test the feasibility of providing care to patients receiving HSCT in the home or home-like setting. The purpose of this presentation is to describe the nurse led implementation of a Homebound Transplant program to support the clinical trial ("Pilot Trial for Homebound Stem Cell Transplantation"). Nursing care for patients receiving HSCT on



the Homebound HSCT program is provided as an extension of the outpatient HSCT clinic by deploying nurses from the clinic to the home. A home screening tool was developed to evaluate environmental safety. New tools to support patient education included a self-assessment symptom guide for emergency management, and a video for self-disconnect from portable intravenous pumps. An enhanced access program for emergency medical service transportation was established. Clinical documentation and scheduling enhancements supported communication of visit location in the electronic medical record (EMR). Nurses gained secure, remote access to EMR and other health information systems to enable real-time access to information and documentation in the home. Staff education included basics of home care nursing etiquette and safe handling and transportation of specimens and equipment. The first patient enrolled to the clinical trial in January (4 patients total to date). Nurses effectively delivered care in the home while maintaining the same standards of quality and excellence that exist in the outpatient clinic. Care of the HSCT patient in the home setting is not standard elsewhere in the United States. Therefore, this represents the first development of nursing processes and procedures to support a homebound HSCT program. This presentation will describe the journey of nurses who led the implementation, highlighting key lessons learned.

**72**  
**RECIPE FOR SUCCESS: CHEMOTHERAPY AND BIOTHERAPY TEACHING TOOLS FOR STAFF.** Colleen McCracken, BSN, RN, CMSRN, CHPN, OCN®, Froedtert Hospital, Milwaukee, WI; Rebecca Martin, BSN, RN, OCN®, BMTCN®, Froedtert Hospital, Milwaukee, WI

In order to safely administer chemotherapy and biotherapy to patients, nurses must retain an inordinate amount of information. They often have a variety of resources available, including pharmaceutical guidelines, reference texts, administration protocols, and nursing specific interventions which may be found in various locations and mediums. After several written and verbal requests from staff and leadership voicing their frustrations of their inability to easily obtain point of care resources, inpatient oncology educators at a large academic medical center created chemotherapy and biotherapy “recipe cards” to supplement staff members’ knowledge about specific regimens. The goal of this resource was to provide the oncology nurse a concise and applicable one-stop tool for chemotherapy/biotherapy regimens. The purpose of the recipe cards was to offer registered nurses and other members of the healthcare team a resource for common chemotherapy/biotherapy regimens seen at our institution; in one location and in an easy to read format. Oncology educators reviewed common inpatient chemotherapy/biotherapy regimens prescribed to patients upon admission. The regimens were simplified in a standardized easy-to-read format containing medications, administration instructions, and nursing considerations including patient and family education and patient safety tips. Prior to implementation, nursing would refer to three to six resources, all in separate locations, for information regarding a specific chemotherapy regimen. Nurses now have access to all of this information in one location. Since implementation, the staff requesting this resource has increased, including pharmacists and providers. We continue to update and have added ten additional protocols to this resource. We have met our goal, giving the staff the tools they need-readily available at their fingertips. The recipe cards are an instrument to provide various therapy regimens in one location for staff. Since creating this tool as an inpatient, nursing focused resource, many outpatient areas, including providers, pharmacists and therapists have requested the use of the recipe card for their knowledge and practice. Other organizations may wish to adapt a similar tool with their most common chemotherapy/biotherapy regimens.

## Research Podium Sessions

**73**  
**DECREASED MITOCHONDRIAL BIOENERGETICS PROFILE IN FATIGUED MEN WITH PROSTATE CANCER UNDERGOING RADIATION THERAPY.** Chao-Pin Hsiao, PhD, RN, School of Nursing, Case Western Reserve University, Cleveland, OH; Barbara Daly, PhD, RN, School of Nursing, Case Western Reserve University, Cleveland, OH; Charles Hoppel, MD, School of Medicine, Case Western Reserve University, Cleveland, OH

Fatigue is one of the most common burdensome symptoms with the greatest adverse effect on quality of life, but arguably the least understood. The study purpose is to determine associations between mitochondrial bioenergetics and fatigue in non-metastatic prostate cancer patients receiving localized radiation therapy (XRT). The physiological mechanisms behind fatigue and its increased severity during localized radiation therapy remain unknown. We proposed a mitochondrial bioenergetics mechanism of radiation-induced fatigue based on a molecular-genetic approach, linking impaired ATP production as a consequence of XRT. Based on our preliminary findings, we hypothesize that decreased BCS1L leads to a decrease of Rieske iron-sulfur protein incorporation into complex III. This incomplete complex III leads to a defect in complex III activity and causes impaired mitochondrial oxidative phosphorylation which results in decreased ATP production, contributing to fatigue. This was a prospective, hypothesis testing project with a longitudinal research design. Fatigue is measured using Patient Reported Outcomes Measurement Information System for Fatigue (PROMIS-F). Mitochondrial bioenergetics profile was measured from patients’ lymphocytes harvested in peripheral blood using an Oxygraph-2k (O2k) high-resolution respirometry system. Data were collected at 3 timepoints (baseline, midpoint, and endpoint) and analyzed using paired t-tests and linear mixed models. This is an ongoing clinical research project. Data from fifteen patients with prostate cancer receiving localized radiation therapy have been completed. The fatigue score intensified at midpoint of XRT and remained elevated at the completion of treatment ( $p=0.01$ ). Mitochondrial oxidative phosphorylation rate (coupled and uncoupled rates of complex I and III) is decreased in lymphocytes of prostate cancer patients receiving XRT at midpoint and endpoint of XRT. Furthermore, increased fatigue scores appear to be associated with decreased mitochondrial oxidative phosphorylation in fatigued prostate cancer patients undergoing XRT. This project is an essential step in pursuing a novel hypothesis designed to reveal the physiologic mechanisms of cancer-related fatigue. Our results identify potential targets for pharmacological and, in particular, nutraceutical interventions and initiate a new direction for design of nursing interventions for cancer-related fatigue. This is the first study to determine the role of mitochondrial bioenergetics function in the development of debilitating radiation-induced fatigue; additionally, a new approach was developed to measure mitochondrial oxidative phosphorylation in isolated fresh human lymphocytes.

**74**  
**IMPACT OF PERCEIVED COGNITIVE IMPAIRMENT ON WORK-RELATED OUTCOMES IN BREAST CANCER SURVIVORS.** Diane Von Ah, PhD, RN, FAAN, Indiana University School of Nursing, Indianapolis, IN; Susan Storey, PhD, RN, AOCNS®, Indiana University School of Nursing, Indianapolis, IN; Adele Crouch, BSN, RN, Indiana University School of Nursing, Indianapolis, IN

Work is central for most adults in the U.S., including women with breast cancer. More than 90% of breast cancer survivors

(BCS) in the U.S. return to work following cancer treatment. Returning to work has been found to provide meaning and purpose in life and has been linked to overall sense of well-being for BCS. However, up to 30% of BCS report difficulty returning to work due to lingering symptoms post-treatment. One symptom, that has not received much attention in regards to work-related outcomes, is perceived cognitive impairment. Current estimates suggest that anywhere from 30-75% of BCS report concerns with cognitive impairment after treatment. The purpose of this study was to examine the impact of perceived cognitive impairment [PCI] on work-related outcomes, including work ability, work performance, and intent to turn over, controlling for BCS characteristics (age, education and time post treatment) and emotional work demands. The Cancer and Work Model by Feuerstein guided this cross-sectional, descriptive study. BCS who were employed and at least 1 year post-adjuvant treatment completed questionnaires assessing perceived cognitive impairment (Functional Assessment of Cancer Therapy: Cognitive Subscale); emotional work demands (Self-Focused Emotional Labor Scale); work ability (Work Ability Index [WAI]), work productivity (Work Limitations Questionnaire [WLQ]) and intent to turn over. Descriptive statistics and general linear regression were used. 68 female BCS, ranging from 29 to 68 years of age ( $M=52.1$ ;  $SD=8.6$ ) and on average 4.97 ( $SD=3.36$ ) years post-treatment, participated. Over one-fourth (26.5%) of BCS reported poor to moderate perceived work ability, indicating substantial concerns regarding work performance. Perceived cognitive impairment significantly predicted work ability ( $p<0.000$ ), and work productivity ( $p<0.000$ ) but, not intent to turn over. Findings from this study improve our understanding regarding the impact of perceived cognitive impairment on work-related outcomes in BCS. Cognitive impairment is a common symptom reported by BCS. The growing set of options for treating breast cancer means that clinicians and patients will need to consider how best to balance the goals of treatment and risks to work once treatment is complete. This is one of the first studies to examine the impact of perceived cognitive impairment on work-related outcomes in BCS.

## 75 SUBGROUPS OF WOMEN EXPERIENCING SIMILAR TRAJECTORIES OF DEPRESSED MOOD AND ANXIETY WHILE UNDERGOING CHEMOTHERAPY FOR BREAST CANCER. Meagan Whisenant, PhD, APRN, FNP-BC, University of Utah, Salt Lake City, UT; Sandra Mitchell, PhD, RN, FAAN, National Institutes of Health, Bethesda, MD; Susan Beck, PhD, APRN, FAAN, AOCN®, University of Utah, Salt Lake City, UT; Bob Wong, PhD, University of Utah, Salt Lake City, UT; Kathi Mooney, PhD, RN, FAAN, University of Utah, Salt Lake City, UT

Substantial evidence suggests women are at risk for emotional distress during treatment for breast cancer. Oncology nurses are uniquely positioned to address the burden of mood disturbances in women at risk for emotional distress. The objective of this study was to identify subgroups of women experiencing similar trajectories of depressed mood and anxiety while undergoing chemotherapy for breast cancer. In a secondary analysis of data from two multi-site randomized clinical trials, subgroups of women experiencing similar symptom patterns with respect to mood disturbances were identified using Latent Growth Mixture Modeling (LGMM). Sample inclusion criteria included women with breast cancer undergoing initial treatment with chemotherapy, with data for at least 3 days during cycles 2 and 3. Symptom severity scores, rated on a 0-10 scale, a reliable method for measuring symptom severity, were self-reported daily using an automated system. Demographic and clinical factors related to subgroup membership were explored.

Participants ( $n=166$ , mean age 53 years,  $S.D. \pm 10.8$ ) were mostly Caucasian (91.46%); approximately half had early stage breast cancer. Two distinct trajectories of depressed mood and two distinct trajectories of anxiety were identified during each therapy cycle. Baseline severity (high versus low) was a defining characteristic of the trajectory classes. For both depressed mood ( $p < .01$ ) and anxiety ( $p = .04$ ), women who received Doxorubicin were more likely to be in the higher severity subgroup. Additionally, for anxiety, women who had not attended college ( $p = .03$ ) or who had greater inactivity ( $p = .03$ ) were more likely to be in the higher severity subgroup. Findings suggest that distinct patterns of symptom expression for depressed mood and anxiety are distinguished by baseline symptom severity. Further study is needed to determine if biologic or genomic factors are associated with trajectory class membership, as few demographic or clinical variables predicted class membership. Adverse mood symptoms occurring early in the treatment trajectory warrant individualized symptom management to improve outcomes. A unique contribution of this study is the approach to modeling the heterogeneity in change over time, using a method that is person-focused. Identification of women at risk for adverse mood changes allows clinicians to intensify their approach to symptom management, thereby mitigating the deleterious outcomes and impairments in quality of life that are associated with depressed mood and anxiety.

## 76 ASSESSING THE COMPLEXITY OF ORAL ONCOLYTIC REGIMENS. Eric Vachon, BSN, RN, Michigan State University, East Lansing, MI; Charles W. Given, PhD, Michigan State University, East Lansing, MI; Barbara A. Given, PhD, RN, FAAN, Michigan State University, East Lansing, MI

Oral oncolytic agents comprise more than 30% of all cancer treatments. Although oral agents are more convenient than IV therapy, regimen complexity is a major concern, and one of the primary causes of non-adherence. Most nursing studies have only included number of daily doses and/or cycling vs. daily dosing when evaluating oncolytic complexity. However, oral oncolytic regimens often include cycling, alternating doses, food/liquid restrictions, and increasing dosages. To capture these and other related variables, this research team developed a 19-variable weighted algorithm, based on George et al.'s (2004) Medication Regimen Complexity Index (MRCI). This report describes the process to adapt the MRCI and compare complexities across oncolytic classes, to assist nurses in identifying patients at risk of non-adherence. Using George et al.'s MRCI weighted variable scoring, variables were included to define oral oncolytic complexity and develop a quantitative oncolytic complexity measure. Data were used from medical record audits (MRA) of 274 participants from a multi-site, randomized 12-week trial testing adherence and symptom management interventions among individuals with cancer newly prescribed oral oncolytics. Baseline (initiation of agent) complexity scores were compared across oral oncolytic classes using ANOVA and pairwise-mean comparison tests. Participants' mean age was 61, with 138 males and 136 females. Oral oncolytic classes included: cytotoxics ( $n=95$ ), kinase inhibitors (KIs) ( $n=129$ ), sex hormone inhibitors (SHIs) ( $n=23$ ), and other ( $n=27$ ). Complexity scores ranged from 1-16, mean=6.80 ( $SD 2.66$ ). Cytotoxics ( $\bar{X}=8.05$ ) and SHIs ( $\bar{X}=8.56$ ) showed significantly higher complexity scores than both KIs ( $\bar{X}=5.55$ ) and other oncolytics ( $\bar{X}=6.52$ ),  $p$ -values  $< .05$ . Cycling doses, multiple medications, multiple pills per dose, and BID prescriptions accounted for increased complexity in cytotoxics and SHIs. There are no differences across age and sex. Differences among oncolytic classes provide insight for nurses as to patients that may need more education and/or increased intervention for oncolytic adherence. Cytotoxics are

usually accompanied by multiple pills and cycling doses, while SHI regimens involve multiple medications and multiple pills per dose. This treatment burden may lead to increased complexity scores, which may lead to increased patient stress and difficulty managing their regimens. By identifying increased complexity scores, clinicians would be able to proactively plan for patients with greater needs, with the intent of increased adherence and regimen management.

## 77

**CAREGIVER INVOLVEMENT IN ADVANCED BREAST CANCER SYMPTOM MANAGEMENT.** Gwen Wyatt, RN, PhD, FAAN, Michigan State University College of Nursing, East Lansing, MI; Alla Sikorski, PhD, University of Arizona College of Nursing, Tucson, AZ; Irena Tesnjak, Michigan State University Department of Statistics and Probability, East Lansing, MI; Dawn Frambes, RN, MSA, Michigan State University College of Michigan State University College of Nursing, East Lansing, MI; Amanda Holmstrom, PhD, Michigan State University Department of Communication, East Lansing, MI; Zhehui Luo, PhD, Michigan State University Department of Epidemiology and Biostatistics, East Lansing, MI

Advanced breast cancer poses multiple adverse symptoms from disease and treatments. Interventions are needed to improve health related quality of life (HRQOL). Reflexology is a symptom management intervention involving application of pressure to reflexes on the feet. The purpose was to determine the effects of a home-based reflexology intervention delivered by a friend or family caregiver compared to attention control on HRQOL for women with advanced breast cancer undergoing chemotherapy. Patient-caregiver dyads (N= 248) were randomized to reflexology or attention control groups. The intervention group caregivers were trained in a 30-minute protocol and delivered sessions to patients weekly for 4 weeks. During these 4 weeks, weekly telephone assessments of symptoms were conducted in both groups. The intervention effects were assessed post-intervention at weeks 5 and 11, including follow-up for symptom severity and interference with daily activities (M.D. Anderson Symptom Inventory), functioning (Patient Reported Outcomes Measurement Information System), general health perception (Quality of Life Index), social support (Multidimensional Scale of Perceived Social Support) and quality of patient-caregiver relationship (Quality of Relationship Tool). To examine the process of change in symptoms during the intervention, linear mixed effects models were used to relate symptom severity and interference at weeks 1-4, 5 and 11 to the study group while controlling for baseline values. Revealed were a significant reduction in symptom severity (mean difference -4.34, SE=1.85, p=.02) and interference (mean difference -3.69, SE= 1.39, p<.01). Stronger quality of relationship was associated with lower symptom interference (coefficient=2.46, SE=1.07, p=.02), but controlling for it did not diminish the effect of the intervention on symptoms. The process of change in symptoms began from intervention week 2, when the significant reductions were seen in the reflexology group compared to attention control. The group differences in symptoms remained significant for the next 3 weeks, but were reduced at week 11. Efficacy findings of caregiver-delivered reflexology with respect to symptom reduction open a new evidence-based avenue for home-based symptom management. The mechanism of action of reflexology does not appear to involve attention or social interaction and can be investigated in future studies.

## 78

**HELPING HER HEAL: ENHANCING MARITAL COMMUNICATION AND INTERPERSONAL SUPPORT IN SPOUSE**

**CAREGIVERS OF WOMEN WITH BREAST CANCER.** Frances Lewis, RN, MN, PhD, FAAN, University of Washington, SCCA, Seattle, WA; Kristin Griffith, MS, University of Washington, Seattle, WA; Ellen Zahlis, MN, University of Washington, Seattle, WA; Mary Ellen Shands, MN, University of Washington, Seattle, WA; Patricia Dawson, MD, PhD, FACS, Swedish Cancer Institute, Seattle, WA

In 2016, an estimated 307,660 women will be newly diagnosed with in situ or invasive breast cancer in the US and an estimated 153,830 will have spouse caregivers who are expected to have elevated depressed mood and anxiety attributable to the diagnosis. However, no intervention has concurrently reduced spouses' and wives' morbidity, the toll of the illness on their relationship, and enhanced the caregivers' self-care. The purpose of this study was to test the short-term efficacy of a 5-session educational counseling intervention, Helping Her Heal (R01-CA-114-561), delivered in person to spouse caregivers with hypothesized benefits to themselves and their wives. Primary goals were to improve caregivers' and wives' depressed mood, anxiety, and marital communication; spouses' behavioral skills and confidence in supporting wives and in managing their own cancer-related distress; and to increase wives' positive appraisal of spouses' support. A total of 322 women newly diagnosed with Stage 0-III breast cancer and their 322 spouse caregivers were enrolled from the Pacific Northwest, randomized to an experimental or control group, and assessed at 3, 6, and 9 months. Outcomes were evaluated using Linear Mixed Models with an intent to treat analysis. Experimental group spouses received five 30-60 minute fully scripted skill-building and efficacy-enhancing intervention sessions at 2-week intervals; controls were mailed a booklet, "What's Happening to the Woman I Love?" At 3 months, experimental spouse caregivers significantly improved on depressed mood, anxiety, marital communication, interpersonal support, self-care, and self-efficacy, compared to controls. All differences were sustained at 9 months except anxiety and depressed mood. Diagnosed wives significantly improved at 3 months on their appraisal of spouses' interpersonal support and changes were sustained at 9 months. At 9 months, experimental wives additionally improved on marital communication. The intervention did not significantly affect women's anxiety or depressed mood. The Helping Her Heal Program benefited spouse caregivers on the majority of outcomes and had a diffused benefit to wives' view of the quality of the couples' communication and spouses' interpersonal support. Brief, fully scripted educational counseling interventions delivered by nurses can positively enhance spouse caregivers' and dyadic outcomes. This is the first known randomized trial showing that an intervention delivered directly to spouse caregivers has diffused benefit on dyadic outcomes while also benefiting spouses' adjustment.

## 79

**ASSESSMENT OF A NEW CLOSED SYSTEM DRUG-TRANSFER DEVICE AT 17 U.S. CANCER CENTERS.** Kristin Rupp, RN, BSN, OCN®, Desert Regional Medical Center Comprehensive Cancer Center, Palm Springs, CA; Timothy Tyler, PharmD, FCSHP, Desert Regional Medical Center Comprehensive Cancer Center, Palm Springs, CA

Adverse effects of nursing exposure to antineoplastic hazardous drugs (AHD) are well documented. Dermal absorption from contaminated surfaces in the work environment is a likely source of exposure during drug administration. While multiple studies have documented decreased surface contamination when using CSTDs for AHD preparation, current literature has limited data regarding their use during AHD administration. The purpose of this study was to assess the effectiveness



of a new CSTD in reducing surface contamination during the simulated administration of two commonly-used AHDs. This study was conducted in 17 cancer centers to evaluate the performance of a new CSTD in containing fixed amounts of cyclophosphamide (CP) and fluorouracil (5FU) during a protocol designed to challenge the administration process. Baseline wipe samples from administration locations, two on the floor under the IV pole and one on the arm of the infusion chair, were collected for existing contamination. Metal templates were then placed on these locations followed by sampling for contamination after the CSTD was utilized. Wipe samples were analyzed for CP and 5FU by an independent laboratory using a validated method. The analytic limit of detection (LOD) for each drug was 0.002 ng/cm<sup>2</sup>. A total of 204 wipe samples were collected from the 17 centers, 102 at baseline and 102 with the CSTD after simulated administration. Either CP or 5FU residue was detected in 74% of the baseline wipe samples. The level of contamination ranged from <LOD to 3.88 ng/cm<sup>2</sup> for 5FU and 0.36 ng/cm<sup>2</sup> for CP. Following simulated administration using all components of the new CSTD, 2.0% of wipe samples were at or slightly above the LOD, at 0.003 ng/cm<sup>2</sup> for 5FU and 0.002 ng/cm<sup>2</sup> for CP. The difference in contamination at baseline compared with after CSTD use was highly significant ( $P < 0.001$ ). The new CSTD significantly reduced surface contamination with CP and 5FU during simulated AHD administration as determined by wipe sampling of environmental surfaces. Reducing environmental contamination with AHDs should reduce nurses' exposure. To improve safety in the clinical oncology workplace, future research must include performance assessment of CSTDs in actual clinical practice. Research reported in this study was supported by the National Cancer Institute (NCI) of the National Institutes of Health (NIH) under award number 5R44CA153636.

**80**  
**ELICITING THE CHILD'S VOICE IN ADVERSE EVENT REPORTING IN ONCOLOGY CLINICAL TRIALS.** Pamela Hinds, PhD, RN, FAAN, Children's National Medical Center, Washington, DC; Bryce Reeve, PhD, UNC-Chapel Hill, Chapel Hill, NC; Shana Jaobs, MD, Children's National

Medical Centre, Washington, DC; Justin Baker, MD, St. Jude Children's Research Hospital, Memphis, TN; Jenny Mack, MD, Dana Farber Cancer Center, Boston, MA; Janice Withycom, PhD, RN, Emory University, Atlanta, GA

Current assessments of treatment toxicity in pediatric oncology are limited to objective indicators graded by clinicians. A more complete and accurate assessment of cancer treatment impact on children would add subjective adverse event reporting by the children experiencing the adverse events. The more complete assessment would better inform clinical management of the adverse events. The purpose of this 8-site study is to create and validate a self-report measure of subjective adverse events (AEs) for children ages 7 to 20 years receiving cancer treatment. Using expert clinician and researcher review panels, and cognitive interviews with children, adolescents and their guardians, five steps have been taken towards the study purpose: 1) expert panel review of the 790 CTCAE items to identify the subjective AEs; 2) 187-member panel review using a Delphi approach to identify which of the subjective AEs the panelists trusted 7 to 20 year olds to accurately report; 3) 96 children and their guardians completed semi-structured interviews regarding their AE experiences; 4) 81 children and their guardians were cognitively interviewed regarding child friendly terminology for the AEs and directions and time period for the pediatric self-report AE measure; and 5) the actual measure was constructed and field tested. The expert panel identified 64 AEs in total, 16 representing core AEs (the most frequently reported were tiredness, nausea and pain). Two waves of cognitive interviewing were required as 12 of the 64 terms did not achieve agreement in the first wave of interviewing. The majority of children accurately understood the 7-day recall period used for the AE interviewing; younger children tended to prefer to have the AE items read to them. Children 7 years of age and older and their guardians are generally able to understand and willing to report on cancer treatment AEs using a 7-day recall period. A longitudinal assessment of the measure is now underway at the 8 participating sites, representing the first time that the AE ratings of children with cancer will be part of treatment toxicity reporting for oncology clinical trials. The child voice reporting cancer treatment AE could become a new trial endpoint.

# 2017 Oncology Nursing Society Annual Congress: Poster Session Abstracts

Each abstract has been indexed according to first author.

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# Clinical/Advanced Practice Poster Abstracts

**1**  
**UTILIZING A WEEKLY INTER-DISCIPLINARY TEAM TO PROMOTE QUALITY CARE FOR CONCURRENT CHEMORADIATION PATIENTS.** Dorothy Abshire, BSN, BA, RN, Baylor Scott and White McClinton Cancer Center, Waco, TX; Miriam Blasingame, BSN, RN, OCN®, Baylor Scott and White McClinton Cancer Center, Waco, TX; Debbie O'Sullivan, RN, OCN®, Baylor Scott and White McClinton Cancer Center, Waco, TX; Sheila Hunt, BA, RN, CEN, OCN®, Baylor Scott and White McClinton Cancer Center, Waco, TX; Carolyn Woods, BS, LD, Baylor Scott and White McClinton Cancer Center, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott and White McClinton Cancer Center, Waco, TX

Studies have shown, the administration of chemotherapy along with radiation produces significantly improved outcomes for patients. In order to enforce concurrency, cooperation between the many disciplines involved is necessary. Chemotherapy and radiation nurses must collaborate to ensure that the treatments are initiated simultaneously, scheduling of treatments are correct and complete, lab appointments are occurring routinely to assess for cytopenia, and that doctors' visits are in place to continue accurate surveillance. In addition, involving members from multiple disciplines can improve the communication necessary to enhance patient care. In the past year, a weekly 30 minute meeting was incorporated every Friday prior to clinic opening to discuss the treatment status of concurrent patients. Representatives from various disciplines such as radiation therapists, nutritionists, and lab technicians were invited to attend. Current and new chemoradiation patients were systematically discussed and the team addressed questions regarding treatments, scheduling, and nutritional needs. From that meeting, each patient's current chemotherapy treatment plan including medication name and cycle number, as well as the number of radiation treatments completed to date were entered into each patient's chart in an accessible location. As a result of these meetings, between August 2015 to August 2016, the disciplinary team caught and corrected at least 40 lab appointments and up to 25 missed provider's visits prior to patient infusion. Over 15 patients who were scheduled for the initiation of one modality but not the other were discovered through this process, and the start dates for the treatments were rectified. The nutritionist was alerted to over 25 individuals not otherwise referred to the service. Through this initiative, we have seen a 95% improvement in caring for this particular group. Because managing the treatment plans of individuals receiving chemotherapy and radiation can be critical and complicated, coming together as an interdisciplinary team to discuss their care is crucial. Through these 30-minute meetings, many smart catches have been made, resulting in a dramatic improvement in patient care. Establishing a routine of consistent communication with a focused goal of discussing the care of concurrent patients can be easily replicated among other interdisciplinary teams in various care settings in order to provide safe passage for this particular patient population.

**2**  
**AN OVERVIEW OF THE CURRENT STATE OF SURVIVORSHIP CARE AT U.S. CANCER CENTERS.** Sangeeta Agarawal, RN, MS, CAS, Helpsy Health, Sunnyvale, CA

A survey was conducted by ONS SIG leaders during the 2016 ONS Congress in which 566 conference attendees were polled regarding the state of survivorship care at their respective insti-

tutions. Additional insights were captured regarding the needs of nurses with respect to survivorship care. These insights were then presented to several SIG leaders who then formulated solutions for the major challenges identified in the survey. This talk will present the findings captured by the survey, discuss the challenges nurses face in administering survivorship care, and present the solutions identified by the SIG leaders.

**3**  
**DECREASING CAREGIVER DISTRESS THROUGH ZEN HOUR.** Kristen Alexander, MS, RN, OCN®, CNL, MD Anderson Cancer Center, Houston, TX; Jessica Vaughn, MSN, RN, OCN®, CNL, MD Anderson Cancer Center, Houston, TX; Toby Meyers, MSN, RN, OCN®, CNL, MD Anderson Cancer Center, Houston, TX

Cancer treatment is long and arduous, and the caregiver takes on a lot of responsibilities. Studies have shown that caregivers have unique needs outside of the patient which can go unmet up to 93.2% of the time with the top need being emotional self-care. In order to reduce this, the Caregiver Activities Committee (CAC) implemented the Caregiver Zen Hour (CZH). The CAC, which consisted of Unit Secretaries, Nursing Assistants, Nurses and the Clinical Nurse Leader, developed CZH. The primary aim of this project was to decrease the distress score of the caregiver on a modified Distress Thermometer through participation in CZH. The Plan, Do, Study, Act model was used to implement this project. After reviewing the literature and brainstorming methods of relaxation for caregivers, the team came up with the idea of CZH. CZH is a time for the caregivers to perform relaxation activities including coloring in adult coloring books, raking Zen sand gardens, reading meditation and prayer books, and using aromatherapy in order to decrease their distress level. This allows them time to leave the patient room, but not have to leave the hospital to perform self-care activities. Beverages and snacks are also provided, and soothing music is played. Funding was received from the Volunteer Endowment Program, and the program was publicized monthly through fliers and emails to all of the leukemia floors. CAC members rotate facilitating CZH in half hour increments. Participants are asked to rate their distress on a scale of 0 to 10 on the modified Distress Thermometer before and after participating in CZH. Data was collected for the first four CZHs. A total of 34 participants attended, and the results showed a mean decrease of 4.4 points on the modified Distress Thermometer. Staff who volunteered their time also commented on how the time was beneficial and relaxing. The committee will partner with the psychiatry team to get more participants to attend and officially open the time up to physically-able patients. The leadership team on this floor has also started setting up a Zen Hour for staff to allow them time for relaxation.

**4**  
**QUALITY OF LIFE AND INTIMACY IN MPN PATIENTS.** Sandra Allen-Bard, BSN, MSN, ANCC, AOCNP®, Weill Cornell Medicine at NY Presbyterian Hospital, New York, NY

As health care providers we ask a lot of questions but rarely do we address sexuality and intimacy function. MPN's are chronic diseases in which patients are living long lives. There have been MPN quality of Life studies and only 1 question of the survey actually addresses sexual function. We as health care team leave it up to patients to address it with us. Interventions can be made such as medication and improving the state of their disease. Surveys looking at the effects of certain treatments the patients are receiving may effect sexual function. Looking at correlations with clinical features and correlations of functioning scales and other symptoms in multiple analysis. Many patients live with depression and don't address it which

is also a factor of sexual dysfunction. Body image in certain MPN patients also may effect sexuality. I would like to develop a survey looking at sexual function in our patients and compare our data at the Leukemia service at Weill Cornell Medical College compared to a national view. Look at prescribed medications for ED, depression and sleep disturbance as well as pain. Discussion of how can we improve on assessing sexual dysfunction and improve the Quality of life of Patients living with MPN's. Work closely with the multidisciplinary teams to help this patient population. Can then be extended to other cancer diagnosis.

**5**  
**ELECTRONIC PATIENT HISTORY DATABASE: A MULTI-DISCIPLINARY TEAM APPROACH TO IMPROVE FLOW PROCESS.** Maria Luna Alonso, BSN, MD Anderson Cancer Center, Houston, TX; Elsy John, MSN, RN-BC, MD Anderson Cancer Center, Houston, TX; Sheen Zacharia, MSN, RN, MD Anderson Cancer Center, Houston, TX; Maria Veronica Revilla, BSN, RN-BC, OCN®, MD Anderson Cancer Center, Houston, TX; Stephanie Stewart, RN, MD Anderson Cancer Center, Houston, TX

The introduction of new electronic health information technology has become an important advancement in the healthcare sector. Adaptation and application of a new EHR system in a comprehensive cancer center provided opportunities for the Staff in Stem Cell Transplant and Cellular Therapy Clinic, providing service to 1800 ambulatory patients per year, to work as a group to leverage the EHR to make improvements in the clinical process flow. The aim of this quality improvement initiative was to examine the impact of forming a multidisciplinary team to work on processes on how to make meaningful use of electronic Patient History Data Base (ePHDB), a process of completing new patient histories prior to the scheduled visit. A multidisciplinary team (MDT) was formed by different level of care teams (Patient Access coordinator, Receptionist, Medical Assistants and Registered Nurses). The team discussed the old process and made suggestions to improve the clinic flow. A new process flow was initiated to ensure the ePHDB was completed prior to the patient's appointment time, and then implemented to collect histories in advance and coordinating with care teams to ensure compliance. Patient completion rate of the ePHDB increased from 32% (pre- March 2016) to 97% (Post- May 2016) implementation. Concomitantly, patient waiting times significantly improved from 74.5 from March 2016 to 84.6 in May 2016 per PRESS GANEY report. A month after the implementation of the new process flow, significant improvements in completion of ePHDB and improved patient wait times to see the physicians were observed. A well-formed, organized multidisciplinary team approach can bring a significant improvement in getting the ePHDB completed prior to patient arrival in the clinic setting.

**6**  
**CHASING ZERO WITH CLABSI CHAMPIONS AND NURSING LEADERSHIP.** Daynabelle Anderson, RN, BSN, OCN®, CCRN, USC Norris Cancer Hospital, Los Angeles, CA; Jill M. Wilson, MPH, BSN, RN, CIC, USC Norris Cancer Hospital, Los Angeles, CA; Paulita Seno, BSN, RN, PHN, USC Norris Cancer Hospital, Los Angeles, CA; Hilary Sykes, RN, BSN, OCN®, CCRN, USC Norris Cancer Hospital, Los Angeles, CA; Anabel Cantero, RN, BSN, USC Norris Cancer Hospital, Los Angeles, CA; Awa Jones, RN, BSN, MSHCM, USC Norris Cancer Hospital, Los Angeles, CA

Reduction in incidence of Central Line Associated Blood Stream Infection (CLABSI) in our Oncology/Hematology/Blood

and Marrow Transplant (BMT) population has proven difficult to sustain. Despite previous efforts aimed at CLABSI reduction, decreases were only transient and the overall incidence continued to rise. Unit-based CLABSI Champions and Nursing leadership took ownership of this issue and became directly involved in the training and validation of staff nurses. This engagement highlighted the importance of central line care, thus resulting in improved commitment and compliance by staff. The purpose is to provide a comprehensive and consistent approach in the care of our patients with central lines and to ensure sustainability of CLABSI reduction efforts. Quarterly validations of central line dressing changes and maintenance practices for all Staff Nurses (including Travelers) are conducted by unit-based CLABSI Champions and Nursing Leadership: Just in time validation for our agency nurses on central line access protocol. Weekly point prevalence studies are conducted on all patients by CLABSI Champions and Nursing Leadership. Incidence of CLABSI in 2016 was compared to the same time period in 2015. From January through August in 2015 there were 31 CLABSI events. In 2016 for this same time period we had 13 CLABSIs for a decrease of 58%. Central line utilization was also found to have decreased as an unintended, yet positive outcome. Device Utilization from January through August 2015 was 0.18. In 2016 for the same time period the ratio decreased to 0.14 which is below national averages for this population. Previous efforts at CLABSI reduction lacked routine validation of skills and application of knowledge. While nurses were educated on the various aspects of central line care and maintenance, evidence of their actual practice was anecdotal. Implementing skills validations ensured standardization of nursing practice. Multi-disciplinary collaboration with Nursing, Infection Prevention, Pharmacy, Environmental Services, and Administration also played a key role in CLABSI reduction efforts. While it is widely accepted that adherence to care bundles positively impacts patient outcomes, it is best sustained with strong organizational support. Our results indicate that organizational support in the form of direct nursing leadership involvement with patient care staff had the most significant impact on CLABSI reduction efforts.

**7**  
**OPTIMIZING ADHERENCE TO SKIN CARE RECOMMENDATIONS DECREASES SEVERITY OF RADIATION DERMATITIS AMONG WOMEN RECEIVING RADIOTHERAPY FOR BREAST CANCER.** Lena Andriths, BSN, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Carole Bauer, MSN, RN, ANP-BC, OCN®, CWOCN, Karmanos Cancer Center, Detroit, MI; Pamela Laszewski, BSN, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Cindy Zelko, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Eva Vera Cruz, BSN, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Morris Magnan, PhD, RN, Karmanos Cancer Center, Detroit, MI

Radiation dermatitis (RD) occurs in more than 95% of patients receiving radiation therapy and can result in impaired quality of life and an inability to perform activities of daily living. For women undergoing radiation therapy for breast cancer this can be especially problematic given the area to which the radiation therapy is delivered. In prior work, the authors demonstrated that a structured, multimedia, theory-based supportive-educational program contributed to high levels of skin care adherence, delayed onset of skin toxicity by four days, but did not affect the severity of skin toxicity. It is not clear whether a similar program of education might influence levels of adherence and skin toxicity among women undergoing radiation therapy for breast cancer. The purpose is to determine to what extent a highly structured, multimedia, theory-based supportive-educational program might optimize adherence to skin care recommendations, delay the onset of RD, and minimize the severity of RD among women receiving



radiotherapy for breast cancer. A multidimensional evidence-based supportive-educational intervention based on ONS PEP guidelines and the WHO adherence model was used to optimize adherence to skin care recommendations. Initially, patients received multimethod (verbal, written, video) pretreatment instruction about skin care. Planned reinforcement occurred at treatment weeks 1 and 3 using the patient's preferred method (verbal, written, or video). All verbal instruction was provided by specially trained oncology certified nurses. Outcomes evaluated included: (1) level of adherence to recommended skin care, (2) number of days to onset of RD, and (3) the highest level of RD experienced. Outcomes 2 and 3 were evaluated against a matched comparison group. Notably, the severity of RD was significantly less (Chi square = 4.61,  $p = .032$ ) in the intervention group ( $N = 24$ ) compared to the comparison group ( $N = 60$ ). Our findings suggest that using a highly structured evidence-based multimedia educational program with planned reinforcements to teach breast cancer patients about skin care during radiation therapy has a demonstrable positive effect on levels of adherence, onset of RD, and a significant decrease in the severity of RD. Radiation oncology nurses might expect better patient outcomes related to the onset and severity of RD among breast cancer patients if evidence-based skin care instruction is provided consistently and planned reinforcements are built into their educational program.

## **8 SIMPLE STEPS, BIG WINS: WAYS FOR NURSES TO CONNECT WITH AND ENGAGE PATIENTS AND FAMILIES.**

**Christina Aning, BSN, RN, Nebraska Medicine, Omaha, NE; Theresa Woodrum, BSN, RN, OCN®, Nebraska Medicine, Omaha, NE; Heidi Tonne, BSN, BA, RN, Nebraska Medicine, Omaha, NE**

Anticipating the expansion of comprehensive cancer care services, a renewed focus on optimizing patient experience and advancing a culture of service and collaboration became critical. Interviews revealed patients frequently have fears or concerns they are uncomfortable voicing to their care team. Family members, who act as primary caregivers, often struggle with feelings of helplessness while their loved one is hospitalized. The relationship between the nurse, patient and family is essential to ensuring open communication and respect. We aimed to strengthen the connection between the three and empower patients and families to become actively involved in their care. Interventions After feedback from the Experience Innovation Network, a Sacred Moment initiative was implemented to help create trusting relationships between nurses, patients and families at the onset of care in order to increase engagement, coordination and collaboration. Upon admission to the Oncology/Hematology Special Care Unit the nurse initiates an uninterrupted conversation with the patient and family. This allows the nurse to build a foundational connection, identify and engage families and address physical, emotional and spiritual needs. All patients are asked "What are you most concerned about?" This provides key insights for the nurse to incorporate into their care of the individual and family. To address feelings of helplessness during an inpatient stay, patients, families and nurses developed a list of care activities that could be performed by the patient and family. This Optional Caregiver Menu encourages patients and families to become actively involved in their care. The menu lists basic nursing cares, such as ambulating and oral hygiene, and allows family members to partner with nursing to ensure completion. A form enables patients or family members to document completed cares. Scores on the inpatient satisfaction domain of "courtesy/respect" increased post implementation of both initiatives. Additionally, nurses expressed a restored sense of purpose in their professional lives. The Sacred Moment gives patients a

platform to voice concerns or fears related to complex oncology care while allowing nursing staff to form relationships and return to the fundamental reason they became nurses. The Optional Caregiver Menu empowers patients and families to actively engage in care delivery and outcomes. Both of these simple strategies can significantly increase the care experience for patients, families and nursing staff.

## **9 UTILIZING A PATIENT-REPORTED QUESTIONNAIRE TABLET TO ASSESS THE PSYCHOLOGICAL DISTRESS RELATED TO VAGINAL BRACHYTHERAPY.** Samantha Aquino, MSN, RN, AGPCNP-BC, NYULMC, New York, NY; Maureen Oliveri, MSN, RN, NYULMC, New York, NY; Adelina Cabrera, BSN, RN, OCN®, NYULMC, New York, NY; Barbara Pietrzyk-Busta, BSN, RN, NYULMC, New York, NY; Stella Lymberis, MD, NYULMC, New York, NY

Evidence has shown treatments for gynecologic cancers can pose a serious threat to quality of life and psychosocial functioning for survivors. Specifically, intra-cavity vaginal brachytherapy for cervical and endometrial cancers can cause a negative impact on quality of life and post-traumatic stress disorder after treatment. Oncology nurses play a crucial role in assessing underlying distress/anxiety and psychosocial issues before, during and after the course of radiation therapy treatment. We present an innovative implementation of a tablet assessment tool to identify those risk factors for psychosocial distress which may occur in female patients undergoing vaginal brachytherapy. The department of radiation oncology utilizes new tablet technology to allow patients to self-report and identify underlying psychosocial risk factors before undergoing vaginal brachytherapy for cervical and endometrial cancers. The questionnaire is provided to the patient before, during treatment, and at follow up visits. We customized the questionnaire combining two validated assessment tools, to screen for urinary, bowel and sexual symptoms. We also included novel screening questions related to past trauma and sexual abuse, which can be difficult for patients to discuss openly. A literary search was performed using the keywords: quality of life, distress, touchscreen, assessment, brachytherapy, and radiation therapy. This literary search provided us with validated screening tools to measure distress and quality of life of patients undergoing vaginal brachytherapy before, during, and after treatment. These findings will allow for early detection of distress so that an appropriate intervention can be rendered. The use of a tablet questionnaire allows patients to privately answer questions at their own pace that can be difficult to discuss. The information provided by the touchscreen patient assessment tool facilitates a discussion with the oncology nurses and radiation oncologist, to better provide supportive services. In a prospective trial, we will evaluate whether early detection and intervention will improve patient's quality of life and prevent long term trauma after vaginal brachytherapy for both cervical and endometrial cancers.

## **10 YOU ARE WHAT YOU DO!** Maria Arevalo, RN, MSK, New York, NY; Yeou Chuan Mary Feng, RN, Memorial Sloan Kettering Cancer Center, New York, NY

The purpose of this abstract is to bring awareness to oncology nurses the importance of self-care measures and ways to prevent mental and physical fatigue. Oncology nurses are not immune to stress. Poor body mechanics, long work hours, and overall poor health maintenance contribute to workplace fatigue. Medical errors, which is now the third leading cause of preventable death, is one such consequence from oncology nurse workplace fatigue. The incidence rates of back injuries

in nurses are more than double that among construction workers and highest compared to any profession. Manual lifting and other patient handling are high-risk activities for nurses. Research reveals that proper body mechanics and lifting techniques alone have consistently failed to reduce job related injuries. In order to prevent injuries or further injuries, we need to bring awareness to our fellow oncology nurses. Education in precautionary measures, preventive care, and available resources can promote nurses to be in control of their own self-care. Precautionary measures are available per institution. Some institutions have Lift Teams with extra staff on call for lifting help. Memorial Sloan Kettering (MSK) provides and encourages the use of lifting devices. For examples, Hoyer lifts, ceiling-mounted mechanical lifting devices for bariatric patients and hospital bed trapeze. Preventive measures include maintaining a health body mass index, having an exercise routine developed by a physical therapist or trainer, a healthy diet, adequate sleep, maintaining a healthy work/life balance, and routine medical checkups. At MSK we promote health and wellness through the Employee Wellness Program by offering employees complimentary services. For instance, screening services, stress management programs, nutrition and weight management, tobacco cessation, exercise and fitness, and an online tool that makes it easy for you to track your personal health information. Oncology patient populations are more ill than ever before. Oncology nurses do not choose to make errors or to harm their patients. However, being fatigued, both mentally and physically, contributes to an unsafe work environment. In order to perform well, oncology nurses must be able to practice vigilance. The time is now to break this bad habit and create new healthy habits. Our goal is to educate, inform and encourage oncology nurses to take control of their wellbeing by facilitating their first step to the right step.

## **11** **LYMPHEDEMA EDUCATION IN PATIENTS WITH BREAST CANCER.** Marissa Arsenault, RN, MSN, Wentworth Douglass Hospital, Dover, NH

Lymphedema is a chronic condition that affects many breast cancer survivors. Recent improvements in technology such as imaging and surgical techniques have decreased the incidence of lymphedema, however patient education remains unchanged. An inconsistency among nurses and physicians regarding patient education and the risk of developing lymphedema was identified. Traditionally, nurses are taught to avoid the affected limb in order to prevent lymphedema development in patients with breast cancer. It was noticed however that patients were routinely stating that their surgeon informed them that there was little to no risk of lymphedema when using the affected limb. This inconsistency led to an increase in anxiety and a decrease in the patient's trust of their clinicians. As a result, the clinical question: "Should patients who have had a sentinel lymph node biopsy avoid using the affected limb for venipunctures and blood pressures, or does current evidence-based research suggest that it is safe to use the affected side without increasing the risk of lymphedema throughout their survivorship?" was asked. This project set out to revise current patient education regarding lymphedema risk factors utilizing current evidence-based research, ensuring patients are given synergistic information within the Wentworth Douglass Health System. A literature review was conducted and it was found that risk-reduction practices must be patient-specific. The review concluded that there are multiple factors that may increase a patient's individual risk level and if patients are given standardized education, it may result in poor patient outcomes such as an increase in anxiety, a decrease in trust of providers, and an increase in lymphedema development. In order to educate patients accordingly, implementing a decision matrix to assist staff in educating patients on ways in which

to reduce their individual risk of developing lymphedema is recommended. This project has resulted in the creation of a decision matrix to guide clinicians in the education of patient-specific lymphedema risk reduction practices. Once approval has been obtained by stakeholders, education of this decision matrix will be provided to staff, ensuring synergy between all providers when educating patients on ways to reduce their risk of developing lymphedema, improving patient outcomes.

## **12** **DROPPING KNOWLEDGE, NOT PATIENTS: REDUCING FALLS ON A HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT) UNIT.** Dianna Assalone, BSN, RN, OCN®, New York Presbyterian: Weill-Cornell Medical Center, New York, NY; Thanyanee McNinney, BSN, RN, OCN®, New York Presbyterian: Weill-Cornell, New York, NY

According to the Center for Disease Control, 1 in 5 falls results in serious injury; this includes broken bones or a head injury. Medicaid and Medicare no longer reimburse hospitals for injuries related to falls. HSCT and oncology patients have unique risk factors such as thrombocytopenia and metastatic disease affecting their bones, putting them at high risk for injuries when a fall occurs. Fall prevention education has shown to reduce falls among patients whom are cognitively intact, in acute care settings. Our nursing team recognized the need to implement a one-to-one patient education fall prevention program. The purpose of this study was to determine effectiveness of a patient education fall prevention program on a 16-bed HSCT in-patient unit. From March 2015 to September 2016, we educated 219 patients on fall risk factors and prevention techniques. Patients learn about their risk factors for falls with injury, thrombocytopenia, metastatic disease involving bones, chemotherapy, pain medication, and transplant side effects. This education included proper body mechanics, keeping personal items close to the bedside, sitting up slowly, calling for help when needing assistance, call bell usage, and bed alarm use. "Call, Don't Fall" signs were posted in each room with the patient's preferred language. Nurses distributed Fall Prevention pamphlets and evaluated patients with the teach-back method. Over a period of 19 months, from March 2015 to September 2016, an average of 13 patients were educated each month. Prior to implementation, our fall rate averaged 2.14 patients per month. Post-implementation, our fall rate decreased, on average, to 1.6 per month, effectively reducing falls by 15%. During months with 100% of patients educated, the average fall rate was 1.2. In August and September 2015, the least number of patients were educated due to staffing challenges; the average fall rate was 1.5. Today this programs continues. Patient education helped reduce falls. Individualized patient education save lives and improve patient outcomes. Oncology nurses play an important role in assessing patients' falls risks and educating on ways to prevent falls. To effectively prevent falls, all nurses and members of the multidisciplinary team should proactively educate patients and their families on fall prevention.

## **13** **SKIN HEALING IN HEAD AND NECK RADIATION ONCOLOGY PATIENTS.** Lesley Bailey, RN, MD Anderson, Houston, TX; Kathy Henye, RN, MD Anderson, Houston, TX

Patients were consistently seen to be suffering from prolonged recovery time and significant scarring of skin during and post radiation treatment for head and neck cancer. A need was identified to further educate nursing on available products to accelerate the healing process, decrease patient discomfort, decrease treatment breaks, as well as decreasing long term scarring. The purpose of this project was to identify alternative products that can accelerate healing of skin desquamation related to radiation treatment. The goal was to decrease patient

suffering, decrease the possibility of break time during treatment, and quicken healing prior to completion of radiation. The team conducted a review of results related to the use of different products for wound care of burns. Those alternative therapies were then modified and utilized on patients with similar skin changes according to the Radiation Oncology Toxicity Grading (RTOG) scale. Daily assessments were conducted on the patients and changes in products were made according to the reaction. This intervention decreased the required nursing assessment visits following completion of radiation due to the acceleration of re-epithelialization. The RTOG scale was utilized to identify patients with a Grade 3 moist skin desquamation. These patients were treated with Alginate and noted to have a marked decrease in their RTOG rating. Many decreasing to a Grade 1 prior to the completion of treatment. Patients not treated with the Alginate dressings, also identified as a Grade 3, maintained the higher rating with longer healing times post treatment. Use of Hydrogel with an Alginate product in moist desquamation skin changes decreased the patients healing time and reduced long term scarring. There was also a decrease in treatment breaks and increase in patient comfort. The improper use of Alginate has shown to increase skin breakdown. It is imperative that patients are closely monitored daily in clinic to avoid this. The daily use of this product combination progressed patient results and recovery time during and post treatment. Early recognition by practitioner to begin appropriate treatment resulted in improved healing outcomes. This project improved the lack of knowledge related to moist desquamation treatment during and post radiation head and neck therapy. These results can assist in further education for medical practitioners to improve patient outcomes within our radiation staff.

## 14

**ENHANCING THE KNOWLEDGE AND CONFIDENCE OF ONCOLOGY NURSES CARING FOR PATIENTS WITH MALIGNANT FUNGATING WOUNDS.** Vanessa Baird, RN, OCN®, MD Anderson Cancer Center, Houston, TX; Afton Dickerson, RN, MD Anderson Cancer Center, Houston, TX; Christi Bowe, RN, NP-C, MD Anderson Cancer Center, Houston, TX; Carol Stalzer, BSN, RN, CBCN®, MD Anderson, Houston, TX; Julia Moore, RN, CBCN®, MD Anderson Cancer Center, Houston, TX; Juana Castaneda, RN, CBCN®, MD Anderson Cancer Center, Houston, TX

While infrequent in occurrence, malignant fungating wounds (MFWs), which occur in up to 10% of patients with metastatic disease, have significant implications for the nursing management and quality of life of these patients. This low volume, high acuity presentation, frequently experienced in the breast cancer population, can provide challenges to the education, training, competency and confidence of the oncology nurse. At a National Cancer Institute-designated comprehensive cancer center the Wound Ostomy and Continence Team was primarily responsible for initial assessment of MFWs, however an opportunity existed to evaluate and enhance the knowledge and confidence of ambulatory care nurses in providing continued palliative management of these wounds. The purpose of this quality improvement initiative was to improve the knowledge and enhance the confidence of ambulatory oncology nurses managing MFWs. This initiative involved the development of an evidence based educational program for nurses focusing on the etiology and management of MFWs, as well as the holistic care of the patient. The program outcomes were assessed using two evaluations, one a 10-item pre- and post-test assessing knowledge of the care of MFWs immediately before and after the educational intervention; and the second a brief assessment of nurses' subjectively reported confidence in the management of these wounds, also administered before and six month after the

educational intervention. A total of 17 subjects were included in the analysis. Summary statistics were used to describe the knowledge items by pre and post-test. Knowledge scores improved significantly after the education intervention ( $P < 0.001$ ). Mean pre test scores were 42.9 (95% CI: 33.1 : 52.6). Mean post test scores were 82.4 (95% CI: 75.2 : 89.5). On the confidence pre-test assessment 0% reported feeling very confident, 47.06% reported feeling somewhat confident and 52.94% reported not feeling confident in caring for MFWs. The confidence assessments were again administered at 6 months post-educational intervention. At this time 13 individuals responded and 30.77% reported feeling very confident, 69.23% reported being somewhat confident and 0% reported being not confident. Providing education for low volume, high acuity procedures, such as MFW care, are important to enhance the knowledge and confidence of nurses caring for patients with these presentations. Ultimately this may contribute to improved patient quality and satisfaction outcomes.

## 15

**READY, SET, TRANSFUSE: DEVELOPING A SUSTAINABLE WORKFLOW FOR SERIALLY TRANSFUSED PATIENTS.** Samantha Barrington, RN, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Tina Curtis, MSN, MBA, RN, NEA-BC, Froedtert Hospital & the Medical College of Wisconsin, Milwaukee, WI; Tabetha Walden, BSN, RN, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Dawn Radsek, BSN, RN, OCN®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

In our large, outpatient academic Cancer Center, the process of serial transfusion visits for malignant hematology patients has long been challenged by multiple visits, repeat blood counts, and time delays for blood product administration. Serial transfusion patients are often tangled up in a series of repeat, fragmented visits in different departments with no one person navigating them through their transfusion journey. Finally, patients needing transfusion were often treated solely on their blood count results, without having a physical assessment done first. The purpose of our project was to define a standardized nursing workflow for patients requiring serial transfusion. The project included the implementation of a "transfusion nurse", along with expectations around standard work, communication, and utilization of the EHR. This initiative helped to standardize a transfusion process from first lab draw to the end of the transfusion visit. A multi-disciplinary workgroup comprised of a hematology clinic and infusion nurse, a Clinical Nurse Specialist, a malignant hematologist and a nurse informaticist was created. The idea of a "transfusion nurse" was developed in the hematology clinic using an existing staff member as a single point of contact for patients requiring serial transfusions. Patients were asked to complete their lab draw, and proceed to clinic for a nurse visit appointment with the transfusion nurse. This nurse reviewed their symptoms and lab results, and scheduled a transfusion based on a pre-existing order set if needed, and scheduled their next blood draw and transfusion nurse visit. This nurse had the autonomy to determine if urgent, same-day, or next-day transfusion was needed, based on the assessment and lab values. Provider support was available in the clinic as needed. Transfusion-related care became more personalized as the nurse became familiar with patients, recognizing patient-specific assessments and forecasting for transfusion needs. Additionally, a transfusion history section was created within the EHR to quickly allow the transfusion nurse the ability to detect transfusion specifics (CMV status, HLA history, etc.) to further simplify the ordering process. The creation of an identified "transfusion



nurse” role has allowed for consistency for both the serially transfused patient and the malignant hematology provider. Both the hematology clinic and the infusion room nursing staff have been pleased with the improved workflow, documentation, and patient scheduling.

## **16 PSYCHOSOCIAL DISTRESS CHANGES THROUGHOUT THE COURSE OF CANCER TREATMENT: A PILOT INITIATIVE.**

**Patricia Beach, MSN, RN, AOCN®, ACHPN, Mercy Health, Toledo, OH; Mohammad Alnsour, MD, Mercy Health, Toledo, OH; Laurie Edwards, BSN, RN, Mercy Health, Toledo, OH; Deb Ross, BSN, RN, OCN®, Mercy Health, Toledo, OH; Karen Anders, BA, LSW, Mercy Health, Toledo, OH; Jessica Wood, PharmD Candidate, Ohio Northern University, Toledo, OH**

An interdisciplinary approach, as this presentation will show, is best suited to most effectively lessen the burden of cancer care and its chronicity. Review of the literature and patient records indicated that patient needs change over the course of treatment and those needs would not be captured by an assessment completed at only one time point. A pilot quality initiative was launched to better understand the changing factors faced by breast cancer patients. This initiative tracked 42 patients at 2 community cancer settings throughout their treatment and a one-time survivorship visit. A distress assessment designed to meet the letter and intent of the American College of Surgeons Commission on Cancer, Cancer Program Standards 2012: Ensuring Patient-Centered Care Standard 3.2 Psychosocial Distress Screening “. . . process to integrate and monitor on-site psychosocial distress screening and referral for the provision of psychosocial care,” was completed by breast cancer patients receiving surgery and chemotherapy with or without radiation therapy. Assessment measures were completed on this homogenous population at three distinct points in the treatment continuum: Initiation of chemotherapy; after completion of two to three cycles of chemotherapy; at completion of all treatment during a survivor visit. This presentation will include: (1) Assessment tool design and implementation by an interdisciplinary planning group focused on the impact of physical symptoms on function and psychosocial well-being. (2) Preliminary findings of significant longitudinal issues for individual patients. For example, financial concerns increasing over time. (3) Concurrent and aggregate findings at the three distinct time periods. For example, anxiety lessens as fear of the unknown treatment diminishes. This assessment tool has been incorporated into this center’s standard of care. Review of the data and literature is being used to further refine implementation with this and other cancer populations. Assessment and interventions to meet psychosocial needs is only one step. But as with all excellent care, it is an important step for each individual patient.

## **17 REAL LIFE EXPERIENCE OF GLIOBLASTOMA PATIENTS TREATED WITH TUMOR TREATING FIELDS. Lynn Belles, MSN, RN, CNRN, Geisinger Medical Center, Danville, PA**

Tumor Treating Fields (TTFields), an anti-mitotic, non-invasive modality, improves progression-free and overall survival when combined with temozolamide for newly diagnosed glioblastoma (GBM). Geisinger Health System has treated approximately 33 patients (26-74 years) with TTFields. Observations of life experiences of patients on TTFields are highlighted by three case studies. TTFields treatment is started after chemoradiation, approximately 3 months after pathological diagnosis. TTFields continuously delivers alternating electric fields through the Optune device via four transducer arrays placed on the shaved scalp. Evaluation Overall patients tolerate the device well, with few complaints. Common complaints

are related to skin irritation, heat, and weight of the device. Case #1: 74 year-old female on TTFields suffered severe pancytopenia after first cycle of metronomic temodar, and was unable to continue despite dose reduction. TTFields was held for 2 weeks due to petechiae on scalp. She has continued on TTFields monotherapy and is 11 months from diagnosis with no radiographic progression. Patient’s husband manages the device for patient. Case #2: 61 year-old female who initiated therapy as part of the EF-14 trial [NCT00916409]. She opted to remain on TTFields after conclusion of the trial. She is now 65 months from diagnosis with no sign of radiographic progression. Patient has commented that it is nice not to have to fix or color her hair. Case #3: 52 year-old male initiated TTFields therapy as part of EF-14 trial. He elected to stop therapy after the 24 months due to social stigma and perceived burden of the device in his active lifestyle. He has no sign of radiographic progression at 69 months post-diagnosis. Overall patients tolerate TTFields well. Few patients stop therapy due to issues with the Optune device. Most patients continue TTFields until disease progression and transition to comfort measures. These cases raise important questions for the future of TTFields therapy: how long should patients continue TTFields? If TTFields is discontinued, should it be restarted at the time of disease progression? Nurses need to be aware of the social and physical issues associated with TTFields to enable patients to overcome these barriers. We play a critical role in educating the health care community (primary care providers, emergency room and inpatient staff) on managing patients using TTFields.

## **18 EXCELLENCE IN END-OF-LIFE CARE FOR PATIENTS DYING IN AN ACUTE CARE HOSPITAL. Rochelle Bensinger, RN, OCN®, Lehigh Valley Health Network, Allentown, PA; Erin Detweiler, BSN, RN, Lehigh Valley Health Network, Allentown, PA**

The Center for Disease Control reports that 35% of individuals over 65 years of age are dying in our hospitals without the benefit of end-of-life care. Staff within a 1200-bed academic Magnet® hospital assessed the scope of this problem and found “medicalized” care of dying patients in critical and medical-surgical care and the emergency department. Findings included: discrepancies in assessing patient comfort; lack of comprehensive emotional and psychosocial support; and, physician orders reflective of acute versus comfort care. This presentation describes an initiative to provide excellence in end-of-life care for those dying in an acute care hospital. Utilizing recommendations from the Institute of Medicine 2014 report on “Dying in America,” an interdisciplinary team of hospital and hospice staff identified the target population as patients with a prognosis of 48 hours or less and too fragile to transport out of the hospital to another care setting. Actions include: admission to hospice while remaining in same, acute-care bed; formation of a Hospice Response Team (HRT); and formal education with contact hours for nurses and physicians. The HRT includes a Hospice nurse and social worker who respond to the consult within two hours. They are present when the patient is transitioned to hospice care and guide the development of a care plan. The plan includes daily visits by a hospice nurse aide for personal care and volunteers from the “No One Dies Alone” program to offer additional time at the bedside when family is not present. The hospice bereavement team interacts with the family for thirteen months following the death of their loved one. Since inception of the program in April 2015, over 550 patients have been referred to the program, hours of interdisciplinary end of life care at the bedside increased and physician orders consistently reflect the need for comfort and dignity. Loved ones now have emotional support at the bedside and bereavement care following a loved one’s death. Educational program

evaluations show 100% believe they learned new knowledge, would be able to apply what they learned, and felt it would improve job performance. Attendees will gain pragmatic and innovative strategies to effect a cultural paradigm shift in the acute care setting by recognizing the need for comprehensive excellence in end of life care.

## 19

### **PPE ADHERENCE AMONGST FAMILY, FRIENDS AND VISITORS.** Stephanie Benson, BSN, RN, MD Anderson, Houston, TX; Chasity Idom, BSN, RN, MD Anderson, Houston, TX

Stem Cell Transplant patients are on reverse isolation. It is a requirement for visitors are required to don Personal Protective Equipment (PPE) for the purpose of decreasing the spread of infection. The team identified that there was a knowledge deficit amongst visitors when donning PPE. The purpose of this project was to provide an educational visual that was an easy step-by-step process that could be understood by all visitors with varying languages. The aim was to increase the adherence of PPE in order to decrease the spread of infection. The team designed a photographic poster that illustrates the proper method and order of putting on PPE. The poster provided clear instructions on what is required prior to entering a patient's room that is on reverse isolation. The staff used the visual posters when educating visitors on entering isolation rooms. We conducted observations of visitors entering the patient's rooms prior to and after the implementation. A small survey was provided to the visitors to gain feedback on the efficacy of the poster. We found during this study that the poster raised the number of inquiries about using PPE by 36%. There was an overall increase in visitors donning the appropriate PPE by 158% and fewer visitors had to be remediated. Remediation occurred 70% less with the poster displayed. The survey provided multiple feedback that it would be more effective if the poster was at eye level. During the study the poster was located at hip level, which was required by Facility Management for the institution. The poster increased inquiry in the act of donning PPE. The feedback indicated that the location of the poster played a key role in its efficacy. In observations, it appears that the visitors want to be in compliance with adherence of the PPE, but need clear and distinct instructions on how to adhere. Raising awareness and practicing safe measures consistently, will ideally decrease infection amongst patients. Involving caregivers leads to overall better patient care, decreased hospital stay, reduced financial cost and increased patient satisfaction. The next steps are to make improvements to the educational material based on the feedback and continue to pilot the project on other reverse isolation floors.

## 20

### **READMISSION REDUCTION RATES WITH A POST DISCHARGE PHONE CALL.** LaNice Berry, MSN, RN, The Ohio State University Comprehensive Cancer Center; Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH; Amira Hartman, BSN, RN, The Ohio State University Comprehensive Cancer Center; Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH; Janet Sirilla, DNP, RN, FACHE, The Ohio State University Comprehensive Cancer Center; Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH

The Hospital Readmissions Reduction program has created increased awareness on preventing hospital readmissions by implementing financial penalties to organizations with high rates. After reviewing the readmission data, the medical oncol-

ogy service line identified a need for improvement. A multidisciplinary team was developed to improve patient outcomes, quality of life, and reduce the risk of penalties from CMS by reducing readmission rates of inpatient medical oncology patients by 5%. The team involves medical oncology physicians, nurse practitioners, case managers, staff nurses, Palliative care, Pharmacist, and Rehabilitation services. Interventions were initiated that focused on the continuity of care for each patient in preparation for going home. Palliative care physicians and rehab professionals looked deeply at pain management, end of life conversations, deconditioning and dyspnea issues. Implementation of activity order sets to detail patient activity to a more specific activity, i.e.: up to chair for meal, instead of up ad lib. Several patient education handouts were developed for symptom management. Education was provided to the advanced practice professionals and residents on the appropriate intravenous to PO conversions of pain medications. Early case management involvement assisted with precertification for prescriptions, arranging for home healthcare and/or oxygen, and scheduling discharge follow up appointments. Since evidence showed that a majority of patients were re-admitted within 3 days of being discharged, a plan was developed to initiate a post discharge call to patient's within 48 hours of being discharged. The gastrointestinal oncology population was identified to evaluate a pilot for these calls due to the volume of admissions and readmissions associated with this patient population. The workgroup meets monthly to review the readmission rates for all three of the organizations medical oncology services with a separate emphasis on the GI oncology patient population. An overall reduction in the GI oncology readmission rates was noted with interventions. An additional decrease was noted with implementation of post discharge calls. An increase in readmission rates was noted when the volume of post discharge calls dropped for a month. The workgroup has determined that a multidisciplinary approach to addressing readmission rates optimizes the outcomes for the oncology patient. The implementation of a post discharge call by an oncology nurse has a positive impact on the reduction or readmission rates.

## 21

### **INTRAPERITONEAL CHEMOTHERAPY: IT'S NOT ALL VEINS.** Nikkeal Beverley, BSN, OCN®, Billings Clinic, Billings, MT; Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

A large infusion center with the only gynecologic oncology service in the northwest saw an increase in intraperitoneal (IP) chemotherapy. IP chemotherapy allows higher doses to be delivered to the intraperitoneal cavity to directly bathe the surface area. Studies reveal the need for a combined inpatient and outpatient approach in which Days 1-2 are administered inpatient, and Day 8 is administered outpatient. An evidence-based IP protocol was needed for patients to receive consistent and safe care across settings. Care across settings can often lead to discrepancy in procedures, thus affecting patient satisfaction and efficiency. The purpose of this project was to ensure evidence-based IP chemotherapy was consistently delivered across the patient experience. This resulted in a dual competency check list valid for both inpatient and outpatient nurses. A multidisciplinary team was convened, comprised of chemotherapy-competent registered nurses (inpatient and outpatient), gynecological oncologists, pharmacists, and leadership. This team reviewed literature to research best practices regarding the administration of IP chemotherapy, which resulted in development of a comprehensive competency and protocol. The team was able to research best practices regarding warming IP fluid and found little evidence to support this practice.

The competency included 1) patient preparation, 2) accessing the IP port in a consistent sterile fashion, 3) administration of the treatment, 4) de-accessing the IP port, and 5) patient positioning post chemo instillation. A protocol detailing nursing management of symptoms was developed. The team created a patient-friendly handout to educate patients about the administration process and potential side effects. The process has been in place for one year. Both inpatient and outpatient nurses are required to complete the competency. Patients are now receiving a consistent fluid amount, which has resulted in less bloating and abdominal complaints during administration; patients report high satisfaction with care. The nursing staff now has guidelines to follow for patient positioning follow instillation of the chemotherapy, and patients are educated consistently. The new protocol can be replicated in both inpatient and outpatient settings across the US in order to provide evidence-based practice and standardized care for patients receiving IP chemotherapy. The project provided an opportunity to reflect on current practice and improve patient care in which patients were more informed about their IP chemotherapy protocol.

## 22

**EMOTIONAL ROLLERCOASTER: HOW NEW PATIENT ORIENTATION REDUCES ANXIETY AND IMPROVES OVERALL PATIENT EXPERIENCE.** Karleen Bien-Aime, RN, BSN, OCN®, Sylvester Comprehensive Cancer Center, Plantation, FL; Danielle Pisen, RN, BSN, OCN®, Sylvester Comprehensive Cancer Center, Plantation, FL

The objective is to illustrate the benefits of implementing New Patient Orientation in the outpatient setting by facilitating reduction of anxiety, promoting compliance and to improve the overall patient experience. According to the National Cancer Institute, cancer is among the leading cause of death worldwide. In 2012, there were 14 million new cases and 8.2 cancer related deaths worldwide with an expected increase of 22 million new cases over the next two decades. Despite these alarming statistics, in recent years we have made great strides in supportive services and overall survivorship. The diagnosis of cancer is devastating and often leaves patients with feelings of anxiety, depression, fear, and oppressed. Nurses play a critical role in assisting and guiding patients through their journey from the initial diagnosis up until their final hours. Nurses that are actively involved during the New Patient Orientation aides in the development of building a trusting nurse-patient relationship while promoting a supportive atmosphere before ever going into the infusion center for the first time. A team was developed to strategize and implement a sustainable process to ease patients from initial diagnosis to first treatment with participation by all primary patient resources. A pre-orientation evaluation was obtained from each patient to screen their level of anxiety, fears, and general expectations. A medical panel consisting of nursing, pharmacy, a social worker and other supportive services meet with new patients and their family members collectively to review "what to expect" on the first day of treatment and during the course of their therapy. This incorporates general medication information, symptom management, supportive services available to them, along with answering questions and concerns they may have. Additionally, patients and family are provided a brief tour through the chemotherapy infusion unit to further assist with desensitization and promote a calming experience. Evaluation: Patients will conduct a brief post-orientation survey to capture the benefits of utilizing this service in addition to providing space for suggestions. Nurses are the frontline for driving new initiatives with heavy contribution to improving their practice. This project highlights the importance of utilizing New Patient Orientation to enhance the nurse-patient relationship and overall patient experience.

## 23

**IMPLEMENTING STANDARDIZED NURSE-LED EDUCATION AND DOCUMENTATION DURING A PRE-CHEMOTHERAPY VISIT.** Kelley Blake, RN, MSN, OCN®, AOCNS®, UW Medicine Valley Medical Center, Renton, WA; Shari Bates, RN, BSN, OCN®, CCM, UW Medicine Valley Medical Center, Renton, WA

Providing patient education prior to the first day of cancer treatment prevents and reduces anxiety. Introducing a pre-chemo clinic for patients at UW Medicine Valley Medical Center (VMC) Infusion Center has improved patients' first infusion experiences, improved understanding, and reduced anxiety. At go-live, patients scheduled for a one-hour nurse visit received education on their treatment medications, duration, side effects, and other expectations of cancer therapy. Each nurse determined the content of each patient visit using standardized handouts. Since content varied by nurse, gaps in patient knowledge and understanding were identified. Standardizing chemotherapy education processes can contribute to improved patient understanding and high patient and staff satisfaction. Standardized education and documentation were developed to reduce the variation in nurse content, and improve the patient experience at the first treatment visit. An electronic documentation template was developed to guide nurses providing pre-chemotherapy education. A standardized education script was developed following the content and format of the documentation template. Notebooks were provided with the script and pdf of the documentation template for use during patient education. Standardized handouts for the patient were still utilized. Ancillary departments, Oncology Doctors, and Oncology Nurse Managers were consulted on content of the script and documentation. In a survey of Infusion Center nurses, 92% (n=10) have observed improved outcomes during the patient's first chemotherapy experience when they have participated in a pre-chemotherapy teach. Reduced anxiety was observed by 82% of nurses. They (94%) feel that patients benefit from the pre-chemotherapy teach, and 96% understand there is a benefit to providing education prior to their first appointment. At time of survey, only 82% of nurses have had the opportunity to provide standardized education to new patients. Implementation of standardized education and documentation for pre-chemotherapy visits has improved patient outcomes and reduced anxiety during the first chemotherapy treatment. Development of tools for nurses providing patient education improves nursing practice and improves the patient experience. Patient education is a vital part of Oncology Nursing. Educating nurses on how to provide education to patients, and providing standardized tools to streamline the process, reflects on the patient experience and results in positive patient outcomes.

## 24

**A MULTIDISCIPLINARY APPROACH TO CARING FOR WOMEN WITH A HIGH RISK OF BREAST CANCER IN THE COMMUNITY HEALTH SETTING.** Miriam Blasingame, BSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Robin Sanders, MSN, RN, FNP-BC, BSW Health, Waco, TX; Michelle Wilson, RT (R)(M), BSW Health, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX

The goal of screening is not only to detect cancer but, ideally, identify cancer in its earliest stage. When caught early, the five-year survival rate for stage 1 breast cancer dramatically increases, and morbidity from treatments decreases. Identifying women as high-risk, assessing genetic risk, and advocating for increased screening is paramount. Within Baylor Scott & White Medical Center: Hillcrest, a community healthcare setting, a multidisciplinary team of three distinct



departments developed a process to comprehensively care for women with Tyrer Cuzick (TC) scores greater than 20%, aligning with NCCN and ACS recommendations for this unique population. At their mammograms, women were given the opportunity to indicate their interest in discussing genetic screening and high risk breast cancer (HRBC) education. Women completed a questionnaire inquiring about family history and risk factors. A nurse practitioner (NP) reviewed data, completed a genetic risk assessment, and contacted those with an indicated need for genetic testing. Once contacted, the NP provided education and completed genetic testing. The results and implications of both negative and positive results were discussed with the patient as well as the need for referral to the genetics department, if indicated, for complete evaluation, recommendations, and management. The breast imaging center also sent letters to all women with a TC score over 20%, notifying them about their HRBC statuses and offering an oncology nurse appointment to review risk factors, receive HRBC education, and define variable lifetime risk. From January to September 2016, 7,924 women received mammograms. Of those, 515 women were high-risk and received letters, 26 called the oncology nurse, and 18 attended a nurse visit. To date, 6,317 women were genetically evaluated by the NP with 884 meeting criteria for testing; 167 completed a genetic test, of which, 9 were positive, and 42 were found to have a variant of unknown significance. Measurable outcomes will unfold over the next several years as we track additionally ordered screening, results, and if modifiable risk education impacted patient behavior. Through this coordinated effort, HRBC women had access to exceptional, evidence based care simply by attending their routine mammograms. This collaborative program will continually refine patient care and processes. Oncology nurses can work with a multidisciplinary team to replicate a HRBC program in other settings.

## **25** **APPLYING ONS PERFORMANCE MEASURES FOR PATIENT EDUCATION AND INTERVENTION REGARDING FATIGUE.** **Carol Blecher, MS, RN, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; Juanita Fryar, MS, RN, OCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ**

Fatigue is a common side effect of cancer and it's treatment and becomes a major for our patients who are undergoing cancer therapy. It is well documented that fatigue can have deleterious effects on quality of life, affecting the person's sense of well being, personal relationships and their ability to cope. Exercise has been shown to be of benefit in the management of fatigue in studies of breast cancer patients, as well as patients with other solid tumors. Based on this data we began developing a program to educate staff, patients and significant others regarding fatigue and to provide an evidence based exercise program in physical therapy designed to relieve fatigue and improve quality of life. This program is designed to increase staff, patient and significant other awareness regarding fatigue. It provides for a systematic and effective means of assessment and screening of all patients undergoing therapy at the cancer center and an evidence based intervention to improve the lives of our patients. Initially staff education program regarding fatigue was presented including the staff of the cancer center, the Cancer Committee and the physical therapy department. The patients/significant others receive information regarding fatigue during their treatment education sessions. Fatigue is assessed on a 0-10 scale at each visit. Fatigue that is rated as a 5 or greater requires a distress screen and is reported to the physician. A recommendation for referral to an exercise intervention is to be discussed with the patient. The patients complete the FACT F questionnaire and a quality of life survey.

They are referred to rehabilitation medicine for an evaluation and the development of an exercise program. Patient evaluation of the program include the completion of a FACT F, quality of life survey, distress screen and a patient satisfaction questionnaire at the end of a three month period and upon completion of treatment. Evaluation of program effectiveness is based on chart surveys and number of patients referred to the program based on our initial survey of patients which indicated that forty percent of patients reported moderate to severe fatigue. This program is designed to provide evidence based interventions for fatigue management in our oncology patient population. It also enhances our goal of comprehensive cancer services and clinical excellence.

## **26** **IMPLEMENTATION OF VAPORIZED HYDROGEN PEROXIDE AND ULTRAVIOLET (UV) LIGHT TERMINAL CLEANING TO PREVENT CLOSTRIDIUM DIFFICILE (C-DIFF) INFECTIONS ON AN INPATIENT HEMATOLOGIC MALIGNANCY AND AUTOLOGOUS STEM CELL TRANSPLANT UNIT.** **Rosaleen Bloom, MS, RN, ACNS-BC, AOCNS®, Aurora St. Luke's Medical Center, Milwaukee, WI; Elise Beattie, BSN, RN, Aurora St. Luke's Medical Center, Milwaukee, WI; Mary Saber, BSN, RN, CIC, Aurora St. Luke's Medical Center, Milwaukee, WI; Jennifer Monson, BSN, RN, Aurora St. Luke's Medical Center, Milwaukee, WI; Rebecca Schmid, BSN, RN, St. Michael's Hospital, Stevens Point, WI; Monique Swiecichowski, MSN, RN, CCRC, OCN®, Aurora St. Luke's Medical Center, Milwaukee, WI**

In 2014 our average hospital acquired Clostridium difficile (C-diff) rate had been 15.24 per 10,000 patient days. In 1st quarter (QTR) 2015 our C-diff infections rose dramatically to a rate of 42.08. Additionally three patients had been in the same autologous stem cell transplant (ASCT) room. Due to the Ebola virus outbreak, our institution purchased hydrogen peroxide (H2O2) and ultraviolet (UV) disinfecting devices and the decision was made to see whether they would decrease C-diff transmission on our unit. The purpose is to prevent C-diff transmission from contaminated hospital rooms. In late March of 2015 our environmental services implemented a two-fold approach to prevent C-diff transmission: discharge clean and UV light disinfect all C-diff positive patient rooms at discharge and disinfect all ASCT rooms with H2O2 vapor prior to ASCT admissions. From 2nd QTR 2015 through 3rd QTR 2016 there were no cases of C-diff that occurred in the same room. 2nd QTR 2015 through 3rd QTR 2015 we saw our average C-diff rate decrease to 11.5. In 4th QTR 2015 we implemented room service food delivery and encountered infection prevention knowledge deficits with the new room service staff. Our 4th QTR 2015 and 1st QTR 2016 rates again rose to 22.4 and 37.14 respectively. After further education of room service staff and reminders to our own staff our rates are on the decline again with a rate of 10.97 for the 2nd QTR 2016 and a rate of 0 for the 3rd QTR 2016. H2O2 and UV units may benefit your hospital if you are having cases occurring in the same room. We recognize that we no longer have C-diff transmissions when we do not have patients with C-diff on the unit however we continue to have hospital acquired cases when a C-diff patient is present. This has made us continue to reflect and look at our nursing practice. Further work includes: antimicrobial stewardship, equipment disinfecting audits, hand hygiene audits, monitoring Personal Protective Equipment (PPE) use and routine rounds with staff to assess verbalization of PPE and hand hygiene practices. The use of new disinfecting tools like vaporized H2O2 and UV light can provide deeper disinfecting to rooms when traditional terminal disinfecting methods are insufficient in preventing C-diff transmission.

### **SAFE HANDLING OF INTRAVESICULAR THERAPY FOR BLADDER CANCER: UROLOGY NURSE OR ONCOLOGY NURSE?** Kimberly Bosket, BSN, Billings Clinic, Billings, MT; Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

Bladder cancer is the fourth most common cancer in men and the ninth most common in women. Intravesicular chemotherapy/biotherapy is indicated in the treatment of non-muscle invasive bladder cancer and according to U.S. Pharmacopeia 800, requires safe handling and administration, proper cleanup and disposal, and trained staff oversight in case of a spill. In order to be compliant with American Society of Clinical Oncology/Oncology Nursing Society Chemotherapy Administration Safety Standards, an independent double check and administration by a chemotherapy certified nurse are also recommended. Historically, this procedure was conducted in the urology clinic by non-oncology nurses. These non-oncology nurses were not chemo/biotherapy certified and lacked the proper training in the safe handling of biohazardous drugs. Therefore, an organizational transition was implemented to move the practice of intravesicular instillation of chemotherapeutic medications from the urology clinic to the infusion center. The transition required the infusion center staff to be retrained in urinary catheter insertion since the nurses primarily administer intravenous treatment. A competency for urinary catheter insertion and administration of the chemo/biotherapy was developed. It includes a patient assessment, review of laboratory testing required prior to receipt, personal protective equipment required (gown, gloves, goggles, and N95 mask), assembly for closed-system-transfer device adapters, proper administration technique, safe discontinuation of the urinary catheter, and disposal of supplies. A patient education document was developed during the transition to include possible side effects of intravesicular chemotherapy, safe handling of urine, skin care, and restrictions on sexual activity. The transition of intravesicular chemotherapy administration from the urology nurse to the oncology nurse opened opportunities for safe handling congruent with U.S. Pharmacopeia 800, which mandates protection of health care workers of hazardous drug administration. Additionally, oncology nurses were able to conduct a more thorough toxicity assessment consistent with their training and provided evidence-based patient education so patients could be better informed. Progressively, more infusion nurses are completing the competency, and the procedure time is decreasing as nurses become more efficient with administration. Other health care organizations can take replicate this process to successfully transition these patients to the oncology suite.

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### **NEW ONCOLOGY NURSE ONBOARDING: PREPARED FOR SUCCESS.** Pamela Bowman, BSN, RN, OCN®, Duke University Hospital, Durham, NC

New oncology nurses face challenges in their first year of practice. Besides learning the basic skills of the new nurse, they need to learn the specialty skills of oncology. The development of a comprehensive onboarding process was key to laying a foundation for the development of successful oncology nurses in our adult solid tumor and hematology oncology inpatient units. The purpose of developing the process was to provide consistency in practice and to include important components necessary in oncology nursing practice. By creating a learning environment in their first weeks of practice, the nurses could gain knowledge, learn and practice skills, and ask questions. After completion of hospital orientation, the new nurses spend

time with nurse educators to learn the basics of chemotherapy administration and the proper handling of hazardous drugs. Nurses attend an oncology nursing orientation led by our clinical nurse specialists who introduce common oncology concepts, symptom management, and resources available to patients, along with a tour of our cancer center facilities. The new oncology nurses spend time on their respective units to become oriented to the unit specific equipment and procedures before any patient care. The new nurses learn about radiation and radioactive therapies on the solid tumor unit, and chemotherapy induction therapies on the hematology unit, using materials from the ONS Resource Center. During their first year of practice, they attend oncology emergency simulations through a collaborative program with our school of nursing. Nurse residency requirements included oncology projects to benefit the new nurses of each unit. The onboarding process has been successful in preparing our new nurses for oncology practice. Nursing staff turnover rates are lower since implementation of the onboarding process on these two units. Nurses who leave inpatient areas go to other jobs in oncology or have become oncology nurse practitioners.

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### **THE USE OF SERUM SEPARATOR TUBES VERSES PLASMA TUBES IN THE LEUKEMIA POPULATION.** Donna Braccia, BSN, RN, OCN®, CHPN, Memorial Sloan Kettering Cancer Center, New York, NY; Jacqueline Patterson, MSN, RN, AG-CNS-BC, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Liza Sanchez, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Connie McKenzie, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Miale Mayer, MSN, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY

Tumor lysis syndrome (TLS) is an oncological emergency defined by massive tumor cell lysis causing large amounts of electrolytes into systemic circulation leading to organ failure. Hematologic malignancies with bulky, rapidly proliferating, and chemo-sensitive cells carry the greatest risk. Those susceptible to TLS can be predicted using clinical and laboratory parameters, however most guidelines recommend aggressive treatment based on laboratory abnormalities before clinical sequela develop. Therefore, frequent tumor lysis labs (TLL), prompt laboratory processing, and nursing assessment is essential. The general chemistry laboratory at a comprehensive cancer center in New York City converted from Serum Separator Tubes (SST) to Plasma Light Green Tubes. Plasma has shown an advantage over serum because of its faster turnaround-time. Unfortunately, hemolysis and/or malignant-cell lysis was occurring sporadically in plasma samples from our leukemia patients causing invalid results, patient re-draws, and delays in treatment. The purpose is to describe how nurses were instrumental in driving change to improve patient safety. The conversion from Serum to Plasma tubes for general chemistry labs began hospital-wide January 2016. Our 43-bed hematology oncology unit sends an average of 60 chemistry specimens a day including TLL labs. It was noted there was an increase number of invalid results with leukemia patients since implementation of plasma tubes. Under the direction of Nurse Leadership, nurses collaborated with Laboratory Services to identify factors that could influence invalid results. Several methods were examined, including how specimens were drawn, time frame from specimen collection to processing, and specimen handling. Other processes examined included walking specimens versus transporting through the pneumatic tubing system, keeping plasma specimens' upright, or placing them on ice, and sending both plasma and serum and comparing. The lab re-checked centrifuges, compared plasma specimen draws

of leukemia patients versus other oncology populations, and reached out to the other institutions for input. Nurses also kept medical team apprised of occurrences and encouraged them not to treat on invalid results. Six months after implementation, the Director of Laboratory Service announced that chemistry labs be performed on serum instead of plasma specimen tubes for all leukemia patients. Due to the fragile nature of leukemia patients' cells related to malignancy and chemotherapy, the use of plasma should be closely examined at other institutions.

### 30 **ONCOLOGY NURSES: PROMOTING HEALTH THROUGH KNOWLEDGE AND INTERVENTION.** Donna Broderick, BA, WOCN, Robert Wood Johnson Hospital, Somerville, NJ; Heather Davis, BSN, CMSRN, Robert Wood Johnson Hospital Somerset, Somerville, NJ

Based on the Robert Wood Johnson Hospital Somerset Practice Model and Jean Watson Human Caring Theory, the nurses in the Oncology Pavilion Department reviewed patient safety and quality and then decided that they would choose four areas of the Nurse Sensitive Indicator to focus on and to work on improving. The purpose was to create SMART goals to decrease falls with injuries, reduce the CLABSI rates, maintain zero acquired pressure ulcer rates, and using pain management as a key measure to improve Courtesy and respect, patient education, responsiveness and careful listening. Clinical practice change in managing central lines along with the use of new products such as Curoc caps and Sage Bath for the patients significantly reduced central line infections. New mattress, along with practice changes for skin assessment, position changes and working in collaboration with the Wound Nurse helps improve our pressure ulcer rates. With the implementation of Safety Huddle and Bedside Handoff along with the Fall Prevention Initiatives, falls with injury have decreased by 50%. For Pain Management, we work in collaboration with the Pain Management committee to set realistic pain goal for each patient. Pain Management education is provided to the staff by one of our Oncologist. In reviewing our quarterly NDNQI reports we noticed that all our interventions that were put in place have improved the quality of the care provided to our patients and were meeting our goals of zero harm to our patients. Oncology nurses are in the position to be at the forefront for quality care. It is imperative that we get all staff involved and encourage them to broaden their knowledge by reviewing evidence-based literature and apply that knowledge to practice so that they are able to proactively prevent harm to the patients, Staying up to date on the literature and the evidence and the trends in healthcare and using ONS as a resource can help the oncology nurse to gain more knowledge and practice evidenced-based nursing.

### 31 **USE OF ORTHOSTATIC BLOOD PRESSURE TO AID IN IDENTIFYING PATIENTS AT HIGH RISK OF FALLS IN THE AUTOLOGOUS STEM CELL TRANSPLANT POPULATION.** Maria Brown, BAN, RN, Aurora St. Luke's Medical Center, Milwaukee, WI; Juliann Bergum, AND, RN, Aurora St. Luke's Medical Center, Milwaukee, WI; Rosaleen Bloom, MS, RN, ACNS-BC, AOCNS®, Aurora St. Luke's Medical Center, Milwaukee, WI; David Guerard, BSN, RN, Aurora St. Luke's Medical Center, Milwaukee, WI; Jamie Huebschen, BSN, RN, OCN®, Aurora St. Luke's Medical Center, Milwaukee, WI; Kimberley Konovalenko, BSN, RN, OCN®, Aurora St. Luke's Medical Center, Milwaukee, WI

On the day of his reinfusion, seven days after admission, an independent fifty year old Autologous Stem Cell Transplant

(ASCT) patient fell in the shower. His fall resulted in several injuries including a head wound requiring stitches. After he was stabilized orthostatic vital signs (VS) were completed and he was found to be severely orthostatic. During the transplant process ASCT patients undergo chemotherapy, receive numerous medications, and experience physiological changes that can affect their body's normal equilibrium and functioning. Many of these patients do not meet falls risk criteria. This event lead to the question of how many other ASCT patients were orthostatic during their hospital stay and what actions could we take to prevent falls? Early identification of orthostatic patients who would be at risk for falls. Daily orthostatic VS. Education provided to patient and families about fall precautions regardless of the patient's activity level and falls risk. Nine months of VS data was evaluated; five months of pre-intervention and four months of post intervention data for a total of twenty-eight patients. Of the thirteen ASCT patient's evaluated during the intervention implementation period eleven of those patients were orthostatic at least once during their stay. Five of those eleven patients had "fall risk" documented in their chart and had MORSE scales to reflect that precaution. In two instances the doctor changed orthostatic VS to be taken every shift instead of every day. Meclizine was ordered in one instance where the patient was orthostatic. Five ASCT falls occurred in the year prior to the implementation of daily orthostatic vital signs. No falls have occurred during the implementation phase. Our results show over 80% of our ASCT patients became orthostatic at some point in time during their stay. We will continue to monitor orthostatic VS, continue to provide falls education to all patients, and take precautions to prevent falls in the ASCT population. Daily orthostatic VS may identify at risk patients if you have ASCT patients or have an increase in falls in your patient population. Orthostatic VS have been usually assessed when a patient is symptomatic by using our proactive approach we are able to identify patients at risk for falls earlier and provide early intervention.

### 32 **A COLLABORATIVE APPROACH TO REDUCE C-DIFFICILE ON AN INPATIENT SETTING.** Laura Brown, MSN, RN, Mayo Clinic Florida, Jacksonville, FL; Amy Gregory, MSHL, RN, Mayo Clinic Florida, Jacksonville, FL

A 28 bed unit on 3North dedicated to Hem/Onc/BMT patients experienced a two year rise in Clostridium Difficile (C-Diff), one of the major complications of this patient population. C-Diff rates rose from (14) in 2014 to (19) in 2015, of those 19 cases in 2015, (15) were attributed to an over representation of AML induction and BMT conditioning within the unit's patient population. Information gathered in our early investigation identified many inconsistencies and interventions that needed to be established. A collaborative team approach with small work groups was established including direct care staff nurses, patient-care techs, management, and environmental services to address this issue. The purpose was to identify and implement improved strategies to decrease the incidence of C-Diff, sustain and share our findings and improved practices across the institution. An enterprise-wide gap analysis identified multiple areas of concern. From this data collection several strategies were initiated and processes were implemented in an attempt to decrease the rising C-Diff infection rates. Audits were completed on the (15) 3North documented C-Diff patient's charts from 2015; data collected was compared using the underutilized C-Diff algorithm. Purging of medical supplies, bleach cleaning and reconfiguration of supply stocking for nurse server carts stored in patient rooms on 3North was completed. All supplies not used are now disposed of at discharge. Initiated Touch Point Testing (TPT) of all discharge rooms on 3N with data



collection and tracking, collaboratively working with Environmental Services (EVS) to identify deficiencies in room cleaning. C-Diff rates have dramatically decreased since the initiation of our quality improvements. For 2016 January to August, only (5) documented cases of C-Diff have been identified on 3North. Of note, (3) of these cases were during May when the regular housekeeper was out. Nurses now purposefully stock nursing carts with what is needed for a patient on admission. As we use what we need and no longer stock pile items in nursing carts our supply utilization has dramatically improved along with cost savings. This practice change will soon be implemented house-wide. Improvements identified from the EVS collaboration have improved both our “turn-times” at discharge as well as the communication between nursing and EVS. These successful initiatives are now being modeled into an institution-wide practice work group.

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#### **EVALUATION OF ROUTINE SYMPTOM ASSESSMENT CALLS.**

**Jane Bryan, BSN, RN, Seidman Cancer Center, Cleveland, OH; Meghan Ramella, RN, BSN, Seidman Cancer Center, Cleveland, OH; Geneva Cardwell, BSN, RN, Seidman Cancer Center, Cleveland, OH; Elizabeth Puffenbarger, RN, MSN, CHPN, Seidman Cancer Center, Cleveland, OH; Bridgette Bright, BSN, RN, Seidman Cancer Center, Cleveland, OH; Cheryl Thompson, BSN, RN, Seidman Cancer Center, Cleveland, OH**

Palliative care is an essential component of comprehensive oncology care. Seidman Cancer Center was awarded an “Innovations” grant from the Centers for Medicare and Medicaid in 2014, testing a nurse care coordinator role. The primary goals were to initiate early palliative care to improve advance care planning and quality of life in patients with advanced cancer, decrease emergency room visits and hospitalizations through better care coordination and improved symptom management. The purpose of the project reported here was to evaluate the effectiveness of one aspect of the program: routine monthly phone calls to assess symptoms and identify patients who have needs appropriate for referral to a palliative care specialist. Care coordinators telephoned each patient monthly unless the patient was assessed in person during that month. In this call, patient symptoms were assessed through use of the Edmonton Symptom Assessment Scale and needs identified through open ended questions. The Care Coordinator answered questions, provided advice and counseling, and referral to palliative care was suggested if symptom management needs were identified. Over a 2 week period, 116 patients were contacted by telephone. Of these, 55 patients (47.4%) expressed needs that could be addressed by a palliative care provider. Of those, 36 (65%) were successfully scheduled to see a member of the Palliative Care service. Nineteen patients (35% of those with identified needs) declined the referral. Monthly telephone calls to large segments of the oncology population are a time consuming and costly intervention. However, we found that almost half of patients had symptom management needs that could be better addressed with timely referral to palliative care. Patients often are hesitant to contact their primary provider with symptoms that are bothersome but not acute and instead suffer silently. Routine, systematic assessment, with education about the benefits of palliative care and help with scheduling an appointment, can improve the quality of life of patients facing the challenges of advanced cancer. The finding that one-third of patients who reported unmet needs declined palliative care indicates a need for further exploration of barriers. Nurse telephone follow-up has been used with other populations, but little is known about patient benefits. This project provides new confirmation about its efficacy in better addressing symptom management needs.

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#### **CALL, DON'T FALL! DECREASING FALLS IN AN INPATIENT ONCOLOGY UNIT.** Julia Buchheit, BSN, RN, OCN®, NYU Langone Medical Center, New York, NY; Kurt Pinto, BSN, RN, NYU Langone Medical Center, New York, NY; Lauren DiCosimo, BSN, RN, OCN®, CHPN, NYU Langone Medical Center, New York, NY; Katherine Thewes, BSN, RN, OCN®, CHPN, NYU Langone Medical Center, New York, NY

The number of falls in an inpatient oncology/hematology unit dramatically increased in 2015. Not only did this affect quality outcomes, these falls compromised patient safety. In collaboration with nurses from other units and performing root cause analysis of previous falls, we were able to develop floor specific initiatives to reduce falls rates. The purpose was to decrease falls and improve patient outcomes through implementation of an interdisciplinary fall reduction program. Multiple interventions were initiated in an inpatient oncology/hematology unit to decrease falls. A multidisciplinary approach was taken involving leadership, staff nurses and ancillary staff. Education was focused on the importance of decreasing fall and injury rates using different strategies to prevent falls. This included district nursing, the implementation of a new hourly rounding sheet, scheduled toileting, fall debriefs/huddles and teaching points emailed to all staff to reinforce education. District nursing allowed nurses to be in closer proximity to their patients, thus being more accessible. The implementation of new hourly rounding sheets, which were more concise, reinforced purposeful hourly rounding. In addition, staff were educated to utilize a concise message of “call, don't fall,” which was reinforced with education material and visible signage in every room. Detailed fall debriefs were emailed to all staff following every fall that examined the specific incident and provided learning points to reinforce practice change. Findings show that falls decrease when properly implementing all interventions. There was a decrease in falls by 50% since the start of this falls initiative. Findings also proved that when certain interventions, such as scheduled toileting were not being followed, falls were more likely to occur. Nursing staff became more aware of causes of falls and improved their practice as far as preventing falls. Since the fall initiative has been implemented, there has been improvement in falls rate as well as more implementation of fall prevention initiatives. Leadership, nursing staff and ancillary staff have all teamed up in the effort to prevent falls and make patient safety a priority. This is an innovative topic that is very relevant to practice and can make a difference in better patient outcomes.

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#### **ONCOLOGY NURSE STAFFING ASSIGNMENTS: AN ENHANCED C. DIFFICILE INFECTION PREVENTION STRATEGY.** Laura Butler, RN, MSN, OCN®, Mount Sinai Hospital, New York, NY; Gretchen Copeland, RN, Ed.D, OCN®, Mount Sinai Hospital, New York, NY; Kathleen Edmondson-Martin, RN, MSN, OCN®, Westchester Medical Center, Valhalla, NY; Molly Lawson, RN, Mount Sinai Hospital, New York, NY

National attention has been focused on Clostridium difficile (C. difficile) infection (CDI) prevention in all healthcare settings. In U.S. hospitals, CDI is the most common healthcare-associated infection, with high burdens of morbidity, mortality, budgetary and resource utilization. Oncology patients, often immunocompromised from hematopoietic cell transplantation, are a vulnerable population, requiring vigilant efforts to implement and evaluate infection prevention strategies. CDC recommendations for effective organizational CDI prevention control include antimicrobial stewardship, contact precautions (gown, gloves, and hand hygiene), dedicated/disposable equipment and envi-

ronmental cleaning. This project describes adjunctive infection prevention strategies used in the inpatient oncology setting of an urban NCI-designated comprehensive cancer center. A multidisciplinary approach, led by nursing, initiated surveillance and control efforts in response to increased CDI rates. Interventions A systematic assessment of existing clinical practice, infection prevention, education and environmental disinfection led to the development of a multi-faceted strategy focused on CDI prevention. A cornerstone initiative was cohorting all oncology patients testing positive for *C. difficile* on one inpatient unit. The nursing staffing plan was adjusted every shift to minimize healthcare personnel caring for patients with CDI. Nurses and assistive personnel were assigned to care for these patients and had little or no contact with other oncology patients during their shifts. Other interventions included the installation of additional sinks for soap and water hand hygiene, review of provider guidelines for CDI testing, PPE compliance monitoring, daily patient bathing with 2% chlorhexidine, staff/patient/family education and ultraviolet light for terminal disinfection. Over a one year period, hospital acquired CDI rates decreased consistently in the oncology department. *C. difficile* infection will continue challenging oncology nurses to explore interventions and collaborate in developing best practices for prevention and control. This project describes innovative strategies of unit cohorting and nursing staff assignment modification. It represents a valuable addition to the multi-faceted CDI prevention tool-kit.

### 36 DESCRIBING PATIENT ENGAGEMENT AND READMISSION RATES AT A LARGE NAVY MEDICAL CENTER. Carlin Callaway, DNP, MS, RN, ACNP-BC, ACNS-BC, AOCNP®, US Navy, Portsmouth, VA; Kenneth Steele, BSN, RN, OCN®, US Navy, Portsmouth, VA; Shawna Grover, MSN, RN, ANP-BC, ACNS-BC, AOCNS®, US Navy, Portsmouth, VA

Chronically ill patients often experience multiple hospitalizations. Oncology patients have been shown to have more readmissions to the hospital than non-oncology patients. Recent reports estimate a high cost burden associated with readmissions within 30 days of discharge. Evidence suggests that one way to help patients take control of their health and avoid readmission is by bolstering behaviors that foster self-efficacy and sustain a patient's ability to manage his/her health, also known as patient engagement. Strategically providing education, resources, and knowledge assessments related to patient health conditions and treatments at the bedside have been shown to impact patient engagement. One reliable way of measuring patient engagement is by evaluating patient responses to the Patient Activation Measure (PAM) survey. Patient activation is a reliable precursor to patient engagement, whereby increased PAM scores have demonstrated improved levels of self-care management, health outcomes, and decreased readmissions. The purpose of this project was to describe the impact of nurse-driven strategies on PAM scores and readmission rates on an inpatient oncology unit at a large military medical center. A secondary objective was to compile observations and staff feedback into lessons-learned. This project was guided by the Plan-Do-Study-Act process improvement framework and utilized a pre-post design. Benchmark PAM scores and readmission rates were obtained prior to project implementation. PAM scores and readmission rates were obtained during and following implementation of bedside handoffs, teach-backs, and discharge bundles. Both the benchmark group and post-implementation group of oncology patients had high PAM scores. Although statistical significance was not evident for increased PAM scores or decreased readmission rates, the results of this quality improvement project are of important clinical value for the unit. Lessons learned will guide future quality improvement projects. Overall, staff members were

satisfied with conducting modified bedside handoffs. This project was derived from an approved Naval Medical Center Portsmouth IRB Protocol (NMCP.2014.0069). Disclaimer: The views expressed in this article are those of the author(s) and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense or the United States Government.

### 37 INNOVATION: IMPLEMENTING AN ELECTRONIC-BASED CANCER DISTRESS SCREENING TOOL. Veronica Campos, MSN, RN, Methodist Hospital, San Antonio, TX; Dunique Yuill, MSSW, LCSW, Methodist Hospital, San Antonio, TX; Esther Garcia, BSN, RN, Methodist Hospital, San Antonio, TX

Distress is an unpleasant feeling that interferes with the ability to cope with treatment or life. A cancer distress tool is a validated tool used to assess cancer related distress, which aids in identifying issues that can negatively impact treatment and outcomes. The NCCN recommends the Distress Thermometer as a screening tool for measuring distress. The Institute of Medicine recommends that all cancer care should identify each patient's psychosocial health needs, and design and implement a plan that assists patients with needed psychosocial services as a standard of care. The American College of Surgeons Commission on Cancer (CoC) recommends that all cancer patients have a physical, psychological, social, spiritual and financial needs assessment at key points in their cancer experience. Standard 3.2 Psychosocial Distress Screening under the continuum of care services is mandated by the CoC to be implemented by January 2016 in order to meet accreditation requirements. 35% to 43% of patients with cancer experience psychosocial distress, but only 5% obtain psychosocial help. The purpose of this presentation is to describe the implementation process (PDCA) of an electronic-based Cancer Distress Screening Tool and the effects on the number of cancer patients screened for psychosocial distress and psychosocial referrals. The Cancer Distress Tool is embedded in the electronic medical record (MEDITECH) in the "Admission History". Upon admission the registered nurse (RN) is prompted to screen patients who have a history of cancer for distress. The patient rates their distress in the past week from 0-10. The patient is then asked to identify specific concerns related to the following categories: (a) practical/family concerns; (b) emotional concerns; (c) spiritual/religion concerns, and (d) physical/medical concerns. A referral for service and physician notification are both required for a patient with a distress score of 4 or greater. The organization aims to improve psychosocial distress screening of cancer patients and referrals to psychosocial oncology support services for all inpatient units within the system. The organization increased the number of cancer patients screened for psychosocial distress and patients referred to psychosocial professionals. There is a lack of accessibility to the oncology trained psychosocial professionals to assess and address psychosocial distress. Our organization continues to screen cancer patients for distress to make certain they are given the appropriate support services.

### 38 DEVELOPING A CIRCLE OF PROTECTION FOR THE CANCER PATIENT: THE IMPORTANCE OF VACCINATION. Melanie Carrow, RN, OCN®, ACRN, Memorial Sloan Kettering Cancer Center, New York, NY; Mary Elizabeth Davis, RN, MSN, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY

There are approximately four million cases of severe illness and up to 500,000 deaths yearly worldwide related to influenza. Streptococcal Pneumoniae is also a leading cause of global

morbidity and mortality. In the United States influenza and pneumonia caused almost 57,000 deaths in 2013. Immunosuppressed patients are at increased risk of serious influenza and pneumonia related complications. Hospitalization rates related to influenza are four times higher and mortality ten times higher among cancer patients than the general population. Influenza and infections cause delays or cancellations of chemotherapy, with possible consequences for cancer control. Oncology nurses need to understand the importance of vaccination in this vulnerable population. At highest risk are those patients with impaired immunity and low number of B and T lymphocytes including patients who have undergone hematopoietic transplant. Health care providers are frequently reluctant to administer vaccinations to cancer patients. This presentation will review the recommended immunization schedules, vaccination laws, patient safety and related nursing interventions to ensure maximum vaccine protection and risk reduction. Nurses need to understand the importance of vaccination, and how vaccines work. Published guidelines exist that include who should be vaccinated, when, and with what vaccines. Recommendations for cancer patients include aggressive influenza and pneumococcal protection. Notwithstanding influenza and pneumococcal, other vaccines, including cancer preventing hepatitis B and HPV are also emphasized. Patients unable to develop vaccine immunity may be indirectly protected by vaccinating members of their household and healthcare contacts to provide a "circle of protection". Increased number of persons vaccinated equals increased protective effect of herd immunity. Reduction of exposure to vaccine-preventable infections is also important for risk reduction. Vaccines are one of the safest measures in disease protection. Vaccination guidelines and laws have existed since 1855 and continue now to ensure special groups are recognized, vaccinated or have a plan to receive. Knowledge of state laws and CDC recommendations is vital to ensure safety and vaccination delivery. Oncology nurses' goal of maintaining health, preventing hospitalizations and treatment interruptions offer the greatest opportunity for continued survival. From the first small pox inoculation in the year 1000, to the development of the cancer—preventing HPV vaccine, vaccination promotion and acceptance remains a challenge for patients and health care providers.

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**PEDIATRIC EMERGENCY PREPAREDNESS IN AN ADULT COMMUNITY HOSPITAL'S RADIATION ONCOLOGY PROGRAM.** Rebecca Carson, DNP, APRN, CPNP, Johns Hopkins Health System, Washington, DC; Amanda Choflet, DNP, RN, OCN®, Johns Hopkins Medicine, Baltimore, MD

Radiation therapy is an essential treatment for many pediatric cancers. Children require providers with pediatric expertise and training due to the unique nature of pediatric physiology, development, and treatment modalities, but the cost of having a dedicated pediatric radiation center is often prohibitive. Therefore, many children are treated at adult facilities where preparation for a pediatric emergency is inadequate. The purpose of this quality improvement project was to develop a multidisciplinary pediatric emergency preparedness plan for a collaborative pediatric radiation oncology program at an adult community hospital with its partnering academic children's hospital. Core competencies of pediatric emergency readiness surrounded 1) protocol and policy creation, 2) team building, and 3) supply preparation adjacent to a multidisciplinary collaborative care model. Within these domains, pediatric emergency preparation utilized communication plans to ensure transitions of care and flow of patient information during emergencies between the inter-institutional multidisciplinary team. There were 3 institutions with 6 departments and 8 healthcare/non-healthcare disciplines involved in the pediatric readiness plan. Management guidelines

supported 7 pediatric emergency scenarios most likely to occur in pediatric oncology care. Final demonstration of emergency preparedness core competencies took place in the form of mock codes. There were 14 participants in the first mock code from 4 disciplines, with an average pediatric experience of 2.3 years. Staff were surveyed on a 5-point Likert scale before (n=14) and after the mock code (n=11). After the mock code, all staff reported understanding their role. Staff comfort increased in domains related to initiating the emergency response (4.2 to 4.7) and participating in the pediatric emergency (3.3 to 4.3) while comfort in initiating CPR decreased (4.5 to 4.3) and comfort in finding supplies remained the same (3.9). By collaborating with the multidisciplinary team in a non-emergent setting, programs have the ability to develop teamwork skills that facilitate communication and problem-solving. Mock codes are helpful with increasing staff comfort of emergency preparation, but should take place on multiple occasions to ensure continued competency in all readiness domains. This is the first description of our multidisciplinary collaborative care and core competency emergency care models.

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**HPV-RELATED OROPHARYNGEAL CANCERS: AN EVIDENCE-BASED OVERVIEW FOR AMBULATORY CARE NURSES.** Kimberly Carstens, RN, BSN, OCN®, The University of Texas MD Anderson Cancer Center, Houston, TX; Kimberly Yarrow, RN, BSN, OCN®, The University of Texas MD Anderson Cancer Center, Houston, TX; Kristen Pytynia, MD, MPH, The University of Texas MD Anderson Cancer Center, Houston, TX; Gregory Chronowski, MD, The University of Texas MD Anderson, Cancer Center, Houston, TX

Human papilloma virus (HPV)-related oropharyngeal carcinoma is predicted to be more common than HPV related cervical cancer by 2020. Yet the risks, signs, and sequelae of these cancers remain poorly understood and potentially stigmatized in the general population. Nurses in the ambulatory care setting have an important role in the care of this patient population related both to prevention-focused education, as well as physiologic and psychosocial support from diagnosis through survivorship. The purpose of this abstract is to present an overview for ambulatory nurses about the causes, sequelae, and physiologic implications of HPV-related oropharyngeal cancer. This includes prevalence and incidence of this cancer type, discussion of preventative interventions, outline of the physiologic care required for patients with this diagnosis, and discussion of the psychosocial concerns and implications frequently expressed and experienced by individuals with this diagnosis. Clinical teaching points for both ambulatory nurses and their patients will be presented in the following domains: Prevention: This content will focus on safe sexual practices and vaccination that can significantly decrease the incidence of HPV infection of the oropharyngeal mucosa. Diagnosis: The natural history of HPV virus infection and how it is transmitted through sexual contact, particularly oral sexual contact, to the mucosa of the oropharynx, and how it can potentially cause cancer will be presented, as well as screening and diagnostic tools. Other HPV-related cancer diagnosis, including anal and penile cancers will be discussed. Clinical care: Current research related to new and emerging therapies to treat HPV positive oropharyngeal cancer and preserve high cure rates, and the prognostic relationship between HPV and cancer will be presented. Psychosocial considerations: The importance of psychosocial support for patient and partner will be discussed, with particular emphasis on counseling of intimate contacts who may have concerns regarding transmission of the virus, as well as supporting patients through what can be a stigmatized diagnosis. Ensuring that nurses are knowledgeable about the latest evidence in prevention, transmission, diagnosis, and sup-



port of individuals with HPV-related cancers is critical to providing evidence-based care and education to patients. Nurses in diverse ambulatory care settings may encounter individuals at various stages on this continuum, therefore evidence-based education is an integral component of supporting exceptional clinical practice in this continually evolving area.

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**EASING THE WAY TO MEASURING SLEEP IN CLINICAL ONCOLOGY PRACTICE.** Patricia Carter, PhD, RN, CNS, The University of Texas at Austin School of Nursing, Austin, TX; Sabrina Q. Mikan, PhD, RN, ACNS-BC, Texas Oncology, Austin, TX

Sleep is a critical contributor to health and wellbeing across populations. However, in the person who is battling cancer, sleep quality can influence, for better or worse, many aspects of their journey. A number of significant studies have demonstrated that sleep has an impact on immune function, treatment response (including severity of side-effects), depressive symptoms, and anxiety in cancer patients. Therefore it would be logical that screening for sleep problems among our patients with cancer should be a priority. Unfortunately, this is where the science and the practice often separate. What appears to the scientist to be a logical “next step” is often viewed as an overwhelming burden to the practicing health care professional. The purpose is to explore usefulness of ESAS in clinical practice to measure sleep. In response to this gap between science and practice, we are conducting an evidence-based practice project to explore the effectiveness of using the Edmonton Symptom Assessment Scale’s (ESAS) other question as a sleep quality screen. The specific question added was “Sleep Disturbance 0=no sleep problems to 10= worst possible sleep problems. The ESAS was already in use in our practice and is part of our electronic medical record. This made the addition of the sleep question at once easy and difficult. Given that the tool was in the record, the practitioners were familiar with it; however, changing the electronic record is not an easy task. This project is ongoing; however, the preliminary findings suggest that the tool is being used and that we are able to identify sleep disturbances in our patient population. By using a pre-existing tool, validity and reliability issues are addressed. Additionally, using the other category of this tool to capture sleep disturbances is an easy way to begin to identify sleep disturbances in our patients that may be impacting their treatment responses. In this presentation we will discuss the process used to incorporate the new sleep question in our ESAS screening tool and we will present some preliminary findings and feedback from practitioners using this modified tool.

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**ESTABLISHING AN ADVANCED PRACTICE NURSE (APN) RUN ACUTE CARE CLINIC FOR SYMPTOM MANAGEMENT OF CHEMOTHERAPY PATIENTS.** Rosanne Casal, MSN, APN-BC, AOCNP®, University Hospitals Seidman Cancer Center, Cleveland, OH; Wendy Miano, RN, DNP, AOCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Karen Donato, RN, BSN, OCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Kathleen Smith, RN, MSN, OCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Regan Demshar, MSN, APN-BC, OCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Holly Kollman, MSN, CNP, University Hospitals Seidman Cancer Center, Cleveland, OH

Chemotherapy patients experiencing side effects secondary to treatment present a significant challenge for management by medical oncology teams. Medical oncology practices often refer

patients to the Emergency Department (ED) for symptom management due to inability to accommodate in the clinical setting. ER utilization is not the most effective option for the following reasons: 1. ED waiting rooms are comprised of sick, often infected patients, placing the immune-compromised patients at great risk. 2. Patients often wait several hours in the ED before seeing a provider. 3. ED is the least cost effective option for symptom management of oncology patients. 4. ED providers and staff are specifically trained in emergency medicine, not oncology. 5. A high percentage of oncology patients presenting to the ED for symptom management are admitted to the hospital. The purpose of establishing an Acute Care Clinic was to improve the timeliness, cost effectiveness, quality of care, and patient satisfaction for symptom management of patients receiving chemotherapy in an outpatient setting. Nursing leadership and APN’s convened a Task Force to improve the timeliness, cost effectiveness, quality of care, and patient satisfaction for symptom management of patients receiving chemotherapy. The team met weekly and decision was made to expand the current Acute Care Clinic for Sickle Cell Patients to include symptom management for chemotherapy patients. The team created a Standard Operating Procedure (SOP), a Supportive Care Order Set focused on symptom management, and Guidelines for Access which were disseminated to the medical oncology teams. Oncology Certified APN’s and RN’s currently managing an Acute Care Clinic for sickle cell pain crisis management in an acute care setting had the expertise, staff availability, and space to expand the clinic to include additional patients. Patients with head and neck cancers comprised the pilot group for symptom management, producing improved patient outcomes and patient satisfaction. As a result of positive response to the pilot, the Acute Care Clinic was expanded to include all solid tumor patients at University Hospitals Seidman Cancer Center. Data is being collected to support utilization and efficacy.

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**DEVELOPING A POPULATION-BASED FALL RISK ASSESSMENT PROCESS IN THE INPATIENT ONCOLOGY POPULATION.** Barbara Cashavelly, RN, MSN, AOCN®, NE-BC, Massachusetts General Hospital, Boston, MA; Susan Finn, MSN, RN, Massachusetts General Hospital, Boston, MA; Patti Shanteler, RN, BSN, MPH, Massachusetts General Hospital, Boston, MA

Patient falls continue to be a leading cause of adverse events in the hospital setting. Despite long term efforts from health care providers, significant, sustained reduction in falls and injury-related falls has not been achieved in our nation’s hospitals. Current literature suggests that the “one size fits all” approach is not effective. Characteristics and risk profiles differ by type of patient and their clinical picture. The purpose was to identify the profile and predictors of the oncology patient at risk for falls and develop a falls risk assessment process that meets the specific needs of the hospitalized cancer patient. All patients who experienced a fall on the inpatient medical oncology unit over 12 months were analyzed for patient characteristics and risk factors contributing to the falls. Results were shared with the unit-based nursing staff and a team of falls champions were identified to develop a risk assessment process to address the specific needs of the oncology patient. By reviewing every fall that occurred over 12 months risk characteristics and potential predictors were identified that were specific to the oncology population. Unit-based nursing staff developed specific population-specific interventions for cancer patients. Contributing factors included variables such as age, time of fall, location of fall, family involvement and medications. These strong contributing factors for the hospitalized oncology patient have influenced a very specific approach and communication to keep patients

safe. The unit base nursing team has developed a set of interventions that have become standard practice for the unit practice. This has assisted the team to develop consistency in the approach to falls prevention and decrease harm induced by falls. Developing a risk profile for all oncology patients has been very informative in assisting nurses in determining fall risks and interventions for their patients along with providing safe care. Staff have developed unit based interventions based on the data collected which include: daily Safety huddles, specific Fall risk signage for every patient and interdisciplinary collaboration.

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**NURSING IMPLICATIONS FOR PATIENTS WITH RELAPSED AND REFRACTORY MULTIPLE MYELOMA RECEIVING COMBINATION THERAPY WITH DARATUMUMAB (DARZALEX®).** Donna Catamero, ANP-BC, OCN®, CCRC, Mount Sinai Hospital, New York, NY; Gillian Morgan, BSN, RN, CCRC, Mount Sinai Hospital, New York, NY; Erika Florendo, RN, ANP-BC, Mount Sinai Medical Center, New York, NY

Multiple myeloma (MM) is the second most common hematologic cancer. In July, 2016, the FDA granted breakthrough therapy designation to daratumumab (DARA) in combination with lenalidomide and dexamethasone (DRd), or bortezomib and dexamethasone (DVd), for the treatment of patients with MM who have received at least one prior therapy. The purpose is to discuss information nurses need to consider before initiating DARA combination therapy, including prophylactic measures, administration, toxicities to monitor, and topics to discuss with patients. Prior to initiation: Prior to receiving the first dose of DARA, patients must have their blood typed and crossmatched for associated false-positive indirect Coombs tests. Patients on DARA are at an increased risk for infusion reactions. The majority of infusion reactions occur during the first infusion or within 4 hours post complication. Approximately half of patients will experience a reaction. There is no increased incidence when given in combination therapy. The most common type of infusion reactions are respiratory symptoms such as cough, wheeze, larynx and throat tightness or irritation, laryngeal edema, nasal congestion, and allergic rhinitis. Patients must be premedicated with an antihistamine, antipyretics, and corticosteroids. Patients with a history of pulmonary obstructive disease may require additional supportive care to reduce respiratory complications. If patient are receiving lenalidomide an anticoagulant must be added for blood clot prophylaxis. Administration: DRd: DARA 16mg/kg IV weekly x 8, every 2 weeks x 16, every 4 weeks thereafter; lenalidomide 25mg orally Days 1-21 of each 28-day cycle; dexamethasone 40mg weekly DVd: DARA 16mg/kg IV weekly x 3 cycles, Day 1 of Cycles 4-9, every 4 weeks thereafter; bortezomib 1.3mg/m<sup>2</sup> SC Days 1, 4, 8, and 11 of each 21-day cycle; dexamethasone 80mg weekly. Higher incidence of neutropenia, diarrhea, fatigue, upper respiratory infection, constipation, cough and muscle spasms were seen in DRd. Higher incidence of thrombocytopenia, neuropathy, and diarrhea were seen in patients receiving VDd. Patient counseling should include discussion of the most common adverse events. Nurses should instruct patients to inform the care team if fever, chills, rigors, chest pain, shortness of breath, or cough develop. Because nurses are involved in administration, assessment, and management of side effects, as well as patient education, it is imperative that oncology nurses are knowledgeable of current and emerging MM therapies.

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**IMPROVING BIOPSYCHOSOCIAL DISTRESS SCREENING IN AN INPATIENT HEMATOLOGY UNIT THROUGH A NURSE LED**

**PILOT USING TOUCH SCREEN TECHNOLOGY.** Marc Ceres, RN, BSN, City of Hope, Duarte, CA; Matthew Loscalzo, LCSW, City of Hope, Duarte, CA; Karen Clark, MS, City of Hope, Duarte, CA; Annette Mercurio, MPH, MCHES, City of Hope, Duarte, CA; Brett Evans, City of Hope, Duarte, CA; Robert Rice, PhD, RN, NP, City of Hope, Duarte, CA

IOM reports, new standards from ASCO and the American College of Surgeons (Commission on Cancer), and an increasing emphasis on whole patient and family centered care support biopsychosocial screening for cancer patients. Subsequently, published evidence further supports that comprehensive screening enhances the quality of life for cancer patients and the importance of and implementation of screening programs. Biopsychosocial distress can be defined as an unpleasant emotional experience which may interfere with an individual's ability to cope. There may be multiple contributing factors from the biological, psychological, practical and social domains. Biopsychosocial distress screening, or distress screening, is a process in which clinicians assess these domains to identify and provide early intervention to minimize development of advanced distress or a crisis state. As patients encounter an increasingly complex and fluid healthcare system, organizations must develop and implement innovative processes to identify and address the needs of patients across multiple settings. Although initially created to merely identify patient biopsychosocial needs, new automated systems now include real time: identification of symptoms and unmet needs, patient and family preferences for management of such problems, tailored education in multiple languages, targeted triage, referrals and resources, setting-specific data for program development and research, and finally enhanced communication and coordination of care. Nursing has a pivotal role in all of these processes either directly or in partnerships with patients and families and supportive care teams. Using a dual lane collaborative approach to the inpatient admission process, we used a tablet-based questionnaire with an emphasis on patient reported biopsychosocial distress. We coordinated a pilot study to quickly identify unmet needs, improve patient and nurse satisfaction with the admission process, provide a sustainable comprehensive distress screening method in the inpatient setting, and improve time to first intervention. The potential benefits to the clinical nurses are robust: reduced time on clerical and redundant functions, enhanced quality time with patients, easier transfer and communication of findings, real-time documentation, deeper patient engagement, reduced repetitive and boring tasks and working at top of license. We will present our pilot study data to demonstrate cost effective and time saving solutions during the admission process, while incorporating an innovative automated triage of identified biopsychosocial distress needs. We will also present lessons learned and future directions.

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**IMPROVE PATIENT ADHERENCE TO THE LMWH THERAPY FOR CANCER-ASSOCIATED THROMBOSIS IN THE ACUTE CARE SETTING: NURSING INTERVENTIONS.** Lijun Chen, PhD, RN, OCN®, CCRC, UT Southwestern Medical Center, Dallas, TX

Up to 20% of patients with malignancy will develop cancer-associated thrombosis (CAT) during the course of their disease. In addition to acute and long-term morbidity, CAT remains the number one cause of death during chemotherapy and the most common cause of all cancer deaths second only to disease progression. The diagnosis of CAT is very distressing for patients both physically and emotionally, especially in the context of the major life event of a recent cancer diagnosis and ongoing cancer treatment. Although evidence-based treatment guidelines all rec-

ommend Low-molecular-weight heparin (LMWH) monotherapy for CAT, data from recent studies still show that warfarin-based treatment remains the most common strategy, emphasizing the urgent need for improved VTE outpatient treatment guideline adherence. Among all the reasons why a physician might choose to prescribe the warfarin-based therapy or direct-acting oral anticoagulants (DOACs), patient refusal of self-injection is remarkably one of them, especially with the emerging use of the DOACs to treat VTE in non-cancer patients even though the efficacy and safety of DOACs compared with LMWH in the oncology settings are still unknown. The LMWH injection itself is painful, and bruising is common. Long-term use is associated with the development of subcutaneous lumps and further bruising, making it harder to find suitable places for injecting. This article reviewed the literature on current challenges of patient adherence with the standard LMWH treatment for CAT and provides a systematic framework of nursing interventions for oncology nurses to integrate into their daily practice. To improve patients' acceptance and adherence to LMWH treatment for CAT, oncology nurses should provide extensive patient education through well-organized written material including: Pathophysiology of CAT; Rational behind the preference of LMWH injection over oral VKA therapy in the oncology settings; possible antineoplastic properties of LMWH; monitoring and safety of LMWH therapy. An informative, accurate, easy-to-understand handout is a critical part of the patient teaching for self-injection of LMWH. The handout should include detailed step by step written instruction illustrated by pictures. Preferably, patient should get a one-on-one or face to face demonstration on how to self-administer LMWH in a quiet environment. The application of adaptive techniques to optimize ongoing injection should be one of the directions of the nursing research in the future.

#### 47 **THE ROLE OF THE SUPPORTIVE ONCODERMATOLOGY NURSE IN THE ASSESSMENT AND MANAGEMENT OF DERMATOLOGIC ADVERSE EVENTS TO ANTICANCER THERAPY.** Kathryn Ciccolini, BSN, RN, OCN®, DNC, Memorial Sloan Kettering Cancer Center, New York, NY

Dermatologic expertise continues to demonstrate significance in oncology as newer, and more targeted anticancer therapies are developed. In 2016, 1,685,210 new cancer cases are expected to be diagnosed. However, from 1991 to 2002, cancer death rates decreased 23% due to improved detection and treatment translating to 1.7 million cancer deaths avoided. Thus, more people are living with the disease, or having survived, yet are still subject to acute or chronic skin, hair, nail, and mucosal adverse events from their anticancer therapy. Dermatologic adverse events (dAE) are clinically significant yet poorly recognized. Having a specialized supportive oncodermatology team integrated within the interdisciplinary structure can be difficult to encounter in the United States, however, the subspecialty is quickly emerging. The role of the supportive oncodermatology nurse at Memorial Sloan Kettering Cancer Center (MSK) has evolved over the past 6.5 years and setting the standard for assessment and management of patients with dermatologic adverse events (dAE) to anticancer therapies in all cancers. The purpose of this oral presentation is to educate oncology nurses using high quality evidence based information merged with the unique supportive oncodermatology nursing expertise on the assessment and management of patients with dAEs related to anticancer therapy. The CREAM principles were developed through a systematic literature review in addition to the unique oncodermatology nursing clinical experience at MSK. Trending themes emerged from this review and formulated CREAM: communication referral, education/encouragement, assessment, management/monitoring illuminating the never-described role of the oncodermatology nurse and the desired outcomes. 99 articles mentioned assessment, and 107

articles mentioned management/monitoring, nursing role and desired outcomes. The CREAM principles literature demonstrates palpable positive patient impacts for an oncodermatology nurse specialized assessment and management/monitoring of dAEs such as: maximizing cancer treatment outcomes, improving physical and psychosocial well-being, and optimizing interdisciplinary collaboration. Dermatologic nursing assessment, triage, and management of dAEs require extensive training and skills in oncology to maximize patient and interdisciplinary outcomes. Oncology nurses should be polished on the basic skills to assess and manage dAEs to anticancer therapy throughout the cancer continuum. Future studies are needed to implement CREAM principles in oncology settings and the impact on patient outcomes. This presentation will provide cutting-edge, quality evidence on the assessment and management of oncology-related dAEs.

#### 48 **A TEAM HUDDLE APPROACH TO COMMUNICATION IN AN OUTPATIENT ONCOLOGY INFUSION SETTING.** Caroline Clark, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, Basking Ridge, NJ; Jessica Uporsky, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, Basking Ridge, NJ

Oncology care is shifting from inpatient to outpatient settings. The nurse in an outpatient infusion setting is managing complex chemotherapy, biotherapy, and investigational regimens along with symptom management and supportive care. In a busy outpatient infusion unit, nurses verbalized feeling increasing pressure to be efficient while safely coordinating care of many patients. The literature highlights effective communication and anticipation of patient needs as key steps in keeping patients safe. Nurses reviewed literature on health care huddles and found huddles gaining momentum primarily in inpatient settings. We considered a huddle to be a possible strategy for ambulatory oncology care. Nurses in an infusion setting were surveyed about workflow, communication, and perception of patient safety. Based on survey results, a team "huddle" was established for the purpose of sharing information succinctly on patients scheduled in the unit on that day, and to improve coordination of nursing care. Nurses implemented a ten minute pre-shift huddle. Information reviewed daily included staffing, physician coverage and volume. Staff highlighted relevant information about patients such as psychosocial concerns, ongoing complex symptom management, poor venous access, and risk for falls. A rotating nurse led the daily huddle to reinforce teamwork and ownership of the huddle as a unit initiative. The huddle provided opportunities for quick practice or product updates and short in-services to promote a culture of learning. Feedback from staff surveyed 3 and 6 months post-implementation was positive. Nurses reported improvements with fluency of communication, increased awareness of patient issues, and satisfaction with the time frame of the huddle. Over time the huddle provided opportunity for pre-identification and assignment of "high acuity" patients to balance nurse workload. Nurses elected to permanently incorporate the huddle into the clinical setting. The team huddle is a proactive approach to address the increasing demands of the ambulatory oncology patient while providing vital information to the team to facilitate patient care. It improved nursing communication and provided an opportunity to increase awareness of patient safety. This formerly inpatient strategy easily transferred to the outpatient setting and has the potential to be expanded for use with other disciplines and departments.

#### 49 **MULTIDISCIPLINARY APPROACH IN TREATING CLINICAL TRIAL PATIENTS DIAGNOSED WITH AGGRESSIVE EXTRANODAL NATURAL KILLER/T-CELL LYMPHOMA WITH AUTOLOGOUS EPSTEIN-BARR VIRUS-SPECIFIC T-CELLS.**



Jennifer Clark, BSN, RN, OCN®, The Ohio State University Comprehensive Cancer Center Arthur G. James and Richard J. Solove Research Institute, Columbus, OH; Jodi Welsh, BSN, RN, OCN®, The Ohio State University Comprehensive Cancer Center Arthur G. James and Richard J. Solove Research Institute, Columbus, OH

Patients diagnosed with extranodal natural killer T-cell lymphoma (ENKTCL) have an 80-90% response rate when treated with traditional chemotherapy and radiation; however there are some patients who exhibit little or no response and have a life expectancy of four to nineteen months. The use of T-cell infusions have been shown to improve disease response by targeting specific malignancies. With reports of potential infusion reactions related to autologous administration of T-cells, we assembled a group of multidisciplinary practitioners to proactively manage these clinical trial patients to ensure a positive outcome. This was the first T-cell infusion trial in the Clinical Treatment Unit (CTU), and the trend in oncology treatment is evolving towards this new therapy. A team was formed for maintaining the guidelines of the clinical trial prior to initiation. This team included the Principle Investigator, Clinical Research Coordinator (CRC), Lead Nurse from the CTU, Specialty Pharmacist, Clinical Trials lab representative, and regulatory personnel. The goal of the team was to determine equipment, education and preparations needed for the implementation of this protocol. The CTU frequently administers high risk medications, but this was complicated as many components had to be coordinated among various disciplines. A competency was developed for the nurses for the procurement of the blood needed for extraction of the T-cells for re-infusion since this was a new process for them. Once the trial opened and a patient was identified, the CRC and Lead Nurse developed an in-service for staff; the Specialty Pharmacist gave a presentation on autologous T-cells to target Epstein-Barr virus (EBV) positive lymphoma cells. The Lead Nurse facilitated education from the Bone Marrow Transplant Unit where inpatient cell infusions are administered. The Lead Nurse collaborated with the manager of the Cell Therapy Laboratory, who shipped the procured blood to the sponsor to prepare the autologous EBV-specific T-cell product, and received it back for storage according to protocol criteria. The CTU is one of the most specialized outpatient units at this Midwestern Cancer facility. Due to the diligent coordination of this multidisciplinary team prior to infusing the T-cells in the first patient, protocol guidelines were followed and patient safety was maintained throughout. This positive patient outcome will lead the way for more innovative oncology treatments in the outpatient setting.

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**MYELODYSPLASTIC SYNDROME: IS IT JUST THAT? THE IMPORTANCE OF OBTAINING AN ACCURATE FAMILY HISTORY.** Kristen Cole, MSN, RN, OCN®, BMTCN®, Office of Clinical Director, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD; Daniele Avila, MSN, CRNP, ANP-BC, Experimental Transplantation and Immunology Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD; Dennis Hickstein, MD, Experimental Transplantation and Immunology Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD

Up to 72 percent of adolescents with myelodysplastic syndrome (MDS), and monosomy 7 have the GATA2 mutation. Patients with GATA2 deficiency can present with atypical mycobacterial infections, severe viral infections, human papilloma virus, lymphedema, MDS, and acute myeloid leukemia

(AML). Infections result from low monocytes, natural killer cells, and B-lymphocytes in the peripheral blood. Approximately one-half of the cases of GATA2 deficiency result from a germline mutation and is heritable. GATA2 deficiency functions by haploinsufficiency—loss of one copy of the gene results in disease. Each member of a family of an affected individual has a 50:50 chance of inheriting the defective allele. Oncology nurses and providers are in a unique position to impact these outcomes by obtaining detailed and accurate family histories to optimize treatment decisions, especially for patients with MDS and/or AML. Research has shown that GATA2 patients that undergo stem cell transplantation prior to development of life-threatening infections or cytogenetic abnormalities have better outcomes. An accurate family history is a valuable, inexpensive, and often underused tool, the opportunity exists to identify individuals with a predisposition to cancer. By eliciting a detailed three-generation pedigree (family history), oncology nurses can identify whether an underlying genetic mutation may be the cause of a disease, and if screening is indicated for the individual patients and family members. To illustrate the significance of a detailed family history, we offer as an example, a 38-year-old male diagnosed with recurrent infections suggestive of GATA2 (disseminated atypical mycobacterial infection, anal condylomata, pulmonary alveolar proteinosis, and MDS). His peripheral blood was notable for monocytopenia, B and NK cell lymphopenia. GATA2 testing confirmed a mutation. His family history revealed four asymptomatic siblings, and a cousin who died of leukemia. His 8-year-old son has had nose bleeds, warts, and asthma. His 16-year-old son had a healthy childhood, however he was found to be neutropenic, and a bone marrow revealed MDS. Both children were found to have the GATA2 mutation. Oncology nurses, and provider armed with knowledge of MDS and GATA2 deficiency can play a critical role by obtaining extensive three-generation family pedigrees to identify patients and their family members who may need genetic testing to provide the highest level of care.

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**MANAGEMENT OF HYPERGLYCEMIA IN PATIENTS RECEIVING PIK3CA INHIBITORS.** Sarah Colella, RN, BSN, Massachusetts General Hospital, Boston, MA; Clare Worth, RN, BSN, OCN®, Massachusetts General Hospital, Boston, MA

Gene mutation targeted therapies are becoming more prevalent in early and late phase research as well as standard of care regimens. In the Termeer Center for Targeted Therapies at Massachusetts General Hospital, there is a large population of patients with PIK3CA mutations. PIK3CA is one of the most commonly mutated genes identified in human cancers. In our experience, while targeting this mutation, about 50% of patients develop drug induced hyperglycemia. Early detection and patient education is crucial in preventing interruption of treatment. We have identified key areas that warrant education for oncology nurses as this class of drugs becomes more prevalent in our practice. It is important for nurses to understand how these medications target PIK3CA when educating their patients about the risk for hyperglycemia. PIK3CA is involved in tumor cell growth and survival as well as glucose metabolism. When blocking the pathways to tumors with this mutation it is also blocking the insulin receptors in the cells therefore the glucose is not metabolized and continues to stay in the blood causing hyperglycemia. Because the insulin receptors are blocked, giving patients insulin to treat this type of hyperglycemia will not resolve the toxicity. Metformin and Actos or pioglitazone are medications that helps control this type of hyperglycemia by making the liver decrease the amount of glucose it releases. The use of these medications in addition to educating patients about the signs and symptoms of hyperglycemia, diabetic diet,

and blood glucose monitoring are ways we have found to help with early detection of hyperglycemia as well as decreased length of time off of drug due to toxicity. Hyperglycemia is a side effect of many cancer treatments and can lead to co morbidities which can affect a patient's quality of life. Our goal is to demonstrate how education and early detection lead to better quality of life and adherence to continuous dosing without interruption.

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### **ONCOLOGY NETWORK RESOURCE POOL. Lindsay Coleman, BSN, RN, OCN®, Froedtert Hospital, Wauwatosa, WI**

The Froedtert & Medical College of Wisconsin Cancer Network is comprised of an Academic Cancer Center with three community locations. These locations are staffed by trained hematology oncology nurses and technicians. Oncology nursing is a specialized area, requiring staff to be specially trained which can lead to staffing struggles during times where staff are out on maternity leave, vacations, FMLA, and sick leave. The Oncology Network resource pool was created to allow for flexibility in staffing and also created the opportunity to establish a direct nursing connection between the academic and community sites. To trial this, a resource pool position was created with one nurse who had worked at both the Froedtert Cancer Center Day Hospital and the Moorland Reserve Cancer Center. During the pilot, the nurse worked primarily at the Day Hospital as there was a larger patient volume and thus larger need at that location. This nurse was able to bring new education and ideas that were initially rolled out at the larger academic site to the smaller community site. This nurse was also able to facilitate improved patient scheduling by identifying and offering patients options for infusion treatment at the community site, rather than the larger academic medical center. Having a nurse with a system wide perspective allowed for improved patient care across locations. Patients were able to be offered appointments at a community site, which decreased their drive time and appointment wait times, while increasing their patient satisfaction. The resource nurse also supported standardized clinical practice among all of the sites. The Oncology Network Resource Pool has been beneficial to our staffing and patient satisfaction. The resource nurse works as a collaborator between Moorland Reserve Cancer Center and Froedtert Cancer Center Day Hospital to improve patient scheduling and flow. They also work to maintain consistent practices between the academic and community sites. More positions for Oncology Network Resource Pool nurses have been established and other community sites are now included in the resource pool. This model also provides the foundation to continually grow the Oncology Network Resource Pool as additional locations are added to the Cancer Network.

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### **LESSONS LEARNED IN CREATING AN EVIDENCE-BASED ELECTRONIC ONCOLOGY CARE PLAN. Meghan Coleman, DNP, RN, CRNP, AOCNP®, Carevive, Philadelphia, PA; Karen Hemmelef, DNP, RN, Carevive, Dearborn, MI; Deborah Wujcik, PhD, RN, FAAN, Carevive, Nashville, TN**

Developing treatment plans and summary templates has been an important step forward for cancer care providers and our patients. The goals of providing evidence-based electronic care plans are to streamline the documentation process, provide an overview of the patient's care in one concise document, and enhance provider and patient communication through identification of goals of care. Studies of the use of evidence-based electronic care plans in the cancer population have demonstrated an improvement in the overall patient care experience, decreased negative outcomes, and enhanced physician/

patient communication. Despite this evidence, use of electronic care plans remains low. This presentation details the nurse led process of creating a patient facing care-plan (directed to the patient), lessons learned, and identifies clinical considerations for future products. This electronic care plan addressed oncology patient needs at one of three phases of the cancer treatment spectrum: treatment planning, distress and symptom management, and survivorship. Initial topics identified for care plan inclusion were disease specific education, recommended referrals, identifying potential, current, or future side effects of surgery, chemotherapy, and/or radiation, and recommending evidence based interventions. The oncology nurse reviews the plan of care with the patient, at the onset of each treatment phase. The strength of the care plan content was in the rigorous evidence based review. Inclusion of resources such as clinical practice guidelines from professional organizations was essential. This often required unanticipated permission and consents, resulting in re-evaluation of the budget and timeline. To ensure successful implementation, scoring readability, reducing care plan length, assessing ease of use, and addressing individual computer literacy and access. Were assessed. An over-arching goal of providing the electronic care plan was to reduce distress and improve the quality of the patient cancer care experience. Nurse led electronic care plan development can enhance patient understanding and education, which can reduce patient distress. The novel care plan delivery fosters interdisciplinary involvement. Further analytics are needed to assess the effectiveness of reaching these goals. The electronic care plan has been in use of over a year. Patients anecdotally report an increase in care satisfaction. Evaluation did not include data collection to assess the effectiveness of the care plan's enhancement of provider-patient communication. This is an important measure to be included for future nursing research.

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### **NUTRITIONAL MANAGEMENT OF WEIGHT LOSS IN PATIENTS WITH HEAD AND NECK CANCER. Catherine Concert, DNP, RN, FNP-BC, AOCNP®, NE-BC, CNL, CGRN, New York University, New York, NY; Omar Ishaq, MD, New York University, New York, NY; Maureen Oliveri, MSN, RN, New York University, New York, NY; Rosanna Florentino, BSN, RN, OCN®, New York University, New York, NY; Kathleen Gumbs, BSN, RN, OCN®, New York University, New York, NY; Elecia Peat, BSN, RN, OCN®, CBCN®, New York University, New York, NY**

Patients with head and neck cancer undergoing chemoradiation/radiation treatment present with unique challenges especially their nutritional needs. Weight loss, dehydration and malnutrition are preventable. Nutritionist consultation and speech and swallow evaluations are necessary processes pre, during and post treatment. Weight loss of 10% or more of patient's baseline weight requires immediate provider intervention. Significant weight loss can influence and lower patient's quality-of-life (QoL) scores, changes in appearance, reduce patient's tolerance to treatment, altering recovery, prognosis and ability to speak and swallow, as well as have life threatening consequences. The Distress Management Panel of the National Comprehensive Cancer Network (NCCN) recommended that all patients with cancer be routinely screened for psychological distress since clinically significant distress may not be recognized by healthcare professionals. Therefore accurate and efficient recording of patient-reported outcome measures, diet history, in conjunction with objective measurement of weight may promote better communication of nutritional needs, treatment interventions, improve care quality, and avoid unnecessary emergency room visits and hospital admissions. Using a handheld tablet computing device which

is an electronic device to gather patient data that can communicate with a healthcare system's EHR may be a great asset to determine food intake and quality of life needs. A handheld tablet with an evidence based data collection tool may be an effective alternative to obtaining and transferring the patient data to a secure database, generating outcome scores that are aggregated, analyzed and trended over time. The National Comprehensive Cancer Network (NCCN) distress thermometer is a valid and reliable method to report physical challenges. Registered Nurse will assess patients weekly. Patient weights are recorded at diagnosis, throughout treatment and at the end of treatment with the percentage of weight change calculated throughout the therapy. The combination of technological efforts and objective measures may ultimately improve the nutritional status of the patient by efficient healthcare provider symptom management, the recognition of treatment toxicities and the promotion of effective care strategies. Close clinical assessment and proactive management of patient's symptoms, side effects and needs may lead to better quality of life, treatment tolerance, performance status, increase patient satisfaction and improved patient outcomes.

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**VINCRIStINE MINIBAG ADMINISTRATION: A PROACTIVE STRATEGY TO ENHANCE CHEMOTHERAPY SAFETY THROUGH SIMULATION.** Nancy Corbitt, BSN, RN, OCN®, CRNI, University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD; Jennifer Nishioka, PharmD, BCOP, University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD; Lisa Malick, MS, RN, OCN®, University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD; Ann Rigdon, MS, RN, OCN®, University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD; Stephanie Szoch, BSN, RN, OCN®, University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD; Peggy Torr, BSN, RN, OCN®, University of Maryland Greenebaum Comprehensive Cancer Center, Baltimore, MD

Vincristine invariably causes death due to ascending radiculomyeloencephalopathy if given intrathecally. Between 1968, when the first fatal incident occurred, and 2012, there have been 120 avoidable deaths worldwide. Syringes of medication can be easily mislabeled or placed in the wrong area, and even with the most stringent of policies and procedures, errors occur. To make administration safer, University of Maryland Greenebaum Comprehensive Cancer Center (UMGCC) reviewed the existing evidence and practice recommendations with a goal of improving safety for patients receiving vincristine by changing practice from intravenous syringe to minibag administration. UMGCC adopted the use of simulation as a method of yearly chemotherapy validation for all nurses on our inpatient and outpatient units and collaborated with the simulation center within the hospital to use this method as a validation of the new skill. The educational process was crafted to be multi-modal and adaptable across practice areas with differing needs, processes and equipment. An interdisciplinary team collaborated to identify the most reliable and simple processes. Documents detailing the minibag process were laminated and posted at practice workstations which allowed nurses to become comfortable with the procedure prior to validating competency in the simulation center. The vincristine administration by minibag infusion was a major change in practice, and although achievable without a high-fidelity simulation center, the simulation was felt to be the best option to ensure patient safety, nursing knowledge and administration competence. Vincristine has been administered to adults via minibag at our institution since August 2015. Over a six month period, 350 doses have been administered with no

extravasations. A total of 93 nurses attended simulation sessions to demonstrate the competency. Evaluation of the use of simulation to validate chemotherapy administration revealed a 97% overall satisfaction score. Nurses reported they felt comfortable with the minibag infusion technique. With careful planning and implementation, minibag administration of vincristine has been an extremely successful endeavor for UMGCC. Using simulation whether low or high fidelity is an effective, streamlined method to institute a major practice change, ensuring optimal patient safety and outcomes. Future plans include expanding minibag infusion technique to the other vinca-alkaloids.

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**PRESERVING OUR PATIENTS' FUTURES: A NURSING SHARED LEADERSHIP PROJECT.** Sherri Costa, MS, RN, AOCNS®, Wheaton Franciscan Healthcare, Wauwatosa, WI; Deanna Birling, MSN ANP-BC AOCNP®, Wheaton Franciscan, Brookfield, WI; Meghann Grosskreutz, RN, BSN, Wheaton Franciscan, Brookfield, WI; Claire Siebold, MSW, Wheaton Franciscan, Wauwatosa, WI; Jeanette Frawley, MSW, Wheaton Franciscan Healthcare, Wauwatosa, WI; Anne Hanson, RN, BSN, Wheaton Franciscan, Brookfield, WI

Oncology patients of reproductive age receive treatments that can impair their future ability to have children. The American Society of Clinical Oncology (ASCO) guideline recommends a documented fertility discussion with all patients of reproductive age receiving cancer treatment that has a potential risk for infertility. Additionally, it should be addressed early, before treatment starts, with a referral provided to a reproductive specialist for any patient desiring fertility preservation. Despite recommendations, studies indicate a lack of fertility discussions occurring. Within our own organization, there is no formal process in place to address fertility prior to the start of treatment. Oncology nurses are in a pivotal role to provide patients with the necessary information to manage the effects that cancer treatment may have on fertility. The primary goal of this nursing shared leadership project was to develop a standardized approach to routinely incorporate fertility discussions into practice. Evidence of successful implementation would be indicated by a documented fertility discussion and referral to a reproductive specialist (as indicated) prior to the start of treatment. An interdisciplinary nursing-led workgroup was formed. A retrospective chart audit was utilized to assess current practice and adherence to the ASCO guidelines. Results revealed only 21% (n=6) of eligible patients with a documented fertility discussion in their medical record. Four of these six patients were referred to a fertility specialist and underwent fertility preservation. A staff survey was conducted to measure current knowledge and comfort level in addressing fertility. Results indicated the majority had some understanding of how their patients' cancer and treatment might affect fertility with the majority being able to correctly identify patients at risk. There was more variation in staff confidence and comfort levels in discussing fertility. Fifty percent of those surveyed indicated that they were not really or not at all knowledgeable about fertility preservation options and resources for their patients. Results of the chart audit and staff survey led to the development of a fertility referral algorithm, guideline, and patient and staff resources. Additionally, the survey identified the need for more staff education around preservation options and resources. Following full implementation of the guideline, chart audits will be repeated to measure compliance with recommendations and adherence to the guideline.

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**PREVENTING PITFALLS ON THE ROAD TO STEM CELL TRANSPLANT: DEVELOPMENT OF AN EARLY PSYCHOSOCIAL**



**SCREENING PROGRAM.** Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Heidi Christianson, PhD, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

Patients with cancer struggle with issues that may or may not be related to their cancer diagnosis and/or its treatment(s). Some problems are more prevalent in patients with cancer versus the general population. Treatment for patients undergoing blood and marrow transplant (BMT) involves high dose chemotherapy, increased risk of infection, and hospitalization. When patients present with pre-existing conditions, complications may arise. The National Institutes of Health recommends routine use of screening tools to identify untreated depression in patients with cancer. The Institute of Medicine reports low rates of recognition and treatment of depression in patients with cancer. This report and the National Comprehensive Cancer Network (NCCN) recommend screening patients with cancer for psychosocial distress, including depression. The NCCN also published a guideline recommending smoking cessation. No standardized screening program existed, despite these recommendations. The purpose was to implement a psychosocial-focused screening for patients during BMT consult. A questionnaire was developed that addressed depression, anxiety, smoking status, alcohol use, cannabis use, and other illegal drug use. Screening measures included: (a) Patient Health Questionnaire (b) Generalized Anxiety Disorder (c) Two question smoking screen (d) Alcohol Use Disorders Identification Test (e) Cannabis Use Disorders Identification Test : Revised (f) One question screen for illegal drug use Considerations for measure choice included face validity, reliability, ease of use, size, and validation in the oncology population. Cut scores were identified for each measure based on oncology-related research. Each measure tracked to a related referral if the patient screened positive. In this pilot, 126 patients had BMT consultation appointments and were sent the questionnaire. Findings included: (a) Not all patients completed the questionnaire. (b) Appropriate referrals were made for the majority of issues. Exception: patients were rarely referred to the smoking cessation program. (c) Patients were being screened too late, with little opportunity for engagement in programs. (d) Some referrals did not have robust workflows. (e) Some referrals were difficult to schedule/obtain services. Post-pilot changes included: (a) Screening program was expanded to include all new clinic patients. (b) Processes were created to assure questionnaire completion. (c) Collaborated with Social Services to develop an AODA referral workflow. (d) Pilot initiated for a smoking cessation program that is imbedded in clinic. Use of validated tools for screening helps to identify patient issues. Timing of screening and having solid processes for implementation and follow through are essential.

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**IMPLEMENTING THE PRACTICE OF BARE BELOW THE ELBOWS ON AN INPATIENT ADULT ONCOLOGY UNIT: A STUDY OF THE ATTITUDES OF PATIENTS AND HEALTHCARE PROVIDERS.** Sally Cowgill, MSN, RN, OCN®, Wake Forest Baptist Medical Center, Winston-Salem, NC; Lindsay Bechtel, BSN, RN, Wake Forest Baptist Health, Winston-Salem, NC; Brooke White, BSN, RN, Wake Forest Baptist Health, Winston-Salem, NC; Sylvia Pegg, BSN, RN, CIC, Wake Forest Baptist Health, Winston-Salem, NC

Infections and resulting complications continue to be a significant cause of morbidity and mortality for oncology patients. Nurses and other healthcare providers are scrutinizing their practices to reduce the risks of healthcare associated infections (HAI) in their environments. Some institutions and some pediatric units within the writers' facility follow the

practice of "Bare Below the Elbows (BBE) for all healthcare providers (HCPs) having direct patient contact. This practice is defined by HCPs not wearing anything (rings, watches, bracelets, clothing, or activity monitors) below the elbows and removing lab coats/jackets prior to entering patients' rooms. Males are also instructed not to wear neckties or to tuck them into their shirts. The purpose of this pilot study was to evaluate the impact of BBE on patient and HCP perception of patient care and satisfaction. Two medical oncology units were chosen for the pilot: BBE was implemented on one unit and the other one served as a control. To gain support for the project, the infection prevention personnel cultured rings, watches, and sleeves of volunteers from both the nursing and the medical staffs along with surveying the frequency of laundering white coats or scrub jackets. No strong evidence-based studies have shown support for BBE, but the results of the cultures compelled the staff to move forward. Physicians and ancillary departments were informed of the project and signage was placed throughout the unit. HCPs and patients were surveyed weekly in the intervention unit and monthly in the control unit for three months. The nurses on the intervention unit were responsible for educating the patients and physicians regarding BBE while holding their peers accountable for the change in practice. Implementation of BBE showed that patients on the intervention unit perceived a decreased threat of infection. Overall 95.7% of them did believe that items below the elbow can transmit pathogens. Therefore, patients were comfortable with providers NOT wearing white coats and still viewed them as professional, even though less than 50% of physicians initially believed this to be so. Over 70% of HCPs did believe that items below the elbow could transmit pathogens and were willing to adopt the BBE policy.

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**THE IMPACT OF PROGNOSTICATION AND COMMUNICATION ON TIMING OF REFERRAL TO HOSPICE.** Destiny Cromer, ANP-BC, AOCNP®, Texas Oncology, The University of Texas at Austin, Austin, TX; Patricia Carter, PhD, RN, CNS, University of Texas at Austin, Austin, TX

The CMS states that "Practitioners in Oncology Care Model are expected to rely on the most current medical evidence and shared decision-making with beneficiaries to inform their recommendation about whether a beneficiary should receive chemotherapy treatment." There is a focus to deliver patient-centered cancer care that includes a discussion of the diagnosis, treatment options, and palliative care. This implies that there is an open and clear line of communication between the practitioner and the patient. Unfortunately, this is not always the case. Patients with incurable metastatic disease often do not understand the intent of their chemotherapy or their life expectancy with or without chemotherapy. Typically, more than half of patients referred to hospice die within 7 days of enrollment. Less than half of patients who die of cancer are enrolled in hospice before their death. In order to improve communication, increase access to services, and maximize quality of life we need to have a better understanding of the barriers and facilitators to communication between the oncology care practitioner and the patient. Additionally, we need to explore what happens in the community cancer clinic, where 90% of the cancer care is delivered the U.S. Patients with metastatic cancer will be provided, on their first consult after being diagnosed with cancer, written and oral information regarding their prognosis and whether the goal of their chemotherapy is curative or palliative. The time elapsed between diagnosis to when a referral to hospice is made will be compared for a twelve month time period before and after the initiation of the intervention. The data collection and analysis are ongoing. Preliminary results suggest provider preparation may be a

contributing factor in improving the timing to the election of hospice. Patients have been observed to be more frequently asking questions about their prognosis when discussing treatment options. Patient understanding may be complicated by inconsistencies in information delivery between providers. During this clinical project in a community based oncology center, we are undergoing a discovery process to identify factors that influence the election of hospice in metastatic patients. The intention of this clinical project is to discover the factors that contribute to successful communication between patient and provider to improve the timing of hospice referrals.

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### **IMPLEMENTING AND EVALUATING THE COMFORT COMMUNICATION IN PALLIATIVE CARE FOR ONCOLOGY NURSES.** Julie Cronin, DNP, RN, OCN®, Massachusetts General Hospital, Boston, MA; Susan Finn, MSN, RN, Massachusetts General Hospital, Boston, MA

Oncology nurses often feel unprepared or unskilled in communicating with patients, families and providers around issues of palliative care. Currently, there is a paucity of training programs that educate nurses on how to communicate effectively in this area. The COMFORT (Communication, Orientation and Opportunity, Mindful Presence, Family, Openings, Relating and Team) communication curriculum was designed to provide education and training to oncology nurses to assist their practice of narrative communication in palliative care. The purpose of the study was to develop and implement an educational program synthesized from the COMFORT communication curriculum for oncology nurses and to assess the effects of the training by evaluating nurse's responses to three scales: The Communication Skills Attitude Scale (CSAS), the Perceived Importance of Medical Communication (PIMC) (adapted to fit nursing), and the Caring Self-Efficacy scale (CES). This study used a pre-post survey design to evaluate the impact of the COMFORT curriculum on communication for nurses in palliative care. Participants received consent, demographic tool and three surveys assessing caring self efficacy, communication skills attitudes and perceived importance of nursing education via RedCap. Twenty oncology nurses attended one four hour course, learning several aspects of the COMFORT curriculum. Participants then received three post surveys. This study was approved by the hospital's Institutional Review Board. Survey results were analyzed using statistical analysis software (SPSS) to assess the effects of the COMFORT communication training curriculum. The majority of pre-post survey results indicated an increase in mean scores. This suggests an overall improvement in oncology nurses attitudes, comfort levels and perceived self efficacy around conversations related to palliative care, although not at a statistically significant level. The COMFORT training may enhance oncology nurses comfort in communication in palliative care. Further research is needed to assess whether the curriculum will have a positive impact on non-oncology nurses dealing with palliative care issues. Research is also needed to assess any impact on nurse's clinical practice. This training and curriculum focuses on teaching nurses how to approach narrative care and patient-centered communication in end of life and palliative care. This is an area in which nurses feel unskilled and providing this curriculum will ultimately increase nurses' comfort with palliative care conversations and enhance outcomes for patients and families.

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### **EDUCATING AND MONITORING NURSING STAFF REGARDING THE CARE OF CENTRAL VENOUS ACCESS DEVICES (CVAD) IN STEM CELL TRANSPLANT PATIENTS.**

### **Ashley Cummings, RN, BSN, New York-Presbyterian Weill Cornell, New York, NY**

A necessity for the patient undergoing a bone marrow transplant (BMT) is the placement of a Central Venous Access Device (CVAD), particularly for the infusion of stem cells. BMT patients are severely immunocompromised and at increased risk for a central line-associated bloodstream infection (CLABSI). According to the Centers for Disease Control and Prevention (CDC), more than 250,000 patients will face a CLABSI in the United States every year. Patients who develop CLABSIs will have longer hospital stays and are likely to exhibit poor outcomes. From January : May 2016, there were seven CLABSIs on the BMT unit. In collaboration with members of the multidisciplinary team, the oncology nurses launched a CLABSI prevention educational program. Our goal was to develop and implement staff education and adopt CVAD management best practices while attempting to reduce our CLABSI rates. A taskforce of interdisciplinary clinicians investigated each CLABSI following a root cause analysis methodology and generated a data aggregation tool. Nurses were observed by CLABSI champions when caring for CVADs, then scored on elements of performance, such as hand hygiene, use of alcohol wipes for central line hubs and knowledge about dressing and tubing changes. Chlorhexidine Gluconate bathing (CHG) was established. The CLABSI taskforce began in June 2016. There were four CLABSIs on the BMT unit in the three months since inception of the taskforce. When this time period was compared with the three months prior to the inception of the taskforce, there were four CLABSIs. An increase in CLABSI rates after the taskforce was initiated was not observed. The number of CLABSIs can be reduced on the BMT unit through improved CVAD best practices. The rate of CLABSIs is expected to decrease for the remainder of the year through continued patient and nursing staff education, as well as routine audits and evaluations. The oncology nurses will be held responsible for using best practice when accessing CVADs to prevent infections, as well as chlorhexidine antiseptics. All staff members are responsible for documenting dressing changes, assessment of CVADs, and the patients' daily use of the CHG cloths. The BMT unit has a plan to continue monitoring patients with central lines, as well as performing daily audits to assess the need for each central line.

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### **THE DEVELOPMENT OF A RESOURCE KIT FOR MEN WITH BREAST CANCER.** Joamee Cutrone, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Ella Smelyanskaya, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Kelly Quinn, MHA, RN, CBCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Marian Borriello, ADN, RN, CBCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Roberta Baron, MSN, RN, AOCN®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY

Little attention has been focused on male breast cancer due to its rare nature. Educational resources often address issues specific to women, such as vaginal dryness, and portray female breast anatomy. This can threaten a man's masculinity and add to feelings of isolation and shame. Studies have shown that a majority of men are unaware that they can get breast cancer. Men diagnosed with breast cancer reported a lack of gender specific or even gender neutral educational resources. The purpose was to identify the educational and supportive needs of men with breast cancer and to develop or modify existing resources to address these needs. A task force comprised of outpatient breast surgery and medicine nurses conducted an evidence-based literature review. Men reported a lack of male specific information related to the disease and treatment. Pa-

tient education materials at our facility focused primarily on women with breast cancer. Men expressed interest in seeing images of the male anatomy and post-mastectomy photographs. While there was little reported interest in attending formal support groups, men favored talking individually with another male breast cancer patient and were receptive to telephone or web-based support groups. Based on these findings, the task force developed a resource kit consisting of photographs of the male breast anatomy, post-mastectomy photographs, a general fact card about male breast cancer, contact information if interested in speaking with another male patient and other online resources. We also initiated a modification to the tamoxifen fact card to include male-specific side effects. The office practice nurse will determine which materials are appropriate for each patient depending on their treatment pathway. Several days after patients receive the material, the nurse will call them and ask several questions to assess satisfaction with the materials provided. These materials can be adapted for use by oncology nurses at other institutions to provide more gender-sensitive care. Through our evidence-based review and nurses' experience, our task force found gaps in the delivery of patient sensitive care geared towards male breast cancer patients. This task force was able to address these concerns and begin to implement changes to our current patient education materials and patient awareness of male breast cancer. This presentation will provide attendees with samples of the material developed.

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**FACTORS RELATED TO NURSE ENGAGEMENT IN DISCUSSION OF CLINICAL TRIALS WITH PATIENTS.** Barbara Daly, PhD, RN, FAAN, Case Western Reserve University, Cleveland, OH; Neal Meropol, MD, University Hospitals Cleveland Medical Center, Cleveland, OH; Susan Flocke, PhD, Case Western Reserve University, Cleveland, OH; Sarah Fulton, MA, Case Western Reserve University, Cleveland, OH; Seunghee Margevicius, PhD, Case Western Reserve University, Cleveland, OH; Mark Schluchter, PhD, Case Western Reserve University, Cleveland, OH

Cancer clinical trials are the cornerstone for advancing cancer treatment and designing improvements in supportive care. Despite this, less than 10% of patients participate, often due to lack of information, misinformation, or fears. Nurses are in the ideal position to support and educate patients about the option of trial participation. The purpose of this study was to obtain baseline data about nurses' knowledge, beliefs, attitudes and barriers to engaging in such discussions with their patients as a step towards identifying targets for intervention. A random sample was obtained from the ONS membership. Surveys were distributed via an e-mail link to a web site. Based on the Theory of Planned Behavior, the survey consisted of questions about knowledge of clinical trials, attitudes towards trials and the nurses' role in discussions, beliefs about trials, subjective norms, and intentions to engage in discussion. Analyses included measures of central tendency and testing of associations via multiple regression analyses. The sample consisted of 112 RNs, predominantly female, Caucasian, with an average of 12 years in oncology nursing. Only 36.6% rated themselves as "very" or "extremely" familiar with clinical trials and one-third (33.9%) had not discussed trials with any patients in the previous 3 months. The mean number of correct responses on the knowledge items was 16 (69.6%). On the attitude scale, average number of responses reflecting a negative attitude towards some aspect of trials was 9 (42.8%). Age, level of education, and number of their patients enrolled in trials had no relationship to knowledge or attitude; only familiarity with trials was a significant predictor. Despite recognition of the key role that nurses can play in educating and supporting patients consider-

ing a clinical trial, results suggest that there are both knowledge and attitudinal barriers to fulfilling this responsibility. Accurate identification of these can provide the basis for design of an intervention to assist nurses in fulfilling this critical role. This study provides the basis for the largest intervention to date to address the unique issues influencing nurses' preparation and ability to provide patients with essential information and counseling about trial participation.

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**PROCESS OF IMPLEMENTING A REIKI THERAPY PROGRAM IN OUTPATIENT ONCOLOGY.** Claire Damschen, BSN, RN, OCN®, Reading Health Systems, West Reading, PA

Oncology patients often suffer from anxiety or decreased quality of life. Reiki Therapy is a Japanese method of relaxation, and when provided as supportive care, patients report an increase in overall quality of life. Reiki Therapy also effectively supports the emotional and spiritual needs of this patient population. A chair side infusion nurse working with cancer patients in an outpatient Oncology setting saw a need to administer this form of therapy. The purpose of this evidence-based practice (EBP) project was to explore evidence about Reiki Therapy and its positive benefits for the Oncology outpatient in respect to anxiety and quality of life to determine the feasibility of offering Reiki Therapy during treatment. Using the Johns Hopkins Model, the following EBP question was addressed, "In cancer patients receiving chemotherapy or radiation, does the use of Reiki Therapy decrease feelings of anxiety and improve quality of life?" Evidence was collected from seven databases. Keywords used were Reiki, anxiety, depression, cancer, Therapeutic Touch, quality of life, Oncology patient, and Oncology. Leadership support was granted for a nurse and Reiki Master to establish a program for Reiki Therapy in an outpatient Oncology setting, where patient education will be provided about the service and they will be referred by clinical nurses or infusion nurses. A total of seven scholarly journal articles were reviewed for this EBP project. The findings consist of one Randomized Controlled Trial, one Case Study, one Mixed Methods Study, one Non-Experimental Study, and three Literature Reviews. Nursing leadership and staff physician support was obtained to implement a program. A Reiki Master Oncology nurse and Reiki trained volunteers will offer and perform the therapy. Future plans will include administering the Distress Screening Tool and questionnaire to patients about the benefits of Reiki before and after therapy. Oncology nurses will be asked to complete a survey about their perceptions of patient benefits from Reiki. Research results show favorable outcomes when Reiki Therapy is offered to Oncology patients in an outpatient setting, which added support for implementing this therapy in an outpatient Oncology setting. A Reiki Therapy program may benefit patients undergoing chemotherapy and radiation treatment.

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**NAVIGATING PATIENTS THROUGH THE MAZE OF INFORMATION AND MIS-INFORMATION ABOUT MEDICINAL MARIJUANA (CANNABIS).** Penny Daugherty, RN, MS, OCN®, Northside Hospital Cancer Institute, Atlanta, GA

The purpose of this abstract is to provide an historical overview of medicinal cannabis as a viable supportive measure/symptom management option. This presentation was developed in response to the many questions posed by colleagues, patients and physicians regarding the veracity of medicinal cannabis as an adjuvant therapy to existing cancer treatment as well as a possible cytotoxic agent. There is a crucial need for accurate, clinically proven evidence-based data to disseminate to patients, enabling them to avoid poor choices which could be detrimental both to their personal care and their pocket-



books. At the completion of this program the attendee will be able to describe the evidence-based data currently available in treating various medical conditions including pediatric, autoimmune and PTSD diagnoses. Also discussed will be documented case studies of actual patients utilizing medicinal cannabis in a variety of medical conditions. Factual data will be provided to guide patients toward informed decisions about their use (or not) of medicinal cannabis. An historical as well as present day perspective of medicinal cannabis will be presented plus elucidating the present Classification and Congressional scheduling. Key cannabinoid compounds and their specific proven efficacies and usage will be discussed. Data presented has been designed to expand knowledge and enable nurses to provide optimal data-driven, evidence-based guidance to patients. This presentation was developed based upon my observations of the massive gap of reliable data pertaining to medicinal cannabis, as well as observation that the option of including medicinal cannabis as an adjuvant therapy is not being appropriately addressed due to misconceptions as well as the paucity of knowledge about medicinal cannabis. At the conclusion, nurses will be equipped with proven data, derived from an extensive literature review. Oncology nurses have unique relationships with patients and their caregivers based upon trust and reliance that they (patients) will be offered sound professional evidence-based guidance. The invaluable education and data we provide our patients will not only assist in forming their decisions but can also save them from potential physical harm as well as financial ruin. All facts presented will be validated by a complete reference section at the end of this presentation.

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**THE GERIATRIC PLAN: AN ELECTRONIC RESOURCE FOR ONCOLOGY NURSES.** Mary Elizabeth Davis, RN, MSN, AOCNS®, MSKCC, New York, NY; Lorraine McEvoy, DNP, MSN, RN, OCN®, Caldwell University, Landing, NJ

In older adults, cancer treatment is made more complex by diminished functional status, comorbidities, and altered physical, physiological and psychosocial capacity. Understanding the interplay of these health issues equips the oncology nurse to anticipate needs, intervene promptly and effectively manage competing demands for care. Often subtle alterations in health or functional status can signal the onset of complications that can result in serious consequences. For the older adult, intricate physical and functional assessment, the involvement of multiple disciplines, and coordination of care resources are required. Therapeutic interactions among family members and caregivers, access to community and supportive resources, assessment of learning needs and abilities, and provision of patient/caregiver education are all essential considerations when cancer treatment and care is being determined. Efforts are directed at providing the older adult optimal treatment options while preventing, controlling, promptly recognizing and intervening as problems arise. The collaborative efforts of the nurse and care team are to minimize complications that would negatively impact the treatment effectiveness while maintaining the patient's functional status and independence consistent with their pre-treatment lifestyle. The Geriatric Plan: A Guide to Assist Older Adults Though Cancer Treatment© has been developed by a group of advanced nursing clinicians within our institution to provide the oncology nurse a systematic framework for addressing the needs of older adults with cancer. Based on the mnemonic GERIATRIC PLAN, each letter is associated with an area for focused clinical assessment of the older adult (G= gait, E= eyes & ears, R=review of medications, I=independence, A= alert & oriented, T=toileting, R=respiratory, I=integumentary, C=comorbidities, P= pain & palliative care, L=labs, A= advance care planning, N = nutrition). Validated assessment tools and references are embedded into each section for ease of use. These instruments can readily be

incorporated into existing nursing assessments and care management processes. Normal physiologic age related changes are presented as well as specific risks for the older adult. Nursing interventions to implement are suggested and there is an index detailing special considerations with regard to chemotherapy medication. The Geriatric Plan has universal applicability across cancer types and treatment modalities. It can be found on our intuition's library website and can be accessed by any nurse via the internet. Metrics are being captured with regard to use.

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**IMPROVING CLINIC OUTCOMES THROUGH AN RN/MD PARTNERED AMBULATORY CARE MODEL—CLINIC STATUS UPDATE.** Robert Davis, MHSA, BSN, RN-BC, The Ohio State University James Comprehensive Cancer Hospital, Columbus, OH; Katie Sanders, RN, The Ohio State University James Comprehensive Cancer Hospital, Columbus, OH

The AHA (American Hospital Association) reports inpatient admissions for U.S. hospitals fell from 35.76 million in 2008 to 34.40 million in 2012 while total outpatient visits rose from 624 million to 675 million for the same period. Some reasons for the transition from inpatient to outpatient health care services include: a rising elderly population, focus on preventative health care, evolving technologies, payment methods and reimbursement criteria. The American Academy of Ambulatory Nurses (ANCC) reports that 25% of registered nurses are employed in the ambulatory care setting and according to the Bureau of Labor Statistics, ambulatory care nursing jobs have a positive outlook. It is projected there will be a 22 percent growth in this field between 2011 and 2018, a rate much faster than the national average of all other occupations. RN/MD partnered ambulatory nurses provide regular, consistent relationships with patients and their families; improves safety; increases quality of services and improves patient outcomes. The RN/MD partnered model was intended to provide continuity of care through a single non-physician provider while affording a more direct means of communication between all providers. The purpose was to evaluate the ongoing success of the RN/MD partnership model of care in the ambulatory oncology setting seven years after implementation. The RN/MD partnered care model began by pairing a nurse with a physician. The role of the nurse includes serving as the primary clinic contact, assisting with procedures and specialized care, communication with the healthcare team and coordination of patient care. Press-Ganey and NDNQI surveys were utilized and physician and nursing survey tools were developed and utilized as well. Data was collected, measured and monitored showing patient and staff satisfaction has risen since this model was implemented. Physicians and nurses also report being highly satisfied with this model of care. Patient, staff and physician satisfaction will continue to be monitored with changes implemented, as needed. Utilizing the RN/MD partnered nurse model resulted in continued improved outcomes including patient, staff and physician satisfaction. The Head and Neck and Voice and Swallowing Disorders clinics were the first oncology ambulatory settings to implement the RN/MD partnership at The James Comprehensive Cancer Hospital.

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**PROCESS IMPROVEMENT TOWARDS BEST PRACTICE AND SAFETY FOR ORAL CHEMOTHERAPY PATIENTS.** Jacqueline Dean, MSN, RN, OCN®, Bristol Hospital, Bristol, CT; Christine Demaio, RN, Bristol Hospital, Bristol, CT

In recent years the Food and Drug Administration has approved many new anticancer medications that are taken primarily by mouth. An estimated 30% of cancer drugs in development are oral, and the trend is increasing. Specific challenges have

been identified with this increased use of oral chemotherapy, including adherence, toxicity assessment, patient education, and accurate documentation. The nurses' role in patient education, care coordination, and follow-up is of great importance for patients who take these potent and potentially dangerous drugs at home. The current process of managing and documenting oral chemotherapy was examined by nurses to assess the quality of care provided and ensure the safety of oncology patients. No formal policy or guidelines existed at Bristol Hospital Cancer Care Center and with an increase in patients taking oral chemotherapy, process improvement needs were identified. The project goal was to develop a formal program to best manage patients on oral chemotherapy. It included: 1. Create a nursing role dedicated to coordinating and managing patients on oral chemotherapy. 2. Provide patients with comprehensive education regarding the risks and benefits of the proposed chemotherapy agent. 3. Implement a patient monitoring system utilizing follow up phone calls to assess patient adherence, side effects, toxicities and reportable symptoms. 4. Design a clear and concise oral chemotherapy care plan and documentation requirements. A team of clinical nurses and leaders was established. The team conducted a literature search for evidence based practices. The policy was written based on current guidelines from the American Society of Clinical Oncology (ASCO) and the Oncology Nursing Society (ONS). The program plan was presented and approved by the Cancer Committee and the Nursing Professional Practice Council. Since program implementation the department has 100% compliance with the new policy standards. All goals have been met and the most valuable practice improvement is dedicating a program nurse to ensure follow-through. Monitoring is essential to success by tracking medication cycles, dose adjustments, and patient adherence to the treatment plan. Additional implications include financial guidance for patient drug procurement and ongoing clinical nursing staff education.

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**HANDLING HAZARDOUS DRUGS: A PROCESS IMPROVEMENT PROJECT AT AN ACADEMIC HOSPITAL.** Jamie Dees, MSN, RN, CNL, UF Health, Gainesville, FL; Tiffany Rouillier, MSN, RN, CCRN, UF Health, Gainesville, FL; Suzette Martin, BSN, RN, MED, OCN®, UF Health, Gainesville, FL; Helen Welsh, MSN, RN, NE-BC, UF Health, Gainesville, FL; Tracie Kilcrease, BSN, RN, CPON®, UF Health, Gainesville, FL

In September 2014, the adult BMT unit experienced a large volume chemotherapy spill resulting in several occupational cytotoxic exposures. A Root Cause Analysis was done and a process improvement team was formed. The team analyzed current organizational practices involving handling and administration of hazardous drugs (HD) and subsequently found that many practices were outdated and numerous risks for occupational exposures were present. A multidisciplinary team used the Plan, Do, Study, Act model as a guide to process improvement. A pre-intervention survey was created and sent to all oncology nursing areas to assess attitudes towards personal protective equipment (PPE) use, PPE compliance, and HD knowledge levels. After a thorough review of current organizational practices, products available for personal protective equipment (PPE), and current HD standards, the team sought to make a multitude of changes. The first was to update hospital policies to bring them in line with the standards. Newer and safer products were brought into the institution and all units were stocked accordingly. Additionally, pharmacy began to pre-prepare all cytotoxic medications rather than just chemotherapy and they also implemented a closed system transfer device to further reduce the chance of a spill. Education regarding the handling, administration, and disposal of HDs and cytotoxic body fluids was created for all clinical staff and set up to reoccur on an annual basis. A post-intervention survey was sent to

all oncology nursing areas after all policies, education, and new products were distributed throughout the organization. Post-intervention survey results saw an improvement (from 37.2% to 90.9%) with nursing staff wearing double gloves >75% of the time while administering hazardous medications. A notable increase in compliance with eye protection and inhalation protection was seen as well. Unfortunately, survey results also indicated an increase (32% to 40%) in staff observing others not wearing PPE as well as knowledge defects in regards to hazardous drug exposures. A thorough needs assessment with continued surveillance can improve staff safety and reduce exposures to HDs. The post-intervention survey identified areas where continued focus is needed including PPE adherence, continued assessment of resistance to wearing PPE, as well as re-addressing knowledge deficits in handling HD exposures.

**70**  
**KARA—MEETING CANCER WITH MINDFULNESS.** Fallon DeGrange, RN, BSN, OCN®, UPMC, Pittsburgh, PA; Lanie Francis, MD, UPMC, Pittsburgh, PA

Being diagnosed with cancer is generally experienced as a life-threatening situation, resulting in a particularly high degree of emotional strain. Mindfulness meditation is seen as a way to experience life in a “non-judgemental” acceptance of the current situation, and also mindful presence in the given situation. Kara contains a range of guided mindfulness meditations designed to support people dealing with cancer. Results suggest that a brief mindfulness intervention may offer short-term benefit and lead to improvements in psychological, behavioral, and biological outcomes. If these effects can be maintained overtime, there is potential benefit for improving cancer survivorship. Kara allows patients and caregivers to learn the most relevant techniques for them in a convenient, portable yet authentic way. Kara is made by Mindfulness Everywhere in partnership with UPMC CancerCenter Wellness and Integrative Oncology Program. Kara contains twelve meditations. First there are core tracks called Kindness, Awareness, Rest and Allowing, each of which helps build these four qualities which are so important when facing cancer and cancer treatment. Then there are eight more, each of which are specially designed for listening to when patients are doing particular activities or experiencing common difficult emotions. When planning the project, we were curious to know which qualities were most valuable for people with cancer. What we found was the four more important were kindness to self and others, awareness, the ability to rest when we need to and the ability to allow the difficult when it is here. Kindness, Awareness, Rest and Allowing. That is how Kara got its name. Kara was released to the public September/2016. The patient-centered approach of the Wellness and Integrative Oncology program at UPMC serves as an innovative model of support for patients and caregivers supplying what are often felt to be missing in conventional cancer care. There is a clear need, a strong demand, and a cultural and operational complexity that is best addressed by the IO physician/nurse team. As the program has expanded, the largest obstacle remains expense of high quality services with insurance coverage as a challenge. Kara is a free tool we can offer to patients for self-guided mindful mediation. <http://thisiskara.com/>

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**THE SPLASHBLOCKER: INNOVATIVE SAFETY EQUIPMENT FOR THE HANDLING AND DISPOSING OF CHEMOTHERAPEUTICALLY-TAINTED HUMAN EXCRETA.** Linda J. Dick, RN, BSN, OCN®, Temple University Hospital, Philadelphia, PA

Oncology nurses are routinely exposed to adverse health effects of hazardous drugs when handling and disposing

chemotherapeutically-tainted human waste. The Oncology Nursing Society (ONS) guidelines recommend the use of personal protective equipment (PPE) whenever there is a risk of exposure to hazardous drugs. Nurses must be proactive in keeping themselves safe from antineoplastic drug exposure, and institutions must make all forms of PPE available to their employees to ensure their personal safety. When disposing of hazardous wastes, ONS recommends: (a) flushing the toilet with the lid down to reduce exposure, or (b) applying a plastic-backed chuck pad over the toilet seat if the fixture does not have a lid. Many hospital toilets do not have lids because sprayers are attached for use in order to clean patient urinals and bed pans. Flushing toilets without lids and cleaning tainted items routinely exposes nurses to hazardous contaminants through direct contact and inhalation. However, the application of chuck pads as adjunctive PPE presents concerns such as disposal issues, availability, and noncompliance. The SPLASH-BLOCKER was invented by an oncology nurse whose goal was to promote greater safety in the workplace by reducing the adverse health risks associated with potential exposure to contaminated human excreta. As an innovative form of PPE, the SPLASHBLOCKER acts as a lid as well as a shield in protecting nurses from the adverse effects of hazardous waste disposal. The SPLASHBLOCKER is light weight, durable, can be stored in every patient bathroom, and cleaned with hospital cleaning solvents. The SPLASHBLOCKER was presented to the hospital's Patient Safety and Quality Control Council for Magnet Status, and was well received. Further, this product is currently under consideration for approval and implementation throughout the hospital's in-patient Bone Marrow Unit by the Value Analysis Coordinator for Product Review. Oncology nurses are exposed to adverse health effects of hazardous drugs when handling contaminated patient excreta. Consistent application of PPE is an important way that nurses can protect themselves from these exposures. The SPLASHBLOCKER is a convenient and innovative form of PPE that may prevent adverse health risks routinely encountered by oncology nurses when handling tainted patient excreta.

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**NURSES TRANSITION POST STEM CELL TRANSPLANT CARE TO THE HOME.** Lindsay Donofrio, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Katie Hambright, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Christina Kiss, BSN, OCN®, ANP-BC, Memorial Sloan Kettering Cancer Center, New York, NY; Michelle Abboud, RN, OCN®, AGACNP-BC, Memorial Sloan Kettering Cancer Center, New York, NY; Elizabeth Rodriguez, DNP, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

To describe the unique nursing experience of providing post transplant care in a home-like environment to recipients of Autologous Stem Cell Transplants (Auto-SCT). To describe the workflow of the Advanced Practice Practitioner (APP) and Registered Nurse (RN) in coordinating and delivering patient care. At this Center, nearly 10% of Auto-SCTs are performed in the outpatient clinic. The clinic population is largely managed by APPs and RNs. Building on this care model, we implemented a feasibility study to transition post-transplant care for this patient population in the home or home-like setting. RNs and APPs created a workflow to deliver care for patients enrolled in the pilot trial for homebound Auto-SCT while continuing to support the patient needs in the outpatient clinic. The RN and APP meet in the morning to discuss the plan of care. The APP checks in with the patient on overnight events and establishes a timeline for visits. Once in the home, the APP assess environmental safety, completes a physical assessment, and collects

lab specimens. The APP communicates via a web based video chat software with the Attending Physician to report findings and facilitate face-to-face interaction with the patient. The APP returns to the clinic to submit lab specimens, enter treatment orders, and provide hand-off to the RN. The RN contacts the patient to establish a plan for treatment and departs for the home. The RN performs a nursing assessment and administers intravenous medications via a portable infusion pump during the visit. Education is provided to patients and caregivers on self-disconnecting from the pump once the infusion is completed. The nurse reviews self-care measures including pancytopenic precautions. Prior to leaving the home, the RN provides report to the APP. From January 2016 until now, four patients have received care on the homebound transplant program. In total, APPs completed 25 visits and RNs completed 20 visits. On two occasions, a second visit was made by a RN in one day to perform additional nursing interventions. RNs and APPs in this outpatient clinic established a workflow to care for patients post Auto-SCT in their home or home-like environment. The workflow supports interdisciplinary communication and teamwork by leveraging technology. The workflow enables safe, specialized, and holistic care to transplant patients in the home environment.

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**DEVELOPMENT OF ELECTRONIC RECORD TOOLS FOR ORAL CHEMOTHERAPY COMPLIANCE AND TRACKING.** Melissa Donofrio, BS, RN, OCN®, Essentia Health, Duluth, MN

Cancer treatment delivery has been undergoing a shift from intravenous to oral treatment. While more convenient for patients, the resulting loss of direct medical supervision can lead to adherence and safety issues. Outpatient oncology nurses play an important role in educating and assessing patients who are receiving oral chemotherapy. Our Cancer Center's oral chemotherapy policy outlines three points of contact during a patient's first treatment cycle. A standardized documentation tool using dot phrases that populated a narrative note was enacted. It provided consistency; however, compliance in completing all points of contact was low. Audits showed an annual average completion of new teaches at 83%, drug received calls at 82% and follow up calls (that assessed adherence/toxicity) at 70%. Our goal of the project was to meet industry standards for oral chemotherapy patient education as outlined in the 2013 Updated ASCO/ONS Chemotherapy Administration Safety Standards as well as the QOPI certification requirements. We incorporated these standards into three points of contact. If all patients received all three points of contact, this ensures the education standards are being met and ultimately increases safety and compliance in the oral chemotherapy patient population. This project identified and addressed barriers and set up a system within the electronic medical record for documentation and tracking. The greatest barrier was patient tracking. We had difficulty determining when a patient would receive their medication and start therapy. Nurses kept paper shadow charts and utilized a tickler system, which was only partially effective. Another barrier was the perceived importance of these calls by the triage nurses. The project entailed nursing and information technology staff working together to develop a smartform documentation tool with associated patient list that automatically populated a list of completed calls and date of future calls. This eliminated the shadow charts and tickler system. Inclusion of the triage nurses in the process and education targeted at the importance of the project with potential impact on patient safety was stressed. Since the roll out of this project in October of 2015, chart audits have increased on all three points of contact to 100% compliance. Also, prior to the project, auditing 25 charts per month took 2.5 hours, now with discrete fields within the smartforms the workbench report can be created in moments.



**A QUALITY IMPROVEMENT PROJECT USING DAILY MOBILITY GOALS TO INCREASE MOBILITY IN HOSPITALIZED HEMATOLOGIC MALIGNANCIES PATIENTS.** Tracy Douglas, RN, MSN, BMTCN®, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD; Kaitlyn Smith, MSN Candidate, The Johns Hopkins School of Nursing, Baltimore, MD; Kathy Mooney, MSN, ACNS-BC, BMTCN®, OCN®, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

Often, hospitalized cancer patients do not get out of bed and walk daily, leading to deconditioning. Providing nursing care to immobile patients is also more physically challenging. This quality improvement project's purpose was to use patients highest levels of mobility (HLOM) from the prior day's standardized mobility screen to determine mobilization goals during interdisciplinary morning rounds. The HLOM score ranges from 1 laying bed to a maximum of 8 walking greater than 250 feet. Baseline data on inpatient mobility status and patient perceptions about mobility and health were obtained prior to the intervention. Baseline HLOM scores for all 74 discharges from two oncology units were obtained in November 2015. The average HLOM was 5.1 (SD 2.0) on admission and 5.3 (SD 1.9) on discharge. A three question mobility survey was administered to 15 inpatients. Feeling that their mobility was unchanged over the previous week, that mobility was very important to their health, and that staff helped them mobilize most of the time were the most prevalent responses. HLOM scale education (including score classifications) and baseline data were provided to nurses, pharmacists, and providers. Beginning April 2016, nurses presented individual patients' HLOM scores on rounds and a mobility goal was determined and documented on the white board in each patient's room. Task analysis was completed on 50 rounds discussions, demonstrating that mobility was discussed for an average of 8 seconds per patient prior to intervention and 43 seconds per patient post intervention. Interim analysis of the intervention examined all 85 discharges in May 2016. The average HLOM score was 5.4 (SD2.1) on admission and 5.8 (SD 1.7) on discharge. The post intervention HLOM on discharge score was higher than the HLOM pre intervention, although not statistically significant. The intervention increased time spent discussing mobility on multidisciplinary rounds from 8 to 43 seconds. This project demonstrates the feasibility of raising awareness and integrating mobility into the inpatient plan of care.

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**THE CONVERSION OF PRIMARY TO SECONDARY TUBING IN THE ADMINISTRATION OF CHEMOTHERAPY WHILE MEETING USP800 GUIDELINES.** Xenia Downey, RN, BSN, Mayo Clinic Florida, Jacksonville, FL; Amy Gregory, MSHL, RN, Mayo Clinic Florida, Jacksonville, FL

In preparation to comply with the 2018 mandatory guidelines set-forth in the US Pharmacopeia 800 (USP 800) outlining the handling of hazardous drugs in the healthcare setting, a pharmacy driven practice change to a closed system for compounding of all hazardous IV drugs was to be implemented for our institution. In collaborative meetings with pharmacy, inpatient and outpatient chemotherapy supervisors, administrators it was identified there is potential time and cost savings benefit in changing our current practice of chemotherapy infusions via primary tubing to secondary tubing. The original intention was to offset increased pharmacy preparation time with the proposed new closed system. This led to the development of a collaborative work group to identify the advantages and disadvantages of this practice change. The purpose of this project

was multi-faceted; the initial intention was to transition from primary to secondary tubing for chemotherapy administration with our upcoming practice change to accommodate the USP800 guidelines. The following advantages for both patient and institution were outlined in our proposal: (a) Provide a safer environment for patients (reduce tubing disconnection, improve mobility, decrease falls), (b) Increase volume of drug delivered to patient (reduce drug waste remaining in primary tubing), (c) Reduce preparation time for pharmacy (offset upcoming closed system compounding/USP800), (d) Cost savings for institution was an incidental bonus (price difference between primary and secondary tubing). Data was collected to compare current vs. proposed practice changes; the findings presented to administration included the advantages and disadvantages of implementation. This proposed practice change was overwhelmingly approved by administration and further approval was granted by the Pharmacy & Therapeutics Committee and Nursing Clinical Practice Committee. Education for staff was completed via in-services that included instructional hand-outs and hands-on demonstrations. Current nursing policies were updated to reflect this practice change. The initial expectations for this transition were thought to bring minimal difficulties as current practice used secondary tubing for other medication administration. Unfortunately, complications presented with the addition of a chemo-safe clave cap, part of the USP800 guidelines intended to prevent chemotherapy exposure, when added to the secondary tubing. This practice change presented many opportunities of learning on multiple level, all changes present their challenges. Through perseverance this practice change has been accomplished with the advantaged originally intended.

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**IMPROVING ENVIRONMENTAL CLEANLINESS AND ENHANCING THE PATIENT EXPERIENCE BY IMPROVING SCORES IN THE ONCOLOGY SETTING.** Kristin Doyle, MSN, RN, OCN®, NE-BC, MD Anderson Cancer Center, Houston, TX

Oncology patients have an increased risk of infection due to the nature of the disease and the immunosuppression caused by chemotherapy. An opportunity was identified to improve patient satisfaction with the cleanliness of the hospital rooms specifically on an inpatient hematology unit at this institution. The purpose of this quality improvement initiative was to improve patient satisfaction with room cleanliness and temperature, as reflected in responses to the Press Ganey patient satisfaction questionnaire. Specifically we aimed to improve our "room cleanliness" and "room temperature" responses of "always" to 90% and greater than 85%, respectively for at least 4 of the subsequent 6 months, and to identify sustainable trends in these satisfaction scores over time. This initiative involved collaborative rounding by nursing and facilities management to identify the major sources of patient concerns about cleanliness. The interventional bundle involved several environmental enhancements, including upgrading the thermostats in the rooms and designing communication cards, modeled on a hotel style template, to notify patients that their rooms had been cleaned each day. The room temperature score increased from 84 (rank 71) to 88 (rank 91) over an 8 month period after all thermostats had been replaced with digital product. Inpatient room cleanliness scores on a 36 bed inpatient leukemia unit increased from a low of 64.3 in October-December 2014 to 83.3 in April-June 2015. Data to date in these domains reflects sustained improvement with an average score of 87 and 91 on room temperature and room cleanliness responses, respectively, over the past 6 months. Improving patient satisfaction is a multi-disciplinary initiative requiring thoughtful collaboration, and simple, yet innovative approaches to enhance patient perception of a safe, clean and comfortable environment. Innovation: Implementa-

tion of concierge style housekeeping and patient controlled thermostats has contributed to improved patient satisfaction scores on the unit, but more importantly may reduce risk of infection to immunocompromised patients.

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**WE CAN GET THERE FROM HERE! ACHIEVING SUCCESS IN THE DELIVERY OF CANCER SURVIVORSHIP CARE PLANS.** Kimberly Drewry, MSN, RN, FNP-C, AOCN®, CBCN®, University of Virginia Health System, Charlottesville, VA; Tracey Gosse, MSN, RN-BC, University of Virginia Health System, Charlottesville, VA

The Commission on Cancer's (CoC) standard 3.3 mandates, in order to maintain accreditation, oncology patients initially diagnosed as Stage I, II, or III, and being treated with curative intent are provided with a Survivorship Care Plan (SCP). Implemented on January 1, 2015, compliance requirements increase by 25% yearly through January 1, 2018, when >75% of eligible oncology patients are to receive a SCP within 12 months of initial diagnosis or before 6 months after the end of active treatment. Breast cancer treatments are often complex, involve many disciplines, and can extend for more than a year. Delivery of SCP's has posed a challenge for providers. Only 21% of CSI designated institutions have developed a process for completing and delivering SCP's. Meeting this standard will require a change in practice for all members of the oncology care team. SCP's are initiated for eligible breast cancer patients, within our practice, when the initial pathology and surgery information are completed. Our service follows patients regularly for five years after surgery allowing us the opportunity to schedule a visit specifically to deliver and discuss the SCP. Use of Cancer Registry reports and chart preparation alerts us to identify patients who are ready to receive their SCP. Many patients receive their adjuvant treatment at facilities within their community requiring us to collaborate with the additional treating facilities to complete and deliver the SCP. Meeting this standard becomes more difficult when the patient is treated by multiple disciplines. Through mentoring and education, standard work will be created to ensure all eligible patients and their primary care providers receive the SCP within the required timeframe. During an audit of SCP's completed during July, 2016, 77% of eligible breast cancer patients received their SCP. The creation of a systematic approach to implementation and delivery of SCP results in improved patient care. The dissemination of this systematic approach to other cancer sub-specialties will enhance the care of all cancer patients.

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**EVIDENCE BASED PRACTICE FOR OBTAINING ACCURATE PARTIAL THROMBOPLASTIN TIME (PTT).** Summer Drummond, BSN, RN, CCRC, University of Pittsburgh Medical Center, Pittsburgh, PA

Within the adult oncology patient population at the University of Pittsburgh Medical Center (UPMC), multiple occurrences of critically elevated PTT levels drawn from port access and determined inaccurate have been noted. Factors that may influence inaccurate port PTT levels include; catheter size, type, dead space, timing, heparin flush, and discard volume. This led to the hypothesis that port drawn PTT levels may yield incorrect results and should be completed via phlebotomy to improve patient safety. The UPMC CancerCenter Evidence Based Practice (EBP) Council identified a need for PTT draw process change, to improve patient safety. The goals of this project were to provide a new institutional policy as well as nationally recognized evidence for best practice when obtaining PTT draws in patients with ports. Methodologies for obtaining data include; evidence based practice literary review, retrospective case studies, and

a quantitative large scale single institution clinical trial. Review of the literature from citation databases confirmed the need for PTT's to be drawn via phlebotomy. Retrospective case study data collected at UPMC confirmed hypothesis. The literary review additionally identified an unmet need for a controlled trial with a large sample size to provide statistical significance. Critical Care Nurses Journal and Infusion Nurses Society recommend that a "PTT specimen collection should be completed by peripheral venipuncture". A meta-analysis in the Clinical Journal of Oncology Nursing, cited four quantitative trials, concluding venipuncture was the best route for obtaining PTTs. A systematic review of literature by Duke Educators also determined that PTT's should not be collected from ports. Retrospective data collected at UPMC includes cases such as; patient completed port drawn PTT on 4/8/15 with result of 66 seconds (critically elevated false read). Patient returned due to above false level and a port re-draw PTT on 4/14/15 resulted as 54 seconds (critically elevated false read again). Patient redrawn a third time on 4/14/15, this time via peripheral phlebotomy draw, for a result of 35 seconds (clinically appropriate). A publication including literature review of evidence based best practice for obtaining a PTT as well as retrospective case study data collected by the UPMC EBP council. Completion of a large scale clinical trial at UPMC for quantitative data to support statistical significance.

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**DELIRIUM PREVENTION, IDENTIFICATION AND MANAGEMENT IN THE ONCOLOGY SETTING: A UNIQUE PARTNERSHIP WITH PATIENTS AND THEIR FAMILY CAREGIVERS.** Mary Eanniello, DNP, RN, OCN®, Hartford Hospital, Hartford, CT; Christine Waszynski, DNP, GNP-c, Hartford Hospital, Hartford, CT; Kerry Milner, DNSc, Sacred Heart University, Fairfield, CT

Delirium affects a significant number of hospitalized adults each year resulting in negative patient outcomes and family caregiver distress. Clinical identification of delirium by nurses and use of family caregivers as part of a multicomponent delirium prevention strategy are not consistently implemented in the practice setting despite being best practice. An interdisciplinary team in this 800 bed level one trauma center has been created to create and implement this best practice delirium protocol. The purpose of this initiative was to incorporate the family caregiver into this existing multicomponent delirium prevention, detection and management protocol. Consistent implementation of basic care interventions and personalized care for at risk patients can help to prevent delirium in the acute care setting. The team has focused on staff education on the use of the CAM (confusion assessment method) as a consistent delirium-screening tool as well as early implementation of the protocol. Use of non-pharmacological interventions can be effective in the prevention of delirium as well as in reduction of the episode if it does occur. Family caregivers can be educated and engaged by the nurse to help create a personalized plan of care. Evaluation of the protocol has been measured by hospital safety and quality metrics such as falls, length of stay, mortality rates as well as patient experience scores. Oncology patients are at high risk for delirium and require a team approach to identify this medical emergency early and to begin evidenced based interventions. Cancer care is most often done in the out patient setting making partnerships with family caregivers even more critical. Non-pharmacological interventions are simple and easily taught to family caregivers. These interventions include encouragement of food and drink, ambulation, cognitive stimulation/orienting strategies and protected rest. This opportunity of partnership is missed by nurses and contributes to poor outcomes. The identification and treatment of delirium is becoming an international priority as its negative impact to quality of life and the bottom line become undeniable. This

medical emergency requires a team approach that includes the family caregiver and a personalized plan of care. The oncology nurse is poised to be an important team member to create positive outcomes.

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**EFFICACY OF DAILY CHLORHEXIDINE GLUCONATE (CHG) BATHS IN REDUCING CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTIONS (CLABSIS) IN NEUTROPENIC PATIENTS ON A 53-BED ONCOLOGY UNIT.** Lisa Ecklund, RN, BSN, UNC Healthcare, Chapel Hill, NC; Jan Burge, RN, BSN, OCN®, UNC Healthcare, Chapel Hill, NC; Lisa Teal, BSN, RN, CIC, UNC Healthcare, Chapel Hill, NC; Summer Cheek, RN, BSN, OCN®, UNC Healthcare, Chapel Hill, NC; Liz Gilley, RN, BSN, UNC Healthcare, Chapel Hill, NC; Mallory Lexa, RN, BSN, OCN®, UNC Healthcare, Chapel Hill, NC

Oncology patients are particularly vulnerable to CLABSIs due to high incidence of neutropenia and need for long-term venous access. Despite unit-based initiatives (staff education, use of CHG-impregnated patches, and monthly compliance audits), CLABSIs continue. Data estimates CLABSIs cost \$15-25K per incident. CHG baths in the ICU setting as a means to reduce CLABSI has aided in reducing added hospital costs and adverse outcomes. The purpose was to reduce CLABSIs in a neutropenic oncology population by developing and implementing a CHG bath protocol. An interdepartmental nursing work-group reviewed the literature on CLABSI prevention strategies and decided to implement CHG daily bathing. The work-group developed a plan for implementation to include Institutional Review Board/Nursing Research Council approval, a compliance audit tool, staff and patient education, automated neutrophil report in the electronic health record, and a redesigned assignment sheet. Liquid 4% CHG soap was used and bathing protocols were developed for both bed baths and patient self-bathing. Preliminary patient feedback revealed their ease of understanding and convenience of pre-made kits. Barriers to achieve 100% compliance included stickiness of soap, forgetfulness of task, and dry skin/rashes perceived as being CHG-related. Protocol reinforcement was provided via emails, staff meetings, and word-of-mouth which increased nursing and patient compliance. The interdepartmental work-group met monthly to assess CLABSI rates, project compliance, and tactics to further reduce barriers. Pre-Implementation CLABSI rates (Jan-June/2015) were compared to post implementation rates (Jan-June/2016) and indicate a significant decrease in our CLABSI rates. Lessons learned include changing the vocabulary from “bath” to “treatment” on the handout to aid in compliance, encouraging staff of long-term goals from the start of implementation, and having an on-unit educator to aid in patient education and reinforcement. Due to increased availability and changes in purchasing of differing soaps, protocol changes may include CHG foams. This successful initiative requires vigilant monitoring to maintain compliance and shift the culture of the unit to this new standard of care. Moving forward we anticipate continued improvement in CLABSI rates and improved protocol adherence, which offers the opportunity to share our findings in areas outside the ICU and across the healthcare system.

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**ADOLESCENT AND YOUNG ADULT NAVIGATION IN AN ADULT OUTPATIENT CLINIC: FINDING THE LOST GENERATION.** Jean Ellsworth-Wolk, MS, RN, AOCNS®, The Cleveland Clinic Cancer Center at Fairview Hospital, Cleveland, OH

There are an estimated 70,000 Adolescent and young adult (AYA) patients diagnosed annually in the U.S. Very few specialty programs exist for this population so most AYA patients are

treated in adult or pediatric settings. Many unique challenges have been identified within this low volume, high risk population. Some of the challenges include a lack of survivorship education, poor adherence to surveillance visits, limited psychological supports, poor lifestyle choices, poor physical and mental health outcomes, relationship stress and the presence of occupational, insurance and financial barriers. All these challenges are colored by the developmental and social characteristics of this group. Given their unique role within the health care setting, oncology nurses in all clinical areas have the opportunity and responsibility to be an AYA advocate and to coordinate the specialized care needed for this patient population during cancer treatment. In order to address gaps in care of the AYA population within an adult outpatient setting, the survivorship program coordinator developed a framework for AYA navigation. This framework was inspired by AYA issues identified in cancer literature and guided by the National Comprehensive Cancer Network (NCCN) AYA Standards (2016). The areas addressed include cancer education and survivorship, coping, sexual and fertility issues, maintenance of normalcy, connection to AYA resources and the elimination of barriers to health care. The framework uses a team approach and consists of patient identification, a focused AYA assessment, advocacy for fertility issues, focused AYA cancer education, knowledge of AYA resources, and a Survivorship Visit. Maintaining individuality and encouraging normalcy was incorporated throughout the process. The poster will address each step in detail. Process and outcome evaluation of the framework is ongoing and addresses the elimination of barriers to care, appropriate fertility education/referrals, patient satisfaction, knowledge of pertinent education/AYA resources and compliance with survivorship visits. The data will be presented in the poster. By addressing the unique needs of the AYA population during treatment oncology nurses will impact future quality of life. All oncology nurses in all clinical settings have the responsibility to be an advocate and address the issues of this vulnerable patient population. Components of this innovative framework could be adapted to any setting no matter the available resources.

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**LEVERAGING THE ELECTRONIC HEALTH RECORD TO HELP NURSING STAFF IMPLEMENT CHANGES FOR PARTICIPATION IN THE ONCOLOGY CARE MODEL.** Sandra Eppers, MBA, BSN, RN-BC, CPHIMS, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Kathleen Sweeney, RN, MS, ACNS-BC, AOCNS®, NE-BC, Froedtert Hospital & the Medical College of Wisconsin, Milwaukee, WI; Tina Curtis, MSN, MBA, RN, NEA-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

The Oncology Care Model (OCM) is a new CMS project exploring alternative payment models for oncology care. The goal is to provide high-quality, highly coordinated oncology care at a decreased cost to the patient. Practices that chose to participate in OCM have committed to providing enhanced services to Medicare beneficiaries including, but not limited to, care coordination, navigation, and care based on national treatment guidelines. Nurses and our electronic health record (EHR) team will play a large part in helping our practice meet all OCM requirements. The operational team in the Cancer Center began working with our EHR team to create solutions to quickly implement and track workflow changes for OCM. The following is our early phase work to meet OCM practice and reporting requirements. Our EHR vendor is working to develop changes to their system for OCM, but that full development is likely years away and we needed to create workflows that could be used now. The following was changed or created in the EHR to meet the OCM requirements: (a) Change in header color to



quickly notify staff that patient qualifies for participation in OCM program. (b) Cue in the department appointment report to display patient financial class identifier. (c) Beneficiary letter and scheduler workflow to give letter to each eligible patient, document in the EHR, and track delivery receipt. (d) Creation of a 13-point care plan and tracking delivery of the document. (e) Addition of a discrete Patient Health Questionnaire (PHQ2/9) depression screen and workflow for interventions based on the score. (f) Tracking for which patients have received a depression screen and a visual timestamp of when the next screening is due. (g) Prompt in the patient schedule so staff is aware who has received a beneficiary letter, care plan, or depression screen. (h) Discrete field created to document that treatment is consistent with national guidelines. (i) Reports created to measure quality metrics. Initial success in meeting OCM requirements is a team effort requiring work from staff at all levels in the organization. It also hinges on leveraging your EHR to create new documents, discrete data elements, and reports to monitor metrics and compliance with changes. Without these EHR advances, these needs would be handled by manual abstraction, which diverts organizational resources away from direct patient care.

### 83 IMPROVING QUALITY OF LIFE FOR CANCER PATIENTS THROUGH EXPRESSIVE WRITING. Marloe Esch, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

Receiving a cancer diagnosis and undergoing treatment is a stressful life event that impacts both the physical and emotional well-being of cancer survivors. The act of expressive writing has been shown in literature to improve quality of life and emotional well-being when used as a therapeutic outlet for people who have gone through traumatic experiences, including cancer. Expressive writing is thought to work by encouraging the writer to review their personal experiences and emotions from a new perspective, allowing for reevaluation of stressful events and leading to assigning meaning to their experiences by finding personal strengths, change, and growth over time. The goal of initiating an expressive writing workshop for cancer survivors was to enhance survivors' quality of life and improve their emotional wellbeing by offering a creative opportunity for personal reflection in a supportive group setting. The writing workshop was set up as a five-session course, required registration with a five-week commitment to attend, and was open to anyone with a diagnosis of cancer. Each session ran for approximately 90 minutes, and was led by a registered nurse who was also a cancer survivor. Different topics of the cancer experience were explored at each session, using examples of published work from cancer survivors, and including two different writing prompts that participants had time to free-write in response to. There was time at the end of each session to share writing with the group, allowing participants' experiences and feelings to be validated and affirmed by those who are in similar circumstances. In the post program evaluations, 6 of 6 participants (100%) rated the information presented throughout the program as "excellent," and 6 of 6 (100%) said they would recommend the program to others. Participants expressed an appreciation for the program being offered and felt the program was a positive experience. These results support the idea of an expressive writing program as a valid option to offer patients looking for a way to organize and understand their thoughts and emotions. As cancer treatment continues to improve and the number of cancer survivors continues to grow, it is important to address the emotional aspects of the cancer experience and provide evidence-based opportunities that enhance survivors' quality of life, understanding, and acceptance of their cancer experiences.

### 84 IMPROVING CLINICAL OUTCOMES IN PATIENTS WITH CANCER AND HEART FAILURE: CLINICAL NURSE LEADERS AS CHAMPIONS. Joylyn Mae Estrella, MSN, RN, OCN®, CNL, UT MD Anderson Cancer Center, Houston, TX; Imelda Febryani, MS, RN, CNL, OCN®, UT MD Anderson Cancer Center, Houston, TX; Clemen Banaglorioso, MS, RN, CNL, PCCN, UT MD Anderson Cancer Center, Houston, TX; Valerie Counts, BSN, RN, UT MD Anderson Cancer Center, Houston, TX; Anecita Fadol, PhD, FNP-BC, FAANP, UT MD Anderson Cancer Center, Houston, TX

Cancer and heart disease together make up more than 70% of disease-related mortality in the developed world. It is increasingly probable that a patient diagnosed with cancer also has an underlying cardiovascular disease. Moreover, many anticancer agents are cardiotoxic that can lead to the development of heart failure (HF) thereby compounding the management of patients with multiple co-morbidities. At a National Cancer Institute (NCI)-designated Cancer Center, a nurse-driven, multidisciplinary "Heart Success Program" (HSP) was implemented to promote high-quality, patient-centered care. The goals of HSP include: 1) provide comprehensive education to nurses in the management of patients with cancer and HF, 2) actively engage patients in self-management through education; and 3) improve patient experience and satisfaction. The aim of this presentation is to discuss the role of the Clinical Nurse Leaders (CNL) as champions in the dissemination of an interdisciplinary program to improve clinical outcomes in patients with cancer and cardiovascular co-morbidity. The CNLs spearheaded the implementation of the HSP across the institution through effective communication, collaboration and coordination. The CNLs developed a toolkit for staff education, coordinated patient care and education, monitored compliance to HSP patient education and documentation, and engaged staff in critical thinking case studies and continuous quality improvement activities. The HSP videotape and education booklet were used in patient teaching, and nurses reinforced patient education using the "teach-back" method. After a year of HSP implementation, documentation of patient education increased from 40% to 92%. Patient satisfaction scores, particularly with discharge instruction improved from 81% to 92% as measured by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. Core measures for Centers for Medicare & Medicaid Services (CMS) showed 100% compliance with measurement of cardiac function and initiation of recommended guideline-directed HF medications. The CNLs are most effective in the coordination of care resulting in improved clinical outcomes and patient satisfaction. Close collaboration with the multidisciplinary team minimized fragmented care, improved early detection of cardiac complications while patients receive anti-cancer treatment, and significantly improved patient experience and satisfaction. Developing partnership with the patient and the health care team is paramount to achieve positive outcomes. The CNLs are outcomes managers and risk anticipators who play an integral role in improving health care delivery particularly in patients with multiple co-morbid conditions.

### 85 UPDATED QOPI CERTIFICATION SAFETY STANDARDS. Amy Evers, BSN, RN, OCN®, American Society of Clinical Oncology, Alexandria, VA; Tara Conti-Kalchik, MSN, RN, OCN®, American Society of Clinical Oncology, Alexandria, VA

In 2009, the American Society of Clinical Oncology (ASCO) and the Oncology Nursing Society (ONS) published standards for the safe use of parenteral chemotherapy in the outpatient setting, including issues of practitioner orders, preparation,

and administration of medication. In 2010 the QOPI Certification Program was instituted based on these standards. In 2016, a third revision to the ASCO/ONS Chemotherapy Safety Standards Including Standards for Pediatric Oncology was completed. The ASCO QOPI Certification Oversight Council consisting of oncology physicians, advanced practice nurses, oncology certified nurses, and quality improvement experts reviewed and adopted the new changes within the 20 QOPI Certification Safety Standards. The updated standards implementation is scheduled for June 2017. New recommendations include strengthening the competency requirements for oncology staff, the verification of safe chemotherapy administration, and overall medical record documentation requirements for oncology patients. This poster will present the newly published QOPI Certification Safety Standards.

## **86** **CANCER THERAPY AND CARDIOTOXICITY: IMPLICATIONS FOR ONCOLOGY NURSING CARE OF PATIENTS WITH CANCER AND CANCER SURVIVORS.** Anecita Fadol, PhD, FNP-BC, FAANP, MD Anderson Cancer Center, Houston, TX

Due to the aging of the population and a common occurrence of risk factors, it is increasingly probable that a patient may have both cancer and cardiovascular disease. Cancer therapy related cardiotoxicity leading to myocardial dysfunction and heart failure is the most concerning cardiovascular complication in cancer patients and survivors. The incidence of cancer therapy-induced myocardial dysfunction varies with different anticancer agents. For example, in patients treated with anthracyclines and trastuzumab, the cumulative incidence of the composite of cardiac dysfunction or heart failure was 6.2% and 20.1% after 1 and 5 years, respectively. Management of these patients with multiple co-morbidities can be challenging. The purpose was to discuss the cardiotoxic effects of cancer therapies that can lead to myocardial dysfunction and heart failure, and the nursing role in the prevention, early identification, and management of cancer therapy-induced cardiotoxicity before, during and after cancer treatment. Case studies will be used to illustrate the cardiotoxic effects of different antineoplastic agents that can cause myocardial dysfunction or heart failure, particularly anthracyclines which are the mainstay of therapy in different types of cancer including breast cancer, sarcoma, lymphoma, and leukemia. Cardiotoxicity related to cancer therapy can greatly diminish the patient's quality of life, limit the therapeutic dose of anticancer treatment, and can significantly affect the patient's utilization of health care services because of increased morbidity. The role of oncology nurses in screening, risk factor stratification, and early detection of cardiotoxicity, as well as therapeutic management based on existing practice guidelines will be addressed. An interactive approach will be used to encourage active participation by attendees. With the increasing number of novel anti-cancer agents with potential cardiotoxicity, oncology nurses have a critical role in the early detection, prevention and management of cancer therapy-induced cardiotoxicity. An understanding of this complex issue is paramount to provide safe and effective care for patients with cancer and cancer survivors.

## **87** **ZAP VAP! Mary Feng, RN, OCN®, MSK, New York, NY**

Nursing education and compliance in oral care and elevating HOB of patients on ventilators will help prevent ventilator-associated pneumonia. Ventilator-associated pneumonia (VAP) continues to complicate the course of 8 to 28% of patients receiving mechanical ventilation. Mortality rate for VAP ranges from 24 to 50% and can reach 76%. There is convincing evidence to suggest that specific interventions can be employed to prevent VAP. The evidence-based interventions focus on the prevention of aerodigestive tract colonization and the prevention of

aspiration of contaminated secretions. Immunosuppression in oncology patients can further contribute to the development of infection. Poor dentition and oral hygiene predispose people to the aspiration of oropharyngeal bacteria and thus aspiration pneumonia. Studies have shown that 47% of nurses found oral care in intubated patients to be important. Experienced critical care nurses performed oral care more often than less experienced nurses. Nurses with a bachelor's degree in nursing used foam swabs and suctioned after oral care more often than other nurses. Oral care practices and policies differs in each institution. Oral care policies appear to be present, but not well used in most institutions. Memorial Sloan Kettering (MSK) has developed a program that we use in critical care units but not widely educated to be used institutional wide. MSK created a VAP bundle in our electronic medical records. We use a disposable oral kit that attaches to a suction canister to prevent VAP while performing oral care. Oncology nurses caring for patients at risk for VAP should promote the development, application and compliance of programs encompassing interventions and occurrence rates of VAP in their institution and unit.

## **88** **ONCOLOGY NURSE PRACTICE: EXEMPLARS IN ASSURING SAFETY IN CLINICAL IMPLEMENTATION OF TREATMENT INNOVATIONS IN MELANOMA.** Ann Finnan, MSc, RN, Seattle Cancer Care Alliance, Seattle, WA; Julie Knight, BSN, RN, CGRN, Seattle Cancer Care Alliance, Seattle, WA; Ann Spengler, PharmD, BCOP, Seattle Cancer Care Alliance, Seattle, WA; Judith Davies, MN, RN, COHN-5, Fred Hutchinson Cancer Research Center, Seattle, WA; John Smith, BSN, RN, Seattle Cancer Care Alliance, Seattle, WA; Martha Read, MSN, RN, OCN®, Seattle Cancer Care Alliance, Seattle, WA

New agents to treat cancer require comprehensive plans for safe implementation in clinical practice. Intra-lesion injection of a modified Herpes Simplex Virus Type 1 (HSV1), Talimogene laherparepvec, a recent immunotherapeutic advance in the treatment of certain types of melanoma, exemplifies this practice issue. Without specific bio-safety procedures, patients and clinical staff are at risk for unacceptable exposures. Oncology nurses play a pivotal role in translating these innovative treatments safely into practice. The purpose was to produce evidence-based, consensus-driven bio-safety procedures to ensure the safe storage, transport, distribution and administration of the intra-lesion injection agent, and post procedural patient care at a NCI designated cancer center. An agile, nurse-led team of oncology care experts convened and synthesized the available evidence, clinical experience and expert knowledge to develop standards and procedures. A patient, provider and staff education plan was created for the new agent. A Go/No Go analysis was performed to ensure the implementation plan was complete, communicated to stakeholders, and ready to implement. A standard checklist was created to safeguard the process and prevent missteps. With organizational leadership approval, the bio-safety procedures, processes and educational materials were saved on the intranet so they can be shared between providers and departments. The repository allows for version control and rapid revision and redistribution of documents as evidence emerges or practice requirements change. The first injection was given without incident. A post GO LIVE analysis was completed and revealed that modifications were needed in the timing of storage and preparation of the agent to improve the downstream efficiency of distribution and administration procedures. The evidence-based bio-safety procedures reduced risks for bio-hazard exposure for patients and clinical staff, and will be evaluated regularly to assure best clinical practice. The safe and effective administration of a new

bio-hazardous immunotherapeutic agent in melanoma required a comprehensive and collaborative approach to developing best practice guidelines. Oncology nurses are integral to this process. The methodology employed and outputs developed provide a template for developing practice guidelines for future innovation in treatments as they emerge.

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**IMPROVING PRESS GANEY SCORES RELATED TO WHAT TO EXPECT IN RADIATION SIDE EFFECTS IN AN OUTPATIENT RADIATION ONCOLOGY DEPARTMENT.** Rosanna Florentino, RN, BSN, OCN®, NYULMC, New York, NY; Katheen Gumbs, RN, BSN, OCN®, NYULMC, New York, NY; Maureen Oliveri, MSN, RN, NYULMC, New York, NY

The objective was to improve patient satisfaction and increase patient knowledge in what to expect with Radiation Therapy at an urban academic medical center. Press Ganey mission is to improve the quality and delivery of healthcare. NYU uses the Press Ganey quarterly as a measurement of patient satisfaction. The department of Radiation has received low Press Ganey in What to Expect during radiation therapy. Improvement in the Press Ganey score where achieved thru staff education, scripting and changing our patient teaching material and collaborating with the Attending and Nurse Practitioner in achieving this goal. 1. Questionnaire distributed to the patient over the course of three months. These questionnaires were given to all patients on their last day of treatment and on their one month follow up. 2. Radiation Oncology staff : partnered with Radiation Oncology Attending in giving a class regarding site specific treatment and side effects expected. Senior Nurses who are expert in their field also presented to the staff about the skin reaction expected and what part of the body to pay attention to. 3. Revised patient education material. Including verifying to patient where they are getting treated and for how long. These materials contained less wording and simplify the education. Made easier to read. 4. Use of a surface model anatomy to show patients the area of treatments and potential side effect. 5. Press Ganey measured quarterly with steady improvement in scores. Over a year span, assessment, intervention : Press Ganey score: Explanation of side effects from Radiation treatment increased from 88 % to 96% on the 1st 3 months, consistently above 90 % up to this day.

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**NIGHT SHIFT PROTOCOL SUPER-USERS: INCREASING NIGHT SHIFT COMFORT WITH CLINICAL TRIALS.** Caitlin Fontanez, BSN RN, Memorial Sloan Kettering Cancer Center, New York, NY; Jillian Lawler, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Madeline Miller, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Kerry King, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Diane Llerandi, MA, RN, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Miale Mayer, MSN, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY

Clinical trials are an important step towards discovering new treatments for cancer patients. However, because of the complexity of these trials and the needs of oncology patients, nurses play a vital role in maintaining the safety and integrity of the study and its participants. Due to limited resources at night, a heightened awareness of clinical complications is necessary in ensuring the safety and care of trials patients. The Oncology Nursing Society (ONS) released the Oncology Clinical Trials Nurses Competencies, which identifies core competencies required of a novice oncology clinical trials nurse. The hematology oncology unit at a large urban center

in New York City incorporated the highlighted competencies to ensure both nursing comfort and safety to those patients participating in clinical trials. The purpose is to examine the effectiveness of night shift protocol super-users to increase comfort level of night nurses caring for patients on clinical trials on a hematology oncology unit. A pre-survey was sent to all night RN staff. Thirteen out of 18 nurses responded with 53% reporting feeling uncomfortable or somewhat comfortable taking care of trial patients, 23% reporting not knowing where to find protocol information, and 92% reporting they feel there should a nursing policy on protocol patients. Five night nurses were assigned specific protocols and served as super-users. The Clinical Research Nurse Coordinator (CNRC) provided education on study assessments and management guidelines for each protocol. The super-users were given protected time to conduct in-services with the night staff and create a protocol "cheat sheet" as quick guides for review. The super-users were then scheduled to work based on protocol activity on the unit. This ensured a resource was available on any given night shift. The rollout of the night RN protocol super-users began in August and already night nurses have verbalized feeling an increased level of comfort caring for patients on clinical trials. A post survey will be sent in November to further evaluate nursing comfort level. With the implementation of night protocol super-users, nurses will continue to build knowledge and comfort and ensure patient safety.

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**A PILOT PROGRAM TO ENHANCE OUTPATIENT AND INPATIENT INTEGRATION FOR ONCOLOGY CARE, IN A COMMUNITY BASED CANCER CENTER.** Deborah Forsythe, RN, OCN®, Hoag Family Cancer Institute, Newport Beach, CA; Rhonda Hjelm, MSN, RN, OCN®, Hoag Family Cancer Institute, Newport Beach, CA; Tina Tillman, MSN, FNP, CNS, RN, OCN®, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; Melissa Lanner, BSN, RN, Hoag Memorial Hospital Presbyterian, Newport Beach, CA; Linda Tupper, RN, OCN®, Hoag Memorial Hospital Presbyterian, Newport Beach, CA

Most oncology patients currently receive their care in the outpatient setting, with inpatient admissions following complications. Patients admitted directly into the inpatient setting typically have complicated diagnoses and care needs. Inpatient registered nurses (RN's) expressed confusion and sometimes animosity at the role of the oncology nurse navigator (ONN) appearing to visit with their patients. Few referrals were received to include the ONN in the continuum of care. Oncology nurse navigators provide coordination of care, provide education and serve as advocates throughout patients' continuum of care; beginning at diagnosis, through treatment, survivorship and end of life. As oncology navigation at this organization broadened to include multiple tumor sites, to ensure access to this important resource for all patients, it is important staff are knowledgeable about the role of the ONN. The purpose of the quality improvement initiative was to enhance communication between inpatient oncology RN's and ONN's. In May 2015, a work group was comprised to include: inpatient and outpatient oncology RN's, the CNS/Educator, the ONN's and the Oncology program executive director. This group identified the primary concerns of inpatient staff related to oncology navigation and available outpatient support services. The primary concerns included clarification of the role of the ONN, how access to their documentation in the electronic medical record and how to contact the ONN for a patient referral. A four hour program was developed, with RN's participating in an orientation program where staff meet all the ONN's, meet with the oncology social worker, tour the outpatient clinical service areas and



were introduced to other available support services. A pre and post survey was implemented to evaluate participants' knowledge acquisition and comments about the program. Of the 53 participants, 49 returned complete surveys. The survey's revealed an average increase of 71% in knowledge: related to the role of the ONN, how to access the ONN's documentation and available support services. Following participation in the orientation, communication and collegiality between inpatient RN's and the ONN's improved significantly. Referrals to and use of the ONN as a resource contributed to improvement in nurse satisfaction and overall teamwork. Understanding the individual role of the ONN in the care of the oncology patient is important to ensure continuity of care and patient access to important resources.

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**NO TIME TO WAIT: DECREASING AMBULATORY INFUSION PATIENT DELAYS THROUGH LEAN METHODOLOGY.** Jennifer Foster, BSN, RN, OCN®, Baylor Scott and White Hospital, Temple, TX; Jennifer Havens, BSN, RN, OCN®, Baylor Scott and White Hospital, Temple, TX

Ambulatory infusion rooms have the potential to become disorganized and hectic which leads to decreased nurse availability and patient delays. Chairside nurses working in the care environment are the best-prepared team members to help generate and implement ideas to resolve workflow issues, positively impacting their own environment. Baylor Scott & White Vasicek Cancer Treatment Center (BSWVCTC) infusion room frequently encountered patient delays. Chairside nurses identified the following issues leading to increased care interruptions, inefficiencies, and delays in patient care: uneven acuity distribution of patient assignments (long versus short treatments); lack of nurse ownership for appointment times; lack of available staff to care for arriving patients; and relying on delayed verbal communication for patients' readiness for treatment. BSWVCTC used lean methodology to involve the front-line staff in identifying improvement opportunities and implementing ideas. Over a nine month period the team generated and implemented multiple improvements, including implementing an acuity-based tool; developing scheduling guidelines that dispersed appointment times determined by staffing availability; and utilization of the electronic medical record (EMR) to include notification of patients' readiness for treatment. BSWVCTC nurses assessed outcomes by measuring the time from patient arrival to intravenous (IV) start. Initially, patients waited an average of 17.6 minutes from arrival to IV start. After implementing assignments, the wait time decreased to 15 minutes. Once acuity based assignments were initiated, the average wait time decreased to 12.3 minutes. Upon changing scheduling guidelines, patient wait time decreased to 11.9 minutes. Finally, after applying EMR notification, the time decreased further to an average 9.4 minutes. Overall, nurses' incrementally-generated and implemented ideas decreased patient delays by approximately 50%. Implementing assignment changes, scheduling guidelines, and visual cues can decrease the variables leading to infusion room disorganization. Engaging chairside nurses is essential in generating ambulatory infusion improvement opportunities. Minor workflow changes can have a significant impact on decreasing patient wait times in a busy infusion center.

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**IMPLEMENTING BEDSIDE SHIFT REPORT FOR NURSING ASSISTANT PERSONNEL ON A MEDICAL ONCOLOGY UNIT.** Chinsia Francis-Hill, RN, BSN, OCN®, New York Presbyterian Hospital/Weill Cornell, New York, NY; Charmaine Smith, RN, BSN, New York Presbyterian Hospital/Weill Cornell,

**New York, NY; Corey Russell, RN, MSN, OCN®, New York Presbyterian Hospital, New York, NY**

Handoff miscommunication or the lack of handoff is a leading cause of medical adverse events. Annually, approximately 210, 000 to 440,000 patients will suffer some kind of preventable adverse event leading to death. Historically, the drive to standardized and implement handoff programs have focused on the licensed clinicians. The role of other care team members, such as ancillary staff, may require the relaying of critical patient information that is essential to the prevention or mitigation of patient harm. In 2015, a handoff program was implemented for nurses at a large academic medical center. The nurse assistant personnel were not included in this implementation. As result, there was a lack of standardization of communication and accountability among the team. The proposed implementation of the bedside nursing report was aimed at achieving the following reliability, consistency and quality of communication among nurse assistive personnel and improved response time to patient needs. Other aims to be fulfilled by the report included building teamwork and accountability while addressing opportunities to enhance real time nursing practice. Pre-implementation phase included sampling of the nursing assistive personnel's perceptions of hand-off communication; observation of current hand-off process on varying shifts; literature review; and development of handoff guidelines. Each participant received education on the process and were deemed competent after successful completing three occurrence of handoff as per the guidelines. Overall findings revealed that it was necessary to implement bedside shift report. The survey conducted offered an in-depth understanding of this need. Most nurses showed high interest in the bedside handoff. Additionally, they also believed that the tool played a pivotal role in improving their career as caregivers. In general, the analysis of the findings significantly illuminated the issue as well as the perception of caregivers towards bedside handoff. Expanding hand-off programs to include nurse assistant personnel is essential to ensuring communication of critical patient information. The role of these individuals is closely integrated into patient's plan of care. Implementing a standardized hand-off process can improve the quality of oncology care. The novelty in the implementation of the bedside shift report is that it will incorporate nursing assistant personnel in all oncology units.

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**A PATIENT EDUCATION APPROACH TO THE PREVENTION/EARLY DETECTION OF FEBRILE NEUTROPENIA.** Juanita Fryar, MS, RN, OCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; Carol Blecher, MS, RN, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; Timothy Clyne, RN, BA, MSN, Trinitas Regional Medical Center, Elizabeth, NJ

There is a great deal of information in the literature regarding Neutropenia and the cost to the facility for the use of growth factors versus the cost of hospitalization for Neutropenic Sepsis. The NCCN, MASCC and ONS have published guidelines regarding Neutropenia and the use of growth factor support in protocols having a high risk for development of Neutropenic Sepsis, as well as self care measures for patients. This information was presented to Cancer Committee along with the hypothesis that patient education regarding neutropenia and sepsis is an essential element in decreasing admissions and length of stay for episodes of neutropenic sepsis. The purpose was to evaluate the number of Neutropenic Sepsis admissions as well as cost of the hospitalization as compared to the cost of educating patients regarding self-care measures to prevent Neutropenia. To evaluate the effectiveness of an inpatient and

outpatient education and self-monitoring program for neutropenia designed to increase patient awareness in decreasing the number of hospitalizations for neutropenic sepsis. We have developed a patient education program regarding the potential for neutropenic sepsis which includes temperature monitoring, instructions regarding hand hygiene and CBC tracking in an effort to prevent hospitalization for neutropenic sepsis. This program was presented to the nurses and they were educated regarding methods of presenting the information to our patients. The information is designed to be presented to patients in the inpatient and outpatient areas prior to the administration of chemotherapy. We are proceeding with education and the institution of a fast track protocol and order set for the ED. Patients are given a green card (get out of jail free card) to present to the ER staff should they have a septic episode. Our plan is to monitor admissions for Febrile Neutropenia to evaluate the effectiveness of our patient education program and to continue the development of programs to promote evidence based practice. We will monitor length of stay in the ED as well as time to first antibiotic administration. In this cooperative patient education project between the Inpatient Oncology Unit and outpatient we are working to improve the quality of care and as an added benefit we hope to improve interdepartmental communication and understanding and quality patient care.

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**BEYOND THE PAIN SCORE: IMPROVING THE PATIENT'S PAIN MANAGEMENT EXPERIENCE.** Jen Galdys, MSN, RN, OCN®, CHPN, Wilmot Cancer Institute, University of Rochester Medical Center, Rochester, NY; Carol Lustig, MS, RN, ANP-BC, Wilmot Cancer Institute, University of Rochester Medical Center, Rochester, NY; Carolyn Ruffing, BSN, RN, OCN®, Wilmot Cancer Institute, University of Rochester Medical Center, Rochester, NY; Tammy Clarke, MS, RN, OCN®, BMTCN®, Wilmot Cancer Institute, University of Rochester Medical Center, Rochester, NY

The leadership team at the Wilmot Cancer Institute (WCI) at the University of Rochester Medical Center identified a need for improved oncology outpatient pain management and education due to low Press Ganey scores. An interdisciplinary committee including oncology RNs from all WCI outpatient sites, APPs, physicians, fellow, integrative oncology coordinator, palliative care APP, oncology outcomes manager, and patient representative was formed to identify how to address these needs in the outpatient oncology setting. The purpose was to describe resources that were identified or created and implemented for patients and staff to promote improved outpatient oncology patient pain management and education. A monthly "Pain Education Series" in grand rounds format began September 2015 with the intent of providing ongoing staff education on various pain management topics. Of note, two presentations were given by oncology patients discussing the patient perspective of pain which were well received by the attendees. Key pain resources for patient distribution were decided upon by the committee. These include: Pain management log, information sheet discussing "Managing Your Pain Together", list of free relaxation phone apps, "Managing Constipation", a list of local massage and acupuncturists, and a brochure for palliative services. Multiple copies of each resource were placed in purple file folders and distributed to each WCI outpatient site August 2016. Committee representatives were responsible for educating their colleagues about these resources, specifically, assessing patient pain management needs, distributing to patients and developing a patient follow-up plan. Attendees of the "Pain Education Series" complete an evaluation after every presentation. Overall, evaluations of the series have been well received. Attendees have provided feedback on how

the presentation may change their practice going forward and ideas for future topics for the series, which has been helpful for planning purposes. Going forward, the committee intends to monitor how useful the pain management resources are by: number of new copies needed of each resource monthly and informally asking for colleague feedback about the resources available. The WCI Outcomes Manager will monitor and provide ongoing status updates of Press Ganey scores. The committee has been motivated, engaged, and creative in working as a group to identify different approaches to improve the patient experience related to pain management.

**96**  
**NO MORE CASUAL CHEMO: THE BSSF ONCOLOGY EVIDENCE-BASED PRACTICE PROJECT.** Laura Gallagher, MSN, ACNS-BC, CEN, Bon Secours St. Francis Hospital, Charleston, SC; Anita Bishop, BSN, RN, OCN®, Bon Secours St. Francis Hospital, Charleston, SC; Linda Moeller, BSN, RN, OCN®, Bon Secours St. Francis Hospital, Charleston, SC; Nnette Borja, BSN, RN, Bon Secours St. Francis Hospital, Charleston, SC

Caring for the Oncology patient carries a degree of risk based on the necessity of administration of chemotherapy, biotherapy, and targeted agents for this complex patient population. Protective equipment and clear communication attenuate risk potential in hazardous medication administration. The Oncology Unit at Bon Secours St. Francis Hospital is an 11 bed inpatient unit established in 2011. Nurses affiliated with this unit are committed to their professional organization. The Oncology Nursing Society (ONS) hosted their 40th annual Congress in Orlando April 2015, whereby several staff interacted with ONS members and vendors to review current practices and guidelines. Sharing information with management and examining protective equipment and practices, gap analysis identified opportunities to match our practice to ONS standards. The Iowa Model of Evidence-Based Practice to Promote Quality Care framed the project. ONS standards and guidelines and BSSF philosophies of care guided the team through the modeled steps. Relevant research and related literature highlighted our need to conform to ONS standards. The research base supported our decision to change practice beginning in June 2015. Observational data by the team included a review of protective equipment, pharmacy delivery practices, independent double checks, staff education, and team communication. Integration of staff nurses and nurse leaders in the project ensured direct care provider buy in and management support for safety initiatives. Inter-departmental information shared between pharmacy and nursing established an open line of communication. The Value Analysis Team (VAT) added the request for impervious chemo gowns to their agenda. Our Shared Governance Unit Based and Clinical Excellence Councils assisted with process evaluation and outcome measurement. Additional staff protective equipment and communication methods were effectively added to protect staff from chemo exposure based on Chemo/Biotherapy Guidelines by the Oncology Nursing Society. The BSSF Oncology inpatient unit has successfully adapted their practice to conform to ONS standards. There have been no reported exposures to hazardous medications in the Oncology area. Every direct care provider and nurse leader for this unit is certified in chemotherapy and biotherapy administration per ONS standards. New orientees participate in ONS Fundamentals of Chemotherapy during their first 6 months once orientation is complete.

**97**  
**FIRST TREATMENT CALL-BACKS: WE DIDN'T FORGET ABOUT YOU.** Dennise Geiger, RN, OCN®, Regional Cancer

Care Associates, East Brunswick, NJ; Carmela Hardy, BSN, Regional Cancer Care Associates, East Brunswick, NJ; Mary Ann Guitierrez, BSN, Regional Cancer Care Associates, East Brunswick, NJ

The first day of chemotherapy treatment for many cancer patients is wrought with fear and anxiety. Although patients are educated on side-effects to be expected after treatment and given instructions as to when to follow-up with the clinic, new patients especially are hesitant to call with questions or when symptoms arise. Many times, patients don't call until their symptoms have surpassed the level of home management, and they then must be scheduled for an urgent office visits, or worst case, sent to the emergency department. Even with education prior to their first treatment, many patients are overwhelmed by their diagnosis, treatment, and concerns. First Treatment Call-Backs were initiated in order to decrease a patient's fear and anxiety, as well as to help manage side effects before they become unmanageable. At initial treatment, the treating nurse enters into the Treatment Plan of the patient's electronic medical record (EMR), an activity titled "First Treatment Call-Back." This activity is planned for 24 hours after either: the end of the infusion; disconnect of continuous infusion pump; or Neulasta injection (whichever signals the end of patient's first cycle). The charge nurse reviews a daily report for Call-Backs and assigns specific nurses to call patients. The nurse calls each patient to assess symptoms, reinforce instructions, and answer questions and concerns. Assessment questions pertain to chills, fever, hydration, bowel regimen and pain. Additional education is given if needed, and if symptomatic, the nurse determines if patient's care can be managed at home, or if intravenous hydration, same-day office visit, or referral to the emergency department is warranted. Once the call is completed, the nurse documents the call and outcome in the patient's EMR. There has been much success with the implementation of First Treatment Call-Backs. Symptomatic patients are given office visits same day with a physician or nurse practitioner, or scheduled for hydration, and trips to the Emergency Room can be bypassed. Patients have expressed relief that nurses follow-up with them, and they know that they need not navigate their cancer journey alone. This one-on-one communication fosters a caring and trusting bond that can help patients manage not only their symptoms, but their fears and anxiety regarding treatment as well.

#### 98 LYMPHEDEMA IN BREAST CANCER PATIENTS: EXPLORING SURGICAL OPTIONS TO COMPLEMENT TRADITIONAL THERAPIES. Jennifer Gerardi, MS, BSN, RN, Cancer Center, The Ohio State University Medical Center, Columbus, OH

Lymphedema in the breast cancer patient, who has undergone lumpectomy or mastectomy with axillary node biopsy is a very prevalent problem. Treatment in the past has included compression sleeves, massage, medication, exercise, skin care and bandaging. Even with these standard treatments, lymphedema is not adequately controlled in many patients. These treatments such as compression sleeves can be hot, restrict movement, and unattractive, and others have side effects or take a great deal of time out of a survivor's day, impacting quality of life. New surgical advances in lymphedema treatment have given new hope to patients as they grasp for anything that will improve their quality of life in the face of chronic lymphedema. Lymphaticovenous Bypass and Vascularized Lymph Node Transfer are two advances in microvascular surgery that have provided new hope for the patient experiencing chronic lymphedema, post breast cancer surgery. Both of these surgeries require the development of a dedicated clinic and the assembly and education of clinic and operating room staff to facilitate a successful lymphedema program. With careful

planning and training, a multimodality (medical and surgical treatment) lymphedema clinic can be developed to treat not only the post-surgical breast cancer patient, but also the patient with lymphedema from other known or unknown causes. Lymphaticovenous Bypass Surgery or Vascularized Lymph Node Transfer Surgery can provide new hope for patients struggling with chronic lymphedema after breast surgery. This presentation will offer information about these surgeries and how to design a clinic to meet the medical and surgical nursing needs of these patients.

#### 99 IMPROVING NIGHT-TIME QUIETNESS ON THE ONCOLOGY UNIT. Sarah Gerber, RN, BSN, CMSRN, New York Presbyterian, New York, NY; Machline Clerrosier, RN, BSN, New York Presbyterian, New York, NY; Corey Russell, RN, MSN, OCN®, New York Presbyterian, New York, NY

Disturbances in sleep can have negative effects on patient's cardiovascular, respiratory, and immune function. Oncology patients are often immunocompromised and sleep disturbances are not conducive to healing. A 19-bed Medical Oncology unit at a large academic medical center identified an opportunity to create a more healing and quiet environment. According to the Healthcare Consumer Assessment of Healthcare Providers and Systems scores for 2016, this unit is operating at a two star rating for the quietness domain, compared to an overall hospital goal of four stars. The purpose of this project is to improve and facilitate better quality of sleep for oncology patients by implementing a noise reduction and sleep promotion bundle. A noise reduction and sleep promotion bundle will be implemented daily to each patient at 9:00 pm. This bundle will include provision of a white noise machine, ear plugs, eye mask and aromatherapy. In addition, the lights will be dimmed or turned off and doors will be closed if it is safe for the patient at the nurse's discretion. During the day shift, quiet hours will be respected from 2:00 pm to 4:00 pm, in which the hallway lights will be dimmed and staff will promote a quiet atmosphere. Patient satisfaction surveys are mailed to each patient when they are discharged from the hospital. Data from these surveys, specifically in the quietness domain, will be evaluated. The goal rating from this survey is to increase from two stars to three stars. A possible limitation to this project is the covering float staff's lack of understanding and implementing the noise reduction bundle. This will be the unit staff's responsibility to educate the oncoming staff who are unfamiliar with this process. Implementing a noise reduction and sleep promotion bundle can positively impact the oncology patient's experience and promote healing. White noise machines along with other aids will help to decrease environmental stimuli and will optimize sleep. Nurses should offer the noise reduction bundle to patients to reduce external environmental stimuli and promote sleep. This project incorporates new technology to be used in patient centered care.

#### 100 PRE-TREATMENT PHONE CALLS FOR NEW INFUSION CENTER PATIENTS. Sarah Gibart, BSN, RN, OCN®, Froedtert Hospital-Clinical Cancer Center, Milwaukee, WI

Receiving a diagnosis of cancer can be stressful and frightening. Starting chemotherapy can add to the anxiety patients may already be experiencing. Patients receive chemotherapy education by clinic nurses days or weeks prior to the initial chemotherapy treatment and patients can arrive at the chemotherapy infusion center unprepared. Often, the chemotherapy education does not include information about what to expect during their infusion related to food, visitors, length of treatment, transportation and what medications to bring. This can lead to the infusion nurse spending valuable



time discussing these common questions and concerns. It was determined a process change was needed to improve patient education. Infusion nurses who were trained in next day chemotherapy order preparation identified patients that would not be seen by a provider the same day as needing a pre-treatment phone call. Nurses identified also if chemotherapy teaching was completed and appropriate antiemetic prescriptions were sent to patient's pharmacy of choice. Selected patients were called the day prior to their initial chemotherapy treatment to discuss logistical information such as length of treatment, wait times, environment of the infusion center and transportation using a prepared teaching script. An electronic health record smart phrase was created for standard nurse documentation. Patients were then asked to complete a written questionnaire to determine how ready they felt for their initial chemotherapy visit. The results were compared to a group of patients new to chemotherapy that did not receive a pre-treatment phone call. Of the patients that were called prior to their first treatment, 87% felt well prepared for their first treatment, compared to 15% of patients who did not receive a call. Patients verbalized appreciation of being called pre-treatment. At the end of the first treatment, 71% of patients reported no negative or unexpected events. Pre-treatment phone calls were not difficult to implement in the chemotherapy infusion center. They helped reduce anxiety and the "fear of the unknown" for patients receiving chemotherapy for the first time. With fewer patient questions about logistical information, infusion nurses were able to spend more time with patients providing additional drug teaching, emotional support and decreasing the length of time the patient spent in the infusion chair.

**101**  
**NURSING OPERATED PULSED XENON ULTRAVIOLET-C DISINFECTION ROBOT UTILIZATION AND THE REDUCTION OF HOSPITAL-ACQUIRED CLOSTRIDIUM DIFFICILE INFECTIONS (CDI) IN HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT) PATIENTS.** Denice Gibson, DNP, RN, CRNI, BMTCN®, AOCNS®, Honor Health, Scottsdale, AZ; Selma Kendrick, MS, RN, OCN®, BMTCN®, Honor Health, Scottsdale, AZ; Michelle McCreary, BSN, RN, Honor Health, Scottsdale, AZ; Rebecca Davis, MHA, Honor Health, Scottsdale, AZ; Andy Szetela, PharmD, BCOP, Honor Health, Scottsdale, AZ; Doralyn Costello, BSN, RN, OCN®, BMTCN®, Grand Canyon University, Phoenix, AZ

HSCT patients are at a high risk for developing hospital-acquired CDI due to immunosuppression. CDI spreads from heat resistant spores shed in feces from an infected individual. These spores are capable of living on dry surfaces for months. In this highly immunosuppressed population, cross-contamination easily occurs in hospital rooms and is hypothesized to result in increased rates of hospital-acquired CDI. The hospital-acquired CDI rate on a HSCT unit far exceeded the national benchmark average of 3 hospital-acquired CDIs per month. In addition to the increased rate, there was also an associated increase in the cost of hospitalization due to extended hospitalization, re-hospitalization, laboratory testing and medications upwards of \$13,000 per CDI. The purpose of this project was to reduce rates and cost associated with hospital-acquired CDI and sustain utilization of the technology by nursing staff. In addition to the standard discharge terminal cleaning of the patient room, the program elected to use a Xenon pulsed UV-C light machine to disinfect. The innovative pulsed Xenon UV-C light machine disinfects rooms by breaking down DNA molecular bonds to destroy the spores that live on dry surfaces and lead to the spread of CDI. In an effort to sustain the utilization, the nursing staff incorporated the use of the machine into their daily workflow as opposed to housekeeping. Each area

of the room, including the patient bathroom, was disinfected via three, 4-minute cycles. The total nursing time required was 22 minutes. This included the room preparation, machine set up and run time. Prior to implementation, the unit exceeded national benchmark for hospital-acquired CDI. After 3 months of implementation, the rate decreased to less than one. By reducing the CDI rate, the program projects a decrease length of stay and treatment cost; thus improving patient outcomes. Furthermore, the business case for the use of this robot has proven successful, as initial cost of the machine was \$105,000 including training. Patient safety and infection prevention is the responsibility of all members of the healthcare team. The HSCT program successfully implemented an innovative program where the nurses manage and operate the pulsed Xenon UV-C light machine to disinfect rooms resulting in decreased hospital-acquired CDI. This is the first known successful implementation of such a program by a nursing team.

**102**  
**IDENTIFY POTENTIAL CHEMOTHERAPY ERRORS USING FAILURE MODE EFFECT ANALYSIS METHODOLOGY.** Karen Gleason, RN, Northwell Health Monter Cancer Center, Lake Success, NY; Jennifer Goldschmitt, NP, Northwell Health Monter Cancer Center, Lake Success, NY; Eileen Fitzgerald, RN, OCN®, Northwell Health Monter Cancer Center, Lake Success, NY; Gail Heilman, RN, OCN®, Northwell Health Monter Cancer Center, Lake Success, NY; Claire Nekola, RN, OCN®, Northwell Health Monter Cancer Center, Lake Success, NY; Jenny Paul, RN, Northwell Health, Lake Success, NY

Monter Cancer Center is an ambulatory center that serves adult oncology patients. The treatment center experiences an average of 3,700 patient treatment visits monthly. Failure mode effect analysis is a method of identifying a process problem before it occurs, determines how severe a problem will be if they do occur, shows how to redesign a process to reduce risk and prevent incidents from occurring. A multi-disciplinary team of nurses, quality management, pharmacy & a physician was formed. Flow charts were created for physician, nursing and pharmacy to depict the medication administration processes. Near miss data for a 22 month period was reviewed and a risk priority number assigned based on potential for failure occurrence, severity of potential failure, and the ability to detect the failure. The purpose was to identify areas of potential failure modes in the chemotherapy ordering & administration process. To identify chemotherapy near misses with the highest risk priority number, using the failure mode effect analysis tools. Implement corrective actions using the hierarchy of risk reductions strategies. Desired outcomes included reducing the risk of potential errors in the ordering and administration of chemotherapy, improve patient safety. 722 near misses were reviewed; categorized and assigned a risk priority number. 203 (26%) of all near misses involved 5 medications. Each near miss was assigned a high priority risk number. Process maps for each discipline were reviewed to identify areas of possible process failures. Areas of potential risk were identified as follows; electronic chemotherapy ordering templates, inconsistent treatment profile completion, and the lack of maximum dose alerts for Carboplatin ordering. Chemotherapy templates redesigned to ensure correct route is ordered. Work groups developed to standardize and educate the staff. Maximum dose alert built into the electronic ordering process. Treatment profile audit completion was at 40% compliance in May 2015, compliance now is between 98-100%. A maximum dose alert built in electronic ordering is in place and functioning, templates updated to ensure correct route is chosen. Near misses continue to be monitored. FMEA was an effective method to

use in the process improvement of identifying near misses and improve overall patient safety. Innovation- Redevelopment of treatment profile audit, staff education, & electronic build in medication ordering.

### 103 ONCOLOGY NURSE NAVIGATION: IMPROVING ACCESS TO CARE AND PATIENT AND PROVIDER SATISFACTION.

Janet Gordils-Perez, DNP, RN, ANP-BC, AOCNP®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Susan Schneider, PhD, RN, AOCN®, ACNS-BC, FAAN, Duke University School of Nursing, Durham, NC; Molly Gabel, MD, Summit Medical Group, Florham Park, NJ; Kathryn Trotter, DNP, CNM, FNP-C, FAANP, Duke University School of Nursing, Durham, NC

Patients recently diagnosed with cancer face significant barriers to accessing timely cancer services as well as challenges in navigating the health care system. Given the multidisciplinary nature of cancer, patients are frequently left on their own to coordinate with numerous treatment providers, balance conflicting information, and make treatment decisions, all while coping with their disease and treatment effects. One approach that enhances coordination of oncology care is the implementation of nursing navigation programs. In this model of care, an oncology nurse navigator coordinates the overall care for patients throughout discrete phases of cancer care. Because of high volumes and complex therapies associated with hematologic and gynecologic malignancies, navigation services were piloted to all new patients with these diagnoses at a NCI-Comprehensive Cancer Center. The objectives of the current project were to evaluate whether employing an oncology nurse navigator for newly diagnosed cancer patients improved timely access to care, patient and provider satisfaction and enrollment in clinical trials. Intervention: Two oncology nurse navigators were hired to support newly diagnosed patients early in their treatment and target the gaps that the patient and their families experience. They were the primary point of contact. Data collected from EHR and patient/provider surveys revealed significant decrease in the mean days from first provider visit to first therapy (16 vs 27;  $p = .002$ ) in the hematology population. Time for both groups from contact to first visit and from first visit to treatment start decreased (3-7 days). Mean satisfaction survey scores for both populations were high regarding navigator role (42.7 and 43.9/45) and with care received (80.1 and 80.8/85). Providers demonstrated a high level of satisfaction with the program with mean scores of 4.95/5 for gynecology and 4.39/5 for hematology. The navigation program facilitated access to care as illustrated by a decrease in time for patients to receive their first oncologist appointment as well as to start therapy. Patients and providers were highly satisfied with the navigator role. The navigation program did not increase clinical trials enrollment. Nurses can learn how to continually provide innovative clinical programs to meet the needs of cancer patients throughout their cancer care trajectory. Oncology nurse navigation programs are one approach that can be implemented to meet the needs of our patients.

### 104 UTILIZING NURSING HANDOFF COMMUNICATION TO MANAGE IMMUNE RELATED ADVERSE EVENTS IN AN OUTPATIENT IMMUNOTHERAPY CLINIC.

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RN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY; Renee Luddy, BSN, RN, Memorial Sloan-Kettering Cancer Center, New York, NY

According to the Institute of Medicine, patient safety may be compromised by lack of proper communication between clinicians. Nursing communication is imperative with the introduction of immunomodulator therapies, specifically, checkpoint inhibitors. Checkpoint inhibitors activate immune cells and have a potential for inducing autoimmune activity leading to the development of immune related adverse events (irAE's). IrAE's require prompt identification and surveillance in order to avoid cessation of therapy and fatal consequences. Nursing handoff communication is an effective method to monitor and manage irAE's. However, limited evidence exists regarding nursing handoff communication in the outpatient oncology setting. Therefore, clinical research nurses (CRN's) and nurse practitioners (NP's) in a Phase I outpatient immunotherapy clinic alongside 10 oncologists identified the need for a nursing handoff communication tool to ensure effective communication between all clinicians. The purpose of this initiative was to implement a nursing handoff communication tool to monitor and follow up on patient status and to identify and manage irAE's. The handoff communication tool that was developed, lists patients experiencing toxicities and a schedule to contact them for telephone assessment. A CRN is designated daily to contact the patient and complete a nursing assessment including a review of systems, symptom evaluation, and medication reconciliation. The assessment findings are documented in the electronic medical record, escalated to the NP as needed, and then inputted into the e-mail handoff for further follow up by the subsequent nurse. Early recognition and surveillance is pivotal in the management of irAE's, but can be challenging to sustain. In this clinical setting, nursing handoff met this challenge and improved communication and patient outcomes. Patients reported an appreciation for receiving thorough care during these events. In addition, the nursing team reported increased team efficiency and accountability. Future evaluation will include aligning symptom management data with emergency room admissions. Nurses caring for patients receiving check point inhibitors are faced with the arduous task of monitoring and managing patients with irAE's. Development of a communication tool is an effective and necessary strategy in the event of an irAE. Leveraging e-mail capability, CRN's are able to focus assessments and improve communication.

### 105 TELE-NICOTINE: CAN IT WORK? A PILOT STUDY OF REMOTE SMOKING CESSATION.

Maria Grabowski, MSN, RN, OCN®, UT Southwestern Simmons Cancer Center, Dallas, TX; Michele Yates, BS, CHES, UT Southwestern Simmons Cancer Center, Dallas, TX; Karla Jerkins, MA, LPC-1, LMFT-A, UT Southwestern Simmons Cancer Center, Dallas, TX

Despite the national reduction in smoking prevalence, use of tobacco products remains a leading preventable cause of cancer. Nicotine cessation is an important approach to cancer prevention and to healthier lifestyle. Nurses and other health professionals can use unique tools and skill sets to impart nicotine cessation messaging and education. However, face-to-face education is not always available. Other approaches include telephone consultation and two-way video interactions (telemedicine). It is not known which of these approaches is more effective. The goal of this project was to expand cancer prevention offerings utilizing innovative technologies. The Community Outreach Program of UT Southwestern NCI Simmons Comprehensive Cancer Center conducted a pilot project to offer nicotine cessation services to an in-need community homeless population. A telemedicine approach ("tele-nicotine") was selected. The pilot site was a men's homeless shelter at

which medical care is delivered by telemedicine. The team consisted of an oncology nurse, a counselor, and a cancer educator who are certified through the American Lung Association Tobacco Cessation program. Technical services were provided by the institution's telemedicine department. Weekly one hour sessions were tailored to the attendees, based on weekly team briefings. Nicotine reduction or elimination was viewed as a successful outcome. This 3 month pilot project has effectively reached over 100 people. Approximately 25% were nicotine-free after attending 4 sessions, and 25% had significantly reduced nicotine use. The economics of nicotine product use were emphasized each session to encourage abstinence. The telemedicine support team was essential to eliminating technical barriers to consistent video and audio communication. Additionally, certified educators successfully gained comfort and skills communicating using this technology and adapt to participants based on participant attendance, and the feedback of participants and on-site facilitators. This project supported cancer prevention goals of eliminating tobacco and nicotine use. Cancer nurses can impart comprehensive messaging and offer programming to targeted groups. This content is adapted to accommodate a wide variety of challenges including literacy, attendance, and needs for medical and psychosocial support. Telemedicine adds extended reach to health care partnerships and aids dissemination of effective approaches to otherwise underserved populations. Within the telemedicine interaction, education can be individualized to each participant.

**106**  
**ISOLATION CODING SYSTEM TO IMPROVE EASE OF IDENTIFICATION OF INFECTIOUS ORGANISMS IN STEM CELL TRANSPLANTATION.** Myra Lynn A. Granada, MSN, RN, OCN®, MD Anderson Cancer Center, Houston, TX; Joylyn Mae E. Estrella, MSN, RN, OCN®, CNL, MD Anderson Cancer Center, Houston, TX; Maria Paz T. Ramirez, BSN, RN, OCN®, MD Anderson Cancer Center, Houston, TX

Stem cell transplantation (SCT) patients are highly susceptible to infections by nature of their compromised immune system. A primary goal of SCT care, which is also an important nursing-sensitive indicator, is monitoring for and prevention of nosocomial infections. Improving processes that help clinicians enforce isolation precautions, including specific personal protective equipment (PPE) and hand hygiene, is critical. The purpose of this quality improvement project was to implement a color-coding system to assist staff in easily identifying isolation type, including source of infection, and use of appropriate PPE. SCT nurses designed a color-coding system called isolation dots, which indicated most common microorganisms and PPE requirements. After a 2-week staff education, the tool was piloted on a 24-bed SCT unit for two months. The committee members conducted a survey to evaluate multidisciplinary professionals' perceptions of the efficacy and benefits of the dots on workflow, PPE education and compliance, and patient safety. A six-question quality improvement survey was administered to 50 multidisciplinary staff members. Forty seven staff responded that the isolation dots were helpful in identifying the infectious source of patients; 48 staff reported use of the dots saved time in identifying the infectious source of patients and assisted them be compliant with PPE; and 30 staff noted the isolation dots as their principal source of identifying the infectious source for their patients. Survey results suggested that staff perceived the color-coding enhanced isolation communication among staff involved directly or indirectly in patient care. The system was implemented across a 48-bed SCT unit, and has been incorporated as a standard practice in all SCT units. The Infection Control Department also adapted the color-coding for hospital rooms requiring Xenex Ultraviolet lighting, where rapid pulses of ultraviolet light destroy potent organisms, such

as Vancomycin-Resistant Enterococcus (VRE) and Clostridium Difficile (C. diff). The literature supports color-coding and signs enhance immediate recognition of affiliated conditions or circumstances. The isolation dots facilitated a quick and inexpensive identification of isolation type, thereby reinforcing appropriate PPE and precautions. In addition, the use of the colored dots allows for staff to recognize the infectious source while still protecting patients' privacy. This innovative project promotes patient safety, specifically prevention of hospital-acquired infections in the SCT population.

**107**  
**CHEMOTHERAPY ADHERENCE IN THE HOME SETTING AND MONITORING ADVERSE EFFECTS.** Brittany Green, RN, BSN, OCN®, MD Anderson Cancer Center, Houston, TX

In preparation for the Quality Oncology Practice Initiative (QOPI) certification renewal, our center reassessed the current processes for the administration of oral chemotherapy. The increased use of oral chemotherapy in the home setting has complicated the techniques that are typically used to maintain adherence and monitor adverse effects. Patient education is the responsibility of the entire medical team, although nurses usually provide the initial reading materials and comprehensive review of symptom management. Monitoring adherence and preserving safe practices is a complex task when patients are administering medication in their home. The goal was to provide patients with an organized method of tracking oral chemotherapy maintenance, while increasing patient compliance and promoting safe practices. When oral chemotherapy was prescribed, there was no process to accurately track the doses that the patient would self-administer. Additionally, when they would return for follow-up, there was an unclear recollection of symptoms that occurred in the interim. A chemo calendar was developed that documented each dose, a report of symptoms, and one of the most crucial additions, included a daily pill count. The daily pill count allowed the staff to confirm that the medications were taken correctly. Patients were also provided with an oral chemotherapy patient education package and specialty pharmacy information. The utilization of the calendar assisted health care providers in determining if the correct amount of doses were taken and easily detect conflicts. On at least two different occasions, instances were discovered where patients mistakenly altered their doses. When inaccuracies were identified, there was an opportunity to teach correct methods and in turn increase positive outcomes. It was observed when the physician required these documents to be filled out completely, patients were eagerly compliant. With the emergence of oral anti-cancer drugs, the onus to maintain adherence and promote safe practice is shared between the health care team and the patient. There are several safety and patient efficacy concerns with the administration of oral chemotherapy in the home setting. Sustaining these methods are difficult in the home setting, but with proper education and creative tools, patient outcomes can be improved. It is extremely pertinent for the entire health care team to discuss the importance of maintaining documentation and compliance of oral chemotherapy.

**108**  
**SAFE ADMINISTRATION OF A VESICANT VIA AN AMBULATORY INFUSION PUMP.** Amy Gregory, MSHL, RN, Mayo Clinic Florida, Jacksonville, FL; Xenia Downey, RN, BSN, Mayo Clinic Florida, Jacksonville, FL

In the current healthcare environment influenced by mandated Medicare reimbursement, the healthcare industry has seen many practice changes affecting treatment plans provided to patients in both inpatient and outpatient settings. As of recent, insurance companies have driven care plans and



medication administration changes, these practice changes are driven by insurance companies looking for potential savings in patient services when treated in an ambulatory setting versus an inpatient hospital setting. Physicians in hematology/oncology practices have historically treated specific cancer diagnoses by admitting patients to the hospital to receive specific chemotherapy treatments. Now, new industry standards are pushing for these treatments to be administered in an ambulatory setting. The purpose of this project was to determine the safest and most cost effective change based on evidence based practice to administer vesicants via an ambulatory infusion pump, a significant practice change for our institution. This initial practice change request was driven by recent FDA approved availability of a new vesicant like chemotherapy drug that showed promising results for our Sarcoma patient population. Our research included gathering data from similar institutions that had participated in the previous clinical trials for this specific chemotherapy. Our data collection included the following: (a) Patient demographics (b) Review of institutional policies, practice and process (c) Patient venous access requirements (PICC, Port, other) (d) Access devices and securements (e) Staff, patient and provider education (f) Adverse Events. According to the data collected, this vesicant-like chemotherapy has been safely administered via an ambulatory infusion pump with minimal documented adverse events. We identified specific central venous access routes that were appropriate, port needles and securement devices deemed to be most suitable, and developed educational programs for patients, nursing and providers. Competency was evaluated post education to ensure best practice and institutional standards would be met. Our findings were presented to multiple levels of institutional committees and this process was approved for an initial six month trial. Once the six month data was collected, evaluated and deemed a safe practice it was agreed that the institution would then move forward to include additional vesicant chemotherapies. This change now aligns our practice with other institutions as well as current insurance industry standards that promote fewer hospital admissions and improved patient satisfaction and outcomes.

### **109 OPTIMIZING HEALTH THROUGH EXERCISE FOLLOWING HEMATOPOIETIC STEM CELL TRANSPLANTATION. Eileen Danaher Hacker, PhD, APN, AOCN®, FAAN, University of Illinois at Chicago, Chicago, IL**

Intensive chemotherapy followed by hematopoietic stem cell transplantation (HCT) results in substantial short- and long-term adverse effects. Exercise is widely promoted as an effective intervention to optimize health and address the physical and psychological problems associated with HCT. Oncology nurses understand the frequently changing health status of this population. They are uniquely qualified to address the challenges and opportunities associated with implementing an exercise program within the context of HCT recovery. This project presents the evidence for optimizing health through exercise following HCT including challenges and opportunities associated with conducting exercise research and subsequent translation into practice. A review of the literature identified fourteen randomized clinical trials (RCTs) (n = 1534) testing exercise interventions following HCT, almost all with small sample sizes (<150). The overall retention rate was 77% (n = 1191). Studies focused on autologous (n = 3), allogeneic (n = 7), or autologous and allogeneic (n = 4) HCT recipients. All interventions were completed in the first year following HCT; most implemented immediately following HCT and lasting between four weeks and six months. The specific aims of the RCTs, timing of intervention and outcomes varied. The exercise interventions employed aerobic/endurance training, strength

training, a combination of strength training/aerobic exercise, stretching/bed exercises, or strength training used alone. Positive effects were reported for fatigue, aerobic capacity, muscle strength, lean body weight, functional performance, physical and psychological well-being, and quality of life. The results across studies were mixed. This likely reflects the timing and intensity of the intervention as well as adherence to the exercise given the complex health status of HCT recipients, particularly in the early recovery period. Implementing an exercise program into any clinical practice is challenging and, more so, in the HCT population. The exercise interventions included in this review varied from simple, self-directed programs to intense, supervised programs. Two criteria for exercise programs following HCT are likely to facilitate translation into practice; those that maximize benefits and minimize burdens in this complex population, and programs that can be seamlessly integrated into clinical practice. Building teams with HCT researchers and practitioners to develop pragmatic, effective interventions, such as clinic-based strength training, is vital for advancing science and clinical practice.

### **110 DEVELOPMENT OF A COMMUNITY NURSE NAVIGATOR ROLE IN AN ACADEMIC HEALTH CARE SYSTEM. Rebecca Hanik, RN, MSN, CNL, OCN®, Emory Winship Cancer Institute, Atlanta, GA; Connie Masters, RN, MBA, MSN, OCN®, Emory Winship Cancer Institute, Atlanta, GA; Caitlyn Carson, RN, BSN, OCN®, Emory Winship Cancer Institute, Atlanta, GA**

Oncology services at our academic health care system expanded in the past two years to include community-based general medical oncologists (CBO) at multiple sites. Prior to CBO, our nurse navigators were disease specific and worked with providers who are specialists in a particular cancer. Therefore, we knew we needed to develop a nurse navigator role that would align with our CBO and this role would need to look very different. The development of a community oncology nurse navigator (CONN) was needed to meet the unique needs of our community-based general medical oncology clinical teams. The purpose of the CONN is to identify and remove barriers to timely and appropriate cancer care for our patients and their referring providers. Nursing leadership and CBO met to identify needs of the patient population, referring health care community, and departments within our entities that we collaborate with to deliver patient care. Having the CONN as a resource for providers and patients facilitates expeditious access to appointments, including outside records collection and review. The CONN follows patients through the trajectory of care assisting with education, referrals to other specialties and supportive services; and provides support to the patient during treatment. A unique aspect of the new role is the CONN meets with newly diagnosed patients in the hospital, emergency department, and the clinic to provide education about diagnosis and ensure they have appropriate follow up care plans in place. When providers within and outside our healthcare system identify a newly diagnosed patient that needs to be seen by our CBO, the CONN is the point of contact to facilitate seamless transition and coordination. The CONN also collaborates with the disease specific nurse navigators and clinical trials coordinators so patients receive all options of care, regardless of geographical location of their oncology provider. Since the implementation of the CONN six months ago, over 100 patients have benefitted. The CBO feedback has been positive. Specifically, CBO have noticed patients are able to obtain appointments quickly and coordination of care has been easier and smoother since role implementation. We are also in the process of implementing a patient survey to gauge satisfaction and results will be shared at presentation.

### 111

#### **ENHANCING AND EXPANDING OUR ASSESSMENT OF PATIENTS' PSYCHOSOCIAL DISTRESS AND SUICIDE RISK.**

Cathy Ann Hanson-Heath, MSN, CNS, BC-PMH, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Janine Kennedy, MA, CNS, AOCNS®, OCN®, MSKCC, New York, NY; Maureen Mullaly-Franca, BSN, RN, OCN®, MSKCC, New York, NY; Una Moore, MSN, RN, OCN®, MSKCC, New York, NY; Inderani Walia, MS, RN-BC, MSKCC, New York, NY; Lisa Wall, PhD, CNS, AOCNS®, MSKCC, New York, NY

Suicide is the tenth leading cause of death in the United States; patients diagnosed with cancer have a suicide rate that is up to twelve times higher than the general population. Psychiatric comorbidities, lack of social support, poor prognosis and unmanaged symptoms are risk factors associated with suicide. At our institution, a task force was convened to examine suicide screening in patients with cancer. Nurses play an important role in assessing patients and intervening on their behalf to ensure their safety and well being. A task force of nurses from across the care continuum was brought together to evaluate current practices regarding suicide risk and psychosocial distress and to review the literature to identify best practices. Inconsistencies regarding the assessment of suicide ideation and associated risk factors were found. Patients are screened for suicidal ideation in the inpatient and perioperative areas, but not in the outpatient clinics. A key finding from our literature review revealed that more than 75% of patients who committed suicide had recent contact with their primary care provider. Based on the literature review and consultation with our psychiatry, chaplaincy, social work and patient representative colleagues, the task force selected the Columbia : Suicide Severity Rating Scale for use at every nurse-patient encounter across the care continuum. Psychosocial distress and pain are often antecedents to suicide; nurses will also screen for both at each encounter in the inpatient, perioperative and outpatient areas. Dissemination of this change in practice will begin with nursing education. A program has been developed to inform staff on suicide risk factors and the new standard of care. This program will be expanded to include all clinicians in the organization. Metrics to evaluate this initiative will be comprised of the number of social work and psychiatry referrals for distress and suicide attempts and completions. Patients and caregivers are impacted by treatments, side effects and performance status changes. Although ongoing assessments may seem redundant, it normalizes a difficult conversation for both the patient and practitioner. In an effort to prevent suicide in this high risk population and promote best practice, the assessment and documentation of suicidal ideation, distress and pain will be completed at each nurse patient encounter. Strengthening our assessment of vulnerable patients will lead to early detection and intervention.

### 112

#### **MANAGEMENT OF A HEAD AND NECK PATIENT WITH A MASSIVE HEMORRHAGE ON AN INPATIENT PALLIATIVE CARE UNIT.** Marcia Scofield, MSN, University of Rochester, Rochester, NY; Darlene Harmor, MS, NP, AOCNP®, University of Rochester, Rochester, NY

Individuals diagnosed with Head & Neck Cancer may experience a rare but devastating life-threatening oncological emergency from massive hemorrhage. A literature review shows incidence of this complication ranges from 3 to 14%. This complication comes with increased mortality and an exceptionally high risk of emotional devastation to patient, family and staff. Management of this rare complication is different for the patients who have elected comfort measures/hospice care. They have chosen not to pursue aggressive medical treatment

measures. The purpose of the guidelines described here is to prepare nursing to respond to this oncological emergency in a calm demeanor, while respecting the patient's goals of care. Interventions will include interdisciplinary team support of patient and family. Social Work, Chaplaincy, Providers, Nursing and ancillary staff should all be involved. The guidelines include written instructions, a tool kit with these items: dark colored towels, basins, IV pumps, suction, ambu-bag, and normal saline in the patient room with easy accessibility as well as pre-ordered medications in the Medical Administration Record with specific parameters. Evaluation of the guidelines will be accomplished with an interdisciplinary morbidity and mortality case review after each incidence. Emotional distress of patient, family and staff will be evaluated at this time. A case study involved a 60yo female, status post right composite neck dissection with hemiglossectomy, tracheostomy, and right radial forearm free flap reconstruction. The patient spontaneously began to bleed profusely from her tracheostomy. The guidelines described above are derived from interventions that were successfully administered in this case. An interdisciplinary team responded. The patient was suctioned, oxygen applied via tracheostomy collar. Ambu-bag was used with normal saline lavage to clear blood from the tracheostomy. The patient received 1mg hydromorphone bolus STAT and the hydromorphone drip was increased to 1mg/hour continuously. The patient also emergently received 1mg lorazepam twice within 10 minutes for anxiety caused by bleeding and respiratory distress. The decision was made not to change from cuff less to cuffed tracheostomy. The bleeding spontaneously stopped. The patient died peacefully sixteen hours later. This time allowed her family to be at her bedside when she died.

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#### **OVERCOMING A GAP BETWEEN A CONVENTIONAL DISTRESS EVALUATION TOOL AND ACTUAL PATIENT'S DISTRESS.** Carol Hatch, RN, OCN®, Parker Adventist Hospital, Parker, CO; Linda Mitchell, MA, LPC, BSN, RN, Parker Adventist Hospital, Parker, CO

The Oncology Nurse Navigator routinely administers and evaluates a patient's distress, then directs the patient towards appropriate resources. The National Comprehensive Cancer Network (NCCN) tool is the most used instrument to measure a patient's distress and Parker was using this. Reevaluation was needed since frequently the NCCN tool was not guiding appropriate interventions. Thus, we conducted a quality improvement project to measure the inconsistencies. The purpose of this project was to evaluate the appropriateness of the conventionally used NCCN Distress Tool and the discrepancy between the scores and need for intervention. Parker's psychosocial coordinator and oncology navigator evaluated Distress Tools completed by 160 patients over 12 months. The patient's scores were compared to the appropriateness of psychosocial referrals and evaluation of the patient's actual psychosocial needs. The evaluation was conducted by reviewing charts. The distress scores that a patient identified (0-10 scale) often were not consistent with a patient's true level of distress. As a previous standard, when the NCCN distress score was 5 or higher, psychosocial referral was made. Eighty eight of the 160 patients were referred for psychosocial support. However, only 60% of these were referred as a result of a high score identified. Forty percent of the 88 required psychosocial intervention despite a low score on the NCCN tool. Other items on the NCCN tool were not weighted or prioritized, and often did not correlate with the overall score the patient identified. This evaluation revealed a discrepancy between higher scores and actual psychosocial referral needs. Oncology Nursing is part of a multidisciplinary team effort to care for cancer patients from diagnosis, treatment, survivorship, recurrence, progression, and end of life. This evaluation

contributed to provide interdisciplinary collaboration through appropriate referral. Commission on Cancer (CoC) accreditation requires monitoring a patient's distress through cancer treatment and provide appropriate intervention. Parker's goal is to meet the needs of the whole patient through evaluation with an appropriate tool. This can promote integrative care including addressing psychosocial distress and other practical needs. The future project would be developing a tool to assist in identifying the needs of patients rapidly and accurately. Adequate distress evaluation influences Oncology Nursing to better meet the needs of cancer patients beyond medical treatment alone.

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### **NURSE NAVIGATION OF THE LUNG CANCER SCREENING PATIENT.** Jennifer Havens, BSN, RN, OCN®, Baylor Scott and White Hospital, Temple, TX

Lung cancer is often diagnosed at advanced stages due to lack of symptoms until disease progression. The advent of the Low Dose CT (LDCT) lung cancer screening exam has created an ability to detect lung cancer earlier when cure remains an option, though this process is still new. Nurse navigators (NN) can be key to assisting with clarifying the flow of patient care through the healthcare system to ensure all patient care needs and referrals are met. At Baylor Scott & White - Temple (BSWT), a team consisting of staff from pulmonary, radiology, electronic medical records (EMR) and oncology was formed to create and implement a LDCT program. The oncology NN was central in developing and revising process flows, sharing communication, and pushing the team to meet deadlines. A physician champion lead efforts to educate primary care providers, and the EMR team created an electronic order to assure minimum requirements for compliance. After go-live, additional challenges were identified, including incorrect orders and missing documentation. Initially, process for reviewing LDCT orders for appropriateness was not lean. Due to the unnecessary rework, the NN made a LDCT requirement checklist for the CT scheduler. The CT scheduler became the initial reviewer and only contacted the NN to address particular issues as needed. After the scan, the NN contacted the patient to discuss results and make appropriate referrals. The program began July 18, 2016, and 76 patients have had LDCTs ordered. Sixteen patients did not qualify for the exam, 9 needed additional order clarification, and 20 needed smoking history clarification. To date, 60 patients have been screened and 44 patients have received referrals to the pulmonary department. One referred patient received a biopsy diagnostic of lung cancer. The NN was able to obtain orders for necessary diagnostic work-up prior to the patient seeing thoracic surgery, expediting surgery scheduling after one visit which allowed his cancer to be treated at a stage 1A disease. The LDCT program has the propensity to benefit overall survival, but has many requirements that must be satisfied. NN's can play a significant role in this process through chart review, patient tracking, and improved timeliness to care.

## 115

### **COPING STRATEGIES FOR STAFF CARING FOR ACTIVELY DYING PATIENTS: IMPLEMENTATION OF GUIDED IMAGERY AND STAFF PERCEPTION OF COMPASSION FATIGUE.** Samanth Herlihy, RN, BSN, Smilow Cancer Hospital @ Yale New Haven, New Haven, CT; Mercy Asomaning, RN, BSN, Smilow Cancer Hospital @ Yale New Haven, New Haven, CT; Kelsey Osiniski, RN, BSN, Smilow Cancer Hospital @ Yale New Haven, New Haven, CT

In a Comprehensive Cancer Center, a medical oncology unit and Gynecology Oncology unit partnered with a regional hospice program to implement inpatient hospice beds during the summer of 2016. With the introduction of hospice, nursing

leadership identified staff may have a need for coping strategies when patients transition to hospice. The purpose of this project is to identify the nursing staff's perception of stress and compassion fatigue while caring for actively dying patients, focusing on guided imagery and staffs' subjective stress levels. This project was a three-step intervention process: first, a survey was distributed to obtain baseline information of the nursing staffs' coping mechanisms and experiences caring for actively dying patients. Once identifying the demographic information, the staff completed a short questionnaire evaluating subjective stress on a 10 point rating scale (1 feeling no stress and 10 feeling extremely stressed) followed by the intervention of the guided imagery audio session. The guided imagery content was provided by the organizations complementary services. Following the session, staff were asked to score their subjective stress level using the same scale. The stress levels were compared before and after the guided imagery session. The initial survey provided insight into the population of nursing staff on these units, experience with caring for actively dying patients, staff perception of stress and burn out and overall challenges caring for patients at the end of life. A total of 34 staff members participated including nurses, nursing assistants and advanced practice providers. Results indicated that all participants benefitted from the guided imagery session and the guided imagery CD is available for staff to use as needed. Overall, the project provided a great foundation for further examination into the areas of self-care for the nurse. Guided imagery can be an option for staff to utilize and to be more aware of their own feelings and attitudes. This project invites discussion into promoting wellness and mental health of the staff, specifically those caring for patients transitioning to hospice. This presentation will include the additional information including the questionnaire and findings from the surveys.

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### **A PILOT STUDY: IMPLEMENTATION OF A HEAD AND NECK CANCER MULTIDISCIPLINARY MEDICAL CARE CLINIC IN A COMMUNITY BASED CANCER CENTER.** Rhonda Hjelm, MSN, RN, OCN®, Hoag Family Cancer Center, Newport Beach, CA; Brian Kim, MD, Hoag Family Cancer Center, Newport Beach, CA; Timothy Kelley, MD, Hoag Family Cancer Center, Newport Beach, CA; George Semeniuk, MD, Hoag Family Cancer Center- USC Keck Oncology, Newport Beach, CA; Denise Lohman, MPH, RD, CSO, Hoag Family Cancer Center, Newport Beach, CA; Tracy Thomas, MS, CCC-SLP, Hoag Family Cancer Center, Newport Beach, CA

Patients newly diagnosed with oropharyngeal cancers are facing multi-modality treatment (surgery, chemotherapy and radiation). This requires patients to seek evaluation with a head and neck surgeon, medical oncologist, radiation oncologist, dentist and/or an oral surgeon. Evaluation of nutritional status and swallow function is also recommended. Patients diagnosed in community settings are often referred to each medical provider sequentially after seeing each specialist, leading to unintentional delays in treatment planning. A recent report suggests that patients seeking care at community-based hospitals may have lower survival rates than those treated at large academic or cancer specialty hospitals. This data may be related to delays in access to providers and specialty services. This community based cancer center sought to develop a pathway for patients to access medical and multidisciplinary providers in an efficient and timely manner. The Head and Neck Multidisciplinary Medical Clinic (H&N; MDMC) was developed as a pilot program to expedite patients' access to providers and determination of a treatment plan. The H&N; MDMC includes: head and neck surgeon; medical oncologist; radiation oncologist; nurse navigator; registered dietitian and a speech patholo-



gist. Any community patient may access the navigator and be referred to the clinic, by physician or self-referral. Upon initial contact, the navigator introduces the program to the patient and family. If they agree to participate, the navigator initiates care planning. Interventions include: coordination of care to medical providers, pathology tissue and radiology exams are obtained for multidisciplinary case presentation. Immediately following case presentation, the patient meets with all providers to discuss treatment recommendations. The patient also completes a nutrition and swallow function screening, prior to meeting with a registered dietitian and speech pathologist. The patient leaves this visit with a treatment plan in place. Since inception of the program September 2015, 12 patients have participated in this pilot program. The average length of time from initial contact with navigator to determination of treatment plan was 7 days (range 2-12 days). Three patients used this program as a 2nd opinion only; two patients sought surgery elsewhere with adjuvant treatment at this facility; seven patients completed definitive treatment at this facility.

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**THE USEFULNESS OF CLINICAL TRIALS INFORMATION ACCESSIBLE ONLINE: PATIENT AND CARE PARTNER RESPONSES.** Sheila Hoff, RN, BSN, OCN®, Moores UCSD Cancer Center, La Jolla, CA; Sharon O'Mary, RN, MSN, Moores UCSD Cancer Center, La Jolla, CA; Andrew Schorr, Patient Power, San Diego, CA

Historically, patient participation in cancer clinical trials is low, estimated at <5% of potentially eligible patients. Because few patients accrue to clinical trials, treatment advances and new therapy options are delayed. That said, patients diagnosed with chronic lymphocytic leukemia (CLL)—a unique patient population—appear to have a higher rate of patient accrual to clinical trials compared to other cancer patient cohorts. The purpose was to survey a cohort of patients (primarily those with CLL), their care partners and CLL healthcare professionals about the usefulness of clinical trials information accessible online. On a patient education website patientpower.info, patients completed an online survey, responding to the usefulness of online clinical trials information. Survey period: (Jan : Feb 2016) Respondents (n = 690) Diagnoses: CLL (42.3%); Myeloproliferative neoplasms (20.6%); Multiple myeloma (19%); Lung Cancer (5.7%); Other (4%). Consider clinical trial? Yes (71.6%) If not consider, why? Not advised about clinical trial option (32.6%); treatment option insufficient for care (28.6%); concern about receiving “experimental medicine” (4.3%); concern about receiving ineffective treatment (4.6%); other (n = 55) (31.4%). Source of clinical trial information? From doctor (266); from online search or resource (244); from fellow patient(s) (29); other (39) Helpful online resources: Clinicaltrials.gov (52.5%); Patient advocacy group sites (38.6%); PatientPower.info (33.3%); Hospital/clinic websites (18.3%); Social media sites (e.g. Facebook, HealthUnlocked, PatientsLikeMe, and others) (12.8%); Pharmaceutical company websites (8%). Clinical trials information accessed online: Influenced a great deal (30.9%); some (31.7%); not much (17%); none at all (20.4%). These responses from patients, their care partners and healthcare professionals address the usefulness of clinical trials information accessible online. Although this was a select group of patients who are already accessing information about their disease, they seemed to have a higher rate of clinical trial participation compared to overall accrual to oncology clinical trials. This patient education website sought to find out how patients access clinical trials information. Survey responses indicated that the majority of patients would consider enrolling in clinical trials and that patients seek trial information online from a variety of sources. This online strategy to gather responses from patients, their care partners and health professionals is especially effective with an engaged and specific patient cohort.

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**THE UNIQUE ROLE OF THE ONCOLOGY RESEARCH NURSE IN DEVELOPING WORKFLOWS AND OPTIMIZING ELECTRONIC MEDICAL RECORD SYSTEMS WHEN CONDUCTING ONCOLOGY CLINICAL TRIALS.** Wanda Honeycutt, RN, BSN, Duke Cancer Institute, Durham, NC; Julia Rasmussen, MS, RN, BSN, Duke Cancer Institute, Durham, NC; Amy Nordo, RN, CPHQ, LNC, Duke University School of Medicine, Durham, NC; Earl S. Schwark, MS, Duke University School of Medicine, Durham, NC; Sai Vadakkevedu, BS, Duke University School of Medicine, Durham, NC; Susan Budinger, BS, Duke University School of Medicine, Durham, NC

Duke University Health System began using Epic Electronic Health Record software in July 2012 and implemented Epic in outpatient clinics in June 2013. Clinical Research started using EPIC for source documentation, management of research-related orders and billing at that time. Using Epic and other Electronic Medical Record (EMR) systems presents unique challenges to the Oncology Research Nurse due to the complexity of the studies, required documentation, Research Beacon Treatment Plans and associated billing. The Duke Office of Research Informatics formed the Epic Research Optimization Task Force in November 2015, including representatives from different disciplines within research, to identify ongoing issues within Clinical Research and opportunities to optimize the functionality of the EMR. While the scope of the optimization task force included non-oncology research, this report will focus on oncology. Representatives from Oncology included Research Nurses from 4 disease-based groups. The first step of this process was to develop practice workflows for outpatient and inpatient oncology research. These workflows allowed us to identify the current process for managing patient activities and documentation in the EMR and to identify Opportunities For Improvement (OFIs). Oncology representatives worked alongside Epic analysts to map out the workflows using Microsoft Visio. The team reviewed the workflow and identified parts of the process that are currently known to cause delays, potential errors or decreased efficiency in ordering, documenting or billing for oncology research patients. The team listed and prioritized OFIs by a combination of factors, including severity, potential risk, frequency of occurrence and difficulty in resolution. The team presented the assessment of the OFIs to the Research Optimization Committee (ROC) to approve the allocation of resources. Following the development of workflows, the team validated them with Oncology Research staff. Specific areas for improvement to oncology workflow included documentation of Adverse Events, research lab coordination, documentation of timed samples, and communication with the Treatment Center. Following the prioritization and allocation of central resources by the ROC, we began to work on possible solutions to the OFIs utilizing features of EPIC and Duke-specific resources. This project has successfully standardized practice and identified OFIs for future optimization. Next steps will include developing focus groups to address OFIs identified and administering a survey to the Oncology Research Nurses to measure improvement in user satisfaction.

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**CHEMOTHERAPY ADMISSION PROCESS IMPROVEMENT.** Kashmir Horton, BSN, RN, OCN®, Banner University Medical Center Phoenix, Phoenix, AZ; Amy Stapleton, BSN, RN, OCN®, Banner University Medical Center Phoenix, Phoenix, AZ

Oncology patients can spend copious amounts of time waiting for appointments, treatments, tests, and results provoking anxiety and distress. Khatri, S, et al. stated, “meaning of time altered so that it was experienced as a precious commodity to

be consciously managed in the context of their changed present and future." A scheduled chemotherapy admission is an anticipated event, patients should expect minimal waiting periods. Nurses at one tertiary Magnet® facility in the Southwest United States noted significant delays in treatment initiation and recognized an opportunity to reduce wait times for their patients, improving patient experience and hospital throughput. Standard admission processes for chemotherapy patients include addressing task related items when patients arrive, including establishment of venous access, labs, height/weight measurement, and routine admission orders. Then chemotherapy order attainment and double verification was done via the oncologist and nurse creating extended wait periods for the patient. The process cannot begin until the patient arrives to the hospital. Rooms may not be held ahead of time for an upcoming admission, so patients were often waiting at home, without a definitive timeframe, for a bed to become available. To improve the admission process, a multidisciplinary team of clinical nurses, nurse leaders, admissions staff, pharmacist, nurse specialist, and nurse educator formed to address the wait times for patients being directly admitted for chemotherapy. In Collaboration with the outpatient infusion staff, who maintain chemotherapy validation, patients are given scheduled appointment times on the day of their chemotherapy admission. Patients arrive directly to the infusion unit at the appointment time, regardless of inpatient bed availability. Nursing initiate the admission work-up. Once an inpatient room is allocated, the patient is transferred to their room. Once the patient arrives to the inpatient unit, chemotherapy is infusing or ready to be initiated. Prior to implementation, standard admission process required patients to wait approximately 14 hours from time of admission to time of chemotherapy initiation. Since implementing the process, patients wait an average of 8 hours. Oncology units can learn from this process by identifying barriers to timely initiation of chemotherapy infusions for patients directly admitted for treatment and collaborating with ambulatory care units to begin the admission process and expedite patient care.

**120**  
**HIDDEN RISKS: PREVENTING CLOSTRIDIUM DIFFICILE ON ONCOLOGY UNITS.** Shelby Hubbard, RN, BSN, Via Christi-St. Francis (Via Christi Cancer Institute), Wichita, KS

*Clostridium difficile* (*C. diff*) is a highly contagious disease that can be deadly to neutropenic cancer patients. Annually, it infects 450,000 people and causes nearly 29,000 deaths. At the site of intervention, records indicate 15 cases of infection in 2015. In the next six month period, 13 more cases were reported. Efforts to combat the spread of spores traditionally focus on the promotion of hand hygiene and the use of disposable nursing equipment. Other means of transmission, such as practices of environmental services, can sabotage institutional efforts to control infection incidences. For example, a common housekeeping practice of reusing commode wands in multiple rooms provides an opportunity for the spores to spread. To protect patients, nurses must do more than follow traditional protocols. Nurses must work collaboratively with all staff to create an environment that prevents the spread of infectious disease. At the conclusion of this presentation, the audience will be able to identify and promote practices that support efforts to control the incidence of *C. diff* on oncology units. Such practices include conventional hygiene procedures and disposable nursing equipment, but should also include critical thinking and communication about areas of vulnerability, such as the use of non-disposable tools across the spectrum. Staff members will attend a one-hour presentation. The presentation will include information about *C. diff* that includes symptoms, transmission, and prevention. Conventional practices for infection control will be demonstrated. The presentation will also include Frequently

Asked Questions, and critical thinking and communication exercises about transmission and prevention. Staff members will demonstrate proper hand hygiene and display critical thinking and communication skills that foster safe environments. To establish competency, an 80% or higher must be achieved on a 10-question post-test. Failure to attain an 80% will result in remedial instruction and re-testing. To create an environment that prevents the transmission of *C. diff*, nurses must reach beyond conventional infection prevention efforts. Disposable tools must be used across the spectrum, from stethoscopes to commode wands, and nurses must use critical thinking and communication skills to enlist staff-wide support to create safe environments for patients. The program will equip nurses with the skills to create an environment wherein the transmission of infectious disease is effectively controlled.

**121**  
**PREGNANCY ASSOCIATED BREAST CANCER: WHEN OBSTETRICS AND BREAST CANCER COLLIDE.** Caitlyn Hull, RN, MS, WHNP-BC, The James Cancer Hospital, Ohio State University Wexner Medical Center, Columbus, OH; Lynne Brophy, RN-BC, MSN, CNS, AOCN®, James Cancer Hospital, The Ohio State University Wexner Medical Center, Columbus, OH

While obstetrical and oncology nursing may not seem to go hand in hand, there is a need among oncology nurses to better understand Pregnancy Associated Breast Cancer (PABC) to support the complex physical and psychosocial needs this patient population may endure. PABC is defined as breast cancer that occurs during or within 12 months of completing pregnancy and it is estimated that 2-3% of all breast cancers in women under age 40 will occur concurrently with pregnancy or lactation. Recent data indicates prognosis in these women does not differ from women who are pregnant. Breast cancer risk inherently increases with age; we expect that PABC may increase in prevalence as women continue to postpone their age of first pregnancy until later in life than previous generations. This presentation will provide a background on PABC for the oncology nursing audience by using a case study to explain how treatment and diagnosis is altered to care for both the mother and simultaneously protect the fetus. The presentation will also include a discussion of potential barriers to diagnosis, the decision whether to terminate the pregnancy, and the psychosocial impact that may occur as a result of PABC. Resources for patient education will be shared. At the end of the presentation, the learner will have a better understanding of precautions that may need to be taken for the PABC patient during diagnosis and staging, have an awareness of potential changes in treatment that may occur for this patient population, feel comfortable discussing ethical dilemmas related to this issue, and be aware of special assessment of the mother and fetus that may need to occur during pregnancy and the perinatal and postpartum period. Oncology nurses are primary caregivers of this unique patient population and increasing their knowledge of PABC will help them to better manage treatment side effects, screen for psychological implications of this diagnosis such as post partum depression, help the woman cope with potential body image and infant bonding issues, and face the uncertainty that comes with becoming a breast cancer survivor while also caring for an infant. A better understanding of PABC and the unique hurdles these women face during cancer treatment and motherhood will enhance the nurse's ability to provide individualized care for these patients.

**122**  
**ENHANCING OPERATIONAL EFFICIENCY IN A HOSPITAL BASED INFUSION CENTER TO IMPROVE PATIENT SATISFACTION, SAFETY, RESOURCE UTILIZATION AND COST**

**SAVINGS.** Dary Hult, RN, OCN®, Providence Holy Cross Medical Center, Mission Hills, CA; Tanya Haight, RN, BSN, OCN®, CCRN, Providence Holy Cross Medical Center, Mission Hills, CA

As the cost of cancer care rises, hospitals are acquiring independent infusion centers. The challenge is integrating with the hospital's operations and policies and procedures, promoting the professionalism and skills of the Infusion Nurses, and focusing on cost savings and patient safety practices. This community hospital acquired a medical group owned Infusion Center. The purpose of the project was to develop operational practices to utilize financial resources efficiently and as a Magnet® hospital, offer the nurses the opportunity to develop professionally and be a part of the development of the Infusion Center program. Interventions: (a) Developed a patient schedule template that eliminated appointments on the half hour. (b) Extended the hours of the Assistant Nurse Manager (ANM) and Charge Nurse (CN) to allow an extension of appointment hours. (c) Using the acuity tool of J. DeLisle (2008), developed a staffing matrix. (d) Enrolled ANM in leadership courses (e) Enrolled Infusion nurse in the End-of-Life-Nursing Education Consortium class and the Palliative Care Committee (f) Encouraged Oncology Certification. (g) Took CN out of ratio to offer support to staff and patients; implemented monthly CN meetings to formalize their role. (h) Developed Quality Metric audit tool to measure patient wait times; developed leader rounding tool (i) Initiated interdisciplinary monthly meetings with pharmacy. (j) Established Patient Educator role patient education. In nine months (Jan-Sept 2016) there has been a significant improvement in the operational efficiency of the clinic. With the schedule template and extended hours, we see 21 patients/8-hour day. Staffing productivity improved (utilizing the staffing matrix) from 5 hours to 2 hours per patient. Staff education, training, and professional development contributed to an increase of OCN certification to 38%. Patient satisfaction, as measured with a Leader Rounding tool, increased 25%. Wait time < 30 minute from "check-in to drug release" measured in 90th percentile. There is scant literature available related to operations for Outpatient Infusion Centers. By conferring with our sister facilities and sharing evidence based best practices, we developed an efficient operational plan and changed practice to improve quality of care. Development of an acuity based matrix and metrics to measure aspects of operational efficiency and quality of care ensured a successful transition to a hospital based infusion center model.

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**A MULTIDISCIPLINARY APPROACH TO PAIN MANAGEMENT IN THE ACUTE CARE SETTING.** Patricia Jakel, RN, MN, AOCN®, UCLA Santa Monica Medical Center, Santa Monica, CA; Franz Cordero, RN, BSN, OCN®, UCLA Santa Monica Medical Center, Santa Monica, CA; Joshua Settlemire, RN, MN, OCN®, UCLA Santa Monica Medical Center, Santa Monica, CA; Jeannette Meyer, RN, MN, CNS, UCLA Santa Monica Medical Center, Santa Monica, CA

Pain is the most feared symptom of cancer, interfering with physical function and quality of life. Ninety percent of patients with advanced cancer are reported to experience pain at some time during the course of their illness. This pain usually is improperly evaluated because it varies by patient and is difficult to control. Pain often cannot be conceptualized because of the individual nature of patient experience. New oncological cancer treatments are improving survival, but advanced pain cancer still presents challenges. On our 26 bed solid tumor unit adequate pain management is a challenge to nurses, doctors, physical therapists, patients and their families. After careful analysis of the patient satisfaction data, the 4 SW pain team decided to focus on the question "Did the staff do everything possible to help

your pain." The team came to understand that well controlled cancer pain is a difficult to achieve but we could ensure that the patient felt the nurses and doctors were working to do everything possible. Interventions: 1. Oncology nurse championed the hospital wide pain sub-committee 2. Survey of barriers 3. Monthly pain audits 4. Classes for MD, RN, and Care Partners 5. Flyer to inform regarding realistic pain goals 6. Team collaboration with Moffitt Cancer Center Palliative care 7. Administrative meetings to encourage the expansion of UCLA Palliative Care Services Evaluation 1. Top 3 barriers identify were: Medication not available from pharmacy, Trips to pharmacy, Physician knowledge/orders. 2. Team approach with pharmacy for medication availability: Time and motion study over 3 months (Total time of RN at pharmacy over a 3 months- 194 minutes), Pharmacy included in the problem solving, Re-survey after interventions completed, Leaders of the organization now aware. 3. Press Ganey Scores: Staff did everything (Jan-Mar- 65%, Apr-Jun : 72%, Jul-Sept- 85.6%). Proper pain management in oncology patients will continue to be a continuous challenge for nurses. We will continue to look at system issues and innovative approaches to education in the hopes of improving pain. UCLA SM utilized pain champions, education involving role playing for all staff, and a barrier survey as innovate techniques. Proper pain management is essential to quality care.

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**SURVIVORSHIP AND FERTILITY CHALLENGES OF OVARIAN GERM CELL TUMOR AMONG YOUNG WOMEN.** Sandra James, MSN, RN, CNS, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY; Omotara Adewale, MSN, MPH, RN, Memorial Sloan Kettering Cancer Center, New York, NY

Ovarian germ cell tumor (OGCTs) is a life changing event among young women of reproductive age, and early identification is an essential predictor of successful treatment in this population. Two challenges related to survivorship are fertility and childbearing. Therefore, fertility care referral should be initiated before and after treatment. Preserved fertility appears promising among young survivors of reproductive age. This depends on staging and the amount of chemotherapy treatment received. Research studies have shown the success of fertility-sparing surgery and chemotherapy treatment, with access to fertility care resources before or after treatment. Nurses play a pivotal role in the education and emotional support during the treatment trajectory of young women with OGCTs. Many women want childbearing preservation included in their treatment options. At this disease management institution, adjuvant treatment of OGCTs is platinum-based Bleomycin, Etoposide and Cisplatin (BEP) chemotherapy and unilateral gonadectomy in the presence of an unaffected ovary, or adnexectomy for fertility preservation. Complete staging involving lymph node dissection may not be necessary as it has not proven to have a higher survival rate in patients with an advanced disease. Treatment with BEP is useful in stages 1A through 4 and improves fertility preservation in women without bilateral ovary involvement. Fertility care is important among women with desiring fertility preservation, before or after treatment. This would help educate patients on their choices and the likelihood of fertility challenges. It would also contribute to raising awareness of long or short term fertility window they may face in the future. Treatment choices are different in women depending on the advanced stage of OGCTs. While most women face the uncertainty of future fertility challenges, other women do not present with conceiving difficulties. Research studies show that pregnancy does not affect tumor prognosis in all cases of advanced disease. There is a high success rate of normal birth among women requiring adjuvant or chemotherapy only based treatment. Those who have fertility challenges can explore options of assisted fertilization for delayed conception which has shown to have a high success rate.



It is imperative for future Research studies to focus on more options of fertility-sparing treatment because most women with malignant OGCTs are young.

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### **DEVELOPING AN ADOLESCENT AND YOUNG ADULT CANCER PILOT PROGRAM: A MULTIDISCIPLINARY COLLABORATION BETWEEN A PEDIATRIC AND ADULT CANCER PROGRAM.**

**Lori Jemison, RN, OCN®, BMTCN®, Froedtert and the Medical College of WI, Milwaukee, WI; Tracy Erlitz, BSN, RN, OCN®, Froedtert Hospital and the Medical College of WI, Milwaukee, WI; John Charlson, MD, Medical College of WI, Milwaukee, WI; Kristen Bingen, PhD, Medical College of Wisconsin and Children's Hospital of SEW, Milwaukee, WI**

Adolescents and young adults (AYA) with cancer have unique needs and treatment challenges. Research demonstrates that some of the challenges include delay in diagnosis, financial concerns and fertility concerns. In addition, many within the AYA population fall into a place between cancer treatment programs for children and those for adults. Children's Hospital of Wisconsin and Froedtert & the Medical College of Wisconsin saw this as an opportunity to collaborate and create an AYA pilot program with the mission to improve quality of life across the cancer care continuum. A multidisciplinary group with members from the adult and pediatric institutions came together in a joint effort to form an AYA pilot program for cancer patients between the ages of 15 and 29. A working checklist of all of the services that should be offered to this population was created to help guide staff in caring for an AYA patient. A packet of available resources and information was created to give patients. The pilot began with oncology nurses providing the resource packet to a subset of patients at the time of diagnosis and completing the checklist. Referrals are placed based on each individual's needs, but can include social workers, dietitians, child life specialists, fertility specialists, and physical / occupational therapy, and psych-oncology professionals. Discussions of clinical trial participation was also collected. The pilot program has identified several key areas for improvement such as the need for staff education about the AYA population, the need for a sustainable workflow for providing information to patients, psych-oncology support, AYA clinical trial workflows, and fertility education. Subcommittees were created to work on these areas. The goals of the subcommittees include educating staff, working through areas needing process improvement, and rolling out the program to all eligible AYA cancer patients. The creation of a comprehensive AYA program across both institutions has the potential to positively impact quality of life and reduce stress for this population of patients. It could also help narrow the knowledge gap that exists in caring for the AYA population through a potential increase in clinical trial participation and improved clinical outcomes. Oncology nurses play a vital role in being advocates for the AYA population and in sharing the resources that are available.

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### **BETTER COORDINATION = BETTER CARE: IMPROVING THE RADIATION THERAPY EXPERIENCE FOR PEDIATRIC PATIENTS.** Celesta Jensen, RN, Nebraska Medicine, Omaha, NE; Rebecca Swanson, MSN, APRN, CPNP, Nebraska Medicine, Omaha, NE; Debbie Wagers, MHA, CCLS, Nebraska Medicine, Omaha, NE

Delivering radiation therapy to pediatric patients requires care coordination between the multidisciplinary team. This can become even more challenging when a patient is receiving care at multiple facilities. Lack of coordination, communication and education between the pediatric oncology team and the radiation oncology department has led to negative impacts

on scheduling within the radiation oncology department and resulted in stressful experiences for children and their families. A multidisciplinary team consisting of physicians, nurses, and therapists from pediatrics, radiation and surgical oncology along with child life specialists, was formed to develop a standardized process and offer the use of Virtual Environment Radiation Therapy (VERT) for all pediatric patients referred for radiation therapy. The team established a care timeline over seven days to help ensure all needed tasks are completed prior to the initiation of therapy. All pediatric patients undergoing radiation therapy receive a referral to Child Life Services (CLS). CLS are available to children during consult, simulation and treatment visits. A CLS Check List was developed to ensure all pertinent information is discussed. Topics include the value of child life services, central line teaching and material on using the simulation laboratory to experience VERT. Through the use of VERT, the child and family is able to experience what happens during radiation therapy treatments in a virtual environment. The goal of using VERT is to help relieve potential anxiety related to unfamiliar treatment and help the child and family understand what will happen during treatments. Pediatric patient packets were created and include staff member roles, a directional map and contact phone numbers. The team also developed a plan to outline who would provide needed nursing care, central line dressing changes and nasogastric tube placement. A process for managing ill patients was established with the hematology/oncology pediatric nurse practitioner. A short eight question survey to evaluate anxiety and emotions relating to treatment was developed for patients ages 5-25 and their parents. We are in the process of evaluating the survey results. We have noted a decrease in the number of pediatric patients requiring general anesthesia which may be attributable to decreased anxiety and better patient preparation. In addition, we will be evaluating the cost implications and team satisfaction with this initiative.

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### **HAZARDOUS DRUG SAFETY: IMPLEMENTING CHANGE.** Barbara Johnson, MSN, RN, Nebraska Methodist Hospital, Omaha, NE; Cheryl Bohacek, MSN, RN, OCN®, Nebraska Methodist Hospital, Omaha, NE

The safety of workers who handle hazardous drugs in healthcare settings is a concern and challenge across the country. The National Institute for Occupational Safety and Health's (NIOSH) list of hazardous drugs is long and changes frequently. The handling of hazardous drugs and their waste products is performed by people across all disciplines. An interprofessional group of people from nursing, pharmacy, human resources, and administration came together to address concerns about simplifying the many safety aspects surrounding hazardous drug handling and educating employees without creating fear. At the heart of the project was a failure modes and effects analysis (FMEA) with a goal to standardize policies and procedures for hazardous drug handling across the health system. This would help ensure patient, family member, caregiver, and staff awareness and safety when handling, administering, and disposing of hazardous drugs as well as working with patients taking these medications. The FMEA identified every step in the process of hazardous drug handling and potential failures that could accompany each step, from the moment the drug enters the facility to the time it is disposed back into the environment. Each potential failure was then stratified and ranked according to its severity, frequency, and the hospital's ability to detect it. The NIOSH list was simplified into two tiers; with tier one medications requiring special training and competency assessment to handle and administer, such as chemotherapy, and tier two being everything else identified by NIOSH as a hazardous drug. Implementing changes resulting from this project was simple yet effective. One policy was created for hazardous drugs with chapter links so staff

across disciplines could easily locate all aspects of medication handling pertinent to them. The delivery process for hazardous drugs was standardized. Individualized education went out to all departments, including pharmacy, nursing, and integrated services. Gloves were standardized throughout the health system to be hazardous drug rated and all medication administration is now done with gloves on. Sharing how a small community health system consisting of three hospitals across two states was able to implement changes to improve awareness and employee safety through interprofessional collaboration in the handling, administration, and disposal of hazardous drugs can help other institutions integrate safe handling practices in their work.

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**REDUCING THE STRESS OF DISTRESS SCREENING: MAXIMIZING THE ELECTRONIC HEALTH RECORD.** Dawn Jourdan, BSN, RN, Nebraska Medicine, Omaha, NE; Marcelle Triantafilou, BSN, RN, Nebraska Medicine, Omaha, NE; Rachele Sledge, MSSW, CMSW, OSW-C, Nebraska Medicine, Omaha, NE; Susan Stensland, LCSW, Nebraska Medicine, Omaha, NE

Research shows cancer patients are at increased risk for distress during their cancer treatment. Distress screening is required for cancer programs seeking accreditation from the American College of Surgeons, Commission on Cancer. Distress screening help fulfill the psychosocial assessment requirement when seeking certification from the American Society of Clinical Oncology Quality Oncology Practice Initiative. Developing a successful distress screening program is essential for cancer programs. The purpose of this project was to create a comprehensive distress screening program utilizing the electronic health record (EHR) to identify patients requiring screening and document interventions. A multidisciplinary team was established to develop a distress screening process for our cancer program. The team developed a screening tool based on the National Comprehensive Cancer Network Distress Thermometer and initially recommended screening patients every 60 days. The distress screening tool was built into our EHR. An alert was created to notify staff at visit check-in to provide the distress screening tool. Once completed, the score and any areas of distress indicated by the patient are entered into the EHR by the medical assistant. When a score is documented, the nurse case manager (CM) receives a "Distress Score" alert when accessing the patient's chart, indicating the need for nursing review. The CM reviews the score, assesses patient needs and documents any needed interventions or referrals. A specific score does not require a specific intervention, rather the CM is required to determine the needs of the individual patient and take appropriate action. The multidisciplinary team continues to evaluate the process and make changes. The most significant change to date has been decreasing the frequency of distress screening from 60 to 90 days. This was based on feedback from patients and an increase in the number of patients who refused to complete the tool. Auditing reveals compliance with documenting a distress score of 95% or greater across all oncology areas and review by the CM of at least 93% on a consistent basis. In many instances, the physician and/or the CM address distress related to the patient's disease or symptom management. Social Work had reported an increase in referrals. Use of the EHR has facilitated the workflow and allowed information to be visible to the care team.

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**ACCELERATED PARTIAL BREAST IRRADIATION: PATIENT EDUCATION ON HOME CATHETER CARE.** Claudine Jreissaty, BSN, RN, CBCN®, UT MD Anderson, Houston, TX

During Accelerated Partial Breast Irradiation (APBI), catheter care and dressing changes are conducted by the nurse while at

the facility. Patients receiving APBI expressed concern about conducting catheter care and dressing changes in the home setting without the assistance of a health care provider. The purpose of this project was to provide patient and caregiver education on the proper care techniques for the catheter, increasing their confidence in caring for the catheter outside of the health care facility. The aim was to also decrease the likelihood of out of hospital catheter site infection and complications. The institutional written patient education for catheter care was reviewed. A consultation was conducted with multidisciplinary physicians and a video was developed based on the existing patient education. The video was made available on the institution's Patient Education website and the Patient Portal. During the office visit for the catheter placement, patient education was provided by the nurse with the video and supplies were provided to utilize for the dressing changes. Patients receiving the video education expressed that the video was helpful, convenient with online access and that the care process was easy to follow. The caregivers expressed satisfaction in having access to the video through the Patient Portal, especially if they were not present during the nursing education provided at the clinic visit. Post-implementation, there was a decrease in post procedure phone calls and office visits related to catheter site infection and catheter placement complications. Additionally, the education significantly impacted the patient decision of having the APBI, whereas in the past, patients would refuse due to the required home care. The education also led to a more successful post-operative recovery, without the need for additional visits to the clinic. Patients are often too overwhelmed or intimidated to process information provided by physicians. The demonstration based education increased patient compliance, confidence, and understanding. Patient satisfaction amongst ABPI patients improved from receiving quality information through an efficient learning method. Although patients vary in their learning styles, the video can also assist with understanding the written instructions and how to follow them. Since the use of APBI has become more and more popular, this educational method can be successfully expanded to all facilities who implement this type of treatment.

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**SURVEILLANCE OF VANCOMYCIN-RESISTANT ENTEROCOCCUS IN ADULTS WITH LEUKEMIA.** Ana Liza Juguilon, RN, UT MD Anderson Cancer Center, Houston, TX; Irma Cabusao, RN, UT MD Anderson Cancer Center, Houston, TX; Saji Paul, RN, OCN®, UT MD Anderson Cancer Center, Houston, TX; Ruth Juat, RN, OCN®, UT MD Anderson Cancer Center, Houston, TX; Heather Muir, RN, UT MD Anderson Cancer Center, Houston, TX; Leda Sagun, RN, MS, UT MD Anderson Cancer Center, Houston, TX

Vancomycin-Resistant Enterococcus (VRE) is one of the most common Healthcare-Associated Infections (HAI). The leukemia patient population is immunocompromised, placing them at a higher risk of acquiring VRE. Weekly surveillance cultures were done on this inpatient leukemia unit in order to prevent room-to-room spreading due to the high rates of VRE colonization. This unit was facing consistently low rates of VRE swab completion, increasing the risk of VRE colonization among the patients. The purpose of this study was to increase VRE swab collection by 25% within a six month period. A VRE Team was formed in January 2014 in order to increase weekly VRE swab completion. The team established a tracking system that involved several Primary Team Nursing (PTN) members, including the Patient Service Coordinator (PSC), Patient Care Technician (PCT), primary RN, Resource RN, and Charge RN. A binder was made for each pod of thirteen patients. Swab completions were documented here by the PSC. PSCs were also responsible for distributing the VRE collection supplies (swab,

bag, and label) for each room. The PCT and primary RN on both dayshift and nightshift collected the VRE swabs. The Resource RN was in charge of following up with incomplete VRE swabs per pod and the Charge RN reviewed the completed patient list on the unit level. The new process was implemented with close supervision by the VRE Team. VRE swab completions increased from 53% in December 2014 to 87.9% in June 2015, surpassing the 25% increase identified in the team's goal. VRE swab compliance increased to 100% by December 2015. Increase in VRE swab completion reinforced the need for routine screening and weekly surveillance while leukemia patients are hospitalized. The VRE Team will focus on prompt initiation of contact isolation precautions when VRE is present, as the implementation of a new electronic health record (EHR) has changed the order process and increased the length of time that contact precautions are ordered.

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**UNIQUE PROJECT: INTERVENTION FOR PATIENTS DIAGNOSED WITH BREAST CANCER AFTER BREAST RECONSTRUCTION SURGERY.** Victoria Kabanovsky, RN, MA, Tel Aviv Medical Center, Tel Aviv; Arza Ashkenazi, MSW, Tel Aviv Medical Center, Tel Aviv; Eyal Gur, Tel Aviv Medical Center, Tel Aviv; Yoav Barnea, Tel Aviv Medical Center, Tel Aviv

Breast cancer survivors after breast reconstruction surgery, will experience physical and psychological distress reflected in anxiety, fear of the future, depression of all kinds, low body image and more, which affect their everyday lives. Research also shows that most women, have an impact on intimate and sexual relationships. From 2015 to 2016 we conducted a quantitative research study in the plastic surgery department. The purpose was to investigate the quality of life in patients. The secondary objective was to build a psychosocial intervention program for this unique population according to the prominent stressors discovered. We distributed questionnaires, who underwent breast tumor resection and reconstruction. It consists of 30 questions relating to all aspects of mental health, coping with illness and quality of relationships. Questionnaires were distributed till now to 20 women aged 25-65 that were hospitalized in plastic surgery department after breast reconstruction surgery. We found that there is a continuous mental distress from the time of diagnosis until after breast reconstruction surgery. Difficulty's was focused on two main areas: 1. Concerns and fears of pain and physical disability after the surgery and difficulty to return to normal functioning. 2. Difficulties in intimacy and sexuality - fear, rejection of partner, lack of sexual desire and fear of pain penetration. According to the findings we have built a treatment plan. All patients after reconstructive surgery were treated physically and mentally by Head Nurse of Plastics Department and by the sexologist Social worker of the department. So far, about 10 women participated in the therapy sessions. Identifying distress ,allows early and targeted intervention, that may significantly improve coping and rehabilitation after surgery. The participants expressed satisfaction with the project and asked for further meetings and noted that the treatment helps them in reducing emotional distress, strengthened them mentally and gave them new tools for coping with the effects of the disease. We intend to continue the treatment program and even expand the intervention for patients that had been discharged from the plastic unit , but still in mental distress. We also intend to expand the project to other oncology departments in the hospital.

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**DEVELOPING SHARED MEDICAL APPOINTMENT FOR BREAST CANCER SURVIVORS.** Paula Keating, BSN, RN, CBCN®, Cleveland Clinic, Fairview Hospital, Cleveland, OH;

Patricia Huddleston, RN, BSN, OCN®, CN-BN, Cleveland Clinic, Fairview Hospital, Cleveland, OH; Jean Ellsworth-Wolk, MS, RN, AOCNS®, Cleveland Clinic Fairview Hospital, Cleveland, OH; Mary Longdon, MS, PA-C, Cleveland Clinic, Fairview Hospital, Cleveland, OH; Dana Stachowski, Cleveland Clinic, Fairview Hospital, Cleveland, OH

Cleveland Clinic- Fairview Moll Center is a NAPBC Certified Breast Center and a main goal of survivorship is to help improve the quality of care of survivors as they move beyond their cancer treatment. Increased number of breast cancer survivors has made it necessary to find new inventive ways to address care for these survivors. SMA provides opportunity to transition patients to a midlevel provider while providing needed education. The Shared Medical Appointment (SMA) provides survivorship care focusing on reinforcement of later and long lasting side effects specific to breast cancer patients. The shared medical appointment enlists a multidisciplinary team to develop a SMA for breast cancer survivors. Organizational support was provided by Cleveland Clinic SMA Department which offered guidance and support. A research was done of other modalities SMA within Cleveland Clinic and how their process could be adapted for Breast Cancer patients. A focus group was enlisted to simulate appointments and give feedback on the program. Development of SMA for breast cancer survivors that meets once a month from 4:30 to 6pm was implemented and can accommodate up to 8 patients. Use of the SMA is a group setting that provides an opportunity for breast cancer survivors to be educated, learn and offer ideas to each other. The SMA allows a review of topics such as risk of lymphedema, sexuality, fear of recurrence, weight and exercise, and bone health. The SMA improved access and education of breast cancer survivors and was able to accommodate 8 patients in an hour and a half setting. We have been able to transition 36 patients to a midlevel provider while improving satisfaction. The SMA for breast cancer survivors is an innovative way for a patient to have her breast exam, be educated and concerns addressed within a 90 minute visit with other survivors, a midlevel provider and nurses.

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**ONCOLOGY NURSING INVOLVEMENT IN DEVELOPING AND IMPLEMENTING AN AUTOMATIC TOBACCO CESSATION REFERRAL PROCESS.** Theresa Kelly, BSN, RN, OCN®, MSM, Baylor Scott & White Glenda Tanner Vasicek Cancer Treatment Center, Temple, TX; Valerie Oxley, RN-BC, OCN®, Corpus Christi Cancer Center, Corpus Christi, TX; Mark Holguin, MD, Baylor Scott & White Glenda Tanner Vasicek Cancer Treatment Center, Temple, TX

The Center for Disease Control notes that smoking remains the leading cause of preventable death and disease. Tobacco use raises the risk for multiple types of cancers and other illnesses. It is estimated one person quitting tobacco use saves \$7,885 per year in both healthcare system savings and in recaptured workplace productivity. With an estimated 74,000 tobacco users within Central Texas, healthcare providers have the opportunity to improve patients' health while curbing costs. The Baylor Scott & White Health (BSWH) Vasicek Cancer Treatment Center served as the Temple Region pilot team to develop, implement, refine, and disseminate a new automatic tobacco cessation referral process through an integrated system inclusive of primary care and multiple specialty clinics. The team aimed to increase the number of referrals to the Texas State Tobacco Cessation Quit Line from a baseline of less than one per month to a goal of 25 per month for six consecutive months. Utilizing lean methodology, the team identified the electronic medical record (EMR) and the assessment/referral process as equal priorities for improvements. The team, which included administrators, information



technology, providers and oncology nurses, used multiple plan-do-check-act (PDCA) cycles to identify and implement actions in order to meet the goal. These included hardwiring clinical intake assessments, creating an electronic best practice advisory provider notification, and educating nursing staff and providers to expedite electronic referrals to the Quit Line. Nursing played a key role in providing education and referring patients both in the clinic environment as well as in the community via health fairs. Prior to development and implementation, the BSWH Temple Region referred less than one patient per month to the Texas Quit Line. From July 2015 to February 2016, the Temple Region has referred over 100 patients per month to the Texas Quit Line, with patient tobacco cessation rates reaching 43%. Oncology nurses, working with leadership, were integral in developing and refining an automatic tobacco cessation referral process for the benefit of all ambulatory patients within the BSWH Central Division, covering over 400,000 patients. Similar work can be replicated in both academic and community ambulatory care settings. The vision, influence and clinical knowledge of professional nurses is vital to create simplified workflows for streamlined patient care.

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#### **THE QUEST FOR A GOOD NIGHT SLEEP: IMPROVING SLEEP IN THE ONCOLOGY PATIENT.** Eileen Kelly, BSN, RN, OCN®, RWJUH Somerset, Somerville, NJ

Evidence suggests that patients with cancer diagnosis have a higher incidence of sleep - wake disturbances than the general public. This occurs at the time of diagnosis, and continues through survivorship. Sleep disturbances include insomnia, poor sleep quality and short sleep durations which have a negative impact on quality of life. The purpose of our study is to determine the efficacy of Cognitive Behavioral Therapy (CBT), which is the ONS recommendation of evidence based practice, in conjunction with other modalities in cancer patients in all stages of treatment, and to determine if any of the suggested interventions makes a difference in sleep quality. Twenty one oncology patients with various cancer types were recruited. Prior to intervention all patients completed the Pittsburgh Sleep Quality Index (PSQI). Patients were accepted with a score above 5. Each patient was given a sleep kit that included Chamomile tea, lavender linen spray, eye mask, ear plugs, relaxation CD, and pamphlet entitled "Better Sleep". CBT was discussed during the first session with patient and lasted about 20 minutes. Patients were followed monthly in person or via the telephone for 6 months using the same PSQI. CBT was encouraged along with use of items in sleep kit. Although our study is not complete at this time, preliminary results suggest that when patients receive individual teaching on sleep hygiene using CBT which was the previous practice at our clinic, our patients sleep did not improve; but when they were given pamphlets and the "sleep kit", they reported improved sleep. We are hopeful that scores will decrease by at least 20%. Data collection for this study will be completed by 12/31/2016. The main objective is to improve sleep in the oncology patient. Are patients more apt to be compliant about sleep hygiene if given a sleep kit? Thus far in the study patients say it's the lavender spray, while others swear by the tea as to why they are sleeping better. Perhaps giving tangible items are more important than we have given credit to. Oncology Nurses can help their patients obtain better quality of sleep by recommending good sleep hygiene processes.

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#### **NURSING CONSIDERATIONS FOR PATIENTS RECEIVING PEGPH20, A NOVEL TREATMENT APPROACH TARGETING THE TUMOR MICROENVIRONMENT (TME) IN METASTATIC PANCREATIC DUCTAL ADENOCARCINOMA (MPDA).** Christina Kirk, RN, MSN, AOCNP®, UC Irvine Health, Orange,

#### **CA; Lindsay Shelby, RN, OCN, Highlands Oncology Group, Rogers, AK**

mPDA is characterized by a highly desmoplastic stroma that hinders immune cell infiltration and therapeutic access to the TME. Hyaluronan (HA) is a glycosaminoglycan that accumulates in the TME of mPDAs, and in preclinical models, contributes to elevated tumor pressure, vascular compression, and reduced drug delivery. PEGylated recombinant human hyaluronidase PH20 (PEGPH20) degrades tumor HA, reduces tumor pressure, expands tumor blood vessels, and increases drug delivery and therapeutic efficacy. Preclinical and clinical data for PEGPH20 in mPDA are summarized, and important nursing considerations are discussed. PEGPH20 plus gemcitabine (G) or gemcitabine+nab-paclitaxel (AG) were evaluated in the genetically engineered KPC mouse model of PDA and in PDA xenografts with high HA levels, respectively. In KPC studies, PEGPH20 increased intratumoral G concentrations and survival vs G alone. In PDA xenografts with high HA, PEGPH20 increased AG antitumor efficacy by 34% and extended survival by >125%. Musculoskeletal events (MSEs; muscle spasm, arthralgia, myalgia) were dose-limiting in Phase 1 clinical trials of PEGPH20, and a recommended Phase 2 dose of 3 µg/kg was determined. Exploratory imaging from a Phase 1b study of PEGPH20+G showed increased tumor perfusion and sustained decrease in tumor metabolic activity. In Phase 2, a brief clinical hold followed observation of potential imbalance in thromboembolic (TE) events in the PEGPH20+AG arm (Stage 1), but incidence decreased with enoxaparin prophylaxis (Stage 2). MSEs were frequent, mostly grade 1 or 2, and rarely led to discontinuation with dexamethasone administered pre/post-PEGPH20. Stage 1 (n=135) supports favorable efficacy of PEGPH20+AG vs AG (median PFS 9.2 vs 6.0 mo, HR=0.46, 95% CI 0.15-1.40; ORR 50% vs 33%) in HA-High mPDA (tested retrospectively by a companion diagnostic in development with Ventana Medical Systems, Inc.). A Phase 3 study of AG plus PEGPH20 or AG plus placebo in pts with prospectively selected HA-High mPDA is ongoing (NCT02715804). PEGPH20 enzymatically degrades HA in the TME to improve treatment access, and may improve outcomes in pts with HA-High mPDA. Mature Phase 2 data (ORR and PFS) are projected in Q42016. PEGPH20 may form the future backbone of therapy for HA-High mPDA and other stroma-rich tumors. Nurse and patient education for thromboprophylaxis and mitigation of MSEs will be key to safe incorporation of this novel agent into treatment paradigms for advanced cancers.

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#### **THE CENTER OF PATIENT CARE IS EXCELLENCE.** Kymberly Kisiel, BSN, RN, OCN®, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Debra Stellavato, RN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA

Instituting Centers of Advanced Oncology (CAO) enables our patients to receive excellent clinical care that is specialized and personalized. This model allows our interdisciplinary teams with expertise in specific disease types to collaborate and provide clinical excellence to their patients. By physically locating into centers, it enables real-time communication and collaboration; which provides exceptional treatment for oncology patients. This is a different approach to cancer care. During the reorganization of the teams, centers were developed. Included in each interdisciplinary team is, Medical and Surgical Oncologists, Radiation Oncology, Nursing, Registered Dietitians, Naturopathic Physicians, Specialty Surgeons, Pathologists, and Physician Specialists (Pulmonology, Urology, Gastroenterology, Nephrology, Neurology, ENT, Orthopedics, Endocrinology, Cardiology). The patients are assigned to the team who specializes in their cancer. This is a multifaceted program that is strategically improving the quality and growth at our hospital. The Centers allow cost savings, by cross-train-

ing our nurses allowing them to become the patient's single point of contact. This provides consistency throughout their cancer journey. Our Nursing team holds oncology certification and Chemo-Bio certifications. Evidenced-based practices, innovative treatment options, technology, research, quality metrics, and outcomes are tracked via dashboards. There are center-specific foundational and strategic goals set for each CAO. Standardized clinical pathways and processes have been implemented. Disease specific tumor boards are being implemented which will deepen the knowledge base across the multi-disciplinary team. Our Breast/GYN Center holds a National accreditation, The National Accreditation Program for Breast Centers (NAPBC). The next center to be accredited is the Thoracic/ENT Center. The intention is to have all centers received accreditation, which acknowledges the outstanding innovations, commitment, and sustainability of excellence within our oncology teams. The CAO has empowered our oncology nurses and created a strong patient centric culture. Our patients experience has been positive, noted increases in loyalty, retention, treatment rate, and satisfaction scores show significant improvement.

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**ON DEMAND EDUCATIONAL VIDEOS IMPROVE PATIENT AUTONOMY.** Lisa Klempner, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Elizabeth Rodriguez, DNP, RN, OCN®, MSKCC, New York, NY; Abigail Baldwin-Medsker, MSN, RN, OCN®, MSKCC, New York, NY; Jeanine Gordon, RN, OCN®, NE-BC, MSKCC, New York, NY; Maureen Jingleleski, BSN, RN, OCN®, MSKCC, New York, NY; John Ford, BSN, RN, MSKCC, New York, NY

Fluorouracil, a common chemotherapy drug used to treat colorectal cancer, is administered in a single-use, continuous-infusion portable elastomeric pump called a dosi-fuser. Infusion is initiated in the chemotherapy suite and patients are discharged home to complete the 48-hour infusion. Upon completion, patients may return to be disconnected or disconnect the pump at home by the patient/caregiver. Prior to video creation, nurses conducted verbal education and return demonstration with the patient/caregiver on how to disconnect the dosi-fuser and implantable access port needle. At this center, more patients choose to disconnect in the chemotherapy suite rather than home. Patients and caregivers express anxiety and reluctance with disconnecting independently. To provide patients and caregivers with access to on demand education in their own homes that could reinforce verbal education and increase independence with self-disconnection. This would lead to decreased disconnect visits at the center; thereby increasing access for treatment appointments. Nursing time spent educating would also decrease; thereby increasing nursing time for other tasks. In collaboration with the patient education department, nurses developed an innovative educational video for patients and caregivers illustrating the disconnect process. The video demonstrated step-by-step instructions for self-disconnect. Instructions mirrored the written patient education material and nursing policy and procedure. In January 2015, the video was uploaded to the center's website and is accessible both internally and externally. Nurses can facilitate viewing of the video while the patients are receiving chemotherapy in the unit. Patients and caregivers can access the video at home for reinforcement and provide just-in-time education. The video supports synchronous and asynchronous learning leading to a decreased need for disconnect in the unit. Patients' ability to access the video at home has helped to increase self-care and autonomy. Nurses report greater efficiency with educating patients regarding disconnects resulting in increase nurse time for other tasks and streamlining the daily functioning in the chemotherapy unit.

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**SWEET DREAMS: USING SOOTHING SOUNDS TO BLOCK OUT BAD NOISES.** Michelle Klimpt, RN, BSN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Laura Markel, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY; Cristi Zavatti, BSN, RN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Judith Del Monte, MS, CPHQ, Roswell Park Cancer Institute, Buffalo, NY

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction survey evaluates noise as part of the patient experience, and many hospitals score poorly on this survey question. Research shows that patients admitted to hospitals do not get enough quality sleep, oftentimes related to complaints of noise in and around the patients' rooms, which can compromise recovery and length of stay. Modifications to reduce overall noise and implementing noise control strategies will help patients to have a better recovery, more meaningful sleep, and lead to a better patient experience. The below national comparison scores on "noise level around patient rooms at night" provides ample opportunity to improve the patients' perceptions of noise at this institution. The goal of this project is to improve the patients' perceptions of their sleep, decrease environmental noise, and improve our HCAHPS scores. A quality of life grant was obtained to financially support the purchase of 60 Ecotones Adaptive Sound Machines. These machines were implemented on three varying types of oncology units (one medical, one surgical, and one ICU step down) in an effort to minimize/mitigate the impact of noise on patients. These units were chosen because their HCAHPS scores offered the most room for improvement, and the sound machines have been placed at each bedside, where they will stay for 6 months. A rounding tool was developed to assess noise levels from the patients' perspectives, and patients' thoughts about the sound machines. Evaluation of the project will be measured by comparing the results of HCAHPS question "noise levels around patient rooms at night" before, during, and post implementation of the sound machines. The institutional goal is to increase patient satisfaction top box score to 70%, which is above the national comparison of 62%. Much time and energy has been given to attempts to change the environment and behaviors in an effort to reduce noise in hospitals. This approach instead uses sound machines to create a "sound barrier" of soothing sounds to keep unwanted (bad) noises from impacting patients' sleep. Promoting quality restorative sleep is critical in all patients, but especially so in oncology, as cancer patients are more likely to experience sleep interruptions from a variety of causes (pain, dyspnea, frequent nursing care) as well as noise.

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**CLINICAL RESEARCH IMPLEMENTATION COMMITTEE: AN INTEGRATED APPROACH TO ONCOLOGY CLINICAL TRIALS.** Teresa Knoop, MSN, RN, AOCN®, Vanderbilt-Ingram Cancer Center, Nashville, TN; Vicki Richard, RN, BSN, MBA, NEA-BC, Vanderbilt-Ingram Cancer Center, Nashville, TN; Leah Atwell, MSN, RN, Vanderbilt-Ingram Cancer Center, Nashville, TN; Lisa Gaynes, CCRP, Vanderbilt-Ingram Cancer Center, Nashville, TN; Lauren Hackett, MPA, Vanderbilt-Ingram Cancer Center, Nashville, TN

The mission of our National Cancer Institute-Designated Comprehensive Cancer Center includes alleviating cancer death and suffering through pioneering research and innovative patient centered care. In the academic setting of our center, the increasing complexity of clinical research has presented an opportunity for an integrated approach to clinical trial implementation and management. The purpose was to implement a forum for clinical trial protocol review which promotes integra-

tion of clinical research into the clinical setting. Interventions: (a) Initiate a Clinical Research Implementation Committee (CRIC) that meets twice monthly. (b) Identify stakeholders to appoint committee members: Clinical Trials Shared Resource (managers, regulatory coordinators, data managers, biospecimen personnel, and budget analysts), Infusion Center, Clinic, Investigational Drug Services, and Ancillary Services such as Radiology and Ophthalmology. (c) Create a SharePoint site to allow each committee member to access and review new protocols as they are introduced into the Cancer Center, allowing early input into how to efficiently and effectively implement the protocol. The CRIC was implemented in 2012 and continues to operate as a successful integrative mechanism of clinical trial review. The CRIC SharePoint Site has been revised and upgraded to provide a mechanism for accountability and follow-up. Specific protocol challenges have been identified early and addressed: special IV pumps, serial procedures that need to be scheduled appropriately and other protocol considerations. The Scientific Review Committee has created a mechanism to relay implementation concerns to CRIC, allowing additional protocol reviewers such as MDs, pharmacists and nurses to have input. Implementation and feasibility issues are identified and addressed early to allow protocols to open and be conducted in a timely manner. Our clinical and clinical trials teams continue to work together on strategies for integrating clinical research into daily practice for our patients. The integrated approach to implementing clinical trials has created an environment of shared accountability for conducting clinical trials throughout our cancer center. CRIC serves as a model for our approach to clinical research.

#### **140** **CHEMOTHERAPY AND BIOTHERAPY ADMINISTRATION SAFETY IMPROVEMENT PROGRAM FOR ONCOLOGY AND NON-ONCOLOGY SETTINGS.** Ikuko (Koko) Komo, MSN, RN, CNS, AOCNS®, Stanford Health Care, Palo Alto, CA; Theresa Latchford, MS, RN, CNS, AOCNS®, BMTCN®, Stanford Health Care, Los Gatos, CA

Since the Oncology Nursing Society (ONS) Chemotherapy Biotherapy course shifted to the online course, there is a demand for improved onsite ongoing clinical chemotherapy training from nursing staff in a Magnet designated institution. Oncology nurses update themselves on latest information through the online course but there is no mechanism to ensure clinical practice is competent and safe. Additionally, there is an increasing number of chemotherapy drugs indicated for non-oncology treatment. However, no national or hospital standard for chemotherapy administration for non-oncology setting is available. There exists some confusion around who is to administer chemotherapy drugs for non-oncology indications and what training nursing staff outside oncology areas should have, possibly leading to compromised safety. The purpose of this program is to develop a process that promotes safe environment around chemotherapy administration and hazardous drug (HD) handling for both oncology and non-oncology settings across the system, following the ONS and American Society of Clinical Oncology standards for safe administration of chemotherapy. First, Chemotherapy SuperUsers were selected from inpatient and outpatient areas and the non-oncology infusion area to standardize chemotherapy administration. Annual SuperUser training is offered by Clinical Nurse Specialists (CNSs) to standardize expectations throughout the different areas. The Superusers are expected to complete staff annual clinical competency check off. Second, the CNSs created a new chemotherapy policy for non-oncology setting that discusses standard practice for non-oncology indications. Third, in collaboration with the pharmacy, a cytotoxic and HD drug list was revised with personal protective equipment (PPE) instructions

for nursing staff across the system. Fourth, the CNSs created videos of safe handling with the occupational health. Lastly, chemotherapy related incident reports that the quality compiled were reviewed monthly with a hospital wide Oncology Medication Safety Committee. Action plans to prevent future errors utilizing the SuperUsers has been implemented. Pre- and post-intervention surveys were conducted to review safe handling. More nursing staff across the system wear PPEs appropriately post intervention. SuperUsers completed clinical competency with 100% staff annually. This new program offered a mechanism to advance safe environment across the system and promote nursing staff's autonomy, collaborating with CNSs. This program created an environment that exerts leadership skills and increases motivation and empowerment among the SuperUsers and nursing staff for safety.

#### **141** **LIFE AFTER BREAST CANCER TREATMENT: A SPECIFIC APPROACH IN CANCER SURVIVORSHIP.** Susan Koomen, BSN, MSN, AOCNP®, University of Rochester Medical Center, Rochester, NY; Nancy Termer, RN, BSN, University of Rochester Medical Center, Rochester, NY

The James P Wilmot Cancer Institute Judy DiMarzo Cancer Survivorship Program has a disease specific approach to survivorship. This approach began because of a common theme found in our patient population, a lack of support during the transition back to living life after treatment is completed. Specifically for breast cancer patients completing adjuvant chemotherapy, a creative approach was explored with customizing treatment summaries and evidence-based survivorship care plans. With this population there are unique needs in their overall outcome success. There seems to be a lack of services available for these patients during this time of transition. One way to meet these unique needs is the development of a "life after Breast Cancer" (LABC) program. Once a patient completes their therapy the breast clinic registers them for a LABC program to help these patients transition forward. The program consists of A Nurse Practitioner, social worker and nurse coordinator. The group would meet every 2 weeks for 10 weeks and open to anyone who finished adjuvant treatment with in the past 8-12 weeks prior. In these meeting patients can discuss concerns and fears they may have in survivorship. (This could take place before or after their initial survivorship transition visit in the breast clinic). Included in the LABC program would be opportunities to discuss survivorship topics common in this population with practical tips that survivors can take with them. This approach to survivorship care provides transitional support and empowers breast cancer patients after adjuvant chemotherapy to take positive steps forward. The goal of such a program is that survivors find ways that are specific to them to improve their overall outcome and quality of life. If the LABC program is successful, future plans would be to incorporate LABC programs for patients with Radiation and Surgery treatment.

#### **142** **ESTABLISHING A CLINICAL EDUCATIONAL ACTION PLAN TO ADDRESS CALIFORNIA'S PHYSICIAN AID IN DYING LEGISLATION.** Patricia Kormanik, RN, MSN, NP-C, AOCNP®, UC San Diego Moores Cancer Center, La Jolla, CA; Michelle Russell, RN, BSN, OCN®, UC San Diego Moores Cancer Center, La Jolla, CA

June 9, 2016, California's End of Life Option Act took effect. Established by state law, the right to assisted suicide is also known as death with dignity, physician assisted suicide, aid in dying. A literature review provided data regarding the experience of the State of Oregon's 1997 Death with Dignity Act, and



background information about California's legislation. The purpose was (a) to establish clinical staff baseline knowledge about the Act and staff attitudes towards the concept of aid in dying and (b) to determine best methods to equip clinical staff with background about the legislation and teaching strategies to educate patients and family members. In April 2016, professional clinical staff at an NCI-designated comprehensive cancer center in California completed a pilot Survey Monkey™ Questionnaire exploring knowledge, attitudes and feelings surrounding the Options for Dying Act, comfort discussing end of life issues and preferences about learning strategies. Professional clinical staff included Registered Nurses, Licensed Clinical Social Workers, and Advanced Practice Providers. Survey Monkey results: 225 staff members received the survey; 81 completed (36% response rate). Survey Data from respondents: 88.5% comfortable reviewing information about end of life issues with their patients and ~40% stated they would be more comfortable with additional training. Preference receiving information: 63% via general in-service, 58% Web based/power point format, 33% paper outline/EMR smart set of salient points of the legislation. Based on Survey results, a Clinical Education Action Plan was developed, including: (a) A quick reference card to address the key points of the legislation. (b) Presentation in small group meetings, reviewing salient points of the legislation (c) 1:1 discussions with staff, covering legislation's salient points (d) Q&A; scripts, to address patient questions. (e) A resource list for further information. Clinic staff evaluated components of education plan (above), providing feedback and suggested revisions. Post review survey from clinical staff (n = 32) provided positive response to the quick card and small group in-service. Oncology nursing continues to become more complex. Supportive care options at end of life include: palliative care, hospice care and now legislation in several states supporting aid in dying. Our staff has identified a need for further education in conducting critical conversations. A follow up questionnaire re: attitudes and comfort with information is planned at a 6 month interval.

### 143 INTERPROFESSIONAL COLLABORATION FOR SUCCESS SCREENING PATIENTS FOR PSYCHOSOCIAL DISTRESS.

**Brenda Kramer, RN, OCN®, Karmanos Cancer Center, Detroit, MI; Morris Magnan, PhD, RN, Karmanos Cancer Center, Detroit, MI; Larmender Davis, MSW, LMSW, Karmanos Cancer Center, Detroit, MI**

Psychosocial distress (PD) in cancer patients can interfere with decision-making, adherence to treatment and adversely affect quality of life. The CoC recommends screening of all cancer patients for psychosocial distress at pivotal points in the disease trajectory. Social Work services are primarily responsible for overseeing implementation of the distress screening process but nursing has greater access to patients at pivotal points of care. Given the magnitude of the PD problem and the consequences, it is imperative that nurses and social workers collaborate closely to ensure timely, efficient, and targeted screening with appropriate referral for patients at risk for or experiencing psychosocial distress. While the literature indicates that interprofessional collaboration is highly valued, little attention has been given to demonstrating the impact of deliberately applying principles of collaboration to resolve health systems problems. The purpose of this demonstration project was to determine to what extent the deliberate application of principles of collaboration might impact the development and implementation of a psychosocial distress screening and referral program. The American Association of Medical Colleges (AMCC) has identified four key principles for building interprofessional collaboration: teams and teamwork, values/ethics, roles/responsibilities, and interprofessional communication. Team and

teamwork focused on sharing responsibility, principles, and a common goal. Roles/responsibilities outlined sharing knowledge of role and interaction with patients while values/ethics focused on appreciating the uniqueness of each profession and their interactions. The final principle reinforced the importance of communication between nursing and social work to reach our goal. These key principles of collaboration were used to optimize goal attainment relevant to both professions. It was expected that through the deliberate application of principles of collaboration we would be able to come to quick agreement about the following outcomes; (1) choice of a screening tool, (2) work flow processes, and (3) discipline-specific division of labor. Point by point application of the principles of interprofessional collaboration ensured achievement of our preferred outcomes and provided an opportunity for both nursing and social work to communicate effectively about the scope of their professional roles, responsibilities and areas of accountability.

### 144 TRANSFORMING END-OF-LIFE CARE AT THE BEDSIDE: AN ONLINE AND INTERACTIVE APPROACH TO EDUCATION FOR ONCOLOGY NURSES. Janet Cipkala-Gaffin, DrPH, PMHCNS- BC, UPMC Shadyside, Pittsburgh, PA; Dori Kuchta, BSN, RN, UPMC Shadyside, Pittsburgh, PA; Valerie Hess, BSN, RN, CHPN, UPMC Shadyside, Pittsburgh, PA; Mohammad Alrawashdeh, MSN, RN, UPMC Shadyside, Pittsburgh, PA; Sharon Hanchett, MSN, RN, OCN®, UPMC Shadyside, Pittsburgh, PA

Comprehensive oncology care is critical to patients' quality of life including at the end of life (EOL). Optimal care includes presenting patients with all treatment options, encompassing excellent palliative and EOL care. Unfortunately, nurses feel unprepared to provide EOL care, and standard nursing curriculum places little emphasis on EOL topics. Four inpatient oncology units in an acute academic hospital setting recognized this problem and recognized the need for improved palliative and EOL nursing education. By using an online program and monthly discussion groups, the goal was to improve nurses' knowledge of palliative and EOL care. The program consisted of monthly online modules using the End of Life Nursing Education Consortium (ELNEC) curriculum. Upon module completion, the 18 participants attended monthly discussion groups which targeted EOL concepts such as pain and symptom management, ethical and cultural considerations, communication, grief and loss, and the dying process. Using the national, 106 question ELNEC exam and a 12-question survey, participants were evaluated for their palliative and hospice care knowledge and for their self-perceived comfort with EOL care. The final test score was calculated based on the number of correct answers. The survey used Likert-type questions with higher scores indicating higher level of self-perceived comfort with EOL care. The final sample included 18 participants who completed the educational intervention. The post-test total scores were statistically significantly higher than the pre-test total scores,  $p < .001$ . That is, the components that significantly improved after the intervention were symptom management ( $p = .005$ ), ethical and legal issues ( $p = .02$ ), cultural considerations ( $p = .02$ ), and grief-loss ( $p = .003$ ). The post-survey scores showed a statistically significant improvement in participants' self-perceived comfort with EOL care compared to the pre-survey scores,  $p < .001$ . The results indicate that the educational intervention was effective in improving nurses' knowledge about EOL care management. The participants expressed improved satisfaction and confidence in their ability to provide patients with better EOL care, as evidenced by the post-test results and post program surveys. The group discussions provided nurses the opportunity to ask questions and to discover available resources helpful in providing better EOL care.

**PRAGMATIC INTERVENTIONS TO PREVENT HOSPITAL-ACQUIRED VENOUS THROMBOEMBOLISM EVENTS.** Deidre Kutzler, BSN, RN, OCN®, CMSRN, Lehigh Valley Health Network, Allentown, PA; Nicole Karasek, BSN, RN, Lehigh Valley Health Network, Allentown, PA

Venous thromboembolism events are prevalent in hospitalized oncology patients, due in part to their relative stasis and disease condition. These events add to morbidity and mortality and increase costs and length of stay. Though largely preventable, many patients may not receive prophylaxis, such as anticoagulants, sequential compression devices (SCDs) and ambulation, due to a variety of factors. When nurses on a hematology oncology unit in a 1200-bed academic Magnet® hospital noted their unit had the highest incidence of VTEs, they identified several reasons for patient prophylaxis non-compliance: knowledge deficit regarding rationale; anticoagulant injection discomfort and bruising, and, SCD inconvenience. This presentation discusses strategies utilized to improve patient compliance with VTE prophylaxis. An initial intervention was an evidence-based practice project completed by oncology nurse residents which investigated and educated nurses on the best practice technique for subcutaneous anticoagulant injections; intent was to minimize discomfort and bruising. Other actions include: staff education on importance of prophylaxis; inclusion of prophylaxis status during the daily safety huddle and bedside shift report; patient education scripting regarding rationale for prophylaxis; and, magnets placed on the patient communication board showing prophylaxis compliance or refusal, prompting physicians and others entering the room to engage in further conversation on the topic. A final step and an especially innovative tactic is requesting the patient sign a "Refusal of Care Waiver" if they do not agree to VTE prophylaxis. This form outlines the importance of prophylaxis and risks associated with treatment refusal. When patients were educated about VTE and presented with the form, they tended to accept prophylaxis. The number and percent (%) of hospital-acquired VTEs for fiscal year (FY) 2015 were 18 and 1.52%, respectively. Interventions began the beginning of FY 2016. There was a significant decrease in VTE number and % in FY 2016 compared to FY2015 : 10 and 0.64%. Venous thromboembolisms are the most common preventable cause of hospital-related death and the third most common cause of hospital death overall. By adapting these pragmatic interventions, oncology nurses in any setting can assume a pivotal role in preventing VTEs and keeping our oncology patients safe from harm.

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**PASSPORT TO INFUSION: A PAPER CHECKLIST TO DECREASE TREATMENT DELAYS, ENHANCE PATIENT SATISFACTION AND INCREASE PATIENT CAPACITY.** Tawni Larsen, BSN, OCN®, MBA, Huntsman Cancer Institute, Salt Lake City, UT; Ryan Doering, BSN, OCN®, Huntsman Cancer Institute, Salt Lake City, UT

The purpose of the "Passport to Infusion" is to improve communication between clinics, enhance patient satisfaction and increase chair capacity. The "Passport" was developed as a paper checklist that clinic nurses could use to ensure patient variables were addressed prior to the patient's infusion appointment. Huntsman's Infusion room has seen dramatic growth in its patient census. The increased patient load brought several issues to the surface that made current operations inefficient. Many issues were identified that cause delays such as: unsigned orders, unaddressed weight changes, abnormal lab values, abnormal vital signs, changes in health status, etc. As a result, the "Passport" was designed to address these issues while the patient is at their provider appointment. Through

joint collaboration of the Clinic Nursing Practice Council, the "Passport" was designed with input from all the outpatient clinics. Several meetings were held to compile a checklist of the tasks that the clinic nurse needs to complete before the patient can advance to the infusion room. The "Passport" was then trialed in one clinic to evaluate its effectiveness. With the data compiled from this trial, changes were made and the "Passport" was initiated in the remaining outpatient clinics. The initial clinic trial showed a great deal of potential with a marked decrease in unsigned orders. As a result, treatments were more efficient, Infusion nurses had to make fewer phone calls to address issues and patient wait times were decreased. The "Passport" was then initiated to all the remaining outpatient clinics on September 6th, 2016. Thus, more data will continue to be compiled and the "Passport's" effectiveness will be further evaluated. When space and resources are limited, current processes have to be evaluated to determine if they are the most efficient means of providing care. The process used by Huntsman's outpatient clinics was long outdated and caused various issues for patient care, patient and staff satisfaction and patient capacity. The "Passport to Infusion" helps alleviate these issues by giving clinic nurses a checklist to ensure the patient is ready for their infusion appointment. Through more data collection, we will be able to determine how effective this process is in enhancing overall patient satisfaction.

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**LUMPECTOMY WITH SINGLE TREATMENT HDR RADIATION THERAPY: ORGANIZATION AND WORKFLOW UNRAVELING THE COMMUNICATION CHAOS.** Donna Lash, RN, University of Virginia, Charlottesville, VA; Katie Rea, RN, CCRC, University of Virginia, Charlottesville, VA; Cindy Mott, RN, University of Virginia, Charlottesville, VA; Deborah Romano, RN, University of Virginia, Charlottesville, VA; Margaret (Maggie) Bennett, BS, RT, University of Virginia, Charlottesville, VA

In 2015, an estimated 231,840 new cases of invasive breast cancer were diagnosed among US women, as well as an estimated 60,290 additional cases of in situ breast cancer. That same year, approximately 40,290 US women were expected to die from breast cancer. The purpose of this clinical trial is to investigate the efficacy of single-fraction intraoperative radiation treatment using a multi-lumen balloon applicator and in-room CT imaging for the treatment of early stage breast cancer. This multidisciplinary approach to the treatment of breast cancer required building a new process to combine surgical and radiation oncology services into a one day process. A phase I study began in December 2013 and the implementation of the IORT process was launched. The team staff consisted of breast surgeon, radiation oncologist, medical physicist, circulating nurse, scrub nurse, radiation therapist, anesthesiologist, and clinical research coordinator. Once eligibility was confirmed, communication was required from the multidisciplinary team to decide on the logistics of each case, i.e. the date, the time, and availability of each team member. Needless to say, this was a very difficult task at times with ineffective communication being the main culprit. Simply scheduling a date was taking as long as 4-5 days which quickly increased work anxiety as well frustration for all disciplines involved. Additionally, this caused stress for the patient who was coping with a life-changing diagnosis. As a whole, the team then began to plan for process improvement by enhancing the communication process. All multidisciplinary teams met on a regular basis to discuss the ongoing problem and how to streamline this process. After much discussion, the following was implemented: (a) Setting dedicated dates for procedures (b) Dedicated staff with back-up staff available (c) Hiring of clinical breast care coordinator (d) Decreasing varied communication processes (e) Breast

Surgical Supply Tote. A 4-5 day attempt to schedule a patient via varied patterns of communication and often failed attempts is now a 1 day communication process headed by the Breast Care Coordinator. Streamlining this process has increased patient satisfaction as well as decreased anxiety for the patient and staff. With sufficient administrative support and multidisciplinary teams willing to work together, we were able to meld complex disciplines into a single team.

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**IMPLICATION OF RITUXIMAB PRIMING PRACTICES.** Carissa Laudati, BSN, RN, OCN®, MSKCC, Basking Ridge, NJ; Caroline Clark, BSN, RN, OCN®, MSKCC, Basking Ridge, NJ; James Sumka, PharmD, MSKCC, Basking Ridge, NJ; John Timoney, PharmD, BCOP, MSKCC, Basking Ridge, NJ; Paul Hamlin, MD, MSKCC, Basking Ridge, NJ

There is an increase in the development and use of monoclonal antibodies (MABs) to treat oncology patients. One risk of MABs is increased incidence of hypersensitivity reaction (HSR). According to the literature, HSR can result in a range of symptoms from mild to life-threatening. Slow titration of MABs can reduce the incidence and severity of HSR. Rituximab is a MAB used for treating hematologic malignancies. The incidence of HSR for patients receiving first dose exceeds 70% and results in prolonged infusion time, use of rescue medications, patient and caregiver anxiety, and disruption to workflow. Given the risk for reaction and potential impact to patient and nurse, titration practices should be precise. At Memorial Sloan Kettering Cancer Center, all MABs are primed with compatible diluent resulting in patients receiving diluent rather than MABs during early titration. The purpose of this project was to determine whether priming with Rituximab reduced the incidence and severity of infusion reaction. A small pilot was conducted where Rituximab lines were primed with active drug allowing for incremental exposure (N=55). This data was compared to three months of retrospective data when the Rituximab line was primed with diluent (N=50). Incidence and grade of reaction was measured using CTCAE criteria. Results illustrate a decrease in incidence of HSR for patients receiving first dose Rituximab from 31.8% (diluent) to 11.8% (Rituximab), respectively. The grade of reactions remained unchanged. The incidence of reaction in patients receiving subsequent or rapid infusions was unchanged. Although these findings were not found to be statistically significant, there is a practice recommendation to prime all non-hazardous titrated MABs with active drug. This practice change offers the possibility of minimizing hypersensitivity reactions when administering MABs. A reduction in infusion reactions may result in improved patient safety, reduced patient and caregiver anxiety, and improved workflow. It is common practice to prime Rituximab with diluent. A small survey of comprehensive cancer centers (CCC) found CCC practice includes priming with diluent (N=4). A prospective study of priming with MABs is planned to include a larger sample size for further statistical analysis. If a reduction of incidence and severity of HSR is confirmed, there is potential for widespread change in clinical practice.

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**RAPID ADMINISTRATION OF ANTIBIOTICS TO PATIENTS WITH NEUTROPENIC FEVER IMPROVES OUTCOMES. A PROCESS IMPROVEMENT PROJECT.** Maria Limanovich, RN, MSN, OCN®, Presbyterian Healthcare Services, Albuquerque, NM

Neutropenic Fever is a potential life threatening emergency for oncology patients undergoing chemotherapy. Neutropenic Fever needs to be treated with broad spectrum antibiotics immediately. Current recommendations suggest administra-

tion of antibiotics within 60 minutes from triage time. Prior to Intervention there were 29 direct admissions to inpatient oncology unit with Neutropenic Fever. Average time from admission to antibiotic administration was 185 minutes. This process improvement project focused on patients that were admitted directly to inpatient oncology unit with Neutropenic Fever. Prior to intervention the average time of antibiotic administration was 185 minutes from the admission time. The purpose of this project was to reduce time from admission to the unit to antibiotic administration to less than 60 minutes. Neutropenic Fever protocol with standardized and timely interventions was created. Multidisciplinary staff was involved in establishing and implementing the protocol. Medical records of patients that were admitted to the unit with Neutropenic Fever were reviewed. The time from admission to the start time of antibiotic administration was tracked. After implementation of new guidelines 19 patients were admitted to the unit with Neutropenic Fever. The average time was 39 minutes from admission to antibiotic administration. Establishing and following protocol has made a significant difference in timeliness of antibiotic administration to patients admitted to oncology unit with Neutropenic Fever. The average time was reduced from 185 minutes prior to intervention to 39 minutes. Working together as a team and having shared responsibility and understanding of the importance of timely intervention made this project successful. Including all potential stakeholders assured understanding of the process among multidisciplinary staff and prevented delays in treatment.

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**ADHERENCE TO GUIDELINES FOR VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS IN HOSPITALIZED CANCER PATIENTS.** Ruth Zu-Kei Lin, RN, MSN, AOCN®, APN-C, Morristown Medical Center, Morristown, NJ; Esther Huang, PharmD, BCPS, BCOP, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

Hospitalized patients are often at risk for developing VTE and this risk is four to seven folds higher in cancer patients. VTE associated death has been reported to be as high as 9.2% in cancer patients, second only to progression of malignancy as cause of death. The increased risk of VTE seen in cancer patients appears to be due to the fact that malignancy can affect each component of the Virchow triad: venous stasis, blood components and vessel damage. Unlike other patient populations, the increased risk of VTE risk in cancer patients are not constant over the course of their disease. Instead, the risk is actually increased with time. It has been shown that cancer patients who develop VTE have a 2.2 fold increased risk of mortality compared to cancer patients without VTE. Despite the current recommendations by the American Society of Clinical Oncology (ASCO) and National Comprehensive Cancer Network (NCCN) guidelines to consider VTE prophylaxis in all hospitalized cancer patients in the absence of bleeding or other contraindications, hospitalized cancer patients continue to be inadequately anticoagulated. A retrospective chart review was conducted to assess the institutional adherence to current VTE prophylaxis guidelines for all cancer patients and hospitalized during the first quarter of 2015. This study was conducted in a non-profit, multispecialty, academic medical center. All patients who were 18 years of age and older with a confirmed diagnosis of cancer were included in this study. Rates of adherence were assessed, and the reasons for guideline noncompliance were also determined. A total of 151 patients were identified. Out of the 151 patients, 4% (n=6) were on oral anticoagulation and 52% (n=79) were on injectable anticoagulation. For the patients who were not started on anticoagulation, 10 patients had confirmed brain metastases, 10 patients with bleeding issues, 18 patients were scheduled for procedure/surgery, 4 patients were admit-



ted under hospice care, 13 patients were thrombocytopenic, 3 were low-risk patients, 8 patients were active and mobile. The study revealed a complete (100%) institutional adherence to current VTE prophylaxis guidelines for hospitalized cancer patients. Anticoagulation therapies were also assessed for appropriate dosing and doses were found to be appropriate for all patients on anticoagulation during admission.

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**AROMATHERAPY AS SYMPTOM MANAGEMENT FOR HEMATOLOGY/ONCOLOGY/BLOOD AND MARROW TRANSPLANT PATIENTS.** Kathryn Lochmann, BSN, RN, BMTCN®, Froedtert Hospital, Milwaukee, WI; Azure Grossman, BSN, RN, OCN®, BMTCN®, Froedtert Hospital, Milwaukee, WI; Carolyn Gatton, BSN, RN, BMTCN®, Froedtert Hospital, Milwaukee, WI; Christina Ebert, BSN, RN, Froedtert Hospital, Milwaukee, WI

Common side effects of chemotherapy include nausea, vomiting, sleep disturbances, pain, and fatigue. The current medications used to treat these symptoms have many side effects, which can lead to adverse events such as respiratory depression and falls. Essential oils are low cost and have minimal side effects compared to the medications used. The aim of this project was to incorporate essential oils as an alternative or complimentary option to current side effect treatment regimens. The group began with an extensive literature review and used the literature to develop guidelines for the use of essential oils for symptom management. Based on the recommendations from our Clinical Cancer Center's Wellness Store, five essential oils were selected for this patient population. The oils chosen were lavender, ginger, peppermint, bergamot, and lemon. The group developed a unit-based aromatherapy policy, created staff education, and designed a patient education pamphlet which is provided to each patient during the admission process. The use of essential oils as an autonomous nursing intervention was implemented in August 2016. Their use is currently being monitored. During the first month of implementation, the use of essential oils has been well received by patients and staff. Lavender and peppermint have been the most frequently used oils. Nausea is the primary symptom for which patients have used aromatherapy. Other symptoms include sleep disturbances and pain. The oils have been used equally by men and women. Nursing plays an important role in symptom management and alleviating the negative side effects of chemotherapy. In the short time since implementation, there has been growing interest in incorporating essential oils into nursing practice throughout the hospital and the entire health system. A future project may include developing a nursing research study to determine if essential oils improve patient satisfaction.

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**HELPING ON-TREATMENT PATIENTS WITH RARE CANCERS: THE SUCCESS OF AN OPEN-DOOR POLICY.** Pam Lowry, RN, BS, CEN, OCN®, Moffitt Cancer Center, Tampa, FL; Jeffery Russell, MD, PhD, Moffitt Cancer Center, Tampa, FL

Merkel cell carcinoma (MCC) is a rare and aggressive non-melanoma skin cancer derived from neuroendocrine cells which commonly reoccurs both locally and distantly. Mortality rates exceed that of melanoma. Risk factors for MCC include a prior history of sun exposure, frequently occur in Caucasian males older than age 65, and it has also been reported in the literature that immunocompromised patients may also be at higher risk for developing the disease. Many in the medical community have never heard of this rare skin cancer. When patients are confronted with this diagnosis, there is very little information available to the lay public, and what data is available, frequently illustrates a grim prognosis. A challenge for ambulatory care nurses with rare

cancer populations is the unpredictability of the disease. Each patient may have significantly different disease behavior; from a slow simmer to rapid disease progression. While the disease may respond to initial treatments, its ability to reoccur rapidly and in new locations is very frustrating for patients. Patients with rare disease require strong nursing support to address all of the physiologic and psychological changes that are associated with the diagnosis and the treatment. This includes an early discussion of advanced directives, advocating ensuring a high quality of life, as well as possible future care through hospice. One of the greatest challenges faced by the ambulatory care nurse is breaking down the patient and family's mindset or fear of "bothering" the care team. By creating an open-door policy in our clinic, we encourage regular communication with our patients and their families either through phone calls, emails, or walk-in nurse visits to discuss any concern. Additionally, helping the patient and family find a balance between living with the "new" normal of cancer with the balance of the thought process that every new pain or lump means that the cancer has returned. We will discuss how an "open-door" policy not only did not create more work for the care team, it increased patient satisfaction through fostering strong communication with treatment team. This change in clinic mindset has allowed members of the treatment team the opportunity to rapidly impact a positive change for these patients.

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**LYMPHEDEMA MANAGEMENT AND L-DEX USE.** Lynn Lutwin, RN, BSN, MSN, MBA, OCN®, CBCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Vivian Owusu-Mensah, APN, OCN®, Robert Wood Johnson University Hospital, New Brunswick, NJ; Shaloo Choudhary, OTR, CEAS, Robert Wood Johnson University Hospital, New Brunswick, NJ

Patients with breast cancer who have lymph nodes removed are at risk for lymphedema. Lymphedema management establishes alternative pathways in the body for the excessive lymph fluid to be reabsorbed and the arm girth size to stabilize. Interventions: Decongestion & manual lymph drainage and wrap arm in multi-layered specialty bandages. Remedial exercises can also be performed. Patients had been measured with a tape measure in the past to determine whether they were developing lymphedema or at risk for doing so. L-Dex technology utilizes the characteristics of frequency dependent current flow to quantify changes in extracellular fluid in the patient's limb. These changes can assist the surgeon or oncologist in clinically assessing early signs of lymphedema. The L-Dex number provides an instant tool for assisting in clinical assessment of lymphedema progression as well as an easy way to track change in the patient over time.

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**REDUCING INTRINSIC AND EXTRINSIC RISK TO PREVENT FALLS IN AN OUTPATIENT INFUSION UNIT.** Mary Pat Lynch, MSN, CRNP, AOCNP®, Abramson Cancer Center at Pennsylvania Hospital, Philadelphia, PA; Christine Usher, RN, BSN, Abramson Cancer Center at Pennsylvania Hospital, Philadelphia, PA; Gina Dang, PharmD, BCPS, Abramson Cancer Center at Pennsylvania Hospital, Philadelphia, PA; Brianna Morgan, MSN, CRNP, Abramson Cancer Center at Pennsylvania Hospital, Philadelphia, PA; Naomi Cardwell, CSA, Abramson Cancer Center at Pennsylvania Hospital, Philadelphia, PA; Sarah Kagan, PhD, RN, University of Pennsylvania School of Nursing, Philadelphia, PA

Generated by recognition of an absence of evidence-based, standardized processes for falls risk assessment and reduc-

tion among ambulatory patients, we addressed falls risk and actual falls in our outpatient infusion unit. While the incidence of actual falls in FY15 was relatively low at 5 per 11,066, patient and family expectations of a safe environment as well as potential sequelae of falls in patients who may pancytopenic led us to define the problem and set the goal of reducing risk and thus limiting falls. One goal was to identify and reduce select intrinsic and extrinsic factors for falls risk. The risk factors were identified by review of literature, best practices review, and expert consultation. Specific objectives included: 1. Identify and implement frailty screening as a factor which may potentiate falls risks in outpatients 2. Assess the physical environment analysis to define factors that may contribute to risks for falls 3. Identify and perform literature and chart review exploring common sedating pre-medications Intervention: We intervened in intrinsic risk with the Triage Risk Screening Tool (TRST) frailty screen, administered by the medical assistants. Those scoring 3 or above on TRST are referred to the geriatric nurse practitioner for comprehensive geriatric assessment. Additionally, an environmental scan for patient safety was completed with a focus on new patient and family guidance for IV pole use. Finally, we focused on reduction of use of diphenhydramine as a pre-medication for chemotherapy by offering providers and patients options of dose reduction and/or use of long acting oral antihistamine for patients who take medications independently. During the initial three-month period of TRST use, 79 patients were screened and 17 (21%) were identified as at risk. Actual falls are occurring less frequently with only 3 falls per 12,847 in FY16, which represents a 60% decrease from prior fiscal year. Initial efforts toward changing diphenhydramine prescribing practice show inclination toward considering dose reduction and 3 incidents of patient requests for oral long acting non-sedating antihistamines. A key to success of this multi-faceted, nurse led, quality improvement project was reliance on person-centered focus regarding patient experience and expectations about falls risk and actual falls in ambulatory care settings.

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**DEVELOPMENT AND IMPLEMENTATION OF A PERSONALIZED PRE SIMULATION EDUCATIONAL PROGRAM IN RADIATION ONCOLOGY.** Kathleen MacDonald, BSN, RN, OCN®, University of Pennsylvania Health System, Philadelphia, PA

According to the National Cancer Institute approximately sixty percent of patients diagnosed with cancer will receive some type of radiation therapy. Radiation side effects are treatment and site specific and, vary from individual to individual therefore, personalizing and identifying patients' educational needs and goals are essential. Knowing that patients play a crucial role in their treatment planning and looking for ways to improve the patient experience, our department initiated a Proton Alumni Program in April 2012. Patients who had received proton radiation and their caregivers gathered together with staff for the purpose of gathering information on how to improve the patient experience. In January 2013, the Patient and Family Advisory Committee, comprised of a radiation oncologist, radiation nurses, social work and patients, was launched with the goal of obtaining patient feedback to improve patient care. As a result of these initiatives, as well as looking at Press Ganey scores focusing on two questions "what to expect during radiation" and "managing radiation side effects explained", the Pre Simulation Patient Education Visit was developed and implemented in December 2014. The purpose of this program is to better prepare patients for radiation therapy and its side effects, alleviate anxiety related to treatment, and avoid delays in radiation planning and treatment. The initial group was prostate cancer patients. This group was identified because of high burden or need including lack of proper bowel preparation. Poor prep can lead to simulation and

planning delays as well as rescheduling. A radiation nurse meets with the patient prior to simulation, providing education on what to expect during radiation, including site specific side effects and their management, and answers any questions. Patients are shown immobilization devices if required for treatment positioning and a tour of the department is offered. They may be seen by social work or nutrition if such needs are identified by nurse. Site specific pre simulation folders containing patient education materials, community resources and integrative services are provided to patients. Laminated cards with tips from former patients are available as well. The Pre Simulation Patient Education Visit is now implemented in our department for Genitourinary, Head and Neck, Breast, Women's Health and Central Nervous System disease sites. Improvements in patient satisfaction scores have been seen since initiation of program.

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**CHANGING PRACTICE OF AN ACADEMIC INSTITUTION BY ESTABLISHING USE OF 24 GAUGE CATHETERS FOR BLOOD TRANSFUSION.** Daniel MacManus, RN, MSN, MBA, OCN®, CCRC, University of California, San Diego Health System, Moores Cancer Center, San Diego, CA

Oncology patients can have age related or develop decreased potential for venous access through repeated use of peripheral veins. Large bore (18-20 gauge) catheters are typically used for blood cell transfusion as nursing and medical practice along with blood banks requirements theorize this prevents hemolysis of red blood cells. Limiting use to larger bore catheters for blood product administration can increase patient discomfort from missed attempts at poor venous access, increased costs for equipment, and increased anxiety for patients and nurses. Change in practice allowing use of 24 gauge catheters will decrease discomfort, anxiety and costs related to multiple venous access attempts while allowing hemolysis free infusion of red blood cells. A literature search was conducted to determine practice, myths and viability of using 24 gauge catheters for blood transfusion. Interviews of UCSD nurses from the Neonatal Intensive Care Unit (NICU) and the Cancer Center Infusion Center (IC) were performed to determine catheter sizes used for blood transfusion. The Nursing Research and Education Department and the Policy and Practice Committee were consulted to determine the process for making this change. A pre and post in class training Survey Monkey analysis was performed to determine effectiveness of training to the infusion center nurses. The literature indicates 24 gauge catheters do not hemolyze red blood cells, and establishes their use by recommendations from the Infusion Nurses Society and the American Association of Critical Care Nurses. NICU nurses routinely use and IC nurses intermittently use 24 gauge catheters to administer blood products. Insertion of 24 gauge catheters for blood product administration allows for increased venous access opportunities without hemolysis while reducing discomfort, equipment costs and anxiety of patients and nursing staff. Evidenced based research highlighted in the literature and clinical outcomes observed in practice validate the change in practice and implementation of an updated policy and procedure for transfusion of blood products. Changing the policy and procedure of an academic institution and allow use of small bore 24 gauge catheters for transfusion of blood products.

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**BLOOD CULTURE EDUCATION INITIATIVE: MAINTAINING LOW BLOOD CULTURE CONTAMINATION RATES THROUGH REEDUCATION OF BEST PRACTICE AND ADHERENCE TO POLICY IN THE URGENT CARE CENTER.** Anna Kristina Madrazo, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Grace Caufield, BSN, RN, Memorial

**Sloan Kettering Cancer Center, Jackson Heights, NY; Esther Schwartz, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY**

In the oncologic population, patients are susceptible to neutropenia as a result of either their disease process or treatment regimens. Neutropenic cancer patients who experience fevers often present to the Urgent Care Center (UCC) at a National Comprehensive Cancer Center where blood cultures are routinely collected as part of their initial workup. Uncontaminated specimens are critical in patients with neutropenic fever to ensure appropriate antibiotic coverage. Contaminated blood cultures greatly impact the patient experience, potentially causing unnecessary antibiotic administration, emotional stress, unnecessary laboratory testing, increased healthcare costs, and longer hospitalizations, often not reimbursed by insurance. Additionally, inadequate collection of blood culture volume can impact management of care due to false negative results from missed detection of bacteria. The project's objective was based off the authors' previous Nurse Residency Evidence Based Practice initiative to determine blood culture contamination rates. This initiative concluded an overall low contamination rate of 0.6% hospital wide in 2015; however, a survey analysis of the UCC's current practice identified a lack of knowledge and adherence to policy among staff that routinely perform venipunctures. Therefore, this project's purpose is to determine if an educational program decreases blood culture contamination rates, increases awareness about proper procedure, and decreases rates of inadequately filled specimens. An educational program was developed using current hospital policy and recent literature review and will be implemented in October 2016. The authors will present a PowerPoint program teaching proper procedure for blood culture collection. The aim is to create awareness of the repercussions of false positive blood cultures, decrease blood culture contamination rates and ultimately improve the quality of patient care. At the completion of the unit's reeducation, staff will participate in an anonymous survey to evaluate the program's effectiveness on their practice. UCC's blood culture contamination rates and the rates of inadequately filled specimens will be monitored quarterly. Re-education will be implemented as necessary. Appropriate antibiotic coverage is imperative for oncology patients with bacteremia. Accurate blood culture results are dependent upon proper collection technique. UCC staff has the responsibility to obtain blood culture specimens during the initial workup upon arrival to an emergency setting. This initiative aims to increase staff knowledge on appropriate blood culture collection techniques thus improving patient care outcomes.

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**CANCER PATIENT'S AND NURSING STAFF KNOWLEDGE OF THE MEDITERRANEAN DIET.** Cathleen Maidlow, MSN, RN, CNL, Rush University Medical Center, Chicago, IL; Karine Otten, MSN, RN, ANP-BC, OCN®, Rush University Medical Center, Chicago, IL; Marisa Mozer, MS, RD, LDN, CNSC, Rush University Medical Center, Chicago, IL; Beth Staffileno, PhD, FAHA, Rush University Medical Center, Chicago, IL

Historically, patients undergoing bone marrow transplant or receiving high doses of chemotherapy were instructed to follow a neutropenic diet (or low bacteria) to decrease the incidence of foodborne infections while they were neutropenic. However, published studies about the neutropenic diet have reported limited or weak evidence showing beneficial effects. Currently, oncology patients are given information about the Oncology Safe-handling Diet which allows raw fruits and vegetables, yet little is known whether patients are following this eating plan. In addition, while the Oncology Safe handling Diet includes information on what to avoid and gives a couple suggestions of

what to eat, it does not outline a plan for a well-balanced diet. The Mediterranean Diet is a healthy eating pattern associated with reduced risk for cardiovascular and neurodegenerative diseases and some types of cancer. The purpose of this interdisciplinary study is to: 1) identify oncology patients and nursing staff knowledge concerning the Mediterranean Diet; and 2) teach them about the health benefits and ways to easily incorporate more fruits and vegetables into their daily diet. A pre-post study will be conducted among patients admitted to a 32 bed inpatient hematology and bone marrow transplant hospital unit. A twelve-item questionnaire will be used to assess patient and nursing staff knowledge of the Mediterranean Diet, pre- and post-education. The education module will consist of a brochure and a 10 minute teaching intervention which will include components that: define the Mediterranean diet, explain health benefits, and give examples of how to easily incorporate the Mediterranean diet into daily living. All nursing staff will be trained prior to the implementation of the patient education module. The goal of the study is to educate patients and nursing staff about the health benefits of the Mediterranean Diet. By increasing fruit and vegetable consumption, staff and patients will benefit from improved overall health and mitigating disease risk. This education module will equip nursing staff with nutritional education that patients are often asking about where a nutritionist may not be available. Future research can be aimed at looking at dietary habits of patients leading up to stem cell transplant.

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**NURSING ALGORITHM FOR LEPTOMENINGEAL DISEASE WORK-UP.** Rochelle Manning, BSN, RN, OCN®, The University of Texas MD Anderson Cancer Center, Houston, TX

At the end of the poster presentation, the oncology nurse will become knowledgeable about Leptomeningeal Disease (LMD) and the tests required for diagnosis. In addition, the oncology nurse will be able to identify the steps to achieve diagnosis and appropriate treatment. Leptomeningeal Disease (LMD) or Neoplastic meningitis (NM) is a complication of cancer that occurs when cancer cells are found in the leptomeninges. LMD is estimated to occur in 6-8% of solid tumor patients, often not diagnosed until the end of life. Patients with LMD may have variable symptoms since it affect different sites of the central nervous system. Some of these symptoms may include but are not limited to headaches, altered mental status, seizures, visual problems, nausea/vomiting, numbness/tingling, weakness, gait instability, or bowel/bladder dysfunction. Since LMD has a high mortality and morbidity rate, early diagnosis and treatment is essential in order to assist in reducing the rapid progression of the disease. Since this is best approached by a multidisciplinary team, the oncology nurse can utilize the presented algorithm as a guide to the work-up needed for patients who may have LMD. At the end of the poster presentation, the oncology nurse will be able to define LMD. In addition, the oncology nurse will be able to list and indicate the rationale for the tests and procedures in diagnosing LMD and identify the steps necessary for diagnosis and treatment. The oncology nurse will also be able to provide nursing interventions to prevent complications in patients undergoing lumbar puncture. As an oncology nurse, it is imperative to educate the patient regarding the ordered tests and procedures to minimize apprehension and complications post procedure. Furthermore, the oncology nurse needs to coordinate appointments and procedures with other multidisciplinary teams so that patient can start treatment as soon as possible once diagnosis has been confirmed. Since LMD has a high mortality and morbidity rate, it is paramount that the oncology nurse is knowledgeable about the disease to create urgency when facilitating appointments.



**LOW GASTROSTOMY TUBE DEPENDENCY, COMPLICATIONS AND ADMISSIONS WITH PROPHYLACTIC GASTROSTOMY TUBE PLACEMENT: RN-LED MULTIDISCIPLINARY TEAM APPROACH TO CARE OF THE HEAD AND NECK CANCER PATIENT RECEIVING CONCURRENT CHEMORADIOTHERAPY.** Diane Markt, BA, RN, BSN, OCN®, Carol G Simon Cancer Center, Morristown Medical Center, Morristown, NJ; Kathryn Hamilton, MA, RDN, CSO, CDN, FAND, Carol G Simon Cancer Center, Morristown, NJ; James Wong, MD, Carol G Simon Cancer Center, Morristown, NJ; Lisa DeMasi, MA, CCC-SLP, Carol G Simon Cancer Center, Morristown, NJ; Erik Cohen, MD, Carol G Simon Cancer Center, Morristown, NJ; Patricia Parker, APN, Carol G Simon Cancer Center, Morristown, NJ

Head and Neck Cancer treated with rigorous concurrent chemoradiotherapy (CRT) can result in significant medical, nutritional and functional impairments. Placement of feeding tubes, prophylactically or reactively, presents an additional layer of complexity to a complicated medical plan. Practice guidelines through the National Comprehensive Cancer Network (NCCN) for Head and Neck Cancer Treatment favor reactive placement over prophylactic. Literature shows that placement of gastrostomy tubes (GT) prophylactically carry a higher risk of long-term feeding tube dependence, impairment of functional swallowing and increased risk for complications. The study goal was to investigate the ability to assemble such a team and deliver care in a regional community hospital setting, minimize critical weight loss, improve quality of life for both the patient and caregiver, and transition the cancer survivor back to a healthy diet as quickly and safely as possible post treatment. This retrospective study examined over 100 patients who underwent CRT and had prophylactic GT placement. Selected patients were sent for dental clearance, GT placement and swallowing evaluation prior to treatment. Patients were instructed on strategies for continued oral intake through treatment, and consistent with NCCN Guidelines, nutrition support is initiated when the patient had a low BMI, an approximate 5% weight loss from baseline or experienced significant nutrition impact symptoms prohibiting intake of needed nutrition and hydration. We compared our tube dependency rates, swallowing complications, and hospitalizations to those reported in the literature. With a multidisciplinary team approach, our results were both better than reported and are transportable to various institutional settings around the country for implementation. Using the pre-, during and post-treatment schedule for intervention, we were able to transition almost 75% of patients off tube feedings by three to six months after placement and over 95% by 11 months. Critical weight loss was less than 10% of baseline for more than 60% of survivors, with less than 5% experiencing greater than 15% critical weight loss. Most patients who initially declined discussion for GT placement were grateful for the mode of nutrition, hydration and medication administration after only a few weeks into treatment. The standardization of a multidisciplinary team approach resulted in better than reported clinical and quality of life outcomes not only for the patient but all caregivers involved.

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**HEALING ARTS—DEVELOPMENT AND IMPLEMENTATION OF AN ART THERAPY PROGRAM FOR CANCER PATIENTS IN AN AMBULATORY INFUSION CENTER.** Connie Masters, RN, MBA, MSN, OCN®, Emory Healthcare, Johns Creek, GA; Nicole Bansavage, RN, MSN, OCN®, Emory Healthcare, Johns Creek, GA

Oncology patients utilize distraction such as watching television or surfing the Internet to occupy their minds while

receiving chemotherapy. Our oncology infusion center (OIC) did not offer patients activities with well-established therapeutic benefits. Studies demonstrate the creative process of making art reduces emotional distress and improves health and emotional well-being. A group formed to develop an art therapy program (ATP) in our OIC. The purpose of the ATP is to provide patients a therapeutic activity while receiving their treatments. A group of oncology nurses, hospital leadership, and a member of a local arts center was formed. The OIC is an ideal setting for an ATP due to time spent receiving treatment, which can be hours. The group evaluated the cost and identified strategies to financially support program implementation. A grant proposal was submitted to our health system (HS) development team. We received a \$2400 grant. The program offers one and one half hour classes twice a month taught by an art instructor from the local art center. The classes exemplify our HS Care Transformation Model. This model encompasses holistic care for each patients, with respect to their knowledge, values, beliefs and cultural backgrounds. The ATP aligned with our strategic plan, focusing on Patient and Family Experience and Discovery and Innovation. Our goal was to enhance self-awareness; allow for expression of feelings related to fear and anxiety of cancer treatments; promote communication through expression; build self-esteem; lessen stress; improve quality of life; and find comfort, freedom and hope. Since implementation, 126 patients and caregivers have participated in our ATP. Our initial intention was to display the art; however, we quickly learned that patients wanted to take their pieces to share with family and display in their homes. Due to the positive patient, caregiver and community response to ATP, our OIC was awarded an additional \$5000 grant. Patient satisfaction and perceived improvements in physiologic and emotional well-being data collection is ongoing and will be completed prior to presentation.

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**DEVELOPING A PRESCREENING TOOL.** Anita McCabe, RN, Roswell Park Cancer Institute, Buffalo, NY; Angelica Zachara, RN, CPHON, OCN®, Roswell Park, Buffalo, NY; Tabatha McCabe, LPN, Roswell Park Cancer Institute, Buffalo, NY

Roswell Park Cancer Institute's pediatric clinic cares for a variety of patients. Ages seen in the clinic range from 2 years of age through adulthood. Types of services provided in our clinic are infusions, chemotherapy, Pediatrics, BMT, hematology, Oncology, AYA and long term childhood cancer survivors. It had come to our attention that many times a patient/caregiver would forget or leave out important information that would greatly impact their visit with our medical team only to be brought up after their physician had already seen them. In efforts to obtain pertinent information covering all aspects of services and maximizing efficiency and safety, it was important to develop a prescreening checklist for the patients/caregivers to review prior to being seen by the medical personnel. A joint effort was established between the physicians, Nurse practitioner and nurses to formulate a pre screening tool for the patient/caregiver who could review and fill out in the waiting room prior to being seen. Once completed, the nurse would review the information with the patient/caregiver. The new screening tool has helped identify pertinent information for the medical team along with helping educate patient/caregiver on importance of all aspects of their clinic visit. Most important, the new prescreening has improved communication and clinic practice between patient/caregiver and medical team. Our goal was accomplished to open up lines of communication and education to create an efficient and safe out patient clinic setting that evaluates multiple services and ages.

**USING NONINVASIVE STIMULATION FOR RADIATION SIDE EFFECTS.** Tabatha McCabe, LPN, Roswell Park Cancer Institute, Buffalo, NY; Anita McCabe, RN, Roswell Park, Buffalo, NY

Many patients with head and neck cancers that have received radiation have some long term complications. The main complaint Xerostomia (dry mouth) can cause difficulty in speaking and swallowing along with difficulty sleeping from dry tongue. Patients can become high risk for poor nutrition if taste buds changes from the radiation occur. It can be difficult finding relief of the radiation side effects. Pharmacologic methods seem to cause temporary relief. Alternative techniques needed to be practiced. A noninvasive treatment form of acupuncture was suggested. Acupuncture-like Transcutaneous Electrical Nerve Stimulation (ALTENS) was offered to help treat radiation induced xerostomia. Pt.'s had to be free of cancer (about 6 months) to be eligible. Health Clinical assistant was educated on acupuncture and trained to apply electrodes to 7 different acupuncture points to deliver electrical stimulation. The intensity of the stimulation ranged from level 3 to 6 depending upon what the patient could tolerate. Each session lasts 20 min with randomly alternating electrode stimulation. Patients are scheduled 2 to 3 days a week for a total of 24 treatments. No side effects have been noted. 2 out of 10 have minimal to no improvement. 8 out of 10 people have improvement regarding quality of life by regaining saliva and or taste buds. As a result, sleeping, speaking and eating have greatly improved.

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**PILOT STUDY: EVALUATING SURVIVOR COMPLIANCE WITH SCREENING RECOMMENDATIONS.** Dana McDaniel, MSN, NP-C, AOCNP®, Missouri Western State University & Mosaic Cancer Center, Saint Joseph, MO

The National Cancer Institute estimates there are more than 15.5 million cancer survivors alive in the US today and that number will grow to more than 20 million by 2026. This overwhelming statistic emphasizes the need for solid survivorship follow up for cancer survivors. The survivors need to focus on the significance of screening for secondary cancers, preventative measures and health promotion. Utilizing the health belief model, cancer survivors were evaluated for compliance with health screening and prevention recommendations. The perceptions and barriers related to compliance or non-compliance were also assessed. 30 patients were included in this pilot. Between 6 and 10 weeks after completion of radiation therapy, cancer survivors were provided a survivorship visit with a nurse practitioner that lasted approximately forty-five minutes. During the visit, emphasis was placed on preventing secondary cancers and health promotion. The survivors were provided verbal recommendations followed by a written survivorship care plan, which included the recommendations, via mail. The patient's primary care provider was also provided a copy of the survivorship care plan via fax. A follow-up phone call was made to the patient thirty days following the survivorship visit to monitor their adherence to the recommendations. Using the health belief model, the students gathered information regarding survivors' perceived susceptibility, severity, benefits and barriers to screening recommendations. Quantitative data, with focus on the health belief model, is currently being collected in 5 categories; 1) patients that were scheduled for and completed the recommendations, 2) patients that were scheduled for and did not complete the recommendations, 3) patients that elected to schedule the recommendations on their own and followed through 4) patients who elected to schedule the recommendations on their own and did not follow through and 5) patients that declined the recommendations. The results will be shared at the time of the presentation.

**TURNING ON THE LIGHT SWITCH: DEVELOPMENT AND IMPLEMENTATION OF AN IMMUNOTHERAPY PROGRAM FOR A COMMUNITY BASED ONCOLOGY PRACTICE.** Ann McGreal, RN, OCN®, Oncology Specialists, S.C., Park Ridge, IL; Lisa Hartle, RN, MS, AOCN®, Oncology Specialists, S.C., Park Ridge, IL

Immunotherapy presents a new era in cancer treatment, which has changed the face of oncology nursing. Effectiveness of immunotherapy is impressive for a rapidly expanding cancer patient population. These novel agents activate the body's immune system by allowing the T lymphocytes to remain turned on, swiftly identifying tumor cells when they materialize. This mechanism of action departs significantly from that of traditional cytotoxic chemotherapy, prompting the health care team to provide a different approach to patient care. At Oncology Specialists, an Immunotherapy Program was developed by nursing for physicians, other nurses and patients, in order to provide consistent, optimal care of patients receiving immunotherapy. Components of the program include: Education materials for patients/families and nursing staff, policy and procedure guidelines, toxicity assessment tools, and EMR documentation templates. "What is Immunotherapy" is an education tool that uses "Turn on the Light Switch" images to help patients understand immune-activation. "Nursing Immune-Mediated Adverse Reaction Checklist" is a tool to assess side effects at patient visits and as a guide for patients to use when calling to report side effects. Immunotherapy training was provided for nursing and included patient assessment/evaluation techniques, and proper use of EMR tools and templates. A "Supportive Care Treatment Plan: Steroids for Immune Oncology Toxicities" was developed as a way to standardize high dose steroid use. A tool to document steroid dose changes in the EMR was also developed. Physicians with immunotherapy treatment experience lead peer-to-peer training on the immunotherapy care and management guidelines. Evaluation of the program will include patients, nursing and physicians. After two cycles of treatment, all patients will complete a survey to assess understanding of immunotherapy and symptoms that need to be reported. Nurses and physicians will be evaluated three months after implementation of the program to ensure accurate recording and treatment of toxicities. Immunotherapy is a rapidly growing treatment modality offering exciting treatment options and unique challenges to the healthcare team. A specific program to address the care of these patients is an effective way to meet this challenge and ensure optimal care and enhanced education.

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**LET THEM SLEEP! INCREASING THE OPPORTUNITY TO SLEEP IN HOSPITALIZED ONCOLOGY PATIENTS THROUGH A MULTIDISCIPLINARY TEAM APPROACH.** Pamela McLaughlin, BSN, RN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Mary Sobaszek, RN, OCN®, CMSRN, Roswell Park Cancer Institute, Buffalo, NY

Oncology patients are at great risk for accidental falls due to treatments, side effects and symptoms related to cancer. Conditions that increase the risk of a fall related to treatment include orthostatic hypotension, urinary or fecal urgency, and peripheral neuropathy. Hospital stays for cancer patients can last for weeks, subjecting them to additional complications related to continual lack of sleep such as confusion and clumsiness. With the addition of an unfamiliar environment and accessories such as IV poles and walkers, it is a recipe for fall disaster. Thrombocytopenia and bone metastasis place the patient at a much greater risk for an injury from a fall, increasing the necessity to prevent accidental falls in the cancer patient. We devised an innovative initiative to allow the patient longer periods of

time for uninterrupted sleep by clustering care interventions. The multidisciplinary group consisting of direct care RN's and aides, physical and occupational therapists, administrators, volunteers, pharmacy staff, housekeeping, occupational and environmental safety, developed a program to combine the times for patient vital signs and intake/output measurement. Prior to the intervention, the nursing staff entered the patient room and disrupted them every two hours around the clock for vital signs every 4 hours and intake/output every 4 hours. Staff may enter the room as often as necessary; however this initiative implemented the grouping of timed tasks to be completed four hours apart. We piloted the initiative on an 18 bed unit that specializes in a variety of liquid and solid tumors. The fall rate on this unit prior to intervention was at 5.71/ per 1000 patient days in the 1st quarter of 2015, and has decreased to 2.05/ per 1000 patient days in the 1st quarter of 2016. While we noted a decrease in accidental falls on this unit, staff, patients, and practitioners reported satisfaction with the change. Aides had more time to provide patient care and practitioner phone calls were also clustered. Cancer patients require sleep to recover/ heal, and previous timing of care prevents adequate sleep. It is imperative that we recognize how to improve practices to educate the health care team to cluster care to increase opportunities for sleep and reduce complications from inadequate sleep.

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### **QUALITY IMPROVEMENT WORKGROUP: CONSISTENT IMPLEMENTATION OF CLINICAL TRIAL AMENDMENTS.**

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This workgroup convened in December of 2015, and following the Six Sigma process improvement methodology Define, Measure, Analyze, Design, and Verify (DMADV), developed a written Standard of Practice (SOP) that will be piloted within lymphoma/ chronic lymphocytic leukemia (CLL) clinical trials during the fall of 2016. The multi-disciplinary workgroup met twice per month to define the current state of workflow, establish metrics, and finally to develop the SOP. This improved the understanding of the overall problem, which was the inconsistent implementation of clinical trial amendments, allowing for the construction of detailed solutions. The focus was only on amendments impacting the treatment plan, such as drug, vital sign monitoring, clinical and research lab changes to be executed by nursing staff. The James utilizes Beacon, developed by Epic, for chemotherapy ordering and administration, including investigational agents under management of the James Beacon Research Team (JBRT). First, a clear method of communicating the amendment information to appropriate teams was established. Next, the implementation process was developed. During preliminary review, the JBRT will modify the treatment plan template within 10 business days of the initial amendment notification. Once approved, the Regulatory Compliance officer will notify the appropriate persons within one day of the Institutional Review Board's (IRB) approval of the amendment. The JBRT will communicate via high priority email the summary of changes to all involved teams. Manual changes will need to be made for all patients already enrolled on the trial, including trials closed to accrual but with patients still receiving active treatment. It was determined the treating team (physician, advanced practice provider and assigned pharmacist) would be responsible for making these changes. Within one day of amendment approval, the clinical research coordinator will compile a list of affected patients, and will submit this, along with the summary of changes, to each of the appropriate care teams. The goal for patient treatment plan changes is 10 days

from IRB approval to ensure timely and accurate execution of current clinical trial protocol version. This will be piloted with lymphoma/CLL clinical trials beginning September 12, 2016.

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### **DECREASING CATHETER-ASSOCIATED URINARY TRACT INFECTIONS THROUGH CHANGES IN WORKFLOW.** Meagan McQuade, MSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Rachel Motzer, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Melanie McCormick, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Catriona Cullum, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Miale Mayer, MSN, RN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY

Catheter-Associated Urinary Tract Infections (CAUTIs) are one of the most common hospital-acquired infections in the United States. They have been shown to increase hospital cost, length of stay, and mortality risk. Patients with hematologic malignancies are at high risk for developing CAUTIs, as they are immuno-compromised as a result of chemotherapy and other treatment modalities. The Joint Commission National Patient Safety Goals have put forth recommendations for implementing procedures based on evidence-based practice guidelines for maintaining an indwelling urinary catheter. An inpatient adult hematology/oncology unit at a comprehensive cancer center in New York City has implemented measures based on the evidence aimed at decreasing CAUTI rates and improving patient safety. The purpose is to demonstrate how a change in nursing interprofessional workflow decreased the incidence of CAUTI on an inpatient adult hematology-oncology unit. Interventions The interprofessional staff consisting of Registered Nurses (RN) and Patient Care Technicians (PCT) on the 43-bed unit engaged in formal discussions with Nurse Leadership to determine the safest and most effective way to integrate changes in workflow. Previous to the start of the pilot, PCTs were responsible for performing q4hr vital signs, measurement of input and outputs (I/O) at 10am, 2pm, and 6pm, morning care, and companion coverage. Morning care on the unit is defined as assisting patients with their hygiene routine. This includes helping patients shower or providing bed baths. In order to help prevent infections, the staff believed it was necessary to prioritize morning care. The change in work-flow involved a shift in morning routine responsibilities between the RN and PCT, where the RN assumed responsibility of 10am vital signs, I/O, and companion coverage, so that the PCTs could prioritize morning care. As part of their morning routine, they implemented evidence-based measures for care of indwelling catheters. This included urethral meatus cleansing with soap and water, securing catheter for un-obstructive urine flow, maintaining drainage bag below level of bladder, and emptying when two-thirds full. The pilot began in February 2016 and since its inception there have been no incidences of CAUTIs, a significant decrease compared to 6 months prior. Integrating this change in workflow hospital wide would enable the institution at large to decrease CAUTI rates, enhance interdisciplinary collaboration, and improve patient safety.

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### **IMPROVING PATIENT OUTCOMES AFTER PORT PLACEMENT IN AN AMBULATORY ONCOLOGY TREATMENT CENTER.**

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In a large academic cancer center, Ambulatory Oncology Treatment Center nurses (AOTCN) identified inconsistencies in



patient education and instructions after port placement which contributed to negative patient outcomes and decreased nursing satisfaction. Interventional Radiology (IR) implants >500 ports/year, therefore negative outcomes associated with this procedure necessitated an intervention. The purpose was to improve overall patient outcomes following port placement and improve nursing satisfaction by implementing a multidisciplinary practice change and enhanced patient education across a large academic healthcare system. AOTCN identified numerous patient care issues following Interventional Radiology (IR) port placement which were documented via a safety reporting system (SRS). AOTCN were surveyed to assess patient outcomes and nursing satisfaction concerns. AOTCN partnered with IR to initiate a multidisciplinary approach to review current procedures, patient education, and outcomes. The multidisciplinary team consisting of AOTCN and IR (RNs, CNS, nurse managers, and IR physician) conducted a literature search, bench marked best practices at like facilities, and reviewed a healthcare system patient education database to identify evidence-based practices (EBP). Based on the evidence, it was decided that IR would implement a practice change to utilize surgical glue for approximately 75% of patient port incisions. This change eliminated the need for dressing supplies since the glue provides a sterile dressing. Additionally, new patient education document was created by AOTCN to reflect the EBP change and provide comprehensive discharge instructions, which was disseminated healthcare system wide. Educational in-services & patient education handouts were distributed to AOTCN & IR staff prior to practice change implementation. Follow up emails and practice alerts were periodically sent to ensure practice change adherence. A post survey was conducted to evaluate the process improvement. The multidisciplinary practice change streamlined the overall process with enhanced patient education, reduced use of dressing supplies, and costs. Post implementation survey of AOTCN demonstrated a favorable response of 82% nurses reporting overall improvement regarding patient outcomes and nursing satisfaction. AOTC also had a reduction of adverse events reported via SRS related to newly implanted ports. This practice change highlights the importance of nursing inquiry and multidisciplinary collaboration to improve nursing satisfaction and patient outcomes in a large academic cancer center.

### **171 BLOOD CULTURE CONTAMINATION REDUCTION IN THE ONCOLOGY POPULATION. Ron Mehaffy Jr., BSN, Baylor University Medical Center, Dallas, TX**

Blood cultures are used to determine bacteremia that can result in a life threatening situation for immunosuppressed oncology patients. It is important to decrease false positive results due to contamination by collection in order to identify true bacterial infections. Collection techniques can reduce these errors resulting in clear identification of pathogens. Other benefits to decreasing blood culture contaminations are inappropriate use of antibiotics and increase accuracy of Central Line Associated Bloodstream Infection events. For FY15, our facility had a blood culture contamination rate of 1.8%. Of that 1.8%, 1.03% were in the Oncology Service Line. The organization goal for this year is 1.5%. In order to improve quality care and contribute to the goal, the service line initiated a blood culture contamination reduction project. The purpose of this project is to reduce the number of contaminated blood cultures collected by nursing in the Oncology Service Line by 25% in FY16 for a goal of 0.77%. Research of blood collection methods, national standards, and a literature review were performed. Current policy, procedures, and practice were evaluated among the Oncology units. A team was created consisting of nursing and lab personnel. A plan was developed to provide education and a target implementation date was set. Revised education

materials were created to instruct on proper blood culture collection methods with and without lab personnel assistance. Education was provided to nursing and lab personnel. The new process was implemented on September 1, 2015. Results for the first 3 months indicated a slight decrease in the number of contaminated blood cultures, 1.02%. December 2015 reported zero contaminated blood cultures for the service line, changes were not made to the original project plan. The service line completed FY16 with a blood culture contamination rate of 0.77%, meeting our goal. Continued education of new nursing and lab personnel was an issue throughout the quality improvement project. Re-enforcement of process and continued recognition of progress was imperative for participation.

### **172 ESTABLISHING A NURSE-MANAGED CALL-BACK PROGRAM AFTER PATIENTS' FIRST CHEMOTHERAPY TREATMENT. Kristen Mensen, RN, BSN, UC San Diego Health System, La Jolla, CA; Monette Santos-Moss, MSN, RN, OCN®, UC San Diego Health System, La Jolla, CA; Daniel MacManus, RN, MSN, MBA, OCN®, CCRC, UC San Diego Health System, La Jolla, CA; Chandra Lovejoy, RN, BSN, UC San Diego Health System, La Jolla, CA**

Symptom management post first chemotherapy treatment is especially challenging after patients are discharged home. A literature search revealed that nurse-managed, proactive follow-up calls to patients post chemotherapy treatment can help patients promptly manage side effects and improve treatment outcomes. Infusion Center nursing staff at the Moores UCSD Cancer Center—one of 69 NCI-designated comprehensive cancer centers—piloted a 4-week Call-Back Program to: (a) Establish frequently-reported patient symptoms post first chemotherapy treatment (b) Determine missing components of the patient's discharge plan following first chemotherapy treatment (c) Improve patient's chemotherapy side effect management post treatment. Infusion Center nurses called patients 24-48 hours after the patient's first chemo treatment: To streamline calls, the nurse inquired about: 1) baseline knowledge about taking anti-nausea medication, 2) unmanaged side effects, and 3) future appointments. (An Infusion Center nurse focus group established the call script.) Patients also were provided the on-call MD contact information. Following the call, the nurse documented the call in the EMR, with the note routed to the patient's oncologist, nurse case manager and/or other appropriate referrals. During the pilot period (n = 61 calls), data showed: (a) Three main patient side effects: fatigue (26%), nausea/vomiting (20%), and other treatment-related issues (i.e. fever, ER visit, hospitalization, etc.) (18%). (b) Missed components in discharge planning: not appropriately-taking anti-nausea medications (8%), clarification about treatment response expectations (7%), no scheduled future appointments (2%). The Pilot Program confirmed that calls to patients 24-48 hours after first treatment promptly addressed symptoms needing management and reinforced treatment teaching. Data also suggested that calls timed 48-72 hours post treatment better capture post treatment side effects. From Press Ganey Scores, data showed improved patient satisfaction (The facility rank for "likelihood to recommend services" increased: 2015Q4: 5%; 2016Q2: 57%). Based on the Pilot Program, The Moores Cancer Center Infusion Center established a Post-Treatment Call-Back Program, which provides early recognition of patient symptoms/side effects and timely interventions. Next steps include establishing a standard-of-care protocol with accompanying EMR-driven quality indicators to efficiently document and track Program quality.

### **173 THREE CHECKPOINTS FOR SAFETY: DEFINING A STANDARD OF PRACTICE FOR INDEPENDENT DOUBLE CHECKS OF**

**CHEMO/BIO THERAPY ACROSS THE CONTINUUM OF CARE.** Megan Mikula, BA, BSN, RN, OCN®, National Institutes of Health, Clinical Center, Bethesda, MD; Leslie Smith, MSN, RN, AOCNS®, APRN-CNS, National Institutes of Health, Clinical Center Nursing Department, Bethesda, MD; Maureen Luthardt, BA, MSN, CRNP-OB/Gyn, OCN®, National Institutes of Health, Clinical Center Nursing Department, Bethesda, MD

Independent double checks are standard for high alert medications, highlighting potential errors and preventing patient harm. Chemo/biotherapy requires multiple verification steps from order entry until administration. The Oncology Nursing Society in conjunction with the American Society of Clinical Oncologists recommends a 2 person process for verification of therapy. The goal was to standardize process and decrease risk of error by reducing confirmation bias, in-attentional blindness, and interruptions in work flow with resultant improvements in adherence to independent double checks for all routes of therapy, including oral. Nursing representatives from multiple oncology and non-oncology units administering chemo/biotherapy convened to discuss workflow for the independent double check process. Comparable and contrasting practices were identified in the nurses' role in verifying treatment plans, checking dispensed agents, and bed/chairside checks before administration. The deliverables included an updated Nursing Department Chemo/biotherapy Standard of Practice using evidenced based review of literature and benchmarking, revised documentation screens consistent with the three checkpoints, a "5-minute Forum" with knowledge assessment, and a poster to provide visual cues in each of the locations where verification steps are performed. Chemo check stations were employed in areas with highest volumes of chemo/biotherapy administration. Observations of the chemotherapy/biotherapy process post initiative from the Clinical Educators and Clinical Nurse Specialists revealed standardization in practice, clearer understanding of the independent check process, and improved documentation of administration of agents. Clear expectations for the three checkpoints for safety in chemo/biotherapy verification by nurses provide consistent practice on all units. Shared meaning of each checkpoint supports patient safety and seamless coordination of care as patients transition between inpatient and outpatient settings as well as for nurses floating to other units. Future efforts to improve the three checkpoints for safety include further standardization of the chemo check stations and possible utilization of the checkpoints for safety list, either in paper form or electronically, as a real-time checklist for safe administration. In standardizing nursing actions for three checkpoints for safety, a uniform approach to verification is achieved. Coordination of document review with electronic medical record screen updates and concluding with staff education allowed for efficient implementation. Nurses have the necessary tools to accurately verify chemo/biotherapy during evaluation of the treatment plan, the dispensed medication, and during bedside administration.

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**PREPARING FOR 2018 MANDATES: DEFINING, DESIGNING, DETERMINING THE PERSONAL PROTECTION EQUIPMENT FOR ONCOLOGY NURSES.** Barbara Milner, RN, MSN, AOCN®, CNS, Cleveland VA Medical Center, Cleveland, OH; Shayne Mervar, MSN, RN, OCN®, CNL, Cleveland VA Medical Center, Cleveland, OH; Alecia Smalheer, BSN, RN, OCN®, Cleveland VA Medical Center, Cleveland, OH; Marie Burke, MS, CSP, CHMM, Cleveland VA Medical Center, Cleveland, OH

The objective was to meet requirements of the pending 2018 mandate of the United States Pharmacopeial 800 (USP 800)

by developing a customized risk assessment of each route of administration of hazardous drugs (HDs). The Cleveland VA Medical Center (CVAMC) identifies over 800 new cancer diagnoses each year. The majority of these patients seek treatment at the CVAMC and are cared for by 20 chemotherapy competent nurses distributed in both the outpatient and inpatient settings. Personal protection equipment (PPE) to be worn while handling HDs is a disputed topic related to eye and face protection while using a closed system transfer device (CSTD). In February 2016 the USP 800 mandate was promulgated with plans for implementation in 2018. In part, the document details safe handling of HDs that will dictate the PPE used by oncology nurses. In section 7.4 Eye and Face Protection of the USP800, it specifies that appropriate eye and face protection must be worn when there is a risk for spills or splashes of HDs (i.e. face shield in addition to goggles). In practice this approach has resulted in occasional fogging that compromised visual acuity. The CVAMC oncology nurse leaders have joined with the Industrial Hygienist to develop a process that provides a risk assessment of each route of administering HDs and incorporate the findings in a standard operating procedure (SOP). This approach is an option offered in the USP800. The authors began meeting in September 2016 to develop a risk assessment tool for the various routes used in the administration of HDs. The tool will be reviewed monthly at the multidisciplinary Hazardous Drug Committee meeting. All parties with a vested interest in the handling of HDs will have oversight and input in the development of the proposed PPE to be worn by oncology nurses. PPE is an occupational requirement in handling HDs. Oncology nurses provide insight and value in developing institutional practices. With their contributions and collaboration with occupational safety professionals, PPE requirements will meet the mandated standards while engaging the nurses who must incorporate PPE in their practice. The process, risk assessment tool, and SOP will be illustrated in the poster presentation at the ONS 42nd Annual Congress.

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**CHEMOTHERAPY AND CARDIOTOXICITY.** Gail Moore, BSN, OCN®, RN, Moffitt Cancer Center, Tampa, FL; Patsy Clarke, BSN, RN, Moffitt Cancer Center, Tampa, FL; Bernadette Shields, MSN, RN, MHA, Moffitt Cancer Center, Tampa, FL; Margaret Wagnerowski, MSN, RN, CNS-BC, AOCN®, AOCNS®, Moffitt Cancer Center, Tampa, FL

Health care providers in our busy Infusion Center consistently address the most common toxicities related to chemotherapeutic/biotherapeutic agents, but may overlook potential complications such as cardiotoxicity, a possible side effect. It is imperative that a patient's medical history be reviewed with each encounter to assess for potential cardiac complications, and that patient education occurs regarding potential signs and symptoms to report to the provider. The purpose of this presentation is to educate staff, patients and families about the potential cardiotoxicity associated with chemotherapy and biotherapy. Risk factors, symptoms to report, and diagnostic tools utilized when cardiotoxicity is suspected should be included in the education. Interventions included developing a poster providing an overview of cancer treatment-related cardiotoxicity as well as a review of drugs with cardiotoxicity as a potential side effect. Additionally, a teaching tool was developed for patients. These interventions have been implemented in our Infusion Center and Clinics. A poster was presented at an internal nursing conference to educate participants about this topic and to discuss the services available at our institution. Staff evaluation of the presentation indicated a better understanding of agents with cardiotoxic potential, effective evaluation of patients and reporting of findings, and how best to provide education to patients and families using the educational mate-

rial developed as part of the presentation. Our cancer center has developed focused areas in symptom management. Our Cardio-Oncology program is an example. This innovative approach provides for more comprehensive care. As the number of cancer survivors grows, the importance of identifying potential late term side effects, such as cardiotoxicity, will continue to be an important part of patient education and evaluation. Patient education is a key role of nursing, this presentation provides a review of cardiotoxicity as a potential side effect of chemotherapy and biotherapy for nursing staff, and provides tools for more thorough education to patients and families. Teaching in an outpatient setting is essential as many patients and families are having first time treatments and have many questions and concerns. Many returning patients and families may need re-teaching, as well. We are well-served to have current information and frequent reviews of chemotherapy/biotherapy side effects to enhance our patient care.

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### **PROBIOTICS: HELPING OUR BONE MARROW TRANSPLANT PATIENTS DIGEST WHAT THEY HEAR IN THE MEDIA.** Barbara Morcerf, RN, BSN, OCN®, BMTCTN, Memorial Sloan Kettering Cancer Center, New York, NY

Over-the-counter (OTC) probiotics (also known as live biotherapeutic products) have been touted in the mass media as beneficial in aiding digestive and intestinal well-being. While specific strains of probiotics have been shown to be effective in managing antibiotic and infection related diarrhea, and irritable bowel syndrome, they can contribute to bacterial infections in immunocompromised patients. Bone Marrow Transplant (BMT) patients are immunocompromised for extended periods of time and typically have gastro-intestinal side effects due to conditioning chemotherapy, use of antibiotics, and graft-vs-host disease. These conditions result in microbial disequilibrium in the intestine, increasing the potential for opportunistic infections. Literature shows that the introduction of live bacteria through OTC probiotics, including leading brands of yogurt, increases the risk of bacteremia in BMT patients. Probiotics are classified as dietary supplements and do not undergo the same rigorous testing by the FDA as pharmaceutical products. Research is lacking on which strains are most effective for certain conditions, dosage amounts, and how to ensure the microbes reach the intestines alive. Contamination by undesirable microorganisms is a major safety concern and methods of detection are still being researched. The purpose was to educate nurses about the use of probiotics, emphasize the importance of reviewing the use of dietary supplements and certain food products during medication reconciliation, and discuss the potential dangers of introducing live bacteria to the diet of BMT patients. Nurses can impact patients' understanding and interpretation of advertisements that claim health benefits of OTC products. The distinction needs to be made between the possible benefit to a healthy person and the risks to a BMT patient. Current literature will be reviewed and important nursing implications highlighted. A thorough review of supplements and food products containing live bacteria along with patient education in BMT patients may increase awareness and promote discussion of the risks in immunocompromised patients. Nurses need to educate their immunocompromised patients on the risks of using probiotics in general and particularly when the patient is having GI symptoms. There is a great deal of promising research currently underway. This presentation will provide nurses with the information they need to effectively educate patients and remain up to date on the latest research in the field of probiotics.

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### **CREATION OF AN ORAL CHEMOTHERAPY EDUCATION PATHWAY.** Kathryn Moreno, RN, MSN, OCN®, BMT-CN,

AOCNS®, Mayo Clinic, Jacksonville, FL; Kimberly Morton, BSN, RN, Mayo Clinic Florida, Jacksonville, FL; Neil Hauck, MSN, OCN®, RN, St. Vincent's Hospital, Jacksonville, FL; Judith O'Connell, MSN, OCN®, RN, Mayo Clinic, Jacksonville, FL

Oral Cancer Agents (OCA) are increasingly becoming available for patients diagnosed with a wide variety of diseases. These agents are easier to use, require less time spent away from home or work, and can improve the cancer patient's quality of life. The lessened amount of time spent in the clinic by OCA patients has resulted in a decrease in dialog between clinic nurses and their patients as well as fewer guidelines for their care. This has led to low confidence levels in staff nurses caring for these patients at this institution. The aim of creating an oral chemotherapy pathway was threefold. First, to provide an educational experience that introduced new guidelines for the care of OCA patients in an effort to increase nurse confidence levels. The second goal was to increase patient compliance with adherence and the third goal related to increasing patient knowledge related to side effects and symptom management. The new guidelines were presented along with proper medication/side-effect informational packets while playing a board game during Phase One. Phase Two provided opportunity for practicing proper documentation; this phase was accomplished during staff nurses' free time. Phase Three involved a simulation experience intended to provide opportunity for practicing patient education. In conjunction with Phase Three, Phase Four provided feedback about the simulation experience by supervisory staff, the oncology nurse educator or the project facilitator. With new guidelines in place, nursing confidence levels should increase along with quality indicator scores and positive patient outcomes.

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### **CREATING A NURSE LED INTERDISCIPLINARY HEAD AND NECK CANCER TEAM TO IMPROVE PATIENT OUTCOMES AT A COMMUNITY CANCER CENTER.** Amanda Myers, RN, BSN, OCN®, University Hospitals Geauga Medical Center, Chardon, OH

The need for quality head and neck (HN) cancer care is increasing in the community ambulatory setting. Patients require complex and time consuming cancer treatments closer to their homes for numerous reasons. The community oncology staff has minimal experience treating complex HN cancer patients. Interdisciplinary staff are often not adequately prepared to manage unique multifaceted needs of HN cancer patients. The purpose is to establish consistent safe practices and interventions congruent with national cancer guidelines, nursing best practices, and patients' rights and responsibilities as well as identify resources, limitations, educational and equipment needs for establishing a comprehensive HN cancer program in a community ambulatory setting. An interdisciplinary team, led by an oncology nurse, and comprised of nurses, a dietician, multiple therapists, a social worker, and pharmacists identified educational and competency gaps. The team worked collaboratively to devise an educational plan consisting of training in areas such as PEG and tracheostomy care, skin care, and nutrition. Timing and appropriateness of consults with rehab, speech, dietician, and homecare was also addressed. The oncology nurse reviews and tracks all HN patients seen at the cancer center and presents issues, concerns, and needs at monthly interdisciplinary meetings. A database was created to organize patient information and track data. Database includes items such as diagnosis, staging, surgical interventions, treatment schedules, rehab therapies, nutritional status, and barriers to care such as alcohol abuse, medication adversities, financial needs, transportation, caregiver need or fatigue. Ongoing collaborative efforts occur as



aggressive supportive care needs are identified. Surveillance and survivorship issues are now discussed at monthly meetings. Colleagues on the team utilized one another's professional knowledge and strengths to grow as a cohesive team. Oncology service lines were strengthened by networking, communication, and education. Staff voiced improvement in confidence and knowledge caring for HN cancer patients. Twenty-eight patients initiated HN cancer treatment at community ambulatory setting. All patients except those with disease progression or palliative goals completed treatment plan, two patients were hospitalized due to treatment side effects, and treatment breaks decreased. The creation of an interdisciplinary HN team can ensure both the completion of individualized treatment plans and improve patient's quality of life through collaborative efforts in patient management, combined with early interventions resulting in optimized care of the patient in the community setting.

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**CHANGING PRACTICE: TIME TO FIRST ANTIBIOTIC FOR FEBRILE NEUTROPENIA IN THE EMERGENCY DEPARTMENT.** Miranda Naegele, MSN, RN, LMT, CEN, OSUWMC-CCC, Columbus, OH; Luca Delatore, MD, The Ohio State University Wexner Medical Center, Columbus, OH; Miranda Gill, MSN, RN, The Ohio State University Medical Center, Columbus, OH; Emily Graham, RHIA, SSGb, The Ohio State University Wexner Medical Center, Columbus, OH

Febrile neutropenia is of significant concern for oncology patients. From February 1, 2016 to April 30, 2016, the James Oncology Emergency Department treated 124 patients with febrile neutropenia. The Oncology Emergency Department identified the need to improve the door to antibiotic times, reducing mortality and improve outcomes for these patients. The purpose was to discuss a process improvement project, improving the door to antibiotic times for patients with febrile neutropenia in the Emergency Department. A preliminary survey was developed, seeking input from staff identifying potential opportunities for improvement. Findings included the need to revise order sets within the electronic documentation system, enhance training of staff nurses to place ultrasound guided intravenous devices, revise the paging system that alerts various ancillary staff, build questions into the triage survey of every patient, screening for potential sepsis within the electronic medical record, and include the absolute neutrophil count in the complete blood count. A second survey was developed, prioritizing interventions and one-on-one education was provided to all emergency department staff members. Prior to the go-live date of February 1st, 2016, the average door to antibiotic time was 78.0 minutes. After education was provided, overhead pages were initiated, and the necessary changes to the electronic documentation system were implemented, the door to antibiotic time was an average of 54 minutes. The mortality index has decreased from 0.44 in January 2016 to 0.33 as of April 2016 and continues to trend downwards. Sepsis has been identified as one of the leading causes of mortality within the United States. Antibiotic administration within sixty minutes is necessary for positive outcomes. Discussions with the front-line staff allowed us to identify potential barriers and areas for opportunity to improve the door to antibiotic times. The additional training of the nursing staff to place ultrasound guided intravenous access devices has significantly improved the door to antibiotic times for patients with febrile neutropenia. Using the overhead alert system within the Emergency Department ensures that all ancillary staff, including respiratory therapy, pharmacy, and radiology arrives quickly to initiate treatments as ordered. Screening all patients for febrile neutropenia in the arrival of a patient to the Emergency Department ensures that these emergencies are identified quickly so treatment may begin promptly.

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**AN INTERDISCIPLINARY APPROACH: THE ELIMINATION OF THE NEUTROPENIC DIET ACROSS THE CONTINUUM OF CARE.** Chelsea Nee, BSN, RN, OCN®, University of Pittsburgh Medical Center–Shadyside, Pittsburgh, PA; Sharon Hanchett, MSN, RN, OCN®, University of Pittsburgh Medical Center–Shadyside, Pittsburgh, PA; Jennifer Wilson, LDN, RDN, Nestle, Pittsburgh, PA; Jan Cipkala-Gaffin, DrPH, PMHCNS-BC, University of Pittsburgh Medical Center, Pittsburgh, PA

Chemotherapy-induced neutropenia increases the vulnerability to infection and mortality in oncology patients. Traditionally, the neutropenic diet has been used to prevent opportunistic infections in immunocompromised patients by restricting foods that may contain bacteria. The neutropenic diet is very restrictive, eliminating fresh fruits and vegetables, raw nuts, and many types of cheese. However, research has not supported the efficacy of dietary restrictions as a means of infection prevention in the neutropenic oncology population. A review of the literature revealed that the neutropenic diet does not contribute to lower infection and/or mortality rates in adult oncology patients with chemotherapy-induced neutropenia. An interdisciplinary team of nurses, physicians, and dietitians was formed and successfully eliminated the neutropenic diet from clinical practice across all inpatient and outpatient clinical care settings at a large university hospital system. Recognizing that the stem cell transplant population is especially vulnerable, the immunosuppressed diet was created. The immunosuppressed diet allows fresh fruits and vegetables but does have some restrictions regarding eating at restaurants and food temperature. Oncology providers and nurses were educated regarding the diet changes and patient education material was revised. The neutropenic diet was eliminated from practice in March, 2015. Data reflecting the incidence of bacteremia, clostridium difficile infections, and pneumonia were obtained pre- and post-implementation. Preliminary data does not reveal an increase in infection after the elimination of the neutropenic diet. Data is currently being analyzed to include patient specific variables such as age, sex, gender, diagnosis, and absolute neutrophil count to further assess the impact of the intervention on infection rates. The elimination of the neutropenic diet has allowed oncology patients to eat fresh fruits and vegetables to allow healthier choices with fewer restrictions. General oncology patients are now instructed to use safe food handling guidelines and ordered a regular diet while inpatient. Many oncology patients have a difficult time meeting nutritional requirements, so the liberalization of diet restrictions has improved the selection of what they can safely eat. Oncology nurses from other institutions who currently utilize the neutropenic diet can use this information to make a positive change for their patients and allow a more diverse diet.

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**THE IMPACT OF SURVIVORSHIP CARE PLANNING ON ADEQUATE SMOKING CESSATION INTERVENTIONS OFFERED TO LUNG CANCER SURVIVORS.** Morgan Nestingen, RN, BSN, CMSRN, OCN®, St. Anthony Hospital, Denver, CO

Smoking is a major detractor to lung health. The NCCN recommends that all cancer survivors receive smoking cessation interventions including medication, counseling, and follow-up. Lung cancer survivors often experience smoking-related guilt. As a result they often request and receive inadequate smoking cessation support. Inadequate documentation further derails efforts to impact smoking rates. The purpose was to improve the adequacy of smoking cessation interventions provided to

non-terminal lung cancer survivors. Interventions: Implement interdisciplinary survivorship care planning consisting of nurse navigation, mental health counseling, and physician support. Each non-hospice patient with stage I-III lung cancer who currently smokes (including those who have recently attempted cessation) will receive a survivorship care plan (SCP) including custom recommendations for smoking cessation. The SCP will be presented face-to-face and the patient will be assessed for readiness to quit and offered smoking cessation interventions. A brief intervention based on motivational interviewing techniques (administered by a mental health counseling intern) and appropriate prescription will be offered. Baseline data will be culled from lung cancer analytic cases for 2014-2015, including demographics and disparities. Following the initial survivorship visit, chart review will be performed to determine adequacy of smoking cessation offerings per NCCN guidelines and documentation of interventions and current smoking status. Patients will be assessed at intervals for needed follow-up. Secondary analysis will be used to determine impact of barriers (insurance status, language, ethnicity, or underlying mental health disorder) on access to smoking cessation interventions. By improving smoking cessation offerings, this project may ultimately have potential impact on smoking cessation in lung cancer survivors. First, however, current practice must reflect NCCN guidelines for survivorship and smoking cessation. The purpose of the SCP is to dovetail team efforts and ensure appropriate ongoing care for the cancer survivor. As such, it should include a meaningful attempt to educate the patient on smoking cessation. As SCPs are implemented nationwide, it is critical that these efforts include practical smoking cessation measures. Innovation: This project will explore the relationship between quality survivorship care planning and appropriate and adequate smoking cessation interventions. Nursing will lead the survivorship care process and coordinate the interdisciplinary team to offer quality survivorship care and follow-up. Furthermore, a follow-up resource analysis may yield support for a permanent smoking cessation position.

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**IMPACT OF HUDDLE BOARDS IN THE AMBULATORY CANCER CENTER INFUSION ROOM.** Erin Noel, BSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX; Ashley Cluke, BSN, RN, Baylor Scott & White McClinton Cancer Center, Waco, TX; Joni Watson, MBA, MSN, RN, OCN®, Baylor Scott & White McClinton Cancer Center, Waco, TX

Idea generation and implementation utilizing huddle boards, which is a concept of lean management, gives the frontline nurse the ability to improve patient care, eliminate waste to improve patient experience as well as decrease the financial burden of healthcare, and improve processes to create a more efficient flow in the ambulatory cancer center. Nurses are able to huddle at the kaizen board daily to facilitate the generation and implementation of their ideas as well as encourage communication between team members. Huddle boards are also an effective tool to elevate ideas to leadership when quick resolution is necessary. Continuous process improvement through clear communication and nursing's advocacy while using the huddle board promotes a positive work environment. The Baylor Scott & White McClinton Cancer Center ambulatory infusion department assessed the quantity of nurse-generated ideas, the number of ideas implemented, and the number of ideas shared between departments and Baylor Scott & White Health facilities to demonstrate the value of huddle board utilization and daily huddles. As infusion room nurses generated ideas for continuous process improvement in care and work, nurses wrote their ideas on an "Idea and Action Log." Team members completed huddle board audits monthly, indicating the number of ideas

generated, implemented, and shared or shareable throughout the Baylor Scott & White Health system. Infusion nurses are currently completing a survey regarding the meaningfulness of the kaizen huddle board and daily huddles. From January 2015 through July 2016, the infusion room nurses generated 95 ideas to solve various departmental issues, implemented 84 ideas, and shared 9 ideas throughout the healthcare system. Results of the nurse survey will be finalized in October 2016; early results indicate huddle boards and daily huddles aid in improving communication between team members and improve quality patient outcomes as well as promote a positive work environment. Kaizen huddle boards are an innovative, effective, and meaningful tool for frontline nurses to generate and discuss new ideas while providing an avenue for spreading effective ideas across departments. Huddle boards increase continuous quality and process improvement involvement to enhance patient care and promote a positive work environment.

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**PARTNERS IN CARE PROGRAM DURING ACTIVE TREATMENT IN STAGE III AND IV CANCER PATIENTS.** Susan Nossaman, RN, BSN, CHPN, BC, Cancer Treatment Center of America, Tulsa, OK; Karen Nevener, RN, BSN, CHPN, Cancer Treatment Centers of America, Tulsa, OK

Good symptom management during active treatment can be complex and challenging in later stages of cancer. Multiple providers are involved in a patient's care at Cancer Treatment Center of America, and each provider addresses symptom management to their discipline. Although symptoms are usually well controlled, there was no efficient process to address or communicate symptom issues and goals of care quickly to all the providers. In addition, "End of life" conversations and advance directives were not consistently discussed due to multiple barriers. Some of these patients found themselves in a crisis situation without their wishes made known to staff and family. In response, we saw an opportunity to improve processes to optimize symptom management, address goals of care, and discuss End of Life issues in a non-crisis environment. The plan was to "pilot" a supportive care program called "Partners in Care" to address all these issues earlier. The plan to start a supportive care program included participation from the multidisciplinary team. This core team included a physician and 2 registered nurses certified in Hospice and Palliative care, pastoral care, and social work. Other disciplines involved included naturopathy, nutrition, physical therapy, and counseling. After initial treatment plan established by medical oncologist, the patient is seen by the Partners in Care team. Symptom issues addressed, goals of care identified, Advance Directives discussed, new orders reviewed, and an e-mail sent to the entire care team regarding the visit. The physician then determined time frame for return appointment. The registered nurse followed up with a phone call to the patient between patient visits to CTCA. Since the implementation of the "Partners in Care" program 6 months ago, there has been a 16% increase in Advance Directive completion which prevented "crisis" decision making at end of life. Care and treatment was streamlined according to the patient's wishes and goals, and provided an sense of "empowerment" to those patients. In time, we hope to increase the percent of completed Advance Directives. We also will track program effectiveness in decreasing hospitalizations and urgent care visits, and patient/family satisfaction with symptom management. In addition, the cost of unnecessary tests and treatment could potentially be reduced.

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**WEATHERING THE STORM: EFFORTS TO INCREASE NURSE JOB SATISFACTION, RETENTION, AND PATIENT CARE DURING TURBULENT TIMES.** Toulon O'Connor, RN, Roswell

**Park Cancer Institute, Buffalo, NY; Christina Tobin, RN, MSN, Roswell Park Cancer Institute, Buffalo, NY**

In order to provide quality, experienced, competent care it is important to maintain a qualified group of professional nurses that are satisfied in their position. An inadequate amount of nurse staffing can result in medication errors, poor patient outcomes and patient dissatisfaction. Our ambulatory infusion center experienced a loss of 27% of its nursing staff during an 8 month period. During this time we were moved from a single floor to a multi-level facility with an increased chair capacity of 16%. These changes resulted in a decrease in morale among the nursing staff and patient dissatisfaction. A unit based council was formed to help address both the concerns of the nursing staff and to help facilitate problem solving including environmental needs of the clinic. Our goal in instituting a unit based council was to enhance nursing retention, collaborate with nursing leadership and hospital administration, and to improve clinical operations of the chemotherapy infusion center, therefore increasing patient satisfaction. A capacity number was placed on our patient volume that was suitable for the number of infusion chairs operating and the appropriate number of nursing personnel. Nursing leadership began working with administration to increase staffing numbers. Nurses were given the option of choosing a shift that coincided with a positive work life balance. In addition to our current charge nurse role, a role for medical orders management was defined and implemented. This role provided clear communication between the chemotherapy infusion center, pharmacy and the providers. An anonymous nursing satisfaction tool was created by the Unit Based Council to measure the overall levels of satisfaction. Participation was voluntary in which 95.6% of nurses chose to contribute. Results from the initial survey showed 77.3% of nursing staff "had to force themselves to work" and 63.7% "would consider taking another job". A patient satisfaction tool was created in order to measure patient response to interventions. Plans to utilize both the nursing and patient tool will take place December 2016 in order to quantify results. At the three month mark post facility move subjective data shows an increase in both nursing and patient satisfaction. It is our anticipation that through a concentrated effort between nursing leadership, the nursing team, and our administration, we will continue to see a positive response.

### **186 WHAT IS THE CURRENT STATUS WITH THE IMMUNOTHERAPY AGENTS PLAYING A ROLE IN THE TREATMENT OF SMALL CELL LUNG CANCER (SCLC) AND HOW DO ONCOLOGY NURSES EDUCATE AND PREPARE THE PATIENTS? Karen Oishi, APRN, AGPCNP, MDACC, Houston, TX**

Small cell lung cancer (SCLC) continues to be an extremely challenging disease to treat and eradicate as it is related to high morbidity and mortality rate in the United States and worldwide. There have been multiple exciting pathways in targeting SCLC disease using several novel agents with great potential. Unfortunately, none of these targetable agents have been successful in resulting positive data yet. The recent approval of the immunotherapy in metastatic Non-Small Cell Lung Cancer (mNSCLC) has changed the dynamic and experience of treating mNSCLC patients. In turn, the same concept is being studied in attacking SCLC after many disappointing results in targeting SCLC with other pathways. This is a challenging yet hopeful period of time as oncology nurses have been bombarded with multiple resources and channels in educating and advocating for our patients. It is imperative to continue to educate oncology nurses on any new novel agents that can enhance our understanding of the complex disease and better assist the patients

receiving biologic treatment in the world of individualized and personalized medicine. The learner will be able to verbalize the specific pathway the agent is utilizing and state one common side effect of the immunotherapy agent the patient is receiving for the treatment of SCLC. I performed current literature search on the topic of novel immunotherapy agents as a treatment for SCLC and the key word of oncology nurses. Although several early staged clinical trials demonstrated favorable activity in SCLC, there were not any studies inspecting the relation between the immunotherapy and oncology nurses. I have surveyed and interviewed outpatient oncology nurses working with SCLC patients in the Thoracic medical oncology clinic. After the data analysis, it was indicated that the outpatient oncology nurses desired additional education on the topic. The outpatient oncology nurses exhibited somewhat limited experience in educating patients on immunotherapy agents. The complete data analyzed will be discussed. Oncology nurses need to be aware of the current strategy of immunotherapy for treating SCLC in order to continue to educate the patients and their significant others. As an increased number of patients are receiving immunotherapy, oncology nurses will need to engage in future collaborative teams to improve nursing education to manage side effects.

### **187 PUTTING AN OLD ONCOLOGY NURSING PRACTICE TO BED: A HOSPITAL-WIDE INITIATIVE USING EVIDENCE-BASED PRACTICE TO STANDARDIZE THE ADMINISTRATION OF VINCA ALKALOIDS USING A MINI-BAG, SIDE-ARM TECHNIQUE. MiKaela Olsen, MS, APRN-CNS, AOCNS®, Johns Hopkins Hospital, Baltimore, MD; Dina Benani, PharmD, Johns Hopkins Hospital, Baltimore, MD; Ashley Przybylski, MSN, CRNP, OCN®, Johns Hopkins Hospital, Baltimore, MD; Shannon Carrol, BSN, RN, OCN®, Johns Hopkins Hospital, Baltimore, MD; Kate Szabo, BSN, RN, OCN®, Johns Hopkins Hospital, Baltimore, MD**

Despite the fact that vinca alkaloids have caused fatalities when inadvertently administered into the cerebral spinal fluid, many oncology practices still utilize the Intravenous (IV) push administration method for these drugs. Although this deadly harm could be completely eliminated by using a mini-bag technique, many oncology nurses are concerned about harm from extravasation using this method. Vinca alkaloids including vincristine, vinblastine, and vinorelbine are chemotherapeutic agents used in many different types of cancer therapy including: Non-Hodgkin Lymphoma, Acute Lymphocytic Leukemia, Non-Small Cell Lung Cancer, breast cancer, and Hodgkin Lymphoma. According to Grissinger (2016), since 1968, over 66 cases of fatal ascending myeloencephalopathy have resulted from vinca alkaloid administration into the cerebral spinal fluid. When given via the intrathecal or intraventricular route, vinca alkaloids can cause rapid progression of sensory and motor dysfunction, paralysis, encephalopathy, and death. Although most of these errors occurred when vinca alkaloids were given via the intrathecal route, through lumbar puncture, several cases were related to these drugs being given via Ommaya reservoirs (intraventricular). Hanrahan and colleagues (2015) describe "sacred cows" as old practices in nursing that are considered routine despite the existence of contradictory evidence. The administration of vinca alkaloids IV push is a perfect example of a "sacred cow" in oncology nursing. Despite evidence, many oncology nurses continue this practice and change is needed to put this practice to bed. Data from our institutional experience, dating back to 2013, demonstrates the number of vinca alkaloids doses successfully administered via mini-bag technique in the adult and pediatric population. The incidence of vesicant extravasations at our comprehensive



cancer center has been zero since the implementation of this delivery method. Education, utilizing a video and competency checklist, were implemented to demonstrate a safe and effective technique for administering vinca alkaloids via the mini-bag, side-arm method. Nurses reported satisfaction with the ease of this delivery method after receiving didactic training and hands on skill verification. Vinca alkaloids should always be dispensed in a mini-bag and administered via the IV side arm technique in order to protect patients from avoidable death.

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**SAFETY HUDDLE: IMPROVING COMMUNICATION AND PATIENT SAFETY.** Marilyn Omabegho, MSN, RN, OCN®, NE-BC, Robert Wood Johnson Hospital Somerset, Somerville, NJ; Ceres Raynera, BSN, RN, OCN®, Robert Wood Johnson Hospital Somerset, Somerville, NJ; Hope Tai, BSN, RN, OCN®, Robert Wood Johnson Hospital Somerset, Somerville, NJ

The exchange of pertinent patient information was not readily available to all staff as everyone worked in silo and was only aware of the patients who were assigned to them. There was no shared communication regarding patients' risk factors and to that end by the end of the first quarter in 2015, we already had 14 falls of which 4 had injuries, several CAUTI and CLABSIs. This was quite alarming so we set out to create a forum in which every staff working on the shift would know and become involved with every patient on the unit regardless of assignment. The purpose was to add a Charge Nurse led daily safety huddle at each change of shift which helps to create a culture of safety and has resulted in significant improvement in our nurse sensitive indicators and also to improve team communication. This was used in addition to Bedside Handoff. Interventions: Focused on visual management of the patients by using a magnetic white board. We used color coded magnets to identify all safety risks for the patients. This was piloted and implemented and the Safety Huddle is conducted by the White Board during change of shift. Resulted in better communication as the pertinent information is on the board for everyone to see. Since the implementation of the Safety Huddle in April of 2015, we have seen a significant decrease in Falls, CAUTI and CLABSI as these are discussed during the Huddle. We have since included Isolation and DNR status and nurses' phone number which makes it easier to look at the board and get the information rather than searching the chart or the nurse. Communication is important for patient safety and team safety and in creating the Safety Huddle, every staff is able to provide input on each patient so that even if a staff is not directly caring for a particular patient, they are aware of the patient's risk factors and can respond immediately to a call bell which might prevent a fall. Magnetic White Board and color coded magnets are great for visual management. This also encourages staff participation as they do make sure that the right magnets are associated with the right patients during the Safety Huddle.

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**EFFECTS OF AN INCENTIVE-BASED EXERCISE PROGRAM ON FATIGUE, PHYSICAL FUNCTIONING, AND LENGTH OF STAY IN STEM CELL TRANSPLANT/HEMATOLOGY PATIENTS.** Karine Otten, MSN, RN, ANP-BC, OCN®, Rush University Medical Center, Chicago, IL; Kristin Olsen, MPT, Rush University Medical Center, Chicago, IL; Erin Dowding, MSN, APN, ACNS-BC, OCN®, Rush University Medical Center, Chicago, IL; Katherine Quinlan, BSN, RN, BMTCN®, Rush University Medical Center, Chicago, IL; Mary Heitschmidt, RN, PhD, APN, CCRN, Rush University Medical Center, Chicago, IL

Exercise has been proven to be beneficial for patients undergoing cancer treatment and specifically for patients undergoing

hematopoietic stem cell transplant. Despite all of the benefits of exercise, many patients do not participate in exercise programs and give resistance to nursing staff when they are approached to be more active. Nursing staff identified barriers such as limited physical therapy staff to walk patients in the hallways and patients refusing to participate in exercise or group therapy programs. The purpose of this study is to create an incentive exercise program for patients, so they will be motivated to engage in exercise, and nursing staff will have an objective way to monitor and encourage patients to meet their exercise goals. To implement the exercise program, each patient will receive a pedometer to keep track of steps, and a personalized exercise chart to keep track of points earned. Patients will be rewarded points for participating in various exercise activities. Nursing staff will monitor patient progress: for every 15 points a patient earns a pennant is placed outside the hospital door and a corresponding colored bandana is awarded to the patient. There are 6 levels of bandanas that the patient may achieve. When the highest level is achieved the patient will receive a certificate and be awarded a "Get Up and Go Champion". Baseline measurements using the Brief Fatigue Inventory, the Functional Assessment of Cancer Therapy-General, and the 2-Minute Walk Test will be obtained within 24 hours of admission. To evaluate the program these measurements will be repeated on the day of discharge. Length of stay will be obtained through the participants medical records. Anticipated outcomes from the project will be increased exercise participation, maintained or improved physical functioning and fatigue, and decreased hospital length of stay. Changes in the overall culture of exercise on the unit will be improved as patients will have the opportunity to showcase their different levels of bandanas achieved. Nursing staff will feel less frustrated through the use of more incentive to get patients to exercise while hospitalized, contributing to less nursing burnout. Future studies are needed to identify ways to engage patients in exercise during their hospitalization.

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**SURVIVORS OFFERING SUPPORT: PEER SUPPORT FOR WOMEN WITH BREAST CANCER.** Sara Owens, RN, OCN®, Wellstar Kennestone Hospital, Marietta, GA; Lisa Sherman, RN, CBCN®, Wellstar Kennestone Hospital, Marietta, GA

Influenced by the groundbreaking work of Harold Freeman in 1990, patient navigation has transformed the landscape of cancer care. As the treatment of cancer becomes increasingly complex, it has become more difficult for patients to navigate. Patient navigation plays a vital role in coordinating and eliminating barriers to care. Studies have linked it to better patient satisfaction as well as better clinical outcomes. In September 2013, Wellstar Kennestone Hospital's Patient Family Advisory Board, a component of the cancer program, recognized a need for peer support as a part of patient navigation. Pre-existing options were evaluated and national phone connection programs were found to be viable, but there was an unmet need for patients to connect locally with a peer. In 2016, a committee was formed that included cancer program leadership, nurse navigation and breast cancer survivors. Information, in the form of a literature review and contact with program leadership, was collected about existing peer support and lay navigation programs around the country. The committee worked collaboratively with and used the pre-existing successful program structures to create the framework for the peer program, which was named Survivors Offering Support. Survivor volunteers were recruited from the Patient Family Advisory Board, physician and nurse navigation referral. Qualifications for the volunteers were that they needed to be at least one year out of active treatment if they were Stage I-III or if they were Stage IV, that they be 6 months from diagnosis or progression. Volunteers went through extensive training, which included

breast cancer basics, psychosocial aspects of cancer care, communication, coping skills, boundaries and active-listening. They were oriented to the cancer center, guided through work flow and documentation processes and given an overview of local and community resources. A three-month pilot of the program is scheduled from September-December of 2016 with an anticipated enrollment of minimum 30 patients. In January 2017, a post-survey will be given to all patients who participated. This will consist of a Likert-scale evaluation of patient satisfaction and perception of their experience. Volunteers will also be surveyed for feedback regarding strengths/opportunities for improvement. Expansion of the program and potential incorporation of other disease sites is projected for 2017-2018.

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**PROFILE OF PATIENTS ADMITTED IN AN ONCOHEMATOLOGIC EMERGENCY UNIT, AND CARE PLANNING.** Gislene Padilha Santos, Hospital Israelita Albert Einstein, San Paulo, Brazil; Ana Fernanda Yamazaki Centrone, Hospital Albert Einstein, San Paulo, Brazil; Luciana Manfredini, Hospital Albert Einstein, San Paulo, Brazil

The increased survival of cancer patients and new oncologic agents can increase the probability of treatment complications and side effects. The emergency team must be aware of the potential of these complications in order to treat them as early as possible. The development of an oncologic-specific emergency unit is needed to improve the management of side effects and complications of the oncologic patient population, through a specialized regard and care of cancer professionals, including the oncologic nurse. The objective of this study is to describe the profile of patients looking for the oncologic emergency unit. This is a retrospective study using assistance quality indicators of the unit. Data were analyzed in absolute numbers, percentages and medium values. In 14 months, 782 patients were assisted in the unit, 57% with hematologic malignancies and 43% with solid tumors, 60% of the total number of patients were in active oncologic treatment with chemotherapy. The most common symptoms were pain, fever, nausea and vomits. The principal emergency diagnosis were pulmonary or urinary sepsis (18%), dehydration (12%), febrile neutropenia (7%), nausea and diarrhea post chemotherapy (7%), infection of the upper respiratory tract (14%), pulmonary thromboembolism (7%). Time from hospital admission to Emergency Department(ED) triage was 1 minute in medium, triage time was 5 minutes in medium, time from admission to medical evaluation was 13 minutes in medium, medium time to ED discharge was 3h04m. Patients were classified as having a medical emergency in 10% of the cases, medical urgency in 77% of the cases, and not emergency in 13% of the cases according to the risk classification Emergency Severity Index (ESI). The rate of severity misevaluation was 0,2%.The results of the last 14 months experience reveal that the oncohematologic ED structure was able to treat the oncological complications of the patients in our institution with a low waiting time and high rate of success. A specific oncologic ED unit allowed the adherence to international emergency care protocols and the continuity of treatment and patient care, given that the same professionals assist the patients in the ED, in and out of hospital care.

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**PUTTING TOGETHER THE PIECES OF INFECTION PREVENTION IN AN OUTPATIENT INFUSION CLINIC.** Melody Pakeltis, RN, BSN, OCN®, Houston Methodist Hospital, Houston, TX

Houston Methodist Hospital celebrated Sepsis Awareness Day on September 9th, 2016 and highlighted what different units in the hospital were doing to prevent sepsis. This topic

is of great interest to the oncology units as the patients in these units are many times immunosuppressed and at greater risk for infection and subsequently sepsis. The purpose of this poster project was to highlight what steps are being taken to prevent infections in an outpatient infusion clinic that administers chemotherapy to patients. The poster details what interventions are being done, potential barriers to compliance with the interventions and how those barriers were resolved, as well as the scientific rationale behind the interventions.

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**DECREASING WAIT TIMES FOR PATIENTS RECEIVING NON-CHEMOTHERAPY INJECTIONS.** Catherine Parker, MSN, RN, OCN®, Emory Healthcare/Winship Cancer Institute, Atlanta, GA; Erin Peone, BSN, RN, OCN®, Emory Healthcare/Winship Cancer Institute, Atlanta, GA; Margaret E. Scobey, LPN, Emory Healthcare/Winship Cancer Institute, Atlanta, GA; Jesus Belonio, BSN, RN, OCN®, Emory Healthcare/Winship Cancer Institute, Atlanta, GA

The usual thought for someone receiving an injection is that it is quick. In our infusion center (IC) that was not the case. Depending on patient volumes and staffing, the wait time to receive an injection was over one hour. Patients were frustrated and didn't understand why their wait was so long for something that took a short amount of time once they got to an infusion chair. While our IC wait times were multifactorial, patients receiving injections could be positively impacted by a process/staffing model change. Leveraging an upcoming remodeling of IC space, a business plan was approved to include an injection clinic (INJC). The purpose of creating an INJC was to improve the patient experience by decreasing wait times and improving efficiencies in work flow. During the remodel, several process and staffing changes were trialed with limited success. Barriers identified were predicting and dedicating space in the IC with our current scheduling template and assigning staff. Injections were scheduled with too much variability throughout the day to dedicate a consistent nursing resource. Therefore, we modified our scheduling system; all injections were scheduled in 3 designated chairs, facilitating visibility and appropriate scheduling. After remodeling, due to increased efficiency of injection scheduling, we were able to expand the treatments offered in the INJC to short infusion IV hydration and non-chemotherapy treatments infused in less than one hour. The INJC also assists with port access, IV starts, and lab draws when needed. In addition to process and staffing changes, we formed a working group of charge and staff RNs to determine appropriate treatments for our LPN INJC. Our nurse educator provided education on the various medications and redesigned an Injection Resource Notebook. Patient wait time from check-in to drug administration decreased for injections. Since the INJC opened, due to decreased wait times and improved nurse continuity, we have seen positive patient comments on our Press Ganey survey results. The creation and implementation of an INJC proved to improve efficiency, patient satisfaction, and continuity of care. Our health system has ICs at multiple locations. Due to the success of this INJC, we are creating similar models at other sites. Data collection is ongoing and will be shared at presentation.

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**ENHANCED RECOVERY AFTER SURGERY (ERAS): QUALITY IMPROVEMENT IN PATIENT CARE USING EVIDENCE BASED PRACTICE.** Lisa Parks, MS, RN, CNP, The Ohio State University James Cancer Hospital, Columbus, OH; Sarah Kincaid, MSN, RN, FNP-BC, CNL, The Ohio State University James Cancer Hospital, Columbus, OH

Enhanced Recover After Surgery (ERAS) is a multimodal perioperative care pathway designed to achieve early recovery

for patients who are undergoing oncologic surgical procedures. ERAS pathways encompass the interval prior to surgery to the day of discharge. In order to improve patient care, advanced practice used evidence based practice to development a multi-disciplinary pilot protocol for Whipple patients. The goal of the project was to develop a protocol to allow all disciplines to care for the patient by improving quality and reducing morbidity. A multidisciplinary workgroup was developed with the purpose of developing a pilot program. Current literature was systematically reviewed with key words: ERAS, fast track. early mobility, early feeding. Clinical pathways and process maps were designed using evidence based practice and standards of care. Standardized order sets were developed and individuals were identified as monitors to assess patient outcomes and collect data to revise and improve patient care and clinical pathways. Standardized patient and family education was developed using various disciplines. This is a pilot project implemented within the past six months. Data is currently being collected on length of stay, patient satisfaction, and associated costs. This project has allowed the quality committee in the department of surgery to look at other patient populations where care is currently not evidenced based. Members from the pilot Whipple ERAS pilot project are acting as mentors for the colorectal patient population ERAS workgroup. Advanced practice nurses are trained to design and implement quality improvement projects while mentoring staff nurses to develop patient and family education. Bedside nurses who participate in protocol development understand the need to implement a new way of educating and caring for a specific patient population.

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**CREATING A COMPREHENSIVE ORAL ONCOLYTIC MEDICATION PROGRAM IN A MULTI-LOCATION PRACTICE.** Amita Patel, MSN, NP-C, OCN®, Regional Cancer Care Associates, East Brunswick, NJ; Shannon Woerner, MSN, ANP-BC, OCN®, Regional Cancer Care Associates, East Brunswick, NJ; Tina Flocco, MSN, ANP-BC, Regional Cancer Care Associates, East Brunswick, NJ

Cancer treatment has evolved significantly in the past two decades with the introduction of oral oncolytics, an important & ever growing arm of cancer treatment. Although these medications offer patients the convenience of home administration, they pose different concerns that are not always seen with IV/SQ administration. Two examples are adherence and office follow ups. To avoid these setbacks and to provide quality cancer care, the Central Jersey Division of Regional Cancer Care Associates (CJD RCCA) has established a comprehensive oral oncolytic program. This program was established to provide patients prescribed oral therapy the tools to safely manage their regimens and related side effects. All prescriptions are sent to our in-house specialty pharmacy, which works with patients and their insurance companies to ensure accessibility to the medications at the lowest cost possible, thus relieving financial anxiety. Then a flowsheet is entered into the patient's EMR, triggering a chemotherapy teaching session with a nurse practitioner and weekly follow up visits for the first month, followed by monthly appointments. Patients are clearly instructed not to initiate therapy prior to this initial teaching session. At this visit they are given drug specific educational sheets which include lab tests to be monitored, common adverse effects, and when to report symptoms along with monthly calendars to document adherence. The flowsheet allows our providers to document toxicities objectively using the CTCAE grading scale. Thus, by standardizing all patients on this system, RCCA is able to ensure adequate clinical monitoring of all patients being treated with oral oncolytics. The nurse practitioners of the CJD of RCCA have commenced this novel treatment on 94 patients in the past year, up from 34 in 2015. This dramatic rise is largely

due to having the flowsheet entered into the EMR, prompting enrollment into the program with subsequent monitoring and mandatory follow up. By helping patients navigate the new obstacles of oral treatment, we have been able to increase compliance and safeguard our patients against some of the burdens associated with chemotherapy. At our practice, this program has become an indispensable tool to ensure positive clinical outcomes. The process requires a multi-disciplinary approach in order to remain successful.

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**DAILY HUDDLE: IMPACT ON COMMUNICATION, COLLABORATION AND KNOWLEDGE INTEGRATION.** Jacqueline Patterson, MSN, RN, AGCNS-BC, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Braccia, BSN, RN, OCN®, CHPN, Memorial Sloan Kettering Cancer Center, New York, NY; Lindsay Lafreniere, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Connie McKenzie, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Kerry King, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Miale-Mayer, MSN, RN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY

Discussions and brainstorming are essential for unit cohesiveness and goal attainment to promote optimal patient care. Communication is a key component in sustaining a culture of safety and quality care. The National Institute of Health (NIH) states that daily team huddles are an effective strategy enhancing communication and care-coordination and may improve patient and staff experiences with the goal of maximizing efficiency. The hematology oncology unit at an urban comprehensive cancer center initially started huddle to assist in unit flow, admissions and discharges. However, it has transformed into a platform of discussion on topics related to managing complex hematology patients, care of clinical trial patients, nursing sensitive indicators (NSI), and a collaboration of work flow between RN's and Patient Care technicians. The purpose is to illustrate how huddle has proved to be transformational for communication on our acute care hematology oncology unit. Huddle began September 2015, and was born out of high patient volume and need to streamline admissions and discharges to provide timely admissions to unit. Led by the Charge RN, it is attended by Primary RNs, PCTs, CNS, and Research RNs. Meeting is approximately 20 minutes long. It was found that most of information needed for unit flow, admission and discharge was obtained through direct conversation throughout the morning between charge RN and Primary RN, leaving time available for multiple topics such as review of new policies, brainstorming and collaborating on ideas to maintain and improve NSI, updates on clinical trial patients, and concerns and suggestions regarding acute patients. This has been a vehicle for staff driven changes. Meetings end with a reading from our unit's "shout out" box. Many RNs have stated that twenty minutes have allowed them to stop and take a moment to gather thoughts, follow up with PCTs on care, and to voice ideas for improved patient care. In addition, the huddle has helped in ease of integration of new policies through daily communication, always feeling "in the loop." What, in the beginning, seemed impossible to attend is now looked forward to. A plan is in development to utilize time for Phase 1 protocol discussions and primary RNs to develop patient care conference as the huddle become a small comfortable environment for RNs to gain confidence presenting to groups.

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**STITCHING SOLUTIONS FOR THE BREAST CANCER PATIENT THROUGH VOLUNTEER INVESTMENTS.** Julie Pederson, RN,



The number of new invasive breast cancer diagnosis in women for 2016 is estimated to be 246,660. Approximately, 61,000 women will have the diagnosis of non-invasive breast cancer in 2016. Until 2010, the American College of Surgeons reported a decline in percentage of mastectomy verses lumpectomy procedures. In 2013, the rate of mastectomy nationally increased, secondary to increased awareness with the “Angelina Jolie Affect”, improved education, genetic testing and insurance coverage. Unilateral or bilateral mastectomy result in the need for Jackson Pratt drains to remove serous fluid while the surgical bed heals. If a woman has reconstruction post mastectomy, she could have up to four drains, one for each breast and 2 for the abdominal site. Internal pocketed vests are needed to managing the multiple drains, provide comfort, enhance safety, decrease pulling and potential dislodging of the drain. Seamstresses in the community who were willing to construct vests were identified. They were given information regarding the use of the vest as well as a pattern for making the vest. More than 100 volunteer hours were used creating various sizes of vests. Twenty-two women receiving treatment at the Baylor Scott and White McClinton Cancer Center and surrounding communities were provided with a free vest made of soft, cheerful fabric with internal pockets. Velcro closures were strategically placed for ease in dressing. Each woman who received a vest expressed how comfortable it was and how it made managing the drains so much more easy. All reporting women wore the vest until the drains were removed, usually 7 to 14 days. Unsolicited comments included, “I don’t know what I would have done without this vest.” While there is a commercially available camisole, it provides only two pockets that are placed up high. The personalized, 4 pocketed free vest could be provided to women throughout the United States, when volunteer seamstresses in communities are a made aware of the need. One vest, with strategically placed pockets, easy to put on, comfortable to wear and free, can be created for any woman in need using volunteer seamstress skills.

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**BRIDGING THE GAP BETWEEN CLINICAL TRIAL INFUSION NURSES AND CLINICAL TRIAL RESEARCH NURSES.** Kristin Pegram, RN, OCN®, Vanderbilt University, Nashville, TN

The mission of our National Cancer Institute-Designated Comprehensive Cancer Center includes alleviating cancer death and suffering through pioneering research and innovative patient centered care. Research nurse teams (RNs and LPNs) in the Clinical Trials Shared Resource (CTSR) and Infusion RN teams in the Infusion Center jointly care for patients participating in therapeutic cancer treatment clinical trials. In the academic setting of our center, the nurses in each area have separate organizational structures and role structures which can present challenges to integrated care. The purpose was to integrate three teams of oncology nursing and management of these teams to improve processes and provide quality care for oncology patients on therapeutic clinical trials. Interventions: Proposed consistent staffing of Infusion RNs trained in management of patients on clinical trials in the Center for Cancer Targeted Therapies (C2T2), the designated Infusion pod for oncology patients on therapeutic clinical trials. Created and distributed an email survey, as well as conducted one on one interviews of CTSR RNs and LPNs, Infusion RNs and management staff in both areas, to gather knowledge regarding current processes. Data was reviewed which identified barriers, challenges and opportunities to provide quality care for our patients on clinical trials. A teaching document was created and distributed to staff and management in both areas. Designated nurses, who have been trained specifically to care for oncol-

ogy patients on therapeutic clinical trial patients, have been assigned to C2T2. Nurses and management indicated that the teaching document helped them understand the roles of each team member and led to changing processes to improve the care of the patients in C2T2. Process issues are identified and elevated early. Our clinical and clinical trials teams continue to work together on strategies for integrating clinical research into daily practice for our patients. The next step is exploring the possibility of a C2T2 nursing advisory council. The integrated approach to conducting clinical trials has created an awareness of clinical trials throughout our Infusion Center, particularly on C2T2. Infusion nurses with clinical trial expertise enhance the study experience for our patients and promotes better communication between the Infusion nurses and Clinical Trial nurses.

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**EMOTIONAL OVERDRIVE: HOW TO PUMP THE BRAKES ON COMPASSION FATIGUE IN ONCOLOGY NURSES.** Emily Perfetto, BSN, RN, NYU Langone Medical Center, New York, NY; Rebecca Goldberg, BSN, OCN®, CHPN, RN, NYU Langone Medical Center, New York, NY

The unique and long-standing relationships that oncology nurses develop with patients and their families make end-of-life (EOL) care increasingly difficult and stressful. Through continued exposure to suffering and pain, many oncology nurses experience compassion fatigue (CF) which can manifest as physical, emotional and spiritual distress. If left unaddressed, CF can eventually lead to burnout and possibly oncology nurses leaving the field. In order to combat CF, literature shows that a variety of interventions including formal debriefing sessions, grief education programs as well as holistic and spiritual interventions are effective in reducing compassion fatigue and alleviating grief-related stress in oncology nurses. With no formal compassion fatigue program in place at our institution we sought to initiate a pilot program on our 28-bed inpatient hematology/oncology and BMT unit. Prior to introducing any interventions, a needs-assessment survey was conducted. Forty-two staff members were surveyed and asked about their level of emotional fatigue and if they thought they would benefit from grief support programs. With an overwhelming response of “yes” (41 out of 42) an initial roll out of four interventions were initiated: 1. Condolence cards to be signed by staff and sent to the family members of patients who passed away on our unit. 2. Formal debriefing sessions led by an in-patient psychiatrist. 3. Group meditation and individual Reiki sessions led by our integrative health RN. 4. Remembrance/prayer box for staff to submit thoughts/prayers/notes. An end of the year survey was conducted to assess the staff’s response to the interventions and the feedback was positive with many people citing the condolence card program and the integrative health sessions as particularly helpful. Areas that needed adjustments primarily focused on providing more opportunities for night staff to become involved. In the upcoming year we will continue to expand on our successful programs while making modifications to include night shift staff, offering alternative times for integrative health sessions and the opportunity to call in for debriefing sessions. While oncology nurses are particularly susceptible to compassion fatigue, it is not exclusive to our field alone. Using our successful, unit-based program as a platform, we hope to expand hospital-wide, providing the same opportunities for other units to help their staff with this ongoing problem.

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**BUILD A UNIT, BUILD A NURSE: THE ONCOLOGY VERSION.** Claire Perlitsh, RN, BSN, OCN®, PHN, Providence Holy Cross Medical Center, Mission Hills, CA; Ingrid Blöse, RN, BSN, OCN®, CMSRN, Providence Holy Cross Medical Center,

Mission Hills, CA; Cynthia Dasaad, RN, BSN, OCN®, PHN, Providence Holy Cross Medical Center, Mission Hills, CA; Aaron De Leon, RN, Providence Holy Cross Medical Center, Mission Hills, CA; Tanya Haight, RN, BSN, OCN®, CCRN, Providence Holy Cross Medical Center, Mission Hills, CA; Michelle Tabar, RN, BSN, OCN®, CMSRN, Providence Holy Cross Medical Center, Mission Hills, CA

Managing transition from a multifocal unit to a dedicated Oncology Unit. The transition had a positive impact on quality indicators (HCAHPS, CLABSI/CAUTI), employee engagement (NDNQI) and retention. The purpose was to develop Oncology nurses to improve quality of care for oncology patients. Interventions: Building an Oncology Team: 22 nurses with Oncology experience were hired ranging from Novice to Expert. An Oncology trained chaplain, Oncology Nutritionist, Oncology Pharmacist, Oncology Nurse Navigator, and Oncology Case Manager are integral members of the interdisciplinary team. Building Morale/Teambuilding Activities: Murals painted in patient rooms, there was a unit blessing by the Chaplain, Oncology T-shirts reflected unit pride and Fellowship Dinners focused on reducing compassion fatigue. The mentorship program partners expert Oncology nurses with novice Oncology nurses. Oncology has broad representation in Magnet and Shared Governance. Four Oncology nurses received the Daisy Award. Fostering employee engagement through team building activities is proven to improve patient outcomes. The Oncology website was developed as a resource for patients and nurses. Caritas classes were offered. Nurses are champions of various initiatives. The Oncology unit has strong representation at local ONS chapter. 100% (22) of eligible nurses are ONS chemotherapy/biotherapy certified. Whole Person Care: Patient and family centered care begins at arrival; patients receive a Welcome Packet with information including medication handout, resources, and individualized education. RN bedside reporting improved patient's perception of involvement in the plan of care. Monthly support groups are available for patients and families. NDNQI scores in 2013 were 7% below mean. 2015 scores were 10% above mean; an overall increase of 17%. Retention improved by 20% in 2016 over 2014. OCN certification increased from 30% to 46%. HCAHPS scores Q1, 2015 compared to Q1, 2016 showed 18% increase on six measures. CAUTI rate in 2016 decreased to 0 from 3.4 in 2014. CLABSI rate in 2016 decreased to 0 from 2 in 2014. Creating a favorable practice environment on a dedicated Oncology unit has significant potential to improve nurse well-being, retention, and quality of care. Nurses' participation in hospital decision making ensures that care provided remains patient-centered and individualized, promoting better outcomes for patients. Dedicated Oncology nurses embrace their role as members of the interdisciplinary team in transforming clinical practice with an increasing emphasis on patient centered care.

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**SOCIAL GROUP MESSAGING IN ELECTRONIC HEALTH RECORD IMPLEMENTATION.** Kim Peterson, MSN, RN, ACCNS-AG, OCN®, Johns Hopkins Hospital, Baltimore, MD; Barb Van de Castle, DNP, ACNS, OCN®, RN-BC, Johns Hopkins Hospital, Baltimore, MD; Monica Wilt, BS, RN, Johns Hopkins Hospital, Baltimore, MD

Implementation of an Electronic Health Record (EHR) is complex and requires focused, timely communication among stakeholders to ensure uncompromised patient care. This project's purpose was to support intra-team communication between nursing super-users and project leads during go-live implementation of an EHR utilizing a social group messaging tool. Usage patterns and staff feedback were assessed to determine usefulness of the application and viability of future use

as a communication tool. Literature supports group messaging through smartphones as a means of feeling connected within a group. The use of social group messaging offers a sense of community, allowing staff the opportunity to post questions and receive rapid responses from other members. Although sharing Protected Health Information (PHI) was prohibited, members did take screenshots of warning and error messages to assist in problem identification. All super-users (65) were invited to join the group messaging tool prior to go-live. Sixty percent participated and received SMS texts or downloaded the application to their smartphone. Users could opt to silence incoming texts at any time. Threads were followed through a smartphone application (via SMS or the app) or a website. 87.2% of those with an account sent at least one text during implementation. Between June 28th and August 31st 1021 texts were sent, including 66 pictures. Blood transfusions (17.7%), followed by flowsheet or nursing documentation (15.6%), and admission/discharges (13.4%) were the most prevalent topics. The greatest number of texts (101) were sent on the first day of implementation and tapered over the project period. A post-implementation satisfaction survey was sent to all super-users. Twenty-four members (36.9%) completed the survey. Most used the smartphone app (90.5%) to follow the thread. Feedback was overwhelmingly positive. Staff noted convenience, ease of use, and knowledge-sharing as strengths of the application. The social messaging tool continues to serve as a forum for EHR communication between department staff by identifying unplanned EHR downtime, verification of appropriate downtime procedures, and real-time status updates. The tool was well received and may be a viable tool to adopt for future projects.

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**USE OF HAND AND FOOT CRYOTHERAPY TO PREVENT NAIL CHANGES DURING TAXANE ADMINISTRATION: APPLYING THE EVIDENCE.** Lauren Peyton, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Erica Fischer-Carlidge, MSN, CNS, AOCNS®, CBCN®, Memorial Sloan Kettering Cancer Center, New York, NY

Taxane chemotherapies are a common treatment for many solid tumor oncologic patients. Nail changes, including discoloration (dyschromia) and lifting (onycholysis) are common. These changes can lead to disfigurement, infection, and impair quality of life. Cryotherapy, or cold therapy, has been shown to reduce the incidence of significant nail changes. Oncology nurses need information on efficacy and tolerability of extremity cooling during taxane administration to be able to provide, current evidence-based supportive care measures to patients. This presentation will review nine years of literature related to cryotherapy use for the prevention of significant nail changes during taxane administration. It will also discuss the application of this data to practice in one large academic cancer center. A literature review of CINAHL and PubMed databases was performed using Boolean search terms "taxanes, nail changes, and cooling," "cryotherapy and taxanes," and "cryotherapy and chemotherapy" was performed with data from 2007-2016. Eight clinical trials were conducted in the last decade. Most were case controlled studies and one systematic review. The majority of the studies were performed in the breast cancer population; however studies also included prostate, lung, gynecologic and other cancers. Outcomes measured were severity of nail toxicity and time to development of nail toxicity. Of the eight studies, two did not demonstrate reduction in nail toxicity however those studies had high attrition rates related to cold intolerance of the glove used. Despite those two studies, there is still sufficient evidence to support extremity cooling as an effective strategy to prevent nail toxicities in patients receiving taxane-based chemotherapies. Application of this evidence has the potential to improve

patient quality of life during chemotherapy treatment and reduce toxicity severity; however this is only possible when oncology nurses are informed and driving practice changes. Based on the synthesis of the literature, the standard of care for a large academic medical center infusion unit was modified to offer all patients receiving taxanes extremity cooling. The data from these experiences is driving larger, institution-wide quality improvement efforts. Case studies of patient outcomes as a result of this change in standard will be reported during formal presentation as an exemplar of translating this evidence in outcome changing practice.

### 203

**INNOVATION IN DIGITAL HEALTH IN CANCER CARE.** Ruth Phillips, RN, BSN, MS, OCN®, Voluntas, Collegeville, PA; April Boyd, RN, BSN, OCN®, MD Anderson, Houston, TX; Ellie Strock, ANP-BC, FAANP, CDE, Voluntas, Cambridge, MA

In a rapidly growing digital health field, mobile technologies are utilized in a number of diseases. With more than 165,000 health applications available, less than 150 are FDA regulated and only about 30 are backed with clinical trial evidence. Advanced application functions include medication titration, symptom management, education and remote monitoring. In oncology, use of digital health is relatively new. When searching the App Store there are only a handful of apps related to the terms “cancer” or “oncology” and most are tailored for the health care professional. Several oncology trials have used mobile technology; in colon cancer for symptom and temperature monitoring with automated alerts to the care team using algorithms, and in breast/colorectal cancer to assess incidence, severity and distress related to common side effects. Overall survival advantage was shown in NSCLC using pain questionnaires sent via a mobile app. Digital technology can support symptom management, provide an accurate reflection of therapy-related toxicities and improve outcomes. Digital platforms also have been used to look at ways to improve survivorship care and meet quality requirements. They have been well received by patients. New technologies connecting patients and care teams via cloud-based systems with embedded algorithms for symptom monitoring are being developed. Therapeutic companion software is the next step and can empower patients by providing real time access to support and assists the care team in the management of side effects. Oncology nurses have an important role in this emerging field. This session will review the current literature and mobile health technologies utilized in oncology, identify pros and cons of applications currently available and discuss opportunities for the future.

### 204

**PREPARING FOR TRANSITIONS: OPTIMIZING PATIENT CARE COORDINATION.** Theresa Pody, MSN, RN, NE-BC, Fox Chase Cancer Center, Philadelphia, PA; Mary Ellen Morba, BSN, RN, Fox Chase Cancer Center, Philadelphia, PA; Jenna Ledger, MSN, RN, PCCN, Fox Chase Cancer Center, Philadelphia, PA; Jessie Schol, BSN, RN, OCN®, Fox Chase Cancer Center, Philadelphia, PA; Sarah Porzig, BA, RN, OCN®, Fox Chase Cancer Center, Philadelphia, PA

Cancer as a chronic disease affords opportunities for clinicians to improve communication and care planning along the disease continuum. The coordination of care for the oncology patient is complex due to the variety of treatment options, side effect management and multi-provider teams. Patients can encounter fragmented post discharge care, or simply be overwhelmed with information. This Cancer Center's long term, multidisciplinary improvement efforts have resulted in practice changes that enhance coordination of care to improve the transition from inpatient to outpatient care for the hospi-

talized oncology patients. Successful transition requires: (a) Early discharge need identification and preparation by nursing (b) Coordinated multidisciplinary care planning written and verbal communication among patient, family and care team about the care plan (c) Expanded role for the RN Navigator to provide continuity between levels of care. Project Methodology included an initial analysis of processes and roles. The team designed a discharge planning process to optimize the successful transition to outpatient care. The objective measures selected as baseline and project metrics were: readmission rate, patient satisfaction measured in the Press Ganey inpatient survey, and call volume made to the Triage phone nurses within five days of discharge from the hospital. Project goals and targeted outcomes are: 1. Patient-centered Multidisciplinary rounds on all units with a focus on nursing sensitive indicators, patient goal for the day and discharge plan of care 2. Development of an App for documentation of information communicated during the rounding process providing team communication during the patient's stay and the documents needed for patient discharge 3. A program for Readmission Risk and Disposition Modeling is being developed and used as part of the discharge planning process 4. Discharge instruction sheets are personalized to individual patient needs based on the discharge plan of care 5. Transition Navigators are integrated in the inpatient /outpatient care continuum 6. Patient is discharged with a printed schedule with all follow-up appointments for all internal and external visits to providers, diagnostics, etc. and a follow-up phone call in 24-48 hours following discharge. The multidisciplinary process is a long term project commitment in order to integrate the practice changes that make a real difference to improved transition of care for oncology patients.

### 205

**PROVIDING ONCOLOGY INFUSION NURSES EVIDENCE-BASED GUIDELINES AND INTERVENTIONS TO MANAGE INFUSION REACTIONS AND ANAPHYLAXIS.** Denise Portz, MSN, RN, ACNS-BC, AOCNS®, Froedtert & Medical College of Wisconsin, Milwaukee, WI

Many infused medications, including chemotherapy and bi-therapy, carry the risk of triggering infusion-related reactions. Although reactions can be allergic or non-allergic most infusion reactions will require prompt intervention to prevent progression of severity, as these reactions can become life-threatening if handled incorrectly. Management of an infusion reaction takes knowledge and confidence in the risk, identification and treatment of this acute event. Most infusion nurses have basic knowledge of how to manage patients with reactions; however, some nurses may lack the confidence and understanding of the sequence and importance of timely emergent medication administration. The purpose of this project was to provide evidence-based guidelines and education to infusion nurses across a large ambulatory oncology infusion setting for the treatment of patients suffering from infusion reactions or anaphylaxis. In a large academic cancer network, nursing, pharmacy, physicians and advance practice providers collaborated to revise the guideline for infusion reaction and anaphylaxis treatment based on current evidence. The oncology infusion clinical nurse specialist created and delivered ten education sessions across four locations to provide nurses with updated interventions for the management of patients with infusion reactions and anaphylaxis. Education focused on patient risk assessment, pathophysiology of infusion reactions and anaphylaxis, quick identification of symptoms, and timely medication administration (including sequencing and new drug delivery methods). The importance of intramuscular epinephrine delivery using the epi-pen, and administration of an IV bolus with a pressure infusion cuff, were emphasized. In order to entice infusion nurses to attend, one unit of continuing education credit was applied for.



Forty-eight nurses attended the education session. Forty nurses responded that the session was “excellent”, 7 responded “very good” and 1 responded that the session was “good” at meeting their learning needs on this topic. When asked if the nurses would be changing their practice based on this presentation and how, the majority of nurses responded yes and commented that they feel more knowledgeable about understanding the different action and sequencing of drugs for reactions, giving epinephrine sooner and more comfort about handling reactions. Overall, creation of an evidence-based infusion reaction and anaphylaxis guideline provides clear direction for the treatment of this life threatening event. The education was successful at improving infusion nurses knowledge and confidence when caring for these patients during an acute crisis.

## 206 EARLY IDENTIFICATION OF SEPSIS AND INTERVENTION IN THE OUTPATIENT SETTING. Brittni Prosdocimo, MSN, RN, Hillman Cancer Center, Pittsburgh, PA

Sepsis is a potential life threatening oncologic emergency that starts with an infection. During a sepsis event the body initiates a systemic response to an infectious agent. When left unrecognized and untreated, sepsis can lead to shock and death. Therefore, early recognition and prompt intervention can help decrease the morbidity and mortality associated with sepsis. In the United States more than 750,000 people experience sepsis annually, with overall mortality between 20-30% and increasing upwards of 50% when shock is present. The Healthcare Cost and Utilization Project of the Agency for Healthcare Research and Quality lists septicemia as the most expensive condition treated in the United States (\$20.3 billion) accounting for 5% of national costs. In an effort to improve patient outcomes as well as maintain financial responsibility for our healthcare organization, University of Pittsburgh Medical Center (UPMC) Hillman Cancer Center implemented a sepsis committee whose purpose is to provide staff with the necessary resources to allow for early identification and appropriate intervention of potentially septic patients in the outpatient setting prior to admission to UPMC Shadyside (Shy) hospital. This committee later expanded to include the SHY emergency department and created an ED transfer of care hand off tool, to ensure safe and thorough hand-off between departments. A literature search was conducted using key words sepsis management, surviving sepsis, sepsis campaign, outpatient sepsis management, early identification of sepsis, and sepsis campaign guidelines. The search was filtered to include scholarly and peer reviewed articles, and was limited to include the years 2009-2015. Research strongly supports the need for earlier identification and intervention for septic patients to improve overall morbidity and mortality. The Hillman Sepsis committee was able to develop tools to be utilized by staff to aid in earlier identification of sepsis and intervention. As a next step in the project, Hillman will audit patients outcomes prior to and then following the implementation of the sepsis committee tools to determine if Hillman's efforts to identify and intervene in potential septic patients, prior to their admission to Shadyside Hospital, improved septic patient outcomes.

## 207 HOW TO USE LEAN METHODOLOGY TO CREATE A PLAN TO PROVIDE SPECIALIZED ONCOLOGY RN CARE TO MULTIPLE GEOGRAPHICAL LOCATIONS. Candace Pruet, MS, RN, NE-BC, University of Colorado Health/Poudre Valley Hospital, Fort Collins, CO; Kathy Brown, MS, RN-BC, CPHQ, University of Colorado Health/Poudre Valley Hospital, Fort Collins, CO; Patsy Grant, BSN, RN-BC, University of Colorado Health/Poudre Valley Hospital, Loveland, CO; Diane Reider, MS, RN,

University of Colorado Health/Poudre Valley Hospital, Fort Collins, CO; Kathryn Kirkpatrick, BSN, RN, OCN®, University of Colorado Health/Poudre Valley Hospital, Fort Collins, CO; Peggy Bradley, MS, University of Colorado Health/Poudre Valley Hospital, Fort Collins, CO

The North Region of The University of Colorado Health has four outpatient infusion areas, three clinics, two inpatient hospitals, and seven outreach locations. All of these areas require specialized oncology nursing care and knowledge. The challenges of meeting patient care needs along with tightened staffing models has demanded a concerted effort to use Lean processes to ensure RN resources are used efficiently to meet patient needs across all facilities. The purpose of this Lean Rapid Improvement Event was to first get the oncology patient to the right location and the right unit. The second identified need was to ensure that we have all of the specialized services and RN support for that patient. Interventions were identified and developed by a team made up of RN's, Pharmacist, MD's, Business Manager, RN Quality Specialist, Senior Level Directors, and a Performance Improvement Coach. In 4 days this highly engaged team: identified the key issues, created solutions, did rapid experiments to test the functionality of ideas and created the plan of action. The plan of action included: (a) Proposal for a specialty oncology float team to span the entire oncology service line including inpatient and ambulatory oncology services. (b) Immediate and long term education plan for oncology areas including an Oncology Nursing Residency Program (c) Visual alert in the electronic health record to identify that a patient is an active oncology or hematology patient to ensure the appropriate placement for services. Outcome measures were identified to measure success of the implementations: (a) Reduction in overtime and working above FTE due to staffing to meet specialized oncology needs such as chemo delivery or management of hazardous drug. (b) Reduction in delay of treatment due to staffing or patient placement (c) Decreased need to transfer patients to another facility or location to receive specialized oncology care and increase patient satisfaction. The Lean process provided the structure for this group to put together the right team to make instant practice changes with the tools to identify what changes needed to occur in the most efficient way. The innovation for this project is the use of Lean methodology to address a concern in the care of the oncology patient and utilizing front line staff and key stakeholders to implement change.

## 208 IMPLEMENTING OPTUNE IN A RADIATION ONCOLOGY DEPARTMENT. Ginny Pugh, BSN, Helen F. Graham Cancer Center and Research Institute, Newark, DE

Optune is a standard treatment for newly diagnosed and recurrent Glioblastoma Multiforme (GBM) patients. It is proven to increase life expectancy for this patient population. Once Optune is prescribed by the radiation oncology office, the primary Optune trained nurse gathers all relevant medical records on the patient and submits the information to the company Novocure who manages the Optune device. Optune uses tumor treating fields to treat the tumor or tumor bed. These are low intensity electromagnetic waves that are transmitted through 4 arrays that are strategically placed on the patient's shaved scalp. This usually beings about 1 month after radiation therapy has been completed. It is recommended that Optune be worn for a minimum of 18 hours a day. Novocure introduced Optune between the medical oncology and radiation oncology offices. The radiation oncology office at the HFGCC & RI pursued certification of Optune by completing a 2-3 hour certification course that was presented to the physicians and nurses involved. When the course was com-

pleted, the physicians were able to prescribe Optune. Once Optune is prescribed, the radiation oncology nurse educates the patient about the device in conjunction with the physician's introduction of Optune. The nurse assists with tips on applying the arrays, changing the arrays, skin tips to prevent skin breakdown, managing skin toxicities that could occur, managing the psychosocial aspect of Optune for the patient, and supporting the patient through this new and different type of treatment. To be able to offer additional hope to any cancer patient is important and powerful from an oncology nurse's standpoint. By educating and monitoring patients who are on Optune, you are providing important information and resources for the next patient that is prescribed Optune. Using patient experiences and providing that information to future patients can ease new patient's fears and uncertainties about using Optune. The nurse in the radiation oncology office becomes the "go to person" for the GBM patient after the device has been applied and becomes a beacon of hope and knowledge to the patient and their family. The nurse can help encourage and improve the patient's quality of life while using Optune.

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**FIRST IN HOPE, FIRST IN CARE, THIRD IN RAPID RESPONSES.** Maria Quirch, BSN, RN, OCN®, UCLA Santa Monica Hospital, Santa Monica, CA; Dallas Lawry, BSN, RN, OCN®, UCLA Santa Monica, Santa Monica, CA; Patricia Jakel, RN, MN, AOCN®, UCLA Santa Monica, Santa Monica, CA; Coleen Wilson, MSN, RN, UCLA Santa Monica, Santa Monica, CA; Romina Sequeria, BSN, RN, UCLA Santa Monica, Santa Monica, CA

The advancement of oncology treatment modalities has led to the increased survival of cancer patients, but has also heightened the complexity of their care. The 26 bed solid oncology unit at UCLA Santa Monica is ranked 3rd in the hospital for Rapid Response (RR) calls. RR is an intervention for early recognition of clinical deterioration, which improves survival rates and quality of life. Bedside nurses are frontline responders for detecting these, sometimes subtle, but life-threatening changes in patient status. In the last three years, as high as 58% of RRs called on the solid oncology unit resulted in ICU transfer. Evidence based interventions were implemented with the purpose of empowering nurses to initiate RRs and to address identified barriers. Education (a) Informational flyers were posted around unit. (b) PowerPoint presentation at monthly staff meetings and at the start of shift huddles that all oncoming staff attend. (c) Badge Buddies - The RR Badge Buddy is small rectangular laminate attached to the hospital ID badges of each RN on the oncology unit. This resource functions as a "cheat sheet," outlining RR criteria and vital signs. (d) Post-Rapid Huddles- After each RR, interdisciplinary huddles involving the key players (including MDs/NPs) were held with the purpose of identifying areas of excellence/opportunity. Based on our data, several themes were identified that would deter a nurse from calling a RR: (a) 47% of RNs admitted to MD resistance when initiating RR. (b) 14% of RNs fear criticism for initiating RR if escalating care is denied. (c) 100% of new graduate RNs reported feeling confident in their ability to initiate a RR, yet 77% of experienced RNs felt that new grads needed more RR education. Nearly half of RNs surveyed reported push-back from physicians when consulting the need for a RR/higher level of care. There is a small window of opportunity to initiate a RR before terminal decline is imminent. Ongoing roll-out of education, badge buddies, and post-RR huddles are addressing identified barriers and improving RN knowledge and confidence. The RR, as a nurse-driven protocol, allows for nurse autonomy and empowerment, leading to improved patient outcomes.

## 210

**ROLLING OUT THE PINK CARPET; CHANGING THE NEW PATIENT PROCESS.** Lindsey Radcliff, RN, BSN, Ohio State Wexner Medical Center, Columbus, OH; Katie Tolliver, RN, BSN, Ohio State Wexner Medical Center, Columbus, OH; Gale Worthington, CHA, Ohio State Wexner Medical Center, Columbus, OH; Mandy Wooten, Ohio State Wexner Medical Center, Columbus, OH; Heidi Basinger, MS, BSN, RN, Ohio State Wexner Medical Center, Columbus, OH

Being referred to an academic medical center is often daunting to a patient. Arriving at the first appointment to discover outside records have not been received or are incomplete and treatment can't begin because of it. Gathering copies of a patient's outside records is important to ensure a meaningful visit, and the patient leaving with a comprehensive treatment plan. It also is helpful to the provider's team to have the patient's outside records packaged so that the visit can be as informative to the patient as possible and treatment can be started quickly. A comprehensive breast cancer center located in the midwest was experiencing significant delays in care because of incomplete outside hospital records for new patients. A multidisciplinary group from our outpatient clinic discovered that we frequently had incomplete records that led to additional appointments. Assembling outside record data is cumbersome for providers seeing a large volume of patients during a clinic day. Our center has begun a pilot program using expert oncology nurses to assemble records and imaging. Working collaboratively with the scheduling department, the nurse triages the patient based on their history, ensuring they are seen in an adequate time frame. Before the patient is seen, all records, reports, and breast imaging from the outside setting is reviewed by our radiologist to provide a second opinion. Then the records are summarized in an oncology history. This results in less serial appointments because the surgeon or medical oncologist can review the imaging before patient arrival. The patients now do not have to arrive early for a second opinion on imaging to be done before seeing a physician. The nurse is also a resource for the patient leading up to their first appointment by relieving anxiety and answering questions. As a result of this pilot, we have had less serial new patient appointments, more rapid initiation of treatment and improved provider and patient satisfaction. The role of the clinical program manager nurse is now being implemented in multiple areas of our tertiary care center.

## 211

**THE DESIGN AND IMPLEMENTATION OF AN ONCOLOGY AND PHARMACY NURSING COMMITTEE TO OPTIMIZE INTERDISCIPLINARY COMMUNICATION AND PATIENT SAFETY.** Judy Ranous, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Heather Backus, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Lynn Czaplewski, MSN, RN, ACNS-BC, AOCNS®, CRNI, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Denise Portz, MSN, RN, ACNS-BC, AOCNS®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Carolyn Oxencis, PharmD, BCPS, BCOP, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Joel Frank, PharmD, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

The nurses and pharmacists working in a large Midwest academic infusion center recognized a need to increase communication between the two disciplines, with an ultimate goal of improved safety regarding the prescription, preparation, distribution, and administration of hazardous medications for our patients with cancer. A grass roots effort commenced, spear-

headed by an oncology infusion center nurse and pharmacist, to create an Oncology Pharmacy Nursing Committee (OPNC). The purpose of the OPNC was to establish a joint decision-making body for issues involving the pharmacy and nursing departments working in ambulatory and acute care oncology, improve patient outcomes related to the pharmacological delivery of hazardous medications, and to serve as a service line working group for medication errors and electronic medication treatment plan issues. OPNC is comprised of representatives from multiple key areas of the oncology service line; nurses, pharmacists, and an oncologist. The committee reviews and updates hazardous agent and parenteral medication guidelines, which is then available for oncology nurses to reference regarding safe handling and administration of formulary-approved medications. With the driving force being safe administration of hazardous medications to the patient, working together on parenteral administration guidelines has given nurses an appreciation for the drug preparation process, and pharmacists an appreciation for bedside administration of medications and monitoring of adverse effects. Reviewing these guidelines provides a forum for identifying electronic treatment plan inconsistencies and inaccuracies leading to provider specific practices being more standardized. OPNC also continuously strives to address the key patient dissatisfaction of wait time. One intervention was identifying medications requiring extended preparation time, and communicating this to nursing staff to assist with setting up patient expectations regarding wait times. Medication error reporting and review through OPNC impacts our internal processes by presenting an open, blame free, facilitated brain storming session in an attempt to actively identify the root of the problem and discuss potential solutions. The benefits of OPNC promotes the safe and effective medication use process in an efficient manner allowing process improvements to be continually implemented. This is carried out in a culture of mutual respectful knowledge sharing and communication of each discipline's professional responsibility which in turn promotes continued assessment, evaluation, and improvement of processes contributing to increased quality care and patient satisfaction.

## 212

**AN EVALUATION OF PATIENTS ADMITTED WITH TREATMENT-RELATED FEBRILE NEUTROPENIA IN TWO COMMUNITY HOSPITALS.** Linda Reuber, MSN, RN, AOCNS®, Fairview Ridges Hospital, Burnsville, MN; Jodi Wieczorek, MSN, RN, OCN®, Fairview Southdale Hospital, Edina, MN; Amy Saladis, BSN, RN, OCN®, Fairview Ridges Hospital, Burnsville, MN; Avina Singh, MD, Fairview Ridges Hospital, Burnsville, MN; Gautam Jha, MD, University of Minnesota Health, Burnsville, MN; Steven Rousey, MD, Fairview Southdale, Edina, MN

The presence of febrile neutropenia is still a profound problem among cancer patients receiving cancer treatment. Although many patients are managed successfully in the outpatient setting, there are many patients that require inpatient hospitalization and treatment. These hospitalized patients are at risk for sepsis. The implementation of the Saving Lives Sepsis Bundle may mitigate the unfavorable outcomes in these hospitalized patients. The purpose of our project was to identify current best practices in treatment of patients admitted with febrile neutropenia through literature review, data collection from patient charts, and comparison with data to best practices. Thirty nine journal articles from 2009-2015 were reviewed and summarized. Clinical data were abstracted from patient charts from January 2013 to December 2014 from both hospitals. At the time that our results were analyzed, a sepsis protocol was initiated. A second data analysis was completed after the sepsis protocol was implemented. The literature revealed that there is not one agreed upon standard for best practices, such as optimal timing from patient arrival to the hospital to collection of

blood culture and antibiotic administration because published studies and guidelines have insufficient numbers of patient cases to be statistically significant. There is general agreement that initial patient assessments upon presentation should be timely, and blood cultures and initial broad spectrum antibiotics administered as soon as possible. We evaluated 106 patients. We found that time to initial blood cultures were 78 and 167 minutes respectively for institution one and two. Time to antibiotic administration was 268 and 232 minutes. A second data analysis following implementation of the sepsis protocol revealed that there were 34 evaluable patients. The average time to initial blood cultures was 61 minutes and 54 minutes respectively for institution one and two. Time to antibiotic administration was 156 minutes and 159 minutes. There was a decrease in the average time to blood culture and time to antibiotic following the implementation of the sepsis protocol. Interestingly, the number of admissions of patients with febrile neutropenia decreased from 106 in the first study to 34 in the second study. Febrile neutropenia and sepsis are considered oncologic emergencies. Nurses play a pivotal role in identification of these patients and initiating timely lifesaving treatments.

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**CREATING CLEAR CREDENTIALING FOR SPECIFIC COMPETENCIES FOR CLINICAL ASSISTANT STAFF IN AMBULATORY CARE.** Marie Riehl, RN, BSN, OCN®, Fox Chase Cancer Center, Philadelphia, PA; Linda Schiech, RN, MSN, Fox Chase Cancer Center, Philadelphia, PA; Virginia Martin, RN, MSN, Fox Chase Cancer, Philadelphia, PA

Health care has undergone rapid change during the recent decades and continues to evolve in ambulatory care. Direct supervision of the assistant staff is the responsibility of the Registered Nurse (RN) within the setting of a fast paced ambulatory care setting. The Oncology Nursing Society (ONS) supports the position that the repetitive performance of a common task or procedure that does not require the professional judgment of an RN may be delegated to unlicensed assistive personnel. Knowing the individual and their competences and helping the worker understand the role expectations can prevent problems related to the unlicensed assistant personnel being used interchangeably with the licensed professional nurses by the medical staff. In order to make this distinction clearer, a project was initiated to develop specific credentialing for competency. The clinic assistant functions under the direction of a registered nurse with the focus providing comfort to outpatients. A clinic assistant can be a certified nursing assistant, a medical assistant or an individual who received on the job training based on their past educational experiences. As a result of the varied backgrounds and the blurry interpretation by the medical staff it became necessary to create competencies. A group was formed that included professional nurses, unlicensed staff and a CNS. Different roles were observed in many practice settings. Upon completion of a unit based orientation program including cultural competencies clinic assistants can complete competencies such as phlebotomy, glucose monitoring, basic wound care, and sterile technique in addition to several others. A learning needs assessment was sent to the clinic assistant staff to gather information on skills being sought as well as skills that were already utilized. After development of competencies for tasks that were within a scope of practice for an unlicensed employee, clinic assistant staff was offered the opportunity to go through education, observation of task, competency checklist and ongoing needs assessment. Once the competency is completed and observed by a licensed professional, yearly credentialing is performed to set realistic performance goals. Importance of facilitating change and promoting success of the clinic assistant staff is ongoing and evolving in this practice setting.



**RESTORING THE PRIMARY NURSING MODEL IN THE OUTPATIENT CLINIC SETTING.** Kathleen Ries, RN, BSN, OCN®, The James, Columbus, OH; Barbara Paxson, RN, The James, Columbus, OH; Donna Labarge, BSN, RN, OCN®, The James, Columbus, OH; Amy McHale, RN, BSN, The James, Columbus, OH; Maryam Lustberg, MD, The James, Columbus, OH; Kathleen Rogers, CNP, The James, Columbus, OH

In the outpatient oncology setting, patients complain about long wait times, repeatedly answering the same questions, and lack of communication impairing coordination of care between disciplines. Our clinic implemented a primary nurse pilot to include a comprehensive, patient-focused assessment by both the nurse and provider at the same time. Our goal was to provide exceptional patient-centered care through a more efficient and comprehensive manner. Thus decreasing patient wait times, improving both patient and nursing satisfaction, supporting enhanced communication and coordination amongst disciplines, and providing enriched patient education. Within the model, there are two primary nurses and one triage nurse assigned for each clinic. At the time of registration, each patient is asked to complete a symptoms assessment questionnaire, as well as a medication list to review, which is then evaluated by the nurse and provider. The primary nurse and provider then go into the patient room together to perform a combined patient assessment. This allows for both disciplines to be present for the patient during symptom assessment, medication review, treatment planning, and development of a comprehensive plan of care. While the provider completes the physical exam, the primary nurse exits the room to gather patient education and to communicate to other disciplines as appropriate. The primary nurse then completes the visit by providing education, reviewing the plan, and answering questions, while the other primary nurse goes with the provider to see the next patient. The triage nurse remains in the clinic room to manage patient phone calls, complete FMLA paperwork, etc. This model has been exceptional for improving the patient experience as reported through patient comments and satisfaction scores. Press Ganey scores have shown a significant improvement in scores related to Coordination of Care (92.0 to 96.3), Doctor and Nurse Communication (92.0 to 95.0), Length and Nature of Wait (82.0 to 84.4) and Quality of Care Received from Nurse (91.8 to 96.9). The nurses report more satisfaction with the model because they have a better understanding of the overall plan of care and can reinforce it with the patient. Nursing education is also more fluid because the nurse is present for the treatment discussion. A more complete picture of the patient is being realized; thereby, creating a more meaningful and efficient visit for the patient.

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**ONE ORIENTATION DOES NOT FIT ALL: DEVELOPMENT OF THE AMBULATORY PRACTICE NURSE ORIENTATION.** Kristen Roche, RN, MSN, CNE, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Monica Fradkin, MPH, BSN, RN, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT

As oncology care has shifted to a predominantly ambulatory setting, the demand for nursing care and support has increased. This need has most recently been met through the implementation and utilization of the “practice nurse” role. An active member of the multidisciplinary team, the practice nurse has been pivotal for smooth transition of patients within each clinical area. However, despite the intricacies of this role, no independent orientation structure has been employed. Our project developed and employed an orientation structure for

the ambulatory setting that prepares the registered nurse for the expectations and challenges that accompany the newly evolving role of the practice nurse. Nurses who are new to the practice nurse role are provided the core hospital orientation, as well as the oncology Competency Based Orientation (CBO) packet, which was developed by the Oncology Education Group. However, there was an identified gap within the orientation process, specific to the practice nurse role. After surveying staff and managers in the multispecialty clinics, key components for inclusion were identified, orientation was restructured and an additional orientation content was developed. New hires would continue to receive the existing oncology CBO, containing policies, practice guidelines, and orientation structure. During the initial three weeks of orientation, new nurses shadowed other practice nurses within the clinic and other disease teams with specific objectives/goals with each observation. Multiple educational tools, containing disease specific education, case studies, treatment guidelines, web quests focusing on side effects were provided and preceptor-guided discussions occurred weekly. All elements of the CBO were completed by the orientee and preceptor during the eight weeks of orientation. Weekly meetings between the orientee, preceptor, and manager were held to report the progression of orientation. New orientees were surveyed upon completion of the orientation. Feedback revealed that new nurses built a strong foundation, utilizing the new orientation structure within the ambulatory setting. Staff identified stronger understanding of the practice nurse role and of disease presentations, side effects and treatments. Nurses felt supported and part of the team by building relationships through the shadow experience. In conclusion, implementing orientation specific to the practice nurse role has provided added value to staff and oncology patients in the ambulatory setting. This presentation will include the orientation curriculum and the findings from the surveys.

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**REDUCING DISCHARGE DELAYS ON A HEMATOLOGY UNIT.** Raina Rock, MSN, RN, OCN®, CNL, MD Anderson Cancer Center, Houston, TX

Literature shows that timely discharge of patients is an important contributor to hospital efficiency and patient satisfaction warranting a proactive approach to discharge planning. On a 24-bed leukemia unit at a National Cancer Institute (NCI)-designated cancer center, an opportunity was identified to improve the discharge planning process. Baseline data revealed that 50% of anticipated discharge patients leave after 4:00PM. Further assessment revealed that the major contributor to discharge delays was multiple blood transfusions on the day of discharge at 68%. The primary aim of this process improvement initiative was to implement a discharge process tool that will help: (a) increase the number of patient discharges before 4:00PM from 50% to 60%, and (b) decrease blood transfusion-related discharge delays from 68% to 58%. After conducting an extensive literature review and evaluation of current discharge policy and processes, a collaborative partnership with the unit leadership, Advanced Practice Providers, and laboratory services was established. A discharge process tool was developed to identify anticipated patient discharges and delineate the roles of nursing staff in the implementation of blood specimen collection at midnight and initiation of early blood administration. The tool was piloted for one month, immediately after conducting mass staff education. Post-pilot data showed an increase in patient discharges before 4:00PM from 50% to 73%, and blood transfusion-related discharge delays were reduced from 68% to 10%. Compliance audit reports also showed an increase in midnight laboratory collection order for anticipated discharges from 6% to 84%. The unit leadership supported to continue the new process and shared the best practice to the rest of the hematology units. Monthly audits are being

conducted and the 6 months data shows an average discharge time 3:45 PM. Results from this initiative demonstrated how a proactive discharge planning tool can significantly decrease discharge delays. Implementing a process for earlier identification of the need for and initiation of transfusions on the day of discharge helps improve discharge and admission times, promote efficient bed management, and imbibe fiscal stewardship. Early discharges result in timely admissions that reduce late shift-change or late night admissions, on-time activation of sensitive oncology treatment plans, and adequate time for patient education. Consequently, this impacts both staff and patient satisfaction.

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**IMPLEMENTATION OF A QUIET AT NIGHT INITIATIVE ON AN INPATIENT HEMATOLOGY/ONCOLOGY UNIT.** Angela Ross, RN, BSN, OCN®, Christiana Care Health System, Newark, DE; Krystle Becraft, RN, BSN, OCN®, Christiana Care Health System, Newark, DE; Arwen Craig, RN, MSN, OCN®, Christiana Care Health System, Newark, DE; Kendra Logue, RN, BSN, OCN®, Christiana Care Health System, Newark, DE; Phyllis Roberts, RN, OCN®, Christiana Care Health System, Newark, DE

Patients with cancer often experience treatment-related side effects, pain, and anxiety, which attribute to more sleep-wake disturbances than other patient populations. These disturbances can lead to insomnia, fatigue, daytime sleepiness, and patient safety concerns related to falls and acute infections. Nighttime hospital noise is a major contributor to sleep disturbances for patients. In an effort to promote a more restful and healing environment, we formed a Quiet at Night (QAN) team on our 40-bed inpatient hematology and oncology unit. Our primary goals are to reduce nighttime noise from preventable sources in order to increase the quantity and quality of sleep that patients experience, and to improve patient satisfaction and health outcomes. The team's secondary goal is to increase nurse satisfaction with care delivery and enhanced workflow. Our QAN initiative involved the implementation of a QAN bundle that utilizes several interventions aimed at improving the environment of care. These interventions included: provision of staff education about noise reduction techniques, consolidation of nursing tasks and purposeful rounding, establishment of a unit-wide quiet time from 9pm to 6am, broadcasting of a calm nightly audio reminder in all patient rooms indicating that quiet time is approaching; distribution of sleep kits to patients which include eye masks, ear plugs, headphones, and a crossword puzzle, dimming of lights and lowering of alarm volumes on equipment; and decreasing light usage in nursing stations. We also work interdepartmentally to eliminate noise from carts travelling through the unit, and collaborate for clustered care with the respiratory and laboratory staff. Our team members act as QAN Champions by offering reminders to lower voices during conversations, step away from patient rooms when taking phone calls, and close patient room doors. As our cancer patients endure extended lengths of stay, we strive to give them the most comforting care possible. Thus far, the implementation of our QAN bundle has resulted in a 10% improvement in our patient satisfaction scores related to quietness at night on our unit. As we continue with our interventions, we hope to achieve a stretch goal of 20%. Because patient satisfaction scores directly impact healthcare reimbursement, hospitals must develop innovative strategies to improve patient experience. Our QAN bundle can be adopted or modified by other inpatient cancer units to contribute to this goal.

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**UTILIZING AN INPATIENT NURSE SEPSIS SCREENING TOOL FOR THE EARLY IDENTIFICATION AND RECOGNITION OF**

**SEPSIS.** Cathleen Rowland, RN, MSN, MPH, OCN®, BMTCN®, Brigham and Womens Hospital, Boston, MA

Sepsis has a mortality rate of 28% to 50% and remains the leading cause of death in U.S. hospitals. Multiple studies have shown that early sepsis detection and treatment is associated with decreased mortality. Immune-compromised oncology patients are a risk population. Sepsis is defined as life threatening organ dysfunction caused by a dysregulated host response to infection. Nurses at the bedside are in the position to assess and identify patients at risk for sepsis and patients showing clinical signs of end organ dysfunction. Early identification and treatment of sepsis improves outcomes. Increasing the nurses understanding of the most current definition of sepsis, signs and symptoms of organ dysfunction and improved communication facilitates early recognition and intervention. The purpose of this quality improvement project was to increase early identification and recognition of sepsis, a key factor in decreasing morbidity and mortality. Nurses on a 10 bed oncology and stem cell transplant unit utilized a sepsis screening tool to assess each patient twice a day, once per shift for 1 month. The tool screens patients with risk factor for sepsis, likelihood of infection, and signs of end organ dysfunction. If a patient screened positive the nurse would notify the responding clinician that the patient has "sepsis screen positive". A total of 452 screenings were done on 43 patients. A survey was administered to nurses and clinicians after the 1 month period to assess perceived effectiveness and satisfaction with the tool. Nurses and clinicians found the tool to be effective, easy to use. Further analysis needs to be performed in order to determine if the screening tool accurately identified patients' positive for sepsis or at high risk. Early identification and treatment of sepsis saves lives. Nurses at the bedside have an important role in identifying the patients at risk for sepsis and nuances of clinical changes in a patient's condition that could be early signs of organ dysfunction. Ensuring timely communication of changes and ensuring timely treatment results and improves outcomes.

**219**  
**INTRODUCING THE RED BOX TO INFUSION. EARLY ACCESS TO INTERVENTIONS FOR ADVERSE DRUG REACTION.** Carolyn Ruef, MSN, CRNP, AOCNP®, Cancer Treatment Centers of America, Philadelphia, PA

Oncology nurses are particularly likely to witness hypersensitivity reactions due to the nature of the drugs they infuse on a daily basis. Acute hypersensitivity reactions (HSR) generally occur within minutes of antigen exposure and symptoms range in severity. Recognizing the early signs and symptoms of HSR is essential as early intervention is associated with better outcomes. Initial subtle symptoms may progress to life threatening complications within seconds. An Adverse Drug Protocol is essential to any infusion center. The treatment guidelines are generally based on expert opinion and institutional policy and procedure. Skillful management and preparedness requires that interventions are defined, understood, timely and available. Barriers include Pyxis access or override requirements and lack of supplies. The Infusion Center implemented an emergency "Red Box" in 2013, with revisions in 2014 and 2015. A red tackle box was selected as it needed to be large enough to store IV supplies. The staff prepared a list of essential drugs found to be effective in an emergency situation at the chair side. The contents of the box was approved and revised by the medical staff and coordinated with actions described in the Adverse Drug Reaction Protocol and institutional chemotherapy order sets. The Adverse Reaction Protocol was designed from recommendations of the Oncology Nursing Society, the Infusion Nursing Society and "Up To Date." A locked Red Box was placed in each of the three modules in the Infusion Room. The Red Box has been successful in the Infusion Room and further implemented in other treatment

areas of the hospital. It has provided a sense of control to infusion nurses as they can provide emergency care to the patient within the first minute. A HSR is often an anxiety provoking event for both the patient and nurse. The contents of the Red Box are readily available, predictable and familiar, reducing the time to intervention and recovery. The patients are skillfully managed in the infusion unit, resulting in decreased stress amongst staff and less utilization of the hospital wide Rapid Response System.

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### **DISTRESS SCREENING—OVERCOMING THE BARRIERS.**

**Roxanne Ruiz Adams, LCSW, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; Carol Blecher, MS, RN, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; Juanita Fryar, MS, RN, OCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ; Timothy Clyne, RN, BA, MSN, Trinitas Regional Medical Center, Elizabeth, NJ**

As per the National Comprehensive Cancer Network (NCCN) guidelines distress is a multi-factorial unpleasant experience that can interfere with the individuals' ability to cope effectively with cancer and treatment. Studies show that distress negatively impacts quality of life in the cancer patient and must be recognized, monitored, documented and treated promptly. Distress can cause poor decision making, non-compliance with treatment regimens and ultimately unfavorable outcomes. Significant distress frequently accompanies the diagnosis and treatment of cancer, but this is often overlooked and is rarely screened for, per Jimmie C. Holland, M.D. of Memorial Sloan Kettering Cancer Center. Patients must have early assessment and intervention to manage their distress effectively. The NCCN developed the Distress Thermometer, for patients to rate distress on a scale of 0 to 10. It is an assessment tool to ascertain specific information regarding distress. It was later updated to include a problem list which includes thirty six items that address family, social, emotional, spiritual and physical problems. Studies have indicated that the distress thermometer has good validity and reliability in cancer patients. Our first objective was to demonstrate a method for the identification and management of stress in the cancer patient undergoing treatment with radiation therapy, and evaluate its impact on satisfaction and quality of life. We also identified the need of program expansion to include our chemotherapy and inpatient populations. For our pilot study we are used a convenience sample of radiation oncology patients. We administered the distress thermometer on the first day of treatment, and planned for a second evaluation point at treatment completion. Later we began distress evaluation at first chemotherapy treatment. All patients scoring a 6 or above on the distress thermometer are appropriately referred for further evaluation. This program has been good at evaluating patients at initiation of treatment in both radiation and chemotherapy, but we have issues with timely communication and follow up. We also are concerned about the effectiveness of our follow up screening points as well as screening at other points of increased vulnerability, such as inpatient admissions. Our team is currently reevaluating our program looking for the potential for improvement in both the screening program and referral systems.

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### **CARING FOR THE CAREGIVERS—SUPPORTING THOSE WHO CARE FOR OUR CANCER PATIENTS.** Christie Santure, RN, BSN, OCN®, UPMC-Hillman Cancer Center, Pittsburgh, PA

Diagnosis and treatment of cancer affects not only the patient but the caregivers as well. Much emphasis is placed on patient support and education, while many times overlooking the needs of the patients' caregivers. Oncology nursing support should be focusing on the needs of both these roles, as they are partners in the cancer treatment journey. Literature

suggests that taking on a caregiver role increases stress and anxiety. Working to decrease these levels is not only beneficial for the caretaker, but may subsequently have a calming effect on the cancer patient. An opportunity exists while caregivers are present at treatment, allowing time for program information and attendance. In coordination with a local community organization that provides free services to cancer patients and their families, a program was created specifically for caregivers. On a monthly basis, a drop-in group session is led by a licensed group counselor and an oncology nurse. The program is organized at the cancer center during the day time, making it convenient for caregivers on-site to attend while their loved-one is receiving treatment. Session topics educate caregivers on self-care strategies (such as mindfulness and relaxation techniques), acknowledge available community resources, and offer emotional peer-to-peer support to help promote their own emotional and psychological health. Seven sessions have been held with continued participation. All participants agreed they were able to better identify self-care resources and techniques to help with the challenges and stresses of being a caregiver. Many caregivers commented on the value and helpfulness of meeting and interacting with others in similar situations. The caregivers also stated they enjoyed connecting with one another and felt the peer-to-peer interaction was beneficial for them. An interest and a need for caregiver support and education has been established and our sessions have shown to be beneficial to attendees. Some caregivers may find difficulty in leaving a patient alone at home or may not have available resources close to their home, therefore on-site sessions offers a unique opportunity for attendance. Cancer patients' caregivers need support and it is important for oncology nurses to attend to their concerns, as they are an integral part of the cancer patients' support system.

## 222

### **A MULTIDISCIPLINARY APPROACH TO CREATING A SKIN AND WOUND TEAM FOR CANCER PATIENTS IN THE OUTPATIENT SETTING.** Emily Sasso, RN, BSN, OCN®, NYU Perlmutter Cancer Center, New York, NY; Caitlin Doran, RN, BSN, OCN®, NYU Perlmutter Cancer Center, New York, NY; Catherine Handy, PhD, RN, AOCN®, NYU Perlmutter Cancer Center, New York, NY

Our Medical Center has a very active hospital based skin and wound care team. We lacked a similar team to support staff and patients in the outpatient setting in managing cancer related wounds and treatment related skin conditions. The purpose of this team is to provide knowledge and skills to physicians, nurse practitioners, registered nurses, patient and families in the management of cancer related wounds and treatment related skin issues. We aim to develop evidence based protocols for treatment related skin issues and develop protocols for wound and pressure injury care. We can provide education on skin care and can help to upgrade our skin care product "formulary". First, we became active members in the medical center's inpatient skin and wound care team. Utilizing their knowledge and resources, we were able to develop a foundation for the team we were creating at the cancer center. A survey was created to determine the needs of the cancer center regarding frequently seen skin care issues, educational needs for staff and acquisition of recommended treatment products. We have begun exploring the products available to us and plan to implement them in to practice soon. The results of our assessment revealed that a skin and wound care team in the outpatient setting would be an asset to both patients and staff. Our team is in the early stages of implementing new products in to practice and will continue to evaluate the effectiveness of the changes we make at the cancer center. Our team of registered nurses and nurse practitioners from areas



including office practice, surgery, radiation and infusion will continue to meet on a monthly basis to assess, implement and evaluate the wound and skin care needs of our cancer center and continue to build our evidence based protocols for wound management and treatment related skin issues. We have continued to grow our team at the cancer center and work with our inpatient counterparts to implement change in the way we manage wounds and skin conditions. The implementation of in-services of new treatments, introduction of new products and the development of evidence based protocols will ultimately improve the care of patients and their outcomes.

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**CLEVELAND CLINIC HILLCREST CANCER CENTER'S JOURNEY TO INCREASE EFFICIENCIES AND PATIENT SATISFACTION THROUGH UTILIZING CONTINUOUS IMPROVEMENT METHODS.** Karen Schaedlich, MSN, RN, OCN®, Cleveland Clinic Hillcrest Cancer Center, Mayfield Hts., OH; Michelle Wiece, RN, OCN®, Cleveland Clinic Hillcrest Cancer Center, Mayfield Hts., OH

In the summer of 2015, caregivers in the cancer center noticed an increase in patients waiting in the infusion suite due to inadequate orders and unexpected delays. This was creating patient dissatisfaction, bottle-neck of chair space, and staff frustration. The initial thought to decrease the delays was hiring an additional pharmacist to improve medication dispense times. However, due to the economic environment this was not feasible at the time. Leadership had heard of a new process in the hospital called Continuous Improvement and suggested it be taken to the outpatient area for trial. A multi-disciplinary team from the cancer center lead by nursing met to discuss the problem. They created a process map of the throughput method for the patient prior to receiving their treatment and then identified process wastes where there were gaps that created delays. What started with a thought that an additional full time employee was needed quickly resulted in recognizing there were many areas of inefficiencies creating the delays. A formal group was created including pharmacy, frontline nursing, nursing leadership, clerical, and physicians with the goal of improving workflows to increase efficiencies and decrease delays. Within the last year the group has identified and implemented changes that include enhanced care coordinator responsibilities, physician standard order sets, time and documentation of validated heights, referral forms for outside appointment requests, daily huddles with the exam staff, and alignment of physician and care coordinators. This has been done through using Continuous Improvement methods of the fishbone diagram, stakeholder analysis, A3, and root cause/countermeasure tools. The group is still regularly meeting and working on countermeasures. The goal of the poster is to not only showcase best practices discovered thus far but to share how our processes can be effective in other areas to improve satisfaction and outcomes for both patients and caregivers.

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**IMPROVING THE PATIENT EDUCATION EXPERIENCE.** Kristin Schmidt, RN, Mayo Clinic, Jacksonville, FL; Xenia Downey, RN, BSN, Mayo Clinic, Jacksonville, FL; Laurie Malling, RN, Mayo Clinic, Jacksonville, FL; Jamie Elliott, RN, BSN, Mayo Clinic, Jacksonville, FL

A cancer diagnosis can be considered one of the most devastating life changes to affect an individual. Along with the stress of physical changes, the impact on family, finances and overall quality of life, cancer has the ability to cause the feeling of a total loss of control and overall grief. The assignment of chemotherapy to treat cancer faces its own set of challenges. Education or a lack thereof, rises to the forefront. Numerous

studies document the importance of providing patient centered education is vital to optimal outcomes during chemotherapy treatment. Studies also confirm the presence of an improved patient experience when education is presented prior to treatment. The aim is to demonstrate when providing a patient centered and chemotherapy regimen specific educational program, patient's outcomes, retention and overall positive experience is increased. In our current practice chemotherapy education is provided immediately prior to treatment within the clinical setting. Our focus is to remove patient education from within the clinical environment to set the stage and promote an atmosphere more conducive to learning. An evaluation of current practice to identify print materials, patient scheduling, space conflicts, and content of information presented during patient education sessions were considered. It was determined print materials supplied to patients were cumbersome and overwhelming, environment where patient education was conducted did not provide privacy, patient schedules did not always allow for a dedicated educational session and content of sessions varied from nurse to nurse. Together with our facilities' Center for Innovation department (CFI), steps to streamline handouts and content along with the planning of private facilities to conduct education, as well as collaboration with our providers and scheduling department to coordinate specific appointments to accommodate education for patients were developed. The prediction is that patients will be well prepared for their upcoming chemotherapy treatments. The materials provided will be easy to read and understand, and will provide for a higher level of comfort upon initial and ongoing treatments. Patients will have a higher retention level of the education provided and anxiety will be decreased due to increased level of comfort provided during private education sessions. Premature data shows favorable results from patients participating in the new education format.

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**CONTINUOUS MONITORING OF NAUSEA AND VOMITING USING SYMPTOM INVENTORY TOOL.** Deborah Selm-Orr, DNP, CRNP, AOCN®, Cancer Treatment Centers of America, Philadelphia, PA

Literature continues to discuss chemotherapy induced nausea and vomiting (CINV) as a most common and distressing symptom. Use of antiemetics proactively has been a key in reducing this symptom. Multiple other interventions have also been described in studies. Flow sheets are helpful in monitoring status of symptoms. Use of the Symptom Inventory Tool (SIT) is one way to achieve this with EHR input. The purpose of this abstract is to describe results of using a process to assure that CINV is proactively managed using consistent methodology. The SIT is now used in our clinic, measuring several symptoms found to impact overall quality of life. The SIT is based on the MD Anderson Symptom Inventory. Patients are provided with an IPAD to record their symptoms. One component of the questionnaire focuses on nausea and vomiting as separate symptoms. When symptom is reported higher than an 8, an intervention should occur immediately. In July of this year, 101 surveys revealed 14 patients reporting nausea, and 7 patients reporting vomiting. Of that group only 5 reported both nausea and vomiting. A more comprehensive chart review is to occur to further identify other possible causes of these symptoms, evaluate antiemetics used, and determine other services that were utilized to assist in managing nausea and vomiting. This is only a portion of the exhaustive nature of use of the SIT tool. Multiple other symptoms are also measured. Use of this instrument has demonstrated the bedside application of an instrument that was developed for research. Effectiveness of the tool allows hospital administration to focus on major symptoms reported by patients, reallocating resources if indi-

cated. It allows for the process of bringing experts together to evaluate the data and develop appropriate interventions. The SIT is an effective measure of various symptoms that impact on quality of life for patients. In this particular subset, there is a low incidence of nausea and vomiting, during one time period. It will be important to further review each patient to determine presence of other causes of nausea and vomiting. It will also be important to measure severity over a longer period of time. Use of an adapted research instrument is an innovative method to measure symptoms at real time and evaluate effectiveness over time.

**226**  
**THE PATIENT FLOW NURSE HAS HELPED CREATE QUALITY DISCHARGES FOR OUR ONCOLOGY/HEMATOLOGY PATIENTS.** Jessica Shirley, RN, Vanderbilt Medical Center, Nashville, TN

Oncology patients who are unable to receive prompt access to the most appropriate care they need, experience delayed treatment, disruption in continuity of care, increased stress, and dissatisfaction with services. Timely bed availability in an organization operating at capacity, is a significant need that can be impacted by the strategic role of the nurse in proactive patient flow. At Vanderbilt Medical Center, a pilot for a Patient Flow Nurse (PFN) rolled out November 2015 and reached our oncology/hematology units in January 2016. The development of this role allows for a unit based focus on timely, quality discharges that helps create successful outcomes and decrease unscheduled readmissions, while allowing bed availability for those requiring prompt oncology inpatient care. The main role of this position is to increase early discharges, in turn creating earlier admissions. This unique position allows focus on timely quality discharges. Having one nurse dedicated to discharges, gives the bedside nurse the freedom to focus on the acute needs of their other patients. The flow nurse attends daily huddle discussing patient needs and barriers, then follows up to ensure meds are filled, appointments are scheduled, and the patient has received all the education necessary for a successful transition out of the hospital. This nurse serves as a unit based point of contact between providers, family, pharmacy and the rest of the healthcare team. The nurse meets with their unit manager weekly, and a focused team evaluates the barriers and successes for continuous improvements to the role. Two key components were measured to determine success of the position: discharge before 1100 and within two hours of the discharge order. From February 8th to April 11th, discharges before 1100 went from 4.7% to 12.3% and within two hours went from 63.6% to 70.4%. This change has started to decrease overall length of stay and increase bed availability. Using the matrix, discharges per week, the unit has increased discharges by two per week, creating 72 beds so far this year.

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**UTILIZING CHS'S LEAN MANAGEMENT SYSTEM TO REDUCE WASTE AND IMPROVE FLOW.** Crystal Shull, RN, OCN®, Levine Cancer Institute, Charlotte, NC

An 88% increase in patient volume at LCI's busiest infusion room and the subsequent unfavorable effect on patient, provider and teammate satisfaction drove selection of this improvement project. Our goals were to decrease patient arrival to discharge, improve patient satisfaction, improve teammate engagement by decreasing overtime, as well as financially benefit by becoming more efficient and removing waste from our processes. Improvement was focused on 3 categories: 1) workplace organization; 2) increasing pre-medication rates and standardization of line flushes; and 3) schedule modification. Using LEAN methodology, we standardized all pods, Omnicells,

computer carts and clean utility rooms. We also standardized all flushes to 21cc as well standardized premedication rates, saving up to 43 minutes per patient. We worked to modify the schedule. Each nurse would have 3-4 chairs, in the same area and worked with an acuity tool to schedule the patients. This allowed us to better utilize our chairs to accommodate more patients. This decreased overtime and allowed nurses to get to lunch. These changes increased our patient schedule availability from 77.5 hours to 129 hours, increasing access by 60%. We were able to increase the number of patients seen per pod by >14% and decrease the patients time in infusion by >14%. The reduction of overtime resulted in over \$70,000 in savings. Efficiencies gained as a result of this work have contributed to enhanced quality and financial performance. Patient satisfaction scores post improvement efforts reached a high of 100% as measured by Press Ganey.

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**PARTY IN A BOX: ENHANCING LIFE ON THE ONCOLOGY UNIT.** Angela Simic, BSN, RN, OCN®, Billings Clinic, Billings, MT; Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

Patients experience milestone events while being hospitalized with cancer. Birthdays, anniversaries, treatment completion and other events deserve recognition. Nurses can help to facilitate celebrations and provide a better hospital experience while recognizing patients as a whole. Simultaneously, nurses working on inpatient settings often care for patients who are acutely ill or at the end-of-life, which can contribute to compassion fatigue and burnout. A recent survey of RN staff confirmed this. One inpatient oncology unit developed a Party in a Box to help patients and families celebrate significant life events while hospitalized. Additionally, this project helped to improve nurse's work satisfaction. Historically, unit celebrations occurred last minute and were not well-organized. A standardized process of identifying patients who were celebrating milestones did not exist. A team was convened of staff nurses, case management, and nursing leadership to develop and operationalize Party in a Box. A list of events to be celebrated was generated including last treatment, birthday, anniversary, end-of-life celebration, and holidays. Using patient-donated funds, boxes were tailored for specific celebrations. Boxes can include party hats, streamers, bubbles, latex-free balloons, battery operated candles, a card signed by staff, and treats. To document events, the RN elicits information from the patient/family and includes this in the event log. At the time of the event, available staff is notified via the paging system to come to the indicated patient room. The team then presents the Party in a Box to the patient/family. Occasionally, a song tailored to the event is sung by staff. The team and family then gather for a photo that is taken after obtaining patient/family consent. A digital photo is provided for the patient/family. Patients/families have been overwhelmingly appreciative. Events are often filled with patient and family tears and hugs, and families frequently request to keep the items to take home as memories. Nurses report increased satisfaction with their work. Staff also noticed other patients/families and ancillary staff joining in the activity, all of which increased overall unit morale. A post-survey of RN staff's satisfaction is currently in progress. Party in a Box can be easily replicated in other oncology settings. Future work in this area can better document outcomes on nurse compassion fatigue and patient/family satisfaction.

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**BLOOD PRODUCT ADMINISTRATION IN A STANDALONE ONCOLOGY PRACTICE.** Karie Smith, MSN, RN, AOCN®,

**Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Alexandra Verbeten, MSN, RN, ACNS-BC, AOCNS®, Froedtert & The Medical College of Wisconsin, Milwaukee, WI**

Over the past 7 years Froedtert & the Medical College of Wisconsin Cancer Center has experienced double digit growth. The Froedtert Cancer Network includes an AMC and three network locations. The latest addition to the Cancer Network was a hospital outpatient department in a business occupancy building, Moorland Reserve. Building Moorland Reserve Cancer Center in a stand alone facility presented barriers to providing oncology patients the same comprehensive care they would receive in a larger facility. It was important to provide those patients with the same comprehensive care without sending them to a different location because of the absence of a blood bank. The purpose of the blood product administration project was to design a process so oncology patients could receive blood transfusions in a stand-alone facility close to home without having to travel to the Academic Medical Center (AMC). The first step was a literature search to identify best practices for blood product transportation and administration. Unfortunately, the literature search revealed little existing information. Next step was to work with the Froedtert health electronic record department, Dynacare, Blood Bank and the IT project management team to decide if blood product administration at an off-site location would be possible. Once the group determined feasibility, several multi-disciplinary meetings were scheduled to establish processes and workflows to ensure safe and timely blood transportation and administration. Benchmarks were set for anticipated turnaround time, from time of order placement to pickup and pickup to delivery. Initial analysis demonstrated time from order to delivery was 2 hours. The workflows were re-evaluated and nursing staff was involved in designing a pre-blood product administration phone screen, documentation and workflow. Instituting this workflow decreased patient wait times and increased patient satisfaction. No information or research is available for blood product administration at off campus locations. Processes and procedures must be put in place, and this project showed that it is possible to deliver blood products in a safe and timely manner to patients at an off campus location.

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**WE CHANGED THE RECIPE.** Rose Mary Spellman, BSN, RN-BC, BMTCN®, Northside Hospital, Atlanta, GA; Lorie Gassel, RN, MSN, OCN®, Northside Hospital, Atlanta, GA; Ellen Marrs, RN, Northside Hospital, Atlanta, GA; Barbara March, RN, Northside Hospital, Atlanta, GA; Beth Morrow, MSN, RN, CIC, GCNS-BC, Northside Hospital, Atlanta, GA; Gabriela Vallejos, RN, BSN, Northside Hospital, Atlanta, GA

CLABSI (Central Line Associated Blood Stream Infection) rates in a 36 bed Bone Marrow Transplant unit were above the national mean as identified by NHSN (National Health Safety Network for Center for Disease Control) for both Temporary and Permanent Lines. Also of note was the fact that the utilization of temporary lines was above the national mean. The utilization of permanent lines was less than the national mean. A multi departmental nursing workgroup was formalized to champion reduction of both temporary as well as permanent line central line associated blood stream infections in this highly vulnerable population. This presentation highlights the efforts, challenges and accomplishments of this multi-departmental team approach. Education regarding routine central line care and maintenance as well as proper selection in the type of line appropriate for the case was provided. Audits and rounding were completed to ensure compliance with the hospital maintenance bundle. A large variety of teaching modalities were incorporated. Bedside nursing staff ownership and accountability were the pivotal factors in success. Routine rounding on all patients with central lines was accomplished

through a dedicated IV team nurse. Through calendar year 2014, 8 permanent line infections and 25 temporary line infections were identified. The device utilization ratio for permanent lines was 0.37 and for temporary lines was 0.58. Through calendar year 2015, we reduced the rates to 6 permanent line infections and 19 central line infections in addition to improving utilization ratios. Permanent line utilization ratio was increased to 0.49 and temporary line utilization was decreased to 0.42. Through a multi-departmental nursing approach, we were able to reduce the number of central line infections in both temporary as well as permanent lines. We also reached our goal of transitioning to use of more permanent lines and less temporary lines, further reducing patient risk. The use of a Nursing Multi-Departmental team approach to improve patient care and safety related to central lines is highly effective. When working together, this team approach accomplished what each department working independently was previously unable to accomplish.

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**UTILIZATION OF CHEMOTHERAPY ADMISSION UNIT: EXPANSION AND PATIENT SATISFACTION.** Caroline Srikumar, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Elena Lubimov, MSN, FNP-BC, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Carlos Rojas, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Michael Velazquez, AAS, Memorial Sloan Kettering Cancer Center, New York, NY; Donna Miale-Mayer, MSN, RN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY; Mary Dowling, MSN, RN, OCN®, CENP, Memorial Sloan Kettering Cancer Center, New York, NY

In 2015, Memorial Sloan Kettering Cancer Center administered 7350 in-patient chemotherapy treatments. Many treatments were delayed due to medical and logistical issues, which adversely affected the quality of expeditious care and patient satisfaction. In response, the Chemotherapy Admission Unit (CAU) was created in 2015 to promote patient satisfaction and quality of care by decreasing the wait time for chemotherapy administration upon admission for hematology patients. In collaboration with Nursing Leadership and multi-disciplinary teams, the CAU successfully decreased the wait time of starting treatments (9.7 hours to 2 hours) and increased patient satisfaction related to the speed of admission (81%). The successful outcomes led to the expansion of care to the Neurology service. The purpose is to decrease wait times and increase patient satisfaction with the expansion of the CAU to include other disease services. The CAU was staffed with 3 oncology nurses and 1 Unit Assistant. The expansion included one additional nurse and a Unit Assistant. The criteria for admission process were discussed with the physicians of the expanded services for maximum utilization of CAU. Qualified patients were scheduled to arrive at CAU in the morning to start their treatment thereby expediting the admission process, decrease the wait time, and increase patient satisfaction. The data was collected since the addition of Neurology service from November 2015 to September, 2016. Patient satisfaction data was collected by giving a patient satisfaction survey at the end of patients' stay in CAU. 70% of the 207 neurology patients who were scheduled to receive treatments met the criteria to be admitted through CAU. Of those patients, 90% reported satisfaction in decrease wait time. Due to the early success of integrating the Neurology service into CAU, the unit will expand to include all elective chemotherapy admissions hospital-wide.

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**ISOLATION CHAMPION: REMOVING ELIGIBLE PATIENTS FROM ISOLATION TO INCREASE PATIENT SATISFACTION AND DECREASE FINANCIAL BURDEN.** Carol Stalzer, BSN, RN, CBCN®, MD Anderson Cancer Center, Houston, TX; Kris



Henderson, BSN, RN, CBCN<sup>®</sup>, MD Anderson Cancer Center, Houston, TX; Kim Nguyen, BS, CIC, MT, MD Anderson Cancer Center, Houston, TX; Jacqueline Anderson, PhD, MSN, BSN, CPHQ, NEA, RN, MD Anderson Cancer Center, Houston, TX

The Ambulatory Quality Professional Action Coordinating Team (PACT) identified a need for patients to be removed from isolation status in a timely manner. The average length of time a patient was on isolation status was 3 months. The PACT proposed to help identify patients and assist with the removal to avoid the stigma for the patient and financial burden for the institution. The purpose of this project was to identify a method that could be utilized to improve the removal rates of eligible patients on isolation status. The Ambulatory Quality PACT created the Isolation Champion Role, which was piloted in the Breast Center. A nurse driven algorithm was created to assist with isolation removal. The Isolation Champion assisted with specimen collection, collaborating with Infection Control, and educating centers regarding clinical trends. They provided support to their respective centers by reviewing the isolation policy and the daily Isolation list. Clinical teams were notified regarding the type of isolation, criteria for removal and appropriate Personal Protective Equipment (PPE). The pilot study was completed from September 2014 to December 2014. Total number of patients for the pilot was 94. Of these patients, 41 (44%) were eligible for removal from isolation status and 37 (39%) were actually cleared. One patient was on isolation status for 11 years (2003), which is an example of the significant impact on patient satisfaction and financial burden. Discussion: The average cost of PPE is \$100 per day per isolation patient. The average hospital length of stay is 7.1 days. Savings over one year per inpatient would be \$85,200. Time to don PPE is 36 seconds. Staff enter a patient's room approximately 100 times per day. Savings would be one hour per day per patient. Based on study findings, it was recommended the role be implemented in all ambulatory centers within the institution. Removing patients appropriately from isolation status helps remove the associated stigma, thereby enhancing patient satisfaction. Creating an Isolation Champion role to assist in timely removal from isolation can decrease the financial cost of utilizing PPE. The role also provides an increased awareness and appropriate referrals to Infectious Disease for patient testing. Information from this study can be utilized in any patient setting monitoring isolation status.

### 233 EARLY PALLIATIVE CARE IMPLEMENTATION IN AMBULATORY CARE SETTING. Bridget Staron, MSN, RN, OCN<sup>®</sup>, Reading Health System, West Reading, PA

Individuals with cancer are particularly fearful of impending debilitating symptoms, such as pain, fatigue, loss of appetite and nausea which may arise from the disease itself, or as a consequence of the administered treatments being utilized to eradicate the disease. These potentially debilitating symptoms have the ability to cause additional unwarranted anguish onto the patient. Compounding the physical complexities of cancer and its treatments are the 30% of patients who are simultaneously inflicted with psychological distress including depression and/or anxiety. Problems associated with late palliative care referrals are becoming more apparent and sadly opportunities are lacking for healthcare professionals to intervene and educate patients about the disease process and symptom management. The proliferation of data supporting early palliative care has augmented the contention that early palliative care should be offered in conjunction with therapy. A literature search performed, provided both quantitative and qualitative publications of varying evidence, strength and quality, defining if the implementation of palliative care early in the oncology patient's cancer journey impacts QOL, depressed mood and patient satisfaction. Adopting

an outpatient office based palliative care clinic, managed by Advanced Practice Registered Nurses (APRN) has the potential to bridge gaps, and decrease apprehension at the beginning of the patients journey by focusing on the physical, psychosocial and complex care coordination required by this population. Following the initial oncology appointment, patients would be offered the opportunity to attend an APRN palliative care clinic, based upon scores obtained from a valid and reliable distress screening tool (Modified-Psycho-Oncology Screening Tool). Initially the APRN clinic would be recommended for patients with stage III or IV disease and/or those who exhibit scores greater than seven on the distress screening tool. The clinic would provide education surrounding the benefits of early palliative care within the patient's course of treatment, including symptom management and coordination of services. Data collected from a post survey assessment would measure the clinics success while simultaneously identifying areas which require improvement. Introducing palliative care early within the patient's treatment trajectory offers hope for tomorrow by improving overall physical and emotional distress levels of patients who are dealing with unwanted feelings of fear, anxiety and hopelessness, thus providing an additional layer of support throughout the cancer continuum.

### 234 DECREASING PEDIATRIC PRE-PROCEDURE ANXIETY USING A NON-PHARMACOLOGIC APPROACH. Rachel Steele, BSE, BSN, RN, OSUCC, The James, Columbus, OH; Andrea Gatrell, BSN, RN, OSUCC, The James, Columbus, OH; Lynne Brophy, RN-BC, MSN, CNS, AOCN<sup>®</sup>, OSUCC, The James, Columbus, OH

Pediatric patients who are treated at adult facilities can experience increased anxiety due to the adult focused surroundings, unknown environment, and unfamiliar staff, in addition to the typical pre-procedure anxiety. Our tertiary care radiation oncology clinic is in an urban teaching hospital which provides care for adults and children. Our pediatric radiation oncology team has implemented assessment tools and devices to help treat anxiety with non-pharmacologic measures rather than pharmacologic measures. Many pediatric patients require daily anesthesia for their radiation treatments for up to seven weeks in an outpatient setting. Anesthesia induction can be traumatic for the child and parent. Sedative medications can be given pre-procedure; however, children may refuse the drug, the drug may fail or may cause a paradoxical reaction. Anesthesia and its side effects may cause post-procedure behavioral changes and necessitates prolonged recovery times which in turn increases department costs. The presentation will summarize a project focused on decreasing pre-procedure anxiety using a non-pharmacologic approach. In early 2015, we partnered with the local children's hospital to change our process and ensure that patients now receive educational material before their first Radiation Oncology visit. When the patient is seen in our clinic for the first time, he/she is assigned a primary nurse, provided educational art therapy, and a virtual "forest friend" which is seen by the patient on interactive boards at various points during the visit. The patient is also given a stuffed animal matching his digital forest friend so the child can take their chosen forest friend to treatment and home with them. Hand held tablets are utilized before each treatment along with wagon rides back to the treatment room greatly decreasing pre-procedure anxiety as shown by the anxiety scale results. The primary nurse uses the Yale Preoperative Anxiety Scale to assess the patient during the initial and subsequent visits. The results of this assessment help the team to determine if sedation prior to anesthesia is needed. Once treatment is completed each child participates in an individualized celebration. Outcome measurements using the Yale scale, pharmaceutical cost savings, and satisfaction survey comments will be included in the presentation.

### **IMPLEMENTATION OF A TREATMENT AREA IN A CANCER INSTITUTE CLINIC IMPROVES PATIENT SATISFACTION.**

**Charlene Stein, BSN, RN, OCN®**, Penn State Hershey Medical Center, Hershey, PA; **Lynn Shay, RN, OCN®**, Penn State Hershey Cancer Institute, Hershey, PA

Within our Cancer Institute clinic, there was no treatment area. As a result, room turnover in clinic was slow due to patients remaining in exam rooms waiting for an ordered injection to have newly ordered lab draws, or waiting for an admission bed. Often patients had to relocate to a different part of the hospital if more treatment was needed. This delayed physicians' schedules, as well as timeliness of rooming other patients. In addition, clinic patients who needed symptom management were often sent to the Emergency Department for treatment because the Cancer Institute Infusion Services area could not accommodate same day add-on appointments into their already full schedule of chemotherapy patients. It was proposed that allocating space within the Cancer Institute clinic as a treatment area would improve patient satisfaction, improve room turnover efficiency, and decrease the number of patients requiring emergency room or hospital admission for certain symptom management needs. On January 25th, 2016, a two treatment bay area within the clinic was designated to accommodate patients seen in clinic who needed additional nursing care. The area is staffed Monday through Friday, 7:30 AM : 4:00 PM by a Registered Nurse. In this new area, patients who prefer to have labs drawn through their central venous catheter can be accommodated quickly. Injections ordered during the clinic visit, all post bone marrow transplant vaccines, as well as antibiotic and electrolyte infusions, hydration, and blood products can also be managed in this area. In the first eight months of operation, 1051 patients were treated in this area. Services rendered by nursing include central venous catheter access, blood product administration, injections, and small volume infusions. Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) and Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CG CAHPS) survey scores for patient satisfaction increased during this period. The Cancer Institute clinic received the 2016 Patient Satisfaction Award from the hospital in recognition of achieving the 99th percentile rank for patient satisfaction among providers nationwide. Having a designated treatment area within clinic space where a nurse can meet patient specific needs has significantly improved patient satisfaction.

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#### **DEVELOPING AN ONCOLOGY NURSE DRIVEN AFTER-HOURS TELEPHONE TRIAGE CENTER.** Sharon Steingass, RN, MSN, AOCN®, OSUWMC–James Cancer Hospital, Columbus, OH

Outpatient oncology nurses are commonly involved in the management of patients via direct care in the clinic setting as well as via indirect care that may occur by telephone or electronic medical record messaging. Patients have become accustomed to reaching health care professionals 24 hours a day. Ineffective management of telephone calls from patients or caregivers can result in negative patient outcomes or experience, unnecessary re-admissions and risk management issues for the organization. Telephone triage is becoming a new subspecialty in nursing and is defined as an interactive process between caller (patient or caregiver) and nurse to determine an appropriate plan of care and disposition of the call. A large metropolitan academic oncology setting quantified that over 23,000 phone calls are being received from patients each month. Oncology nurses are currently managing calls during business hours however after-hour calls are being man-

aged by an answering service which uses non-medical staff to take messages and escalate calls to various on-call providers. After-hours call data indicates that seventy-six percent of the phone calls received are for symptom management or other clinical issues. A review of EMR documentation indicates that only sixty-eight percent of the calls taken after hours are documented which may result in care coordination issues or risk management issues for the organization. Given this assessment the organization identified a need to embarked on the creation of an after-hours nurse driven triage center using the process improvement approach DMADV (define, measure, analyze, design, verify). This process improvement project has resulted in the creation of a new triage nurse job description, development of a triage nurse peer review tool, and implementation of evidenced based telephone triage protocols and a telephone triage module within the electronic medical record. Implementation of the after-hours triage center will be in phases focusing on the high volume and high risk patient populations for the initial phase with the goal to provide coverage for all clinical services after hours. Metrics for success will include duplicate or repeat calls for the management of the same symptom, number of calls managed by one call resolution, appropriate escalation of calls and documentation of calls within the electronic medical record.

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#### **TAKING TIME TO SIT IMPROVES QUALITY OF LIFE.** Debra Stellavato, RN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA

As oncology nurses, it is our responsibility to assess and manage our patient's symptoms, and disease or treatment related side effects. The Symptom Inventory Tool (SIT) is an assessment tool that captures the patients' perceived symptom burden for real-time clinical intervention, taken at the point of no intervention. This is taken every 21 days or greater. All new patients are given a SIT survey upon arrival to the center to establish their baseline. The SIT is comprised of 27 questions utilizing the M.D. Anderson Symptom Inventory tool (MDASI), and validated assessment instrument with 8 questions added and a free text box by Cancer Treatment Centers of America (CTCA). The information obtained from this tool, will drive the nursing assessment. Our focus and intervention is then directed towards alleviating those identified symptoms. The SIT tool helps to track our effectiveness in side effect management. By performing this analysis, it enables our practitioners to meet and comply with all Medicare quality initiatives. Improving a patient's quality of life is imperative to obtaining positive outcomes. Via the use of an iPad, the patient's self-assessment is automatically imported into the electronic medical record. Once imported, it provides for the clinician, a longitudinal view and graphical trending of those symptoms and quality of life concerns. This survey is reviewed by the nurse prior to the visit with the patient. Scores of 8 or above require immediate intervention. This can be brought to the attention of the provider and appropriate intervention or consultation can be initiated. This data can be pulled into the review of systems flowsheet and the interventions and responses to those interventions can be documented. Ongoing evaluation of SIT information has led to multidisciplinary discussion of symptom management. The implications to oncology nursing practice are immediate identification of the symptom occurrences and distress this is key to management and measurement of quality of life.

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#### **A ROADMAP FOR THE DEVELOPMENT OF AN ONCO-FERTILITY PROGRAM USING A LOGIC MODEL APPROACH.** Kyle Stimpert, RN, MSN, ACNP, University Hospitals Cleveland Medical Center, Cleveland, OH; Amelia Baffa, RN,

**MSN, Rainbow Babies and Children's Hospitals, Cleveland, OH; Breanne Roche, RN, MSN, CPNP, Rainbow Babies and Children's Hospital, Cleveland, OH; Leslie Whalen, RN, BSN, University Hospitals Cleveland Medical Center, Cleveland, OH**

In response to the growing concerns of adolescent young adults (AYA) pursuing cancer treatment, oncofertility is emerging as a subspecialty. Guidelines from national organizations describe the importance of fertility preservation (FP) prior to the initiation of treatment. However, research and practice shows this conversation to be lacking and therefore causing high distress levels in patients who have completed treatment. Further, patients report fragmented care between their oncology and fertility care. The purpose is to describe the development of an oncofertility program, using a logic model approach, at University Hospitals Cleveland Medical Center Seidman Cancer Center and Rainbow Babies and Children's Hospital. Logic models provide a structured and sequential roadmap to communicate a program and its effectiveness and show the relationships among resources invested, implementation activities, outcomes and impact. These models provide a shared understanding of the linkages across inputs, throughputs and outcomes that allow for ongoing program improvement. Resources (resources available to assist with program development): a committed, multidisciplinary team of healthcare professionals, time allocation, AYA patients. Activities (utilizing resources for program development): creating a business plan, establishing a network of key organizational supports, developing oncofertility navigator models (RN, NP or blended service line), establishing a historical baseline of newly diagnosed AYA patients, building a comprehensive database and oncofertility platform in EMR to generate triggers for early identification of FP, providing education to providers, creating communication strategies to facilitate workflow and collaborative relationships, and streamlining intra-team communications. Outputs (products of program activity): obtaining data on the number of newly diagnosed AYA patients per year referred for FP prior to the initiation of oncologic treatment, delivery of an oncofertility service-line for improved management of FP, increasing the number of providers addressing FP at the first clinic visit and developing of a robust oncofertility program, policies and procedures and database. Outcomes (changes that have occurred): the development of a formalized oncofertility program at an academic medical center, education to oncology staff on oncofertility and timeliness of consult, change of culture at first clinic visit to include a conversation about FP, and creation of follow on services that improve quality of care and organizational outcomes. Impact (long-term organizational impact): institutional measures which display a timely FP consult, an increase in overall consult volume and improvement in AYA satisfaction of FP.

### **239 HYPERGLYCEMIA, DIABETES MELLITUS AND CANCER: THE CHICKEN OR THE EGG? Susan Storey, PhD, RN, AOCNS®, Indiana University, Indianapolis, IN**

Diabetes mellitus (DM) and cancer are common co-occurring conditions. Among newly diagnosed cancer patients, the prevalence of DM is estimated to be as high as 18%. Having diabetes when given a cancer diagnosis increases the risk of death by 40%. Hyperglycemia, which frequently occurs in cancer patients independent of a diagnosis of DM, may be due to treatment related factors including steroids, certain chemotherapeutic agents and hormone deprivation therapy. Poor health outcomes have been linked to hyperglycemia in patients with cancer with or without DM. Possible links between hyperglycemia, DM and cancer include oxidative stress,

pro-inflammatory response, weakened immune response and epigenetic alterations. The purpose of this overview is to present an overview of the shared pathophysiologic processes between hyperglycemia, DM and cancer. Additionally, the contribution of chemotherapy to hyperglycemia will be discussed as well as the impact of hyperglycemia on the health outcomes of patients with cancer. Nurses knowledgeable about the shared pathways between DM, hyperglycemia and cancer can proactively identify, assess, and intercede on behalf of these at risk patients. Oncology nurses are integral in the development of a patient-specific plan of care that incorporates knowledge of disease processes, cancer therapy, and changes in diet and activity on blood glucose. By managing hyperglycemia, the onset of shared pathologic processes can be deterred, improving health related outcomes in cancer patients with and without DM. Nurses can communicate the presence of hyperglycemia to oncology advanced practice nurses and physicians to initiate monitoring and treatment practices. The oncology nurse plays an important role in the prompt identification of hyperglycemia and can collaborate with other members of the healthcare team to implement strategies to prevent or mitigate the harmful consequences of hyperglycemia. Clinicians typically focus on strategies to manage cancer and the associated symptom, and often fail to recognize coexisting insidious pathophysiologic processes which can diminish and/or alter the effectiveness of treatments. Educating oncology nurses regarding the harmful effects of hyperglycemia is imperative to provide comprehensive care to patients with cancer.

### **240 WHERE TO FIND THE VEIN: DIAGNOSTIC RADIOLOGY. Kenneth Struck, BSN, RN, Roswell Park Cancer Institute, Buffalo, NY; Cristi Zavatti, BSN, RN, OCN®, Roswell Park Cancer Institute, Buffalo, NY**

Diagnostic Radiology is a great place to learn how to start intravenous catheters (IV's). In one diagnostic radiology department the average number of IV starts per week is approximately 600. The volume of IV insertions in this department makes it the perfect venue for educating nurses and nursing students. Intravenous access skills can be difficult to master for a variety of reasons including lack of experience and/or exposure. Oncology patients often have central venous lines or IV's already infusing on arrival to in-patient units. Nursing schools and facility education classrooms have restrictions limiting clinical opportunity to insert IV's. The IV Insertion Program has been developed over the last twenty years. Newly graduated nurses, student nurses, radiology technicians and experienced nurses who need to learn or relearn how to start an IV can be assisted in this process by actually performing IV insertions in radiology with subject matter experts. The goal of this program is to increase the opportunity, confidence, education, and IV insertion skill technique in nurses. Participants are identified by Nursing Staff development Instructors based on previous experience. In addition, staff may request to participate in the program through their own self-assessment. An eight hour day is arranged focused solely around IV insertion skills. Upon initial arrival to the radiology department the student is given an educational handout outlining the proper IV insertion technique. A fake vein is utilized to practice with and ensure basic competency of the skill. The student then observes the subject matter expert inserting IV's with patients. Practical experience is allotted under supervision for the remainder of the day. Since the inception of the program approximately 800 participants have completed training. Nurses' accomplishment is measured by their successful insertions during their rotation in radiology. The average nurse will attempt approximately 12-15 IV insertions during the rotation. Students complete evaluations of the pro-



gram and consistently provide positive remarks regarding the experience. Working one on one with an experienced trainer provides real time feedback in a constructive manner to help the student in developing their skills. Oncology patients often have fragile veins due to the disease process and treatments. This education and skill development in IV insertion leads to improved nurse and patient satisfaction.

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### **THE POTENTIAL MISSING LINK: THE VITAL ROLE OF OUTPATIENT ONCOLOGY NURSES IN CLABSI PREVENTION.**

**Ellie Stull, MSN, RN, OCN<sup>®</sup>, Nebraska Medicine, Omaha, NE; Susan O'Neill, RN, OCN<sup>®</sup>, Nebraska Medicine, Omaha, NE; Karlie Zastrow, BSN, RN, Nebraska Medicine, Omaha, NE; Jim O'Rourke, RN, Nebraska Medicine, Omaha, NE**

More intense treatment is shifting from inpatient to outpatient settings which brings the responsibility for prevention of central line infections. Infusion center nurses play a critical role in central line associated blood stream infection (CLABSI) prevention. Much work is underway at our institution for inpatient CLABSI reduction given the cost association and risk for increased morbidity/mortality. There is currently no recognized method to track CLABSI rates in the outpatient setting. With no comparative benchmark, it is difficult to assess we are performing against others. The purpose is to explore current central line practices in an outpatient infusion center. Identify opportunities to improve central line care and develop strategies to address identified issues. Interventions: (a) Conducted baseline assessment with nurses to determine knowledge of central line care requirements and documentation practices. Surveys were given and return rate was 63%. (b) Patient charts were reviewed to determine compliance with institutional policy regarding dressing, cap and stat lock changes along with assessment of dressing integrity. (c) Observations were performed to assess overall dressing appearance and if dressings were appropriately labeled. (d) Reviewed organizational policies and identified potential practice conflicts as it applies to the outpatient setting. The interventions outlined demonstrate tremendous variability in nursing practice in the outpatient infusion center. The following strategies have been identified: (a) RN Skills Validation including dressing and cap changes, flushing/medication administration, blood draws and use of a new IV tubing system. (b) Workspace/Environment: Rooms were not originally intended for performing sterile dressing changes. Environmental modifications included utilizing a bedside table to facilitate maintenance of the sterile field. (c) Historical reluctance to utilize central line dressing kits exists, however, attitudes are evolving and evaluations of available dressing kits are underway. (d) Collaborating with the Practice Council to clarify policies relating to central line care practices in the outpatient setting. (e) Leverage electronic health record capabilities to simplify identification of central line care needs. Outpatient oncology nurses play a vital role in caring and maintaining central lines in patients who are at high risk for infections as a result of their oncology treatments. It is essential to identify optimal practices in the outpatient care setting to ensure quality care is delivered on a consistent basis. A comprehensive review of central line care practices can identify opportunities for improvement.

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### **NURSING INVOLVEMENT IN CANCER SCREENINGS ADDS EXTRA LAYER OF SUPPORT.** Kathleen Sweeney, RN, MS, ACNS-BC, AOCNS<sup>®</sup>, NE-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

Cancer screening can save lives by detecting cancers at an earlier stage and decreasing diagnosis of late stage cancers.

When cancer is caught early it can be easier to treat or cure. Nurses can impact cancer screenings by being able to provide education at a screening event to further change behaviors that can increase the risk of cancer. The Cancer Center at Froedtert and the Medical College of WI was asked by a community partner to provide a week's worth of cancer screening events. Instead of putting screening events together run purely by doctors or advance practice providers, it was decided to involve nurses in the screenings to add an additional layer of education and support for those being screened. Nursing was added to the skin cancer and lung cancer screening offerings. During the skin cancer screening the nurse talked to each patient about risk factors and skin cancer prevention, provided education on skin checks, use of sunscreen and protective clothes, and coordination of follow-up appointments and biopsies. In the lung cancer screening the nurse began by screening each patient to make sure they met screening guidelines, and if they did she immediately referred them onto a provider to have a shared decision making discussion about lung cancer screening. As part of this screening the nurse was able to educate patients on risk factors for lung cancer and refer patients to nursing colleagues that were providing free smoking cessation appointments in conjunction with the screening event. Nurses can add an important layer to cancer screenings by spending extra time with patients to answer question, provide needed education on cancer prevention activities and future screening needs, coordinate follow-up care, and provide smoking cessation counseling. Cancer screenings already add value to the community and individuals by increasing the number of cancers caught at an early stage. Nurses can add additional benefits by providing an extra layer of support, education, and coordination to these screening programs. Our project embedded nursing into skin and lung cancer screenings, but nursing staff could be added to any cancer screening program.

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### **STANDARDIZATION OF PATIENT ASSESSMENTS AND ADMINISTRATION GUIDELINES FOR BLINATUMOMAB.**

**Stephanie Szoch, BSN, RN, OCN<sup>®</sup>, University of Maryland Medical Center, Baltimore, MD; Christina Boord, BSN, RN, OCN<sup>®</sup>, University of Maryland Medical Center, Baltimore, MD**

Blinatumomab received accelerated FDA approval in 2014 for the treatment of relapsed and refractory B-cell ALL. This novel treatment is unique in that it is the only single-agent treatment for relapsed ALL and has shown great potential for patients who have chemotherapy-resistant disease. Current findings show it can induce complete remission in approximately one third of patients, providing hope to those fighting to receive stem-cell transplants and a possible cure. Blinatumomab's toxicity profile includes CNS toxicities as well as cytokine release syndrome (CRS). Although neurological toxicities associated with blinatumomab are almost always reversible, early detection and intervention of these toxicities is vital to ensure patients continue their full course of treatment. In addition, blinatumomab presents unique administration challenges related to preventing CRS, which ultimately can lead to line occlusions, resulting in possible delay of treatment. Two adverse events with patients prompted the Clinical Practice Council to investigate current practice as outlined in nursing literature as well as query other teaching institutions. However, no information was discovered. The purpose of this project was to develop nursing education for blinatumomab, specifically focusing on proper administration of the drug. In addition, a standardized neurological patient assessment was developed to ensure safe and effective administration of blinatumomab. An informational "Fact Sheet" was created describing the action of blinatumomab in B-cell ALL, including proper dosage, an administration guide, and a table outlining the drug's toxic-

ity profile. Education was provided via mandatory in-services. Subsequently, a "FAQ" guide was created addressing additional concerns as the use of blinatumomab increased within the institution. In addition, a standardized neurological assessment was created and outlined in the chemotherapy order-set. Retrospective chart audits were performed to identify patients who had neurological toxicities, CRS, or line occlusions while receiving their treatment prior to the described interventions. The same audits will be done post-implementation and will be compared with pre-implementation data. The post-implementation audits will also monitor adherence to the new assessment documentation guidelines. Results will be provided. Due to its recent accelerated approval and increased use, the nurse will continue to play a vital role in monitoring for signs and symptoms of adverse reactions, ensuring all patients receive the full benefit of their treatment.

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**OPENING A FAST TRACK UNIT IN AN OUTPATIENT CANCER CENTER.** Lynda Tagariello, BSN, RN, OCN®, NYU Langone Medical Center, New York, NY; Jessica Mayer, RN, MA, NYU Langone Medical Center, New York, NY; Roseanne DeRiso, RN, MA, OCN®, NYU Langone Medical Center, New York, NY; Patricia Eklund, RN, BS, OCN®, CRNI, NYU Langone Medical Center, New York, NY; Tiffany Tomberlin, RN, BSN, NYU Langone Medical Center, New York, NY; Klara Culmone, RN, MSN, OCN®, NYU Langone Medical Center, New York, NY

Volume for the two infusion units had increased dramatically, resulting in increased wait time over the previous one year. Oncology nursing leadership identified that there were a significant number of patients coming in for only blood draws, port flushes and/or injections which required a shorter chair time. The leadership team, in conjunction with the oncology infusion nurses, worked to create a "fast track unit" for this particular patient population. The idea was initially piloted in a small room carved out of the existing infusion space. The pilot resulted in successfully increasing the available chair time on that unit. A permanent location was then selected on the first floor of the cancer center building. The intention was to increase available chair time on both infusion units while at the same time allowing patients to be seen and released quickly and efficiently for these short, simple needs. It is much more convenient to be on the first floor rather than waiting to take the elevator up to the fifth or sixth floor to receive treatment. The unit is opened Monday through Thursday and staffed with two full time equivalent oncology nurses. Currently, these positions are actually filled with two part time nurses and one full time nurse. These three nurses and the leadership group collaborated with various other departments (i.e. materials management, pharmacy, registration, IT, etc.) on the design and layout of the workspace to ensure that the needs of both staff and patients were met. The unit fully opened in April 2016. The volume in fast track has increased since its inception in April. Subsequently, the fast track unit allowed for an increase in volume on the infusion floors without an increase in wait time. The fast track nurse does not have competing priorities of lengthy and complicated protocols, hypersensitivity reactions and blood transfusion reactions etc., thus allowing them to move a larger volume of patients with lower acuity through the system more efficiently. Our next steps are to compare patient satisfaction scores pre and post fast track unit opening. We plan to hire additional nurses in order to accommodate this service on Fridays as well.

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**RADIATION SAFETY EDUCATION: AN INNOVATIVE, MULTIDISCIPLINARY APPROACH TO ENHANCING THE**

**KNOWLEDGE AND SKILLS OF ONCOLOGY NURSES IN AN INPATIENT RADIATION SETTING.** Tara Tatum, RN, MBA, MD Anderson Cancer Center, Houston, TX; Stella Dike, MSN, RN, OCN®, MD Anderson Cancer Center, Houston, TX

Radiation Therapy is a common modality for various oncology diseases such as Thyroid Cancer, Intraocular Melanoma and Cervical Cancer. A 25 bed inpatient oncology unit designed a radiation safety and educational training for its multidisciplinary team to address the identified educational needs, safety intelligence reports and lack of standardized processes of onboarding new employees. It is critical for all health care personnel involved in the care of radiation patients to understand radiation safety principles and how to apply them into practice. The purpose of this project was to increase radiation safety awareness, knowledge, skill, compliance and promote a culture of safety, related to risks associated with radiation therapy. The aim was to develop a comprehensive radiation training program to maintain unit competency and provide a unit standard of practice. A multidisciplinary educational event was designed and presented by the unit educator, physicians, radiation safety and field service engineers on the common radiation therapies, oncology specific disease processes and emergency procedures. A four hour classroom training was held over two days and followed by skills validation check-off for all clinical nurses, patient care technicians and inpatient service coordinators. This educational activity was communicated to learners through email and advertisement through fliers. Pre-implementation needs assessment by unit educator identified a radiation safety knowledge deficit and priority for unit training. Additionally, antidotal feedback, exit interviews and multiple safety events revealed a lack of knowledge of radiation safety and patient care. Each learner's knowledge level was measured by post presentation questions through an evaluation of the radiation safety program. A four month safety event review was conducted to evaluate the impact on clinical practice, which indicated a decrease in radiation safety events. Our team gleaned many valuable lessons from the assessment and development of this program. Using a multi-disciplinary approach was effective in the implementation of radiation safety training. It is critical that new employees', onboarding oncology radiation settings, promote efforts to ensure the development of a radiation safety training program. Therefore, a quarterly radiation training program targeting new employees and an annual refresher training for the entire team will be implemented.

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**NURSING CONSIDERATIONS FOR THE PATIENT UNDERGOING DENVER SHUNT PLACEMENT FOR MALIGNANT CHYLOUS ASCITES.** Julia Taylor, RN, BSN, CMSRN, Memorial Sloan Kettering Cancer Center, New York, NY; Lauren Picarde, RN, BSN, Memorial Sloan Kettering Cancer Center, New York, NY

Treatment of intractable chylous ascites in cancer patients remains a challenge for the Oncology team. Nutritional loss and limitations in sustained quality of life are two of the main burdens. However, Denver shunts are known to be effective in treating intractable malignant ascites. It is essential nurses are knowledgeable about the care and complications of Denver shunts in order to provide quality nursing interventions. The purpose is to inform and educate oncology nurses about the treatment of chylous ascites with Denver shunts. To increase knowledge about Denver shunt placement, post-procedural complications and recommended nursing interventions. From April 2001 to June 2015, 28 patients with chylous ascites were treated with percutaneous Denver shunts. Demographic characteristics, technical success, efficacy in providing symptomatic relief, shunt survival time and complications were

recorded and analyzed. Symptomatic relief was defined by relief of abdominal pressure and distention. Resolutions of ascites were assessed by follow-up imaging and clinic visits. Univariate logistic regression was performed to determine factors correlating with complications, complete resolution of chylous ascites and shunt removal. Denver shunts were technically successfully inserted in all 28 patients (100% technical success) and were 100% effective in symptomatic relief. Chylous ascites was completely resolved in 10 patients (43%) whose ascites has resulted from retroperitoneal lymph node dissection, leading to shunt removal within 128±84 days. No recurrence of ascites was seen post shunt removal upon follow-up (mean follow up 15±11 months). The post-procedure complication rate was 37%. The most common complication was shunt malfunction. Denver shunts successfully treated chylous ascites in cancer patients, particularly in the setting of testicular cancer, leading to complete resolution of ascites and shunt removal in all of them. Nursing care plays a pivotal role in preventing post-procedure complications including obstruction and infection.

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**HOW AN IMPROVED ORIENTATION PROCESS CAN ASSIST IN STAFF RETENTION, IMPROVE QUALITY METRICS, AND INCREASE PATIENT SATISFACTION SCORES.** Katherine Thewes, RN, BSN, OCN®, CHPN, NYU Langone Medical Center, New York, NY; Laura Diaz, RN, MSN, OCN®, NYU Langone Medical Center, New York, NY; Lauren DiCosimo, RN, BSN, OCN®, NYU Langone Medical Center, New York, NY; Michael Wuckovich, RN, MSN, NYU Langone Medical Center, New York, NY

In 2015, our inpatient oncology unit saw a large turnover in nursing staff along with a significant drop in quality metrics and patient satisfaction scores. Also, we noticed that new graduate nurses (NGNs) were struggling with their transition off orientation. Since our institution already has a well-established Nurse Residency Program, how could we improve upon our unit-specific orientation? The purpose is to change and standardize our inpatient unit-specific oncology orientation to better support our NGNs, see better staff retention, while also improving unit quality metrics and patient satisfaction. We extended the orientation period by two weeks. During the first five weeks, that includes intermittent 8-hour classroom days, the NGNs remain on a Monday-Friday 8-hour schedule. The NGNs are assigned different essential nursing tasks to focus on each day, including unit-specific education that covers assessment skills with proper documentation, documentation of a patient's care plan, two separate oncology specific education days, accurate completion and documentation of admissions and discharges, and communication skills. One day is dedicated to shadowing the charge nurse for exposure to unit flow. The other days are then split between medication administration with patient education and completing admissions and discharges. The second half of the NGNs orientation leaves five weeks of full 11.5-hour shifts with a full patient assignment where they are able to put the pieces together. Once off orientation, the NGNs complete 1:1 rounds each shift with a unit educator for two years to help improve their critical thinking skills. Since beginning the new orientation process, we have seen 100% retention in new hire staff to date. We have not had to extend anyone's orientation time, and new hires have expressed at 8 week, 3 month, and 6 month check-ins that they feel supported and well-adjusted to their workload. Even with 58% of nurses within two years of their hire date, we have seen significant increases in patient satisfaction scores, as well as improvement in our quality metrics. Improvement in quality metrics and patient satisfaction data along with increased new hire retention and satisfaction, when 58% of staff is within their first two years, highlights how a more focused, unit-specific orientation can benefit an inpatient oncology unit.

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**USING IN-SITU TECHNOLOGY WITH DYSRHYTHMIA TRAINING TO INCREASE FIRST TIME ACLS PASS RATES ON AN INPATIENT ONCOLOGY UNIT.** Tanya Thomas, BA, BSN, RN, OCN®, University of Virginia Health System, Charlottesville, VA; Katelyn Rybicki, DNP(c), MSN, RN, CCRN, University of Virginia Health System, Charlottesville, VA; Amy Turner, BSN, RN, University of Virginia Health System, Charlottesville, VA; Regina DeGennaro, DNP, RN, CNS, AOCN®, CNL, University of Virginia School of Nursing, Charlottesville, VA

As a result of increasing patient acuity, oncology nurses must be prepared to care for deteriorating patients and provide early resuscitative measures to those with increasingly complex needs and monitoring requirements. ACLS is a required course for many. In 2012, first-time pass rates for ACLS were dismal and nurses were hesitant to attend training. Early in 2015, a combination of in-situ training and formal dysrhythmia classes were re offered to unit-based acute oncology nurses to provide a stronger foundation for care of patients and to increase confidence with ACLS classes using iSimulate technology. In-situ dysrhythmia training using the iSimulate platform is a realistic and adaptable training tool. By using this technological tool, nurses can learn a multitude of rhythms and strengthen recognition skills which translate into more knowledgeable care of deteriorating patients. A teaching and learning plan was developed to improve confidence and competence in dysrhythmia recognition. The teaching plan included demonstration of the effective use of technology to improve nursing practice and patient outcomes. In spring of 2015, a combination of in-situ and formal dysrhythmia classes were offered on the unit to provide a foundation for care of patients and improve knowledge with ACLS. Initial classes utilized the iSimulate monitor for basic rhythm interpretation. As clinicians became more proficient, an additional simulator was used in connection with the defibrillator to hone ACLS skills, connecting rhythm interpretation with treatment algorithms and kinesthetic learning. First-time ACLS pass rates from 2012 showed a 33% pass rate. ACLS participants, unit management and ACLS instructors identified a knowledge deficit and need for dysrhythmia training to strengthen skills, confidence and competence. In spring of 2015, roving dysrhythmia training on the unit, coupled with formal in-situ classes began. In less than 6 months, data illustrated first-time ACLS pass rates had risen to 79%. Off-unit training is challenging, impacts staffing and has financial implications. The need for regularly scheduled and consistent training makes classroom education problematic. Educational strategies require adaptation to meet clinician needs. Using technology with roving unit-based education can accomplish these goals which translate into positive outcomes. Optimizing clinician learning with technology in real-time while at work was offered in partnership with management approval. Responding to knowledge deficit and improving clinician confidence and competence with rhythm recognition optimizes patient outcomes.

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**SUSTAINED REDUCTION OF CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS (CLABSI) ON AN INPATIENT HEMATOLOGY/ONCOLOGY AND BONE MARROW TRANSPLANT UNIT.** Trudy Thomas, BSN, RN, OCN®, Christiana Care Health System, Newark, DE; Krystle Becraft, BSN, RN, OCN®, Christiana Care Health System, Newark, DE; Christine Brown, BSN, RN, OCN®, Christiana Care Health System, Newark, DE; Lisa France, RN, AND, OCN®, Christiana Care Health System, Newark, DE; Lori Randle, BSN, RN, OCN®, Christiana Care Health System,



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Reducing central line-associated bloodstream infections (CLABSI) in hematology and oncology patients is imperative, yet sustaining a reduced rate among the most immunocompromised subset of this population often proves to be a challenge. Using previously instituted interventions combined with the implementation of new prevention strategies, we have achieved a steady decline in the rate of non-mucosal barrier injury (non-MBI) CLABSIs for patients on our unit. The Hematology/Oncology unit at Christiana Care Hospital consists of 40 acute care inpatient beds and a 6 bed bone marrow transplant unit. Our CLABSI prevention initiatives have incorporated multiple evidence-based central line care interventions that were implemented after assessing the current process with a concentrated focus on standardizing best practices, monitoring performance, and educating staff and patients. The strategies have included: increased monitoring of central lines from once monthly to three times weekly; development and utilization of a comprehensive electronic monitoring tool; improvement of data collection and analysis; communication of monitor results and opportunities with staff; requirement of mask wearing by other departments during accessing of ports and dressing changes; daily patient CHG bathing; conduction of Deep Dive analysis for all CLABSIs; 1:1 observations of central line dressing changes and lab collections to ensure adherence to standardized practices; utilization of Site-Scrubs® for cleaning lines prior to every access; changing caps prior to blood culture collection; patient hand hygiene; increased supply accessibility and availability; participation in environmental rounds; conducted a Voice of the Customer campaign to obtain patient, physician, and nursing feedback regarding central lines; application of Curoso™ disinfecting caps on unused lumens and IV tubing ports; and the development of a customized central line dressing change kit. The implementation of these improvement strategies has resulted in a decrease in our non-MBI CLABSI rate from 3.4 to 1.5. This represents a 56% reduction achieved in this type of CLABSI. We strive to provide optimal care to our hematology and oncology patients through the prevention of CLABSIs. We continue to collect and review data for improvement opportunities. We empower our patients to be active participants in their care and emphasize staff accountability in the prevention of infection. By focusing our efforts on the promotion and delivery of safe and excellent care practices we work to prevent harm and enhance patient outcomes.

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**ALIGNING THE STARS: FACILITATING A COMPLEX INFUSION PROTOCOL TO PROMOTE SAFE, EFFICIENT CARE.** Rebecca Thome, BSN, RN, OCN®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Denise Portz, MSN, RN, ACNS-BC, AOCNS®, Froedtert & Medical College of Wisconsin, Milwaukee, WI; Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Heather Backus, BSN, RN, OCN®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI

Blinatumomab is a novel agent given for the treatment of B cell acute lymphoblastic leukemia. It is given by continuous infusion, beginning in the inpatient environment and then transitioning to the ambulatory setting. Patients are required to return every 48 hours for a new bag, infused through an ambulatory pump. Many challenges exist in managing both the care and scheduling of these patients. Drug-specific issues include neurotoxicity and infusion-related reactions. Special attention must also be given to the central line, as the drug cannot be flushed quickly. Patients need to be discharged from the inpatient setting directly to the outpatient setting, requiring

exceptional communication and handoff. The purpose of this project was to develop a process that facilitates safe, timely care for patients receiving blinatumomab, focusing on transitions of care. In a large Midwest academic cancer network, a team was created to develop a standardized workflow for this complex protocol. Led by two clinical nurse specialists (CNS), the team included nursing, pharmacy, advance practice providers and schedulers. Tip sheets and smart phrases were developed for schedulers to improve patient scheduling. A patient teaching plan was designed for a nurse and pharmacist to deliver to patients regarding blinatumomab action, side effects and protocol specifics. Interprofessional work occurred between nursing and pharmacy to expedite drug processing in the infusion center. Education was provided to nursing staff regarding all elements of administration, management, and transitions, including administration guidelines and IV tips to assure consistency and knowledge for nurses giving the drug. The creation of central line flushing algorithms to guide nurses during bag exchanges, disconnects, and troubleshooting was also included. All information specific to this protocol was placed on a shared access site for viewing by all oncology staff. This project resulted in a comprehensive plan for patients receiving this protocol. Nurses' report increased knowledge of the drug protocol, ability to complete an appropriate assessment, and comfort with medication administration. This allows for better communication and education with patients. Next steps include enhancing the program to allow patients to discharge earlier from the inpatient setting, positively affecting length of stay. Creation of a standardized process for a complicated drug protocol supports nurses and patients' abilities to give and be an active partner in care.

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**THE BENEFITS OF ANIMAL ASSISTED VISITATION IN AN OUTPATIENT ONCOLOGY SETTING: A NURSING PERSPECTIVE.** Imelda Unto, RN, MSN, OCN®, Florida Hospital Memorial Medical Center, Daytona Beach, FL; Jenny Ketrang, LCSW, Florida Hospital Memorial Medical Center, Daytona Beach, FL

Commission on Cancer accreditation requires cancer centers to offer supportive programs in order to enhance the wellbeing of their patients while undergoing treatment. Pet visitation is a complimentary treatment to oncological care that has been shown to transform both participants and milieu. Nursing advocacy is an essential contributor in the expansion of ancillary services. Pet visitation has shown to be so effective at increasing patient satisfaction that program use in the hospital setting has increased more than 100% in the last 8 years. Patients are educated about the outreach ministry of Florida Hospital HospiceCare (HospiceCare HosPoochCare and HosPussCare) by the Nurse Navigators. Members of the nursing teams regularly participate in pet visitation and encourage patients to enjoy a session as well. Special considerations are discussed such the potential for zoonotic infection but the risk is low with proper hygiene and patients are routinely educated on the benefits from a visit. Animal assisted visitation promotes a physiological transformation that can promote healing, reduce stress and decrease anxiety throughout the visit. The advantages of pet visitation have ongoing results that can be seen during the entire outpatient appointment. The neuroendocrine system is a primary recipient of pet visitation benefits. Oxytocin, epinephrine, and norepinephrine can be altered by experiencing pet visitation. Humans and dogs benefit from the releases of Oxytocin when a meaningful gaze is exchanged. Oxytocin fosters feelings of joy and peace which is greatly appreciated in a stressful situation. Animal assisted visitation also has been proven to decrease systolic pulmonary artery pressure and pulmonary capillary wedge pressure during and after

the visits. Animal assisted visitation provides an avenue for patients and their families to experience familiar connections to what most would classify as an institutional environment. It can be a welcomed distraction that does not adversely affect productivity, require additional cost, or need special equipment to appreciate the benefits. Animal assisted visitation programs in the outpatient oncological environment provide intentional therapeutic opportunities for bridging communication gaps between patients and healthcare providers while decreasing barriers to care and stress.

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### **BREAST IMPLANT-ASSOCIATED ANAPLASTIC LARGE CELL LYMPHOMA.** Kerri Vaughan, MS/MPH, RN, APHN-BC, Memorial Sloan Kettering Cancer Center, New York, NY

Approximately 12% of American women will develop breast cancer over the course of a lifetime, and approximately 80% of women who undergo a mastectomy with breast reconstruction do so with prosthetic implantation. Breast Implant-associated Anaplastic Large Cell Lymphoma (BIA-ALCL) is a rare lymphoma that develops within the fibrous capsule surrounding a breast implant. From 1997 to 2016 there have been 258 reported cases of BIA-ALCL to the Food and Drug Administration. With the use of prosthetic implants for breast reconstruction on the rise, there is a need for increased knowledge about diagnosing, treating, and educating the breast cancer patient about BIA-ALCL. The purpose of this project is to identify the risk factors for BIA-ALCL, how to diagnosis, treat, and comprehensively educate the breast implant patient population about this rare lymphoma. An evidence-based review of the literature was conducted to examine the state of knowledge and gaps in research about BIA-ALCL. Using citation databases, MedLine, PubMed and CINAHL, identified publications on the current state of research on BIA-ALCL and there is extremely limited research about this topic. An identified publication discussed a structured expert consultation process including medical oncologists, hemato-pathologists, plastic surgeons, surgical oncologist, and radiation oncologist who convened in 2014 to review and set standards for BIA-ALCL treatment. The research shows that risk factors for BIA-ALCL are having textured implants and/or unexplained seromas greater than one year from implant placement. The publication identifies diagnosis of BIA-ALCL through fluid sampling to cytology, and interventions suggest surgical removal of the affected breast implant and total capsulectomy. This literature can guide the oncology nurse to care for breast cancer patients with prosthetic implants through early diagnosis and referral. In addition, a key role of the oncology nurse is educating the breast implant patient about the need to monitor their reconstructed breasts for any changes such as change in shape, swelling, or lumps. Breast implants are not lifetime devices and that the longer they are used, the more likely to have local complications such as BIA-ALCL. However, more research is needed to adequately understand this rare lymphoma affecting the breast cancer population.

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### **PAWS FOR A CAUSE: CAN ANIMAL ASSISTED THERAPY REDUCE COMPASSION FATIGUE IN NURSES?** Christine Veal, RN, MSN, OCN®, Cancer Treatment Centers of America, Philadelphia, PA

Workplace stressors are described as physical and emotional outcomes that result when the demands of a job are greater than the amount of control one has over these demands. When cancer care clinicians become stressed, they are placing themselves at risk for compassion fatigue and burnout. The purpose of this pilot is to identify if Animal Assisted Therapy (AAT), a common therapy for patients experiencing stressors, could provide positive outcomes for nurses. Comfort Caring

Canines, a volunteer based AAT organization, was contacted to participate in bi-weekly AAT support groups in the infusion department. Infusion nurses were asked to quantify their stressors by completing the Professional Quality of Life Scale (Pro-QoL) - measuring compassion satisfaction, risk for burnout, and compassion fatigue : prior to participating. At each AAT support group, nurses were encouraged to discuss workplace stressors while interacting with the therapy animal as much as they saw fit. An average of six nurses participated in each AAT support group. Prior to AAT, the baseline level of compassion satisfaction was 41 indicating a greater level of satisfaction than the average Pro-QoL participant which was 37. After four AAT support groups, the average was 43. The baseline level for burnout was 19, indicative of overall positive feelings about being effective at work and ranking lower than the average participant who ranked 22. Post AAT, the average was 17, indicating a continued decrease in the risk for burnout. The baseline level of compassion fatigue was 13, which is the average ranking : a score above 17 suggests high levels of compassion fatigue. After AAT, the average dropped to 12. The infusion nurses indicated a high level of satisfaction and an average level of fatigue in the baseline survey and even still the averages improved after only four AAT sessions. More significantly, the risk for burnout decreased after participation in the support groups. Although the data suggests minimal increase/decrease in numbers, the quantitative data has spoken volumes. Nurses have reported increased positive outlook during stressful times, new sense of teamwork, and appreciation for the time to debrief at work. Continuation of this pilot will further evaluate the effectiveness of AAT as an effective coping mechanism for nurses.

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### **OUTPATIENT CANCER NETWORK SHARED GOVERNANCE MODEL: AN INNOVATIVE APPROACH TO NURSING COLLABORATION.** Alexandra Verbeten, MSN, RN, ACNS-BC, AOCNS®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Julianna Manske, MSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Tina Curtis, MSN, MBA, RN, NEA-BC, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Martina Hartwell, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, West Bend, WI; Nora Klocek, BSN, RN, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

In an outpatient cancer network with four locations and more than 120 nurses, the combination of practice standardization, collaboration, shared decision-making and clear communication are key to providing optimal patient care. Current evidence supports the benefit of shared governance; however, information lacks on the process and outcomes of transitioning from a site-specific to system-wide, or network, shared governance model. Prior to embarking on the development of a new system shared governance model, the Index of Professional Nursing Governance (IPNG) instrument was administered to all nurses across the cancer network. A sampling of clinic and infusion nurses, a clinical nurse educator, and clinical nurse specialist met to create a new model which would elevate evidence-based practice, standardize patient care, and increase the sense of shared decision-making. The new model aimed to unify nursing in all outpatient oncology areas across the network. In order to promote successful implementation, the majority of project decisions were made by several staff nurses at all locations. Interventions for the project were extensive, and included two change management workout sessions leading to: a structural redesign of four councils to five "Special Interest Groups" (SIG) reflecting ONS nomenclature; a new charter, bylaws, and project proposal form; new dates and meeting times to accommodate

staff schedules; use of videoconferencing technology; in-depth staff education; and SIG chair and co-chair elections. An informal survey was sent to nurses six months following implementation. Feedback consisted of improvements toward technology and documentation, communication and time to complete project work. Nurses noted advantages including collaboration with network colleagues and more flexible meeting times. The IPNG survey will be re-administered one year post-implementation to evaluate the perception of shared decision-making with the new model. Until that time, we will continue to make adjustments to the structure as needed. The model was "home-grown" for oncology which allows nurses to dive deep into their practice and advocate for exceptional patient care. The project addresses the unique needs of our nursing population, uniting the oncology community. While the model continues to evolve and improve, several impressive projects have already transpired through shared governance, with more in progress. Other institutions may wish to evaluate their shared governance with the IPNG and adopt an oncology-specific framework to accommodate the unique needs of the patient population.

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**INFECTON PREVENTION THROUGH EDUCATION: A NURSE/PATIENT CENTRAL LINE AGREEMENT.** Emily Vogt, BSN, RN, OCN®, CN-III, Robert Wood Johnson University Hospital, New Brunswick, NJ; Anusuya Govindarajan, BSN, RN, OCN®, CN-IV, Robert Wood Johnson University Hospital, New Brunswick, NJ; Nicole Minovich, RN, BA, BSN, CN-III, Robert Wood Johnson University Hospital, New Brunswick, NJ

A team of three front-line staff nurses developed a written agreement for educating patients with central lines. This project was inspired by the case review of a patient who developed a central line-associated bloodstream infection (CLABSI) and was identified as manipulating the IV tubing. The nurses created a document, the Central Line Agreement, that discusses the hospital's policy and procedures, and empowers the patient to assist with central line care and infection prevention. The idea came from the success of a Fall Safety Agreement that is discussed with all patients on admission, and has been shown to decrease fall rates. The Center for Disease Control and Prevention estimates that approximately 41,000 hospital patients are affected by CLABSIs each year. These infections are usually serious and cause increased risk of mortality, prolonged hospital stays, and increased cost to the patient and institution. Robert Wood Johnson University Hospital had 64 CLABSIs in 2015 with a rate of 1.27 infections/1,000 catheter days. CLABSIs are especially important in the oncology setting because many patients with central lines are immunosuppressed. The primary purpose of the Central Line Agreement is to reduce CLABSI rates. A team of three oncology nurses met to discuss how patients can be included in the care of their central line. The nurses developed a written document using simple language that describes the complications that can result from a central line and how to prevent them, including information about bathing instructions, dressing changes, minimizing disconnection and reconnection of tubing, etc. This agreement will also keep nurses on task with policy and procedures as their patients will be knowledgeable about the specific care that is required. The agreement has not yet been handed out to patients, as it is still in process with the approving committees. The agreement is estimated to be rolled out hospital-wide in the fall of 2016. By the time of ONS Congress in 2017, results can be shared.

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**PREVENTING PATIENT FALLS IN THE INFUSION CENTER BY CREATING A DEPARTMENT POLICY TO INCLUDE**

**AMBULATION TRIAL.** Victoria Vu, RN, UCSD, La Jolla, CA; Monette Santos-Moss, MSN, RN, UCSD, La Jolla, CA

UCSD Moores Cancer in La Jolla, California is one of the 69 NCI-designated Comprehensive Cancer Centers in the United States and a member of the National Comprehensive Cancer Network (NCCN). The UCSD Moores Cancer Center (IC) provides chemotherapy, biotherapy, post bone marrow transplant care and other infusions in the outpatient setting. The patient population in the infusion center is at risks for falls due to medications they are receiving as well as their compromised health. The Infusion Center nursing staff and leaders created a Fall Task Force together to: (a) Evaluate the Fall Assessment and Interventions for the outpatient setting (b) Assess the current practice of documenting the Fall Assessment and Interventions (c) Create a departmental policy for Falls. Based on a thorough review of fall documentation, the Infusion Center developed a specific policy which includes ambulation trial prior to discharging patients. Ambulation trial is defined by walking 10 feet, turning around and returning to origin. The Infusion Center also provided staff education on the importance of documenting Fall Assessment and Interventions to keep patients safe while in the Infusion Center. Staff education includes email and frequent huddles with staff. Prior to rolling out staff education on Fall Assessment and Intervention, the Infusion Center average 81% (June 2015) on documentation. By November 2015, the average increased to 95% and is at currently at 98% (May 2016). This is a 17% improvement from baseline. There were a total of 14 falls from August 2014 to August 2015. For August 2015 to August 2016, there was a decrease of 6 falls total. Prior to implementing our education and review of policy, the Infusion Center staff was not consistent in assessing patients at risk for falls and providing instructions to patients. There were certain medications that were given to patients during administration of infusions that may change the patient's risks for falls. Patient assessments were not done on risks for falls prior to discharge. From the task force, a policy specific to Infusion Center was created and added to the Medical Center Policy. This policy includes ambulation trial which is done prior to patient discharge. Frequent chart audits are done to monitor compliance with fall documentation.

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**THE VIRTUAL HOSPICE PROGRAM (VHP) AND THE HALO EFFECT TOWARDS EARLIER PALLIATIVE CARE INTEGRATION.** Katherine Walczak, BSN, RN, CMSRN, Froedtert Hospital, Milwaukee, WI

The purpose was to enhance the quality of care for patients at the end of life within the hospital, the creation of a virtual hospice program (VHP) started in January of 2015. The focus for this program is on improved symptom management and support for patients who are anticipating a hospital death because of rapid decline in condition. Patients and families enrolled into the VHP receive nursing care in a collaborative manner. Benefits of the VHP to the patient and family include: the palliative care team as the hospice doctors, 24/7 hospice nursing support, enrollment into their hospice benefit, room enhancements to create a less medically technical environment, and partnership of the nursing care to provide best symptom management. Rapidly progressive functional decline is listed as NCCN guideline criteria for palliative care consultation. Out of 332 patients served by the VHP, 84 patients were oncology patients. Through enrollment into the VHP, all the oncology patients and their families received consultation from the palliative care team. The palliative care team includes supportive services from child life specialists, a team chaplain, a psychologist, music thanatology and a bereavement coordinator. Enrollment in the virtual hospice program resulted in positive patient and family satisfaction



within the oncology patient population as evidenced by the family bereavement survey. Overall satisfaction scores for the VHP are at 88%. Several process improvement efforts have formed and are supported through review of the data from VHP. Efforts to improve advance care planning have already begun at an organizational level. A workgroup of critical care doctors, nurses, and the palliative care medical director has been formulated and are reviewing ICU deaths and timing of palliative care consults. Of the 84 oncology patients of the VHP, 40 of those signed on while in an ICU setting. The review of the oncology patients of the VHP can assist with promotion efforts for earlier integration of palliative care consultations, prior to end of life. Collaborative efforts in nursing and provider education about palliative care are ongoing. Earlier integration of palliative care and early advance care planning can result in improved overall quality of life for oncology patients. Continued review of the VHP can provide evidence for further investment towards improvement.

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**NATIONAL EARLY WARNING SCORES (NEWS): A QUALITY IMPROVEMENT PROJECT.** Sreedevi Warriar, DNP, RN, MSN, CNS, Harbor-UCLA Medical Center, Torrance, CA; Margaret Brady, PhD, RN, CPNP-PC, California State University, Long Beach, CA; Joy Goebel, PhD, RN, FPCN, California State University, Long Beach, CA; Savitri Singh-Carlson, PhD, RN, APHN-BC, California State University, Long Beach, CA

Research suggests that a patient suffering from a cardiac and/or respiratory arrest usually exhibits physiological deviations, such as changes in vital signs and/or mental status, at least eight hours prior to the need for more intensive care. Numerous early warning score (EWS) tools are available for use in acute care settings to alert nurses to the need for early intervention to prevent continuing decline and mortality. The National Early Warning Scores (NEWS) is a tool used to predict clinical deterioration, based on physiologic measurements. A specific score is given to each physiological measurement and aggregated scores from six parameters and the use of oxygen are used to create a composite score to predict the magnitude of decline. The purpose of this project is the early identification of clinical deterioration in patients, so that nurses and providers could initiate an immediate intervention(s) ensuring appropriate use of RRT and/or Code Blue activations and preventing further clinical decline. A prospective quantitative study was conducted in six medical/surgical units in a Level 1 Trauma Center, over a 30-day period of time (November 10, 2015 - December 9, 2015), in order to validate the effectiveness of NEWS in predicting clinical deterioration. Three thousand one hundred and fifty-four patient recordings revealed that 138 patients scored NEWS  $\geq$  5, or a 3 in a single parameter and received interventions to prevent further clinical deterioration. At the time of the project the hospital included the sepsis identification with NEWS. After data cleaning, 122 patients identified as NEWS positive patients, 11 patients were transferred to a higher level of care, whereas 63 patients remained in the medical/surgical unit after an intervention. Their NEWS returned to acceptable levels after therapies. Project findings indicate that NEWS supports clinical decision-making processes as it allows for a single measure of an extreme physiologic value or an aggregate score to activate interventions to prevent clinical deterioration. NEWS provides a realistic tool for clinical decision making, assists providers and nurses in identifying clinical deterioration since the scores are readily available to promote initiation of intervention.

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**ENHANCING THE DISCHARGE PROCESS AND IMPROVING PATIENT SATISFACTION ON A 25-BED GYNECOLOGIC**

**ONCOLOGY/RADIATION UNIT.** LaKisha Washington, MSN-CNL, RN, MD Anderson Cancer Center, Houston, TX; Terri Earles, MSN-RN, WHPN-BC, MD Anderson Cancer Center, Houston, TX

The discharge process can be harrowing for both the patient and the team. Our goal was to improve this process by evaluating and establishing new pathways in which we can alleviate this stressor and consequently improve the satisfaction of both the team and the patient. Some of the negative consequences we identified included, but were not limited to the following: increased hospital costs, continued use of hospital resources, lack of communication, and inadequate patient education which left the patient feeling unprepared for discharge. The primary aim of the quality improvement project was to decrease the amount of patients discharged from the floor after 1100 by 10% by August 2016. The secondary aim was to have patients discharged from the unit within 2 hours from the time the order is written. Our target population included all gynecology patients admitted to our unit with medical indications. We excluded all surgical patients. Our interventions included meeting with our Patient Family Advisory Council (PFAC) focus group, encouraging nurses to educate patients about our Discharge Center, daily meetings with the case managers and social worker, defining the roles and responsibilities of the care team, communicating with the provider team about the discharge process, and increasing follow-up and communication with the nurses on unit. The interventions were implemented on May 30, 2016 however we continue make revisions to proposed interventions as needed on a monthly basis. In June and July 2016, we saw an average 17.2% decrease in the total discharge process time post interventions. We also saw an average 9.0% decrease in monthly room charges at stake post interventions. Ongoing analysis will be needed in order to determine how we can further improve our discharge process. We will continue to meet monthly to discuss metrics and make any necessary changes. This project has highlighted the need to educate nurses on better documentation of the reason for discharge delays. We also determined that we need to communicate with provider teams about assessing a patient's readiness for discharge prior to writing the discharge order. We will also increase utilization of the Discharge Center as it was not utilized by our patients post interventions.

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**OUR QUEST FOR EFFICACIOUS PAIN MANAGEMENT.** Boguslav Wawzkowicz, BSN, RN, OCN®, Robert Wood Johnson Hospital Somerset, Somerville, NJ; Lisa Landon, RN, OCN®, Robert Wood Johnson University Hospital, Somerset, Somerville, NJ

It is reported that 80% of patients experience pain postoperatively with between 11 and 20 percent experiencing severe pain. Post-surgical pain has been linked as having one of the highest dissatisfaction rates within the acute care setting. Pain management is important in healthcare since this is a question asked after the patient is discharged. On the Oncology Pavilion, we care for patients with acute, chronic pain, post-surgical pain, Sickle cell crisis and end of life, so we take pride in providing the highest level of care. Guided by evidence-based practice articles, we created a unit based Pain Management Committee to address our low HCAHPS scores and to find better ways manage our patients pain. Patients are screened on admission and post-operatively for the presence or absence of pain using the Wong-Baker Scale—available in multiple languages. For patients with tolerable pain level greater than 3, a realistic pain goal is set by the patient. Create a visual pain plan with the medications and administration times on the White Board which eliminates anxiety for the patients. A laminated sign with the realistic pain

goal is then placed at the bedside with instructions for the patient to notify their nurse if the goal is not being met. Hourly rounding to assess pain and HCAHPS survey results showed that we were still having challenges in the two areas: Pain Well Controlled and Staff did everything to help with pain. We audited pain assessment and re-assessment and found that even though pain medications were being given, the dose of the medication did not match the reported pain scores for mild, moderate and severe pain. Practice change improved the pain score from 40th percentile to 100 percentile in six months. Oncology nurses in all setting must first set the expectation that a pain goal of zero is unrealistic through effective communication, education and trusting relationship while setting the numeric pain goal. It is critical to build an arsenal against pain by offering non-pharmacological therapies. Patients who set realistic goals and meet them reported higher satisfaction with pain management. Visual pain management regimen laminated realistic goal sign, bright colored paper reminder for the physician.

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**STEM CELL TRANSPLANT UNIT ACUITY TOOL.** Andrea Wearden, BSN, RN, UPMC Shadyside, Pittsburgh, PA; Wendy Lucas, MSN, RN, CCRN, CCNS, UPMC Shadyside, Pittsburgh, PA

Nursing satisfaction is highly dependent on equitable patient assignments. Creation of these assignments employing an acuity tool was utilized. The purpose of this project was to create an acuity tool, specific to the stem cell transplant population, which would foster the following: (a) Distribution of workload among nursing staff (b) Facilitation of the process in making patient assignments (c) Confidence of the charge nurse in the equity of assignments. The acuity tool scores patients for tasks anticipated during the oncoming shift. Included tasks are either time-intensive or indicate an increased severity of illness. After each staff nurse scores his or her individual patients, the charge nurse determines the total acuity for the unit for the oncoming shift. The charge nurse then divides the patients accordingly, aiming to create assignments with similar total acuity scores while also accounting for factors like nurse skill set, chemotherapy certification, and patient location. Project goals were evaluated via two separate surveys. One survey was sent to all nurses on the unit, and the other survey was sent only to charge nurses. Outcomes of the project, measured for dayshift and nightshift, were: (a) Nurses' perception of fairness of assignment (b) Degree to which nurses felt they had an assignment that allowed them to provide adequate care to their patients (c) Charge nurses' perception of difficulty in creating equitable assignments and confidence that final assignments were equitable. Satisfaction surveys were done prior to initiating use of the tool, and at one month and four months following implementation. Comparing survey responses across time indicated increased satisfaction on all measures except dayshift nurses felt it was more difficult to make assignments for the oncoming nightshift using the tool. This response can be attributed to the fact that assigning acuity was a new task for dayshift. Prior to the acuity tool implementation, only the nightshift nurses assigned a green, yellow, or red color to each patient; the color represented the nurses' opinion or perception of the patient's workload. Time and continued fine-tuning has improved comfort levels among dayshift nurses. Achieving equitable distribution of patient acuity has strong implications for nurse satisfaction. Improved satisfaction translates to increased staff retention, which ultimately creates a more experienced staff and a safer environment for the stem cell transplant patient.

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**ONCOLOGIC EMERGENCIES: MANAGING THE COMPLEX MEDICAL ONCOLOGY PATIENT IN THE ICU.** Michele Weber,

DNP, RN, CCRN, OCN®, CCNS, AOCNS®, ANP-BC, The Ohio State University Wexner Medical Center, Columbus, OH

Managing the complex oncology patient in the ICU provides a number of clinical challenges. As with all of our ICU patients, today's oncology ICU patient suffers from multi-system disease. Historically oncology patients were admitted to the ICU for end of life care. Now, oncology patients are often admitted to the ICU for active oncology treatment or for life-threatening consequences of their oncology treatment. There are many "oncologic emergencies" that are defined in the oncology literature. One of the commonly recognized oncologic emergencies is tumor lysis syndrome. This complex and often fatal complication of hematologic cancers often requires an ICU admission. The purpose is to increase the RN's knowledge of the complex pathophysiology of the critically ill oncology patient and to increase the RN's knowledge of essential nursing interventions for the critically ill oncology patient. The oncology nursing care treatment plans often end with a patient transfer to the ICU thus providing no guidance to the ICU RN in the care for this syndrome. The critical care literature provides little information to the experienced ICU RN regarding the complex and unique needs of the high acuity medical oncology patient. Often patients who are suffering this complication continue to receive active chemotherapy treatment that has been the cause of the syndrome. The RN has to manage both the patient's ongoing oncologic treatment at the same time she/he is managing the complications of the treatment. This dichotomy can add additional psychosocial and ethical challenges for the RN. Evaluation: Objectives: 1. Discuss the complex pathophysiology of the critically ill patient with tumor lysis syndrome. 2. Discuss the hematologic manifestations of tumor lysis syndrome. 3. Describe three essential nursing interventions for the patient with tumor lysis syndrome. Participants in this session will learn the complex pathophysiology of the tumor lysis patient in the ICU. Participants will learn in-depth analysis of the hematologic profile and the unique metabolic, hematologic, and hemodynamic nursing care needs of the medical oncology patient. This session requires interaction between the presenter and participants in deciphering case studies, laboratory panels, and treatment plans. As many medical centers are opening oncology ICU's, preparing oncology nurses to care for these high acuity patients is essential.

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**STOP! HUDDLE TIME: IMPLEMENTING A POST-FALL HUDDLE TO REDUCE FALLS IN A CANCER POPULATION.** Breanna Weisbrod, MS, APRN, AGCNS-BC, OCN®, University of Kansas Hospital, Overland Park, KS

A patient fall can lead to injury, increased length of stay and death. Falls are reported through the National Database of Nursing Quality Indicators (NDNQI) as a way to evaluate care processes specific to nursing. At a large Midwestern university hospital, a hospital-wide nursing quality improvement project was developed to reduce NDNQI reported falls. The fall total numbers and rates for two inpatient cancer units are presented. The purpose was to increase urgency after a fall, identify any preventable causes, and immediately disseminate an action plan to other staff on the floor. In November 2015, a new post-fall process was implemented. When a fall occurred, the charge and nurse manager were immediately notified. The nurse manager then coordinated a "huddle" time between the staff involved with the nursing director and the vice president of patient care services, as well as the nurse manager and clinical nurse specialist. The huddle occurred during the same shift, preferably as soon as possible. During the huddle, the staff involved described the details of the fall, and those participating were able to ask clarifying questions. The process was non-punitive and sought to find policy and system breakdowns that

could have led to the patient fall. Once identified, an action plan was developed to immediately correct these breakdowns. This plan was disseminated to all unit staff through several shifts to rapidly educate all members of the care team. The timeframe of evaluation was the 9 months before and the 9 months after huddle implementation. The combined average total number of falls per month decreased from 3.00 falls per month pre-huddle, to 1.83 per month post-huddle. Unassisted falls decreased from 73.7% to 45% of total falls. When comparing rates, Unit 1 decreased their average rate per month from 4.93 to 2.40, and Unit 2 decreased their average rate per month from 4.99 to 3.24. Unit 2 also reported a 60.3% decrease in their fall with injury rate. This quality improvement project was effective at reducing falls in the inpatient cancer population at our hospital. With a high number of falls on these units compared to the rest of the hospital, this project was a timely intervention in the continued efforts to reduce falls for our cancer patients.

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**CREATING AN ISTHMUS TO CONNECT THE INPATIENT AND OUTPATIENT TEAMS.** Barbara Wenger, MS, RN, AOCNS®, CRNI, University of Colorado Hospital, Aurora, CO; Michaelene Wolff, RN, BSN, OCN®, HTI-PA, University of Colorado Hospital, Aurora, CO; Jamie Nordhagen, RN, BSN, OCN®, University of Colorado Hospital, Aurora, CO; Georgina Cheng, MD, University of Colorado Hospital, Aurora, CO; Nicole Brooks, RN, BSN, University of Colorado Hospital, Aurora, CO; Mackenzie Hedrick, RN, BSN, University of Colorado Hospital, Aurora, CO

Gynecologic Oncology (Gyn-Onc) patient care transitions have shown variability across the inpatient and outpatient settings including processes, teams and communication methods. This variability creates inefficiencies and has shown a negative impact on length of stay (LOS), nursing and patient satisfaction as well as continuity of care. Unifying processes and the development of a clinical pathway using best practice standards have been shown to decrease variability, improve quality outcomes, increase provider, staff and patient satisfaction and decrease LOS. The purpose of this process improvement (PI) project was to streamline the Gyn-Onc surgical patient care pathway from pre-admission, through the hospital stay and post-discharge care. A team of inpatient/outpatient staff from Gyn-Onc collaborated to develop a PI project with the Institute for Healthcare Quality, Safety and Efficiency. Development and implementation of a clinical pathway allowed standardization of care and provided a nursing tool for patient advocacy. This pathway included preoperative education, an EPIC specific order set, post-operative education, and appropriate early access involvement with the supportive services (case management, physical therapy and home services). The most beneficial outcome was improved collegiality and teamwork between the unit's leadership and Gyn-Onc providers. The pathway now includes 24-48 hour post-discharge follow up phone calls to the patient at home. Post implementation, an Inpatient/Outpatient Gyn-Onc Clinical Practice Committee was developed to continue assessing issues and provide opportunities for process improvement. Initial data from the Gyn-Onc pathway has already had some positive results with prevention of readmission and symptom management prior to patients' follow up post-operative visits. Further data will be collected, analyzed and results will be presented. The goal of this project is to decrease complications that could lead to patient readmissions and increase satisfaction with care, empower nurses to practice at the top of their scope and promote autonomy. Inpatient and outpatient representatives now meet regularly to strengthen communication with patients and staff during their care transition. In addition, there are ongoing educational

materials reviewed at both new hire orientation and monthly resident education to continue to promote the Gyn-Onc transitions of care pathway. Health care institutions continue to look for more efficient ways to transition between settings. Innovations such as these clinical pathways have shown assist with these transitions and potentially prevent readmissions.

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**DEALING WITH GRIEF—TOOLS FOR SELF-CARE AND HELPING OTHERS COPE WITH GRIEF AND LOSS.** Liana Wheatley, BSN, RN, OCN®, Baylor Scott and White Health, Round Rock, TX

Oncology nurses deal with grief and loss on a daily basis, which without resolution can lead to burnout and stress and may cause illness. This program will discuss grief and the grieving process, and how it affects emotional and physical health. Review of current research into the role of stress on mental and physical health, and the benefits of meditation for stress management will be presented. The goal of this program will be to give nurses self-care tools that they can use in their own practice to promote physical, emotional and spiritual wellness. In addition, participants will leave the session with tools to share with coworkers and patients upon returning to their practice. Participants will be lead in self-reflection and exploration of their own grief by completing a Stages of Grief activity and completing a Grief Sentence Completion activity. Participants will be encouraged to discuss or simply write down their feelings of grief and understanding of their own grieving processes and how that integrated grief affects their relationships and interactions with others. After completion of the grief activities, participants will be introduced to specific gratitude exercises in an experiential session to deal with and release grief and pain from loss. Specific tools for coping with grief, regaining self-control in times of grief and loss, and tools for self-reflection will be presented. Integrative therapies; guided meditation, mindfulness exercises, letter writing, journaling and mindfulness/gratitude walking techniques will be discussed and practiced. Guided meditation will focus on identifying grief emotions and healing the sense of grief and loss. Participants will be guided in an exercise to connect grief and have an opportunity to embrace that grief, heal it, and release it. Mindfulness techniques will be used to teach control of "the monkey mind", learning to focus on breathing to control perceptions of distracting thoughts and emotions. Specific interventions such as letter writing and other mindfulness/gratitude activities will be introduced and explored as a group. This program will present an evidenced based intervention for grief using Complementary and Integrative therapies.

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**UTILIZING A NOVEL URINE CTDNA LIQUID BIOPSY TO AID IN CHEMOTHERAPY HOLIDAY DECISION MAKING.** Monique Wheatley, PA-C, Cleveland Clinic Florida, Weston, FL; Gia Peterson, LPN, Cleveland Clinic Florida, Weston, FL; Kathleen Englert, RN, Trovagene Inc, San Diego, CA; Tim Nguyen, MD, Cleveland Clinic Florida, Weston, FL

Patient fatigue in oncology care can lessen quality of life and therapeutic impact. One approach to combat this is a chemotherapy (chemo) holiday, however, identifying the medically appropriate time can be challenging. Currently clinicians rely on patient performance status or other life factors to aid in the decision of chemo holiday timing. A molecular assessment of response may support the clinical decision and timing of when to provide a chemo holiday. The purpose was to describe the use of a novel, non-invasive urine circulating tumor DNA (ctDNA) molecular test to determine patient's response to therapy which helped to support the clinician's decision to grant a chemo



holiday. A 29-year-old female presented with stage III resectable Colorectal Cancer. Following surgery, her tumor was found to be KRAS+. Clinician recommended chemotherapy, but patient refused; Patient chose alternative holistic therapies. Patient returned to the clinic three months later and was found to have liver metastases. Folfxiri Avastin regimen was initiated. Following four cycles, patient complained of nausea, vomiting, fatigue, weakness, and abdominal pain. Chemotherapy changed to Folfx Avastin. After five cycles, patient complained of diminished quality of life; and was changed to maintenance therapy. After two cycles, patient requested discontinuation of chemotherapy. To consider a chemo holiday, the clinician assessed therapeutic response. Clinician utilized non-invasive urine ctDNA liquid biopsy to determine tumor activity by quantitatively measuring KRAS levels. Urine ctDNA results were not detected for KRAS mutations demonstrating a decrease in tumor activity and thus confirming response to therapy. The clinician evaluated these results combined with patient performance status and was able to accommodate the patient's request for a chemo holiday. This is a patient centric approach to oncology; balancing the clinical treatment with the patient's quality of life without jeopardizing the patient's health which is critical to successful oncology care. The urine ctDNA molecular test provided the clinician reliable, actionable information utilizing a completely non-invasive method. Novel molecular diagnostic tools, like urine ctDNA liquid biopsy, are providing necessary information for clinicians to aid in clinical decision making while utilizing a method that is viewed to be favorable by the patient. As patient advocates, it is important for nurses to be aware of these new technologies that can benefit and positively impact patient care.

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**NURSING CONSIDERATIONS FOR ORAL CHEMOTHERAPY GIVEN FOR NON-ONCOLOGY INDICATIONS IN AN ACUTE CARE SETTING.** Jodi Wieczorek, MSN, RN, OCN®, Fairview Southdale Hospital, Edina, MN; Linda Reuber, MSN, RN, AOCNS®, Fairview Ridges Hospital, Burnsville, MN; Kathleen Green, PharmD, University of Minnesota Medical Center, Minneapolis, MN; Ania Sweet, PharmD, Fairview Southdale Hospital, Edina, MN

Oral chemotherapy (chemo) is used for the treatment of oncology and non-oncology diseases. Patients receiving these drugs are admitted to all hospital departments. These drugs are high risk and have the same considerations for patients and staff, regardless of the therapeutic indication and patient location. There are many challenges adhering to national guidelines for chemo administration with the delivery of oral chemo in the hospital setting. Hospitalists often resume chemo orders for home medications and may not be aware of special considerations of novel agents. It is not feasible for pharmacists and oncology nurses (RN'S) to administer all oral chemo agents in the hospital and provide timely patient care, while meeting staffing requirements. There are missed opportunities to assess hospitalized patients' knowledge of and adherence to oral chemo. The goal of this quality improvement project was to create a safe, effective practice, based on national guidelines, for administration of oral chemo agents for oncology and non-oncology indications regardless of patient location. Baseline data collected included RN surveys, pharmacist interviews, review of oral chemo orders and patient charts. Findings were discussed with an interdisciplinary team of oncology and non-oncology RN's, pharmacists and physicians. The team established a process and developed tools. Data revealed that the drugs most frequently ordered were hydroxyurea, methotrexate, imatinib, cyclophosphamide, and mercaptopurine. The most frequent ordering provider was the Hospitalist or Hospitalist Physician Assistant. The most frequent diagnoses were Polycythemia Vera, Thrombocytosis, Rheumatoid Arthritis, Lung Cancer, CML and Crohn's Disease.

The majority of orders resumed home medications, not new therapies. Providers were notified most often for abnormal lab results and dose clarifications. New workflows feature a user-friendly oral chemo reference with non-oncology and oncology considerations linked into the medication administration record, and a standardized checklist used by RN's and pharmacists regardless of patient diagnosis. Oncology RN's double check and administer oral chemo for cancer diagnoses. Non-oncology RN's double-check and administer oral chemo for non-cancer diagnoses. The interdisciplinary workgroup created a safe, effective workflow for all patients receiving oral chemo while hospitalized. Patients are assessed for effectiveness of therapy, medication adherence, and educated on self-care. Oncology RN's and pharmacists remain a resource to staff and the new workflow provides timely, safe medication administration to all patients.

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**ONCOLOGY READMISSIONS: EXPLORING RISK ASSESSMENT.** Sarah Wiegand, BSN, RN, OCN®, Duke University Health System, Durham, NC; Caroline Smithson, MSN, RN, AOCNP®, Duke Cancer Institute, Durham, NC; Michelle Kasprzak, MSN, RN, OCN®, Duke University Health System, Durham, NC; Kim Slusser, MSN, RN, Emory Healthcare/Winship Cancer Institute, Atlanta, GA; Tracy Gosselin, PhD, RN, AOCN®, Duke University Health System, Durham, NC; Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Institute, Durham, NC

Significant emphasis is placed on reducing hospital readmissions due to financial and resource strain that follows. Many factors impact readmission rates, yet most risk assessments heavily weight a cancer diagnosis. Thus exploring factors into readmission risk for adults hospitalized with a solid tumor cancer diagnosis may ultimately result in reducing readmissions. The purpose is to identify constructs that could potentially generate items leading to the development and testing of an oncology-specific readmission risk assessment tool. A descriptive, exploratory design was used to guide the initial identification of oncology-specific constructs related to readmission (excluding neutropenic fever). Using instrument development theory, we began with a literature review to identify common readmission risks. Structured interviews of six patients was performed to identify additional items to consider for construct analysis (n=3 new cancer diagnosis, n=3 30-day readmission cancer diagnosis). Using a list of 30 items, a retrospective chart review of 50 adult patients with a solid tumor diagnosis who were readmitted within 30 days was compared to 50 adult patients matched by solid tumor diagnosis and stage and not readmitted within 30 days of being discharged at a large academic medical center. Descriptive statistics, univariate analyses, and correlations were used to identify preliminary constructs related to readmission. Variables are based upon demographic, social, medical, and health care use patterns. Patients not readmitted on average were 60.9 (range 27-82) years old, 44% males, 42% >4 comorbidities, 12% lives alone; those with 30-day readmissions were 61.9 years old (range 36-95), 52% males, 48% >4 comorbidities, 24% lives alone. Hospital length of stay averaged 3.8 days for those readmitted and 4.6 days for those not readmitted. Differences were noted in number of medications at discharge  $t(df=98)=2.6, p=.01$ ; number of services used during hospitalization  $P^2=3.8, p=.05$ . Age >65 and lives alone approached significance,  $P^2=2.6, p=.1$  and  $P^2=3.2, p=.07$  respectively. No difference in age, gender, insurer, length of stay, or comorbidities were observed. This study explored factors that may contribute to readmissions for patients with solid tumors. It was observed that factors commonly attributed to general hospital readmissions, such as age, was found not to contribute significantly for this oncology population. Next steps involve further analysis to develop a risk assessment tool in which to examine predictive value.

**KEEPING PATIENTS CONNECTED: THE ROLE OF THE COMMUNITY LIAISON.** Katie Wigdorski, MSN, FNP, RN, ANCC, Roswell Park Cancer Institute, Buffalo, NY; Lisa Garvey, MSN, RN, OCN®, Roswell Park Cancer Institute, Buffalo, NY

We are a freestanding Comprehensive Cancer Center in Western New York. We have 134 inpatient beds and greater than 600 outpatient clinical visits per day, but around the clock urgent care is not available within the Institute. Many of our patients with urgent medical needs are forced to present to community hospital emergency rooms, where they often require inpatient admission. Oncology patients often present with complex and unique medical complaints that are directly related to their cancer care and treatment. Admission to a community hospital is both challenging to the community providers, and disconcerting to the patient and their families. The role of the Community Liaison was created to directly address these challenges. The Community Liaison role provides a direct point of access for the community provider to the cancer center. Community providers are encouraged to utilize the Liaison to request patient information, make contact with the RPCI provider team, and if needed, request transfer. In addition, patients and families can rely on the Liaison to keep their oncology providers abreast of developments while admitted at a community hospital. The Liaison team consists of an NP and an RN. The NP is privileged at several community hospitals, and is an invaluable resource for both RPCI and outside providers to call upon. Conversely, the NP is able to evaluate our patients independently while admitted elsewhere, and offer treatment recommendations based on their current oncology plan. The RN provides support to the NP, and is able to act as a conduit for community providers, as well, but is best utilized as a bridge for the patient and the patient's family members. We find that patients are very comfortable with their oncology team, and are often uncomfortable when admission elsewhere is necessary. Both the NP and RN spend a great deal of time focusing on the patient and their families, giving them the peace of mind that both their oncologic and non-oncologic needs are being met. In addition to improving RPCI's relationship with community providers, this Liaison team is also focused on streamlining the process of inpatient transfers, and we plan to report the success of this initiative through both anecdotal evidence and measurable data.

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**REDUCING THE RISK OF HOSPITALIZATION RELATED TO NAUSEA, VOMITING, AND DEHYDRATION FROM MODERATE TO HIGHLY EMETOGENIC CHEMOTHERAPY IN INCREASING THE NUMBER OF CONTACTS TO THE PATIENT POST CYCLE ONE OF CHEMOTHERAPY.** Paula Williams, RN, BSN, OCN®, Vasicek Cancer Treatment Center, Baylor Scott & White Health, Temple, TX; Carol Woodcock, RN, OCN®, Vasicek Cancer Treatment Center, Baylor Scott & White Health, Temple, TX

Between November 17, 2014 and January 11, 2015 there were six admissions to Baylor Scott & White (BSW) Hospital due to nausea, vomiting, and dehydration (NV&D;) related to Adriamycin, Epirubicin, Cisplatin, and Oxaliplatin (AECO). This situation led to decreased patient satisfaction and increased cost for the patients and system. Our oncology nurses found there was an opportunity to improve education and communication to prevent hospitalizations due to NV&D.; Patients that received their first cycle of chemotherapy at the BSW Vasicek Cancer Treatment Center were contacted via phone for follow up assessment. Beginning November 2015 three post chemotherapy calls were made to assess NV&D; for moderately to highly

emetogenic chemotherapy (MHEC). The goal was to decrease hospitalizations related to NC&D; in patients receiving MHEC, specifically AECO, using evidence based guidelines. Patients receiving their first cycle of AECO were identified. The oncology nurse contacted the patient following the first treatment to assess NV&D; and use of anti-emetics. Contact was made with the patient again, one to three days later monitoring the response to interventions; followed by a third phone call. If the patient continued to have problems with NV&D;, the patient was seen by the physician for evaluation. A total of three calls were made for the first cycle. During November 17, 2015 thru April 12, 2016 there were no admissions to the hospital related to NV&D; for patients with solid tumors receiving AECO. Post-chemotherapy telephone calls made a difference for patients whose anti-emetics were not effective. For the majority of the patients, one follow up call post first cycle chemotherapy was found to be sufficient to review side effects, interventions, and precautions. If patient is identified with problems, then an additional interventional call should be provided. Some patients would express dissatisfaction with an increased volume of calls on the second and third call when no intervention was needed. Thorough pre-chemotherapy patient education regarding NV&D;, along with appropriate anti-emetics and post-chemotherapy phone call was found to prevent post cycle one NV&D;. This is an cutting edge topic due to the need to increase patient satisfaction with their chemotherapy as it related to the success of treatment.

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**UTILIZING THE MORISKY MEDICATION ADHERENCE SCALE (MMAS-4) TO ASSESS PATIENT'S ADHERENCE TO ORAL CHEMOTHERAPY.** Donna Wilson, RN, MSN, CBCN®, VCU Massey Cancer Center, Richmond, VA

Medical oncologist are ordering oral chemotherapy regimens more frequently; placing the burden on the patient and family to administer oral oncolytic therapy. The degree to which a patient's medication behaviors are consistent with the instructions of the healthcare provider regarding the dose, timing, and frequency is the definition of medication adherence. The first step in improving adherence is identifying patient-specific barriers. A multifaceted approach may be necessary and includes providing an ongoing positive relationship between the healthcare provider, nursing, and the patient with ongoing support and reinforcement. Providing shared decision making about treatment options, and consistent follow-up and reminders. Oncology nurses are essential in educating, monitoring, and supporting the patient and family. Also providing education about the medication regimen tailored to the patient's education level and health literacy, social support to the patient and caregivers, and positive reinforcement for achieving treatment goals. Oral therapy regimens sometimes have complicated schedules, food and drug interactions that may make adherence difficult for the patient. Patient education and support from the oncology registered nurse is imperative and the use of the Morisky Medication Adherence (MMAS-4) four item questionnaire is useful in monitoring the adherence of the patient. The MMAS-4 questionnaire is a common used adherence scale and is based on the belief that patient medication adherence is based on several factors. The validity and reliability of the scale has been tested in patients with a broad range of diseases. Factors include forgetfulness, carelessness, stopping the medication when feeling better or feeling worse. The scale is easily administered and simple to score. The questionnaire is proven to detect non-adherence readily and consistently to medication. When asked, patients usually want to answer "yes", the questions are worded so that answering yes identifies non-adherent behavior. Each time the patient states "yes" he scores a point, the more points; the less adherent to the medication. Printed

copies of the scale are provided at the patient's follow-up visit, and the nurses use the scale when making follow-up phone calls. Using the MMAS-4 questionnaire provides the nurse a tool to assess the patient's adherence and an opportunity to interact with the patient and caregiver to discuss medication-taking behavior. The expected results are increased medication adherence and positive patient outcomes.

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**ONCOLOGY NURSE LED PROGRAM BUILDING FOR SCIENTIFIC INNOVATIONS IN PRACTICE.** Molly Winklepleck, BSN, RN, Seattle Cancer Care Alliance, Seattle, WA; Suni Elgar, MPH, RN, OCN®, Seattle Cancer Care Alliance, Seattle, WA; Kathleen Shannon Dorcy, PhD, RN, Seattle Cancer Care Alliance, Seattle, WA; Amy Walker, PhD, RN, Seattle Cancer Care Alliance, Seattle, WA; Sherry Littlefield, RN, Seattle Cancer Care Alliance, Seattle, WA

Chimeric Antigen Receptor (CAR) T-cells are a promising research intervention for patients with relapsed/refractory leukemia/lymphoma. Patients present to the Immunotherapy Service with rapidly progressing hematologic malignancies despite previous treatments. Intensive interim disease management is necessary (e.g., transfusions, salvage chemotherapy) for successful CAR T-cell protocol implementation. T-cells are collected and modified followed by patient evaluation, and lymphodepleting chemotherapy. CAR T-cells are re-infused for in vivo expansion. Within this phase of the protocol, patients are at high risk for the potentially life threatening cytokine release syndrome (CRS). A new best practice standard in nursing care was imperative for these complex patients. The purpose is to describe the best practices process adopted for nursing assessment and clinical care in support of scientific innovation for hematologic patients receiving CAR T-cells. The bone marrow transplant team of nurses, advanced practice providers, and physicians were chosen to care for these patients because of their expertise with the diseases treated with CAR T-cells. Additionally, these teams had operations in place to support the intense monitoring and rapid access to triage that can be required by these patients. In September 2015, the scope of work was defined with the development for a new model of care delivery expanding into clinic design and the creation of standard workflows and a data management system. Operations for hiring an entire comprehensive care team were undertaken envisioning how combining early phase research in CAR T-cells and state of the science nursing care could be integrated. Competencies for specific immunotherapy care delivery were created for initially referred patients, leukapheresis, and clinical monitoring. Biweekly multidisciplinary team rounds were implemented with care delivered primarily in the ambulatory care center. Nursing education was provided on the care and monitoring of CAR T-cell patients throughout the system. Early phase research is foundational to immunotherapy patient care and all immunotherapy staff have completed CITI© human subjects and Good Clinical Practices certification to assure highest standards in research implementation. Assure the best possible outcomes for CAR T-cell patients, processes must evolve quickly as more is discovered and yet unknown CAR T-cell related toxicities present. Oncology nurses are on the front of emerging immunotherapies and play a pivotal role in swiftly developing practice guidelines to ensure safe care for patients.

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**IMPROVING INTAKE AND OUTPUT ACCURACY, AWARENESS, AND DOCUMENTATION.** Rebecca Wolfe, RN, Froedtert & the Medical College of Wisconsin Froedtert Hospital, Milwaukee, WI; Taylor May, BSN, RN, CMSRN, Froedtert

& the Medical College of Wisconsin Froedtert Hospital, Milwaukee, WI

A medical oncology inpatient unit within an academic medical center experiencing inconsistencies in patient intake and output documentation developed a six month project to improve documentation accuracy and prevent unnecessary or inappropriate interventions. A strategy of increasing the frequency of documentation was put into practice to establish a real time indication of patient intake and output. The goal of every six hour intake and output was to increase total volumes documented per day, decrease the time between values documentation, and provide comprehensive daily totals. Customizing oncology care plans to account for hydration, insensible fluid loss, drug toxicity, and hemodynamics requires timely and accurate intake and output measurements. The purpose of this new standard of practice was to improve the accuracy of intake and output documentation. Increasing staff awareness of the importance of accurate intake and output, as well as the monitoring of appropriate documentation, was essential to this improvement project. Pre-project audits were completed to collect baseline data of staff documentation. A six-hour frequency of intake and output documentation was implemented for all patients and project expectations were outlined for both registered nurses and patient care assistants. Audits were completed for documentation of all oral, intravenous, and enteral intake, and all voided, drained, or collected output. Audit results were used to monitor staff compliance with new standards and to demonstrate improvements in overall documentation. Results of the project showed a 60-80% increase in appropriate documentation every six hours, as well as several months with 100% documentation of drains, tubes, drips, and ostomy output. Providers and ancillary departments delivered positive feedback, and a subjective decrease in unnecessary orders was noted. Increasing the intake and output documentation standard from the customary eight hour order to an every six hour standard has the potential to improve oncology patient outcomes by offering clinical providers a more accurate patient differential from which to tailor the plan of care. The successful establishment of a new documentation standard, with sustained staff compliance, can be attributed to the shared decision making of the unit's shared governance councils, with engaged nurses setting staff expectations and providing subsequent feedback, and teamwork amongst disciplines in order to promote best practice for the patient population.

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**IMPLEMENTATION OF AN ORAL ASSESSMENT TOOL AND NURSE-INITIATED INTERVENTIONS.** Brenda Wolles, MSN, OCN®, CNL, Sanford USD Medical Center, Sioux Falls, SD

Oral mucositis refers to the inflammation of the oral mucosa that in severe cases can lead to ulceration and cause a disruption in the function and integrity of the mouth. Mucositis adversely affects nutrition, speech, comfort, adherence to treatment schedule, and may lead to systemic bloodstream infections in immunocompromised patients. Basic oral cares reduce the impact of oral microbial flora, prevent infection, and may help alleviate oral pain and bleeding. Components of a basic oral care protocol include a thorough oral assessment, patient education, brushing, flossing as appropriate, moisturizing the lips, and rinsing with bland agents. Evidence shows that oral care protocols used consistently show a positive effect on mucositis prevention and management. The implementation of oral care bundles has been associated with the reduction of infections and decreased lengths of stay in several studies. Mucosal barrier injury laboratory-confirmed bloodstream infections MBI-LCBIs are a type of CLABSI where intestinal flora (but no other organisms) translocate into the mucous membranes into the bloodstream of a severely neutropenic



patient (ANC or WBC <500 cells/cc<sup>3</sup>). The translocation of intestinal bacteria into the bloodstream requires the inclusion of CLABSI reduction efforts other than the line focused care in the maintenance bundle. The oral cavity was evaluated using the Oral Assessment Guide (OAG) and nurse-initiated oral care interventions for all patients admitted to a primary oncologist on beginning on April 6, 2015. Interventions included teeth brushing, the use of bland rinses, lanolin lip moisturizer, and Magic Mouth wash. The number and frequency of interventions were determined by the OAG score. Process measures of nurse compliance and documentation were evaluated and the number of MBI-LCBIs was the primary end point measure of this evidence-based project. MBI-LCBIs, a CLABSI associated with translocation of intestinal bacteria in compromised oncology patients were not observed after the protocol implementation. A novel, evidence-based approach to reduce CLABSIs with the implementation of an oral hygiene protocol was successful in an inpatient oncology population. The addition of an oral hygiene to a CLABSI maintenance bundle should be considered for inpatient units with at risk oncology populations.

### **275 ANTIEMETIC GUIDELINES FOR PATIENTS RECEIVING IMMU-132. Clare Worth, RN, BSN, OCN®, Massachusetts General Hospital, Boston, MA; Sarah Colella, RN, BSN, Massachusetts General Hospital, Boston, MA**

Antibody drug conjugates (ADC) deliver highly potent chemotherapies directly to cancer cells with less toxicity to the patient. In the Termeer Center for Targeted Therapies at Massachusetts General Hospital we have seen one of these ADCs be fast tracked by the FDA for approval for treatment of metastatic triple negative breast cancer. This drug is known to us as IMMU-132, soon to be known as Sacituzumab Govitecan. As it gets closer to being approved it is important that the treating nurses understand the importance of premedicating with antiemetics. Sacituzumab Govitecan works by attaching the active metabolite in Irinotecan, SN-38, to the antibody Trop2, which is found in most aggressive tumors. Once attached to the cancer cell receptors SN-38 is slowly released over several days. Because of the antibody activation the patient's body also can release T cells which then fight off the cancer cells, giving this drug two ways it can target cancer. Although this is a targeted therapy, some of the antibodies never connect with a receptor and release some of the SN-38 into the blood stream which is why there are still side effects from this drug such as neutropenia, alopecia, diarrhea, and nausea/vomiting. We have treated about 100 patients, a third of all patients nationwide, and have observed nausea/vomiting lasting for several days after treatment. Initially patients were premedicated with the same regimen that is used with Irinotecan, ondansetron and dexamethasone. Patients who continued to have nausea/vomiting received intravenous antiemetics. Because the majority of patients ended up with persistent nausea/vomiting, requiring intravenous antiemetics there was a practice change to premedicate with only intravenous antiemetics. There is some thought from the overall principle investigator that dexamethasone could affect how well the drug works due to the immunosuppressive effects of steroids, so there is ongoing discussion about whether to include this in our antiemetic regimen. With the development of this new drug and the speed in which it will soon be available to the public it is imperative for oncology nurses to understand how to manage their patient's side effects. Nausea/vomiting can have a compounding effect on a patient as a whole. By developing antiemetic guidelines we hope to improve patients overall quality of life.

### **276 WHAT'S IN IT FOR ME? SUCCESSFULLY IMPLEMENTING BEDSIDE SHIFT REPORT ON AN INPATIENT MEDICAL**

### **ONCOLOGY UNIT THROUGH EFFECTIVE STAFF ENGAGEMENT. Melissa Wright, BSN, RN, OCN®, Huntsman Cancer Hospital, Salt Lake City, UT; Mikka Pendergrass, BSN, RN, Huntsman Cancer Hospital, Salt Lake City, UT; Melissa Banner, MS, RN, OCN®, Huntsman Cancer Hospital, Salt Lake City, UT; Deana Nilsson, CNA, Huntsman Cancer Hospital, Salt Lake City, UT**

With evidence suggesting that 80% of medical errors are related to poor communication, particularly during shift change, many hospitals nationwide have implemented the practice of bedside shift report (BSR). After two unsuccessful attempts to make this initiative a consistent part of our unit practice, a third re-launch was introduced on our inpatient medical oncology unit in January 2016. Our objective this time around was to approach the BSR initiative from a staff perspective, with a goal of obtaining staff buy-in by helping unit nurses to recognize what's in it for them. The idea was to convince them that they should want to do BSR. Methods identified as essential to success were the following- completion of literature reviews, identification of key project leaders, facilitation of staff education, prioritization of staff engagement, and implementation of a strategy to maintain unit compliance. The results of this initiative have been overwhelmingly positive. The unit has maintained a BSR compliance of 85% or above in the 6 months following implementation, an increase from 0% compliance prior to relaunch. The average report time per patient has remained largely unchanged, fluctuating between about 5-6 minutes per patient. Patient reported BSR compliance on HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) surveys went from 63% to 75% "always" answers within two quarters. Perhaps most enticing for unit nurses, the staff late out hours per month have decreased significantly. In the two months prior to BSR relaunch, late out hours (hours worked beyond scheduled shift end time) were 216 and 215 hours. In the month of implementation late outs fell to 192 hours, and since then have dropped as low as 100 hours. Since implementation nursing late out hours have not surpassed 192 hours. Finally, we measured staff BSR perceptions through a survey; collected pre-implementation and then with plans to recollect again at 8 months post-implementation. Though initially a daunting change for nurses, BSR has proven to be a successful unit initiative that has positively impacted both patients and staff on our inpatient medical oncology unit. Despite two failed attempts, we were able to recognize and overcome the past barriers by identifying the keys to effective implementation on an oncology unit and have now the relished the many benefits of BSR.

### **277 EVALUATION OF INTERVENTIONS FOR IMPROVING PATIENT ADHERENCE TO ADJUVANT HORMONAL BREAST CANCER THERAPY AT ATLANTIC HEALTH SYSTEM. Sandra Wrigley, RN, CN-BN, CMF, Atlantic Health System, Summit, NJ; Christopher Buck, MS, RN, OCN®, Atlantic Health System, Summit, NJ; Jeanne Silva, BSN, RN-BC, CN-BN, CMSRN, Atlantic Health System, Morristown, NJ; Kelly Zukswert, RN, BSN, CCN, CN-BN, Atlantic Health System, Newton, NJ; Jared Dornfeld, BA, Atlantic Health System, Summit, NJ**

Adjuvant hormonal (endocrine) therapy is an essential part of treating hormone-receptor positive breast cancer patients. Clinical studies have shown a reduction in breast cancer recurrence rates for women treated with hormonal therapy such as Tamoxifen or aromatase inhibitors (AIs). However, it is well known that adherence to adjuvant hormonal therapy is sub-optimal due to a number of reasons such as drug-related side effects. In addition, it has been shown that race, socioeconomic status, and availability of health insurance also influence adher-

ence to these therapies. Low adherence to adjuvant hormonal therapy may increase the risk of breast cancer recurrence or even death for these patients. The purpose is to determine the effectiveness of nursing interventions on improving patient adherence to adjuvant hormonal breast cancer therapy. With this in mind, a quality improvement study, spearheaded by our Breast Cancer Navigators, was designed and executed to evaluate interventions for improving patient adherence to adjuvant hormonal therapy within the Atlantic Health System. An initial pilot study was conducted in July 2015 on 13 patients taking Tamoxifen. Followed by a larger study of a total of 92 women, who are currently prescribed adjuvant hormonal therapy, (either Tamoxifen or an AI), who were surveyed from April : September 2016. Patients were characterized based on age, race/ethnicity, primary language, level of education, type of health insurance, and hormonal therapy (Tamoxifen vs. AIs). A pre-intervention questionnaire was sent to all patients to assess their opinions on the following interventions to improve drug adherence: 1) paper-based educational resources, 2) pill organizer, 3) mobile phone pill reminder app, and 4) tools for managing drug-related side effects. After three months of implementing these four interventions, the same questionnaire was mailed again to all patients to evaluate if their views on the effectiveness of the interventions were changed. Our initial results suggest that there was a meaningful positive change in our patients' attitudes towards improving drug adherence by using the interventions described here. Next steps include incorporating these interventions into our breast cancer patient education and survivorship plans. Going forward we will continue to monitor the drug adherence rate for our patient population.

### **278** **APPLYING KNOWLEDGE TO PRACTICE THROUGH CHEMOTHERAPY ERROR PREVENTION.** Tracy Wyant, MSN, DNP(c), RN-BC, AOCN®, CHPN, Oncology Nursing Society, Canfield, OH

The former Institutes of Medicine (IOM) has issued various reports revealing the effects of medical errors on patient outcomes. A key component is medication errors with the significant notation that error prevention is "particularly important for cancer chemotherapy." The complexity of multidrug regimens, toxicity risks, narrow therapeutic indices, and presence of comorbidities create complex care scenarios in which a chemotherapy error may result in a life-threatening adverse event. Safe chemotherapy care involves organizational and individual accountability and compliance with clinical guidelines and practice standards. Many chemotherapy errors are recognized just prior to or during treatment administration, highlighting the nurse as a vital contributor to error prevention. The foremost proactive strategy to prevent chemotherapy errors is comprehensive, specialized education leading to critical behavior and skill attainment. The purpose of this project is to assess the impact of knowledge attained from a nationally offered comprehensive chemotherapy course on critical nursing practice behavior and organizational policies/procedures that drive compliance with evidence-based chemotherapy error prevention strategies. The New World Kirkpatrick Model of Evaluation (NWKM) is used to address the impact of knowledge on practice. The Knowledge-to-Action framework (KTA) is used to determine barriers and facilitators to knowledge integration based on the context of the practice environment. A descriptive, cross-sectional survey is being conducted that reflects course content specific to chemotherapy error prevention at the individual and organizational levels. Survey content includes error prevention strategies within key clinical guidelines and practice standards. Retrospective, self-reported data is being collected during the last quarter of 2016 from a

subset of registered nurses who have successfully participated in the course. Data analysis will include descriptive statistics and inferential statistics to analyze relationships between the categorized practice and process change variables and demographic variables. Data analysis, findings, conclusions, limitations, and implications for nursing practice will be available by March, 2017. A growing demand exists for effective educational interventions that develop chemotherapy-competent nurses and enhance patient safety outcomes. This project is an initial step in describing a correlation between attained knowledge and resulting practice change for safer chemotherapy administration. The results will assist in understanding the needs of chemotherapy nurses related to the integration of evidence-based knowledge to practice.

### **279** **MEDICAL ADHESIVE RELATED SKIN INJURY (MARSI) AMONG ADULT ONCOLOGY OUTPATIENTS.** Stephanie Yates, MSN, RN, ANP, CWCN, APN-BC, Duke Cancer Center, Durham, NC; Laurie McNichol, MSN, RN, GNP, CWCN, CWON-AP, FAAN, Cone Health, Greensboro, NC

Medical Adhesive Related Skin Injury (MARSI) is a comparatively new category of skin damage. Outpatient oncology patients are frequently subjected to the use of multiple adhesive products, especially on treatment day. Since any disruption in skin integrity is a potential portal for infection in the oncology population, care should be directed to prevent MARSI. The prevalence of adhesive use and resulting MARSI has been described in outpatient wound clinics and inpatient medical surgical and critical care units, but not in oncology outpatient areas. The purpose of this study is to measure the prevalence of adhesive product use and related skin injuries (MARSI) in adult patients being seen in an outpatient cancer clinic. Measures taken to avoid injury will also be described and quantified. Data is being collected from the treatment areas of a tertiary referral cancer center during oncology outpatient visits to measure current use of adhesives, injuries (past or current) related to adhesives and measures taken by staff to reduce the likelihood of injury. Type of medical adhesive product in use, type of injury with location and severity are noted as well as any preventive products or techniques used to prevent injury. A questionnaire will be distributed to staff nurses who apply and remove adhesives to determine if consensus-based best practices for prevention of MARSI are being followed and to ascertain their perceptions about the severity of problem. Raising awareness of the risk of skin injury associated with medical adhesives is the first priority. Results from this study will be used to develop and tailor interventions to improve patient care related to the use of medical adhesives. Outcomes from this study will be used to guide product selection and changes, education efforts to protect and prevent injury where adhesives must be used.

### **280** **CREATION OF A FALLS BUNDLE TO REDUCE FALLS IN AN INPATIENT ONCOLOGY SETTING.** Daniel Yeager, RN, BSN, OCN®, Penn State Hershey Medical Center, Hershey, PA; Emily Hull, RN, BSN, OCN®, Penn State Hershey Medical Center, Hershey, PA

Falls are dangerous events for patients, especially oncology patients who often suffer from poor nutritional intake to heal wounds, decreased bone density to prevent fractures, and decreased platelets to stop bleeding. All patients who fall require additional treatment, resulting in prolonged hospital stays. Hospitals are not reimbursed for the costs to treat falls, as they are seen as preventable events by nursing, and continued Magnet designation is dependent on avoiding falls.

A team was organized to devise methods to reduce falls on an inpatient oncology floor. A reduction in falls will lead to better patient outcomes and reduced costs of care. A Falls Bundle was created, consisting of a group of interventions focused on both prevention of falls and analysis of why falls occur: (a) Shift Huddles before each shift to highlight patients at risk for falls (b) A unique sign to highlight the patient most at risk to fall (c) Bedside Shift Report in which nurses physically confirm patient safety (d) Mandatory bed alarms for all patients at risk for falls (e) Staff must remain with patients who are at risk for falls when out of bed (f) Falls Huddles after each fall involving all staff present to determine why falls occurred and what can be done to prevent their occurrence in the future (g) Reflection e-mails sent to all staff to explain why falls occurred and what can be done to prevent their occurrence in the future (h) Fall scores are updated in real time on a publicly displayed board. 4.67 patient falls occurred on average each month for the six months before the introduction of the Falls Bundle. 3.42 patient falls occurred on average each month for the 14 months since the introduction of the Falls Bundle. Falls scores improved by 27% as a result of the Falls Bundle. Staff are more aware of the significance and prevalence of patient falls and communicate in a more timely and organized manner to prevent and analyze falls. Patients are educated on the rationale and importance of measures in the Falls Bundle. Falls Huddles and Reflection e-mails incorporate evidence-based practice as they investigate what caused falls, and what can be done to prevent falls in the future.

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**IMPROVING ONCOLOGY NURSING PRACTICE ACROSS THE CONTINUUM OF CARE: A LOOK AT THE SUCCESSFUL IMPLEMENTATION OF TOXICITY ASSESSMENTS IN THE ELECTRONIC HEALTH RECORD.** Katelyn Yoder, BSN, RN, LG Health/Penn Medicine, Lancaster, PA; Lisa Landon, RN, OCN®, Robert Wood Johnson University Hospital, Somerset, Somerville, NJ; Katrina Fetter, MSN, RN, OCN®, Lancaster General Health/Penn Medicine, Lancaster, PA

Many actively treated oncology patients have the potential to develop toxicities that impact patient quality of life and can be life threatening. Accurate and consistent assessment and intervention for these toxicities is imperative for patient safety and care across the continuum. At Lancaster General Health in Lancaster, PA we identified a gap in the nurses' knowledge in assessing these toxicities and in implementing evidence-based practice interventions based on the results. Oncology nurses in the service line recognized the need for improvement in addressing toxicities for safe patient care. The purpose of the ensuing project was to develop a place for all nurses in all oncology settings in the health system to consistently document evidence-based assessments of toxicities. Another goal was to improve oncology-specific assessment skills and interventions based on the assessment results. Using evidence-based resources an inter-professional taskforce agreed to which scales would be used and an innovative flowsheet in the electronic health record was developed that all entities could see. These toxicities included multiple common problems such as: diarrhea, nausea, vomiting, and fatigue. The next step was to educate the oncology nursing staff through presentations at inpatient staff meetings and a larger scale educational lunch and learn for the entire service line at the Ann B. Barshinger Cancer Center. Assessment timing recommendations, documentation considerations, and intervention suggestions were all reviewed. Education and use of the flowsheet was well-received by staff. Documentation of oncology toxicities increased and conversations with physicians about patient symptoms and treatment needs was improved. The nurses became aware of changes in patients more quickly and safe patient care was

enhanced. Nurses have expressed feeling more comfortable in both recognizing worsening toxicities in patients and suggesting current evidence-based practice implementations to providers. Implementing and educating the oncology staff on the Oncology Toxicity Flowsheet has allowed Lancaster General Health to improve assessment skills and intervention of common oncology toxicities. This increases the autonomous and specialty specific ability of the oncology nurse and is applicable to any oncology organization or oncology nurse.

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**INCREASE AWARENESS AND PROMOTE HEALTH LITERACY IN CLINICAL SETTING.** Fatemeh Youssefi, PhD, RN, OCN®, UTSW, Dallas, TX; Kim Marchand, RN, OCN®, UTSW, Dallas, TX; Kristen Vaught, BSN, RN, OCN®, UTSW, Dallas, TX

The objectives were to increase awareness and promote "Health Literacy" in clinical setting by utilizing small discussion groups. Oncology patients face challenging complex issues during their cancer journey. Patients must make decisions regarding their diagnosis, treatment plans, possible complications, and overall life choices. Thus, an oncology nurses' communication method is essential to a patient's understanding of health information. The National Institute of Health outlined strategies to increase health literacy which need to be considered when discussing information with patients. Key ideas are to be aware of universal precautions which refers to everyone experiencing low health literacy regardless of educational level and understanding process of health information is compromised in the presence of emotion. Healthcare providers need to explain evidence based information, so patients can distinguish facts from false data and encourage patients to ask questions. Furthermore, recognizing various learning methods and stressing the importance of teach-back method will enhance patient education. A few oncology infusion nurses decided to promote health literacy through in-service sessions. The need to increase awareness and promote health literacy was identified during patient education. For example, a patient was told of delayed treatment due to low WBC and absolute neutrophils, and the initial comment was, "OK, so I will continue my chemo pill and you would hold my IV chemo" showing they did not understand instruction. Also, when a pharmacist counseled a patient on use of growth factor, they explained it is to "increase your counts." Phrases like this require further explanation and can cause miscommunication between healthcare providers and patients. A PowerPoint presentation that included points from literature reviews on health literacy was used to teach application of health literacy strategies when discussing plan of care including oral oncolytic agents. In-services were conducted several times ensuring majority of infusion nurses participated and focused on teach-back method, universal precautions, understanding patient's emotional state. Even though health literacy goes beyond patient education, understanding teach-back method and recognizing a patient's low health literacy level regardless of educational level resulted in positive comments. After completion of in-service, nurses expressed the need to assess patients' anxiety, use of learning assessment prior to patient education, providing patients with evidence-based education and application of teach-back method during patient education.

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**AN INTERDISCIPLINARY PROCESS TO DECREASE HOSPITAL-ACQUIRED CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS.** Lyn Zehner, MN, RN, AOCN®, ACNS, Inova Alexandria Hospital, Alexandria, VA; Rachel Cathey, MS ED, BSN, RN-BC, Inova Alexandria Hospital, Alexandria, VA; Robin Jackson, MSN, RN-BC, CCRN, CCNS, Inova



**Alexandria Hospital, Alexandria, VA; Emily Taylor, BSN, BS, RN, Inova Alexandria Hospital, Alexandria, VA**

High quality care during hospitalization is known to improve patient outcomes. The Hospital-Acquired Condition (HAC) Reduction program of the Affordable Care Act provides incentives for hospitals to reduce HACs. In 2015, Inova Alexandria Hospital (IAH) experienced a total of 25 hospital-acquired Central Line Associated Blood Stream Infections (CLABSIs). The 29 bed oncology unit accounted for 7 infections. Nursing leadership resolved to improve nursing accountability and decrease the CLABSI rate. The purpose of this project was to evaluate current processes and identify opportunities for improvement regarding care and maintenance of central lines. Our goal was to decrease the number of CLABSIs at IAH. Utilizing evidence-based practice, an interdisciplinary team composed of nursing leaders, quality consultants, the medical director, RN unit supervisors, and staff nurses developed a standardized process to monitor all central venous catheters (CVCs). A unit electronic report listing all CVCs was generated daily. The RN unit supervisor and a leadership team member rounded on each patient, confirming that specific daily care activities (Chlorhexidine hygiene, line care, etc) were properly completed and documented. All staff, hospital-wide, were trained in CVC care (including those units not historically responsible for CVC dressing changes. Education of RN staff in dressing change and line care techniques was implemented through training video, individual skill development, and re-education on CVC maintenance bundle procedures. Additionally, rolling carts stocked with sterile supplies for CVC dressings were purchased and deployed. For all identified infections, an apparent cause analysis (ACA) was completed and immediate action taken. Within one week, involved team members, including the provider, nursing staff, clinical technicians, and quality consultants met to identify CLABSI root cause. The outcome to date is a 73% reduction in CLABSIs for the entire hospital. The oncology unit has experienced no CLABSIs from January through September 2016. Implementing interdisciplinary leadership rounding identified educational and process-related gaps. On going clinical education is imperative for CLABSI Reduction.

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**IMPROVING STAFF RESPONSIVENESS: A UNIT INITIATIVE TO IMPROVE CALL BELL RESPONSE TIMES.** Gail Zephyr, BSN, RN, OCN®, The Johns Hopkins Hospital, Baltimore, MD; Laurie Bryant, MSN, RN, OCN®, ACNS-BC, The Johns Hopkins Hospital, Baltimore, MD; Colleen Apostol, MSN, RN, OCN®, CHPN, The Johns Hopkins Hospital, Baltimore, MD

The Centers for Medicare & Medicaid Services guidelines to reimburse healthcare providers based on patient experience has led to the development of strategic priorities and initiatives to improve the quality of service delivered. A measure of patient experience via the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey provides a real-time performance score card. HCAHPS survey results indicated the need for improvement in staff responsiveness to patient call bells. Staff on a 15 bed Oncology unit partnered with a Service Excellence Coach to implement the "LOCATE ME" initiative with the goal of improving call bell response times. Call bells answered at the central location were triaged as clinical or non-clinical requests. This ensured that the appropriate staff responded to the call, promptly meeting patient needs and allowing staff to focus on their areas of expertise and promoting teamwork. Utilizing tools in place to drive our initiative included the electronic call bell system, personal staff locators and purposeful hourly rounding. All staff members received "LOCATE ME" education at team meetings. The procedure for answering central station call bells and appropriately triaging patient requests were communicated. The unit clerk

assumed responsibility for ensuring staff wore a working locator. A triage tool listing the most frequent patient requests was designed and posted at the central station. Calls were triaged more efficiently and properly assigned to a staff member based on their scope of practice. Prior to initiation of the "LOCATE ME" project there was inconsistency in how call bells were cancelled in the room versus cancelling the call bell at the central station. Because of this, the total length of time for a call bell to be answered until the call bell was canceled in the patient's room was not collected until after the project was launched. During the initiative call bell response times averaged 2.5 minutes. Pre-implementation call bell requests were 3800/month, decreasing to 3100 post-implementation. Pre-implementation HCAPHS staff responsiveness scores were at the 60th percentile, improving to the 94th percentile post-implementation. The "LOCATE ME" project enhanced communication and teamwork between disciplines. We work cooperatively, reminding staff to wear locators. As with many unit initiatives, changing culture is challenging and requires constant visual and verbal reminders to institute and maintain a new practice.

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**DEVELOPMENT OF A POST HEMATOPOIETIC STEM CELL TRANSPLANT VACCINATION ORDER SET, UTILIZING THE EPIC/BEACON ELECTRONIC MEDICAL RECORD SYSTEM.** Cheryl Zienkiewicz, RN, MS, ACNP-BC, OCN®, CHPN, NYU Clinical Cancer Center, New York, NY; Kathy Leonard, RN, MA, ANPC, ACNP-BC, ANP-BC, AOCNP®, New York University Clinical Cancer Center, New York, NY

The purpose of this poster presentation is to share the process of transitioning to an electronic ordering of vaccinations post hematopoietic stem cell transplantation (HSCT) utilizing the EPIC/Beacon electronic medical record system. New York University Clinical Cancer Center transitioned to the EPIC/Beacon system in 2012. During this transition, the physicians and nurse practitioners had to order each vaccination, for the post HSCT recipients, individually. There was no way to easily access vaccinations that were previously given. This was very inefficient, time consuming, and increased the risk for potential errors. Hematopoietic stem cell transplantation (HSCT) is the process, by which stem cells that are destroyed by high doses of chemotherapy and radiation and are replaced by healthy stem cells that are harvested from bone marrow, peripheral blood or umbilical cord blood. The two major types of transplants are: autologous, in which patients receive their own stem cells and allogeneic, in which the patient receives stem cells from that of another person who may or may not be related. Patients who have undergone hematopoietic stem cell transplantation become severely immunocompromised post transplantation and are at risk of developing bacterial and viral infections. HSCT recipients lose protective immunity to vaccine preventable diseases and this becomes a significant cause of re-hospitalization, morbidity and mortality. This patient population must undergo revaccination of these immunizations. These include inactivated influenza, diphtheria-pertussis, haemophilus influenza, inactivated polio, hepatitis A and B, pneumococcal, and mumps, measles and rubella vaccines, given at recommended scheduled times. The authors met with the transplant nurses, nurse practitioners, physicians, pharmacists, and the EPIC/Beacon clinical analysts to develop an ordering template to be used for vaccinating this population. The goal was to streamline and standardize the process of ordering and documenting vaccinations post HSCT, in the EPIC/Beacon system. A standardized electronic order set and documentation of vaccinations is beneficial to providing quality patient care and reducing medical errors. Incorporating this order set into the EPIC/Beacon electron record, has allowed for easier access to the patient's vaccination history in this patient population.

### **EFFECT OF CHLORHEXIDINE GLUCONATE (HIBICLENS®) BATHING ON CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTION RATES.** Cathy Zmolik, BSN, RN, OCN®, Baylor Scott & White Health, Dallas, TX

The objective was to evaluate the impact of HIBICLENS® daily bathing on an oncology unit to reduce the central line associated blood stream infection rates and improve patient outcomes. Central line associated blood stream infections (CLABSIs) remain a leading cause of deaths each year and are associated with billions of dollars in increased cost to our healthcare system. Chlorhexidine gluconate (CHG) has broad-spectrum antimicrobial effects and has been used to disinfect the skin prior to surgical procedures and intravascular insertions. Multiple studies include the use of CHG impregnated wash cloths in ICU settings but there is very little evidence on the use of whole-body CHG bathing in the oncology population. The oncology service line consists of 72 beds, two medical oncology units and one bone marrow transplant (BMT) unit. Each unit uses Lever 2000 for daily bathing with the exception of CHG impregnated wash cloths in our BMT ICU setting. The purpose of this evidence-based project was to evaluate the use of HIBICLENS® antiseptic soap on one unit (24 beds) for three months compared to non-antiseptic soap used on the other two units to reduce the incidence of CLABSIs. A team of oncology service line nurses was formed and an education plan was developed regarding the proper use of HIBICLENS® prior to the soap conversion. In addition, an educational flyer was developed for staff to assist with educating patients. Each patient was educated by their assigned nurse on the day of the conversion. During the pilot project, additional interventions were implemented house-wide to reduce CLABSIs. One intervention was the implementation of a new peripherally inserted central catheter. The use of HIBICLENS® did not show a reduction in the units CLABSI rates; therefore, further evaluation of HIBICLENS® is required. Although the use of HIBICLENS® did not show a reduction in the units CLABSI rates our practices and processes will continue to be evaluated based on the evidence.

## **Leadership/Management/Education Poster Abstracts**

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#### **PROVIDING DISTANCE PERSONALIZED ONCOLOGY STAFF EDUCATION.** Elizabeth Abernathy, MSN, RN, AOCNS®, Duke Cancer Network, Durham, NC; Kerri Dalton, MSN, RN, AOCNS®, Duke Cancer Network, Durham, NC

As oncology patient care becomes increasingly more complex, specialized education for nurses is paramount to providing safe care. Institutional resources have diminished leaving little support for education and development. Community oncology programs (COPs) are stressed to provide the needed educational support. It was recognized that the COPs affiliated with our academic institution need ongoing cancer education. Most COPs are rural, with limited resources, and ONS chapters are at a distance. Consistent with national trends, many new nurses in oncology lack oncology experience thus requiring education on the fundamentals of oncology nursing as well as ongoing oncology education. Guided by needs assessments conducted at affiliated COPs, a monthly, web-facilitated educational series was developed. To encourage attendance, topics and timing were chosen from the needs assessments. Continuing nursing education credit was offered. In the 5 years since its inception, this educational series has been evaluated and modified to meet the growing needs of these programs. In 2013, education appropriate for pharmacists and social workers was added. Quarterly

pharmacology programs with pharmacy specific credit and an annual ethics program for social workers was included. Because of demanding schedules, staff were challenged to attend live web-facilitated education. To meet that challenge, in 2013 all programs were recorded and archived to view on-demand while still receiving continuing education credit. Satisfaction surveys, verbal feedback and attendance tracking show success in web-facilitated education. Attendance significantly improved when an archived, on-demand option was available. In the years following the transition to archived education, participation from the COPs and from the staff at our academic institution increased dramatically. 1415 participants accessed the archived webinars and 359 participants attended live webinars awarding over 2500 education credits since 2013. Since the transition to web-facilitated live and archived education for COPs has been so successful, courses were added that make up the standard for orientation for COP new nurses. Archived orientation courses include: Cancer Basics, Chemotherapy Orientation and Radiation Orientation. We also have an OCN Review Course for the experienced nurse. To personalize the orientation education, we offer scheduled live discussion with the COPs. Next steps include continuing this educational format, as well as adding additional courses and series as requested by COPs.

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#### **DESIGNING A BLOOD AND MARROW TRANSPLANT, HEMATOLOGY AND ONCOLOGY INPATIENT UNIT—WHAT DOES IT TAKE? A NURSE'S PERSPECTIVE.** Kelly Acker, BSN, RN, OCN®, BMTCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

In the fall of 2014, Froedtert and the Medical College of Wisconsin embarked on a journey to build two additional inpatient units. This space would provide tertiary care for patients receiving blood and marrow transplants, hematology and oncology treatments as well as palliative care services. The goal was to add inpatient beds to our health system and accommodate the growing needs of the oncology service line. The purpose was to design inpatient space that meets the needs of our special patient population. The length of stay for oncology patients is significantly long in comparison to other specialties. This was our chance to create the patient's home away from home and improve the work environment for hospital staff while making it easier to provide exceptional care. The design team was composed of multi-disciplinary healthcare staff and members of the architectural firm contracted to this project. Thoughts and feedback about the current inpatient units were collected from former oncology patients and their families. They were surveyed on their likes and dislikes regarding the existing inpatient environment. We toured hospitals outside of our state which were recommended by our physicians. Final plans included a meditation room, community room and a physical therapy gym. Nursing moved to a decentralized model by implementing charting alcoves outside of each patient room and bringing supplies and equipment closer to the bedside. Rounding rooms were designed with the latest in computer technology to support multi-disciplinary rounds and care coordination. The walking path was created and featured large television monitors throughout the corridors. Frequently changing landscape and nature scenes are displayed on these monitors and help to inspire patients to ambulate and socialize. The new units opened in July of 2016. We continue to adjust to our new environment and adapt when needed. Feedback from both patients and staff has been positive. It is important to gather the opinions of all stakeholders when planning for a significant change to their environment. This approach was considered to be quite successful by hospital leadership and will be used to create additional inpatient space throughout our hospital over the next decade.

### **ONCOLOGY NURSE SATISFACTION WITH THE ORAL CHEMOTHERAPY PROCESS: A GREEN BELT PROJECT.** Sally Acton, RN, BSN, OCN®, MSM, Schneck Medical Center, Seymour, IN

A rising number of chemotherapy medications are being given orally causing nurses to be increasingly challenged with effectively and efficiently monitoring patient compliance to medication regimens, maintaining a plan of care, and navigating patients through a continuum of care. Outpatient oncology nurses voiced concerns regarding current processes and completed a survey to quantify their level of dissatisfaction. Use of an affinity diagram assisted nurses in identifying the greatest concerns: ineffective communication, lack of quality patient education, patient cost, patient and staff safety, and enough dedicated staff. The purpose was to enhance the quality of care for patients receiving oral chemotherapy and improve nurse oncology satisfaction through process improvement. A SIPOC was performed to identify suppliers, inputs, processes, outputs and customers. A current state flow map was performed as well as a current state spaghetti diagram. Current process wastes included defects in teaching alcohol use, financial assistance and timing of medication. Time wastes were noted with recreation of education sheets, printing, faxing, repeating education and waiting to have orders signed. The team brainstormed improvements and placed in a PICK chart to determine the impact and effort required for improvement. An action plan was developed and included: a centralized location to reduce steps; patient and staff education sheets incorporated into a procedure manual; and a tracking tool. All oral chemotherapy forms and processes moved into a central location where the printer/fax is located. The spaghetti diagram indicated a dramatic savings in steps and time. The education sheets for patients were developed so that other education forms were not required to be printed, improving education compliance and time. Improved communication was developed by utilizing an Outlook conference calendar to allow all oncology nurses to have access to current patient status and follow-up. Staff satisfaction was verified by repeat survey. It is imperative for a small cancer center with limited resources to have effective and efficient processes in place to allow for high-quality care, positive patient experiences, and satisfied nurses. Utilizing a Green Belt Team, guided the department in thinking “out of the box” to improve patient care and nurse satisfaction.

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### **USING THE TOOLS YOU HAVE: A RAPID IMPROVEMENT EVENT (RIE) SUCCESS.** Lori Allen, MSN, RN, OCN®, University of Colorado Cancer Center, Aurora, CO; Jennifer Zaccane, MS, RN, OCN®, University of Colorado Cancer Center, Aurora, CO; James Bachman, MBA, University of Colorado Cancer Center, Aurora, CO

The University of Colorado Cancer Center (UCCC) implemented the ONS telephone triage guidelines in 2015. These were embedded in the electronic health record (EHR), and education was provided to registered nurses (RN) on their purpose and functionality. An audit of symptom based calls three months after implementation showed RNs were using the guidelines 2.55% of the time. A rapid improvement event (RIE) was planned and implemented to increase utilization. The purpose was to increase RN utilization of the ONS telephone triage guidelines. After the initial training, 35% of RNs self-reported needing more practice and training as a barrier to using the ONS telephone triage guidelines. 11 one-hour training sessions focused on finding and utilizing the ONS guidelines while using practice scenarios in a “playground” version of the EHR were offered. Thirty seven RNs attended. Telephone triage utilizing the ONS guidelines was incorporat-

ed into orientation for new hire RNs (offered monthly). Nurses were given access to a step by step demonstration of how to utilize the guidelines in the form of a short video. Additionally, tip sheets with helpful hints were distributed. The Cancer Center RN educators provided additional individualized training and answered specific workflow questions at staff meetings and huddles. Three months post RIE the UCCC ONS guideline utilization was at 58% (up from 2.55%). Following the RIE interventions, 85% of nurses (n=51) stated that they were extremely likely (45.1%) or moderately likely (41.18%) to use the ONS telephone triage guidelines if the symptom was appropriate. Less than 1% (0.6%) of nurses said they were having difficulty finding the protocols in the EHR, and 0.06% still do not feel comfortable or proficient using the protocols. Training needs to be relevant, specific, adaptive, and on-going. Using different methods to meet individual learning styles is critical. Firm expectations for usage as well as intention and benefits of any new process should be emphasized.

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### **INNOVATIVE STRATEGY TO UNDERSTAND NURSE'S EDUCATIONAL NEEDS THROUGH PROFILING.** Yuki Asakura, PhD, RN, ACHPN, OCN®, Parker Adventist Hospital, Parker, CO; Desiree Duckworth, RN, BSN, Parker Adventist Hospital, Parker, CO

A significant number of patients with cancer suffer from pain, and pain is the most reported symptoms by oncology patient. However, pain management satisfaction has been one of the greatest challenges. Although many comprehensive pain education programs has been suggested, often implementation of the education programs failed due to financial concerns, nurses turn over, and non-targeted audience. This quality improvement project suggests innovative strategies to analyze nurses' needs so that targeted, cost-effective and appropriate interventions can be offered. The purpose of this presentation is to provide strategies to analyze nurses' pain management educational needs to develop tailored interventions. This project is presented by using actual data analysis from our pain management assessment needs survey. “Knowledge and Attitude Survey regarding Pain” (KASRP) tool is a well-developed survey to measure nurse's knowledge deficit and attitude regarding pain management. Nurses were asked to response to KASRP survey in addition to demographic information (N=102). After getting a response, detailed analysis was conducted for profiling by using a statistical software SPSS. This profiling revealed an attitude towards to pain management is different among care settings. Some of the findings from this survey were: (a) Simple comparison of knowledge score showed only differences between ED and ICU/PreOp/PACU (p=0.13). However, further analysis revealed more information as following. (b) ICU nurses use appropriate and higher dose of opioid than ED or all inpatient-unit nurses (p=0.017) (c) Total knowledge scores were significantly higher in ICU (p=0.18) and Pre-Op/OR/Procedure-areas (p=0.13) than ED (d) Nurses with longer experience take increased motor movement seriously than nurses with less than 5-year experience (p=0.03) (e) False beliefs of recurrence of addiction by using opioid analgesics were prominently higher in ED and all inpatient-unit nurses (p=0.005) It is often see that uniform education is provided for nurses without assessing their needs. Needs assessment is complex process but can be done appropriately when use an appropriate strategies, and this information is helpful to provide educational intervention more appropriately. Oncology patients can be presented any settings, and understanding of each work area's characteristics is important to improve care. This introduced strategy makes us better understand regarding education needs in pain management and assist to develop targeted intervention efficiently.



**WHO, WHAT, WHERE, WHEN AND WHY: IS REAL TIME LOCATION SYSTEM (RTL)S) THE ANSWER?** Adrienne Banavage, MSN, RN-BC, OCN®, University of Virginia Health System, Charlottesville, VA; Hannah Spencer, MSc, University of Virginia Health System, Charlottesville, VA; Veronica Brill, MSN, RN, NEA-BC, University of Virginia Health System, Charlottesville, VA; Jody Reyes, BSN, MSBA, RN, OCN®, University of Virginia Health System, Charlottesville, VA

The ability to provide safe, efficient care is the cornerstone of ambulatory care. The complexity of numerous same-day appointments and unplanned labs or treatments presents challenges in providing efficient care. Additionally, as oncology patients require multiple care encounters, often while feeling unwell and with limited time, it is imperative that cancer care providers improve efficiency. Current data systems don't provide sufficient detail regarding patient flow. In 2016 an academic ambulatory cancer center piloted the use of real time location services (RTL)S). The purpose of this pilot was to understand the patient experience while receiving care at the cancer center and to identify opportunities to improve care and resource utilization. A team collaborated with key stakeholders to identify the priorities and scope of pilot which were defined as identification of patient wait times and time interfacing with a member of the care team. Data collection around patient movements, messaging, and alerts were designed to meet target metrics. Over 50 education sessions were provided to staff, along with educational materials and scripting for patients. In May, a phased-rollout of badge distribution to patients was implemented to gather preliminary data while not overloading operations of staff responsible for badge distribution and collection. Since initially deploying badges in May, a total of 173 care team members were assigned badges and 3,434 patients received badges. The phased roll-out of patient badges resulted in three levels of volume distribution ranging from 50 to 180 badges daily. Initial data identifies opportunities to enhance patient wait times in the infusion center, refinement of appointment scheduling to avoid "downstream" delays and a need for greater space resources for patients enrolled in clinical trials. RTL)S) has great potential to understand patient experience in the ambulatory setting. The use of empirical data to inform this decision making is critical to identify and solve the real issues and not the imagined ones. Education to patients and staff presented in varying formats and settings was key to success of the pilot. RTL)S) provides an abundance of data about patient passage and resource use while in the cancer center.

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**ENGAGING PATIENTS AND CAREGIVERS IN ASSESSING CHEMOTHERAPY COMPETENCY.** Lisa Barbarotta, MSN, APRN-BC, AOCNS®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT; Kristen Roche, RN, MSN, CNE, OCN®, Smilow Cancer Hospital at Yale New Haven, New Haven, CT

Annually, our cancer center assesses the competency of nurses who administer systemic cancer treatments. These assessments are done in a simulation center. Competencies include order verification, safe handling, and managing emergencies. Historically, patient education has not been assessed as a mandatory competency. Clinical observations from educators noted variation in messages delivered and inadequate assessment of patient understanding. Effective communication can impact patient outcomes including adherence, resource utilization, and patient satisfaction. The patient perspective is critical in assessing professional communication skills. The purpose is to engage patients and caregivers in competency assessment

related to patient education through live simulation of patient education interactions with nurses. Additionally, we aimed to promote the utility of teach-back. Patient and family advisor participation was voluntary and recruited through our Patient and Family Advisory Committees. Advisors underwent a two hour training session to prepare them for the competency assessments. Standard advisor expectations and evaluation tools were developed and reviewed during training. Prior to the first day of assessments, the nurses were given an outline of what to expect, scenarios, and an article on the basics of patient education. Each nurse was asked to provide focused patient education to an advisor while an educator evaluated from an observation room. On completion of the education, the advisor and the educator provide the nurse feedback. If the nurse failed to assess patient understanding, this was role modeled by the educator and reinforced in their evaluation. Through this exercise, we were able to assess the nurses' competency in specific patient education domains, enabling us to target future staff education based on common deficits, which included lack of initial assessment of patient knowledge and lack of assessment of understanding on completion of education. Nurses and advisors completed evaluations. Overall feedback was positive and advisors felt strongly they were contributing to the development of staff. Patients and caregivers can provide insight into the effectiveness of our communication. This exercise provided a unique opportunity for staff to hear direct feedback from patients and caregivers with specific recommendations for improvement. A combination of both professional and patient evaluation provides a comprehensive assessment of staff skill. In the future, this approach may be considered for a wide variety of other communication based competencies.

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**CAREGIVER AWARENESS OF SUPPORTIVE RESOURCES FOR CAREGIVERS AT UC SAN DIEGO COMPREHENSIVE BREAST CARE CENTER.** Eva Bariuan, MPH, RN-BC, OCN®, UCSD Moores Cancer Center, La Jolla, CA; Debbie Noell, BSN, RN, UC San Diego Moores Cancer Center, La Jolla, CA; Caroline Sanchez, MSN, RN, CBCN®, UCSD Moores Cancer Center, La Jolla, CA; Anne Wallace, MD, UCSD Moores Cancer Center, La Jolla, CA; Sarah Blair, MD, UCSD Moores Cancer Center, La Jolla, CA

The emotional burden accompanying a breast cancer diagnosis and need for treatment affects patients and their caregivers. A literature review confirms that caregivers may experience increased stress, anxiety and depression. It also indicates that caregiver awareness about available support resources can help relieve the caregivers' emotional burden. The purpose is to assess caregivers about their awareness of resources to support their caregiver role for breast cancer patients treated at the UCSD Moores Cancer Center, one of 69 NCI designated Comprehensive Cancer Centers. Over the period of September 12 to 26, 2016. Twenty one (21) caregivers of breast cancer patients completed a survey. Survey data gathered demographic information and measured the caregiver's awareness about available supportive resources available at the Comprehensive Breast Health Center and at the Moores Cancer Center. Based on the results, 11 of the 21 surveyed (52%) indicated they were not aware of resources. Ten of those surveyed (48%) were aware of resources but were not familiar with how to access those resources, such as: support group meetings, family and patient programs, caregivers' classes, and individualized counsel from social workers and breast team nurses. Of those that were aware, eighty percent (80%) stated their quality of care to the patient improved and ninety percent (90%) of the caregivers stated access to resources reduced their emotional burden. Survey data indicates that increased discussion and

visibility is needed about available caregiver resources. In addition, caregivers aware of available resource greatly improve the quality of care they provide patients and lessen their emotional burden (stress and anxiety). Mobilizing collaborative, mutually-beneficial professional relationships with outside resources can better serve the caregiver population: Cancer Caregiver Education Support Group, Women Support Group, and the Radiation Oncology Class. With the assistance of clinic social workers, caregivers can connect with other caregivers, to reduce isolation, share caregiving advice and to gather relevant information to help them in their caregiver role. The development of a survey to assess caregiver awareness of available of supportive resources.

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### **A NOVEL APPROACH TO IMMUNOTHERAPY IN THE MANAGEMENT OF RECURRENT OVARIAN CANCER: WHAT ONCOLOGY NURSES NEED TO KNOW.** Cheryl Barnes, DNP, RN, FNP-BC, Memorial Sloan Kettering Cancer Center, New York, NY

Ovarian cancer is the deadliest form of gynecologic cancer in the United States with a projected 14,240 deaths in 2016. Approximately 1.3 percent of women will be diagnosed with ovarian cancer at some point during their lifetime. Although approximately 70% of these patients achieve an initial remission most will eventually relapse and at some point develop chemotherapy-refractory disease, resulting in the need for alternative therapy. One alternate therapy is immunotherapy. It is essential for oncology nurses to be knowledgeable about immunotherapy and its implication for practice in order to optimize patient outcomes. The purpose of this presentation is to educate oncology nurses on the trajectory of the disease process, protocol screening and evidenced-based clinical management of women with ovarian cancer receiving Chimeric Antigen Receptor (CAR)-T-Cell immunotherapy. There is growing use of immunotherapy using CAR-T-Cell in the management of patients with ovarian cancer. In this technique T cells are removed from the patient's blood and genetically altered in the lab to have specific antigen receptors called chimeric antigen receptors (CARs). The T cells are then multiplied in the lab and infused back into the patient's blood to attack and kill the cancer cells. Oncology nurses are key providers throughout this process. Patients are hospitalized for the CAR-T-Cell administration. They are seen four days after discharge then get weekly visits for two months followed by monthly visits for toxicity monitoring. Some side effects from this treatment include dyspnea, high fevers and low blood pressure. Oncology nurses, as providers caring for women with ovarian cancer, should be knowledgeable about the application and impact of this innovative therapy in providing comprehensive care to these patients. The long term outcomes of this therapy in patients with ovarian cancer are unknown. However engineering patients' own immune cells to recognize and attack their tumors has generated remarkable responses in patients with advanced cancer, particularly in acute lymphoblastic leukemia and lymphoma. Ovarian cancer antigen, MUC16, is overexpressed in approximately 70% of women with ovarian cancer and is considered a good target for this type of immunotherapy. These clinical trials are now being integrated into the management of patients with ovarian cancer. A protocol using this approach recently opened at this NCI-designated institution.

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### **NURSING OUTREACH TO THE MIDDLE EAST.** Jalen Bartek, RN, OCN®, MD Anderson Cancer Center, Houston, TX; Kristie Fuller, RN, MD Anderson Cancer Center, Houston, TX; Ruth Roach, RN, MD Anderson Cancer Center, Houston,

### **TX; Rebekah Gold, RN, MD Anderson Cancer Center, Houston, TX**

Over the last half century the Middle East has seen some of the most catastrophic humanitarian disasters of the modern world. With war raging in several countries and an overwhelming refugee population in the countries that surround these war-torn nations, there is a great need for healthcare in the land. While much partnership is still needed, there have been some opportunities for nurses that have developed recently in several countries in the Middle East. The focus of the work was to provide knowledge gained in nursing and at MD Anderson Cancer Center to cross cultural barriers and educate nurses and patients throughout the Middle East, to develop and partner with healthcare colleagues in the Middle East to provide nursing curriculum and programs, and to promote the role of the infectious disease/infection control/oncology nurse through classes and conferences. A couple of activities included developing and coordinating an oncology conference for nurses at a country's sole oncology hospital, providing an infectious disease and infection control conference for nurses at a rural desert hospital and providing classes and trainings for healthcare workers, refugees and key community leaders in the Middle East. We partnered with nurse educators from that part of the world for the conferences who better understand the culture, learning needs and who speak the language. These opportunities were very successful in providing relevant and quality education to those attending and helped develop strong relationships with healthcare institutions in which we were able to provide recommendations and encourage them in the work they are doing. By coming alongside healthcare professionals in that part of the world, we can have greater impact through education as we are able to train those who are serving there permanently and if we are doing it correctly we end up learning a lot ourselves.

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### **EQUIPING NON-ONCOLOGY NURSES TO SAFELY ADMINISTER CHEMOTHERAPY IN SPECIALTY POPULATIONS.** Sarah Basurto, BSN, RN, OCN®, Cleveland Clinic, Cleveland, OH; Kimberly Kalo, MSN, RN, AGCNS-BC, OCN®, Cleveland Clinic, Cleveland, OH; Diana Karius, MS, RN, AOCN®, CHPN, Cleveland Clinic, Cleveland, OH; Christina Colvin, MSN, RN, AOCNS®, Cleveland Clinic, Cleveland, OH; Julie Fetto, BSN, RN, MBA, NE-BC, OCN®, Cleveland Clinic, Cleveland, OH

A growing number of medical fields utilize chemotherapy/biotherapy to successfully manage non-oncology conditions (autoimmune disease, solid organ transplant, etc.). These patient populations are cared for by specialty nurses who frequently have no experience or training in safe administration of chemotherapy and biotherapy. A literature review yielded minimal data related to the training of non-oncology nurses to administer chemotherapy. Chemotherapy administration is a high-risk multidisciplinary process for which there are nationally mandated standards to ensure patient and caregiver safety. In recognition of this our facility established a chemotherapy pager. The pager was staffed 24/7/365 by oncology nurses to make a chemotherapy trained nurse available to safely administer chemotherapy in non-oncology areas. This responsibility was in addition to the nurse's regular duties. Over time there was a marked increase in the volume of non-oncology chemotherapy/biotherapy, which became unmanageable. A two hour non-oncology chemotherapy class was developed with the purpose of empowering and educating our non-oncology colleagues to safely administer chemotherapy/biotherapy medications to their patient populations. Resource nurses from various high volume units were invited to attend. Content included commonly used agents, order review, dosage

re-calculation, personal protective equipment, safe handling, and toxicity management. It concluded with a quiz covering all components, and hands on returned demonstration. A passing score and correct demonstration deemed the resource nurse competent to administer chemotherapy to their patient population only. The chemotherapy pager remained a resource for questions and additional resources were provided. From December 2014 to present, we educated over 100 non-oncology nurses via our class. During 2013 and 2014, prior to beginning education, chemotherapy pager nurses directly administered over 75 non-oncology chemotherapies. In 2015 and 2016 the volume dropped to 5 and 3, respectively. Additionally, there was no increase in nursing-related chemotherapy errors on non-oncology units. The increased use of chemotherapy for non-oncology indications has created a knowledge gap for specialty nurses whose patients require these unfamiliar and hazardous medications. Hospitals must find a way to address this gap that ensures patient and caregiver safety and supports effective resource management. Collaboration among oncology nurse educators at our institution yielded mutually beneficial knowledge-sharing with non-oncology nurses to provide innovative yet uncompromised safe patient care.

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### **INTENDED BETTER OUTCOMES FOR ONCOLOGY PATIENTS FROM REVISED ORIENTATION PROCESS FOR NURSES.**

**Mary Beltran, RN, ADN, Froedtert Hospital, Milwaukee, WI; Alexandra TerHark, RN, BSN, OCN®, Froedtert, Milwaukee, WI**

There was a need to hire and train twenty new nurses on an oncology unit due to a unit expansion in a six month period of time. The goal of our project was to assess the current training process and discover obstacles in learning development in order to implement new policies and education that would lead to improved success rates and reduction in nursing errors thus improved patient outcomes. New nurses were surveyed on their experiences before, during, and after unit orientation to determine patterns of successful nurses and identify factors that potentially contributed to nursing errors. The questions include prior education and training in the medical field, relationships with preceptors, leadership and peers, and any oncology specific training received. The staff will also be able to describe learning opportunities that were not offered during orientation they felt were important for care of the patient. These surveys were compared to event reports of nursing errors that occurred around or after their training period has ended and preceptor evaluation forms will be evaluated to identify areas of concern during the orientation process. The intended results will reveal what training and education are needed for new nurses to be successful, to reduce the incidence of errors, and new policy implementation to promote success among new nurses in our hematology oncology unit. Our unit will have reduced errors among new nurses and more positive patient outcomes as a result of identifying and implementing education and training among new staff RNs. Other hospitals may want to implement a similar evaluation process of their orientation to optimize staff training.

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### **ENGAGING A NEW WORK FORCE: CROSS TRAINING TO A VARIETY OF CANCER CARE AREAS.** Cheryl Bohacek, MSN, RN, OCN®, Nebraska Methodist Hospital, Omaha, NE; Barbara Johnson, MSN, RN, Nebraska Methodist Hospital, Omaha, NE; Carrie Smith, BSN, RN, Nebraska Methodist Hospital, Omaha, NE

Keeping nurses at the bedside in a hospital setting is becoming increasingly difficult; demanding recruitment and retention strategies that change with the demographics of the

work force. Millennials make up the largest generation in the history of the United States, growing up amidst rapid change largely due to technological advances. Those entering the work force are attracted to work sites that offer a variety of experiences and opportunities to build a broad spectrum of skill sets. A model of cross training instituted at a community hospital and cancer center has turned out to be beneficial for all stakeholders. Oncology care encompasses a wide variety of professional options for nurses. Inpatient nursing on an acute care unit includes technical skills, effective communication abilities and astute time management to balance the many needs of the acutely ill. Long shifts and a lack of the full perspective of the patient care trajectory may cause young staff members to seek other opportunities that offer professional growth and variety. The community cancer center provides specific population based services such as an infusion center and clinics for surgical oncology and breast, lung, gynecologic and head and neck cancers. The initial plan cross train hospital inpatient oncology unit nursing staff to the cancer center was to satisfy staffing issues for clinics that had small work forces and needed coverage for vacations, short term leave or vacancies. Overwhelming positive benefits and feedback added more structure to the program. Staff has acquired new skills including increased and more varied patient education interactions, surgical scheduling, assisting with screenings, phone triage for symptom management and bedside procedures not done routinely in the hospital. A fuller understanding of the course of care also brought an enriched knowledge base to the inpatient unit, benefitting patients and families. Providers were able to build relationships with nurses in the clinic who they then entrusted to care for their patients when hospitalized. Clinic staff were able to better problem solve issues surrounding the flow of patients throughout the system through a better understanding of processes outside their work area. A cross training program structured by evaluation of staff feedback has retained millennial nurses within the health system and provided familiar faces for patients throughout their cancer treatment, improving care and staff satisfaction.

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### **THE PAUSE: PERSONAL REFLECTION AFTER PATIENT EXPIRATION PROVIDES MEANING.** Christina Boyer, RN, Moffitt Cancer Center, Tampa, FL; Tina Mason, MSN, ARNP, AOCN®, AOCNS®, Moffitt Cancer Center, Tampa, FL; JoEllen Warnke, RN, MS, OCN®, Moffitt Cancer Center, Tampa, FL

Oncology nursing is a stressful specialty. Contributing to stress are the environment and working with dying patients. Negative consequences are associated with unresolved grief. While a Code Lavender is designed to help reduce stress of healthcare workers following traumatic situations, it is not immediate nor allows for personal reflection. Therefore, a nurse resident team advocated for the addition of “in the moment processing” after a patient’s death as both complementary and beneficial. The purpose is to describe the implementation of a nurse resident program-driven Legacy Project, “The Pause”, and its implementation, in collaboration with Pastoral Care, immediately following the expiration of a patient for all staff involved in at a NCI-designated Comprehensive Cancer Center. During a one-year program, nurse residents are challenged to leave their legacy and shape nursing care. After sharing personal experiences of patients’ death, one cohort turned to the literature. The team modified “The Pause”, described by Jonathan Bartels, RN, University of Virginia Health System, as a time to slow racing minds, offering mental space so staff is not drawn into the vortex of failure versus success. The team surveyed 70 interdisciplinary staff members (nurses, techs, providers, chaplain, manager, social worker, educator) about distress and ability to cope after a patient expires. 75% of nurses experienced distress while 80%



were able to cope. 90% of nurses and 88% of all staff surveyed said they would benefit from an immediate moment of silence. The process includes posting signage on patient's door (painting by Artist-in-Residence), notifying pastoral care, chaplain reading a reflections script, 30-second moment of silence, and closure by the chaplain. "The Pause" was well received by Patient and Family Advisory Council. Following education, it was implemented February 2016, it has received favorable feedback from participating staff. Nursing guidelines have been developed and "The Pause" has rolled out to the ambulatory setting. This presentation will highlight post implementation improvement and sustainment outcome measures: distress, ability to cope after patient expiration, and overall satisfaction for the interdisciplinary team. A "pause" immediately following patient expiration allows staff that has cared for the patient an opportunity to reflect on their contributions to the patient's life as honorable and not as a failure. "The Pause" and support of pastoral care can help the interdisciplinary team cope with a loss.

### **302 PEER INTERVIEWING AND SHADOWING: A STRATEGY FOR ENGAGEMENT, RECRUITMENT, AND RETENTION.** Carolyn Brausch, MBA, BSN, RN, Froedtert & the Medical College of Wisconsin Froedtert Hospital, Milwaukee, WI

An oncology/hematology inpatient unit within an academic medical center increased staffing ratios from a 4-5:1 patient/nurse ratio to a 3:1 patient/nurse ratio on all shifts. The unit was also in the process of undergoing a relocation, which included an increased bed capacity. There was a need to hire 25 registered nurses in a three month time-frame, with completion of orientation within five months. A strategy of peer interviewing and providing a shadowing experience with all potential candidates was implemented. The goal of this strategy was to enhance teamwork and shared decision-making, increasing engagement of existing staff, and the recruitment and retention of new staff. The purpose this new strategy was to encourage current staff nurses on the unit to have a voice regarding the selection of potential future peers, by providing professional, constructive feedback to the nurse manager. This would empower current unit nurses and help create a team environment with all newly hired and existing registered nurses. Registered nurse candidates were contacted to meet with potential peers for a job shadow and interview. Peers were provided with candidate resumes and a list of interview questions to be used with all candidates. Each candidate shadowed a staff registered nurse for two hours and then was interviewed by a small group of two to four registered nurses from the unit. The nurse manager followed up with the participating unit nurses to discuss the potential candidate; also contacted the candidate to answer any questions he/she may have had. Staff and candidates verbalized positive feedback about this experience. Candidates who were hired felt they were better prepared relative to expectations and more comfortable having met members of the team. We will continue to monitor registered nurse engagement and retention rates. Peer interviewing and shadowing resulted in successfully hiring and training 22 registered nurses within six months. This success is attributed to shared decision-making with peer interviewing and engagement in the selection process, which built trust among existing staff. In addition, candidates' expectations were set before being hired to the unit and a stronger team environment was formed among new and existing nurses.

### **303 WHAT DOES THE INSTITUTIONAL REVIEW BOARD EXPECT?** Denise Brigham, RN, MPH, OCN®, East Carolina University, Greenville, NC

Nurses are increasingly becoming more engaged in the research process, whether through their role as a nurse scientist

or through the spirit of clinical inquiry at the bedside. This scientific growth is essential to our patients, our profession, and our health care system. At this same time, human subject protections and research regulations are becoming increasingly complex. Institutional Review Boards (IRBs) govern the interpretation, implementation, and evaluation of the federal research regulations. Determining what activities fall under IRB jurisdiction can be intimidating, and may even serve as a deterrent to pursuing activities. Submitting an application for IRB review can be a daunting task. Additionally, the IRB retains oversight for research projects for ongoing continuing review and are a constant partner over the life of research study. The regulations can be distilled to simple ideas that are easily applied in the majority of cases. Clarity around a few basic rules and regulations will serve to decrease some of the trepidation towards pursuing research projects and evidence-based activities, empowering us all to acquire new nursing knowledge.

### **304 EFFECTIVENESS OF HIGH FIDELITY SIMULATION ON UNDERGRADUATE NURSING STUDENTS' END-OF-LIFE COMPETENCY.** Cheryl Brohard, PhD, RN, CNS-ONC, AOCN®, CHPCA, University of Houston, School of Nursing, Houston, TX

Undergraduate nursing students are expected to demonstrate competencies for palliative care and end-of-life based on the new palliative care essential competencies published by the American Association of Colleges of Nursing (AACN). Although didactic instruction and discussions have been used in the past, nurse students and experienced nurses identify their lack of comfort and experience with death and dying issues with patients and families. We are proposing to use innovative teaching strategies, an intrigue and creative end-of-life scenario, and a sophisticated high fidelity simulation equipment in a quasi-experimental, descriptive study to improve the students' knowledge, communication, confidence and satisfaction of the essential undergraduate nursing student palliative care and end-of-life competencies at three time points during nursing school. A convenient sample of undergraduate second-degree nursing students from an accelerated nursing program will be recruited and the study will be approved by the IRB. Descriptive statistical analyses will be used to analyze the central tendencies, and inferential analysis using the independent t-test/ANCOVA will be used to analyze the data over time for significant changes in the dependent variables. The significance of this research study is to prepare the next generation of nurses to compassionately provide essential end-of-life patient care. Oncology educators are positioned to use the AACN competencies and these educational strategies to ensure competent oncology nurses are caring for patients with cancer. Detailed description of the teaching strategies and learning activities and outcome measures will be shared. What that means for nursing, healthcare, and society is empower confident nurses to use this specialized education to improve patient advocacy, communication with the interprofessional team, and provide excellent end-of-life care to patients and their families.

### **305 ESTABLISHING FOUNDATIONAL TOOLS FOR CLINIC NURSE CASE MANAGERS TO COVER SPECIALTY ONCOLOGY PRACTICES.** Ellen Carr, RN, MSN, AOCN®, Moores UCSD Cancer Center, La Jolla, CA; Vicki Bradford, RN, BSN, MBA, Moores UCSD Cancer Center, La Jolla, CA

The Moores UCSD Cancer Center, one of 69 NCI-designated Comprehensive Cancer Centers, provides ambulatory clinic-based care to > 62,000 patients/year at its Multispecialty Clinic (MSC). The Clinic staffs approx. 66 specialty medical and surgi-

cal oncology practices with 41 nurse case managers (NCMs) contributing as integral clinical team members. In the Clinic, NCMs provide patient navigation, patient and family teaching and assistance with in-clinic procedures. They also serve as a communication hub for patients, their family members and all members of the patient's care team. To safely provide practice coverage for vacationing or ill NCMs, the MSC Leadership instituted several strategies to equip covering NCMs with foundational tools about specialty oncology practices. The purpose is to determine the ease of access, effectiveness and value of specialty oncology practice foundational tools to equip NCMs with guidance and resources. Nursing Leadership at the MSC established foundational tools to equip NCMs to cover specialty oncology practices unfamiliar to the NCM. These tools include: (a) i-share accessed Specialty Practice Profiles (i-share is an internal, secure on-line platform for information exchange and resources.) (b) Monthly NCM Brown Bag/Clinical Update Sessions, focusing on specialty oncology practice updates. Session content then is posted on i-share as specialty practice resources. NCM Leads (veteran specialty practice experts) guide covering NCMs to resources and help problem-solve clinical questions. Special Instruction Guides (i.e. Process to request and confirm diagnostic and treatment authorizations; Who to call and when; nutrition guides). Guides are posted on i-share. Evaluation Using a Survey Monkey® Survey, all MSC NCMs had the opportunity to evaluate each of the foundational tools for their: (a) ease of access (b) effectiveness, providing needed background about specialty oncology practices (c) value as a covering NCM. MSC NCMs also provided suggestions to revise or add to the current portfolio of tools. Survey results (n = 20) indicate all tools were easy to access and valuable to the NCM. Effectiveness data suggests that additional tools could focus on specific oncology care teams and their workflows. These foundational tools equip any Moors MSC NCM to safely and effectively cover specialty oncology clinical practices—a standard-of-care expectation. Establishing these tools provides an ongoing strategy and process to update NCM clinical practice resources.

### 306

**IF A PICTURE IS WORTH A THOUSAND WORDS THEN A VIDEO IS WORTH TEN THOUSAND WORDS: USING A UNIT BASED VIDEO BLOG TO INCREASE BEDSIDE STAFF COMMUNICATION AND ENGAGEMENT.** Linda Chan, BSN, RN, OCN®, UT Southwestern Medical Center, Dallas, TX; Marco Pataray, BSN, RN, CMSRN, OCN®, UT Southwestern Medical Center, Dallas, TX

The reader will identify key components of a unit based website with a video blog to increase communication and engagement among staff members who provide direct patient care. Communication problems can lead to chaos, confusion, conflict, resource waste, and system problems, and furthermore, have been linked to preventable medical errors and low employee morale. Gallup and organizations that measure employee engagement report that 60% of employees are not engaged, and moreover, an additional 15% are aggressively disengaged in their workplace. The financial impact of employee disengagement for healthcare organizations in the United States is calculated at 100 billion dollars per year, or about \$8,500 per employee. The purpose is to increase communication and engagement among nursing staff who provide direct care for surgical oncology patients on a 32 bed unit in a large teaching hospital. Using a Windows based platform called SharePoint, unit nurses created a secure website specific for the surgical oncology unit. The site can be accessed from the unit or from home. In addition to the video blog, it contains libraries for educational PowerPoints, a virtual journal club, sites for project collaboration, a calendar, photos, and links to outside nursing

resources like the Oncology Nursing Society. All clerical and nursing staff can contribute content. Since the start of SharePoint in January 2016 the unit based shared governance council (UBC) launched three initiatives: an acuity tool, a bundle to decrease incremental overtime, and a new process to improve admission times. In addition to traditional teaching methods, the SharePoint video blog was used to educate staff about the UBC initiatives. More than 50 comments were posted on the video blog which enabled UBC to make staff driven improvements in the initiatives. Over 7000 SharePoint page views have been recorded (includes site creation). Communicating new practices and obtaining staff feedback in environments that provide twenty four hour care can be challenging. Novel ways that facilitate staff contribution and evaluation are needed. Creating a unit based website with a video blog, which can be accessed on the unit or at home, provides a venue for communication and engagement. This model can be adapted to any practice environment.

### 307

**CREATING A COMPASSIONATE WORKPLACE RESULTING IN STAFF RESILIENCY, PERSONAL GROWTH AND PROFESSIONAL DEVELOPMENT.** Susan Childress, MN, RN, OCN®, Huntsman Cancer Hospital, Salt Lake City, UT; Melissa Banner, MS, RN, OCN®, Huntsman Cancer Hospital, Salt Lake City, UT; Alexa Doig, PhD, RN, University of Utah College of Nursing, Salt Lake City, UT

Compassion fatigue, burnout, and secondary trauma is well documented in healthcare literature. Professionals working in oncology have the privilege and challenge of assisting patients during critical times in their life. Listening to patients and families, providing complex patient care and working in a high stress environment impacts nurses and their families. In addition to the personal impact to employees, there is the financial cost of high staff turnover rates and the impact on quality of care and patient relations when staff are burned out. The purpose is to create a comprehensive "Compassionate Workplace" program that proactively addresses these issues and supports staff through adequate staffing, education and targeted interventions. An additional goal was to identify a new organizational core value: An evidence-based system approach to prevent compassion fatigue through a compassionate workplace. Using the PROQOL V instrument, 1200 cancer center employees were surveyed for compassion fatigue, burnout, and secondary trauma; 396 employees multiple disciplines and job roles responded. The survey also asked questions regarding their perceived cause of stress and potential interventions for relieving stress in the work environment. A "Compassionate Workplace" interdisciplinary committee was formed with front line, manager, and administrative representatives to review survey results and put together an action plan. With support from senior hospital administration, the committee started the initiative with a focus on adequate staffing to match the workload, improved communications, break room enhancements, and increased wellness offerings. A biyearly resiliency retreat was overhauled to meet identified needs and be offered monthly, a website created, chair massage pilot implemented, and Oncology Certification Recognition was expanded. The latest group of interventions has included a new Employee Wellness Coordinator position, a "Break for Lunch" Campaign, Schwartz Rounds program, automatic massage chairs purchased, quarterly memorial services, and a staff lounge redesign. After one year there has been demonstrated improvement in staff turnover, employee satisfaction, and manager satisfaction. Recognizing the need to address compassion fatigue, burnout, and secondary trauma by creating a "Compassionate Workplace," employers ultimately have the opportunity to impact the quality of patient care, the patient experience, and the financial bottom line. Although there is evidence based

literature to support many of these individual interventions, a comprehensive “Compassionate Workplace” program for a cancer center has not been documented.

**308**  
**RECONCILING PATIENT ENGAGEMENT AND THE ELECTRONIC HEALTH RECORD.** Timothy Clyne, RN, BA, MSN, Trinitas Regional Medical Center, Elizabeth, NJ; Carol Blecher, MS, RN, AOCN®, APNC, CBCN®, Trinitas Comprehensive Cancer Center, Elizabeth, NJ

There is a focus on the medication reconciliation process when patients are discharged from the inpatient setting. This process is particularly important for those patients with an oncologic diagnosis due to their polypharmacy complexities. Medication Reconciliation is recommended by The Joint Commission as a measure to avoid harm and improve outcomes for our patients. Traditionally much of the focus has been on the medication reconciliation process at the time of discharge from inpatient units. Inaccurate medication lists may lead to poor outcomes in the outpatient setting leading to inpatient admissions. The purpose of this educational leadership project is to improve the medication reconciliation process across the care continuum by implementing a medication reconciliation form in the outpatient Electronic Health Record (EHR). Currently this process occurs in the EHR in the inpatient setting but is hand written in the outpatient setting and does not translate readily across the continuum of care. This project also aims to improve patient engagement through education of the importance of medication reconciliation at the time of discharge from the inpatient oncology unit. The inpatient oncology nurse manager will collaborate with the outpatient comprehensive cancer center to implement medication reconciliation in the outpatient area in the EHR. There will also be education for the inpatient and outpatient oncology nursing staff on the importance of medication reconciliation to improve outcomes for our patients. This will include strategies to improve patient engagement in the medication reconciliation process. We will evaluate our success through improvement in customer satisfaction scores in the domain of “care transitions”. We will also follow re admissions of patients due to medication errors. It has been identified that educating the healthcare team about the importance of medication reconciliation has reduced errors from 89% to 49%. It is equally important to note that patient education and empowerment has also been found to improve the completeness and accuracy of medication lists. Through the implementation of the outpatient EHR medication reconciliation we will improve the continuity of the information for practitioner’s and will also provide the opportunity for patients to be more engaged in medication reconciliation. This will improve patient outcomes and understanding of their medications across the oncology continuum.

**309**  
**ENSURING AGE-APPROPRIATE CANCER CARE FOR ADOLESCENTS AND YOUNG ADULTS.** Donna Colabroy, RN, MSN, CCM, AOCNS®, Lehigh Valley Health Network, Allentown, PA; Melissa Kratz, RN, MSN, AOCN®, Lehigh Valley Health Network, Allentown, PA; Amber Messinger, BSW, Lehigh Valley Health Network, Allentown, PA; Rose Schenk, MSW, Lehigh Valley Health Network, Allentown, PA; Elizabeth Rohn, MSS, LCSW, OSW-C, PhD, Lehigh Valley Health Network, Allentown, PA; Mandy Hendricks, RN, MSN, AOCNS®, Lehigh Valley Health Network, Allentown, PA

Approximately 70,000 teens and young adults in the United States are diagnosed with cancer every year. Adolescents and Young Adults (AYA’s) with cancer are a distinct patient

group with care management needs falling between a family-centered pediatric approach, and a disease-centered adult paradigm. Cancer in the AYA population demonstrates poorer overall survival trends compared to older and younger age groups. Factors implicated in lagging survival statistics include inadequate access to care, lack of insurance, diagnosis and treatment delays, lack of psychosocial support and follow-up care. A multidisciplinary group of oncology professionals at the Lehigh Valley Health Network (LVHN) worked collaboratively to address age-related needs of Adolescents and Young Adults with cancer. As a result, processes to facilitate access to care, clinical trials, financial services, fertility counseling, and psychosocial support and survivorship resources were created. The purpose was to develop an age-appropriate approach to patient care and management of adolescents and young adults with cancer. A core group of oncology certified nurses, social workers, clinical trials nurses, financial specialists and an oncology counselor delineated processes for AYA patient assessment, referrals, and interventions by developing three algorithms. These streamlined instructions direct implementation of appropriate patient measures which can include: a fertility consult request, financial services referral, interventions for psychosocial/behavioral concerns and others. A resource listing of supplemental patient support and survivorship/respite services was also created. Oncology clinical nurse specialists subsequently developed an educational offering, approved for nursing continuing education credits, and provided in-service education in office, infusion and radiation oncology settings to facilitate application of the process algorithms and use of the resource listing. In the year since the development of the AYA Team there has been a 25 % increase in the number of patients consented to clinical trials. Forty referrals have been made to fertility preservation, social work, counseling and financial services. Oncology nursing staff has reported increased knowledge of AYA needs and LVHN resources available for assistance. Delivering quality cancer care for the adolescent/young adult is possible when the multidisciplinary team has increased awareness of the age-related needs of this population. Innovative strategies to increase clinical trials availability and the funding for fertility preservation options are still needed.

**310**  
**FACILITATING TRANSITION TO PRACTICE: BLOOD AND MARROW TRANSPLANT NURSE FELLOWSHIP.** Anne Corbett, MS, BSN, RN, Hackensack University Medical Center, Hackensack, NJ; Brenda Diaz, MSN, RN, APN, AOCN®, Hackensack University Medical Center, Hackensack, NJ; April Camiling, MSN, RN, BMTCN®, Hackensack University Medical Center, Hackensack, NJ

The Institute of Medicine recommends the establishment of a transition to practice program when nurses enter a new clinical practice area. In accordance with this, the nurse manager of a blood and marrow transplant (BMT) unit recognized a need for the development of a BMT nurse fellowship program in order to promote retention, increase certification in BMT, and develop staff-initiated evidence-based projects at a large, academic medical center. In this facility, inpatient adult BMT nursing orientation consists of eight to twelve weeks on the unit with a preceptor, completion of three eight-hour adult oncology classes and two eight-hour adult stem cell classes. The new nurse is also assigned to observe in radiation oncology and in the BMT outpatient clinic. Nurses who have completed orientation are eligible to participate in the fellowship program. The year-long fellowship program consists of monthly class sessions, observation experiences, case study presentations, and evidence-based project development. During the fellowship, the nurses are assigned a mentor to help and support with the transition. The first group of nurses (N=4) completed their



one year fellowship program and are still in their current position. Two nurses developed an evidence-based project on the nursing management of graft versus host disease of the skin, which has been approved by the Professional Practice Council. Two nurses were interested in the effect of aromatherapy on nausea, vomiting and anxiety on patients undergoing stem cell transplantation. Currently, they are working on their project in order to present it to the Institutional Review Board. One nurse successfully passed the BMT certification and the other three are preparing for to take the exam before the end of 2016. A planned and comprehensive transition to practice is important in order to develop a workforce which is prepared to care for specialized patients. In oncology, there are several different subspecialties. Enhanced preparation of the staff is important to develop knowledge, skill, and professional growth.

### 311

**ONLINE ONCOLOGY: NURSING EDUCATION IN A DIGITAL WORLD.** Tonya Cox, BSN, RN, OCN®, Sarah Cannon, Denver, CO; Laura Brougher, BSN, RN, Sarah Cannon, Denver, CO; Chris Roach, PMP, Sarah Cannon, Nashville, TN; Elaine DeMeyer, RN, MSN, AOCN®, Independent Consultant, Rockwell, TX; Rocky Billups, MS, Sarah Cannon, Nashville, TN

As adult learners, oncology nurses have a need for self-directed learning with a high level of engagement in the learning process and application of learning to their practice. Yet, few oncology nursing education materials incorporate adult learning principles with active learner engagement, allowing nurses to take a leadership role in their own learning. The goal of this project was to develop an oncology nursing curriculum across multiple care sites within the Sarah Cannon Blood Cancer Network for consistency in education and active learner participation. Phase 1 of this 3 phase project comprises 14 continuing education (CE) web-based modules using a highly interactive format including critical thinking elements, case studies, SBAR communication examples, reflection time, and clinical application points. Video interviews of nursing staff, providers, multidisciplinary team members, and patients are integrated into the modules to support content. Content includes both basic and advanced information on disease states, treatments, side effects, oncologic emergencies, as well as “care for the caregivers” with a module on professional boundaries. A nurse advisory council of 13 representatives from 7 clinical organizations was formed to support the planning committee and content development team. Their role is to provide content recommendations, suggest peer reviewers, and offer real life clinical practice examples. They act as project champions to increase awareness and usage of each completed module. In addition, a pool of peer reviewers, representing the target audience, evaluates each module not only to meet CE guidelines but provide valuable end user input prior to each module going live. This process describes the collaboration of creating interactive oncology education for both the new and experienced oncology nurse to improve oncology nursing care and ultimately patient outcomes. Outcome measurement for the project and each module will be discussed.

### 312

**IMPROVING NURSE ORIENTATION CHECKLISTS ONE CLICK AT A TIME.** Kate Daignault, BSN, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital, Baltimore, MD; Kathy Mooney, MSN, ACNS-BC, BMTCN®, OCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital, Baltimore, MD

The Bone Marrow Transplant (BMT) units at this NCI-designated Comprehensive Cancer Center increased nurse hires by 79% in one year with the opening of a new unit and increase in the number of ICU beds. Documentation and collection of orientation

skills checklists using a paper-based system was very difficult to monitor and maintain. Checklists were often misplaced or submitted late. An enhanced process for managing orientation documents was needed. A unit-based committee was formed to improve the entire orientation process. The committee determined that the skills checklists should be maintained in one place allowing for transparency and accessibility. Skills checklists and orientation materials were revised and uploaded into a “Dropbox” application. A pilot group of orientees and preceptors was identified and educated on electronically signing skills checklists and accessing the dropbox. During the pilot, dropbox systems issues were identified, preventing staff acceptance. An example was the inability to update documents in the system. The process was introduced to all staff after barriers were addressed. Since implementation, 87% of staff have utilized the system, expressing satisfaction with ease and accessibility. The dropbox allows for easy transfer of checklists to employees’ electronic files. Compliance with submitting completed checklists has improved. No checklists have been misplaced and the time required to obtain signatures has decreased. Previously, face to face interaction was necessary to obtain missing signatures. Now, staff have the ability to sign checklists at any time, from any computer, leading to improved turnaround. The success of the orientation skills checklist dropbox has led to implementation on other units in the cancer center, as well as identification of other applications for use on the unit. This process will soon expand to include Clinical Technicians and, travel nurse orientation checklists and documentation of annual competencies.

### 313

**NURSES, WHY DO YOU DO THE THINGS YOU DO?** Elizabeth Dailey, BSN, RN, OCN®, HN-BC, Cancer Treatment Centers of America, Eastern Regional Medical Center, Philadelphia, PA; Patricia Eckenrode, BSN, RN, SANE, Cancer Treatment Centers of America, Eastern Regional Medical Center, Philadelphia, PA

Comprehensive cancer centers were established in the outpatient clinic to provide patient focused cancer care. This process necessitated a merger of medical oncology clinics and specialty clinics. Collaboration was required. Through mutual respect, each nurse introspectively reviewed their clinical practices and observed the variations in colleagues’ practices. This led to the realization that “because we’ve always done it that way” is not best practice. While keeping the patient in the forefront, we continue to learn to come together and develop solutions to work smarter and not harder. Our goal was to establish an innovative venue for all clinic nurses to comment on current clinic practices and suggest ways to promote optimal clinical practices. With the support of senior nursing leadership a clinic nursing council was created. The council was led by two co-chairs and the members were registered nurses (RNs) from the newly merged clinics. All RNs were encouraged to participate. We realized that even when merged, the clinics were still extremely separate in their practices, roles, responsibilities and expectations. The common denominator of many discussions was “why?” As a group, we wanted to know why we did things the way we did. We placed envelopes with the word “WHY?” on them throughout the clinic. Nurses were encouraged to place both positive and negative concerns, thoughts, and suggestions in the envelopes. Anonymity was optional. Eighteen nurses were asked to participate. Twenty-three responses were received. Nurses could submit more than one response and a qualitative analysis was performed. Three major themes emerged: work-flow, processes, and administrative issues. The administrative issues were “managed up” by co-chairs to the manager. Many processes are now council projects. We have since changed two polices: Falls Assessment in the Outpatient Clinic and Limb Alert Bracelets. This is an ongoing process

improvement initiative which will continue. This method of data collection has proven invaluable as a safe, confidential way for nurses to express their ideas, concerns and successes. The “WHY?” envelopes continue to fill up and the council is moving forward to address the challenges while maintaining a best practice environment for our patients.

### 314

**CAN THE EARLY INTRODUCTION OF PALLIATIVE CARE ALLEVIATE THE DISEASE BURDEN IN ADOLESCENTS AND YOUNG ADULTS WITH CANCER?** Katherine Daunov, MSN, APRN, CNP, University Hospitals Case Medical Center, Cleveland, OH; Sydney Cornett, Student Nurse, Truman State University, Kirksville, MO

As a result of oncology research and technology, great improvements in cancer treatment and survival have occurred in the past two decades. However, adolescents and young adults (AYAs) diagnosed with cancer have not witnessed the same improvements in survival as children or older adults. AYA oncology is an emerging field that focuses on the physical and psychosocial treatment of patients between the ages of 15 and 39. AYA oncology patients experience high burden of psychological distress, in addition to physical symptoms, which impact their quality of life. Cancer is the leading disease related cause of death in AYAs; it is imperative that healthcare professionals work to improve the high morbidity and mortality within this age group. AYA oncology patients would benefit from earlier implementation of palliative care. Incorporating palliative care alongside early cancer treatment regimens is beneficial in helping to relieve psychosocial and symptom burden, increase quality of life, and identify the patient's goals of care throughout the treatment process. Despite research indicating benefits to patients and increased growth of clinical and academic palliative care programs; many barriers still exist in incorporating palliative care alongside standard oncology care. Palliative care is not routinely incorporated into AYA oncology despite the high symptom burden and unique psychosocial needs of this population. In order to provide holistic care, palliative care in the AYA population is best delivered in multidisciplinary teams. Nurses, physicians, psychologists, chaplains, and social workers all have unique skills and training that benefit the patient. However, unlike their counterparts in medicine and psychology, the nursing role overlaps multiple disciplines, including case management and coordination, patient education, medical management, and psychosocial support of the patient and family. Nurses are essential members of palliative care teams; they often spend the most time at the bedside with the patient, and are in the best position to advocate for patients' needs and wishes about treatment, including advocating for early palliative care integration. Nursing may be the pivotal role within palliative care teams that brings the different disciplines and multiple aspects of patient care together. This literature review discusses unique challenges AYA's face throughout the diagnosis of cancer, identifies the unmet needs of this population, and advocates for an earlier introduction of palliative care throughout the treatment process.

### 315

**GIVING YOUR PRESENTATION CPR: DEVELOPMENT OF AN ONCOLOGY NURSE SPEAKER MENTORSHIP PROGRAM.** Elaine DeMeyer, RN, MSN, AOCN®, Consultant, Rockwall, TX; Amy Ford, RN, BSN, OCN®, Dallas Chapter ONS, Dallas, TX; Margaret Rhoads, RN, BSN, OCN®, Texas Oncology Presbyterian Cancer Center Dallas, Dallas, TX; Deborah Spitzer, MSN, RN, OCN®, Harold C. Simmons Cancer Center, UT Southwestern Medical Center, Dallas, TX

Oncology nurses are often expert clinicians but not necessarily expert speakers. Very few have received formal training

or mentorship beyond college on how best to prepare for a presentation. Although oncology nurses practice in a variety of settings, ALL oncology nurses provide education in some part of their role : to patients, professionals, communities, or board-room executives. Therefore, there is a gap between the need for these leadership skills and the available training to develop or enhance those speaking skills. In collaboration with the Dallas Chapter Oncology Nursing Society (ONS), a formalized speaker mentorship program was developed in order to train, coach, and guide oncology nurses to become more effective speakers. The mentorship program incorporates both interactive workshops and one on one mentorship opportunities. The didactic component includes a series of three, CE-approved two-hour, highly interactive workshops. The framework for workshops is the CPR acronym. In order to “breathe life into your presentation,” each educational activity needs content (C), participation (P), and review (R). The content workshop focuses on how to identify practice gaps, develop a concept map, and create purposeful slides. The second workshop on participation teaches oncology nurses how to move from traditional lecture formats to incorporate active adult learning. This is consistent with the 2015 ANCC provider guidelines which focus on active learner engagement. The final “review” workshop reinforces why learners need review with each participant developing an individualized action plan to incorporate CPR into their educational activities. The first phase of the mentorship program will be completed by the Board of the Dallas chapter of ONS then in 2017 the plan is to expand to the Dallas membership at large and other interested ONS chapters in phase 2 and 3. The aim of this speaker mentorship is to improve the leadership skills of ONS members as outlined in the strategic directions of national ONS “to implement a comprehensive model of leadership development to prepare nurses to lead teams and organizations.”

### 316

**ADDRESSING GAPS IN ONCOLOGY NURSES' KNOWLEDGE AND COMFORT WITH DELIRIUM: THE ROLE OF THE GERIATRIC RESOURCE NURSE.** Lauren DiCosimo, BSN, OCN®, NYU Langone Medical Center, New York, NY; Claire Gange, BSN, NYU Langone Medical Center, New York, NY; Honore Burt, MS, RN-BC, NYU Langone Medical Center, New York, NY

Delirium is a common geriatric condition contributing to falls, pressure injuries and other adverse events. Oncology patients are at high risk for developing delirium related to disease state. Therefore, the older adult in oncology is at heightened risk for delirium. Assessment of delirium was not part of routine practice for the inpatient oncology/hematology nurses. To address this knowledge deficit, oncology nurses were sent to a seminar to become Geriatric Resource Nurses (GRNs). The purpose is to educate oncology nursing staff to identify delirium in the inpatient oncology/hematology patient age 65 and older using the Confusion Assessment Method (CAM) tool and to train nursing staff to care for patients identified as CAM positive. The CAM is an evidence based assessment tool integrated into the electronic medical record. The staff was assessed for their baseline knowledge of delirium and use of CAM through an anonymous staff survey. The survey also included items on past experiences with the CAM assessment. Data from chart reviews examined frequency of CAM performance. After collecting the results of chart reviews and knowledge survey, an educational tool was created and GRNs provided formal and informal educational sessions on delirium for staff. Initial survey results showed that the oncology nurses were not consistent in assessing patients for delirium. Additionally, when asked to rate their comfort level with delirium and the care of the delirious patient the majority stated “somewhat” or “a little.” Chart audits showed CAM was documented on admission in 11% of charts and on daily

assessment in 17% of charts. Thus, a need for knowledge was identified. Through the identification of a knowledge deficit in the care of the older adult, the inpatient oncology/hematology nurses received education in the assessment and care of delirious patients from trained GRNs. The availability of GRNs on the unit provides nursing staff with constant support in providing best quality care for the older adult oncology inpatient.

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**PROVISION OF PERSONALIZED CARE THROUGH THE USE OF PRECISION MEDICINE.** Crystal Dodson, PhD, RN, MSN, BC-ADM, University of North Carolina at Wilmington, Wilmington, NC

The American Nurses Association (ANA) and the Institute of Medicine (IOM) have both identified the need to prepare nurses to take part in genomic health care services. According to the Food and Drug Administration, there are currently over 50 different oncology drugs that utilize pharmacogenomic information for guidance surrounding prescription. Therefore, it is imperative that oncology nurses and providers understand the role of precision medicine within oncology care to not only provide proper medications but ensure confidence in their ability to advocate and provide education for their patients as well. The purpose of this activity is to provide basic information surrounding the most commonly seen pharmacogenomic tests available within the oncology setting. Additionally, a goal of this activity is to provide knowledge on the implications of precision medicine for nursing practice, patient advocacy, and patient education. With the help of a focus group of oncology nurses that routinely care for patients undergoing personalized therapies with the use of precision medicine, knowledge gaps surrounding application of precision medicine within nursing care were identified. This project will highlight these knowledge gaps and provide basic knowledge surrounding precision medicine that is commonly seen within oncology practice to better inform nurses on these therapies. The outcome of this activity will be to increase oncology nurses' and providers' knowledge of precision medicine within the oncology setting. The goal for this activity will be to improve knowledge beyond their initial understanding of precision medicine. This activity will facilitate application of precision medicine into practice, patient education, and advocacy. This knowledge will promote confidence when caring for patients undergoing personalized therapies. The implications for nursing is to become knowledgeable about this forthcoming topic that will only become more prevalent in the future. On January 20, 2015, President Obama announced the Precision Medicine Initiative<sup>®</sup>. Precision medicine is an emerging method for disease prevention and treatment that considers individual variations in genes, environment, and lifestyle. This initiative proposes to generate evidence-based practice needed to translate the notion of precision medicine into clinical practice. Therefore, the use of precision medicine in all fields, especially oncology, will be exponentially increasing over time.

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**COMMUNITY OUTREACH INITIATIVES AT THE LOCAL LEVEL: NC TRIANGLE ONCOLOGY NURSING SOCIETY.** Mary Dunn, RN, MSN, OCN<sup>®</sup>, NP-C, University of North Carolina Chapel Hill, Chapel Hill, NC

As my elected position on the TONS Board was ending, I wanted to find a way to maintain my involvement by starting an innovative initiative. As such, I began to get the chapter involved in community activities as the first board-appointed Community Outreach Coordinator. The purpose of starting an official community outreach program included responding to a needs assessment in which chapter members voiced a desire

to become more involved in our local community; advocating for and supporting oncology patients outside of our formal role as their nurse; and having visibility within the community in order to educate the public about the role of nursing. Our first event was manning an information table at the 2011 Gail Parkins Ovarian Cancer 5k, where volunteers distributed ovarian cancer and oncology nursing literature. We have participated in ten walks/runs throughout the years, either staffing information booths or forming a team. We have also partnered with a local school of nursing to host a blood drive; collected items for a local food bank for three years; and staffed a table at a women's conference during which we provided information about Radon. Our August 2015 chapter meeting, "Educating Nurses about Community Resources for Cancer Patients and Caregivers: A Panel Discussion", featured speakers from local patient advocacy groups, who informed our members about their organization and highlighted the resources they offered to oncology patients. The panel consisted of a representative from each of the following: Cornucopia Cancer Support Center, Lung Cancer Initiative of NC, LLS, Susan G Komen, BCAN, Duke Cancer Institute, UNC Lineberger, and Rex Healthcare. The program was well received by attendees and panelists. Additionally, I started a program called Kaps for Kids, which collects hats for pediatric oncology patients at two major academic medical centers. In 2011, we collected 1,000 hats and the program continues to grow every year, with over 2,000 hats collected in 2016. Chapter members consistently identify community service as an area of importance on our annual needs assessment. Since the inception of our unique community outreach program in 2011, members have had many chances to volunteer and provide feedback about outreach initiatives. In response to continued interest, I plan to continue to organize and encourage participation in various community-oriented events.

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**ESTABLISHING A NURSING REVIEW PROCESS TO IDENTIFY OPEN PATIENT VISIT ENCOUNTERS AS A RESULT OF MISSING DOCUMENTATION.** Aileen Ewin, RN, MSN, OCN<sup>®</sup>, UCSD Moores Cancer Center, San Diego, CA; Victoria Vu, RN, BSN, OCN<sup>®</sup>, UCSD Moores Cancer Center, San Diego, CA

Incomplete nursing documentation results in noncompliance with institutional policies. A literature search reveals that incomplete documentation reflects gaps and inaccuracies in patient care information. At the Moores Infusion Center, patient visit encounters remain open when required documentation is incomplete. Required documentation includes: Pain scores-Nursing notes-Missing medication administration and completion times Purpose: Infusion Center nursing staff at the Moores Cancer Center introduced a new process to review missing required documentation in order to: (a) Quickly identify missing documentation (b) Minimize outstanding open encounters (c) Improve timely response in completing all missing documentation (d) Increase compliance of completing documentation within 72 hours per organization policy Infusion Center nurses included the "Coding Comp" column to check for missing documentation. The Coding Comp column was added to all patient appointment visits in the EMR system in May 2016. Staff meeting, huddles and one to one personal assistance were provided as training to educate nurses how to identify open encounters using the coding comp column. Nursing staff reviewed open patient encounters as indicated by "Yes, waiting for RN". Nursing staff completed missing documentation allowing for encounters to be closed. In comparison of the months August 2015 to August 2016, the data showed a decrease of 48 open patient encounters. The data confirms that the new process of identifying open encounters using "Coding Comp" decreased the number of open encounters in our monthly report. The management team reviews the monthly report



of outstanding open encounters to identify needs for further education. Based on the addition of the Coding Comp column, the Moores Infusion Center Nursing staff was able to timely complete any missing documentation reducing the number of outstanding encounters that remained open for long periods of time. Next steps include collaborating with the Electronic Medical Record IS Team to integrate “soft stops” that will alert nursing staff of missing required documentation on same day patient visit. This will allow nurses to complete documentation at the end of business day.

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**PROMOTING UNDERGRADUATE ONCOLOGY NURSING SCHOLARSHIP AND RESEARCH THROUGH A FACULTY-MENTORED NURSING HONORS PROGRAM.** Jane Fall-Dickson, PhD, RN, AOCN®, Georgetown University School of Nursing & Health Studies, Washington, DC; Sarah Vittone, MSN, MA, RN, Georgetown University School of Nursing & Health Studies, Washington, DC

An innovative undergraduate nursing Honors Program will be described including exemplars of three recent student research projects that focused on key issues in oncology nursing practice. The 3-semester faculty-mentored Honors Program guides undergraduate nursing students through all steps of the research process including systematic literature review to identify and refine the research question, choice of appropriate research design and valid and reliable instruments, IRB approval, research project implementation, and dissemination of results. Conducting their individual research projects is a key component of the students' developmental process as a novice researcher. Requirements for enrolling in the Honor's Program in the second semester of junior year include a GPA of at least 3.5 and completion of a successful interview with faculty. Two of the recent research projects focused on explorations of oncology nurses' knowledge base for and perceptions of efficacy of complementary and alternative medicine (CAM) for symptom management. These Honors' students worked with the Oncology Nursing Society Marketing Department to distribute electronic investigator-created surveys to a national sample of eligible oncology nurses practicing in the United States. The third project explored the relationship between patient-perceived teamwork among their health care professionals and patient satisfaction in the chemotherapy setting for breast cancer. This project allowed the Honors' student to recruit participants through the Nontherapeutic Subject Registry sponsored by a National Cancer Institute-designated Comprehensive Cancer Center located in the mid-Atlantic region. The Honors' students present their completed research projects during the Department of Professional Nursing Practice Scholars Day, and at the University-sponsored Undergraduate Research Day. Faculty and colleague feedback throughout the 3-semester Honors Program is critical to develop student communication and writing skills necessary to explain the rationale for and results of their studies to an interdisciplinary audience. All Honors Program students have received funding for study activities through the Tau Chapter, Sigma Theta Tau International. The Department of Professional Nursing Practice sponsors the students to present their research projects at a professional nursing meeting. This successful undergraduate nursing Honors' Program promotes oncology nursing scholarship and research, and gives undergraduate nursing students the opportunity to plan, implement, evaluate, and disseminate results of a research study.

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**EDUCATING AND ENGAGING STUDENT NURSES THROUGH INNOVATIVE DEVELOPMENT OPPORTUNITIES: PREPARING**

**FOR THE TRANSITION INTO A PROFESSIONAL ONCOLOGY NURSING CAREER.** Erin Ferlet, MS, RN, OCN®, The James Cancer Hospital, Columbus, OH

If you spoke to any oncology nurse, they probably would not tell you that when they were accepted into nursing school they planned to be taking care of cancer patients for the rest of their careers. This is because Oncology is one of the many subjects that a Bachelors of Science in Nursing (BSN) degree covers over the four years of school, and currently our local Columbus BSN programs only teaches approximately 2 hours of oncology information throughout their program. So, how do student nurses decide to go into oncology nursing? In January 2015, The James Cancer Hospital created the Student Nurse Professional Development Program. This program gives student nurses the opportunity to work in an oncology hospital while providing them additional learning opportunities based on their needs. The Student Nurse Professional Development Program focuses on bridging the gap between what the student nurses' receive in their nursing curriculum and what skills and information they would need for a successful transition into an oncology nursing career. The goals for this program are to increase knowledge of Oncology diagnoses' and treatment, development of leadership and emotional intelligence skills, assistance in finding the best career fit and providing the opportunity for networking and mentorship. To achieve these goals we offer monthly programs, 1:1 coaching, collaboration with our local ONS chapter, and a NCLEX review series. All student nurses working at the James, 120 currently, have the opportunity to participate in the program free of cost, over half take advantage of this opportunity. In 2015 we had 25 senior nursing students; 16/25 became nursing interns at the James; 64% retention rate. In 2016 we had 18 out of 27 seniors stay at the James and transition into their oncology nursing career; 67% retention rate. After increasing our student nursing positions last year, we now have a projected 40 graduating seniors in 2017. They say, once an oncology nurse, always an oncology nurse. In 2015, we surveyed Magnet hospitals around the country to see if any has created a similar program. The findings showed that this was the only program that specifically focuses on developing our student nurses to provide knowledge, guidance, and mentorship to help them successfully transition into an oncology nursing career.

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**IMPROVING HEALTH AND WELLNESS IN THE WORKPLACE FACE TO FACE.** Lauren Finaldi, RN, BSN, Hackensack University Medical Center, Hackensack, NJ; Sally Dunn O'Leary, RN, BS, BSN, OCN®, Hackensack University Medical Center, Hackensack, NJ; Beth Boseski, ANCP-BC, OCN®, CCRP, Regional Cancer Care Associates, Hackensack, NJ

Nurses are often consumed by the wellness of others that they forget to take care of their own mental and physical wellbeing. “Stress-related health problems include headache, backache, excessive nervousness, sleep disturbances, feelings of continuous stress, and inability to seek pleasant activities in everyday life.” 5PW is an inpatient oncology unit located in a large hospital within the metropolitan NYC area. The current patient population consists of chemotherapy regimens, oncologic emergencies, readmissions due to disease progression or side effects of treatment. These frequent admissions allow the nurse to build a rapport with patients and families. NDNQI surveys assists hospitals to understand at a unit level needs of the nurses and nursing sensitive quality indicators. During the 2015 NDNQI survey data abstracted from 5 PW staff revealed deficiency in RN to RN interaction on 5PW, ranking 4.65 against the national benchmark of 5.12 of bed size >= 500. This deficit, warranted further investigation and the unit based council was charged with addressing this initiative. The unit based council identified two common

themes; lack of comradery and emotional distress associated with caring for oncology patients. In an effort to increase staff satisfaction, the unit based council initiated a wellness centered performance improvement project to address employees' concerns. A learning needs assessment was distributed amongst the nursing staff to determine their current wellness practices and knowledge regarding self-care. Staff gaged their current level of stress/fatigue and 68.75% respondents stated they experience a moderate amount of stress. The survey also questioned whether nurses thought about patients' condition/prognosis during their off hours and whether these thoughts have affected their mood. 75% of responses indicated yes either sometimes or frequently. Small forums were developed to assist staff with awareness regarding wellness. Topics reviewed by a wellness coach sponsored by the hospital included health and wellness promotion, psychological support for improved coping mechanisms, and social gatherings to enhance staff relationships. Post forums surveys are going to be collected to assess staff's satisfaction with this wellness initiative, and identify areas of improvements for development of future programs. Results will be presented at the 42nd Annual Oncology Nursing Congress.

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**LEVERAGING A NEW MASTER'S PREPARED NURSING ROLE IN ONCOLOGY.** Nancy Froggatt, MN, RN, Froedtert & Medical College of WI, Milwaukee, WI; Jayme Cotter, MS, RN, AOCNS®, ACNS-BC, Froedtert & the Medical College of WI, Milwaukee, WI; Kate Sweeney, MS, RN, ACNS-BC, AOCNS®, NEA-BC, Froedtert & the Medical College of WI, Milwaukee, WI; Tina Curtis, MSN, MBA, RN, NEA-BC, Froedtert & the Medical College of WI, Milwaukee, WI

The clinical nurse leader (CNL) is a relatively new role in nursing. Literature shows that integration of the CNL role in hospitals has resulted in reduced variability in nursing practice and reduced infection rates. The role of the CNL is also complementary to the role of the clinical nurse specialist (CNS), as noted by the American Association of Colleges of Nursing. Clinical nurse specialists (CNS) within a rapidly growing inpatient/outpatient academic cancer service line redefined CNS accountabilities and realized an opportunity to incorporate the CNL role into the team as a partner to the CNSs. A proposal for a pilot project incorporating the CNL role on the inpatient blood and marrow transplant/hematology oncology unit was developed and presented to senior leadership. The pilot was approved using an existing CNL student in the outpatient clinic, mentored by one of the cancer service line CNSs. The purpose is to pilot a CNL on an inpatient oncology unit as an added member of the healthcare team. The CNL student shadowed the various roles on the unit and worked to identify existing tasks, projects, and accountabilities that were within the CNL scope and identify gaps in practice where the CNL could assume responsibility. Accountabilities identified for the CNL included those related to patient safety and nursing quality indicators during the inpatient stay, and also as a participant in transitional care elements as this population moves between inpatient and outpatient care during the course of treatment. The student assumed primary responsibility for several unit-based initiatives to monitor quality of care. The result of the pilot was a role matrix delineating the accountabilities for the nurse educator, manager, CNL, and CNS. The matrix showed how the addition of the CNL removed tasks from all roles maintaining the right work be completed by the right role and allowing all roles to practice to their maximum extent. The decision was made to implement the CNL position on the inpatient unit. Organizations should consider integrating the CNL role into their structure to assist in improving outcomes and enhancing patient care. CNSs should work to partner with CNLs to maximize shared output and enhance their practice.

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**BEYOND THE CHECKLIST: DEVELOPMENT AND IMPLEMENTATION OF THE ONCOLOGY NURSING SOCIETY NURSE GENERALIST COMPETENCIES.** Michele Gaguski, MSN, RN, AOCN®, CHPN, APN-C, Atlanticare Cancer Care Institute, Egg Harbor Township, NJ; Heather Mackey, RN, MSN, ANP-BC, AOCN®, Cone Health Cancer Center, Greensboro, NC

Given the growing prevalence and complexity of cancer care, demonstrating current knowledge, skill, and competency are core essentials for oncology nurses to ensure safety and quality in care delivery of people with cancer across the disease trajectory. Nurses play an integral role within the care team to provide safe, proficient, and effective interventions to improve patient outcomes. The Oncology Nursing Society (ONS) recognizes that oncology nurses are major contributors to providing high-quality cancer care in an evolving health care environment. To better delineate their role, a project team was created to design evidence based competencies for novice nurses, including experienced nurses new to the oncology specialty and nurses beginning careers in oncology. The purpose of this project work was to define and outline core competencies for the oncology nurse generalist. After a formal application process, the final project team consisted of nurse educators, advanced practice nurses, nurse administrators, and ONS staff. The team engaged in several strategies including but not limited to the following: conference calls, several brainstorming sessions, an intensive literature review, and the development and integration of a standardized ranking template of the evidence. Based on this work, they systematically composed the competency statements reflective of current standards and practices. The final competency statements and measurements were made available for public comment and feedback. The project team reviewed all comments and integrated recommendations as appropriate to keep aligned with the predominant goal that the competencies remain oncology specific. Additionally, the team outlined initial basic prerequisites that the nurse generalist should acquire and demonstrate competency of within the first one to two years as a novice nurse. Oncology nursing competency is a vital first step to ensuring safe practice, establishing a strong foundation of clinical skills and knowledge, encouraging commitment to lifelong learning, and enhancing professional development. In addition to the process behind how the competencies were established, exemplars for integrating the ONS Oncology Nurse Generalist Competencies into practice will also be highlighted. The ONS Oncology Nurse Generalist Competencies can serve as an innovative approach for institutions to assess their competency programs, develop unique educational activities to measure and appraise proficiency, and establish processes to foster a workplace environment committed to the mentoring and teaching of future oncology nurses.

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**INCREASING OCN® CERTIFICATION RATES.** Gabrielle Gerber, MS, RN, OCN®, Stony Brook Medical Center, Stony Brook, NY

Certification provides patients and their families with validation that the nurse caring for them has demonstrated experience, knowledge and skills in their complex specialty of care. Nurse certification and the continuing education required to maintain certification contributes to the creation of an environment of professionalism and a culture of retention. The more nurses who are certified; the better the chances of gaining Magnet recognition. Hospitals with Magnet Status are able to differentiate themselves from competitors and demonstrate to consumers that they have attracted the most skilled and experienced nursing professionals. By becoming certified, nurses validate their expert knowledge and skills and therefore position themselves for appropriate

recognition and a critical sense of confidence and achievement. I formed and lead a group of Registered Nurses at the Stony Brook Cancer Center and supported them in gaining their certifications in our specialty area, Oncology. The group members and myself would meet weekly prior to our shift and review assigned chapters in the ONS Core Curriculum of Oncology Nursing book. The success of this project was measured by a final practice test that was given to each group member. The mean score was 86%. The highest score was 96% and the lowest score was 82%. There is tangible evidence that Certified Nurses have the knowledge required to effectively provide care to patients experiencing the complex problems associated with a diagnosis of cancer throughout the disease continuum. Becoming certified is great for professional growth and research shows how certified prepared nurses deliver more of quality care to patients.

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**SAFETY BEYOND NUMBERS: AN INNOVATIVE NURSE-DRIVEN FALLS REDUCTION INITIATIVE TO ADDRESS OUR NURSE SENSITIVE INDICATOR: EDUCATING PATIENTS FOR BETTER OUTCOMES.** Julio Gonzalez-Diaz, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Natasha Ramrup, MSN, RN, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Stephanie McEaney, MSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Karshook Wu, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Anna Schloms, MSN, RN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY; Oksana Ditwell, MSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY

Historically, patient falls has been a major public health concern. Falls contribute to detrimental patient outcomes, and also places a financial burden on the health care system. Falls can be complex and unpredictable. Identifying patients who are at risk for falls has been a daunting task that every healthcare organization has addressed with strategic interventions. Our structured conversation initiative to address this important nurse sensitive indicator has impacted our falls rate. The continuing interest in the contributions of nursing to patient outcomes has inspired the development of new and innovative initiatives. Our evidence-based falls program which had been in place for many years, had not been fully effective in significantly decreasing fall rates. A different approach was needed on our Disease Management Team (DMT). In our effort to reduce falls on our unit, the Clinical Nurse Specialist (CNS) and/or the daily Charge Nurse, visits every new admission. At this time, a detailed and structured conversation takes place which serves to educate the patient on their risk factors for falling. Additionally, during this collaborative conversation, we discuss “tipping point” risk factors which are unique to their medical condition and hospital visit. This intervention has been well received by our patients and caregivers who appreciate our continued efforts towards patient safety. This new intervention was implemented in February 2016, when our first quarter, NDNQI falls rate was 4.77, and now, in the third quarter, seven months post-initiative, our falls rate is 2.44. Although it is too early to measure the success of this intervention, we believe that with our continued partnership with patients and their caregivers, we may significantly impact falls. This NCI designated comprehensive cancer center is committed to reducing our falls rate and sustaining an organizational culture that is dedicated to improving patient safety. In collaborating with the patient and implementing a structured patient conversation, we have been able to impact our falls rate. This is a new and unique intervention, implemented in collaboration with our patients/caregivers. It is in addition to the already established evidence-based falls reduction program currently being implemented in this NCI.

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**MERGING CRITICAL CARE AND ONCOLOGY AT THE BEDSIDE: BUILDING AN ACUTE CARE IN ONCOLOGY CURRICULUM.** Theresa Gorman, MSN, RN, AOCNS®, BMTCN®, Hospital of the University of Pennsylvania, Philadelphia, PA; Christin Reddy, MSN, RN, OCN®, Hospital of the University of Pennsylvania, Philadelphia, PA; Kristen Bink, MSN, RN, AGCNS-BC, Hospital of the University of Pennsylvania, Philadelphia, PA; Amy Moore, MSN, RN, ACNS-BC, Hospital of the University of Pennsylvania, Philadelphia, PA; Kristen Maloney, MSN, RN, AOCNS®, Hospital of the University of Pennsylvania, Philadelphia, PA

Novel targeted clinical trials and immunotherapies have increased treatment options for oncology patients, many of whom may not have previously qualified due to co-morbidities and advanced age. While patients are living longer with cancer than ever before, emerging therapies and their side effects have increased the acuity of the oncology patient. Nurses taking care of patients receiving novel oncologic therapies must have dual specialty skills in both oncology as well as critical care nursing. Oncology Clinical Nurse Specialists and an Oncology Nurse Educator at an academic medical center recognized the need to integrate critical care education into their curriculum, after identifying a trend in acuity in the patient population. A database examining indications for transfer to the Medical Intensive Care Unit revealed nurses need to manage critical emergencies such as septic shock, respiratory failure, and other oncologic emergencies. A three-day curriculum was built blending didactic lectures with high-fidelity simulation scenarios in partnership with interdisciplinary content experts. Lectures included liquid and solid tumor pathophysiology, treatment modalities such as chemotherapy, radiation and bone marrow transplant, and symptom management. Critical care content included management of Sepsis, Acute Respiratory Failure, Renal/Metabolic Failure, and Structural/Metabolic Oncological emergencies. Simulation scenarios incorporated the management of patients with sepsis, hypoxemic respiratory failure, and cord compression. Nurses participating in the curriculum were evaluated on knowledge of course topics utilizing multiple choice pre and post-testing. Additionally, nursing confidence levels were measured on the course topics using pre and post self-assessments. Qualitative follow-up with nurses' 3-months post-curriculum completion gathered examples of application of knowledge obtained from the course that was incorporated into nursing practice. Nurses engaged in the bedside care of oncology patients require education in both critical and oncologic care. Nurses who completed the Acute Care in Oncology curriculum had measurable increases in both knowledge of course topics, as well as increases in confidence of the care of their patients. Future opportunities for growth of the course may include the management of the geriatric oncology patient, as well as the role of physical therapy and mobility in cancer care. The Acute Care in Oncology Curriculum builds nurse's oncology and critical care skill sets in order to meet the evolving needs of the modern oncology patient.

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**GAP ANALYSIS: A TOOL TO IMPROVE THE QUALITY OF CARE OF HEAD AND NECK CANCER PATIENTS.** Clara Granda-Cameron, DrNP, APN-BC, AOCN®, ANCC, Thomas Jefferson University, Philadelphia, PA; Mary Pat Lynch, MSN, CRNP, AOCNP®, Pennsylvania Hospital, Philadelphia, PA; Meredith Pauly, MA, CCC-SLP, Pennsylvania Hospital, Philadelphia, PA; Debra DeMille, MS, RD, CSO, Abramson Cancer Center at Pennsylvania Hospital, Philadelphia, PA; Jason Newman, MD, Center for Cranial Base Surgery,



Ongoing evaluation of cancer care delivery services is critical to provide high quality care. Head and neck cancer (HNC) patients are a vulnerable population who often experience fragmented and uncoordinated care that leads to delays in cancer treatment, patient distress, and dissatisfaction with care. Oncology nurses are in a privileged position to lead initiatives directed to identify barriers to cancer care and implement corrective interventions. The purpose is to describe the process of conducting a gap analysis of cancer services for head and neck cancer patients and discuss its findings, recommendations, and interventions. A gap analysis quality improvement project led by an Advanced Practice Nurse. The gap analysis comprised of a thorough literature review to determine best practice in the management of HNC patients and data collection on the care provided at the cancer center. Data collection methods included a clinician survey, a process map, a patient satisfaction survey, and baseline data from 2013. A SWOT analysis was conducted and followed by quality improvement interventions. Clinician survey (N=25) identified gaps in care including insufficient pre-operative education, inefficient discharge planning, and delayed dental consultations. The patient satisfaction survey indicated overall satisfaction with the care received at the cancer center. The process mapping (N=33) identified that the intervals between treatments did not always meet the best practice standards. The SWOT analysis reported strengths, weaknesses, opportunities and threats of the care provided to HNC patients based upon the results of the clinician surveys, process mapping, and patient satisfaction survey. Two main gaps identified were in the areas of education and coordination of care. This analysis was followed by quality improvement actions that included the creation of the transitions committee that developed strategies to improve the coordination of care of patients throughout their cancer treatment and the education committee that elaborated new ways to enhance patient education while meeting treatment timeline standards. The implementation of the interventions was developed by the main teams caring for the HNC population. Gap analysis, although frequently used in the corporate environment, it is a strategy minimally used in clinical settings. Oncology nursing leadership is paramount in improving patient care, and a gap analysis provides the structure to evaluate and improve cancer care services.

### 329 IMPLEMENTING A NEW ROLE: PROFESSIONAL DEVELOPMENT SPECIALIST OF ONCOLOGY. Kelsey Haley, MSN, RN, OCN®, Baylor Scott & White–North Texas, Dallas, TX

Due to the evolution of oncology and patient care, nurses must maintain current and specialized knowledge to provide quality care for those with cancer. Validation of this knowledge is obtained through certification by the Oncology Nursing Certification Corporation (ONCC). Within the north region of Baylor Scott & White Health (BSWH), nine hospitals offer inpatient oncology services with over 300 nurses providing inpatient oncology care. Clinical resources to support nursing staff differ among sites resulting in variances in the distribution of oncology education, rate of chemotherapy and biotherapy providers, and number of ONCC-certified staff. The role of a Professional Development Specialist (PDS) of Oncology was implemented to provide consistent, ongoing educational support to all BSWH oncology nurses. In doing so, BSWH aims to offer exceptional care provided by an increased number of ONCC-certified staff. The PDS collaborates with the leaders and staff of the system's oncology and nursing services to assess and meet the educational needs of oncology nursing staff via on-site visits and online venues. With the aim to increase the frequency and accessibility of oncology-related nursing education, the PDS: Updates classroom courses, pro-

vides classroom courses at least quarterly and as needed at any system facility providing cancer care, and arranges continuing education activities. In order to provide more interactive learning methods, the PDS: Develops online courses and maintains a system webpage dedicated to oncology nursing. In an effort to encourage certification in oncology, the PDS of Oncology: (a) Developed the classroom course, An OCN® Review. (b) Obtained a partnership with ONCC to provide a 20% discount on registration fees for BSWH nurses. Performance metrics include the rate of ONCC-certified staff; the goal was to increase this rate from June 2015 to June 2016 by 4-7%. As of June 2016, the percentage of ONCC-staff increased by 3.5%. This region of the system saw a significant drop in the number of staff eligible for certification due to turnover. A new goal has been established to increase the rate of ONCC-certified staff by 5% by June 2017. The PDS identifies the educational needs and learning preferences of oncology nurses to guide the development of future educational offerings. The PDS advocates on behalf of oncology nurses by sitting on several committees.

### 330 IMPLEMENTING A ROUNDING PROGRAM BY PATIENT/FAMILY VOLUNTEERS TRAINED IN ENGAGEMENT: A PILOT PROJECT. Karen Hess, RN, BSN, Seidman Cancer Center, University Hospitals–Cleveland Medical Center, Cleveland, OH; Wendy Rowehl-Miano, DNP, MSN, RN, AOCN®, University Seidman Cancer Center, Cleveland, OH

A proactive, systematic approach to anticipating, identifying and addressing patient and family concerns early during the hospital stay is critical to achieving positive patient outcomes and satisfaction. Despite numerous nurse-driven initiatives to improve patient satisfaction on our inpatient Medical Oncology/Hematology Unit, the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey scores were not consistently meeting the national benchmarks. Collaboration with the Patient Family Advisory Council presented a unique opportunity to implement a pilot program utilizing a volunteer, who had experience as a cancer family caregiver, to work with the nurses and unit leadership to enhance communication, education and support for patients and families. The purpose of this project was to design, implement and evaluate the role of a patient-oriented volunteer over a six month period on a 30 bed inpatient medical oncology unit. The goal was to improve patient HCAHPS scores. Preliminary, review of HCAHPS scores by a nursing leadership team identified focal areas for the engagement of a volunteer. The nurse manager and volunteer collaborated to develop a paper tool for patient visits with specific touch point questions that were known to be drivers of patient satisfaction. In addition an electronic audit tool was developed to report volunteer visits and perception of patient needs, so that concerns could be addressed by the nursing staff in real time. A volunteer patient rounding schedule of three days per week and biweekly meetings with head nurse were implemented. Collaboration with nursing staff was daily. There have been over 1900 patient visits by the volunteer since December 2015. HCAHPS scores for overall patient satisfaction and relationship with RN have increased to 75% and 80%, respectively, and are now meeting national benchmarks. Response to Hospital Staff scores have steadily improved but remain below benchmark at 53%. The staff consider the volunteer a team member and recognize his positive impact on patient care coordination. The benefits of this pilot intervention go beyond the improvement in satisfaction scores. The volunteer has become a bridge between patients, families and nursing staff, offering a unique perspective because of his experience as a family caregiver. Implementation of a volunteer rounding program is feasible and a low-cost strategy to improve patient and family satisfaction, as well as to enhance oncology nursing practice.

**MAKING THE FINANCIAL CASE FOR ONCOLOGY NURSE NAVIGATION.** Dori Holnagel, MBA, Hoag Family Cancer Center, Newport Beach, CA; Rhonda Hjelm, MSN, RN, OCN®, Hoag Family Cancer Center, Newport Beach, CA; Meghan Voisinet, BA, Hoag Memorial Hospital Presbyterian, Newport Beach, CA

Oncology navigation is a growing field that has shown evidence to improve patient satisfaction and access to cancer care. National organizations recommend patient navigation as an essential part of comprehensive care. However, navigation is not reimbursable and viewed as an expense for health administrators. The purpose of this quality assurance project is to identify if there is any cost benefit provided by an oncology nurse navigator. This community-based cancer center treats over 3300 new patients annually. It has five tumor-site specific clinical oncology nurse navigators. One navigator participated in this pilot project. This RN cares for three tumor sites; melanoma, advanced skin cancer and head and neck cancer. This project analyzed data solely from the head and neck cancer program. The oncology navigator collected limited information on any community calls; defined as patients who contacted the navigator based on self-referral or referral to the organization by outside providers. Data for fiscal year 2016 included the number of community calls, identification of the referral source and if the patient converted their care and/or treatment to the facility. The navigator for head and neck cancer received 35 community calls; 19 patients converted care to the facility, equivalent to 54%. Referral sources included: website; former patients; employees; outside providers; facility reputation and unknown. The types of care received after conversion included: Imaging only; consult only; multidisciplinary consult; surgery; radiation; chemotherapy; medical admission; rehabilitation. The center's executive director estimates that this navigator contributed over \$150,000 towards the organization's contribution margin. The national average annual salary for a clinical nurse navigator is \$85,000. With that said, an organization not only realizes the quality and service benefits from a solid navigation program; but also the potential for improved margin. The current health economy has limited financial resources available for ancillary care, making it an imperative that organizations choose wisely in development of support services. Every organization wants to provide quality care for their patients, but administrators are also financially accountable to organizational leadership. The ability to evaluate the cost effectiveness of support services is beneficial in developing a quality cancer program. This quality assurance project is one example in which oncology navigators can provide evidence that the organization's investment is not only a quality initiative, but also a cost effective initiative.

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**THE USE OF AROMATHERAPY AS A METHOD TO DECREASE WORKPLACE STRESS AND ENHANCE JOB SATISFACTION IN AN AMBULATORY ONCOLOGY CLINIC.** Teresa James, MS, RN, BFA, OCN®, VCU Health Massey Cancer Center, Richmond, VA

Throughout literature evidence has shown a direct link between nursing satisfaction and stress in the workplace. Many recommendations have been made to enhance nursing satisfaction. Over the last two years, changes have occurred within our clinic resulting in decreased nursing satisfaction and increased stress. Working collaboratively with nurses, we created an action plan to address these issues. A literature review was performed searching for ways to decrease levels of stress in the workplace. Complementary and alternative methods were a consistent theme throughout the literature. Specifically, evidence has shown positive effects of aromatherapy to decrease

stress. Research describes special receptor cells within the nose communicate to the limbic system, a complex system of nerves and networks in the brain, involving several areas near the edge of the cortex affecting mood. The limbic system controls basic emotions for physical, emotional and mental health. Transformational leaders increase moral, motivation and performance. Utilizing aromatherapy as a complementary intervention to enhance staff satisfaction by creating an atmosphere designed to calm, relax and elevate mood, a transforming effect will be had on both leader and team resulting in a holistic approach to improve staff satisfaction. Known for the ability to elevate mood, pure therapeutic oils of lemon and lime will be diffused throughout the clinic. Over a period of four weeks, nurses will complete self-reported questionnaires related to the perception of job stress and work satisfaction. Based on literature, the use of aromatherapy to change the atmosphere of the clinic using essential oils is expected to increase job satisfaction and decrease perceived levels of stress. The results of this evidence based project, if positive, will result in an expansion to involve the use of aromatherapy in the oncology patient population. One way transformational leaders can cultivate a healthy workplace is to utilize a holistic approach to decrease stress and therefore increasing job satisfaction. Through complementary methods, including aromatherapy, leaders have the ability focus on creating a therapeutic work environment resulting in improved satisfaction. The partnering of transformational leadership with aromatherapy is an innovative method to enhance relationships with staff that will ultimately decrease workplace related stress resulting in improved satisfaction. Holistic leaders understand the relationship between therapeutic interventions and improved nursing outcomes.

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**MORAL DISTRESS: JOURNAL CLUB RESOURCES TO EMPOWER AND EDUCATE ONCOLOGY NURSES.** Lara Jaquemai, RN, BSN, CMSRN, The Ohio State University Wexner Medical Center–James Cancer Hospital, Columbus, OH; Regina Moore, RN, BSN, CCRN, OCN®, The Ohio State University Wexner Medical Center–James Cancer Hospital, Columbus, OH; Diana McMahon, MSN, RN, OCN®, The Ohio State University Wexner Medical Center–James Cancer Hospital, Columbus, OH; Kathryn Thompson, MS, RN, PMHCNS-BC, The Ohio State University Wexner Medical Center–James Cancer Hospital, Columbus, OH

Moral distress has been identified as a concern for oncology nurses. It has been described as a negative emotional response that happens when a nurse knows morally what should be done but is prevented from taking that action, because of restrictions that don't allow for the appropriate ethical choice in the nurse's view. A goal of our nurse-based ethics committee was to identify the role of this committee in assessing and facilitating educational needs of nurses related to ethics. We studied the incidence of moral distress at our institution and determined the need for education across our system. We developed a journal club toolkit with resources for nurses to aid in discussion and empowerment. A survey about moral distress was completed by a DNP student in The James Cancer Hospital initially. Later this study was revised and distributed throughout the medical center. Based on the results, the Nursing Ethics Committee developed an educational intervention to help nurses address moral distress. Twelve articles were chosen with discussion questions for each article. This toolkit is posted on the Nursing Ethics website for all nurses to reference. The committee is gathering feedback about this intervention through a post activity survey. The goal of this intervention is to aid nurses and management in addressing moral distress directly, allowing for

open communication related to needs of the staff. The Nursing Ethics Committee developed a plan to educate staff nurses and help them address moral distress in their department. Each member was asked to find articles to present at the monthly meeting for discussion. The toolkit articles were chosen from these suggestions and discussion questions were developed. The toolkit was presented to nursing committees throughout the medical center to assist with disseminating the information. The intervention is in line with our professional practice model and shared governance structure that encourages nurses to define and shape the culture of care. Our model of care, Relationship Based Care, describes care of self and care of colleagues which is demonstrated here. The number of nurses is growing and will continue to expand in the future. There has been research on moral distress but not on interventions. It is important for us to begin to have interventions prior to an epidemic problem.

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**PROSTATECTOMY PATIENT EDUCATION: FILLING THE GAP.** Erica Jaworski, RN, National Institutes of Health, Bethesda, MD; Kathryn Elokda, National Institutes of Health, Bethesda, MD

On a Surgical Oncology unit at a research hospital, it was observed by the nursing staff that prostatectomy post-operative patient education was lacking in numerous aspects. Patients were found to be lacking in understanding post-prostatectomy care and operative side effects. The nurses developed a project to address this gap in patient education. Current literature was reviewed regarding prostate surgery. A patient centered educational packet, including Kegel exercises, indwelling urinary catheter care, scrotal edema, and sexuality and intimacy following surgery was created to educate patients and families regarding all aspects of a prostatectomy. The educational packet is supplied to patients during the first surgical consultation, and reviewed throughout the decision making and surgery processes. It is reviewed again by the nursing staff on discharge from the hospital following surgery. This was a multiple disciplinary approach involving out-patient clinics and in-patient nursing units to increase patient education and facilitate better patient understanding of all aspects of a prostatectomy. Verbal feedback from patients has been positive and answers questions. This intervention has provided continuity of care between the outpatient and inpatient units. It has also provided clearer understanding for the patients on expectations post prostatectomy.

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**STRAIGHT FROM THE HORSE'S MOUTH: USING EMPLOYEE FEEDBACK TO TRANSFORM UNIT CULTURE.** Joyce Lee, MSN, RN, OCN®, Texas Health Presbyterian Hospital Dallas, Dallas, TX; Carolyn Mayer, BSN, RN, OCN®, Texas Health Presbyterian Hospital Dallas, Dallas, TX; Patricia A. Kelly, DNP, RN, CNS, AGN-BC, AOCN®, Texas Health Presbyterian Hospital Dallas, Dallas, TX

Employee surveys are tools used to measure engagement, or how connected staff feel to an organization. Our hospital conducts two engagement surveys annually, Press Ganey (PG) for all employees and National Database of Nursing Quality Indicators (NDNQI) for nurses. Organizations with higher engagement scores have cultures that attract more employees and have less turnover. Three years ago our oncology unit's overall PG scores were satisfactory, however scores for individual questions on teamwork/unit culture were concerning. The unit scored poorly on: "Members of my work group treat one another with dignity and respect" (37th percentile) and "Employees in my work group are fully attentive to the needs of others" (36th percentile). The purpose of this abstract is to de-

scribe methods to change the culture on an inpatient oncology unit. The unit manager and supervisor first addressed unprofessional employees using progressive corrective actions. Some employees improved while others were terminated or chose to resign. Next, nurse leaders developed a plan to increase open communication. They set aside time monthly to talk with employees one-on-one. Nurse leaders used active listening while deferring judgment. They tracked the encounters on a log with a monthly goal of meeting with 90% of the staff. Employees were at first hesitant to share concerns, but over time, they trusted the process. They also facilitated biannual discussion groups where employees reviewed PG and NDNQI survey results. The nurse leaders established ground rules and facilitated respectful employee communication. Employees participated in the development of action plans to address areas of concern. These action plans became standing agenda items at unit meetings. Within one year, PG scores increased to above the 50th percentile for questions relating to teamwork/unit culture. Overall PG scores improved and outperformed the national average on all 37 questions. During the same time period, NDNQI scores on RN-RN interaction increased. The unit received comments from float staff and patients about the positive work environment. It can be uncomfortable and overwhelming for nurse leaders to ask employees about unit problems. Hearing about concerns can be disheartening as it is easy to take criticism personally. Active listening and engaging employees in proactive action plans have been key to building a culture of trust on the unit.

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**FROM SOUP TO NUTS: ESTABLISHING A MULTI-DISCIPLINARY HEAD AND NECK CANCER CLINIC.** Deborah Lewandowski, BSN, MBA, RN, OCN®, University of Virginia Health System, Charlottesville, VA; Veronica Brill, MSN, RN, NEA-BC, University of Virginia Health System, Charlottesville, VA; Adrienne Banavage, MSN, RN-BC, OCN®, University of Virginia, Charlottesville, VA; Jennifer Mellot, BSN, RN, CRRN, University of Virginia Health System, Charlottesville, VA; Carol Palumbo, BSN, RN, OCN®, University of Virginia Health System, Charlottesville, VA

In 2014 a team from the University of Virginia Cancer Center identified the creation of a multi-disciplinary head and neck cancer clinic as a priority. Tobacco use is a leading risk factor for these cancers; Virginia's smoking rate is 20% with a national rate of 13%. It is imperative to provide this care in systematic and patient centered manner for the patients of central Virginia. These patients have complex needs including nutritional complications related to treatment, psychosocial needs related to this disfiguring disease and speech therapy needs related to post-operative changes as well as the need for complex nursing care including care coordination and medication and equipment management in the ambulatory setting. The goal: create a multidisciplinary head and neck clinic that would offer a full complement of patient-centered services in one location. Utilizing a shared governance approach, the stakeholders collaborated to identify the patients' needs and the structure and process to meet these needs. Oto-laryngology and speech therapy would be added to existing services that included medical and radiation oncology, infusion, social work and nutrition at the cancer center. These patients often require endoscopic evaluation and the application of several medications to the naso-pharyngeal tract. The addition of this service required the acquisition of specialized equipment and specialized education for nursing staff. Attention was paid to elements key to patient safety: disinfection and sterilization of equipment as well medication application. Access to the supportive services would be new for this patient population, distress screening (initially on paper now electronically) was implemented to assure psycho-



social, emotional and practical concerns were addressed. Standardized patient education resources were collected and agreed upon by all care providers. Nurse coordinators were hired and received specialized education in the care of these patients. In one year's time we have had a 17% increase in the volume of patient visits and have expanded the number of social workers and otolaryngologists providing care to these patients. Due to the increase in volume of patients on site sterilization services will be provided beginning November 2016 to better meet the patients' needs for efficient and timely care and to decrease equipment turnaround time. Press Ganey scores are in the 99th percentile for "recommend this provider office".

### 337 **CONFIDENCE AND COMPETENCE! ONCOLOGY CODE BLUE EDUCATION.** Frances Lin, BSN, RN, RWJBarnabas, New Brunswick, NJ; Tamara Alexander, BSN, RN, RWJBarnabas, New Brunswick, NJ

5 North is a Hematology Oncology unit that has experienced a rise in patient acuity. In the past two years, the number of code blue events has increased in frequency. The majority of the frontline staff recognized the need for more knowledge on how to care for patients during a code blue situation. Using Transforming Care at the Bedside model, several nurses on the unit formed the 5 North Code Blue Committee. The purpose of this committee is to reinforce oncological emergency management basics, as well as improve competencies and confidence of the frontline staff. The committee worked with the director of Emergency Medical Services to create an educational series specific to the unit's oncology population. Four hands-on modules were developed: Leadership/Documentation, Cardiac/Compressions/Defibrillator, Code Cart, and Airway. The committee was divided into subgroups, who were trained to be "Superusers." These "Superusers" worked opposite shifts to develop and present their topics. The modules were presented as half hour sessions at change of shifts. Contact hours were provided to all participants. Unit leadership supported the committee and project by requiring mandatory attendance and competency check-offs for each session. After the completion of these educational sessions, the frontline staff reported an increase in responsiveness, confidence, and leadership when caring for patients with deteriorating clinical conditions. As a result of the committee's work, the unit has identified additional equipment needed to facilitate appropriate care. Unit staff engagement is high, with 15% of the staff involved in the committee. The committee continues to evaluate and improve emergency management of oncology patients.

### 338 **TAKING CHARGE! DEVELOPING A STANDARDIZED CHARGE NURSE ORIENTATION PROGRAM IN THE OUTPATIENT CHEMOTHERAPY INFUSION SETTING.** Caroline Lochner, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Jaclyn Andronico, CNS, OCN®, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY; Christen Hughes, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Ramona Cruz, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Lorna Thomas, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Jeanine Gordon, RN, OCN®, NE-BC, Memorial Sloan Kettering Cancer Center, New York, NY

The shift of oncology healthcare moving from inpatient to the outpatient setting requires more competent nursing leadership. Historically, outpatient chemotherapy infusion nurses were given minimal, informal training on how to be effective leaders in their units. As a result, charge nurses were lacking

necessary leadership skills to manage units and complex oncology patients. A structured training program for chemotherapy infusion charge nurses is necessary for ensuring safe patient care and staff satisfaction. This presentation describes a comprehensive structured charge nurse orientation program developed for the ambulatory chemotherapy infusion setting. This program prepares new charge nurses and develops charge nurses currently in the role to be leaders in their units, identify tools needed to succeed in their role and foster safe patient care environments. A taskforce of six charge nurses and clinical nurse specialist chose 17 participants from five decentralized chemotherapy infusion units to participate in this 2-day educational opportunity. Subjects included nurses that were new or currently acting in the charge nurse role. A pre-survey showed that 70% felt "very" or "extremely comfortable" within the charge nurse role, 14% were comfortable utilizing the patient scheduling system, 64% reported familiarity with unit operations. Day one of the program consisted of assigned journal readings, a didactic lecture, case studies, open discussion, a training session with the patient scheduling system and a shadow experience with nursing leadership. On day two the nurses were assigned to shadow a charge nurse on various infusion units to understand the similarities and differences of unit operations and charge nurses responsibilities. Post program survey showed, 91% reported "very" or "extremely comfortable" in the charge nurse role; 60% had a better understanding of the patient scheduling system and 84% reported a better understanding of unit operations. Program evaluations showed 100% of the respondents would recommend this course for future charge nurses. Charge nurses need to be aware of the important leadership role they play when managing staff and patients throughout infusion units. This ongoing formalized program teaches skills such as strategic planning, problem solving, critical thinking, delegation and managing the care of the complex oncology patient. With the growing volume of patients in ambulatory chemotherapy infusion units a formalized education program for charge nurses is necessary to ensure patient safety and staff satisfaction.

### 339 **IMPROVING ORAL CANCER TREATMENT DOCUMENTATION IN THE PATIENT'S EMR.** Sue Margolis, RN, BSN, Moores UCSD Cancer Center, La Jolla, CA; Ellen Carr, RN, MSN, AOCN®, Moores UCSD Cancer Center, La Jolla, CA; Pamela Johanson, RN, BSN, OCN®, Moores UCSD Cancer Center, La Jolla, CA; Meghan Wickman, RN, BSN, OCN®, Moores UCSD Cancer Center, La Jolla, CA; Sarah Eder, RN, BSN, OCN®, Moores UCSD Cancer Center, La Jolla, CA; Luke Tran, RN, BSN, Moores UCSD Cancer Center, La Jolla, CA

More oral chemotherapy formulations and immunotherapy agents are becoming treatment options for oncology patients. Yet patients prescribed these treatments mainly are on their own—responsible for acquiring the oral treatment, administering it, monitoring their treatment response and managing any side effects. And to stay on oral treatment, patients need to report side effects early so they can be managed. Providers are challenged to document oral cancer treatment care and their patients' response. Although the EMR has allowed more comprehensive documentation about oral cancer treatment, provider documentation remains inconsistent. At the Moores UCSD Cancer Center Multispecialty Clinic (one of 69 NCI-designated Comprehensive Cancer Centers), nurse case managers (NCMs) show improvement in thoroughness and consistency when documenting oral cancer treatment in patients' EMR. In early 2015, a nurse-led, multidisciplinary team launched the initial roll-out of education about oral cancer treatment documentation in the EMR to NCMs (n = 32). During Summer, 2016, based on auditing of selected EMR patient

charts (n = 7), documentation was 1) non-existent, 2) incomplete, related to components of dispensing, administration, response and symptom management. In September, 2016, a new nurse-led Multidisciplinary Project Team re-launched a refreshed and expanded educational package about oral cancer treatment documentation in patients' EMR to Clinic NCMs (n =41). NCMs completed a post education-package quiz to verify understanding of the education content. In addition, NCMs responded to a post education-package Survey Monkey® survey: >75% respondents: educational package = effective; > 50% respondents: report consistent and thorough oral cancer treatment documentation in patients' EMR. Post re-launch of the education package, assigned NCMs audited selected random EMRs of patients receiving oral cancer treatment (n = 10). The audit showed that the components of documentation improved—dispensing, administration, response and symptom management. Yet some components still were not consistently documented. Over time, thorough and consistent oral cancer treatment documentation remains challenging. But thorough and consistent documentation assures patient quality care and timely intervention. Therefore, the Project Team will further reinforce education with clinic NCMs and continue periodic EMR auditing, as well as expand education to nurses, who practice at the Cancer Center's Infusion Center, BMT Division and satellite clinics.

### **340** **EDUCATING NURSES ON THE ROLE OF THE FOOD AND DRUG ADMINISTRATION IN THE REGULATION OF MEDICAL DEVICES.** Keith Marin, MS, MBA, OCN®, RAC, Food and Drug Administration, Silver Spring, MD

Nurses use a variety of medical devices every day in their practice. Complex devices ranging from infusion pumps and on-body injection systems to simple devices such as syringes and needles play a critical role in patient care. However, many nurses do not have a clear understanding of the role of the FDA in evaluating a medical device. The FDA regulates medical device products based on evidence that the device is safe and effective for a particular use. This is accomplished through pre-market review (such as investigating a new device in a clinical study) and post market adverse event reporting (reporting safety issues and problems with device performance). Pre-market medical devices are regulated through two pathways, the Premarket Approval (PMA) and the 510(k) clearance. The PMA submission is the process of scientific and regulatory review to evaluate the safety and effectiveness of Class III medical devices (high risk devices). A 510(k) submission is made to the FDA to demonstrate that the device to be marketed is substantially equivalent to a legally marketed device, typically for class II medical devices. In post-market, the Medical Device Reporting (MDR) regulation contains mandatory requirements for manufacturers, importers, and device user facilities to report certain device-related adverse events and product problems to the FDA. It is important to note, the FDA does not have the authority to regulate nurse practice, recommend medical care, or rate any regulated product. The purpose of this presentation is to educate nurses by providing an overview of the role of the Food and Drug Administration (FDA) in regulating medical devices integral to nursing practice to ensure they are safe and effective. A continuing education program with CEUs will be developed to educate nurses on the roles of the FDA and the impact on their clinical practice by WebEx. A pre and post-test will be developed to see how much knowledge has been gained from this educational program intervention. After participation in this education program, nurses will understand how FDA ensures the safety and effectiveness of new devices and continuously monitors them once they are on the market.

### **341** **WHEN TWO BECOME ONE: MERGING A HEMATOLOGIC MALIGNANCY AND BMT UNIT.** Rebecca Martin, BSN, RN, OCN®, BMTCN®, Froedtert Hospital, Milwaukee, WI; Kelly Acker, BSN, RN, OCN®, BMTCN®, Froedtert Hospital, Milwaukee, WI

The treatment of hematologic malignancies occurs across a continuum, including induction and consolidation treatment and often times blood and marrow transplant (BMT). The care of the patient varies largely across this continuum, requiring different nursing expertise. A 15-bed hematologic malignancy and a 12-bed BMT unit in a large academic medical center were merging to form one 32-bed combined unit. The merge of the units required significant education to prepare the nursing staff to care for both specialties. Oncology nurse educators conducted a needs assessment, developed and implemented multidisciplinary education to aid staff in the combination of the two populations. Education included written resources, lecture and case studies as well as time cross-training on the other unit. Recipe cards were developed to insure staff had an easy resource to use when reviewing the many treatment protocols utilized in both patient populations. Two six hour education sessions were offered. The first session was based on the unique needs of the newly diagnosed leukemic patient and included lecture, case studies on disease, treatment and nursing considerations. This session was required for BMT nurses and encouraged for all staff. The second session was based on the unique needs of the BMT patient and included lecture and case studies on donor selection, transplant process, treatment, and nursing considerations regarding post transplant complications. This session was required for all heme malignancy nurses and encouraged for all staff. Staff were also required to cross-train on the opposite unit. During this time, their patient assignment focused on the patient population of which they were most unfamiliar. When the two departments merged onto the combined unit, staff had been exposed to each of the different populations and noted an increased comfort in providing the care required to these complex patients. The education and cross-training also helped develop a level of team work and trust among the staff. In order to merge two departments, one must acknowledge the specialty of each. Offering different modes of education and training was key to successfully combining and moving two departments, while maintaining a high level of quality patient care.

### **342** **PARTNERING FOR FUTURE HEALTH CAREER OPPORTUNITIES: A COMPREHENSIVE CANCER CENTER AND AN URBAN HIGH SCHOOL EXPERIENCE.** Virginia Martin, RN, MSN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA; Frances McAdams, RN, MSN, AOCNS®, Lincoln High School, Philadelphia, PA; Marie Riehl, RN, BSN, OCN®, Fox Chase Cancer Center, Philadelphia, PA; Tyra Pettiford, CNA, Fox Chase Cancer Center, Philadelphia, PA

In today's challenging job environment, it is more critical than ever before that young people complete their high school education with strong academic and technical skills that prepare them for college-level studies and successful careers. An experienced oncology nurse completed a local university program and transitioned to a Health Care Technology Career and Technical Education teacher in a diverse urban high school. The High School program is designed to meet a dual mission : developing students with college readiness and a career path purpose. The teacher, high school students and oncology nursing staff at a cancer center began working together with the Pennsylvania Career and Technical Education (CTE) system. The collaborative effort allows the nursing staff to go in

to the high school and test the students on basic nursing skills and provides an observational practicum for the high school students with staff at the cancer center. Students take a National Occupational Testing Institute (NOCTI) test at program end that includes a comprehensive written portion and skills evaluation. The nursing staff from the comprehensive cancer center, professional and nonprofessional, evaluated the skills portion of the exam. Students receive a certificate in Health Assisting from the PA Department of Education. Students who score well enough on the NOCTI have the opportunity to take the American Medical Certification Association Nursing Assisting Certification exam. The nursing staff and administrator were invited to the school for a post experience evaluation with the high school teachers, principal and city program administrators to discuss the experience and make recommendations. The feedback was positive on both sides, the nursing staff was able to leave the work place, enter the high school, engage with the students and gain energy from student experience. Students were able to observe and interact with oncology nurse, share career dreams and use their new skills: handwashing, obtaining weights and heights, vital signs and transfer techniques in a practice setting. The School District of Philadelphia has designated 12 high schools to participate in the program which provides students with career awareness, exploration, post-secondary and healthcare industry pipelines. Students can earn industry recognized certifications, foundation knowledge and technical skills that are transferable in any healthcare professions and receive 1080 hours of academically career specific instruction.

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**EDUCATE THE EDUCATOR: IMPLEMENTATION OF SURGICAL INCISION CARE TEACHING: IMPROVING PATIENT OUTCOMES THROUGH STAFF EDUCATION.** Stephanie McEaney, MSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Susan Crowe, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Emma Allen, BSN, RN, Memorial Sloan Kettering Cancer Center, New York, NY; Natasha Ramrup, MSN, RN, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Anna Schloms, MSN, RN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY; Nicole Bianco, BSN, RN, Memorial Sloan Kettering Cancer, New York, NY

As a surgical Hepaticopancreaticobiliary (HPB) unit, our patients have various types of surgical incisions. Currently there is no policy for incision care, nor patient education materials for our HPB post-op patients. It was identified through nurse-driven discussions that there was a lack of consistency in how staff performed incision care and educated patients. Upon discharge, these patients are responsible for taking care of their own incision. It was noted via survey that, without the proper education, many patients lacked confidence in their ability to provide self-care at home. The lack of consistent education, coupled with our recent RN/Patient Care Technician (PCT) turnover, led to an examination of our effectiveness in patient education. In re-examining our education efforts, our goal was to implement standard incision care education for all post-op HPB patients. In streamlining this education, and collaborating with our patients, we balanced the need for excellence in clinical care with the psychosocial needs that stem from the fear of going home after surgery. Thirty patients were surveyed 24-hours after surgical dressing removal. Survey questions targeted our need to ascertain the accuracy in patient's incision care provided by staff; the appropriateness of the education provided to patients by staff, as well as patient's comfort with home care. All staff was then provided with evidence-based education on proper care of incisions. We are currently collecting post-intervention data to evaluate the effectiveness of this program. We anticipate that we

will not only see an increase in the number of RN's and PCT's who are properly teaching incision care to our patients, but also an increase in our patient's comfort with home care. In collaborating with staff and patients, we are providing our patients with the skills and knowledge necessary for them to comfortably take care of their incision at home. In the future, we hope to create education materials for patient reference and laminated information in all patient showers. Nurses and PCTs play a significant role in providing consistent care across the continuum. Our staff was proactive in identifying the gap in patient care and the need for consistent education for our surgical patients. This nurse driven initiative uses an "educate the educator approach," for better patient outcomes.

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**BUILDING RESILIENCE THROUGH CARING RELATIONSHIPS.** Diana McMahon, MSN, RN, OCN®, OSUCCC-The James, Columbus, OH; Jamie Tippet, MSN, RN, NEABC, OSUCCC-The James, Columbus, OH

Oncology nurses face work-related demands that can lead to stress, burnout and compassion fatigue. Negative effects of work-related stress are multifaceted including increased staff turnover, decreased patient satisfaction, and poor clinical outcomes. Oncology nursing requires a high degree of self-giving in which nurses can grow and flourish or suffer the effects of caring without renewal. Developing caring relationships with self, colleagues, patients/families and the larger community can provide a supportive environment for nurses to develop resilience. The purpose of this presentation is to share a multifaceted resilience training program that is sustainable, measurable and innovative. Resilience training program objectives include: 1) Develop practices that build positivity, resilience and capacity for compassionate care. 2) Demonstrate how to maintain self-awareness and connection during challenging health care events. 3) Demonstrate enhanced communication and engagement across disciplines. Interventions: This resilience training program is built upon the organization's nursing professional practice model to take advantage and further integrate the common language and values of nursing practice expectations and resources. Resilience programming will be described including an experiential retreat in which nurses explore and practice care of self, patients/families, colleagues and the greater community; peer support training that builds skills for collegial support during challenging events; a remembrance experience that acknowledges/supports professional loss, grief and bereavement; unit-based Mental Health Clinical Nurse Specialists support to provide assessment, support and education to nursing staff based on unique and corporate experiences related to care of self and patient/families; a Care of Self Advisory Committee that identifies and communicates organizational resources to promote personal well-being; and a critical incident stress debriefing team available 24/7. Program evaluation is individualized based on training components goals. Metrics used include a variety of combinations of the PROQOL, Connor-Davison Resilience Scale 10, MI Human Services Survey, HCAPs, Patient Satisfaction and program evaluations. Data and stories will be shared to demonstrate program effectiveness. Resilience is multidimensional requiring a multifaceted and innovative approach. Caring relationships can be a protective factor to influence resilience. A resilient nurse can engage in a caring practice that is based on the patients' needs but reciprocal in nature promoting optimal care to the patient as well as growth of the professional nursing practice. Using a relational approach to resilience is synergistic.

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**JUST FIVE MINUTES: NURSING EDUCATION IN THE AMBULATORY CARE SETTING.** Cathrin McMullin, RN, BSN,



OCN®, Roswell Park Cancer Institute, Buffalo, NY; Kelly Englert, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY

Nursing education has always been a challenge in the hospital environment. Annual nursing competency is evaluated using Benner's novice to expert model. At this time nurses are at the advanced beginner or competent level. The goal is to increase this to the competent or expert level. The ambulatory care areas continue to be challenged to find dedicated time for education. The need for ambulatory nurse education was identified and two Nursing Staff Development Instructors have been dedicated to ambulatory care. The education challenge in ambulatory care is in the limited hours of operation, varied start/stop times of the nurses, interruption of dedicated time to patients, and the clinical team dynamics. The goal of the "just five minutes" endeavor is the brainchild of the new Nursing Staff Development Instructors to provide meaningful education to ambulatory care nurses on new policy, products and procedures while maintaining clinical flow and minimizing team disruption. Educational instruction was limited to five minutes to increase participation. The nursing staff development instructors have provided a quick five minute or less oral communication to the nurses, and then follow up with written materials for reference. The materials are left in the ambulatory centers and then e-mailed to the staff. Outside product and pharmaceutical representatives have been given the same guidelines to follow and understand the importance of the nurses returning to patient care in a timely manner. The future plan for evaluation of the success of the five minute education will be evidenced in the nursing satisfaction scores using the question "do you have access to regular in service programs", and the patient satisfaction survey using the question "how satisfied are you with the skill and knowledge of the nurse". The annual nursing evaluation using Benner's novice to expert model will be utilized as a measurement tool to show the improvement in the level of the nurses. Through this process nurses are now seeking out the educators to get more information on products, policies and specific needs in their patient care areas. The layering of educational information with verbal communication, written memorandums, and electronic dissemination of the education material has increased ambulatory nursing engagement for educational opportunities.

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**AN ONS MEGA-CHAPTER SEEKS METHODS TO INCREASE MEMBER PARTICIPATION IN LEADERSHIP POSITIONS ON THE BOARD OF DIRECTORS.** Faye McNaull, RN, BSN, MPH, MBA, NCTONS, Durham, NC; Lisa Ecklund, RN, BSN, University of N.C. Hospitals, Chapel Hill, NC

Chapter leadership on the Board of Directors (BOD) is critical to successful goal-oriented performance. For the past 2 elections, this mega-chapter had difficulty slating a minimum of 2 candidates per office; in fact, 10 persons were slated for 9 positions. Social science studies of volunteer recruitment and retention show that the most effective ways to recruit volunteers is to help them understand the skills needed, match them successfully to their interests, make a one on one request, and after recruiting successfully, recognize efforts and outcomes. Recent research-based volunteer management literature recommends approaching individuals one on one as an effective method of assessing interest and matching interest to position requirements. Further, research shows that Generation X and Millennial volunteers have specific expectations and goals associated with their participation. The purpose was to develop a program to improve and simplify slating candidates for BOD positions and support their roles once elected. Interventions. BOD chapter leaders developed a program specific to each generational group that 1) based recruitment on techniques and information to match generational

needs and assessment of readiness for leadership using one on one contacts; 2) wrote policies/procedures for recruitment/retention; 3) developed a training program to match tasks to individual skills and interpret positive career influences of BOD service using a chapter program, newsletter articles, virtual community notices and mentoring to communicate requirements, skills needed, length of service and time requirements for each office; 4) developed a recognition system to assure volunteers in leadership positions of their value to the organization. It is expected that application of the above-named principles should improve formulation of a slate for each election and increase interest in leadership opportunities; data will be compiled for two years after implementation. The ultimate goal is to recruit and retain a diverse mix of nurses, as stated in ONS Strategic Goal 2. Developing a targeted program for recruiting and retaining volunteers should increase interest and ease of slating candidates for BOD service. This pilot initiative may provide information for other chapters to assure on-going preparation of candidates for chapter leadership.

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**MAXIMIZING NURSING STAFF COVERAGE IN AN OUTPATIENT ONCOLOGY TREATMENT CENTER.** Cassandra Mendez, RN, BSN, OCN®, Duke University, Durham, NC; Denise Lovold, RN, OCN®, Duke University, Durham, NC

At a high volume outpatient Oncology Treatment Center (OTC), it is crucial to have adequate staffing to provide safe patient care. If we do not have sufficient nurse to patient ratios, it will have a direct effect on nurse retention and increase operating cost with the need for supplemental staff. The goal was to maximize our utilization of current staff to help improve nurse to patient ratio, increase the nurses available each day, reduce the need to acquire float pool staff, and improve nurse satisfaction. Initially, a survey was sent out to our nursing staff assessing their level of satisfaction with the current scheduling method, perception of staffing sufficiency, and work-life balance. Following the survey, we acquired data from our facility's scheduling program a 5 month record of patient volumes and daily staffing numbers. We calculated the average daily nurse to patient ratio for the unit. We also calculated the cost of acquiring float pool staff, travel nurses, and supplemental pay for staff working overtime. We organized an all-employee meeting. We discussed our average patient volumes, an overview of the current problems, and listed possible solutions. This was also an open forum for staff to discuss scheduling ideas and concerns. We collated all the feedback and created multiple mock schedules. We decided to use the 4 week track scheduling system as a trial run. The staffing schedule changes will be implemented in October 2016 and post data available April 2017. We expect these changes to significantly reduce the usage and costs to the unit for the supplemental staff. Other goals include improving nurse to patient ratio and staff satisfaction, and reduce staff turnover. Even though the OTC is profitable, it also has budgetary constraints and barriers that impede quicker approval of hiring additional staff. By optimizing our internal resources, we can have a positive impact on staffing that will reduce the cost of operations and improve team morale.

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**IMPROVING EDUCATION FOR LEUKEMIA PATIENTS: DEVELOPMENT OF A NEW EDUCATION PLATFORM.** Jaclyn Merkel, BSN, RN, University of Maryland Medical Center, Baltimore, MD; Nicole Bernardo, BSN, RN, University of Maryland Medical Center, Baltimore, MD

Specialized nurse-led, patient centered education has a greater impact on a patient's understanding of disease process, symptom management, and quality of life than non-standard-

ized education. About 345,000 US citizens are living with leukemia (including remission). There is little information about preparing new leukemic patients for discharge. The purpose was to identify gaps in discharge preparation for new leukemic patients and develop a standardized educational tool to address these gaps during and after hospitalization. Twenty two inpatient nurses from a comprehensive cancer center (36.6% response rate) completed a survey consisting of 9, 5-point Likert scale items. Five items assessed patient readiness at discharge (infection control, thrombocytopenia, sexuality, central line care and treatment plan), with responses ranging from very unprepared to very prepared. Four item responses ranged from strongly disagree to strongly agree. Three of these items evaluated nurses' perceptions of disease related education and the other assessed the discharge process. Results showed 72.7% (n=16) of respondents felt that at discharge, patients were unprepared or very unprepared regarding sexual intimacy. Respondents felt patients at discharge were unprepared or very unprepared concerning infection control (22.7%, n=5), thrombocytopenia (18.2%, n=4), and treatment plan (27.3%, n=6). 72.7% agreed or strongly agreed education provided to patients was inconsistent between staff members. 54.5% agreed or strongly agreed patients were given little advance notification of impending discharge. Based on these surveys, a group of inpatient nurses with varying levels of experience developed a multifaceted curriculum for new leukemia patients. The curriculum includes information regarding diagnostic workup for acute leukemia, treatment options including chemotherapy, and post treatment recovery (e.g., infection control, intimacy, treatment side effects). Handouts addressing these topics were obtained from electronic health record resources or developed by the group. Future plans are to create a binder utilizing these handouts that will be distributed to new leukemia patients and used for individual education during hospitalization and serve as a post discharge resource. Nurse perceptions of discharge preparedness of new leukemic patients can identify patient education gaps that need to be addressed in a standardized manner. A nursing survey about discharge preparation gaps can identify opportunities for improvement and provide the momentum for nurses' development of standardized patient education tools.

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**COMBINING EDUCATIONAL RESOURCES FOR CHEMOTHERAPY SKILL COMPETENCY.** Ashley Mickiewicz, BSN, RN, OCN®, RWJBarnabas, New Brunswick, NJ; Reneé Kurz, DNP, MSN, FNP-BC, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Ellen Sterman, APN.C, AOCNS®, ACNS, RN.C, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Jodi Castiglia, MSN, RN-BC, RWJBarnabas, Somerville, NJ

With fewer health care financial resources impacting on numbers of educators and equipment, educating nurses has become challenging. Three educators representing ambulatory care and in-patient facilities joined forces to share ideas, staff, and equipment to educate oncology nurses at multiple affiliated institutions. The purpose of this activity is to meet the recommendations of ASCO/ONS Chemotherapy Administration Safety Standards to meet these recommendations, nurses from multiple institutions were brought together for a "Skills Day" workshop. Nurses from the Rutgers Cancer Institute of New Jersey (ambulatory care) and Robert Wood Johnson Barnabas working in the oncology setting attended. Nurse educators from both settings came together to plan and administer a unique skills validation program that encompassed multiple learning strategies. The educators from the inpatient and outpatient facility met to discuss the needs at multiple locations and the resources available. Policies and procedures

were reviewed so that education was applicable to both facilities. Four skill scenarios were developed. The first scenario is a high fidelity patient simulation. The learning objective of the first scenario was identifying and treating a hypersensitivity reaction in a patient receiving chemotherapy. The second scenario involves a standardized patient actor who has a "leak" in their IV when receiving a chemotherapy infusion. The learning objective of this scenario is to demonstrate spill management. In the third scenario, nurses enter a room where a patient is receiving treatment and encounters various safety hazards. They are charged with identifying "what is wrong with this picture." The objective is to reinforce safe handling. The final scenario was a case study that involves a patient who experiences an extravasation. The objective is to discuss extravasation prevention, management and treatment. By combining resources, the educators were able to incorporate multiple teaching strategies into a 90 minute skills station session. Resources utilized were the hospital's simulation suite, and a team of educators from the different centers. Nurses in attendance received 1.5 contact hours. An evaluation form was collected at the conclusion of the activity. Nurses identified a high degree of satisfaction and degree learned from the activity. An additional benefit for attendees was collaborating with other oncology nurses that cared for patients that moved between both the inpatient and outpatient settings and from one institution to the next.

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**INITIATING A VRE COHORT TO REDUCE TRANSMISSIONS AMONG ONCOLOGY PATIENTS.** Mary Molloy, MSN, RN, OCN®, Northwestern Memorial Hospital, Chicago, IL; Kristen Metzger, MPH, CIC, Northwestern Memorial Hospital, Chicago, IL; Maribeth Mielnicki, MSN, RN, NE-BC, Northwestern Memorial Hospital, Chicago, IL

Colonization with vancomycin-resistant Enterococci (VRE) is common in hematology and oncology patients, who have weakened immune systems and high rates of antibiotic usage. VRE colonization may lead to subsequent bloodstream, urinary tract, wound or heart infections. Patient-to-patient transmission of VRE occurs when healthcare workers do not strictly adhere to infection prevention measures such as hand hygiene, contact precautions and disinfection of environmental surfaces and equipment. Cohorting, or placing patients with the same organism in a designated location with designated staff, is an intervention commonly used to halt outbreaks of multidrug-resistant organisms. Over the course of one year, a hematology/oncology unit in a large urban academic hospital had 24 VRE transmissions. After several different interventions did not reduce VRE transmissions, a strict geographic and staffing cohort of VRE-positive patients was initiated. The purpose of implementing the VRE cohort was to improve patient safety by decreasing or eliminating the spread of VRE between patients. On July 18th 2016, the hematology/oncology unit implemented a geographic cohort of VRE-positive patients. A total of 10 patients were moved into consecutive rooms in a designated location of the unit. Patient care staff were localized to the cohort. Shared equipment, such as scales and glucometers, were also dedicated to the cohort. The effectiveness of the cohort is measured through the reduction of VRE transmissions. Patients are swabbed for VRE rectal colonization on admission, weekly, and at discharge. The laboratory performs strain typing on all positive cultures, then the Infection Prevention department evaluates epidemiologic links between patients to determine whether transmission occurred. Within 1 month of cohort implementation, the number of VRE transmission dropped from 4 to 0. The long-term effectiveness of the cohort is still being evaluated. When implementing a VRE cohort, one major challenge is maintaining strict staffing of the cohort. Staff are lo-

calized to avoid caring for both positive and negative patients. Staff are tracked through a rotation log including the date of last assignment to the cohort. Partnership with throughput coordinators is essential to ensure VRE-positive patients are appropriately admitted/transferred into the cohort. While cohorting is not a new practice, the implementation and maintenance of a VRE cohort requires a significant amount multidisciplinary collaboration, flexibility and creative staffing solutions.

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#### **PREPARING COMMUNITY ONCOLOGY NURSES FOR THE IMPLEMENTATION OF A MULTIDISCIPLINARY HEAD AND NECK CANCER PROGRAM.** Amanda Musial, MN, RN, OCN®, University Hospitals Geauga Medical Center, Chardon, OH; Amanda Myers, RN, BSN, OCN®, University Hospitals Geauga Medical Center, Chardon, OH

Community-based Cancer Centers, even when associated with larger Medical Centers, have barriers to resources needed to provide care to more complex head and neck cancer (HNC) patients. Education to assure nurse competency and availability of required resources to accommodate a higher acuity population are essential. Furthermore, clinical expert mentorship for a variety of support services, such as physical therapy, social work, and speech therapy, is necessary to ensure adequate support for nurses. The purpose is to build an educational and support structure for the community-based oncology nurse to safely and effectively care for highly complex HNC patients in the rural setting. An initial nurse-led meeting was convened with the community oncology team and supportive services to outline the complex needs and diverse requirements of this patient population. Then a task force was created to address deficiencies in personnel, equipment, and training. Nurse learning needs were assessed and an educational and competency training plan was developed and implemented. In total, 10 nurses were trained on topics including: tracheotomy care, cleaning, suctioning, emergencies, and oxygenation, percutaneous epigastric (PEG) tubes, medication administration via PEG, different medication formularies for PEG use, and scope handling and proper sterilization. The lead H&N; cancer nurse participated in additional training sessions held at the Main Medical Center with the surgical and medical oncology HNC teams. Ongoing educational topics about HNC patients are presented at monthly staff meetings. The nursing staff reports feeling well supported in terms of education and by the other specialties within the hospital, making it easy to provide exceptional care to these patients. This is reported in monthly staff meetings as well as noted in NDNQI results, particularly in the area of professional development access. The oncology team has noted positive outcomes in terms of staying on course with the treatment plan as well as limited hospitalizations for HNC patients. A proactive, comprehensive approach to staff education, along with strengthening of key support services, has led to positive HNC patient outcomes and growth in patient referrals and volume within the program. Future opportunities include expansion into survivorship and caregiver support.

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#### **A NURSE NAVIGATOR-LED SMOKING CESSATION PROGRAM: RELATIONSHIP-BASED SUCCESS.** Kerry Nichols, RN, BSN, OCN®, Billings Clinic Cancer Center, Billings, MT; Donna Parker, RN, BSN, Billings Clinic Cancer Center, Billings, MT; Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

Tobacco is associated with cancer and is a leading cause of cancer death. Evidence suggests a relationship between

smoking and risk of cancer recurrence, poorer treatment responses, and increased treatment-related toxicity. Data reveal cancer patients continue to smoke post-diagnosis. At a Northwestern US cancer center, nurse navigators identified the smoking cessation program fell short of providing high-quality, comprehensive services. Nurse navigators establish relationships with patients throughout the cancer trajectory, thus have a unique opportunity to assess, motivate, and support patients about smoking cessation. The purpose of this project was to develop a nurse navigator-led compassionate and standardized process to foster smoking cessation using evidence-based practice and the National Comprehensive Cancer Network (NCCN) Guidelines. Smoking cessation assessment tools and supportive resources from the local and state level were gathered. Resources were outdated and lacked comprehension. Navigators also met with the cardiothoracic department, which cares for many of the cancer program's lung cancer population, and discovered smoking cessation tools were not evidence-based. Lack of patient follow-up was apparent. Lastly, navigators benchmarked with an academic cancer center's tobacco cessation program to obtain information about developing an evidence-based approach that could be implemented by nurse navigators. A screening tool was developed to assess current smoking habits and barriers to quitting. An algorithm of pharmacotherapy options based on NCCN interventions was included. The tool was incorporated into the electronic record and reviewed by the nurse navigator with each patient encounter using motivational interviewing techniques. Supportive care resources and a patient education handout explaining steps for smoking cessation were provided. First, second, and third line options for success offers patients hope if first steps are unsuccessful. A calendar was developed with dates and times to "check-in" on patients' progress. This new program was piloted in lung and hematologic cancers. The multidisciplinary team was educated about the new process and assisted in referrals and reinforcement. Outcome data will be presented including successes, failures and barriers to adherence. Nurse navigators should lead in developing tobacco cessation programs. Their compassionate and ongoing relationship with the patient provides an advantage to assist patients in being successful. A similar approach can be adapted in any oncology setting. As more data suggest the adverse effects of smoking nurses have an opportunity to positively affect patient outcomes.

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#### **IMPROVING PATIENT EDUCATION AT HILLMAN CANCER CENTER.** Lynne O'Connor, BSN, RN, Hillman Cancer Center, Pittsburgh, PA; Rachel Antin, BSN, RN, OCN®, Hillman Cancer Center, Pittsburgh, PA; Bergstrom Gayle, BSN, RN, OCN®, Hillman Cancer Center, Pittsburgh, PA; Dutton Annette, BSN, RN, Hillman Cancer Center, Pittsburgh, PA; Sabol Lindsey, BSN, RN, OCN®, Hillman Cancer Center, Pittsburgh, PA; Christie Santure, BSN, RN, OCN®, Hillman Cancer Center, Pittsburgh, PA

As oncology care continues to change, improve, and move to the outpatient setting, oncology nurses are challenged with finding ways to effectively educate patients. Often times learning of a cancer diagnosis during their initial oncology visit affects the patient's ability to retain any additional information regarding the disease, treatment, or symptom management. Additionally, the literature shows that patients are too overwhelmed during their first chemotherapy treatment to retain the information. It is imperative to ensure that newly diagnosed patients receive consistent content surrounding their education. Education needs to be provided by an oncology nurse in a quiet, calm environment in order to be most effective. Currently new patients at Hillman are taught in an exam room during their initial appoint-



ment. The education taught is inconsistent due to interruption and lack of time by the RN. The patient presents for their first treatment unprepared for the day. The purpose of the project is improve the oncology patient education experience by adding an education session after the initial patient visit and before the initial treatment in order to decrease anxiety, increase content retention, and improve the overall patient experience. A committee of 8 nurses began the patient education committee. The goals of the committee were as follows: add an education class between the initial visit and the initial treatment, identify a quiet space to conduct the class, identify consistent content to be taught using a flip book, identify nurses to teach the class and, identify times each day that the class will be taught. After implementation (August, 2016) barriers identified were: patient compliance, and physician awareness. Results of pre and post patient surveys show improvement of understanding of content. Discussion around barriers is to continue to educate the physicians on the importance of this project. In addition to this, staff are now permitted to give out meal tickets and parking passes to patients who attend the class in order to increase compliance. Future goals will be to have the class be mandatory for all new patients who are receiving treatment. The flip book that is used to teach is large, easy to see and colorful. We used our own staff as "patients" and "nurses" in order to make it look real. This helped to engage all staff.

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#### **DEVELOPING A GERIATRIC ONCOLOGY CURRICULUM TO EDUCATE 400 NURSES ACROSS THE UNITED STATES.**

**Christopher Okamoto, BSN, RN, City of Hope, Duarte, CA; Peggy Burhenn, MS, RN-BC, CNS, City of Hope, Duarte, CA; Denice Economou, RN, MN, CNS, City of Hope, Duarte, CA; Richard Yang, MS, City of Hope, Duarte, CA; Can-Lan Sun, PhD, City of Hope, Duarte, CA; Arti Hurria, MD, City of Hope, Duarte, CA**

The population of older adults is rising. Healthcare needs of older adults differ from those of younger adults. There is a projected 67% increase in cancer incidence in adults age 65+ from 2010 to 2030. Institute of Medicine (IOM) highlights the shortage of geriatric experienced nurses, noting less than 1% of nurses and less than 3% of advance practice nurses are certified in geriatrics. This program addresses this educational gap by providing a multidisciplinary, interactive, geriatric-targeted curriculum for oncology nurses. Our aim is to develop and teach a comprehensive geriatric oncology curriculum for oncology nurses with participation and input from multidiscipline, nationally-recognized, expert faculty. The overall strategy is to develop a curriculum to educate 400 nurses through 4 annual conferences. The curriculum consists of 23 geriatric oncology topics offered over a 2 ½ day conference and is guided by a combination of the International Society of Geriatric Oncology (SIOG) framework of geriatric assessment, IOM Report recommendations, Oncology Nursing Society (ONS) course work and a needs assessment. The curriculum combines two disciplines by bringing skills from geriatrics into oncology care and moves beyond didactic education to provide participants the opportunity to practice geriatric assessment skills and knowledge learned through breakout sessions and mentoring from the faculty. The participants will develop goals to implement and will participate in monthly conference calls and 6, 12 and 18 month assessments. Participants and faculty evaluated the course. Course 1 was evaluated post course both internally by faculty (n=18) and externally by participants (n=99). Faculty items were rated on a scale of one (not very helpful) through ten (very helpful) including: 1) pre-conference communication and preparation ( $\bar{X}$ =9.9); 2) effectiveness of content prepared ( $\bar{X}$ =9.5); 3) effectiveness of teaching methods used ( $\bar{X}$ =9.2); 4) effective-

ness of small group breakout sessions ( $\bar{X}$ =8.6); and 5) the effectiveness of faculty time spent with participants throughout the course ( $\bar{X}$ =8.8). Participants evaluated the program on a 4 point scale, with 4 being the highest (scores ranged from 3.79 to 3.9). Evaluation results included suggestions for improving the next conference. Year 1 of this conference developed and successfully implemented a course to educate oncology nurses in geriatrics. We will continue to assess the effectiveness of the curriculum through ongoing evaluation after subsequent conferences.

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#### **THE JAMES COMPASSIONATE CARE AWARD. Heather O'Neal, BSN, RN, OCN®, The Ohio State University Comprehensive Cancer Center: Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, OH**

The Duffy Caring Model states that if you feel cared for you can better care for others. When nurses feel cared for their ability to develop positive interprofessional relationships increases. In an effort to recognize nurses for their care, The James Compassionate Care Award was developed. The shared governance group identified the need related to structural empowerment as defined in the guide for Magnet designation. The award was developed using The James professional practice model, concepts related to relationship based care and our nursing mission. The award recognizes nurses and staff who carry on the mission in significant ways that impact the patient and family experience. It is awarded to two individuals quarterly and one team biannually. Individual nominees must be staff member who provides direct care. Team nominees must have 2-8 staff members with the team lead by a nurse. Nominations include a story about how the nominee showed compassionate care with a positive attitude and respect for the patient and family. Awardees are selected by a shared governance council. The council chairs contact the nominators and present the awardees with a pin and certificate. The awardees story is placed on the facilities intranet site. To date 24 awards have been given. Each quarter, the council receives multiple nominations to review and score. Nominations forms and scoring tools are amended to comply with current mission and relationship based care values. Nursing staff are eager to nominate their colleagues because of the excellent care The James gives on a daily basis. Staff recognize fellow colleagues caring and promote the mission and values stated in the professional practice model. In addition to developing this award, after the first year, the council hosted a luncheon for the 2015 awardees and their nominators. The luncheon was a celebration of the caring and compassionate work that we see on a daily basis.

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#### **EDUCATING NURSES ON SAFE MANAGEMENT OF PATIENTS RECEIVING TALIMOGENE. Yvette Ong, MS, RN, OCN®, NE-BC, MD Anderson Cancer Center, Houston, TX; Nicole Vaughan-Adams, MSN, RN-C, OCN®, MD Anderson Cancer Center, Houston, TX**

More people have been diagnosed with skin cancer over the past 30 years than all other cancers combined. Although melanoma occurs in only 1% of the population diagnosed with skin cancer, it is the deadliest. In 2012, melanoma was one the key areas of focus for the Moon Shots Program at a comprehensive cancer center, to improve cancer cure and survival over the next decade. Talimogene is the only oncolytic immunotherapy approved by the Food and Drug Administration for the local treatment of unresectable, cutaneous, subcutaneous, and nodal lesions in patients with recurrent melanoma post-surgery. Talimogene is a modified herpes simplex-1 virus, intra-lesional agent, with a serious potential for accidental

exposure from initial preparation, administration, disposal, and post-injection care. The purpose of this presentation is to describe an interprofessional educational plan for safe preparation, administration, and care of patients receiving Talimogene. The investigational phase began in the ambulatory setting and included fifty patients, during which two events of accidental eye exposure occurred. Additionally, immunocompromised or pregnant healthcare providers should avoid contact with Talimogene due to potential harm. As Talimogene administration expanded to the inpatient setting, it was imperative for the staff to be appropriately trained in preparation, administration, proper disposal, and post-injection of and accidental exposure to Talimogene. An interprofessional care team established guidelines to address safety concerns, proper equipment and supplies, and nursing education. The team identified stakeholders within the institution for required training. Education was completed in 3 weeks, with a 100% representation from key areas. To date, eleven patients have received Talimogene and no accidental exposure has been reported. Nurses play a key role in educating patients and caregivers of the purpose, potential risks and side-effects of any therapy. Oncology nurses are at forefront of the fight against cancer, and are pivotal in coordinating patient care and treatment. Information shared would be beneficial to nurses in other institutions who have not encountered a similar agent.

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**AN INTERNATIONAL COLLABORATION: ESTABLISHING ONCOLOGY NURSING CURRICULUM IN COLOMBIA, SOUTH AMERICA.** Sara Orndoff, MSN, RN, OCN®, BMTCN®, UPMC CancerCenters, Pittsburgh, PA; Mary Kate Egan, MSN, RN, OCN®, UPMC CancerCenters, Pittsburgh, PA; Cheryl Steele, RN, MSN, MPM, AOCN®, UPMC CancerCenters, Pittsburgh, PA; Mindy Lenhart, BSN, RN, CPHON®, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA; Paula Eicker, MSN, RN, NEA-BC, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA

Cancer care and treatment has become an international priority for developed countries outside of the United States. A need exists for them to implement high quality cancer programs for their citizens. The University of Pittsburgh CancerCenters and Children's Hospital of UPMC have collaborated with Hospital International de Colombia (HIC), in Colombia, South America, to develop adult and pediatric inpatient and outpatient oncology departments. This collaboration includes being a part of the architectural design of the departments, the work flow processes of nurses, pharmacists and medical assistants, and educating nurses on cancer and cancer drug therapy. Four nurses and one physician spent 4 weeks in Pittsburgh at both locations for training. The project goal was to provide comprehensive adult and pediatric chemotherapy, biotherapy and oncology education utilizing a didactic method of teaching combined with observational experiences and skill sessions. Chemotherapy and biotherapy curriculum was delivered in a classroom setting. Observation experiences included inpatient oncology units, outpatient clinics and treatment areas, and the radiation oncology department. An interactive skills session demonstrating chemotherapy drug order verification, donning and doffing personal protective equipment and safe drug administration was also completed. Prior to arrival the 4 nurses took a pretest to evaluate their knowledge of cancer drug therapy. A post-test was administered upon completion of the program. An increase in exam scores demonstrated an increase in knowledge. With knowledge gained during their training the Colombian nurses developed an oncology training curriculum, policies and procedures, and a plan to educate their colleagues. Developing a relationship based care model as they observed here in the

U.S. was also part of their work. This experience will serve as a framework for the UPMC CancerCenter's future collaborations with other countries including China and Kazakhstan. Ongoing guidance and support has continued to be provided. Technology was crucial to relationship building with the Colombian staff. Video conferences were used to connect both groups. During class, translators ensured an accurate transfer of information between two languages. High tech translation equipment allowed the Colombian students to remain in the classroom with other students and experience the classroom setting.

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**INTERVENTIONS TO PREVENT COMPASSION FATIGUE IN ONCOLOGY NURSES.** Matthew Ortiz, BSN, RN, OCN®, Providence Health and Services, Spokane, WA; Brianna Knighten, BSN, RN, Sacred Heart Medical Center, Spokane, WA; Bridget Schwartz, BSN, RN, Sacred Heart Medical Center, Spokane, WA; Ruth Bryant, MSN, RN, Sacred Heart Medical Center, Spokane, WA

Compassion Fatigue can be related to the negative aspects of helping. This phenomenon is described as something which can develop over time and deeply consume a person physically, emotionally, and spiritually. It is often accompanied by significant emotional pain. This may lead to a decline in the joy of caring for others. Compassion fatigue affects those who do their job well. It can be characterized by deep emotional and physical exhaustion, symptoms resembling depression and PTSD (post-traumatic stress disorder) and/or a shift in a sense of hope, optimism about the future and the value of their work. The level of CF can vary from day to day. Even very healthy helpers with excellent life/work balance and self-care strategies may experience a higher than normal level of CF when overloaded with high acuity cases or working with excessive traumatic content. Nurses on the Medical Oncology floor (7S) at Sacred Heart likely experience compassion fatigue symptoms including exhaustion, headaches, sleep disturbance, anxiety, and depression. The Unit Based Council for 7S is conducting an evidence based project to address compassion fatigue on our unit. Our clinical question is "What is the impact of strategic intervention to compassion fatigue in Oncology nurses?" Education on compassion fatigue to all staff, Quarterly remembrance pot luck to celebrate the patients we helped, Patient journals for staff to leave encouragement, quotes, and scripture, Memorial stones with patients' first names released into campus pond, Electric candle in break room to turn on when a patient passes. The ProQOL survey will be given again at 60, 90, and 180 days after the start of these interventions. Evaluation and development of further interventions will be ongoing.

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**COMPASSION FATIGUE MEETINGS PROMOTE CARE MODEL.** Carolyn Paget, BSN, RN, OCN®, NCH Healthcare System, Naples, FL; Melissa Kieffer, BSN, RN, OCN®, NCH Healthcare System, Naples, FL; Emily Guerrero, BSN, RN-BC, OCN®, NCH Healthcare System, Naples, FL; Theresa Morrison, PhD, CNS, CNS-BC, NCH Healthcare System, Naples, FL; Julia Amundson, BSN, RN, OCN®, NCH Healthcare System, Naples, FL; Carolyn Smith, BSN, RN OCN®, NCH Healthcare System, Naples, FL

Recognizing the need for compassion fatigue management and prevention strategies, oncology nursing staff held weekly meetings where the oncology staff was offered expert speakers and discussion in an informal atmosphere. Professional Quality of Life (ProQOL) scores were obtained from participants before the first and after their third meeting. Participating staff ProQOL-IV scores will demonstrate 10% improvement after attending three

compassion fatigue resiliency sessions. Invitation extended to oncology staff to attend weekly 45-minute sessions with phone-in option available. Prior to first meeting, informed consent obtained from participants and ProQOL-IV completed for baseline measure. After attendance at three meetings, participants again completed the ProQOL-IV. The baseline and post scores were compared. Nine sessions were held in measurement period, with four to six participants each for a total of 45 interactions. Baseline compassion satisfaction, secondary traumatic stress, and burnout symptoms scores were all average pre sessions. Post sessions, compassion satisfaction scores increased, and secondary traumatic stress and burnout symptom scores decreased. Overall the finding from the ProQOL-IV helped the staff further understand compassion satisfaction and traumatic stress and burnout symptoms. Addressing workplace satisfaction and stressors in a safe environment, promoted staff wellbeing.

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#### **ONCOLOGY STAFFING MODEL: DOWN TO THE CORE.** Kendra Peot, BSN, RN, ONC, Spectrum Health, Grand Rapids, MI; Katherine Borum, MS, RN, CMSRN, Spectrum Health, Grand Rapids, MI

A standard scheduling model for all oncology nursing units did not exist, creating many challenges, including staff dissatisfaction, understaffed shifts (ie charge nurse, chemotherapy certified nurse), lack of accountability, and confusion. Additionally, leadership dedicated a significant amount of time to balancing and managing the schedule. An evidence-based collaborative process was used to redesign the staffing and scheduling model used for an oncology unit in an effort to minimize time spent adjusting the schedule, improve staff satisfaction, and create a more balanced schedule that best meets the needs of the unit. Through the use of a Rapid Improvement Event (RIE) it was determined that a core schedule model would best meet the staffing needs of the nursing units. Leadership then created a core schedule template, taking into account staff preference, unit need, charge nurse coverage, budgeted FTEs and most importantly, chemotherapy certified nurse coverage. Considerations were made regarding the ratio of full time to part-time staff as the core schedule would act as a means of position control for the unit. Weekend coverage was addressed and expectations were set regarding the ratio of staff working every third weekend versus staff working every other weekend. Core schedules were assigned to staff based on the preferences they had previously shared with the leadership team. In order to evaluate the success of the staffing model, surveys were sent out to staff at intervals of 30, 60 and 90 days post core schedule implementation. Surveys evaluated staff satisfaction with the new process and data was collected related to successes and opportunities. Time studies were collected comparing the time spent managing the schedule on core schedule unit to non-core schedule units. Overall the results of the staff survey were favorable and the areas of opportunity often highlighted a need for education or explanation of the process. The time studies showed that leadership spent less than half the time managing core schedules. Lastly, even distribution of chemotherapy certified nurses and charge nurses was more consistently achieved without continuous monitoring of these essential staffing needs. Overall, core schedules have been successful for oncology and will likely be rolled out to all adult inpatient units at Spectrum Health Grand Rapids.

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#### **IMPROVING ACCESS AND FLOW TO THE DUKE ONCOLOGY INFUSION CENTER.** Mary Ann Plambeck, MSN, RN, OCN®, Duke Cancer Center, Durham, NC

The Duke Oncology Treatment Center (OTC) provides care to patients receiving chemotherapy and other infusion therapies.

In the past year we have seen our daily census increase from an average of 140 to 160 patients a day. The majority of the patients arrive between the hours of 10 and 2, and are often late due to multiple appointments earlier in the day. This influx has led to an increase in patient wait times as well as patient and staff dissatisfaction. The purpose was to increase capacity to meet volume demand, decrease patient wait times and improve staff satisfaction and work culture scores. Four action items were identified as possible improvement plans. This included: 1) Creating scheduling guidelines that would maximize the use of early treatment room appointments, 2) Pulling injections out of the OTC, 3) Identifying and fast tracking patients with OTC appointment, and 4) Designing a new scheduling template based upon regimen duration. Scheduling guidelines have helped and a more robust communication plan is being developed to ensure compliance. The majority of the injections given in the OTC are pegfilgrastim and hormonal injections. Two challenges with moving these injections included creating a process to assure prior authorization prior to the visit and space constraints due to programmatic growth. Fast tracking was piloted and improved the arrival time in the OTC and negatively impacted patient wait times in clinics for those without a OTC appointment. Creating the new schedule by duration and chair will be implemented in January 2017. The purposed changes can have a significant impact on improving patient and staff satisfaction. However, for the changes to be 100% successful partnering with providers, pharmacy, scheduling staff and administration is crucial. Implementation and communication plans are critical to success. As our oncology population continues to grow, creating a system that can accommodate the volume with minimal patient wait times and support a healthy work culture is critical. Inter professional team engagement is critical to programmatic success.

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#### **DEVELOPING THE CHARGE NURSE ROLE IN AN AMBULATORY SETTING.** Gail Powers, BSN, RN, OCN®, Froedtert & the Medical College of Wisconsin, Milwaukee, WI; Julie Mihlsimmer, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Lori Lierman, BSN, RN, CMSRN, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Sandy Todd, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI; Judy Pawlak, BSN, RN, OCN®, Froedtert and the Medical College of Wisconsin, Milwaukee, WI

The objective was to describe the evolution of a consistent Charge Nurse (CN) role in the Clinical Cancer Center (CCC) outpatient clinics including the outcomes as it relates to communication and satisfaction of leadership, clinic staff, and patient care. In May 2008 the CCC opened with a patient-centered disease specific model of care. Prior to opening, cancer patients were seen in multiple clinics. Clinic volumes the first year were 36,663. By end of fiscal year 2011, volumes increased to 52,952. Due to this growth, it became evident to leadership that there was a need for an experienced nurse from each of the four clinics to meet weekly to discuss staffing needs. This role evolved to charge nurse. As of May 2016, there are six clinics located on two floors with an increased volume of 84,269. Everyone's responsibility is to assure care is safe and efficient. Each clinic developed specific staffing needs driven by the different demands of their patient population. The CN became an expert regarding clinic workflow, staff, and patient population. The group met with clinic leadership weekly and became instrumental in developing guidelines to define the new role. Each CN was assigned a designated day to adjust staffing needs due to sick calls. The consistency of the CN allowed this role to evolve to include more responsibilities; bi-weekly meetings, contact for emergencies, clinic flow and additional duties. Clinic leader's



response included an increased approval and confidence in the role. Traditionally the CN is a rotating position; however, the staff has come to depend on the consistency and has developed confidence that the CN is able to run the clinic in the leader's absence. A complex oncology patient can be the primary reason for changes in clinic flow along with the increase in outpatient treatments and procedures. In the future there may be a need to develop an outpatient acuity scale to determine staffing needs. As reimbursement guidelines continue to change, the complexity of patient care on an outpatient basis is projected to increase. These changes reinforce the need for this role in an outpatient setting. Due to the continued success of the CN role in the CCC, the hope is that other facilities can learn from our current model.

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**CREATING A CULTURE OF SUPPORT THROUGH MENTORSHIP.** Penelope Raddatz, RN, CHPN, Froedtert Hospital, Milwaukee, WI; Tara Pack, RN, Froedtert Hospital, Milwaukee, WI

Successful mentoring relationships develop over time and are based on mutual trust and respect. Nurses with caring and supportive mentors are more inclined to become mentors themselves. Mentorship also increases confidence and knowledge, improves quality of care, and patient outcomes. One inpatient oncology unit increased RN staff by over 50% in 2016, with the majority of hires being new graduates. In order to facilitate a culture of support and success on the unit through this growth, a mentorship program was developed. The purpose was to create a 6-month long mentorship program to pass on knowledge from mentor to mentee during the transition period following formal preceptorship. The program aimed to also assist with developing positive peer relationships and help guide the mentee through the early stages of his/her career, beyond what a traditional orientation provides for the specialty of oncology. Drawing from experiences with new graduate hires onto the unit, guidelines were developed for the mentorship program. Expectations regarding confidentiality, accountability, and respect for the relationship are outlined in the guidelines. Experienced unit nurses volunteered to serve as mentors, and dyads were created based on mentee preference and schedule. A meeting frequency of at least once per workweek was recommended. A list of teaching points was provided to the mentors to serve as a guide. Also provided were tools such as a New Nurse Confidence Scale, and a Goals and Meetings Log to help identify individual needs, develop goals, and track meetings. Currently 16 mentors and 18 mentees are participating in the program. Final presentation will include individual outcomes based on a Goals and Outcomes Assessment Tool, and a program based evaluation summary to evaluate the success of the mentorship program overall. Long-term goals of this program include monitoring for decreasing staff turnover annually. This mentorship program is geared specifically towards our oncology nurses and is new to our hospital. Implementing a formal mentorship program in the hospital environment will ensure the development of our future leaders as they advance their clinical knowledge and develop strong interpersonal and leadership skills. This program would be easy to replicate and can be tailored to meet the needs of any type of new hire, as well as any general or specialty unit.

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**NURTURING NEW ONCOLOGY NURSES: DEVELOPING A UNIT SPECIFIC ORIENTATION PROGRAM THAT FOSTERS GROWTH AND SUCCESS.** Natasha Ramrup, MSN, RN, AOCNS®, CNS, Memorial Sloan Kettering Cancer Center, New York, NY; Morie Davis, MSN, AGACNP-BC, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Karshook

Wu, BSN, MSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Anna Schloms, MSN, RN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY

Nurse turnover is pervasive and costly to health care organizations. In our Disease Management Team we have noticed that new nurse's lack experience and knowledge especially for our Oncology population. It is fundamental for on-boarding novice nurses to have the necessary education and hands on skills to provide consistent high quality care. It is challenging to place new graduates in a high acuity disease management team (DMT). We recognized that there is a significant gap between formal classroom and actual hospital setting. Not having adequate knowledge and skills can be anxiety provoking for the new nurses in providing safe and effective care. A unit specific extensive orientation program was implemented 10 years ago to bridge this chasm. The new nurse is assigned two preceptors on a consistent basis to foster a positive learning experience. The combined knowledge and experience of the preceptors helps to establish a strong foundation for learning. The new nurse was provided a manual which is a compilation of presentations and articles relevant to this DMT. Most importantly they attend a two day unit specific class which entails didactic, skills, return demonstration and videos of procedures specific to the DMT. Implementing multiple modes of unit based education experiences for new nurses will lead to confidence in caring for our patient population. The integration of multiple modes of learning experiences was well received by the orientees. This allows the nurses to feel prepared, supported, grow and flourish in this DMT. An additional benefit is the decrease burden of the preceptors by not having to spend extensive time teaching basic skills. By virtue of their new position, these nurses tend to be skills oriented and encounter many stressors working in an oncology setting. It is only prudent to focus our attention on better educating staff in providing quality care and gain the necessary knowledge for professional development. Providing a comprehensive, standardized approach to educating new nurses may lead to retention, decrease stress, increase satisfaction for the preceptors and new nurse. The unit specific orientation sets the stage for the care the new nurses will be delivering. This two day unit class provides the foundation for the new nurse to become the expert nurse of tomorrow.

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**COLLABORATION THROUGH INNOVATION: A MULTI-DISCIPLINARY APPROACH TO CLINICAL PERFORMANCE.** Martha Read, MSN, RN, OCN®, Seattle Cancer Care Alliance, Seattle, WA; Ann Finnan, MSc, RN, Seattle Cancer Care Alliance, Seattle, WA; Stephanie Lunt, RN, Seattle Cancer Care Alliance, Seattle, WA; Debra Martin, RN, OCN®, Seattle Cancer Care Alliance, Seattle, WA; Jesse Kasten, MHA, MA, Seattle Cancer Care Alliance, Seattle, WA

Key processes and practices are needed for interdisciplinary teams to engage in a continuous process of quality improvement, and to achieve best practice. Oncology nurses can play pivotal roles in harnessing the knowledge, skills, experience and perspectives of interdisciplinary team members and charter sustainable change. The purpose of this project was to develop a structure, process, and tools to facilitate collaboration and innovation for an interdisciplinary team focused on renal melanoma. The overarching goals are to improve clinical practice and achieve high quality patient outcomes. The team was struggling with interdisciplinary communication and collaboration issues, and employing inefficient processes that were hindering best practice and optimal teamwork. The committee, which included interdisciplinary clinical and administrative staff, developed a charter for the project. The charter included the purpose and goals, specific roles and responsibilities.

ties, and guidelines for communication and decision-making. For example, the nurse manager chaired the committee and agreed to manage relationships with interdisciplinary team leads, make decisions based on committee recommendations, and garner support for implementation from organization leaders. Standard tools including agendas, minutes, email templates, triage and escalation pathways were created to ensure real time collaboration and communication across the interdisciplinary team. An active, shared log was developed to provide transparency and accountability in prioritizing and addressing operational and practice issues. In six months, eleven practice and process improvement initiatives were addressed using the standard tools and processes we developed. Three complex interdisciplinary initiatives, crossing multiple departments, have been implemented and will be evaluated on an ongoing basis, including: 1) standardizing pre-authorization for high-cost oral chemotherapy; 2) guidelines for multidisciplinary communication, collaboration and coordination of patient care and 3) development of an evidence-based bio-safety guideline for using emerging immunologic agents in the treatment of melanoma. These tools, templates and processes are designed to assist with addressing future initiatives. Collaboration through innovation is an ongoing process that should evolve over time. Nurses play a critical role in leading skilled communication, interdisciplinary collaboration and effective decision making that helps achieve continuous performance improvement and the highest quality patient outcomes.

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**DEVELOPING NURSE SCIENTISTS BY ENGAGING IN RESEARCH DURING COURSEWORK.** Heather Reens, MSN, RN, Molloy College, Rockville Centre, NY; Veronica Feeg, PhD, RN, FAAN, Molloy College, Rockville Centre, NY; Margaret Barton-Burke, PhD, RN, FAAN, Memorial Sloan Kettering Cancer Center, New York City, NY

Nursing is in need of research studies and dissemination of data to improve patient outcomes as well as to advance the practice and discipline of nursing. Today only about 300,000 of the 3 million nurses have their doctoral degree. The IOM Future of Nursing Report of 2010 stressed the need to double the number of doctorally prepared nurses by 2020 to “add to the cadre of nurse faculty and researchers.” The purpose of this abstract is to describe research activities of a research residency course that develops nurse researchers through guided experiences and immersion into research. The author highlights the importance of courses like this by using examples of residency activities as they relate to science and practice of oncology nursing. Relevant research experiences/interventions include developing a research question and plan, writing a research proposal, preparing an IRB application, data coding and preparation, conducting human research, analyzing data, publishing and disseminating research, and planning for future research. The author became part of a research team that developed a grant proposal from composition and submission of the Letter of Intent to full proposal during a research residency. This research resident participated in developing the curriculum, evaluating fellowship applications, and teaching content on nursing science for a nursing research fellowship course for staff nurses. During the research residency, preceptors identify projects for the PhD student while contributing to the evaluation providing constructive feedback. Outcomes of this residency are applicable to oncology nursing since it took place at a large metropolitan cancer center in New York. This experience helped the student reflect on the experience and demonstrate what they have learned in the classroom. As a current PhD student, I have seen first-hand the importance and value of this course through implications for oncology nursing practice identi-

fied during research residency including grant and proposal development and submission for an oncologic study. I have gained invaluable experiences in working with a mentor and learning from the ground up. This presentation regarding a research residency is innovative providing alternatives to classroom learning and developing a nurse researcher/scientist that is ground in practice. This residency provides guided and valuable research experiences into various aspects of the nurse scientist role helping advance future practice through empirical research.

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**ANALYSIS OF THE PSYCHOSOCIAL IMPACT OF MILITARY AND JOURNEY METAPHORS IN PATIENTS WITH CANCER: A LITERATURE REVIEW.** Carla Remondini, MSN, RN, OCN®, RN-BC, Scripps Mercy Hospital, San Diego, CA

Communication about cancer in the society at large is saturated with military metaphors. “Fighting cancer” is a common expression that finds place in the public discourse as well as in conversations between cancer patients and healthcare professionals. Many expert opinions have objected to the use of aggressive metaphors in relation to cancer because they may pressure patients to pursue treatments at any stage and ignore considerations on quality of life. The cancer journey metaphor has been offered as replacement for its more holistic perspective. Defining how war and journey metaphors impact cancer patients can guide oncology nurses to provide patient-centered care and sensitive communication that promotes positive coping. Purpose: To present the evidence from the scientific literature regarding the psychosocial impact of military and journey metaphors on patients with cancer. Medline, PsycINFO, and CINAHL databases were searched for the period 2000-2016, using keywords that describe military metaphors in cancer, such as “violence,” “enemy,” “war,” “fight,” “struggle,” “battle,” and “cancer journey.” 116 entries were found and narrowed to 13 relevant studies. Only 4 of them were large studies that directly analyzed the effect of military imagery on patients with cancer or cancer prevention intentions in the general population. The highest level of evidence suggests that military as well as journey metaphors have either enabling or disabling effects on psychosocial well-being, depending on their context. Overall, seeing cancer as enemy carries more disadvantages due to reduced intention to pursue preventive cancer behaviors in the general population and its relation to higher depression and anxiety in follow-up assessments of cancer patients. As a result, health care professionals should not use military metaphors without first assessing their patients’ preferences and policymakers should promote public information about cancer that refrains from using military expressions. However, the discrepancy between the frequency with which military metaphors are used in cancer discourse and the paucity of research studies about their psychosocial effects on patients with cancer prevents any conclusive recommendations. Oncology nurses need awareness of the role that metaphors play in conveying thoughts and emotions in patients with cancer, so that they can promote positive coping mechanisms. Nurses with heightened knowledge of patient communication can also advocate for appropriate language in cancer policies.

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**UTILIZING TREATMENT ACUITY LEVELS TO IMPROVE PATIENT SAFETY.** Susan Riveiro, RN, OCN®, NYU Perlmutter Cancer Center, Lake Success, NY; Jeanne Eschmann, BSN, RN, OCN®, NYU Perlmutter Cancer Center, Lake Success, NY

Improving patient safety is arguably the most important goal within the health care community. The Joint Commission developed the National Patient Safety Goals to identify health care safety issues and recommend ways to improve them. Treat-

ment acuity levels in nursing have historically been used to determine staffing requirements and assignments. There is insufficient literature to document a relationship between acuity levels and patient safety. The purpose of this study is to determine if there is any correlation between treatment acuity levels and improved patient safety outcomes. A treatment acuity tool was developed by our Ambulatory Infusion Center. Several peer reviewed articles were referenced, describing successful implementation of treatment acuity levels in the outpatient infusion setting. Our model assigns treatment levels from 1 to 5. A simple hydration is assigned a level 1 while more complex treatments, such as oxaliplatin desensitization, are assigned a level 5. The acuity levels of treatments assigned to each nurse are totaled daily. A monthly average of the total acuity for each nurse was calculated. These totals were compared to the monthly number of patient safety events retrieved from our hospital's database. During the evaluation period, there were no reported safety events in the month where the average nursing acuity total was 8. All other months in the evaluation period had reported safety events with nursing acuity totals between 9 and 11. Based on these findings, there appears to be an increase in patient safety events when nurse acuity totals rise above 8. The total acuity level assigned to a nurse can directly affect patient safety outcomes. It is beneficial for Infusion departments to develop a universal tool for measuring treatment acuity and to compare acuity levels and patient safety events. Careful, consistent monitoring of this data will determine the safest acuity level to assign infusion nurses to ensure optimal patient outcomes. Based on the findings from this single infusion center, future research is planned. Data from our multiple infusion centers will be collected and evaluated in an effort to confirm and replicate the results of this initial review.

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**IMPROVING CLINICAL CARE AND TRANSPARENCY ONE POST AT A TIME.** Georgina Rodgers, BSN, RN, OCN®, NE-BC, Cleveland Clinic Cancer Institute, Cleveland, OH; Curtis Brinkman, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH; Dennis Urbanek, Cleveland Clinic Taussig Cancer Institute, Cleveland, OH

Internal communication and goal alignment can be a challenge for any organization. Lack of caregiver awareness of proper policies and procedures can lead to compromised patient care due to teams not operating from the same standards. Employee engagement can suffer due to ineffective or inadequate communication. Nursing teams may lack the time to search for policies or key initiatives and need quick access to information at a moment's notice. Previous attempts at communicating pertinent information included sending numerous, consecutive e-mails which may have led to confusion and e-mail overload. In response to this, Cleveland Clinic Cancer Center developed a Cancer News Feed on its intranet website to allow any caregiver or employee to share ideas and best practices, communicate project updates, and allow leadership to cascade institute priorities for greater goal alignment. Similar to popular social media platforms, users can upload images and documents, share important links and create hashtags that relate to similar content all within a 256-character limit. This limit helps users create concise and informative updates that are easy to consume at a glance. Our next step was to create a Nursing Notes e-newsletter which pulls database driven content automatically, based on hashtags, from our Cancer News Feed. When a user tags a post with nursing related hashtags, like #nursing or #EMR, the system will automatically assemble the Nursing Notes e-newsletter with the tagged posts and distribute to the appropriate e-mail groups. This curated content provides nursing teams with meaningful and targeted updates and institute priorities across all of our Ohio and Florida loca-

tions on a bi-weekly basis. Initial concerns with implementing our Cancer News Feed and Nursing Notes e-newsletter included monitoring for inappropriate or irrelevant content. These concerns were alleviated by including the author's name, photo and e-mail address with each post, as an increased form of accountability. Additionally, content is archived and searchable for future reference and monthly analytic reports help us measure readership and identify opportunities to develop new content. Nursing related posts on the Cancer News Feed are up 34% YTD and 86% of recently surveyed nurses consistently read our communications and find the information as a useful resource at Cleveland Clinic.

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**UTILIZATION OF A HEPATITIS B SCREENING TOOL BEFORE ADMINISTRATION OF ANTI-CD20 MONOCLONAL ANTIBODIES.** Susan Sakalian, RN, MS, OCN®, Montefiore Medical Center, Bronx, NY

In 1997, rituximab was approved by the U.S. Food and Drug Administration (FDA) to treat B-cell non-Hodgkin lymphomas. Rituximab is a chimeric human monoclonal antibody which targets CD20 on the cell surface of B lymphocytes. CD20 antigen is overexpressed on most malignant B-cells. Since its initial indication, rituximab has been approved for a wide range of lymphoproliferative and autoimmune diseases. Anti-CD20 monoclonal antibodies exert an immunosuppressive effect which can result in an increased risk hepatitis B virus (HBV) reactivation. In 2013 the FDA, added "risk of reactivation of hepatitis B virus (HBV)" to the list of boxed warnings for rituximab. The purpose of this project was to standardized protocols to guide health care providers in screening patients at risk for HBV reactivation and to reduce or prevent its occurrence. This project was led by an interdisciplinary taskforce consisting of representation from Oncology/Hepatology, Nursing, Pharmacy, Quality, and Nursing Education at a major urban multi-hospital academic medical center. Interventions included the development of an educational offering, consisting of a power point presentation and case study entitled: "Utilization of a Hepatitis B Screening Tool Prior to Anti-CD20 Administration" and development of a pre-infusion interdisciplinary checklist. Target audience consisted of staff throughout the cancer center from 3 inpatient units, 2 ambulatory infusion units, and 7 medical oncology practice sites and staff from the cardiac and renal transplant units. Evaluation: Chart audits were conducted to measure the effectiveness of a pre-treatment checklist to identify at risk patients, and appropriate prophylaxis. It is imperative that health care institutions create a system of delivery that focuses on patient safety across the health care continuum. The safe administration of anti-CD20 agents requires the development of a well-coordinated interdisciplinary approach. The major stakeholders in patient safety at this institution are committed to creating a safe and reliable system to improve a patient care. One month post screening tool utilization rollout: 88% screened appropriately; 7% not screened; 5% screened incompletely; 18% screened positive. Utilization of a checklist has an impact on safe and reliable patient care. Continued application of this project includes merging the checklist into the new EMR and placing the educational offering onto the institution's E learning platform.

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**AN ONCOLOGY NURSING CHAPTER'S INNOVATION TO EDUCATE A GLOBAL HEALTHCARE COMMUNITY.** Cynthia Samborski, MSN, MHA, CCRC, Roswell Park Cancer Institute, Buffalo, NY; Marrienne Jerla, BSN, Roswell Park Cancer Institute, Buffalo, NY

Nursing professionals have a unique opportunity to develop educational activities for the advancement of nursing practice.



This is accomplished by developing educational programs, implementing evidence-based practice, and conducting nursing research. Disseminating education nationally and internationally with modern tools is imperative to the evolution of nursing education and practice advancement. ONS must be enterprising as they educate. ONS members and nonmembers expressed inability to be present during Chapter sponsored educational activities, consequently missing valuable education. This Chapter was challenged to resolve this dilemma. This Chapter is offering a free CNE Educational Program for our members and nonmembers including three lectures for career enhancement and development. This program will reach nurses and healthcare professionals globally through a virtual setting and help foster relationships and establish collaborative efforts to advance the profession. The Local Chapter discussed the inability to reach nurses who were unable to attend educational programs with the CNO of a Comprehensive Cancer Center (CCC). The CNO offered their Information Technology Department to stream the program live through WebEx. A pamphlet Education Day offered the option to attend in person or virtually. This pamphlet will be distributed to our Local Chapter members and past members via e-mails, along with nurses associated with the CCC. The event occurs on October 22, 2016. The topics include: Advances in the treatment of metastatic colorectal cancer: Current strategies and future directions; The Reach of a Generation: Cancer Moonshot Initiative and The Future of Nursing: Where do we stand? The Likert Scale will be used to validate goals. An opened ended question will be added to develop further programs. Participation will be tracked and immediately following an email link will be sent to online participants with the evaluation form to be returned within two weeks to receive free CNE credits. The goal is to provide continuing education through different methods and build collaborative relationships internationally. Survey responses will be analyzed to formulate new programs and recruit new authors based on the needs of nurses around the globe. Utilizing CCC expands participants to 550+ nurses locally, nationally, and internationally.

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**NO MORE DELAYS IN CRITICAL VITAL SIGN NOTIFICATION: A QUALITY IMPROVEMENT PROJECT FOR OUTPATIENT HEMATOLOGY-ONCOLOGY AND BONE MARROW TRANSPLANT CLINICS.** Aya Sato-DiLorenzo, RN, BSN, OCN®, Beth Israel Deaconess Medical Center, Boston, MA; Danielle Wright, RN, MSN, OCN®, Beth Israel Deaconess Medical Center, Boston, MA; Erika Coletti, RN, BSN, Beth Israel Deaconess Medical Center, Boston, MA; Toni Abren, RN, BSN, Beth Israel Deaconess Medical Center, Boston, MA; Rolando Salazar, Beth Israel Deaconess Medical Center, Boston, MA; Amanda Cottrill, Beth Israel Deaconess Medical Center, Boston, MA

With the current trend toward outpatient-based care and an increase in patient acuity in ambulatory oncology clinics, it is crucial to promptly identify critically abnormal vital signs ("critical vital signs"). In our ambulatory oncology clinics, a group of unlicensed practice assistants (UPAs) obtain vital signs, record measurements on intake sheets, and transcribe the information into electronic medical records. After recording of vital signs, patients return to the waiting area until they are called to see their providers. Two incidents involving critical vital signs occurred earlier this year. A patient with an aggressive lymphoma had an irregular heart rate in the 150s and another patient with breast cancer had a systolic blood pressure in the 80s. Although the vital signs were accurately recorded, their providers were never notified. The nurse educator, a leader of the nursing team, met with a clinic coordinator to review the two known

incidents and the current policy regarding provider notification. Two major concerns were identified: the policy did not indicate who was responsible for notifying providers; and UPAs limited clinical knowledge. A meeting with the aim of revising the current policy was convened with the nursing director of the hematology-oncology clinic, the assistant nursing director of the bone marrow transplant clinic, the clinic manager, and a clinic coordinator. Review of the current policy revealed that critical vital sign criteria did not include a low diastolic blood pressure and a double-check for critical vital sign measurements was not required. The process of provider notification was not clearly defined. In addition, UPAs often felt they could not stop their assigned tasks to page a provider because of the busy clinic environment. Based on these findings, the group revised the policy to include a step-by-step notification process and planned re-designing of the vital sign record sheet to include critical vital sign criteria so that the information is readily available to UPAs. The group also identified a go-between clinic staff person who is responsible for communicating critical vital sign information from UPAs to providers. When the revised policy is approved by the institution, staff education will begin. Changes to the current policy will be communicated through email and in-person at staff meetings. The safety reporting system will be monitored for any recurrent incidents.

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**THE IMPACT OF A SELF-LEARNING END-OF-LIFE MODULE ON KNOWLEDGE AND ATTITUDE.** Marcia Satryan, MSN, RN, AOCN®, CNE, Penn State University, Altoona, PA

Healthcare professionals have expressed several barriers in providing end-of-life care. One of the barriers is that end-of-life education has not been consistently provided to healthcare professionals, specifically registered nurses, despite national initiatives to improve it. Also, there are negative attitudes by healthcare professionals regarding caring for the dying patient. At facilities where there has been a consistent effort to provide end-of-life education, quality care and patient and family satisfaction has been demonstrated. In today's healthcare facilities, staff development departments face numerous constraints in providing end-of-life education. Creative teaching strategies need to be formulated to determine the most effective method for knowledge acquisition and retention, in an effort to change attitudes for providing care to dying patients. One strategy that may impact a large number of nurses would be an online self-learning module on end-of-life care. This in-progress quasi-experimental pre- and post-test design study will examine the effect of an end-of-life self-learning module on knowledge acquisition and attitude in medical-surgical nurses at an acute care facility in southcentral Pennsylvania. Knowledge will be measured by the Palliative Care Knowledge Test (PCKT) tool and attitude will be measured by the Frommelt Attitude toward Care of the Dying (FATCOD-A) tool. Data analytics of knowledge acquisition and attitudes will be presented in the presentation / poster. In addition, information regarding the effectiveness of the self-learning module, as an educational strategy, will be presented. In addition to the analytics, the presentation/poster will describe the process of the entire project.

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**PASSED THE ONCOLOGY NURSING SOCIETY (ONS)/ ONCOLOGY NURSING CERTIFICATION CORPORATION (ONCC) CHEMOTHERAPY BIOTHERAPY CERTIFICATE COURSE! NOW WHAT?** Leah Scaramuzzo, MSN, RN-BC, AOCN®, Billings Clinic, Billings, MT; Jeannine Brant, PhD, APRN, AOCN®, FAAN, Billings Clinic, Billings, MT

According to ONS, nurses must complete a clinical practicum following the didactic learning of the ONS/ONCC

Chemotherapy/Biotherapy Certificate Course. This allows nurses to apply knowledge gained into clinical practice thus demonstrating competency. Few resources exist regarding chemotherapy/biotherapy clinical practicums, therefore, many organizations struggle with their development. One inpatient oncology unit recognized that a standardized approach was needed for a clinical practicum which includes hospital-specific administration, assessment of skills, and documentation of competency. The purpose of this project was to standardize a chemotherapy/biotherapy clinical practicum for nurses completing the ONS/ONCC Chemotherapy/Biotherapy Certificate Course. Organizational items for chemotherapy/biotherapy administration were gathered: hospital policies/procedures, equipment (i.e. closed-system transfer devices, personal protective equipment), worksheets/cheat sheets, professional resource manuals, patient education materials, and electronic medical record screen shots of forms. A table of the most common regimens administered and types of oncology patients seen on the unit was created. A workshop was developed with practice calculations for absolute neutrophil count, body surface area calculations, 5% marginal dose determination, and carboplatin dosing. Training sessions were planned with Electronic Medical Record test patients including activation of chemotherapy orders, documentation of the pre-assessment, blood return assessment, administration, and patient education. Mock scenarios with hands-on simulation learning were developed including first time chemotherapy patient education, chemotherapy administration via various routes, management of flare reaction, extravasation, hypersensitivity and anaphylaxis; and safe handling and spill management. Interactive learning was provided in the hospital simulation lab. The day concluded with explanation that actual IV and oral administration competencies were to be completed on the unit. Evaluations from the clinical practicum were extremely positive. Staff shared they felt better prepared for final competency evaluation. Nurses expressed increased fear after taking the didactic course; however, this lessened after completing the clinical practicum. Now that the ONS Chemotherapy/Biotherapy Course has moved from live-training to an on-line program, nurses have opportunities to implement robust clinical practicum programs. A clinical practicum tied to didactic education creates opportunities not only for competency assessment, but for sharing details of how to apply principles to direct patient care while incorporating hospital-specific details. This education model can easily be adapted as a chemotherapy/biotherapy clinical practicum model in any organization.

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**DEVELOPMENT AND USE OF AN RN-DRIVEN MEDICAL ONCOLOGY INFUSION DASHBOARD TO MAXIMIZE OPERATIONAL EFFICIENCIES IN AN AMBULATORY ONCOLOGY INFUSION CENTER.** Elizabeth Scarsella, MBA, RN, BSN, OCN®, NE-BC, UR Medicine, James P. Wilmot Cancer Institute, Rochester, NY

The infusion center at the Pluta Cancer Center, which became part of the James P. Wilmot Cancer Institute (WCI) at the University of Rochester Medical Center in late 2012, experienced a patient volume increase of roughly threefold within six months of the acquisition related to the addition of providers as well as a very robust breast oncology practice. This necessitated a close look at infusion center operations associated with volumes and use of resources in order to accommodate the growth in volume while maintaining quality, safety and efficiency. The purpose was to describe how the development and utilization of an RN driven infusion center dashboard facilitated operational decision making and improvements to accommodate a significant increase in patient volume. The metrics were first identified in

collaboration with the WCI infusion center medical director, chief quality and safety officer, and additional infusion center nurse managers. Metrics chosen included: volumes of specific appointment types, nursing care hours, urgent add-ons, acute patient emergencies, chair turnover and utilization, unsigned treatment orders, medication waste, and reason(s) for late patient arrival for appointments. The dashboard was then built as an excel spreadsheet in order to facilitate manipulation and analysis of the data as entered by the infusion RNs. Trends and opportunities for operational improvements were identified and shared with key stakeholders on the care team including: providers, nurses and administrators. Several workflow and operational changes were implemented as a result including: conversion of a clinic exam room to a "quick chair" used for port draw/flushes and administration of injections, RN schedule changes, increases in RN staffing, addition of clinical tech support, and regular communication of results to providers and nurses as a means to encourage timely completion of orders and multidisciplinary collaboration. The Pluta infusion location was able to successfully accommodate and maintain the approximate threefold increase in patient volume with the use of the dashboard. The infusion dashboard has also become an integral tool that is now part of the daily infusion center workflow at all four ambulatory nursing units at the WCI. Innovation The dashboard is an invaluable tool that has increased nursing satisfaction by advocating for needed infusion workflow improvements while maintaining the quality of care for the patients.

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**INCORPORATING HEALTH LITERACY ASSESSMENT TO IMPROVE INDIVIDUALIZED ONCOLOGY PATIENT EDUCATION.** Carla Schaefer, BSN, RN, OCN®, Rutgers Cancer Institute of New Jersey, Freehold, NJ; Stephanie Farias, RN, BSN-BC, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; Donna Nubla, BSN, RN, OCN®, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

Health literacy is an individual's ability to read, write, and comprehend health information necessary to make informed health decisions. Research shows that poor health literacy correlates with poor health/poor outcomes. These individuals often have poorly managed chronic conditions; use emergency services more often; and have higher incidences of preventable hospital admissions increasing costs. The risk for negative outcomes increases when the healthcare team does not provide information in a way that is easily understood by patients. Because of this, Joint Commission standards require written and oral information that is easily comprehended. Cancer patients often want as much information as possible regarding their cancer and its treatment; however, this information can be overwhelming. Patient education materials are often difficult to follow and too high of a reading level. At Rutgers Cancer Institute of New Jersey (RCINJ), patients and their families are encouraged to attend a New Patient Orientation class. The presentation is projected on the screen, printed handouts are provided, and members of the healthcare team speak to the class regarding the services that each provides. Barriers to learning and preferred methods of learning are assessed and documented in the electronic medical record (EMR). Prior to treatment, a nurse navigator conducts assessment of health literacy and learning barriers to determine the best approach to the patient's educational needs. This is done by utilizing tools such as a word-recognition test like Rapid Estimate of Adult Literacy in Medicine (REALM) to measure a patient's reading ability. In addition, the RCINJ Patient Education Committee evaluates all written information that is provided to patients for education within the organization to ensure that documents are easy to reference and written on a low reading level. Finally, the "universal precautions" approach assumes that every patient has low health literacy. By using this

approach we can avoid the risk of a patient not comprehending the care instructions, medications, or treatment that is being provided. When a patient does not clearly understand all of the facets of their plan of care, it is difficult for that individual to be engaged and empowered in their own care, compliant with medications, and make the needed lifestyle changes. By implementing the interventions listed, health literacy and learning needs can be addressed to yield positive health outcomes.

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#### **IMPLEMENTING A STANDARDIZED TOOL TO IMPROVE THE WORK ENVIRONMENT IN AN ONCOLOGY SERVICE LINE.**

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An academic medical center in an urban area experienced rapid growth in oncology inpatient demand. The department expanded by 23% to a total of 83 beds, requiring what was once one unit to divide into four separate units with individual leaders and nursing teams. Historically, patient flow and resource allocation was overseen by a designated charge nurse who managed these processes for all of the oncology units. The change in governance structure led to the decentralization of responsibilities to the charge nurse in each of the respective units. As a result, silos were created, communication breakdown occurred, and relationships amongst the units deteriorated. Teammates began to express feelings of inequality of the distribution of resources and workload on the individual units. A need was identified to create structure and process to ensure adequate resource allocation; better patient flow; and empowerment of frontline nurses in decision making. The goal of the project is to facilitate communication and teamwork among nurses across multiple oncology units and restore a positive healthy work environment. Patient Care Directors (PCDs) collaborated to restructure and facilitate a forum among the oncology units. An evidence-based acuity tool was implemented to assist the nurses in decision making and resource allocation. Additionally, the structure and process of a daily census meeting was reorganized and streamlined. A dashboard was developed to guide the flow of the meeting and standardize communication. Staff nurses were charged with then sharing decisions made in the meeting with their own unit based teams to enhance transparency regarding resource allocation. A pre and post implementation survey will be used to measure staff perception of empowerment, teamwork and communication. Leadership has the ability to impact change through assessment, building trust, and role modeling a collaborative and objective approach. Nurse leaders must balance individual needs of their team with the needs of the entire service line. Staff nurses given the tool, mentorship and coaching by leaders can positively impact the operations and work environment. The success of this structured model can be duplicated amongst other services within the hospital and throughout healthcare organizations.

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**DEVELOPING AN EDUCATION PLAN TO ADDRESS AN EXPANDING BLOOD AND MARROW TRANSPLANT POPULATION.** Kathleen Shuey, MS, RN, ACNS BC, AOCN®, Baylor University Medical Center, Dallas, TX; Cathy Zmolik, BSN, RN, Baylor University Medical Center, Dallas, TX; Christina Barrow, BSN, RN, BMTCN®, Baylor University

**Medical Center, Dallas, TX; Ivana Dehorney, MSN, RN, Baylor University Medical Center, Dallas, TX**

Blood and marrow transplant (BMT) represents a subspecialty within oncology requiring specialized knowledge of the treatment and transplant process, various types of transplant, and associated side effects : both short and long term. Our facility has a 24 bed unit dedicated to the BMT population. Incorporated into the 24 beds, are ICU beds that accommodate oncology patients in addition to the BMT population. Additionally, there is a hematology, medical oncology, and gynecologic oncology unit for a total 96 inpatient oncology beds. BMT patients who are at day +100 may be moved to sister unit (usually hematology) to accommodate patients beginning the transplant process. Patient volume within our BMT program has steadily increased over the last 5 years. Currently, 18-25 transplants a month (autologous and allogenic) are performed at Baylor University Medical Center. Because of the increase in the transplant population, patients who are less than +100 days are transferred to sister units to complete their inpatient stay requiring additional expertise of nursing staff. The change in population has impacted the turnover rate for the hematology unit. Oncology nursing staff attends the general nursing orientation for the hospital. Staff also participate in the Oncology/BMT Internship. The internship is a 3-4 day class offered over several weeks. Over time, the internship has evolved to include additional content specific to BMT. In addition to the internship, a series of offerings are have been or are in development for experienced staff. The physician team has provided video lectures on the transplant process. An education series is in development to offer content on advanced concepts in transplant, clinical management of the hematology patient and end of life care. The change in patient population has impacted the satisfaction of nursing staff on sister units. One unit has experienced an increase in turnover rate. The evaluation process is currently ongoing. The goal of nursing leadership and education is to address nursing knowledge and skills of the BMT population, improve unit morale and stabilize staffing within the next six months. When a change in patient population occurs, the leadership team (which includes management and education) must provide staff with opportunities to address perceived or actual knowledge deficits of staff, provide additional educational opportunities and address events that increase stress within the nursing team.

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**NURSING IS MORE THAN A SHIFT: A QUANTITATIVE STUDY TO EXPLORE NON-TRADITIONAL NURSING ROLES.** Maggie Smith, DNP, MSN/Ed, RN, OCN®, Janssen, Olympia Fields, IL; Wendy Garvin, MSN, APRN, Janssen, Horsham, PA; Joanne Vanak, RN, MSN, Janssen, Horsham, PA; Jill Vanak, PhD, ACNP-BC, AOCNP®, University of Pennsylvania Health System, Philadelphia, PA

Nurses provide the largest professional workforce in the healthcare system, serving as the primary interface point and advocate for patients and families. The healthcare system has experienced large-scale evolution within the past two decades, with the majority of oncology care transferring from the inpatient unit to an ambulatory care setting. As the healthcare construct continues to evolve in parallel with medicine, health system leaders must look to nurses to lead and support new models of care delivery, continuity across transitions in care settings, and integration of resources between the home and the site of care. A subset of nurses has started to shift the paradigm of the profession by becoming engaged in non-traditional oncology roles, examples of which include the role of nurse navigator, clinical nurse educator, medical liaison, and marketing/sales consultants. The primary objective is to gain an understanding of the factors that influence the career path



of expert oncology nurses who work in non-traditional nursing positions. The investigators will work with their local oncology chapters to target 25-30 expert nurses currently working in non-traditional oncology roles. The investigators will develop a survey consisting of ten questions; a link to the survey will be emailed to all chapter members and will remain active for 45 days or until the target number has been reached. The survey will be anonymously reported. Inclusion criteria for the expert oncology nurse includes: greater than or equal to five (5) years of experience as an oncology nurse; the participant must be currently employed in a non-traditional nursing role in the field of oncology. Uni-variate data analysis will be completed for all of the demographic information obtained from participants (i.e. gender, age, highest degree attained, current role, location of work) and the accompanying survey. Given the small sample size; further research is needed to understand the factors associated with the pursuit of a non-traditional nursing role within the field of oncology. Such research will focus on nurses' intent to leave clinical practice, job satisfaction, practice environment, retention, and the impact of these non-traditional roles on the delivery and outcomes of health care services. The analysis of motivational factors used to influence an oncology nurse to explore non-traditional oncology nursing roles will be explored.

### **380** **THE ROLE OF THE ONCOLOGY NURSE NAVIGATOR IN IMPROVING DISCHARGE PROCESS FOR PATIENTS WITH NEWLY INSERTED PERCUTANEOUS NEPHROSTOMY TUBES.** Dominique Srdanovic, RN, MA, OCN®, Bennett Cancer Center, Stamford Hospital, Stamford, CT; Elizabeth Manfredo, MS, RD, Bennett Cancer Center, Stamford Hospital, Stamford, CT

An oncology nurse navigator (ONN) is described as a "professional registered nurse with oncology specific clinical knowledge who offers individualized assistance to patients, families and caregivers to help overcome healthcare system barriers" (Oncology Nursing Society). The ONN often works with patients through the continuum of care ranging from outreach to diagnosis through treatment and survivorship. At times, the ONN is the one healthcare professional to notice gaps in clinical care as they navigate the patient through the healthcare system. At the Bennett Cancer Center (BCC), the ONN recognized that oncology patients demonstrated and verbalized the lack of education on how to care for their newly inserted percutaneous nephrostomy (PCN) tubes. The ONN worked with Director of the Cancer Center to design a project charter to clearly identify how the BCC could improve patient education upon discharge. The project charter defined the problem statement, supporting facts, project goals and the multidisciplinary team of stakeholders for the project. The project team met monthly over a seven month period. Lean methodology was used to examine the current process: Supplier/Input/Process/Output/ Customer tool and fishbone cause and effect diagram. Findings revealed that besides the lack of standard patient education, additional gaps such as lack of support services, needed supplies and follow-up were noted. These deficits were improved upon in the new process. It was clear through this process that standardized patient education upon discharge was imperative for the patient with a newly inserted PCN tube. Education is a vital component of the discharge process. It is crucial that oncology nurses have a clear understanding of the PCN tube care and standardized patient education. As a result of this project, a standardized nursing education program was developed. This program included education on the care of the patient with a PCN tube, home guide for patients and the discharge planning process. This program was rolled out electronically to 440 nurses with a 92% completion rate. ONNs coordinate care, ad-

dress barriers to healthcare, make referrals and facilitate timely care. The ONN plays a significant role in improving patient outcomes. ONNs can be a valuable change agent and make a difference by participating in quality improvement initiatives for their cancer center.

### **382** **IMPROVING KNOWLEDGE OF CHEMOTHERAPY SAFE HANDLING UTILIZING CHEMOTHERAPY SAFETY CHAMPIONS.** Allison Steinberg, MSN, MPH, OCN®, Johns Hopkins Kimmel Cancer Center Sibley Infusion, Washington, DC; Alice Catches, BSN, RN, OCN®, Johns Hopkins Kimmel Cancer Center Sibley Infusion, Washington, DC; Katherine Evans, BSN, RN, OCN®, Johns Hopkins Sidney Kimmel Cancer Center at Sibley Hospital, Washington, DC; Mary Cox, MSN, BSN, OCN®, Johns Hopkins Kimmel Cancer Center at Sibley Hospital, Washington, DC; Taffere Abay, MPH, RN, OCN®, Johns Hopkins Sidney Kimmel Cancer Center at Sibley Hospital, Washington, DC

The purpose was to guide nurses to adopt safer chemotherapy safe handling practices using Chemotherapy Safety Champions. Infusion clinic oncology nurses are exposed to chemotherapy consistently. Without safety precautions, data has indicated exposure causes risks and adverse health outcomes. Five years ago, Sibley Memorial Hospital, a community hospital in Washington DC, became a part of the Johns Hopkins Medical System and since then, its medical oncology practice has grown exponentially. All clinic nurses are OCN certified but education about chemotherapy safety and adherence to recommended precautions has been inadequate. In 2016, an anticipated increase in patient chairs was the impetus to assess the need and methods to improve chemotherapy safety education. A 66 question survey developed by Dr. Martha Polovich revealed that the nurses' baseline understanding of potential hazards in handling the drugs and procedures to minimize them was inadequate. The Nurse Educator facilitated an initial all-staff in-service on safe handling of chemotherapy, assisted by two nurse volunteers. They and two more volunteers were educated and introduced as "Chemotherapy Safety Champions" (CSCs) to liaison between staff and Nurse Educator. Their tasks included identifying staff needing individual coaching; conducting coaching sessions; modeling best practices; and generally raising awareness of safe handling. With the Nurse Educator, they eventually facilitated a chemotherapy safe handling and spill competency session. Three months after the creation of CSCs, Dr. Polovich's survey was re-administered. Comparing responses to the first survey indicated improved knowledge about and compliance with chemotherapy safety measures. In the first survey 66.7% of respondents answered "agree/strongly agree" that others neglect to wear PPE, but 85.7% in the second survey "strongly disagreed" with the same statement. In the first survey, nurses reported that gowns were reused and double gloves, gowns and eye protection were "rarely" used, while in the second, gowns were "never" reused and double gloves and eye protection was "always" worn. Utilizing staff "champions" rather than solely the educator has raised the level of awareness of safety practices and also the level of compliance. Ensuring that chemotherapy safety standards are consistently followed is an ongoing challenge, but the continued assistance the CSCs liaising with the Nurse Educator, coupled with ongoing education and coaching about safety and risks should continue to improve awareness of and adherence to safe practices.

### **383** **DEVICE HUDDLE: A NOVEL ELEMENT OF HOSPITAL-ACQUIRED INFECTION PREVENTION.** Karen Sublett, MS,

Hospital-acquired infections (HAIs) such as catheter-associated urinary tract infections (CAUTIs) and central line-associated bloodstream infections (CLABSIs) contribute to increased morbidity and mortality among hospitalized patients and significant healthcare cost. Infection prevention guidelines instruct healthcare providers to use urinary catheters and central lines when properly indicated and only for the necessary duration. It is also recommended that the ongoing need for these devices be evaluated regularly. At a large, community hospital in the western US, an increased number of CLABSIs during one year prompted nursing leaders to create a new strategy for ensuring that the ongoing need for devices was being evaluated. The Device Huddle was developed to help prevent HAIs by ensuring that urinary catheters and central lines were only being utilized for appropriate indications and promptly removed when no longer needed. As an adjunct to the daily hospital-wide safety huddle, a small huddle with a representative from each inpatient nursing unit was held twice weekly. The Device Huddle was primarily led by an Oncology Clinical Nurse Specialist, with assistance from Infection Prevention and the Vascular Access Team Manager. During this huddle each nursing unit would report the number of urinary catheters and central lines currently in use and the indication for each device. If during huddle discourse, no appropriate indication was identified for the device, it was recommended to return to the unit and advocate for device removal. In the calendar year before the Device Huddle, the project hospital had 24 CAUTIs (3 oncology) and 20 CLABSIs (10 oncology). In the calendar year since implementing the Device Huddle, the project hospital has had seven CAUTIs (zero oncology) and three CLABSIs (two oncology). In addition, increased awareness of device utilization has led to units reporting the number of urinary catheters and central lines during the hospital safety huddle, and in unit shift-to-shift huddles. The Device Huddle is one element of the efforts within the project hospital to combat HAIs. The brief, dialogue-driven format allows rapid evaluation of all devices in use within the hospital. Oncology patients are at high risk for HAIs due to immune suppression and high utilization of central lines. This huddle strategy ensures appropriate use of devices and early removal, therefore aiding infection prevention efforts.

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**MORE THAN JUST A CHEMO NURSE! A VISION-DRIVEN CURRICULUM FOR TRANSITION INTO ONCOLOGY NURSING PRACTICE.** Sarah Sumner, MSN, RN, OCN®, Providence Saint Joseph Medical Center, Burbank, CA

The Institute Of Medicine (IOM) report “Ensuring quality cancer care through the oncology workforce: Sustaining care in the 21st century” predicted a significant shortage of oncology professionals due to the aging population, increase in new cancer diagnoses, and growth of the cancer survivorship population. The 2015 Oncology Nursing Society (ONS) position statement, “The impact of nursing workforce issues on quality cancer care” called for employers to create innovative programs to develop trained oncology nursing professionals, guided by quality and safety standards, and educated in the latest technologies and therapies. Generalist nurses trained only to administer chemotherapy often lack the knowledge, skills, and attitudes required to care for people with cancer. Poorly prepared nurses experience increased burnout, job dissatisfaction, and intent to leave the specialty. The purpose was to design a vision-driven transition into practice (TIP) program for experienced nurses new to oncology. The TIP program curriculum was inspired by the Providence Saint Joseph Health System vision statement “Know me, Care for me, Ease my way” and the ONS core values:

innovation, excellence, and advocacy. The patient-centered design invited collaboration between clinical education and the inter-professional oncology team. The curriculum incorporated multiple learning strategies including: ONS computer-based learning modules, lectures by clinical experts, infusion center clinical rotations, reflective journaling, a tour of cancer center, demonstrations by integrative-care providers, and a case study presentation. Assessment of the Oncology Nursing Certification Corporation (ONCC) test blueprint served as a gap analysis for program thoroughness. “Inspire and develop our people” is a pillar in the Providence Saint Joseph Health System strategic plan. The TIP oncology program demonstrates this commitment. 10 RNs will complete the program during October and November, 2016. 2017 projections anticipate training 20-30 additional RNs. A four-week intensive training program was designed to prepare experienced RNs for the oncology nursing specialty by leveraging ONS resources and clinical experts in the organization. The health system invested in the TIP program to ensure recruitment and retention of qualified oncology nurses responding to the IOM and ONS recommendations. The TIP program was designed to inspire nurse engagement and present a broad view of oncology nursing roles: beginning at cancer screening, through treatment modalities, and finally to compassionate end-of-life care.

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**RETOOLING REGISTERED NURSES (RN): A MENTORING PROGRAM FOR EXPERIENCED NON-ONCOLOGY NURSES TO FILL A GAP IN AN OUTPATIENT CANCER CLINIC WORKFORCE.** Lexine Thall, MN, RN-BC, AOCN®, Loma Linda University Medical Center, Loma Linda, CA; Cheri McDougall, BSN, RN, OCN®, Loma Linda University Medical Center, Loma Linda, CA; Gaylene Swanson, BSN, RN, OCN®, Loma Linda University Medical Center, Loma Linda, CA

Succession planning and oncology expertise development are essential to support clinical needs of patients and operational requirements of a Cancer Center. Chemotherapy skilled and oncology experienced RNs at this large private academic Cancer Center are in high demand. RNs desiring to specialize in oncology are discouraged by employers unwilling to bear education costs. This mentoring programs’ goal is to promote the oncology specialty and minimize RN vacancies. The outcome is for the RN to be an oncology specialist and attain the ONS Chemotherapy Provider Card (CPC) that validates essential knowledge is gained for safe chemotherapy/biotherapy administration. An RN shortage was the stimulus to explore alternative staffing to meet high patient appointment demand. Supportive care treatments (e.g., hydration therapy, blood transfusions) account for 40% of infusion appointments. These non-chemotherapy/biotherapy treatments only require a RN without chemotherapy/biotherapy skills. This prompted the concept to fill RN vacancies with experienced non-oncology nurses while providing an oncology specialty educational opportunity. Behavioral interviewing is used to select program applicants. This is a selection process through stories that bring to life the skill sets required for the position. Once hired to the program, the first phase is a 2-month department orientation including classroom lectures and written testing, self-study, and a preceptored practicum. Upon successful department orientation completion, the second phase includes daily patient assignments to manage supportive care treatment appointments. This allows RN exposure to cancer diagnoses, supportive care treatment RN experience from side effects and complications, and cancer treatment protocols familiarization. Throughout this phase a regular review with the RN includes the mentor, RN supervisor, and clinical educator. The third phase is the joint decision to attempt the ONS CPC. Attaining the CPC begins the fourth phase. This phase documents return demonstrations and the mentor’s observa-

tions on the program checklist indicating independence to administer chemotherapy/biotherapy competently, e.g., safe handling, complications, treatment scheduling. At this time the RN also receives a clinical ladder promotion and a wage increase. To date, five applicants have attained the ONS CPC and 80% have remained with the organization after attaining the ONS CPC. Mentoring programs such as this allows experienced RNs committed to developing a specialty in oncology the opportunity to gain focused experience while providing professional satisfaction and role expansion for the RN mentor.

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#### **MEETING ONS STRATEGIC GOALS BY DEVELOPING MEMBER LEADERSHIP AND ENGAGEMENT THROUGH ENHANCING CHAPTER PROGRAMS.** Bonnie Toaso, RN, MSN, OCN®, Duke University Medical Center, Durham, NC; Faye McNaul, RN, BSN, MPH, MBA, Retired, Chapel Hill, NC

Historically this mega chapter covering a territory of 12 counties offered 12 programs annually, only 4 were CEU-based programs. Due to the geographical distribution, program participation was limited to <10% total membership. Since 2008, PhRMA Guideline changes decreased membership access to pharmaceutical representatives and limited attendance at pharmaceutical-sponsored programs. This resulted in member dissatisfaction specifically in regard to the lack of new oncology product information and its impact on their clinical practice. The purpose was to provide more educational opportunities annually, offering timely information on new treatment options and associated side effects designed to: 1) improve clinical and patient care and education, 2) increase member representation at programs, and 3) increase member confidence and encourage leadership opportunities to meet the ONS strategic goals. Annual needs assessment revealed the lack of timely education and knowledge regarding new oncology products and networking ability. Members perceived being left on their own to learn information on new treatment options. As the PhRMA Guideline changes limited nurses' exposure to interactive learning opportunities, the chapter needed to improve its efforts toward meeting the ONS strategic goals of advancing the quality of cancer care and patient/staff safety. The 2016 program committee set a goal to increase the number of programs offered annually by 50%, with CEU programs to increase to 6. This permits members more access to programs, information, and networking opportunities. Program evaluations and attendance were tracked. The program committee successfully increased the number of programs offered in 2016 this year by 83% (n=22) and met the CEU-program goal (n=6). Monthly program average attendance increased by 44% (2015: n=43; 2016: n=62). Total number of individual members attending increased by 86% (2015: n=129; 2016: n=240). By meeting the goal to provide more programs, the chapter observed an increase in the number of individual members attending and consequently volunteering locally and nationally, thereby meeting ONS Strategic Goal 2: growing the Society by engaging a diverse mix of nurses caring for patients with cancer. Although programs were more frequent, varied in location, and offered more diversity, only 39% of members participated. Next steps include offering programs to reach the distant members who are unable to physically attend.

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#### **OVERCOMING CHALLENGES IN THE RESEARCH PROCESS.** Carol Tringali, MS, RN, AOCNS®, Retired, Hummelstown, PA; Emily Busko-Ruff, BSN, RN, CCRN, Penn State Health Milton S Hershey Medical Center, Hershey, PA; Leslyn Keil, MSN, RN, CPN, Penn State Health Milton S Hershey Medical Center, Hershey, PA; Bonnie Pugliese, BSN, RN, CPN, Penn State Health Milton S Hershey Medical Center, Hershey,

PA; Elizabeth Rohrer, MSN, RN, CCRN, Penn State Health Milton S Hershey Medical Center, Hershey, PA; Lauren Zarefoss, BSN, RN, CEN, CPN, Penn State Health Milton S Hershey Medical Center, Hershey, PA

Research must be planned with thoughtful attention to design decisions. Challenges that occur while planning and conducting research provide valuable lessons for novice researchers. Nursing Research and Evidence-Based Practice Council (NR&EBP;) provides a forum for advanced practice nurses to mentor direct care nurses in the research process. The purpose of this presentation is to provide a summary of lessons learned from a research team using the five phases of the research process. Realities and challenges encountered while studying a clinical phenomenon using the hospital ward as a naturalistic setting for patient, caregiver, and nurse responses are described. A NR&EBP; sub-group designed the Institutional Review Board (IRB) approved study Pediatric Patient, Parent, and Nurse Perceptions of Satisfaction with Pain Management utilizing the Research Design Process Phases. Challenges were encountered throughout the design process. Time constraints created challenges in decision making during the Conceptual Phase and Design/Planning Phase. Despite meticulous efforts during these phases, issues arose during the Empirical Phase. Plans for resolution were developed: patient age and time from admission eligibility criteria were changed to expand enrollment of qualified patients, and methods for contacting data collectors about eligible patients were changed to better accommodate busy clinician schedules. Upon completion of the first four research design phases, the Pain Study sub-group utilized the model to review challenges encountered and how each was handled to determine opportunities for improvement in future research design work. This model enabled the research team to identify areas of improvement for future research design. Direct care nurses acknowledged learning valuable lessons about conducting research: each phase takes time, but prepares the team and project for the next design phase; the structure of the phases and a timeline are important for maintaining focus at each phase; problems and barriers that arise need to be managed promptly according to the established timeline. Despite meticulous efforts, issues arose during research study design phases. These challenges provided valuable lessons for novice researchers as they examined problems and developed plans to overcome setbacks, demonstrating that success requires vigilance in oversight of the study, flexibility to make changes, and belief in the research process. Experience gained by using the Research Design Process Phase model will be shared with nursing via the of NR&EBP; Council electronic Research Tool Kit.

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#### **THE COLLABORATIVE SUPPORT MODEL: A UNIQUE PROCESS TO ON-BOARD ONCOLOGY INFUSION NURSES.** Kayce Tugg, MSN, RN, AOCN®, Baptist Health South Florida, Miami, FL; Diane Kramer, BSN, RN, P-PCA, Baptist Health South Florida, Miami, FL

The Collaborative Support Model (CSM), which originated at Baptist Health South Florida (BHSF) is an adjunct to the on-boarding process designed to ensure the nurse is supported and accepted in a transparent way by the entire team on their clinical unit. It is a proactive approach developed to support, educate, and mentor the nurse as well as identify the nurse's needs for improvement early in the on-boarding process while simultaneously recognizing the suitability for the organization. In anticipation of the opening of a premier research and outpatient oncology facility, many more nurses (both oncology experienced and inexperienced) needed to be hired to join the incumbent nurses for staffing the 60 chair chemotherapy infusion suite. The purpose of this project was to implement and evaluate the CSM



model for on-boarding in the oncology infusion suite in order to create a cohesive, trusting work environment. This on-boarding practice change included conducting CSM meetings on a regularly scheduled basis utilizing a customized meeting template/documentation tool comprised of expected learning behaviors with evaluative criteria. At each meeting, the new nurse meets with the unit team (the unit manager, unit-based educator, clinical learning educator and preceptor) for discussion and debriefing. The oncology nurse team members completed CMS evaluations. Numerous themes emerged including: CSM impact on member's roles, team dynamics, retention, competency, professional growth and accountability, engagement, nursing skill development, trust, and unit enculturation. The CSM was initially conceived to support the newly licensed nurse during their residency program. The model has since expanded to newly hired experienced nurses as well as nurses transitioning to a new specialty. Many specialty units, in collaboration with the CSM creator, have designed copyrighted CSM template/documentation tools specific to their nursing specialty. This most recent undertaking in the oncology infusion nurses has demonstrated a positive impact on unit culture. The CSM is a simple, straightforward technique that adds the compassionate component to identifying, supporting and monitoring the new oncology staff's learning needs. This process assists in recognizing the uniqueness of each nurse in order to create individualized outcome focused strategies to meet their specific learning needs while simultaneously supporting incumbent nurses' in the precepting process of the new staff; thus, creating a transparent, trusting and cohesive unit.

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**ASSESS FOR TWO OR LESS: AN EDUCATIONAL PROGRAM TO PREVENT PRESSURE INJURIES IN ONCOLOGY PATIENTS.**  
Christine Wallace, MSN, RN, ACNS-BC, PCCN, UH Seidman Cancer Center, Cleveland, OH; Jennifer Sullivan, MSN, RN, ACNS-BC, UH Seidman Cancer Center, Cleveland, OH

Pressure injuries remain at the forefront for clinical teams, healthcare managers, and governing bodies due to their significant negative impact on patient and institutional outcomes. The Joint Commission's 2016 call to action encourages identifying specific risk factors for patients and tailoring care plans to each factor. Oncology nurses' ability to appropriately screen for and prevent pressure injuries is critical, as the effects of cancer and cancer treatment pose additional risks for patients. Despite the significance of this issue, nurses often do not conduct risk assessments regularly or correctly. The purpose of this educational offering was to change nurses' attitude, knowledge, and intention to assess for individual pressure ulcer risk factors using the Braden Scale and to prevent pressure injuries by tailoring care plans. The Theory of Planned Behavior guided this project. Pressure injury NDNQI data from 2014 and 2015 trended above the mean for three of four inpatient oncology units. Preliminary chart audits revealed 50% of Braden Scales were completed daily. Nurses lacked awareness of how Braden subscales are used to identify specific risk factors and how to tailor care plans to those factors. Classes reviewed proper utilization of the tool and focused on oncology risk factors and Braden subscales as opportunities for targeted interventions. Identification and communication of subscales scoring two or less were stressed, as these indicate risk factors for skin breakdown. Fifty percent of all inpatient nurses and staff attended. Participants' knowledge, attitude, and intention to assess and intervene for pressure ulcer risk factors was assessed. Post-program evaluation showed an increase in attitude, confidence, and intention to change risk assessment and intervention behavior. Two major factors, intent to communicate and work together and increase in responsibility, showed the most significant improvement. Nurses rated their overall knowledge of how to correctly complete the Braden

Scale higher post education. Participants' charts were audited one month after the class and showed 100% completion of the Braden Scale (n=50). Post-education NDNQI 2016 data will be presented. An educational program targeting nurse knowledge and utilization of the Braden subscales was effective in changing oncology nursing practice. Utilization of the subscales helps identify at-risk oncology patients who may have high overall total scores, yet are at risk for pressure injuries because their individual subscales are less than optimal.

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**DEVELOPING A COMPREHENSIVE RESOURCE GUIDE FOR CHEMOTHERAPY PATIENTS.** Regina White, RN, MS, OCN®, Moffitt Cancer Center, Tampa, FL; Anne Bidelman, BA, Moffitt Cancer Center, Tampa, FL; Kim Amtmann-Buettner, BA, Moffitt Cancer Center, Tampa, FL; Vicki Vann, MS, ARNP, OCN®, Moffitt Cancer Center, Tampa, FL

Patient education plays a vital role in a patient's cancer journey. Patients undergoing chemotherapy need consistent and up-to-date information on their chemotherapy regimen, potential side effects, and their management. Press Ganey® scores indicated an opportunity for improvement in the area of staff explaining the management of chemotherapy side effects with patients. The Patient Education department and the Patient Library staff have collaborated to facilitate the creation and distribution of chemotherapy packets. These packets contained nearly two-dozen individual tools related to chemotherapy; however, it was found to be used inconsistently. A query of all outpatient areas found many staff unaware of its existence, but all felt it was a valuable resource. At a Patient and Family Education meeting, all members (including patient representatives) were asked which chemotherapy side effects they felt were most common. Members were asked to review what the present packet contained, and to provide input on what should be removed/included. The next step was to consolidate the information regarding side effects of chemotherapy. Patient education specialists updated and revised 12 individual side effects handouts. A cover sheet titled "Managing Side Effects of Chemotherapy" was developed. All 12 patient education tools were placed together in one handout. It was agreed that this would be placed on the right side of the packet so that the words "Managing Side Effects of Chemotherapy" would be front and center when the packet was opened. All other information would be on the left side of the packet. Finally, the team addressed increasing staff awareness of the new and improved chemotherapy packet for patients. Messages were sent to managers, information was related in hospital and staff meetings, and an article was published in "Nurses Notes." Chemotherapy packets are available in English and Spanish and can be ordered online. Packets can be handed out by any nurse working with chemotherapy patients. They can be placed electronically onto the patient's Portal account. The number of pieces in the packet has been reduced from 21 to 8. Press Ganey® scores are improving. Future consideration is to ensure all patients undergoing chemotherapy have access to this packet, are aware of potential side effects, how to manage them and who to call for help.

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**THE HANDS HAVE IT: USING A UNIQUE EDUCATIONAL VIDEO TO IMPROVE HAND HYGIENE (HH) COMPLIANCE.**  
Susan Wintermeyer-Pingel, MS, RN, ACNS-BC, ACNP-BC, University of Michigan Health System, Ann Arbor, MI; Julie Murray, BSN, RN, UMHS, Ann Arbor, MI; Chelsea Harding, BSN, RN, OCN®, UMHS, Ann Arbor, MI

The simple task of proper HH is the single most important task that can prevent the spread of HAI's (Hospital Acquired

Infections) to hospitalized patients. CDC statistics suggest that health care providers typically wash their hands less than 50% of the time when they should be performing HH. This Inpatient Hematology/Oncology unit's overt and covert audit results were unfavorable (as low as 38%) and the need to create a culture change to increase unit compliance became apparent. This unit identified barriers to achieving the institutional goal of >90% compliance set by the Health System and created a unique educational video to be used in addition to hospital wide efforts. The purpose of this educational video was to increase HH compliance to >90% through reducing barriers and increasing staff awareness of proper HH. In order to improve hand hygiene compliance, a multidisciplinary team of nurse leaders, nursing staff and environmental services worked together to create a unique educational video using fake germs. "The Hands Have It" video illuminated places where microorganisms can be spread during a typical patient nurse interaction. <https://www.youtube.com/watch?v=7d0JQY6jCYg&feature=youtu.be>. The unit also began covert audits by leadership and peers to provide immediate feedback to non-compliant staff. Covert auditing of clean in and clean out technique by institutional staff improved to >70% compliance for seven months. Unit peer and leadership audits have demonstrated > 90% compliance consistently. The unit also was institutionally recognized for their positive performance and asked to present their 7 Habits of Hand Hygiene at the Health System. Unit HH habits include: Being comfortable to hold each other accountable, not being afraid to kindly remind others of proper HH, involving multidisciplinary staff in HH education, performing daily covert peer audits to increase HH awareness, the dissemination of the educational video to unit staff, performing HH check offs, and increasing patient awareness of when HH is being done. Staff are now more aware of opportunities for improved HH during day to day tasks such as touching door handles, keyboards, furniture, or crossing thresholds. There are still areas for improvement to reach 90%, however, proper HH is part of the unit culture and an area of staff focus.

### 392 INCREASING RADON AWARENESS IN NURSES: THE NC EXPERIENCE. Jane Worrell, MSN, RN, OCN®, Duke Cancer Center of Raleigh, Raleigh, NC; Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Institute, Durham, NC; Phillip Gibson, BA, MS, NC DHHS, NC Radon Program, Raleigh, NC

Radon is the second leading cause of lung cancer and first leading cause in non-smokers. When tobacco (first-, second-, or third-hand smoking) and radon exposures are combined, the risk for developing lung cancer is significantly increased. Although radon exposure is preventable, many healthcare professionals (HCP) are not aware of radon's effects, therefore, do not discuss the importance of home-testing with their patients. The purpose is to describe a NC Advisory Committee on Cancer Control and Coordination (NCACCCC) initiative focused on educating HCP about radon and its health effects in effort to increase testing and reduce exposures leading to lung cancer. The NCACCCC Prevention Subcommittee's primary goal is to activate strategies to prevent cancer development: for 2016-17, they prioritized increasing radon awareness. The NC Radon Program has targeted stakeholders of real estate and construction industry effectively, yet lacked a comprehensive program for engaging HCP to discuss radon exposure and home testing as a means to reduce lung cancer cases. Using the Spectrum for Prevention Framework, interventions targeted to engage HCP were: 1) search for literature to use in educating HCP, 2) offer radon awareness presentations, 3) partner with Lung Cancer Initiative at community events, and 4) engage Triangle ONS chapter (TONS) for community outreach. We found a lack of literature aimed to

educate HCP about radon and its effects; we successfully submitted 4 manuscripts to nursing journals targeting primary care and oncology nurses/nurse practitioners (2 manuscripts provide CE credit). Several proposals for presentations at HCP conferences were submitted, only 1 educational presentation to oncology nurses was accepted (upcoming October 2016; anticipate 50 attendees+ additional webinar participants; all will receive a radon test kit. One health fair targeting women with limited healthcare access covering 12 counties was completed: 12 TONS members were trained with 272 kits were distributed; follow-up calls to fair participants indicate 75% intend to test their homes this winter; a second set of follow-up calls in the winter is planned. We have provided radon awareness to over 12,000 nurses. The Spectrum of Prevention framework guided strategies to increase radon awareness to individual consumers, HCPs, healthcare organizations, and community partners. Increasing radon awareness in NC nurses is ongoing with 2016 events being successfully implemented to ultimately reduce lung cancer cases in NC.

### 393 NURSE SUMMER INTERNSHIP PROGRAM: A 375-HOUR JOB INTERVIEW. Cristi Zavatti, BSN, RN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Jennifer Missland, BSN, RN, OCN®, CCRN, Roswell Park Cancer Institute, Buffalo, NY; Jill Kaczor, MEd, RN, Roswell Park Cancer Institute, Buffalo, NY; Margarita Coyne, MS, RN, NEA-BC, CENP, Rowell Park, Cancer Institute, Buffalo, NY

The Nurse Summer Internship Program provides an opportunity for nursing students to develop clinical skills while working at the bedside with a Registered Professional Nurse (RN). The intent of the internship is to provide education, retention and recruitment. The internship provides much needed and sought after real-life clinical and specialty experience. During the 8-10 weeks of the internship, interns gain intimate knowledge of oncology and the nursing profession; while the hospital gains valuable information about potential employees that includes work ethic, skill set and intellectual and emotional intelligence. As the Program has developed, the applicant pool has expanded. For example, in 2016 there were 130 applicants for 20 positions. The purpose was to provide student nurses with a summer internship program in oncology that instills student confidence, improves clinical skills, and a deeper understanding of oncology and the nursing profession. Provide the oncology institution with a 375-day job interview from each intern. Interns are paid during the 37.5-hour/10-week Program. Currently, 20 interns are accepted from a rigorous application process who are entering their senior year. Once the final intern roster is established, Nursing Education considers the placement preferences of the interns and schedules them on the two units of their choice with a primary preceptor volunteer (e.g. medical-surgical, bone marrow transplant, intensive care). The Program is divided into two rotations (4-5 weeks) including experiences in additional specialty areas of nursing such as Wound and Ostomy care, Infection Prevention and Control, and Clinical Research Services. The interns complete an evidence-based practice project and presentation. The interns complete a self-assessment both pre and post program in which they rate their knowledge and skill level utilizing the Likert-type scale. Results of the data provided a statistically significant increase in confidence ( $p < 0.001$ ). The narrative comments revealed improvements in clinical skills, and a deeper understanding of oncology and the nursing profession. The Program bridges the gap between the classroom and the bedside. It eases the transition into practice. The interns return to start their senior year with confidence, aptitude and realism. Alumni from the Program have been recruited for employment in this hospital; 20% recruitment rate. In addition to being familiar with oncology, these employees have a shorter orientation period and seamlessly join the culture and team.

### **DECREASING WASTE OF BLOOD PRODUCTS ON A HEMATOLOGY ONCOLOGY UNIT.** Kelly Zwiebel, BSN, OCN®, New York Presbyterian Hospital, Weill Cornell, NYC, NY

Blood products are at a worldwide shortage and often are wasted for preventable reasons. Blood products are expensive and are in high demand. In 2015, the leukemia and lymphoma inpatient unit at an academic medical center wasted 16 units of red blood cells (RBC), which was an estimated loss of \$4000. This was the highest frequency wasted product across the center. Overall the medical center wasted a total of 176 units or \$44,880. Through observations and discussion with nursing colleagues it was determined that waste could be prevented with awareness and additional education of medical and nursing staff. The goal of the project was to reduce blood product waste by 50% from 2015. A review of current policies and procedures was performed, as well as interviews with nurses about perceived barriers. An interventional tip sheet was developed and educational sessions were rolled out in January of 2016 with all team members. All nurses, physician assistants, and doctors participated in the educational sessions over the course of 1 month. Sessions focused on education of transfusion policies, consideration for oncology patients, and increased communication among the interdisciplinary team. Each session was ended by highlighting the burden and generous gift of blood donations. This connects a human element to something which is sometimes treated like another piece of medical technology. Data was tracked via the transfusion center from January through September 2016. The leukemia and lymphoma unit has wasted three units of blood which is approximately an 80% decrease from 2015 thus far. Through awareness and education blood waste can be minimized. Benefits include a cost reduction as well as improved efficacy of utilization. This process could be replicated amongst other units and staff within the medical center and other institutions who are experiencing a high rate of blood waste.

## **Research Poster Abstracts**

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### **USING SOCIAL MEDIA TO RECRUIT YOUNG ADULTS WITH ADVANCED CANCER FOR AN ONLINE BEHAVIORAL INTERVENTION STUDY.** Katharine Adelsein, PhD, RN, ANP-BC, Vanderbilt University School of Nursing, Nashville, TN; Jessica Keim-Malpass, PhD, RN, University of Virginia School of Nursing, Charlottesville, VA

Young adults with cancer have traditionally been difficult to recruit for clinical research studies. However, with the emergence of young adults as a distinct population with unique disease biology and psychosocial concerns, it is imperative to increase their participation in research. Given the current Internet usage of young adults with cancer, online recruitment via social media may yield increased participation in clinical or behavioral research studies. The purpose of this study was to explore an exclusively online approach to recruitment of young adults with advanced cancer to an online behavioral intervention study. The study was promoted using social media platforms including Twitter, Facebook, and Instagram. Researchers spent \$375.34 on Facebook advertisements that focused on promoting the study itself, promoting the study's Facebook page, and promoting the study website. In addition to paid advertisements, researchers sought out, joined, and actively engaged in various disease- and age-specific online communities. Once established as community members, researchers disseminated the study flyer within the online community space. Twenty-six potential participants expressed interest in the study. Twenty

of the potential participants learned of the study through their online communities and three learned of the study from online friends. Three learned of the study from other social media sites including Twitter. Paid advertisements did not yield any participants. Nineteen participants were ultimately enrolled in the study. Three potential participants were ineligible due to age or stage of disease and four declined to participate. The enrolled participants represented all geographic regions of the continental U.S. as well as four international sites. Researchers found that posting advertisements on forums frequented by young adults with cancer was not enough to engage potential participants. Interest and study participation increased when researchers joined and participated in online communities naturally formed by young adults with cancer. These results provide support for adapting the traditional model of Community-Based Participatory Research to a digital world to more deeply engage young adults in the research process. Future research should focus on strategies to maximize the engagement potential of online forums such as Instagram and Snapchat. This study expands on existing literature regarding online recruitment, demonstrating that joining and engaging in virtual communities may be an effective way to engage young adults in research without spending large amounts of money.

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### **EXPLORING THE EFFECTS OF A DIAGNOSIS OF ACUTE MYELOID LEUKEMIA ON THE FAMILY SYSTEM.** Tara Albrecht, PhD, ACNP-BC, VCU, Richmond, VA; Egidio Del Fabbro, MD, Virginia Commonwealth University, Richmond, VA; Adam Sima, PhD, Virginia Commonwealth University, Richmond, VA; Angela Starkweather, PhD, ACNP-BC, CNRN, FAAN, University of Connecticut, Storrs, CT

Acute myeloid leukemia (AML) is a serious life-threatening cancer that is associated with high mortality rates, toxicity/symptoms, lengthy hospitalizations, and poor health-related quality of life (HQoL). Stress associated with the diagnosis of AML and its treatment can have far-reaching effects on the patient as well as their family. The diagnosis of AML requires the family to quickly adjust to the absence of their family member during treatment. Financial uncertainty and possible employment strains only add to the stress the family must manage. Current evidence has shown that family members of individuals with cancer experience decreased HRQoL, impaired immune function and increased risk of co-morbid conditions such as cardiovascular disease. However, very little research has been conducted regarding the relationships among psychological symptoms, stress response and family needs in the context of the initial treatment period for families experiencing a diagnosis of AML. The purpose of this preliminary study was to address this knowledge gap, by using a longitudinal descriptive design to preliminarily explore family needs, psychological symptoms and distress and biological correlates of stress in patient-primary family member dyads of newly diagnosed adults undergoing treatment for AML. The Distress Thermometer, Family Inventory of Needs, Perceived Stress Scale, Numeric Rating Scales of Anxiety and Depression and Salivary Stress Markers were collected from the 9 patient-family dyads at the time of diagnosis and every 2-weeks during the hospitalization for 6-weeks total. Descriptive statistics of demographic, disease and patient and family-reported measures and change over time will be explored. A linear mixed effects model will be used to model time effects of the patient and family-reported measures and biologic variables (alpha-amylase and cortisol levels). Data collected from this study is currently in the process of being prepared for analysis. The findings from this study will provide new knowledge surrounding the experience of families and simultaneously the biobehavioral responses of patient/family dyads during the initial diagnosis and treatment



for AML, an area that has yet to be explored. The results of this preliminary study will also guide the development of innovative approaches aimed to improve symptom management and HRQoL for patients with AML and their family members.

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**EXPLORING COMPENSATORY BEHAVIORS USED TO MAINTAIN COGNITIVE FUNCTION IN ADULT SURVIVORS OF PRIMARY BRAIN TUMOR.** Deborah Allen, PhD, RN, CNS, FNP-BC, AOCNP®, Duke Cancer Institute, Durham, NC; Virginia Neelon, PhD, RN, University of North Carolina, Chapel Hill, NC; Sophia Smith, PhD, MSW, Duke University School of Nursing, Durham, NC

Surveillance of late effects has gained attention as treatment advances improve survival rates. Adult survivors of primary brain tumors (PBT) report persistence of cognitive complaints after treatment completion. While some research has explored neuropsychological evaluations and subjective complaints, little is known about compensatory strategies/behaviors (CS/B) used to perform cognitive tasks for everyday function. This study describes CS/B used by PBT survivors during cognitive evaluations as compared to health controls and explores the relationship of cognitive reserve in the context of CS/B use. Eligibility requirements included: MMSE > 24, completed oncology treatment for one year, stable tumor status. A cross-sectional descriptive-exploratory design was used with 0 subjects completing a structured 100-minute session (neuropsychological battery; subjective assessments of cognitive function, symptom presence, quality of life). A subset of subjects (n=7) agreed to be video-recorded during the study procedures and completed a structured 30 minute interview to discuss their perceptions of everyday function and change since diagnosis. An additional sample of 7 healthy adults matched for age-, gender-, and education were recruited and completed the same study session while being video-recorded for behavioral comparison and interviewed for their perceptions of everyday function. Recordings were coded and categorized into themes using constant comparative analysis. The subset sample averaged 50 years old (SD 9.7), were predominately women (57%), completed 12 years education; PBT subjects high-grade gliomas, ranged 2-15 years since diagnosis. PBT subjects had more objective and subjective cognitive impairment/complaints, specifically with memory and attention domains, and rated them more severe than healthy controls. CS/B included purposeful counting, repeating instructions, storytelling throughout session, delaying. Since diagnosis, subjects with PBT performed an average of 5 cognitively-engaging activities weekly as compared to 11 activities reported by healthy controls. PBT subjects reported stopping anywhere from 4-12 cognitively-engaging activities since diagnosis. PBT subjects with lower cognitive reserve had greater cognitive impairment, reported presence of more symptoms, and had stopped more cognitively-engaging activities. By identifying CS/B that adult survivors of PBT use during cognitive evaluations, as well as their engagement in daily cognitive activities, we can begin to determine which strategies may aid or hamper cognitive processes and everyday function. These determinations may lead to identifying those at cognitive risk so early interventions can be initiated.

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**ILLNESS-RELATED CONCERNS IN CHILDREN OF MOTHERS WITH BREAST CANCER: TESTS OF PREDICTIVE THEORETICAL MODELS.** Hebah Almulla, MSN, BSN, RN, University of Washington, Seattle, WA; Frances M Lewis, RN, MN, PhD, FAAN, University of Washington, Seattle, WA

An estimated 185,640 school age children were newly impacted by their mother's cancer in 2016, each of whom is known to

experience illness-related concerns that can negatively impact their coping and adjustment to the illness. However, no study has quantitatively tested a theoretical predictive model of these child reported illness-related concerns. From qualitative studies, six domains of attributed illness concerns can be identified: worries about the changes imposed on the family's routine and resources, the mother's medical appointments or hospitalization, the effect of the illness on the mother's well-being, the mother's illness getting worse or becoming permanent, existential fears about the child or the family, and the mother's death. The purpose of the current study is to test six multivariate predictive models of the illness-related concerns that the child explicitly attributes to the mother's cancer. Five predictors were extracted from the literature for each model: child age, child gender, treatment status of mother, maternal depressed mood, and the security of parent-child attachment. Secondary analysis was carried out on baseline data obtained from 146 mothers and their 146 school-age children, prior to randomization from a recently completed clinical trial, The Enhancing Connections Program (R01-CA-78424). Linear regression models were used to analyze the data obtained from standardized measures completed by the mothers and their children. Study results revealed that children reported greater illness-related concerns under two conditions: when their mother was more depressed and when the child wanted more certainty about the mother's attachment. Contrary to prediction, the age of the child, gender of the child, and the mother's treatment status did not significantly predict the child's illness-attributed concerns. Treatment for breast cancer is a time when the child experiences heightened illness-related concerns and feels less securely attached to the mother or the mother is more depressed. Nurses are in a prime position to help mothers know the importance of their interacting and behaving with the child in ways that demonstrate secure mother-child attachment. It is the child's view of the mother's parenting and mood, not objective qualities of the disease or treatment, that predict the child's concerns about the illness. Future intervention studies should focus on enhancing secure mother-child attachment and assisting mothers better manage their depressed mood.

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**ASSESSING CONCERNS OF STEM CELL TRANSPLANT SURVIVORS USING A QUALITY OF LIFE FRAMEWORK.** Linda Baer, MSN, NP-C, AOCNP®, University Hospitals Cleveland Medical Center, Seidman Cancer Center, Cleveland, OH; Lauren Brister, MSN, NP-C, AOCNP®, University Hospitals Cleveland Medical Center, Seidman Cancer Center, Cleveland, OH; Hillard Lazarus, MD, FACP, University Hospitals Cleveland Medical Center, Seidman Cancer Center, Cleveland, OH; Madeline Weiman, Student, Case Western Reserve University, Cleveland, OH; Susan Mazanec, PhD, RN, AOCN®, Case Western Reserve University, Cleveland, OH

More patients have the opportunity to undergo aggressive treatment of stem cell transplantation (SCT) for leukemia, lymphoma and myeloma in part due to expanding sources of stem cells and less toxic conditioning regimens. Transplant survivors express significant concerns regarding the long term physical, social, psychological and spiritual effects of SCT, which impact their quality of life and re-entry into personal and social lives. There is limited research identifying the most meaningful concerns for this vulnerable and complex group of cancer survivors. The primary purpose of this study was to describe and better understand the most salient concerns of patients following SCT in preparation for the development of a nurse practitioner led survivorship clinic. Using a cross-

sectional, descriptive design, a 39 item survey, assessing physical, social, emotional and spiritual concerns and needs, was mailed to a convenience sample of 219 survivors who had received a SCT between 2009 and 2014. Participants rated the intensity of concerns on a six-point scale. They also reported how well their concerns were addressed by the transplant team. Descriptive statistics were used to identify the most prevalent moderate/high concerns by quality of life domain. Seventy-four (34%) surveys were returned. The most prevalent moderate/high concerns were in the emotional domain with 52% of respondents identifying fear of cancer returning and a new cancer developing. Moderate/high physical concerns of fatigue, body changes, and balance difficulties were reported by 40, 39, and 36%, respectively. Financial concerns were the most prevalent in the social domain, reported by 64%. More than half of respondents had spiritual concerns and these were the least addressed by the transplant team. In general, findings were consistent with reported needs assessments of survivors with mixed cancer diagnoses. Oncology nurses are often focused on meeting needs related to the physical domain, but the survey results underscore the critical need to address all four quality of life domains in cancer survivors. The need to develop comprehensive survivorship programs is recognized, but the means and structure of an effective program are unclear and require rigorous study. The results of this needs assessment survey will help shape the focus of a survivorship clinic for patients at the transition from acute post-transplant care to long-term health maintenance.

#### **400 A COMPARISON OF FATHERS' AND MOTHERS' VERBAL AND NONVERBAL BEHAVIORS FOR CHILDREN DURING CANCER PORT START PROCEDURES.** Jinbing Bai, PhD, MSN, RN, Emory University Nell Hodgson Woodruff School of Nursing, Atlanta, GA

Parent communication behaviors play a critical role in children during painful and distressing cancer port start procedures. Parental caring behaviors can reduce child's pain and distress levels during these procedures. Mothers' behaviors have been well reported in the literature as they are frequently identified as the primary caregiver of their child; fathers' behaviors show significant meanings to their child and can influence child's pain responses during cancer procedures. Nevertheless, paternal behaviors are rarely investigated. The purpose of this study was to compare fathers' and mothers' verbal and nonverbal communication behaviors for children during cancer port start procedures. Forty-three children, each with 2-3 video-recordings of port starts, were selected from a parent study (R01CA138981; PI: L. Penner). In each video, three "slices" ranging from 3 to 5 min (pre-, during and post-port starts) were selected to code parental behaviors. We coded the designated primary caregiver's behaviors for each child if multiple caregivers were present. Two trained raters coded the video data using the 18-item Parent Caring Response Scoring System, which evaluates parental verbal and nonverbal caring behaviors versus non-caring behaviors. All video data were coded by the StudioCode© software based on the timed-event coding strategy. Frequency and percentage were reported for each verbal and nonverbal behavior. The Mann-Whitney U test was conducted to compare fathers' versus mothers' verbal and nonverbal behaviors. Our sample included 34 mothers and 9 fathers. More mothers showed verbal caring behaviors (e.g., comforting, informing/explaining and validating) and nonverbal supporting/allowing behaviors than fathers; more fathers showed verbal criticizing behaviors than mothers. Based on the Mann-Whitney U test, mothers showed significantly more verbal caring behaviors (e.g., avoiding assumption and informing/explaining) and nonverbal caring behaviors (e.g., eye con-

tact and distance close enough to touch) than fathers; fathers showed significantly more verbal non-caring (e.g., criticizing) and nonverbal non-caring behaviors (e.g., less availability) than mothers. Mothers showed more caring behaviors but less non-caring behaviors as compared to fathers involved in children's cancer procedures. These differences have to be considered in the clinical education and management of painful procedures. This is the first time to compare fathers' and mothers' caring and non-caring behaviors during repeated cancer port starts.

#### **401 PERCEIVED ECONOMIC HARDSHIP AND DISTRESS IN ACUTE MYELOGENOUS LEUKEMIA.** Justin Bala-Hampton, DNP, MPH, RN, AGACNP-BC, PCCN, University of Pittsburgh, Houston, TX; Margaret Rosenzweig, PhD, CRNP-C, AOCN®, FAAN, University of Pittsburgh, Pittsburgh, PA; Linda Dudjak, PhD, RN, University of Pittsburgh, Pittsburgh, PA; Tara Albrecht, PhD, ACNP-BC, RN, Virginia Commonwealth University, Richmond, VA

While emerging research is quantifying the economic hardship and associated distress of cancer care, there has been little attention focused specifically on acute myelogenous leukemia (AML), a specific cancer with great potential economic hardship. Unlike most solid tumor treatment, leukemia treatments require multiple, sequential acute care admissions, and possible long and frequent periods of isolation from support systems. The purpose of this study was to explore the concept of economic hardship and economic distress among a cohort of adult patients at least 6 months post-diagnosis of AML. currently receiving outpatient treatment at a National Cancer Institute (NCI) designated cancer center was conducted. Three surveys were utilized for this assessment of economic distress, toxicity and demographics. The Comprehensive Score for Financial Toxicity: Patient Reported Outcome Measure (scores ranged 0 to 44; with lower values indicating greater economic toxicity, and higher values indicating lesser economic toxicity) was used to measure economic distress; the University of Pittsburgh School of Nursing Demographics Questionnaire to measure demographics and the Measure of Economic Hardship (Scores range 20 to 83, higher scores = more hardship) used to assess economic hardship. Paper surveys were offered to eligible patients upon arrival to clinic. The study was conducted from June 1, 2015 through December 1, 2015. The survey was completed by 26 of 32 eligible patients. The sample was equally divided in gender, and included a majority of participants who were insured and well educated. The population sampled was largely white (80.8%), married (80.7%), highly educated, with a mean age of 58.5 (SD 14.1), and the majority had annual incomes over \$50,000/year. Of the 9 sociodemographic factors measured, three significant correlations to economic hardship were found: age ( $p=0.04$ ), basic necessities ( $p=0.04$ ), and economic adjustment ( $p=0.01$ ). The median COST score was 17 (Scores < 17 [49.6 [SD 6.5]; scores >17 (40.9 [SD 7.1] [ $p=0.019$ ])). These results suggest that perceived economic hardship and subsequent distress are present among patients with AML. Both economic concern and distress appear to be unrelated to income or insurance. Economic toxicity during AML treatment appears to be related to distress. Interdisciplinary teams may be needed to mitigate economic hardship through diagnosis, follow-up and readmissions for patients and families with AML.

#### **402 INTERRELATIONSHIPS OF COMPASSION FATIGUE, JOB SATISFACTION, AND LIFE BALANCE ACTIVITIES IN ONCOLOGY NURSES.** Mary Elizabeth Barnhouse, BSN, RN, OCN®, Medical City Dallas Hospital, Dallas, TX; Becky

Spencer, PhD, RN, IBCLC, Texas Woman's University, Denton, TX

Compassion fatigue is characterized by physical, spiritual, and emotional exhaustion that is caused by witnessing trauma and suffering. Nurses are at a high risk for experiencing compassion fatigue because they engage in intense empathic, caring relationships with patients and their families in high stress working environments. Evidence in the literature suggests that oncology nurses have increased incidence of compassion fatigue than nurses from other specialties. The purpose of this study was to assess the presence of compassion fatigue among nurses working in oncology and the relationships among compassion fatigue, job satisfaction, and life balance. A descriptive correlational study was conducted. Three surveys were deployed through Survey Monkey and by paper copy including: 1) the ProQOL which measures secondary traumatic stress, burnout, and compassion satisfaction, 2) the Nursing Work Index Revised scale which measures job satisfaction among nurses, and 3) the Life Balance Inventory scale measured life balance through perception of participation in desired activities. 60 of 85 nurses invited to participate completed all three surveys for a response rate of 71% response rate. An average score of 57 on both the Burnout (BO) and Secondary Traumatic Stress (STS) scales of the ProQOL scale represent increased risk for compassion fatigue. None of the oncology units represented (Bone Marrow Transplant, Medical Oncology, and Surgical Oncology) had average scores above 57 on either scale. A multiple linear regression was calculated to predict job satisfaction based on BO and STS. Only BO was predictive of job satisfaction. The interaction term between Life Balance and BO accounted for a significant proportion of the variance in job satisfaction ( $F(3, 56) = 3.9112, p < .013$ ), with an  $R^2 .230$ . Life balance appears to moderate the relationship between burnout and job satisfaction among oncology nurses, but not the relationship between secondary traumatic stress and job satisfaction. Interventions designed to help nurses achieve better life balance could improve burnout rates and job satisfaction need to be designed and tested. More research regarding the factors associated with secondary traumatic stress is necessary.

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**IMPACT OF SPOUSAL NUTRITION KNOWLEDGE, ATTITUDES AND BEHAVIORS ON LATINO MALES RECEIVING ANDROGEN DEPRIVATION THERAPY FOR LATE STAGE PROSTATE CANCER.** Cecille Babilio, MSN, RN, PHN, University of California Los Angeles, Los Angeles, CA; Felicia Hodge, DrPH, University of California Los Angeles School of Nursing, Los Angeles, CA

The increased use of androgen deprivation therapy (ADT) over the past decade has made it the mainstay treatment for advanced stage prostate cancer. Although there are significant survival benefits to the treatment, ADT has been associated with several adverse conditions, such as an increased risk of type 2 diabetes (T2D) - presenting in as little as three months following ADT treatment. ADT-induced insulin resistance due to increase in visceral fat and decrease in lean body mass can lead to an increased risk of T2D. Latino men are predisposed to diabetes risk factors, and at even greater risk, as they are more likely to be diagnosed with late stage prostate cancer than non-Hispanic White men. Improved metabolic health can mitigate the risk of ADT-induced T2D. Identifying the impact of wives' dietary knowledge in promoting spousal improved metabolic health is critical. Assessing wives' level of nutritional knowledge, attitudes and behaviors in a cross-sectional study could provide information to minimize men's risk of diabetes while on ADT treatment. Data collected during the study include levels of knowledge of the various food groups in such areas as nutrient, fat and saturated

fat, salt and sugar, fiber and cholesterol, and the types of food purchased by wives for home meals. The study will measure the wives' practice of reading and understanding food labels and the choices made to prepare a healthy diet. Perceptions of dietary practices by males and their wives are important to guide intervention as certain dietary behaviors/practices may be linked to various health problems. These areas of investigation will be assessed from data collected in a self-administered survey of 120 wives of Latino men receiving ADT for late-stage prostate cancer. Ultimately, the outcome of this study will inform and guide the development of dietary interventions for men with prostate cancer. The findings from this study will inform and guide policy makers in the creation of health policies that have broad implications for the reduction of obesity, metabolic syndrome and associated diseases for Latino families. Nursing key considerations and strategies to inform culturally tailored nutrition guidelines to improve metabolic health of men diagnosed with prostate cancer and receiving ADT will be presented.

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**VARIANTS IN DNA REPAIR GENES ASSOCIATED WITH COGNITIVE FUNCTION IN WOMEN WITH BREAST CANCER.** Catherine Bender, PhD, RN, FAAN, University of Pittsburgh, Pittsburgh, PA; John Merriman, PhD, RN, AOCNS®, University of Pittsburgh, Pittsburgh, PA; Theresa Koleck, RN, PhD, Columbia University, New York, NY; Susan Sereika, PhD, University of Pittsburgh, Pittsburgh, PA; Yehui Zhu, RN, BSN, MSN, University of Pittsburgh, Pittsburgh, PA; Yvette Conley, PhD, University of Pittsburgh, Pittsburgh, PA

Compared to age and education-matched women without cancer, some women with breast cancer have poorer cognitive function before beginning adjuvant therapy and deterioration in cognitive function with therapy. Poorer cognitive function with cancer and cancer therapy may represent accelerated aging with multiple potential underlying mechanisms including weakened DNA repair. In our preliminary work, using group-based trajectory modeling, we identified subgroups with distinct trajectories of cognitive performance for three, targeted domains determined to deteriorate with adjuvant therapy, executive function, concentration and working memory. For executive function, three subgroups were identified, "low", "average", and "high". For concentration, three subgroups were identified, "low", "average", and "high", and for working memory two groups were identified, "low" and "high". We then examined whether variations in single nucleotide polymorphisms (SNPs) in candidate genes involved in DNA repair (PARP1, ERCC2, ERCC3, ERCC5) were associated with trajectories of cognitive function at pre-therapy and at 6 month intervals through the first 18 months of therapy in 126 postmenopausal women with breast cancer and at matched time points in 66 controls. Cognitive function was assessed with a neuropsychological battery; genotyping was accomplished using iPLEX multiplex assays. Multinomial logistic regression was used to identify associations between gene variants related to DNA repair and cognitive function subgroup membership. We considered age, education, cancer therapy (chemotherapy+anastrozole, anastrozole alone), mood, fatigue and pain as covariates. For executive function, compared to the average subgroup, a PARP1 gene variant, rs2271347, predicted membership in the low subgroup (adjusted odds ratio [AOR]=3.87, p[corrected]=.015), and an ERCC5 gene variant, rs751402, predicted membership in the low subgroup compared to the high subgroup (AOR=0.19, p[corrected]=.033). There were also trends for an ERCC3 rs4150402 (AOR=2.75, p[corrected]=.075) and ERCC5 rs751402 (AOR=0.29, p[corrected]=.060) gene variants to predict membership in the low executive function subgroup compared to the average subgroup. For working memory, compared to the high subgroup, an ERCC5 gene variant, rs873601, predicted membership in the low subgroup (AOR=3.84, p=.027. For concentration,



compared to the average subgroup, there was a trend for an ERCC3 gene variant, rs4150407, to predict membership in the low subgroup (AOR=8.26,  $p[\text{corrected}]=.069$ ). These results suggest that variability in DNA repair is independently associated with cognitive function in women with breast cancer. These genetic variations may impact cognitive function by contributing to accelerated aging during therapy.

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**NURSING PRACTICES ASSOCIATED WITH THE ADMINISTRATION OF INTRAVENOUS IMMUNOGLOBULIN IN THE ACUTE INPATIENT SETTING: EXAMINING THE EFFICACY OF TRADITIONAL NURSING PRACTICES FOR QUALITY CARE.** Kathryn Berger, RN, BSN, Geisinger Medical Center, Danville, PA; Michele Long, RN, MS, BSN, NE-BC, OCN®, Geisinger Medical Center, Danville, PA; Adele Spegman, RN, PhD, Geisinger Medical Center, Danville, PA

The administration of intravenous immunoglobulin (IVIG), a type of blood product, has many oncologic related applications in the acute care and outpatient settings. Traditional nursing practices include frequent vital sign (VS) monitoring due to the historically based prevalence of adverse events during IVIG infusions. IVIG is a more refined and purified product than it once was, thereby contributing to a decreased incidence of adverse events. Recently, a system-wide policy change was initiated for IVIG infusions in outpatient setting, based on research that found VS fluctuations were unrelated to adverse infusion events. A substantial gap exists in the literature surrounding the administration of IVIG and propensity of adverse reactions in the acute care setting. Following Internal Review Board approval, a team of nurses examined the relationship between adverse events and the corresponding VS during IVIG infusions. Retrospective data were retrieved for infusions administered over a 12-month period; survey data about infusion care and reaction events were collected from patients and nurses on the oncology unit and infusion center. Sixty hospitalized patients received 153 infusions. VS instability was documented 3 or more times during 82 infusions administered to 41 patients. Of these patients, 79% demonstrated VS instability prior to the start of the infusion and 5% manifested only mild hypothermia. Among the 15 infusion center patients, 280 infusions were administered; six patients were hypertensive throughout 44 infusions, with no interventions. Across both settings, minor adverse events were described including chills, flushing, and back pain, with little or no change evident in VS. Surveys, completed by 14 patients, conveyed perceptions of safe care throughout infusions. Surveys, submitted by 15 RNs, supported revising the IVIG infusion policy so to align with other blood transfusion policies and to actively involve patients in monitoring for reactions. This study illustrates the value of replicating studies across a variety of patient settings. The results suggest that, when IVIG is administered to patients hospitalized for acute care, unstable vital signs often reflect existing acuity. Similar to patients in ambulatory care, frequent VS did not lead to recognition of adverse responses to IVIG. Accordingly, policy revision is now underway to align the administration practices of IVIG with those of other blood products. Nursing judgement, coupled with active patient participation, will enhance patient safety and wellbeing.

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**SURVIVORSHIP CARE PLANS FOR WOMEN TREATED FOR INVASIVE BREAST CANCER.** Patricia Buchsel, RN, MSN, OCN®, DNPc, FAAN, Seattle University College of Nursing, Seattle, WA; Mary Heffernan, ARNP, AOCN®, Bellevue Medical Breast Center, Bellevue, WA

An estimated 246,660 new cases of invasive breast cancer are expected to be diagnosed in 2016. Invasive breast cancer

is treated with one or a combination of surgery, chemotherapy, radiation, and hormonal agents placing patients at risk for physiological and psychological sequelae. The Institute of Medicine (IOM) and the Society of Clinical Oncologists (ASCO) recommend that those receiving cancer treatment receive a Survivorship Care Plan (SCP) as a communication tool for oncologists or community health providers. ASCO has developed a two-part breast cancer template that outlines the patient's treatment regimen and a surveillance plan. This exploratory study contained two research questions. The first was to determine the number of women treated with invasive breast who received an ASCO breast cancer SCP. The second was to determine the percentage of women who followed suggested recommendations during that time period. The time period of the study was from January 1, 2014 to December 31, 2014. Inclusion criteria were women who received treatment for invasive breast during the study time. Exclusion criteria were women who were treated for Stage 4 breast cancer. Data were collected by the study investigators from Electronic Privacy Information Center (EPIC). Both research questions were answered. Forty women received a completed SCP. Thirty eight women met inclusion criteria. All eligible study participants received an SCP with completed data points using the ASCO breast cancer template and returned for one year evaluations. Implementation of SCPs using ASCO breast cancer templates can guide health care providers to identify possible long term complications of breast cancer. A commitment from the oncology team to use a SCP is successful is essential for its successful implementation and consistent use. The SCP at the study site was a useful tool to guide treatment plans. A commitment of the oncology team to use of the SCP is essential for its successful implementation and consistent use. Advanced nurse practitioners can support the oncology team to increasing the use of SCPs and consistent and evaluating the impact of its use and evaluation of its impact.

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**TOPICAL GREEN TEA USE IN A RADIATION SETTING.** Eva Burgan, RN, BSN, OCN®, Hendricks Regional Health, Danville, IN; Edna Wilson, RN, BSN, OCN®, Hendricks Regional Health Cancer Center, Avon, IN

Patients receiving radiation therapy commonly develop skin toxicities, ranging mild erythema to confluent moist desquamation. Two populations most affected by these toxicities are breast cancer and head and neck cancers. When nurses noted minimal skin reaction in a female head and neck patient at the completion of her treatment, patient shared she was using a green tea solution on her skin. Literature search revealed only one study available that investigated the effect of tea extract and concluded that tea extract both protected and supported healing of skin during radiation oncology therapy. The patient's dramatic skin result, as well as, the cost effectiveness of this intervention, encouraged further investigation. Comparison group consisted of 20 breast and 20 head and neck patients. Data was collected retrospectively. All patients received formal skin assessments utilizing the Radiation Therapy Oncology Group (RTOG) Skin Toxicity Scale. The intervention group consisted of 25 breast and 22 head and neck patients. Study participants were instructed on preparation and application of green tea. Weekly skin assessments were performed by nursing utilizing the RTOG Skin Toxicity Scale. We examined 3 variables: weeks to worse skin assessment, weeks with worse skin assessment, and worse skin assessment. 2 variables were statistically significant in the breast and combined group; weeks to worse skin and weeks with worse skin. Patients in the intervention group exhibited slower skin reaction to radiation and were at their worse skin for a shorter period of time. In the head and neck group, although the means of both variables showed some improvement in the intervention group, it was

not statistically significant. Further research will be conducted in this population. Results were encouraging and offering this low cost, low risk treatment has become a standard of care in the facility. Nurses were encouraged by the results of the study and challenged to explore other uses for the green tea application, including, but not limited to mucositis. Since beginning our study, much research is being conducted in this area.

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**A NOVEL ONCOLOGIST-LED BRCA1/2 GERMLINE MUTATION TESTING AND COUNSELING MODEL FOR PATIENTS WITH OVARIAN CANCER: INTERIM RESULTS FROM THE ENGAGE (NCT02406235) STUDY.** Eva Chalas, MD, Winthrop University Hospital, Mineola, NY; Gloria Huang, MD, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, NY; Sudeep Karve, B Pharm, PhD, AstraZeneca, Gaithersburg, MD

Targeted therapies mean that BRCA1/2 germline mutation (gBRCAm) testing and genetic counseling are becoming routine in ovarian cancer management. ENGAGE is the first real-world study to evaluate an oncologist-led testing model initially used at the Institute of Cancer Research and Royal Marsden Hospital, London, UK. This ongoing prospective, observational study was conducted across sites in the US (11), Italy (8), and Spain (7), enrolling 710 adult patients with epithelial ovarian, fallopian tube, or primary peritoneal cancer. Baseline demographic, clinical, and therapeutic data, and primary outcome data (gBRCAm testing turnaround time [TAT], outcome of BRCAm test, and patient and oncogenetic counselor's satisfaction surveys on the model) were collected. Physicians completed training on BRCAm counseling. This interim analysis evaluated data from 444 patients (US 297; Europe 147) with mean age 63.7 (standard deviation [SD] 10.6) years, of whom 38% were newly diagnosed and 38% had family history of breast or ovarian cancer. Median time since diagnosis was 0.8 years. Pre-BRCA test counseling was provided by oncologists (40%) or nurses (56%) in the US and by oncologists in Europe. Only 1 patient requested additional pre-test counseling. Mean TAT from initial counseling to BRCA test results/oncogenetic counseling was 6.7 (SD 4.5) weeks: 5.1 (SD 3.7) weeks in the US and 10.0 (SD 4.2) weeks in Europe. BRCA testing was mainly performed in a central laboratory (91%) and BRCAm was identified in 10% of patients. Mean patient-reported fulfillment of expectations and overall satisfaction with counseling were both  $>3.7/4$  pre/post-BRCA testing; 92% were satisfied to have the genetic test at an existing rather than a separate visit. Over 80% of oncologists considered the BRCA-testing process to work well and that counseling patients on BRCA testing was an efficient use of their time. Interim results showed that the novel testing model results in reduced timelines and high acceptance and satisfaction levels in both patients and staff, with potential for quicker treatment decisions and better use of resources. The time to receive BRCAm test results was the major variable. The full data analysis will be available at the time of the meeting.

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**THE EFFECTS OF A PSYCHOEDUCATIONAL WEB-BASED INTERVENTION ON STRESS, COPING AND QUALITY OF LIFE OF PARENTS OF PEDIATRIC CANCER PATIENTS: A PILOT STUDY.** Carmen WH Chan, The Chinese University of Hong Kong, Hong Kong; Winnie PY Tang, The Chinese University of Hong Kong, Hong Kong; Doris YP Leung, The Chinese University of Hong Kong, Hong Kong

Psychoeducational interventions have been implemented to relieve parental caregiving stress and promote parents' coping abilities and quality of life, and the recent rapid de-

velopment of the internet has made it a possible platform for delivering PEI in a user friendly way. The aim of this pilot study was to examine the feasibility and estimate the effect of a psychoeducational web-based intervention (PEWBI) for parents of pediatric cancer patients. An eight-week PEWBI was developed in line with the theoretical framework of the Transactional Model of Stress and Coping. The PEWBI consisted of two components, an informational website and an online support group. The feasibility, acceptability and effects of PEWBI in stress, coping and QoL were examined in a non-equivalent control group time series design. The study was carried out in two regional hospitals in Hong Kong. Subjects in both intervention and control groups received usual care, while the intervention group received PEWBI for eight weeks in addition. Feasibility and acceptability were assessed by process evaluation. The consent and attrition rates, adherence, dose and level of satisfaction were all assessed. The effect outcomes were measured by perceived stress scale and salivary cortisol and cortisone, Brief COPE-C, and CQOLC-C at three time points: baseline, eight weeks (immediately after the intervention), and 12 weeks (a month post-intervention). The generalized estimating equations (GEE) model was applied to analyze the between-group differences in all outcomes, except salivary biomarkers. Forty-four parents of pediatric cancer patients participated in this pilot, 28 and 16 in intervention and control groups, with consent and attrition rates of 60.9% and 29.5%, respectively. Half the parents used PEWBI at least once and were satisfied with it. Though no statistically difference between two groups was detected in all outcomes, the intervention group showed a steady and favorable trend in all outcomes across all study points, while the control group experienced fluctuations. The findings support that implementing a user-friendly and innovative PEWBI for caregiver is feasible in Hong Kong. The preliminary effects of PEWBI showed positive improvement in all outcomes, suggesting that PEWBI might well have clinical significance on caregiver well being.

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**PATIENTS' APPRAISAL OF ILLNESS AND QUALITY OF LIFE IN KOREAN MEN TREATED WITH RADICAL PROSTATECTOMY FOR PROSTATE CANCER.** Ha Ni Choe, RN, Chungnam National University Hospital, Daejeon; Hyunli Kim, PhD, RN, Chungnam National University, Daejeon; Eunju Kang, RN, Chungnam National University Hospital, Daejeon; Mi Sook Jung, PhD RN, Chungnam National University, Daejeon

Patient's perception of illness and treatment-related side effects may differ across cultures. Unlike numerous studies reporting that primary prostate cancer treatment often results in suboptimal urinary and sexual function that can interfere with health-related quality of life in western countries, little is known about the effect of perception of illness and treatment related symptoms on post-treatment quality of life in Asian prostate cancer survivors. Therefore, this study was conducted to explore patients' appraisal of illness and treatment-related symptoms, and prostate cancer-specific quality of life and to determine predictors of prostate cancer-specific quality of life in Korean men treated with prostatectomy. One-hundred-seventeen Korean men who have received routine follow-up after radical prostatectomy for early stage prostate cancer were recruited from a national university hospital. All participants were evaluated by Expanded Prostate Cancer Index Composite, Sexual Functioning Inventory, Appraisal of Illness, and Functional Assessment of Cancer Therapy-Prostate Scale. Participants showed mild to moderate urinary symptoms, poor sexual function, low sexual satisfaction, negative appraisal, and impaired quality of life after treatment for prostate cancer. It was revealed from the comparison be-

tween findings in this study and those in other studies that Korean men treated for early stage prostate cancer reported similarly low level of quality of life compared to those of western patients with recurrent or advanced prostate cancer rather than early stage prostate rather than patients newly diagnosed with prostate cancer. Patient's appraisal of illness was found to be a significant factor influencing overall and domain-specific quality of life after controlling for urinary and sexual symptoms, sexual satisfaction, types of adjuvant treatment, and time since diagnosis. Patients' appraisal of illness may impact post-treatment quality of life in Korean prostate cancer survivors. Urinary symptoms and sexual dysfunction and dissatisfaction tend to be shown as common problems after treatment but a relatively weak relationship was found between quality of life and these symptoms and satisfaction. This should highlight the need for further research in how to improve quality of life through appraisal management with consideration for cultural uniqueness in Asian prostate cancer patients with urinary and sexual dysfunction. This is a first study to identify the effect of commonly-reported symptoms and illness appraisal on quality of life in Korean prostate cancer survivors.

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**EVALUATION OF A NURSING PROFESSIONAL PRACTICE MODEL AT A COMPREHENSIVE CANCER CENTER: A FOCUS GROUP RESEARCH STUDY APPROACH.** Susan Cobb, PhD, RN-BC, Fox Chase Cancer Center, Moorestown, NJ; Kathy Wolf, RN, BSN, MBA, NEA-BC, Fox Chase Cancer Center, Philadelphia, NJ; Christa Shine, BSN, RN, Fox Chase Cancer Center, Philadelphia, NJ; Anne Jadwin, RN, MSN, AOCN®, NE-BC, Fox Chase Cancer Center, Philadelphia, NJ

Magnet®-designated organizations must evaluate their nursing professional practice models on an ongoing basis and involve clinical nurses. Focus groups are one method to evaluate NPPMs which can provide rich data that can be used to validate the components of the model and inform any need for modifications. Our NCI-designated Comprehensive Cancer Center is seeking its fifth Magnet® designation and chose this approach which could also be useful to other organizations seeking to evaluate their NPPM utilizing a qualitative research methodology. The purpose of this study was to evaluate nursing staff understanding and perceptions of the NPPM. The aims of the study were to obtain increased knowledge of how the NPPM is understood and used by nurses and how its relevance to current practice can be enhanced. This was a qualitative study using focus groups. Participants were Registered Nurses from all levels, settings and shifts at an NCI-designated Comprehensive Cancer Center. Four focus groups were held and structured interview questions were used by the moderator. Data analysis consisted of review of the audiotapes, transcripts and field notes with identification of major and minor themes to reach saturation. Data and thematic concordance were verified by an experienced outside qualitative researcher consultant. Major themes included that the NPPM is multifaceted and empowers nurses. Themes and values articulated include caring and compassion, evidence-based practice, quality patient care, education and certification, nursing voice, visible leadership, and holistic and complementary care. The focus group research approach was effective in evaluation of the NPPM. The NPPM was found to be relevant and reflective of nursing practice. Study participants indicated that the NPPM needs to be more visible throughout the organization and offered several suggestions for this. It was felt that the NPPM needs to be diligently communicated to nurses new to the organization as representative of the nursing culture and expectations. The evaluation revealed that a few minor revisions to the NPPM were indicated. A follow up

group was convened and accomplished a minor redesign of the NPPM based on the focus group results. Use of a focus group research study design is an innovative way to meet dual objectives of promoting research and involving clinical nurses in evaluating NPPMs in organizations.

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**ADDRESSING COGNITIVE IMPAIRMENT AFTER BREAST CANCER: WHAT DO WOMEN WANT?** Adele Crouch, BSN, RN, Indiana University School of Nursing, Indianapolis, IN; Susan Storey, PhD, RN, AOCNS®, Indiana University School of Nursing, Indianapolis, IN; Diane Von Ah, PhD, RN, FAAN, Indiana University School of Nursing, Indianapolis, IN

Cognitive changes in breast cancer survivors (BCS) are common and have a disruptive impact on daily life. BCS frequently employ self-management strategies to assuage the impact of cognitive changes on their lives. There is little information from the perspective of BCS as to what they need in the form of interventions to address these cognitive changes. Developing patient centered interventions to address this late and often persistent effect of treatment for BCS is important. The objective of this study was to explore how BCS 1) cope and self-manage the symptoms associated with cognitive changes, 2) preferences for the type of intervention(s), and 3) perceived facilitators and barriers to interventions. A qualitative descriptive study in a cross section design using content analysis was conducted. Semi-structured telephone interviews were conducted with 13 BCS. BCS identified validation from family, other BCS, and healthcare providers as providing relief and legitimacy to the symptoms they were experiencing. Mind stimulation, organization, humor and adjusting expectations were identified as self-management strategies. BCS prefer evidence-based interventions that used a combined online-in-person approach and include long-term follow-up. Ease of use, accessibility, convenient schedules were identified by BCS as most important to facilitate participation while, cost, too time intensive, and distance to travel hampered participation. Future interventions for cognitive changes in BCS should focus on education and validation of symptoms, and self-management techniques all within a reasonable time constraint. Incorporating family members, other BCS and healthcare professionals may provide the most benefit. This study is unique in that data was solicited from the perspective of BCS, to determine coping, self-management strategies, their preferences for interventions, and their perceived facilitators/barriers to participation in activities to alleviate cognitive changes.

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**EXPLORING NURSES' PERCEPTIONS OF DIGNITY DURING END-OF-LIFE CARE.** Barbara Crump, PhD, NP-C, AOCNP®, VA NJHCS, Teaneck, NJ

The purpose of this qualitative grounded theory study was to understand nurses' perceptions of care that supports patients' dignity during hospitalization at the end of life, and to propose a theoretical foundation consistent with these perceptions as a guide to practice. The research involved analyzing perceptions about processes that can explain how nurses perceive care that supports patients' dignity at the end of life during hospitalization. The aim of the research in this study included a focus on the general problem that patients' dignity is not always respected by healthcare providers according to the review of the literature and the acknowledgment of the lack of theories related to nurses' perceptions of care that supports dignity during end-of-life care. A grounded theory design offered a systematic approach to developing a theoretical model from data that takes into consideration the complexities of nurses' perceptions of care that supports dignity during hospitalization



at end of life. Semistructured interviews were conducted with 11 experienced registered oncology female nurses from the northeastern region of the United States. The research involved analysis of the perceptions of nurses caring for cancer patients admitted to the hospital during end of life. The development of a beginning model for dignity care stemmed from the emergence of three major categories, which were communication, support, and facilitation. The identified subcategories were education, workshops, course curriculum, in-services, being an advocate, listening, being present, physical needs, emotional support, compassion, honoring wishes, respect, and being treated as human. The emergence and development of a dignity model may offer a process that can serve as a valuable reference in providing care that supports the dignity of patients during hospitalization at end of life.

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**VITAMIN D DEFICIENCY IN HEMATOPOIETIC CELL TRANSPLANT AND A POTENTIAL BUFFERING OF ACUTE GVHD BY SUPPLEMENTATION.** Linda DuPuis-Rosen, RN, OCN®, Stanford Health Care, Stanford, CA; Tara Coghlin-Dickson, MS, RD, CSSD, Stanford Health Care, Stanford, CA; Kathryn Tierney, RN, PhD, Stanford Health Care, Stanford, CA; Laura Johnston, MD, Stanford Health Care, Stanford, CA; David Pickham, RN, PhD, Stanford Health Care, Stanford, CA

Vitamin D, an essential hormone with function ranging from mediating bone hemostasis to immune modulation, has been reported to be deficient in the majority of myeloablative allogeneic hematopoietic cell transplant (HCT) recipients and associated with diagnosis of chronic graft versus host disease (GVHD). We tested the hypothesis that vitamin D deficiency is associated with acute GVHD within 90 days after HCT. Fifty allogeneic recipients were selected from the HCT database based on blood samples available pre-transplant, 30 days, and 90 days post HCT. Liquid chromatography-tandem mass spectrometry (LC-MS/MS) was used to determine 25-OH vitamin D (D2, D3 and total) levels at the three time-points. Fifty HCT recipients (25 male, 25 female), median age 45±11 years (range 22yr : 59yr), 50% caucasian (16% Asian, 34% other), were selected. Acute GVHD (all grades) was present in 23/50 (46%) of HCT recipients. Of the 50 participants, 74% had vitamin D deficiency (median 20±8 ng/ml) pre-HCT, significantly decreased at 30 days (median 16±8 ng/ml,  $p=.048$ ), and remained constant at 90 days (median 16±10 ng/ml). The majority of the 150 samples were below threshold for vitamin D (<25 ng/ml, 77%), however no significant relationship to acute GVHD (grade I-IV) at 90 days was detected ( $p=.9$ ). All 15 subjects with grade II-IV GVHD at 90 days had vitamin D deficiency (median 12±6 ng/ml, range 5-23ng/ml,  $p=.08$ ). We find Vitamin D deficiency to be common within this HCT recipient cohort. All subjects with GVHD (grade II-IV) had vitamin D deficiency. Given our findings as well as other recent research, it compelled our bone marrow transplant program to adopt a new standard of care for monitoring and supplementing vitamin D. It's been one year since we implemented the new standard of care. We will continue to collect the data for two years to help reflect the impact of adequate vitamin D levels and its potential buffering for acute GVHD. Our hope is that this new data will provide the needed evidence to demonstrate some of the many benefits of adequate vitamin D for this patient population.

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**THE NEEDS OF OLDER ADULTS RECENTLY DIAGNOSED WITH CANCER.** Genevieve Elrod, PhD, RN, OCN®, Grand Valley State University, Grand Rapids, MI

Adults 65 years and older are the population most often diagnosed with cancer. However, there has not been a focus

on older adults' perceptions of their needs following diagnosis. The significance of this inattention to the needs of older adults at their time of cancer diagnosis relates to a number of national organizational missions and goals, including Healthy People 2020, the Agency for Healthcare Research and Quality, the Institute of Medicine, the Oncology Nursing Society, and the Geriatric Oncology Consortium. Literature findings related to maintaining independence, coping with the diagnosis, social support, and financial concerns provided the context for this qualitative descriptive study. The purpose was to explore the needs of older adults recently diagnosed with cancer, thereby discovering opportunities to enhance their access to comprehensive clinical care. The study's convenience sample, recruited through collaboration of nurse clinicians and researchers, included 14 Midwestern participants with an average age of 69 and who were an average of 9 weeks from cancer diagnosis. The participants completed semi-structured interviews, and data from the interviews were analyzed using conventional content analysis to generate patterns and themes related to the needs of the participants. Rigor was achieved through prolonged engagement, member checking, and an extensive audit trail. The study's themes include: (a) The Cancer Health Care Experience: Interactions with providers that are generally positive but not without disappointments, (b) Challenges in Managing the Cancer Experience: Barriers to feeling normal and hurdles to overcome, and (c) Coping with the Cancer Experience: Handling the cancer journey with mental adaptation and external support. These findings are congruent with literature findings about trust and respect, emotional strain, and desire for control. The findings illuminated new issues such as the impact of past health care experiences and the reliance on positive outlook. Implications include better integration of health care delivery teams, facilitating maintenance of self-identity and control among older adults, and improving training for healthcare providers on patient financial and workplace concerns. Future studies should be conducted to explore older adults' needs from the perspectives of family members and health care providers. Collaborative community teams can also work to uncover the needs of older adults who are not frequenting the cancer health care system.

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**EVALUATING ONCOLOGY NURSES' SAFETY FOLLOWING ANTINEOPLASTIC DRUG SPILLS: CASE REPORT ANALYSIS FROM A MULTI-SITE STUDY.** Alex J. Fauer, BSN Student, University of Michigan School of Nursing, Ann Arbor, MI; Kari Mendelsohn-Victor, MPH, University of Michigan School of Nursing, Ann Arbor, MI; Marjorie McCullagh, PhD, RN, FAAONN, FAAN, University of Michigan School of Nursing, Ann Arbor, MI; Christopher R. Friese, PhD, RN, AOCN®, FAAN, University of Michigan School of Nursing, Ann Arbor, MI

The National Institute for Occupational Safety and Health (NIOSH) has launched the Total Worker Health Initiative to address gaps in workplace health and safety quality. To date, few studies have examined self-reported PPE use across multiple facilities when hazardous drug exposures (i.e., chemotherapy spills) occur. The current inquiry aims to provide descriptive feedback on safe chemotherapy handling practices to oncology nurses at 12 participating ambulatory cancer centers to improve practice and reduce adverse health effects from hazardous drug exposure. The study was activated in March, 2015 after Human Subjects approval. Consented participants (n=393) completed an encrypted, user-authenticated survey when hazardous drug spills occur on the secure study website. We used descriptive statistics to examine the frequency of PPE usage, nurse response, and hand hygiene when spills occurred. To date, 46 unique spills were reported across 12 study institu-

tions. Among the data, nurses did not wear a gown in 19 spills (41.6%), wore only one pair of gloves in 19 spills (41.3%), and wore two pair of gloves (as recommended) in 25 spills (54.5%). 42 nurses (91.3%) reported washing their hands with soap and water after a spill (as recommended) and 3 (6.5%) used alcohol-based hand gel. Closed system transfer devices (CSTD) were used (as recommended) during 30 spills (69.8%), yet nurses reported the device failed in 13 (43.3%) of those cases. A substantial number of nurses reported suboptimal use of personal protective equipment when responding to a drug spill. We found a troubling underuse of PPE usage and hand hygiene practice across study sites, despite published evidence-based guidelines from professional organizations and institutional policies. Ongoing education and practice may improve the use of protective equipment during spills, resulting in reduced exposure to nurses. Closed system transfer devices need to be further studied to determine the root cause for malfunctions and errors. Practice leaders should lead efforts to harmonize safe practice policies and safety education across health systems and educational institutions. Collaborations with systems and mechanical engineers may lead to improved device design. Systematic reporting of hazardous drug spills and analysis of the events provides crucial insights into necessary practice change and staff education.

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**IS INSOMNIA SEVERITY RELATED TO DYSFUNCTIONAL BELIEFS IN LUNG CANCER SURVIVORS?** Carleora Ferreira Da Rosa Silva, MS, PhD Student, RN, University at Buffalo, Buffalo, NY; Suzanne Dickerson, DNS, RN, University at Buffalo School of Nursing, Buffalo, NY; Carla Jungquist, PhD, RN, University at Buffalo School of Nursing, Buffalo, NY; Grace Dean, PhD, RN, University at Buffalo School of Nursing, Buffalo, NY

While subjective sleep complaints are the core symptoms that define the diagnosis of insomnia, what patients believe about their sleep may perpetuate or intensify their insomnia. Brief behavioral therapy for insomnia (BBT-I) is a shortened non-pharmacological intervention to treat insomnia that focuses on the modification of sleep behaviors over time. This study sought to explore the relationships between insomnia severity, and the beliefs patients have about sleep before receiving a therapy for their insomnia. The theory that guided this study was Spielman's three-factor model of insomnia. The 3P model is a framework that conceptualizes factors that contribute to the development and maintenance of insomnia. The three factors include predisposition (both regarding behavioral and genetics), precipitation (biopsychosocial) and perpetuation (mismatch between sleep ability and sleep opportunity). This model has stimulated research into the causes and maintenance of insomnia and promoted treatment development. This randomized controlled trial included stage I/II, non-small cell lung cancer (NSCLC) survivors with insomnia who were at least six weeks post-surgery. Participants were screened for sleep apnea and referred if they tested positive. Thirty-eight participants were randomly assignment into groups for BBT-I. Participants completed the 30-item Dysfunctional Beliefs and Attitudes about Sleep (DBAS) questionnaire and the 7-item Insomnia Severity Index (ISI), two valid and reliable instruments, at baseline. A multivariate analysis of covariance (MANCOVA) on DBAS total score and subscales with ISI total score. The participants had a mean age of 66.0 + 7.9 (range 53-82), female (62.8%), and Caucasian (88%). There was a main effect of dysfunctional expectations on levels of insomnia at baseline. Fear of dying during sleep ( $p=.008$ ), belief that insomnia is an irremediable problem ( $p=.006$ ) and ruins life ( $p=.016$ ) had a significant effect on insomnia severity. However, the main effect relates to beliefs that there is a right number of hours

of sleep ( $F= 22.9, p = .000$ ). Unhelpful beliefs that 8 hours of sleep are the "gold standard" correlate to insomnia severity in lung cancer survivors. This finding reinforces the importance of sleep education to reduce inaccurate beliefs patients have about sleep need during BBT-I.

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**NURSES LEADING THE WAY: THE ROLE OF NURSES IN EOL DISCUSSIONS IN THE OUTPATIENT ONCOLOGY SETTING.** Julie Foidelli, RN, BSN, OCN®, BIDMC, Boston, MA; Susan Desanto-Madeya, RN, PhD, BIDMC, Boston, MA; Danielle McDonald, NP, BIDMC, Boston, MA

Despite being diagnosed with an incurable malignancy, discussions with patients about their end-of-life (EOL) preferences are often avoided in the outpatient oncology setting. This can prevent patients from receiving the care they desire and deserve at EOL. Factors identified as contributing to a lack of meaningful EOL discussions with patients include: time constraints, fear of death/dying, and a lack of education on, and skill in EOL communication. The purpose of this project was to assess outpatient oncology nurses knowledge of, and comfort with, EOL discussions. A mixed-method design was used. The End-of-Life Professional Caregiver Survey (EPCS). EPCS is a 28 item survey that examines three domains: patient and family-centered communication, cultural and ethical values, and effective care delivery. This instrument was emailed to nurses in an Oncology Clinic at a Comprehensive Cancer Center. A focus group to explore their experiences with EOL, and facilitators/barriers to engaging patients in EOL discussions was also conducted. Twenty-nine of the thirty-nine oncology clinic nurses completed the survey, reflecting a 74% participation rate. Twenty-one nurses (73%) had greater than ten years of and only one nurse (3.5%) had less than two years of oncology experience. The oncology clinic nurses overall weighted average score for EPCS was 3.78 (1 = not all; 5 = very much), indicating comfort in all domains. They were most comfortable with family-centered communication (3.96); and less comfortable with cultural and ethical values (3.73) and effective care delivery (3.57). Nine nurses participated in the focus group. Themes from the focus group were: initiating and taking a team approach to patient and family-centered EOL care discussions; knowing and appreciating the nurses' role in EOL communication; and starting and continuing conversations about EOL choices and preferences. Outpatient oncology nurses are in key positions to approach and lead EOL discussions. Findings from this project will be used to develop educational programs that will enhance oncology nurse's comfort with EOL discussions and empower them to facilitate meaningful EOL conversation with patients, their families, and the oncology team.

**419**  
**BLOOD TRANSFUSIONS AND VITAL SIGNS: THE EVIDENCE.** Kristen Foley, BSN, RN, OCN®, Novant Health Forsyth Medical Center, Winston-Salem, NC; Joanna Cortez-Gan, RN, Novant Health Forsyth Medical Center, Winston-Salem, NC; Tammy McGee, RN, OCN®, Novant Health Forsyth Medical, Winston-Salem, NC; Kim Gilmore, BSN, RN, Novant Health Forsyth Medical Center, Winston-Salem, NC; Daria Kring, PhD, RN, NE-BC, Novant Health Forsyth Medical Center, Winston-Salem, NC; Melanie Hooker, RN, MSN, AGPCNP, OCN®, Wake Forest Baptist Health, Winston-Salem, NC

In 2009, a hospital policy revision increased vital sign collection to five sets per unit of blood product transfused: prior to administration for baseline, 15 minutes after initiation, one hour after initiation, completion, and one hour post-completion of the transfusion. Nurses questioned whether increased

monitoring enhanced safety of the transfusion process. After an inconclusive literature review, research was conducted to examine vital sign timing and frequency to determine best practice for administering blood products. The hypothesis claims that vital sign monitoring for blood product administration is effective at three intervals: pre-transfusion, fifteen minutes after initiation, and completion. Staff started a retrospective study of transfusions between the years of 2008-2012. Of 77,842 products transfused, 116 resulted in reaction for a reaction rate of 0.15%. Packed red blood cells accounted for 78% of reactions and each severe reaction documented. The first 15 minutes of a transfusion are widely accepted as most important; however, only 15% of patients reacted during that time suggesting it may not be as critical as previously thought. Fever was noted in 46% of patients, the most sensitive indicator of reaction. Patients displayed signs of minor reactions at a mean time of 92.2 minutes after initiation of the transfusion and required little to no intervention. About 5% (N=6) of patients reacted severely, requiring life-sustaining intervention. Hallmarked by hypoxemia, fever and chills, a mean time of 129 minutes was noted for severe reaction onset. Patients displayed symptoms of reaction as late as 300 minutes after initiation with regularity. The research shows that minimalist monitoring is insufficient when caring for patients receiving blood products. Safety is the focus and patients depend on our commitment to evidence-based practice. Therefore, our study supports the policy to heighten vital sign surveillance during blood product administration. Based on our findings, we are collecting five sets of vital signs for every blood product transfused. While this is not widely accepted as the standard in other healthcare facilities, we have continued to do more than is expected to increase the quality of the care we provide, as we have promised to do in the communities we serve.

#### **420** **STORIES OF AFRICAN AMERICAN WOMEN WHO ARE LONG-TERM BREAST CANCER SURVIVORS. Yvonne Ford, RN, PhD, UNC Greensboro, Greensboro, NC**

The purpose of this study was to discuss the stories of African American (AA) women who are disease-free survivors of breast cancer, 10 or more years after initial diagnosis, and consider themselves to be thriving after cancer. Storytelling has deep roots in the AA culture and is useful in oral history traditions. The current literature on long-term breast cancer survivorship is not very representative of the experiences of the AA woman. In order to learn more about AA women who are long-term breast cancer survivors, there must be some foundational knowledge of their experiences. Participants were AA women with 10 or more years of disease-free survival from breast cancer. Data were collected in the southeastern region of the United States. In order to develop the stories into a cohesive whole, narrative inquiry was used. A womanist framework was used as a lens through which to consider the data. Semi-structured interviews were conducted with data analysis concurrent with data collection. Analysis of the data was accomplished using a word processing program with manual coding. First level coding of verbatim text was begun by looking at chunks of participant responses and marking these initial codes with the meanings derived from the responses. Subsequently, portions of the text containing themes related to the theoretical framework were retained for further analysis. In the tradition of narrative inquiry, one blended story was derived from the data. The story was developed from the following themes: (1) I'm still here; (2) And then I had cancer; (3) Can we talk?; (4) Peace in the valley; (5) They call it the red devil; (6) You are not alone; (7) The new normal; and (8) When I learn something, I share it. The structures of the stories were dynamic and have implications for nursing research and practice. Using culturally relevant interventions can be helpful in

caring for physical, social, and spiritual needs. If researchers and clinicians can tailor their communication style and value the historical underpinnings of health-seeking behaviors in AA long-term breast cancer survivors, more support can be made available for this population.

#### **421** **DEVELOPING A PREDICTIVE RISK TOOL FOR DELINEATING HOSPITAL ACQUIRED PRESSURE INJURIES (HAPI) AT END OF LIFE AND FURTHER DEFINING THE UNAVOIDABLE HAPI. Anna Foster, RN, BSN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Jennifer Lindemann, RN, MSN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Melissa Hiscock, RN, BSN, CWOCN, OCN®, Roswell Park Cancer Institute, Buffalo, NY; Wendy Kinsey, RN, BA, OCN®, CWOCN, Roswell Park Cancer Institute, Buffalo, NY; Judith Del Monte, MS, CPHQ, Roswell Park Cancer Institute, Buffalo, NY**

It is well supported in the literature that skin changes and skin failure occur at end of life. These changes are most commonly identified as Hospital Acquired Pressure Injury (HAPI) and are reported in the public data, but these HAPI are not avoidable. The aim of the project is to create evidence-based risk identification criteria for end of life situations in the oncology population that will classify these HAPIs as unavoidable. The Multi-disciplinary Pressure Ulcer Prevention team struggled frequently with end of life situations and patients suffering from, what the team thought of as "unavoidable" pressure injuries. Although nursing staff implement appropriate interventions, the pressure injury still occurs, and the incidence counts in publicly reported data. The team evaluated the relationship between these patients and common pathophysiologic factors, and questioned could a more specific, predictive risk scale be developed. The project was a quantitative retrospective analysis of all patients who developed a HAPI and later expired. Data was collected over 19 months (Jan 2015-Jul 2016). Utilizing a structured data collection tool based on literature review, 32 data elements were collected. Data was abstracted, entered into a database and analyzed using descriptive statistical tools. 56 patients developed a HAPI during the 19 months of the project. Our review focused on the 37 (66%) patients who expired. 73% expired within 30 days (40% within 10 days). The average age was 64 years old with 68% male and 32% female. Deep tissue injury was the most common stage (46%) with 54% of the HAPIs located in the buttock/sacrum area. Leukemia, Lymphoma and BMT were the common diagnoses. The most prevalent risk factors were respiratory failure and hypoalbuminemia. Other collected risk factors showed an abnormal distribution ( $p < 0.005$ ) and warrant further study. Differences in the means of mobility, nutrition and moisture Braden subscale scores were also statistically significant. A high percentage of oncology patients who developed a HAPI expired within 30 days. Preliminary analysis of the data corresponded with the literature that certain risk factors play a part in developing end of life pressure injuries. In order to create a predictive risk tool for end of life situations, additional numbers and comparison data is needed to clarify which factors correlate with unavoidable HAPI and therefore should not be reportable.

#### **422** **EXPLORATION OF PATIENTS' SPIRITUAL/RELIGIOUS BELIEFS AND RESUSCITATION DECISIONS. Elizabeth Freitas, RN, MS, The Queen's Medical Center, Honolulu, HI**

The resuscitation decision, which has the potential to reverse a premature death or prolong the dying process, is complex and can be associated with spiritual/religious beliefs, values, and quality of life. The consequences of resuscitation



decisions make it imperative that oncology nurses have an understanding of patients' spiritual/religious beliefs and how those beliefs are associated with resuscitation decisions. Current literature is mixed regarding impact of spiritual/religious beliefs on patients' resuscitation decisions. In clinical practice, assumptions regarding resuscitation decisions are often made based upon age, culture, and quality of life. This study's objective was to determine the associations between hospitalized patients' spiritual/religious beliefs and their resuscitation decisions. A single-site, descriptive, correlational study was conducted. Primary investigator was an APRN, and convenience sample was 84 hospitalized patients (enrolled November 2015-January 2016) cared for by staff physicians. Patients were consented, passed a cognitive exam, and completed a 52-item written questionnaire comprised of demographics and two research-validated spiritual/religious beliefs scales, the Spiritual Involvement and Beliefs Scale-Revised (SIBS-R) and Beliefs and Values Scale (BVS). Two questions (If your heart were to stop would you want someone to try to restart it? If you were to stop breathing would you want a breathing tube and machine?) were used to determine resuscitation decision. No associations were found between the demographic characteristics of this patient population and their resuscitation decisions. However, participants' SIBS-R and BVS scores varied significantly according to primary spiritual/religious beliefs (traditional theistic beliefs and nontheistic) and ethnicity (Native Hawaiian/Pacific Islanders had higher spiritual scores than Asians and Caucasians). Incidental finding: 20% of participants answered yes to only one resuscitation question. Although the research evidence remains inconclusive, (similar to other published research) this study found no associations between resuscitation decisions and spiritual/religious beliefs in the hospitalized patients. The implication for nursing is that assumptions about the relationship between spiritual/religious beliefs and resuscitation decisions should not be made; in addition, further patient education regarding medical interventions and anticipated prognosis is needed. Future research on the relationship between patients' spiritual/religious beliefs and their resuscitation decisions should address the complexity of the decision, including individual factors and cultural collectivist decision-making, and should be done in collaboration with physicians, chaplains and nurses.

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**OPEN LABEL, RANDOMIZED CLINICAL STUDY COMPARING CALENDULA VERSUS AQUAPHOR®: SELF-REPORTED EXPERIENCES USING JOURNALS AND ADHERENCE TO SKIN CARE IN WOMEN WITH BREAST CANCER UNDERGOING RADIOTHERAPY.** Susan Getz, RN, BSN, OCN®, Maine Medical Center, Portland, ME; James Kavanaugh, RN, MSN, OCN®, Maine Medical Center, Portland, ME; Nellie Bergeron, RN, BSN, OCN®, Maine Medical Center, Portland, ME; Julie Wildes, RN, OCN®, Maine Medical Center, Portland, ME; Kristiina Hyrkas, RN, MSNc, LicNSc, PhD, Maine Medical Center, Portland, ME

The use of a topical cream and cleaning are routinely recommended for women receiving radiation for breast cancer to minimize radiodermatitis. Results from a few randomized trials comparing skin care products have been contradictory. A recent study found that guidance and maintenance of personal hygiene during treatment varied considerably. The objective of this study was to describe women's self-reported daily skin cleaning routines and adherence to using skin care products during radiation treatment for breast cancer. Our study was part of an open label, randomized clinical study comparing calendula and Aloe Vera/Aquaphor®. Radiation oncology nurses educated study participants about washing the treatment area

and applying products. Subjects were asked to complete a home journal in which they documented product application, ease of use, skin reactions, cleansing and satisfaction. Journal questions were open-ended, dichotomous or Likert type. Statistical methods and qualitative content analysis were used to analyze the journal data. Study participants (n=148) were enrolled between 4/10/13 : 3/8/16 and randomly assigned to the usual care (Aloe Vera) (n= 71, 48%) or intervention (Calendula) (n= 77, 52.0%) groups. Subjects were primarily Caucasian (99.3%) with fair skin type (79.7%). Average age was 60.7 years (SD 9.25) with a BMI of 30.9 kg/m<sup>2</sup>. They used the skin care products an average of 30 days and spent 33 days in the study. More than one in five subjects (22.1%) received silver sulfadiazine cream for skin irritation over the course of radiation therapy and 4.2% experienced a break in radiation treatment. The majority of subjects (99%) reported daily skin cleaning per instructions, but adherence was reduced towards the end of the treatment. Self-reported skin reactions increased from 14% at week 1 to 80% by week 5. Most women reported no/or mild pain throughout the treatment (88% - 98%). Some subjects (0.8% - 13.8%) were dissatisfied with the products; with the highest dissatisfaction reported during week 6, and slightly more common in the usual care group. As women's treatment duration and radiodermatitis increased, they became less compliant with following skin care instructions. Implementing weekly journaling with review by oncology nurses was identified as a novel and beneficial strategy that may increase adherence and improve self-care in this population. Measuring adherence and self-reported care is also an important method in validating study results.

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**SLEEP DISTURBANCE SIGNIFICANTLY INCREASES MAGNITUDE OF DEPRESSION, ANXIETY AND DISTRESS IN CANCER PATIENTS.** Nancy Gilbert, MSN, RN, OCN®, MD Anderson Cancer Center, Richmond, TX; Richard De La Garza, PhD, MD Anderson Cancer Center, Richmond, TX; Margaret Bell, DNP, MPH, CMPE, RN, MD Anderson Cancer Center, Richmond, TX; Titilayo Makanjuola, MD, MD Anderson Cancer Center, Richmond, TX

Several studies have examined the high incidence of sleep disturbances reported by patients along the cancer continuum. Exploring the relationship between SD, depression and anxiety will highlight the importance of screening to identify patients in need of further evaluation. The current study was designed to evaluate the extent to which sleep disturbance influences magnitude of psychiatric symptoms in cancer patients. All adult patients seen in the MDACC outpatient psychiatry oncology clinic (June 2014-Jan 2016) who provided informed consent were included (N=1,094). Sleep disturbance (SD) was assessed using question 10 of the ESAS, and other assessments included the PHQ-9, GAD-7, and NCCN Distress Thermometer (DT). Demographic variables included age, sex, race/ethnicity, and marital status. Data are presented as percentages or Mean±S.D. The ESAS sleep item average score for all patients was 5.3±2.9. Using the cut-off for ESAS SD suggested by Delgado-Guay 2011, significant differences were detected between participants categorized with SD (≥ 79.4%) versus no SD (0-2; 20.6%) (6.4±2.1 vs. 1.1±.8, F1,1092=1415, p<.0001). Patients categorized with SD, as compared to no SD, exhibited significantly higher total scores for the PHQ-9 (12.1±5.5 vs. 6.8±5.2, F1,1092=169.2, p<.0001), GAD-7 (10.4±5.5 vs. 5.7±5.5, F1,1092=133.1, p<.0001) and DT (6.0±2.6 vs. 3.7±3.1, F1,1092=134.7, p<.0001). An alternative means of analysing these data was using the DT checklist "Sleep Problems" item as a binomial variable. The data show that individuals who specified Yes, as compared to those who indicated No, exhibited significantly higher total scores for the PHQ-9 (12.3±5.5

vs.  $7.9 \pm 5.3$ ,  $F_{1,1090} = 145.8$ ,  $p < .0001$ ), GAD-7 ( $10.6 \pm 5.6$  vs.  $6.8 \pm 5.6$ ,  $F_{1,1090} = 102.7$ ,  $p < .0001$ ) and DT ( $6.1 \pm 2.6$  vs.  $4.1 \pm 3.0$ ,  $F_{1,1092} = 118.6$ ,  $p < .0001$ ). The data indicate that ~80% of all patients seen at the MDACC Psychiatric Oncology Clinic self-report some level of SD and that these individuals exhibit significantly higher levels of depression, anxiety and distress. These findings were based on ESAS SD criteria and internally validated using the DT checklist. The fact that individuals with SD exhibit a near doubling of magnitude of psychiatric symptoms should be of particular importance to clinicians.

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**RUNNING THE CAR SHOP: NURSING'S ROLE IN ESTABLISHING THE INTAKE AND MANAGEMENT STANDARDS OF PATIENTS ON CAR T CELL CLINICAL TRIALS.** Elizabeth Halton, RN, MS, NP-BC, AOCNP®, Memorial Sloan Kettering Cancer Center, New York, NY; Claudia Diamonte, RN, BSN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY

Chimeric Antigen Receptor (CAR) T cell therapy has demonstrated clinical efficacy in relapsed/refractory patients with hematological malignancies. Having achieved improved patient outcomes in hematologic malignancies, Memorial Sloan Kettering is now expanding the application of CAR T cells to solid tumors. Cellular Therapeutics Center (CTC) was developed to unite researchers and clinicians to conduct CAR T cell clinical trials for treatment of hematological and solid tumor malignancies. Nurses of the CTC have taken the lead in expediting eligibility screening of trial candidates and have led the charge in the establishment of a centralized treatment area for patients undergoing CAR T cell therapy. CTC nursing has had a key role in the development of guidelines for patient management, inclusion of consult services and the collection of research data. Designated in/outpatient nursing units where patients would be treated and followed were identified, and staff trained. Centralized intake and scheduling processes for the CTC were established. Expedited patient intake and screening is completed with minimal strain on the patient. Ineligible patients are notified by the CTC nurses before committing to the financial burden, while eligible patients have ancillary services scheduled in advance. Clinical data is collected and distributed prior to the patient's visit. Prior to admission, CTC nurses provide education on CAR T cells, expected hospital course and probable side effects. A plan of care is established before the patient is admitted. The inpatient medical team and nursing staff are informed of the patient's history, treatment plan and schedule, which expedites implementation upon arrival. Patients are followed in and outpatient by CTC nurses for continuity. Having weekly CTC multidisciplinary rounds has fostered collaboration and insight into the identification and management of the side effects these patient experience. CTC nursing involvement and collaboration has increased patient satisfaction, improved transmission of clinical data, and refined the collection of research data. This has enhanced our ability to manage patients more safely. CTC patients are screened and clinical information collected prior to appointments, thereby utilizing precious patient and provider resources in the most efficient manner and increasing both parties satisfaction. Following patients from initial contact through treatment follow up has improved collection of research data and patient care.

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**A SYSTEMATIC REVIEW OF ORAL CARE PROTOCOLS AND RECOMMENDATIONS TO PREVENT ORAL MUCOSITIS IN PATIENTS UNDERGOING CANCER TREATMENT.** Elaine Haroz, BSN, RN, OCN®, Christus St. Vincent Regional Cancer Center, Santa Fe, NM; Marsha Madrid, RN, Christus St. Vincent Cancer Center, Santa Fe, NM; Carolyn Phillips,

MSN, RN, ACNP-BC, AOCNP®, University of Texas at Austin School of Nursing, Austin, TX; Emily Haozous, PhD, RN, FAAN, University of New Mexico College of Nursing, Albuquerque, NM

Establishing oral care protocols is important for the early detection, intervention and resolution of mucositis caused by cancer treatments; yet there is a lack of literature on the efficacy of protocols for the treatment and prevention of cancer-related oral mucositis. Objectives: The purpose of this review was to examine the body of evidence in the use of oral care protocols for the prevention of mucositis. This review may be used for care planning and to direct future research in oral care protocols for patients receiving cancer treatments. The PRISMA format guidelines were used for this review. The literature search was conducted using PubMed, CINAHL, Google Scholar and the ONS journals. Eligibility criteria included studies that reported on oral care protocols for the prevention of mucositis in the inpatient or outpatient setting, adult or pediatric population, using all cancer treatment modalities including radiation and chemotherapy, and hematopoietic stem cell transplantation. Original research and performance improvement publications were included. Studies ( $N=18$ ) reported on establishing oral care protocols in head and neck patients undergoing radiation therapy in the outpatient setting ( $N=4$ ), inpatient general oncology unit ( $N=2$ ), inpatient hematopoietic stem cell transplantation unit ( $N=5$ ), and pediatric setting ( $N=4$ ). Three studies focused on patient and nurse education regarding oral care. All studies emphasized education and the value of an oral care protocol for the patients to follow in order to decrease the severity and duration of mucositis. Half of the studies reviewed show the implementation of oral care protocols in an inpatient setting, but there were only 4 studies in the outpatient setting, where the burden falls on the patient to follow an oral care protocol and assess themselves for changes in the oral cavity. Frequent oral care assessment in the cancer patient ensures early mucositis detection and intervention. As most cancer treatments are outpatient, it is important to establish feasible oral care protocols that are easy to follow into oncology nursing practice. Supporting nurses through continuing clinical education is key to the successful implementation and integration of oral care protocols in patients.

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**FUNCTIONAL STATUS AND QUALITY OF LIFE AMONG BREAST CANCER SURVIVORS WITH HEART FAILURE: SECONDARY ANALYSIS OF THE MEDICARE HEALTH OUTCOMES SURVEY.** Jordan M. Harrison, BSN, RN, University of Michigan School of Nursing, Ann Arbor, MI; Matthew A. Davis, PhD, University of Michigan School of Nursing, Ann Arbor, MI; Debra L. Barton, PhD, RN, AOCN®, FAAN, University of Michigan School of Nursing, Ann Arbor, MI; Nancy K. Janz, PhD, University of Michigan School of Public Health, Ann Arbor, MI; Susan J. Pressler, PhD, RN, FAAN, FAHA, Indiana University School of Nursing, Indianapolis, IN; Christopher R. Friese, PhD, RN, AOCN®, FAAN, University of Michigan School of Nursing, Ann Arbor, MI

Chronic heart failure is a disabling, life-limiting condition that negatively impacts health-related quality of life (HRQOL). Though heart failure disproportionately affects breast cancer survivors, little is known about how it impacts HRQOL and functional status in this population. We conducted a population-based, cross-sectional secondary analysis to evaluate the relationship between heart failure and HRQOL and functional status among breast cancer survivors using Medicare Health Outcomes Survey data. Data were from

female respondents aged 65 and older diagnosed with breast cancer in the past five years. Surveys were linked to Surveillance, Epidemiology, and End Results cancer registries. Each woman identified with self-reported heart failure (n=239) was matched to controls without heart failure (n=685) using propensity scores. Eight mental and physical domains of HRQOL were measured using the validated Short Form-36. Functional status was measured by limitations in six activities of daily living (ADLs). Linear models examined the association between heart failure status and HRQOL. Odds ratios for the association between heart failure and ADL impairment were estimated using logistic regression. Associations were examined for the total study population and for subgroups stratified by cancer stage. Among all study participants, heart failure was associated with significant deficits in every domain of physical and mental HRQOL ( $p < 0.01$  for all). After stratification by cancer stage, heart failure was associated with significant physical deficits across all stages (physical functioning, vitality, general health) and mental HRQOL deficits only in women with stage I/II cancer (role-emotional, social function). Women with heart failure and stage III/IV cancer experienced the greatest physical deficits. However, the contribution of heart failure to physical and mental deficits was greatest for women with early-stage cancer. Overall, heart failure was associated with impairment in all six ADLs ( $p < 0.01$  for all, ORs ranged from 1.74 to 2.47). Heart failure in breast cancer survivors is associated with substantial deficits in physical function and mental wellbeing. Women with early-stage cancer experienced the greatest deficits associated with heart failure, warranting increased awareness and intervention in this group. Patients may benefit from tailored nursing interventions to address their unique concerns, as well as systematic referral to physical/occupational therapists to maintain their functional status. Prospective studies can inform proactive approaches to prevent deterioration of function and HRQOL in this high-risk population.

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**PALLIATIVE CARE KNOWLEDGE AND PREFERENCES BY HEAD AND NECK CANCER PATIENTS AND THEIR PRIMARY CAREGIVERS.** Verna Hendricks-Ferguson, PhD, RN, CHPPN, FPCN, FAAN, Saint Louis University, School of Nursing, St. Louis, MO; Rebecca Ott, RN, BSN, Missouri Baptist Medical Center, St. Louis, MO; Crystal Weaver, MA, PLPC, CRC, MT-BC, Saint Louis University Cancer Center, St. Louis, MO; Margaret Bultas, PhD, RN, CPNP-PC, Saint Louis University, School of Nursing, St. Louis, MO

Research has provided evidence the public is often misinformed and confused about the meaning of palliative care (PC). Public surveys have also shown approximately 78% of Americans do not know or have not heard of PC and continue to lack fact-based knowledge about choices related to PC and end-of-life (EOL) care. Facilitating public awareness about the purpose and benefits of PC before an illness occurs is an ethical duty of all healthcare providers. Fostering public awareness and accurate understanding about PC support may empower individuals to ask providers about PC support options rather than relying on providers to offer PC support during oncology treatments or near EOL care. Our study purpose focused on evaluation of perspectives held by head and neck cancer patients (HNC) patients and their primary family caregivers about PC support received. A descriptive qualitative design was used for this pilot study. The targeted sample included 20 subjects (i.e., 10 patients with any type of newly diagnosed HNC and 10 primary family caregivers). Subjects were recruited using a convenience sampling plan from a Midwest radiation oncology clinic. An interview guide of open-ended questions was used to guide the audio-

recorded interviews with each subject. Collected interview data was analyzed using Krippendorff's method of semantic content-analysis procedures. Study findings included: 100% of subjects did not recall hearing the term PC used by their providers; 88% of subjects had no knowledge of the purpose of PC; and pain and weight loss were the most common reported symptom of concern during radiation care. Our findings suggest HNC patients in this setting may not be receiving needed information about PC support to minimize oral pain and significant weight loss while improving quality of life during radiation oncology treatments. Delivery of PC education to the public is critical to empower individuals and families in the community to consider the purpose and benefits of PC before being faced with the crisis of coping and making necessary and often very difficult healthcare decisions for a loved one who has been diagnosed with a chronic or serious illness or for their own health care. Hence, offering educational opportunities in the community to increase PC is essential to increase the possibility that future HNC patients and their family caregivers can consider PC support.

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**NURSES' PERCEPTIONS AND SATISFACTION TO THE USE OF A CLOSED-SYSTEM DRUG TRANSFER DEVICE FOR CHEMOTHERAPY ADMINISTRATION.** Ming Ying Hong, RN, National Taiwan University Hospital, Taipei; Ying Siou Lin, RN, National Taiwan University Hospital, Taipei; Yuen Jiau Hwang, RN, National Taiwan University Hospital, Taipei; Yeur Hur Lai, RN, National Taiwan University Hospital, Taipei

Antineoplastic chemotherapy is the main treatment in cancer therapy, and the toxicity are well known to primary care clinicians. An increasing trend of chemotherapy drug use has expanded the occupational exposure among the clinical nurses. Many Guidelines and studies indicated that closed-system drug transfer device (CSTD) can reduce the exposure of health care workers to harmful agents and may offer additional protection. Purposes of this study were to compare nurses' perceptions and satisfaction to the use of a closed-system drug transfer device versus centralized preparing the chemotherapy medications and the priming of IV tubing in the pharmacy of a medical center in northern Taiwan. This study was a descriptive study using self-report surveys and was conducted from October 2015 to February 2016. Nurses rated their perception on a 4-point Likert's scale on the ease of use, safety of use, perceived time efficiency, risk of exposure chemotherapy, ensure patients received all of the dose, reduce hazardous drug environmental contamination, convenient in use, and overall satisfaction with use of each chemotherapy administration methods. The instrument used in this study was designed by the investigators based on the literature, clinical experiences and validated by subject experts. A total of 257 nurses participated in the study from 19 nursing units at one hospital participated in this study. Comparing the use of CSTDs to the centralized priming, nurses felt the use of CSTDs were safer ( $3.18 \pm 0.51$  vs.  $2.93 \pm 0.69$ ,  $p < .001$ ), decreased the risk of chemotherapy exposure ( $2.74 \pm 0.66$  vs.  $3.03 \pm 0.63$ ,  $p < .001$ ), ensured patient received all of dose of chemotherapy ( $3.08 \pm 0.66$  vs.  $2.80 \pm 0.74$ ,  $p < .001$ ), decreased hazardous drug environmental contamination ( $2.54 \pm 0.71$  vs.  $2.91 \pm 0.74$ ,  $p < .001$ ), were more convenient ( $3.23 \pm 0.58$  vs.  $2.93 \pm 2.77$ ,  $p < .001$ ), and were satisfactory ( $86.3 \pm 7.31$  vs.  $82.8 \pm 8.89$ ,  $p < .001$ ) in use CSTDs. In this study, nurses felt more comfortable and satisfactory with the use of CSTDs comparing with the centralization of the priming of IV tubing in the pharmacy for chemotherapy administration, and perceived the use of CSTDs to be a safer alternative for occupational safety.



### THE SYMPTOM EXPERIENCE OF PATIENTS RECEIVING EPIDERMAL GROWTH FACTOR RECEPTOR INHIBITORS.

Josie Howard-Ruben, PhD, APRN-CNS, AOCN®, CHPN, Loyola University Chicago, Park Ridge, IL

This study was designed to explore the symptom experience, including discovery of any co-occurring symptoms (symptom clusters), associated with epidermal growth factor receptor inhibitor (EGFRI) therapy. Patients with solid tumors including lung cancer, colon cancer, head and neck cancer, and breast cancer who were receiving an EGFRI for at least four weeks were eligible for inclusion. The most common side effects of these agents are dermatologic, including rashes, hair, and nail changes. However, EGFRI may also cause an array of other, less well-described, symptoms. In addition to describing a broader range of symptoms associated with EGFRI therapies, this study examined how these symptoms impacted several outcomes, including quality of life, psychological status, and performance. Factor analytic procedures and hierarchical cluster analyses resulted in the identification of co-occurring symptoms, or symptom clusters. The relationship of key variables (age, diagnosis, gender, EGFRI therapy, and symptom clusters) to outcomes was explored. A descriptive, correlational online or paper survey was used in this study. A total of 56 participants were eligible for inclusion; 44 participants completed online surveys and 12 completed surveys on paper. Three symptom clusters were identified: a psychological-cognitive cluster; a treatment-related dermatologic cluster that has not been previously identified as a symptom cluster; and, a mucocutaneous and fatigue cluster. Symptom clusters had differing impacts on outcomes, so knowledge of the effects of these symptom clusters can guide nursing practice in the care of patients receiving these targeted therapies. Nursing care can be tailored to include symptom management strategies as well as appropriate psychosocial interventions. Novel symptom clusters were identified in this exploratory work. Evidence has been presented that patient receiving these therapeutic agents experience a significant symptom burden related to their disease and treatment that includes dermatologic symptoms, but also includes a wide variety of other symptoms that require assessment and management, such as mood and affective symptoms. Most previous work has addressed the dermatologic side effects and has not addressed the holistic patient experience.

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### DISTRESS THERMOMETER EMOTIONAL PROBLEM ITEMS PREDICT INCREASING ANXIETY AND DEPRESSION SCORES IN CANCER PATIENTS.

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This study was designed to evaluate the extent to which individual "emotional problems" on the distress thermometer (DT) checklist predict overall anxiety and/or depression scores assessed using standardized instruments. All adult patients seen in the outpatient psychiatry oncology clinic (June 2014-Jan 2016) who provided informed consent were included (N=1,096). Assessment tools included the Patient Health Questionnaire-9 (PHQ-9) to measure depression, the Generalized Anxiety Disorder scale (GAD-7) to measure anxiety, and specific items from the NCCN DT Checklist, which were analyzed as categorical variables (Yes vs. No). Data are presented as percentages or Mean ± S.D. In this cohort, patients were predominantly female (67%), White (76%), ~54 years of age, and the majority (63%) were in a committed relationship. Overall, PHQ-9 (10.9±5.8) and GAD-7 (9.5±5.9) scores were considered to be in the moderate to mild range. Endorsement (Yes vs No) of individual DT

items, including Depression (12.9±5.3 vs. 7.1±4.6; F1,1091=323.2, p<.0001), Sadness (12.9±5.3 vs. 7.1±4.6; F1,1091=323.2, p<.0001) or Loss of Interest (13.5±5.3 vs. 7.3±4.4; F1,1091=404.1, p<.0001) predicted significantly higher levels of depression as measured using the PHQ-9. Similarly, endorsement of Fears (11.6±5.3 vs. 5.9±4.9; F1,1090=317.9, p<.0001), Nervousness (11.7±5.2 vs. 5.1±4.1; F1,1090=420.8, p<.0001) or Worry (10.8±5.4 vs. 3.6±4.0; F1,1090=324.8, p<.0001) predicted significantly higher levels of anxiety as measured using the GAD-7. The data indicate that individual "emotional problems" on the DT checklist predict increasing anxiety and depression scores assessed using standardized instruments. For centers that use only the DT to assess distress, these findings validate a patient's self-report of depression and /or anxiety and may warrant psychiatric intervention. Knowing this, the oncology nurse can monitor the patient's mood symptoms using the DT and make recommendations for psychiatric intervention. This study validated the usefulness of the DT to predict anxiety and depression in patients with cancer so that psychiatric intervention can be instituted earlier in their cancer journey, especially if the DT is used during outpatient visits and hospitalizations.

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### INTEGRATED EFFICACY AND SAFETY ANALYSIS OF THE POLY(ADP-RIBOSE) POLYMERASE INHIBITOR RUCAPARIB IN PATIENTS WITH HIGH-GRADE OVARIAN CARCINOMA.

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Rucaparib is a poly(ADP-ribose) polymerase (PARP) inhibitor with clinical activity in patients with high-grade ovarian carcinoma (HGOC). Data from the phase 2 studies ARIEL2 (NCT01891344) and Study 10 (NCT01482715) were pooled to evaluate the efficacy of rucaparib in patients (n=106) with somatic or germline BRCA-mutated HGOC. Additionally, safety was assessed in 377 patients with BRCA-mutated or BRCA:wild-type HGOC. All patients in the safety population received at least 1 dose of oral rucaparib (600 mg). After initiation of treatment, the intended dose was 600 mg BID (2 pills twice daily) in continuous 21- or 28-day cycles until disease progression or other reason for discontinuation. Dose reductions were permitted following grade ≥3 adverse events (AEs). In the efficacy population, the investigator-assessed confirmed objective response rate was 54% (95% confidence interval [CI], 44–64); median duration of response was 9.2 months (95% CI, 6.6–11.7). In the efficacy population, 9% of patients had an investigator-assessed confirmed complete response, 45% had a partial response, and 34% had stable disease. In the safety population (BRCA-mutated and BRCA:wild-type HGOC), median duration of treatment was 5.5 (range, 0.1–28.0) months. Common treatment-emergent AEs included nausea (77%; grade ≥3, 5%), asthenia/fatigue (77%; grade ≥3, 11%), vomiting (46%; grade ≥3, 4%), and anemia/decreased hemoglobin (44%; grade ≥3, 25%). Laboratory abnormalities for which patients had a maximum shift to grade 3/4 during treatment included decreased hemoglobin (23%; 88/375 of patients with both baseline and post-baseline results), increased alanine aminotransferase (ALT) (13%; 47/375), decreased neutrophils (10%; 37/375), decreased lymphocytes (7%; 26/371), decreased platelets (6%; 23/375), increased aspartate aminotransferase (AST) (5%; 17/375), increased cholesterol (2%; 9/366), and increased creatinine (1%; 5/375). Increases in ALT or AST normalized over time with continued rucaparib treatment. The most common AEs leading to dose interruption (59% overall) were anemia/decreased hemoglobin (17%) and nausea (14%). Overall, 13% of patients discontinued treatment with an AE as the primary reason. Common treatment-emergent AEs leading to treatment discontinuation included asthenia/fatigue (2%), small intestinal obstruction (2%), and nausea (1%). No

patients died from treatment-related AEs. AEs and laboratory abnormalities were managed with medication (eg, antiemetics), treatment (eg, infusions), and/or dose modification. Rucaparib has clinical activity in HGOC tumors with germline or somatic BRCA mutations.

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**ONE SIMPLE CALL CAN SATISFY THEM ALL.** Colleen Jennings, RN, BSN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Robyn Dunbar, RN, BSN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA; Kerri Slavin, RN, BSN, HN-BC, Cancer Treatment Centers of America, Philadelphia, PA

Studies have shown follow-up phone calls, after a patient is discharged, improves patient satisfaction. On a step-down oncology unit at a cancer-specific hospital, the nurses needed to examine the discharge process to effectively make an impact on patient satisfaction. The purpose of this study was to determine patient's understanding of their discharge instructions, answer any outlying questions related to their medications and plan of care, and, ultimately, improve the discharge process on the unit. This study was a phenomenological qualitative research study conducted to determine how the patients perceived their discharge process. Nurses on the unit were educated on the importance of follow-up phone calls for each patient. A script with six questions was developed to obtain essential feedback. Discharged patients were called by the charge nurse the following day. Any question the charge nurse was unable to answer was directed to the appropriate department for further clarification. A log of patient comments and education given was retained on the unit. The charge nurse would routinely share trends from the phone calls in the daily huddle. This study was carried out from April 2015 to July 2016. From April to December of 2015, 75 out of the 222 patients contacted through the calls requested further education on their plan of care and their medications. From January to July of 2016, 11 out of 128 patients contacted through the calls requested further education on their discharge plan and their medications. From 2015 to 2016 we observed improvement with our discharge process, as less patients requested further education during their discharge follow-up phone calls. The study showed that discharge follow-up phone calls were an effective way to develop a comprehensive discharge process. By calling each patient after discharge, the nurses were able to clarify patient questions on their plan of care as well as provide teaching for their home medications. The next steps to evaluate opportunities for improvement include: to examine the discharge script, assess patient satisfaction scores, and capture additional patients upon discharge for valuable feedback.

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**A COMPARISON OF COAGULATION STUDY RESULTS BETWEEN HEPARINIZED HICKMAN CATHETER AND VENIPUNCTURE.** Mijin Jeon, RN, OCN®, Asan Medical Center, Seoul; Arum Han, RN, OCN®, Asan Medical Center, Seoul; Hyeran Kang, RN, OCN®, Asan Medical Center, Seoul; Jeeyoon Kim, RN, Asan Medical Center, Seoul; Yoonsook Doo, RN, Asan Medical Center, Seoul; Soonja Shin, RN, Asan Medical Center, Seoul

The purpose of this study was to evaluate the procedure of blood sampling for coagulation test from heparinized Hickman catheter by comparing results with blood drawn from venipuncture (VP). A prospective, quasi-experimental design using purposive sampling was used. Over 2,000-bed tertiary hospital located in Seoul, South Korea. Sample: 38 patients with three-lumen Hickman catheter and had coagulation studies prescribed.

Using aseptic technique, Blood samples for coagulation tests were drawn via VP and from Hickman catheter within seconds. For the blood sampling, Hickman catheter was flushed out with 5mL normal saline and then connected with vacutainer. Before the sampling of blood for coagulation tests, 10.2±0.3 mL blood was discarded with two no additive tubes. All blood sampling procedures followed Clinical and Laboratory Standard Institute (CLSI) guideline. Pearson product moment correlation and Bland-Altman analysis were used for data analysis. The age of the patients ranged from 20-68 years old (45.6±14.8). 78.9% patients was diagnosed with leukemia and 60.5% patients had hematopoietic stem cell transplantation. The prothrombin time (PT INR) results acquired from blood sampling via Hickman catheter were significantly correlated with the results from venipuncture ( $r=0.91$ ,  $p<.001$ ). The correlation existed between blood samples from VP and Hickman catheter in activated partial thromboplastin time (aPTT) results ( $r=0.38$ ,  $p=.019$ ). Blood sampling from heparinized Hickman catheter based on CLSI guidelines is suitable for PT test. Discarded volume is not sufficient to prevent heparin contamination in adult patients. It has been difficult to establish institutional policy for coagulation tests via heparinized central catheters due to the various guidelines, catheter types, and concentration of heparin solution. The study is significant for identifying the agreement of the coagulation test results via VP and Hickman catheters in adult patients.

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**EFFECT OF COGNITIVE DYSFUNCTION ON POST-OPERATIVE QUALITY OF LIFE IN WOMEN NEWLY DIAGNOSED WITH BREAST CANCER BEFORE ADJUVANT TREATMENT.** Mi Sook Jung, PhD, RN, Chungnam National University, Daejeon; Moira Visovatti, PhD, RN, ACNP-BC, OCN®, University of Michigan, Ann Arbor, MI; Jinsun Lee, MD, Chungnam National University Hospital, Daejeon; Mijung Kim, RN, Chungnam National University, Daejeon

Health-related quality of life (QOL) has been a longstanding concern in oncology nursing research and practice. There is a general consensus that women receiving breast-conserving surgery had fewer difficulties in body image and sexual functioning than those undergoing mastectomy only. However, recent meta-analyses indicated that overall QOL did not significantly differ among studies to compare QOL associated with lumpectomy versus mastectomy. Patient-reported QOL post-surgery may influence various factors such as choice of surgical procedures, changes in symptomatology, and pre-existing cultural tendency related to attitudes toward symptom experiences. This study aimed to explore changes in physical, mental, and cognitive symptoms before and after breast cancer surgery and to examine the effect of changes in symptoms and cultural tendency on post-operative QOL in Korean women with breast cancer. Korean women awaiting surgery for breast cancer (N=126) were enrolled and interviewed with self-report questionnaires to assess symptom distress, cultural tendency, and health-related QOL at pre- and post-surgery. Paired t-test was used to identify changes in symptomatology before and after surgery and multiple linear regression was performed to determine the predictors of post-operative QOL. Participants showed a significant reduction in cognitive function between pre- and post-surgery for breast cancer. Depressive symptoms significantly decreased between these time points while no significant changes were found in worry and fatigue over time. Physical symptoms including sexual, urologic, weight/body image, gastrointestinal, musculoskeletal, and vasomotor distress after surgery was significantly worse than those before surgery. Reduced cognitive function and a lower tendency toward collectivistic cultures predicted overall QOL impairment in women receiving surgery for breast cancer, when controlling for age, education, stage of illness, type of surgery, and other

symptomatology. Post-operative QOL was associated with changes in patient-reported cognitive function and cultural tendency, regardless of demographic and illness-related factors. Healthcare professionals need to routinely assess cognitive function during the trajectory of cancer treatment immediately after diagnosis and develop interventions to improve cognitive function with consideration for cultural orientation in women with breast cancer. This is a first report of relationship between post-treatment quality of life and changes in cognitive dysfunction between pre- and post-surgery.

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##### **EFFECTS OF SYMPTOM DISTRESS AND SELF-CARE COMPETENCE ON THYROID-SPECIFIC QUALITY OF LIFE.**

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Thyroid cancer has received attention because of a significant increase in incidence and total number of survivors in most countries. In South Korea, the incidence rate was reached at an alarming level of 22.1% per year between 1999 and 2012. Thyroid cancer has been labelled as a “good cancer” due to a high survival rate but poor quality of life was reported in thyroid cancer survivors compared to those with other serious types such as colorectal cancer. Given this current thyroid cancer trends, research is needed to assess symptom distress and promote quality of life in thyroid cancer survivors. The aims of this study were to explore persistent symptoms, self-care competence, and quality of life and to identify the factors associated with thyroid cancer-specific quality of life. Total of 115 individuals treated for thyroid cancer were enrolled from a national university hospital. Post-treatment symptoms, self-care, and quality of life were assessed by MD Anderson Symptom Inventory Thyroid Cancer Module, Self-as-Carer Inventory, and Quality of Life thyroid scale. Descriptive and multivariable regression analyses were performed. The majority of participants were middle-aged women treated with lobectomy or thyroidectomy for early stage thyroid cancer. Participants had experienced various persistent symptoms such as fatigue, forgetfulness, sleep disturbance, emotional distress, and changes in sensation although the overall severity was mild. These symptoms were strongly related to interference with effective daily functioning. Perceived self-care competence was good and quality of life was moderate to high, ranging from the lowest level in the spiritual domain to the highest level in the psychological domain. Physical and psychological quality of life were associated with lower symptom experience and interference and better self-care competence. Social quality of life was related to older age and less interference and spiritual quality of life was associated with only self-care competence when controlling for demographic and illness-related variables. Thyroid cancer survivors may have persistent symptoms which may lead to reduced quality of life after treatment. Nurse-led health educations are needed to help minority thyroid cancer survivors manage post-treatment symptoms through performance in self-care and to improve quality of life. This is a study to highlight the issues regarding quality of life in individuals treated for thyroid cancer labelled as a “good cancer”.

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##### **A SURVEY OF ONCOLOGY PATIENTS: DOES CENTRAL NERVOUS SYSTEM AND BRAIN INVOLVEMENT ELEVATE FALL RISK? Margaret Karas, RN, ADN, Froedtert Hospital, Milwaukee, WI**

Oncology patients are admitted to the hospital with impaired activity, intravenous infusions, and medications known to im-

pair their judgment and/or physical stability. These patients are recognized as having a risk for falls. Some oncology patients are admitted for scheduled chemotherapy, hydration, and nausea management and are not identified at risk for falls using screening tools. The goal of this survey is to identify whether patients with known brain metastasis or CNS involvement of their cancer are at an elevated risk for falls. The population was gathered from a retrospective survey of all oncology patients who fell while admitted to the hematology oncology unit at a large academic medical center over a twenty-four month period. The fall scale used at the institution where the survey took place scored patients one point for each positive response to: activity impairment, cognitive/behavioral limitations, any medication that places patient at risk for falls, and elimination issues. If the patient had fallen within the last thirty days, they earned an additional five points. Any total greater than one identified patient as having some risk for falls, any total five or higher identified the patient as a high fall risk, where specific interventions were required. The data was collected from internal hospital chart reviews created after a patient fell. Information surveyed includes: chief complaint for admission, primary diagnosis, diagnostic imaging, vital signs, medications, laboratory results, and care team progress notes. It was noted if the patient who fell had known brain metastasis or CNS involvement of their cancer, and what their fall risk assessment was prior to their fall. Preliminary data reveals 25-30% of patients who fell had known brain metastasis or CNS involvement. Data is being calculated to determine what percentage of patients who fell were not identified as a “high fall risk,” scoring less than five points on the institutional fall scale. A relationship exists between patients with known brain metastasis or CNS involvement and an increased frequency of falls. An additional screening factor added to patient fall risk assessments may better identify these patients as being at a higher risk for falls than current methods, thus increasing safety interventions and reducing occurrence of falls.

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##### **TREATMENT-RELATED DECISIONAL CONFLICT, QUALITY OF LIFE, AND COMORBID ILLNESS IN OLDER ADULTS WITH CANCER. Jeannette Kates, PhD, MSN, CRNP, GNP-BC, Thomas Jefferson University, Philadelphia, PA**

As the aging population in the nation increases, cancer diagnoses in this age group will also increase. The many chronic medical conditions associated with older adults are confounded by a diagnosis of cancer. Older adults with cancer are at risk for physical, psychological, and functional decline as a result of not only the cancer, but also the cancer treatment. In their current research agenda, the Oncology Nursing Society identified the need for research related to multiple comorbidities in older adults with cancer. This study utilized a cross-sectional, descriptive, correlational study design to explore the relationships between and among treatment-related decisional conflict, quality of life, and comorbidity in older adults with cancer. Oncology nurses recruited a sample size of 200 for this study from outpatient medical oncology, radiation oncology and palliative care practices. Using an anonymous survey method, participants completed three psychometrically-sound instruments, including the Decisional Conflict Scale, Self-Administered Comorbidity Questionnaire, and the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire. Bivariate relationships existed between increased levels of decisional conflict and increased quality of life ( $p = .009$ ) and quality of life and comorbidity ( $p = .001$ ). All six regression models achieved significance ( $p < .001$ ). Statistically significant relationships were identified in each of the six regression models. Positive relationships existed between decisional conflict and financial problems, physical function, and global health status/quality



of life. Increased emotional function may be predictive of decreased decisional conflict in all of the regression models. Other negative relationships existed between decisional conflict and cognitive function, diarrhea, spiritual support, insomnia, year diagnosed, fatigue, and nausea/vomiting. With their focus on patient-centered care, oncology nurses are a crucial component of the multidisciplinary cancer team that can empower older cancer patients to communicate their values and preferences regarding cancer treatment. Additionally, this study underscores the importance of oncology nurses being prepared to provide high-quality care to geriatric patients with multiple comorbidities. Given the paucity of research on the impact of cancer and its treatment on older adults, there are no published studies that address all of these variables. In light of the regression analyses, further research is needed with regard to emotional function, spiritual support, and symptom management in the setting of decision making in older adults with cancer.

#### **439 PREDICTORS OF MAKING AN ATTEMPT TO QUIT SMOKING IN THE PREVIOUS YEAR: A SECONDARY DATA ANALYSIS.** Kristin Keller, MS, AOCNS®, Saint Louis University, St. Louis, MO

Chronic tobacco use is associated with negative health consequences yet, nearly 1 in 5 adults in the US smoke cigarettes. While tobacco use is widely recognized as a major cause of preventable morbidity and mortality, smoking cessation remains a challenging behavior change to achieve. The purpose of this study is to determine the factors that predict an attempt to quit smoking during the previous year. The Health Information National Trends Survey (HINTS) was used to develop a risk prediction model for attempted smoking cessation. HINTS collects data regarding the US public's use of cancer-related information. This dataset was limited to active smokers (n=452). Data from males (n= 187) and females (n= 265) were analyzed separately. Logistic regression was used to regress smoking cessation attempt onto fruit consumption, vegetable consumption, exercise, receipt of mammography, and receipt of prostate specific antigen (PSA) screening test. Overall, the model significantly predicted an attempt to quit smoking in the previous year for females (Chi-Square = 21.745, df = 5, p = 0.001), but not for males (Chi-Square = 6.062, df = 4, p = 0.195). Having a pap test within the past three years significantly predicted a quit attempt. Smokers who had a pap test in the previous three years were 2.099 times more likely to have attempted to quit smoking than smokers who did not participate in pap test screening (Chi-Square = 6.620, df = 1, p = 0.010). Smokers who had a mammogram in the past three years were 1.643 times more likely to have made a quit attempt than smokers who had not had a mammogram within the past three years (Chi-Square = 3.039, df = 1, p = 0.81), but this result was not statistically significant. The results of this analysis suggest that women who engage actively in cancer screening, specifically women who have received a mammogram or pap testing within the past three years, may be more likely to make an attempt to quit smoking. Additionally, a model incorporating exercise, and fruit and vegetable consumption successfully predicted an attempt to quit smoking for female participants. This research is innovative because, it investigates predictors of quit attempts in relation to health behaviors, specifically, adherence to cancer screening recommendations.

#### **440 FACTORS THAT INFLUENCE ENROLLMENT OF PATIENTS IN GYNECOLOGICAL CANCER CLINICAL TRIALS.** Izumi Kohara, RN, DNSc, CCRP, Jichi Medical University, Shimotsuke; Shizuo Machida, MD, PhD, Jichi Medical University,

Shimotsuke; Akiyo Taneichi, MD, Jichi Medical University, Shimotsuke; Yoshie Watanabe, RN, MSN, Jichi Medical University, Shimotsuke; Yuji Takei, MD, PhD, Jichi Medical University, Shimotsuke; Hiroyuki Fujiwara, MD, PhD, Jichi Medical University, Shimotsuke

Only 2-7% of cancer patients participate in clinical trials. There are barriers to developing systemic therapies for cancer. Determining factors that influence enrollment in clinical trials is important to develop the role of nurses in clinical trials, to promote rapid patient enrollment, and to develop new therapies. The purpose of this study was to determine factors that influenced patients' enrollment in gynecological cancer clinical trials at our institute. A retrospective survey was performed in 133 gynecological cancer patients who had been determined by physicians and a research nurse coordinator to be eligible to participate in clinical trials from 2010 to 2014. Sociodemographic characteristics, cancer type, and enrollment process in cancer clinical trials were collected from medical records. We conducted descriptive statistics and logistic regression to assess factors related to patient enrollment. Among 111 patients (83%, 111/133) who were assessed as being eligible for a clinical trial as a result of screening and were informed about a clinical trial, 67 patients (50%, 67/133) consented to participate in a trial and 64 patients (48%, 64/133) were actually enrolled in a trial. Patient age and whether trials were randomized or not were not related to a patient's consenting to participate in a trial. Trials of adjuvant chemotherapies had a low consent rate (p=0.011), while trials for recurrent cancer had a high consent rate (p=0.014). Receiving detailed information and having a discussion with a research nurse coordinator after receiving physician consultation (current intervention) were not significantly associated with a patient's giving consent to participate in a clinical trial. Enrollment in a clinical trial after screening depends on patients' consent. Reasons for the low consent rate in patient-informed trials of adjuvant chemotherapies may include patients' low interest, understanding or self-efficacy. Most patients who are informed about trials of adjuvant chemotherapies do not have advanced cancer and do not have much experience in cancer therapies. Our current intervention by a research nurse coordinator did not sufficiently influence patient enrollment in clinical trials. Preparing patients to consider clinical trials is critical including education prior to physician consultation. Clinical nurses can play a role by preparing patients to consider participating in clinical trials under collaboration with a research nurse coordinator and physicians, which may increase patients' consent rate in clinical trials.

#### **441 FEAR OF CANCER RECURRENCE IN EARLY STAGE LUNG CANCER PATIENTS.** Yeur-Hur Lai, RN, PhD, National Taiwan University, Taipei; Jin-Shin Chen, MD, PhD, National Taiwan University Hospital, Taipei

Fear of cancer recurrence (FCR) is a common distress experienced by cancer patients and it might negatively influence patients' quality of life. However, relatively limited information has been reported about FCR in those operable early stage lung cancer patients. Purposes: (1) To explore the experiences of FCR in early stage lung cancer patients at three Methods: A cross-sectional study with consecutive sampling was conducted to recruit newly diagnosed early stage lung cancer patients 3 month post-surgery. The validated Chinese version of Fear of Cancer Recurrence Inventory (FCRI-C) was applied to assess patients' experiences in FCR at 3-month post-operation time point. IRB approval and patients' consents were obtained before data collection. Two trained oncology research nurses assessed those eligible patients in thoracic OPD. A total of 140 early stage lung cancer patients were recruited from a medi-

cal center in Northern Taiwan. In general, the results showed that about 10% of early stage LC patients frequently or always thought about cancer recurrence. There was close to half of patients experiencing of FCR while triggered by seeing or hearing television shows or newspaper/ articles about cancer. One third of patients perceived a little worry, fear or anxiety while thinking about such unpleasant events. However, one fourth of patients recognizing FCR or having negative emotion were normal. For coping strategies, close to half of patients tried to convince themselves that everything will be fine or to think positively to cope with this distressful concern. One fourth of patients went to hospital or clinic for an examination, if they had some physical discomfort. This study reveals that FCR is still a distressful concern to patients with early stage lung cancer 3 month after tumor dissection surgery. Health care professionals should assess and address patients' FCR concerns and provide them timely supports. Developing those Interventions to help patients live well with early stage lung cancer would be strongly suggested. This is the one of few published papers related to FCR in early stage lung cancer patients.

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**THE INFLUENCE OF SYMPTOM CLUSTERS ON FUNCTIONING AND QOL.** Jiyeon Lee, RN, PhD, Chungnam National University, Daejeon; Sun Young Rha, MD, PhD, Yonsei Cancer Center, Seoul

Symptom clusters are interrelated symptoms occurring simultaneously that exert a negative impact on survival. Identification of symptom clusters and effective symptom management for patients receiving palliative chemotherapy is crucial. The purpose of this study was to identify symptom clusters among cancer patients undergoing palliative chemotherapy and examine the relationship between symptom clusters and functioning and quality of life (QOL) in these patients. A total of 300 patients undergoing palliative chemotherapy participated in the study. Symptom experience during previous palliative chemotherapy was evaluated using a symptom questionnaire including 20 symptoms. The European Organization for Research and Treatment of Cancer Quality of Life-C30 was used to measure patients' symptoms, functioning and QOL. Factor and hierarchical cluster analyses were performed to identify symptom clusters. Structural equation modeling was used to identify relationships between symptom clusters, functioning and QOL in patients. Four symptom clusters including 14 symptoms were identified among 20 symptoms experienced by patients undergoing palliative chemotherapy. The emotional cluster influenced role and social functioning. The NV/appetite/taste change cluster had a negative impact on role functioning. The fatigue/cognitive and other cluster (dyspnea, pain, constipation, neuropathy and sleep disturbance) negatively influenced physical functioning. Among the functioning subscales, only role functioning had a direct influence on QOL. Indirect relationships between symptom clusters and QOL were mediated by physical and role functioning. The final model, which consisted of four symptom clusters and three functioning subscales, accounted for 23.3% of the variance in the QOL. Four symptom clusters occurring during palliative chemotherapy demonstrated negative influences on functioning and QOL. Differential contributions of symptom clusters to functioning were identified that eventually contributed to QOL through role functioning. The identified symptom clusters and their relationships with functioning and QOL may help guide approaches to symptom management. Implementation of interventions targeting symptom clusters would contribute to improving functioning and QOL in patients. Targeting symptom clusters for symptom management is recommended for practice as studies have demonstrated symptom clusters, rather than the individual symptoms of the clusters, have significantly higher impacts on functioning and QOL.

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**EFFECTS OF NURSE-LED TELEPHONE-BASED SUPPORTIVE INTERVENTIONS FOR PATIENTS WITH CANCER: A META-ANALYSIS.** Myung Kyung Lee, RN, PhD, Kyungpook National University, Daegu

**Problem Identification:** To evaluate the effects of nurse-led telephone-based supportive interventions (NTSIs) for patients with cancer. **Literature Search:** Electronic databases, including EMBASE, MEDLINE, Google Scholar, Cochrane Library CENTRAL, ProQuest Medical Library, and CINAHL, through February 2016. We performed a meta-analysis of 16 trials that met our eligibility criteria. There were 13 randomized controlled trials (RCTs) and 3 nonrandomized trials that examined a total of 2912 patients with cancer. Patients who received NTSIs were compared with those who received attentional control or usual care (no intervention). The results indicate that NTSIs had a large and significant effect on the ability of self-care; a moderate and significant effect on relieving cancer symptoms; and a small and significant effect on emotional distress and health-related quality of life (HRQOL). Subgroup analyses indicated that the significant effects of NTSIs on cancer symptoms, emotional distress, and HRQOL were larger for studies that combined an application of a theoretical framework, had a control group given usual care, and used an RTC design. Our findings indicate that telephone interventions delivered by a nurse in an oncology care setting reduced cancer symptoms and emotional distress, and improved self-care and HRQOL. Our findings suggest that a further tiered evaluation that has a theoretical underpinning, and high-quality methodology is required to confirm the efficacy of NTSI for adoption of specific care models.

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**HOSPICE AND PALLIATIVE CARE PROVIDERS PERCEPTIONS ABOUT USING CYBERMEDITATION TO COMBAT COMPASSION FATIGUE: FOCUS GROUP FINDINGS.** Rebecca H. Lehto, PhD, RN, Michigan State University, East Lansing, MI; Carrie Heeter, PhD, Michigan State University, East Lansing, MI; Marcel Allbritton, PhD, Core Resonance Works, Albany, CA; Tom Day, MS, Michigan State University, East Lansing, MI; Michelle Wiseman, MPA, RN, Sparrow Health Network, East Lansing, MI

Oncology health care providers (HCPs) involved in the care of terminally ill patients are at risk of developing compassion fatigue, a condition characterized by psychic exhaustion and reduced professional engagement. Compassion fatigue may contribute to professional burnout with adverse outcomes such as decreased productivity, absenteeism and decreased work engagement, reduced patient and family satisfaction, and heightened turnover. Research has shown that development of a meditation practice can relieve stress, cultivate self-regulation skills, and may have potential to modify risk and symptoms of compassion fatigue and burnout. Meditation programs, such as mindfulness based stress reduction, require 6-8 weeks of group participation and a one-day retreat making commitment challenging for busy HCP's who often have demanding schedules. A pilot study was conducted that tested the adoption, use, and outcomes of an innovative Cybermeditation Toolkit (6-week program using 10-12 minute meditation apps involving breath, gentle movement and visualization combined with bi-weekly support emails) developed specifically to combat compassion fatigue and burnout symptoms for professional HCPs. The study purpose was to examine palliative and hospice HCPs perceptions relative to the adoption and use of the toolkit. The study was guided by a Professional Quality of Life(ProQoL) framework. Audio-taped

focus groups were conducted among 11 HCPs [age 36-63 years; 10 females with 5-40 years of work experience who used the cybermeditation apps 6 (low usage) to 30 (high usage) times. Data were transcribed and analyzed using qualitative methodology. Participants described positive benefits from using the cybermeditation apps including perceived better regulation of aversive emotions, stress reduction, heightened mindfulness, and adoption of healthy lifestyle behaviors. Flexibility and feasible length of meditations were cited as strengths. Barriers primarily related to technical issues such as tapping screen to advance phone apps. Perceptions about the email support were mixed. Engaging a participatory approach, findings provide valuable input to consider in the development of meditation programs to reduce negative work-related sequelae in oncology professionals. Interventions that can be flexibly adapted for HCPs with busy lifestyles are imperative. Such efforts may lead to higher professional satisfaction, reduced turnover, and potentially to improved patient care delivery. The cybermeditation toolkit is a novel application of technology with guided meditation to improve the wellbeing of care providers.

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**HELPING US HEAL: A COMPARATIVE ANALYSIS OF A TELEPHONE VERSUS IN-PERSON SPOUSE CAREGIVER PROGRAM.** Frances Lewis, RN, MN, PhD, University of Washington, SCCA, Seattle, WA; Kristin Griffith, MS, University of Washington, Seattle, WA; Ellen Zahlis, MN, University of Washington, Seattle, WA; Mary Ellen Shands, MN, University of Washington, Seattle, WA

Both spouse caregivers and patients suffer elevated levels of distress (anxiety, depressed mood) during initial diagnosis and treatment of breast cancer. Spousal distress has known negative consequences for caregivers and the diagnosed woman, including its negative effects on the support spouse caregivers are able to offer the diagnosed patient. Although prior spouse caregiver intervention studies have been carried out, none has evaluated the outcomes of a telephone-delivered spouse caregiver program whose goals included distress reduction as well as caregiver self-management (self-care, communication skills, and confidence to interpersonally support and protect the quality of the couple's relationship). Further, none has compared outcomes of a telephone-delivered program with outcomes of the same program delivered in-person. The purpose of this 2-part pilot study is to 1) test the short-term impact of Helping Us Heal (HUSH), a manualized telephone-delivered educational counseling program for spouse caregivers (pre-posttest design); and 2) to compare spouse caregiver outcomes from the HUSH with outcomes from the same program delivered in-person (quasi-experimental design). A total of 39 spouse caregivers participated; one group received the telephone program (n=13) and the other the in-person program (n=26). Spouses in both programs were eligible if they were married or co-inhabiting with a woman diagnosed within 8 months with Stage 0-III breast cancer. After obtaining informed consent and baseline data, 5 intervention sessions were delivered at 2-week intervals by Masters prepared nurses. Outcomes were assessed at exit from program, 12 weeks post-baseline. Spouses who participated in the telephone-delivered program significantly improved on depressed mood, anxiety, behavioral skills to communicate and support their wife, and self-efficacy over protecting the quality of the couples' relationship and managing their own self-care. There were no statistically significant differences between gains from the in-person compared to gains from the telephone-delivered program. These positive outcomes from the telephone program were particularly remarkable because 62% of spouses at baseline in HUSH reached or ex-

ceeded the clinical cut off score on depressed mood. A brief, manualized nurse-delivered telephone educational counseling intervention has the potential to benefit spouse caregivers, including distressed caregivers. This is the first known pilot feasibility study to compare an in-person with a telephone-delivered oncology nurses' educational intervention; more complex or costly telehealth technology was not needed to help caregivers, including distressed caregivers.

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**POST-TRAUMATIC STRESS SYMPTOMS AND ITS RELATED FACTORS IN EARLY STAGE LUNG CANCER PATIENTS AFTER SURGERY.** Yaun-Ju Lin, RN, School of Nursing, National Taiwan University, Taipei, Taiwan; Yu-Ying Chou, RN, School of Nursing, National Taiwan University, Taipei, Taiwan; Yeur-Hur Lai, PhD, School of Nursing, National Taiwan University, Taipei, Taiwan

The impact of cancer diagnosis can be viewed as a potential traumatic stressor leading to serious posttraumatic stress symptoms (PTSS). This might be particularly true for those patients diagnosed with lung cancers. However, limited information has reported in this field. Thus, the purpose of this study was to explore the severity of PTSS and factors related to it in early stage operable lung cancer patients in Taiwan. This is a cross-sectional study. The eligible subjects were early stage lung cancer patients after surgery. We recruited subjects in a medical center in Northern Taiwan. Patients were assessed of their PTSS (by Impact of Event Scale Revised [IES-R]), symptom severity (by EORTC Lung Cancer 13 module [QLQ-LC13]) and performance status (by Karnofsky's Performance Scale) at 3 months post-surgery. Patients' demographic information and disease characteristics were also assessed. Data was analyzed by t-test, ANOVA and Pearson's correlation. IRB approval and patients' consents were obtained before data collection. One hundred and sixty-four patients were recruited. Among the PTSS, there were three sub-dimensions: intrusion, avoidance, hyperarousal. In this study, the results showed that the levels of PTSS sub-dimensions as their descending order were avoidance, intrusion and hyperarousal, respectively. Patients with younger age reported to have higher avoidance. Patients with higher education perceived higher intrusion, avoidance and overall PTSS. Severe symptoms were significantly associated with increased PTSS, particularly in patients with more severe dyspnea. Additionally, patients with more cough experienced more hyperarousal. In despite of relatively longer survival time, patients with early stage lung cancer still perceived the impacts from lung cancer reflected in their PTSS scores. Thus, careful assessment and personalized interventions were suggested for providing better clinical care.

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**IMPORTANCE OF ONCOLOGY NURSES' ROLE ON IMPROVING QOL IN CANCER PATIENTS WITH PRURITUS UNDERGOING ACTIVE ANTI-CANCER THERAPIES.** Anna Skripnik Lucas, MSN, RN, DNC, FNP-BC, Memorial Sloan Kettering Cancer Center, New York, NY

Pruritus is a dermatologic adverse event (dAE) that develop in patients receiving curative and palliative anti-cancer therapy. Pruritus is often under reported, under assessed and under treated. Causative therapies include radiation therapy, chemotherapy, epidermal growth factor inhibitors, immunotherapy, hormonal therapy, transplants, targeted therapy, and other newer novel agents. Anticancer therapies increase survival rates however, pruritus may have a significant negative impact on quality of life (QoL), activities of daily living, economic burden and lead to dose reduction. Patients who experience



pruritus often create excoriations secondary to scratching, thus creating a reservoir for microorganisms in immunocompromised patients. Accurate holistic assessment, treatment and management of pruritus in oncology patients is vital in promoting patients to maintain their therapeutic dose, minimize skin infections, avoid therapy discontinuation and disease progression. A PubMed literature search was performed limiting to English and Human studies only from January 1, 2000- October 1, 2016. The search yielded 108 articles of which 21 pertinent articles identified based on pruritus reporting, grading and impact on QoL. The identified articles reported pruritus as having the most negative impact on QoL, and patients are willing to give up a portion of their life expectancy to stop feeling itchy. Pruritus has poor prognosis in patients with Hodgkin's disease. Patients equated pruritus symptomatology with pain. The incidence of all grade and high grade pruritus is frequent in patients on targeted therapies. Findings highlight the need for standardizing grading systems to appropriately grade pruritus, and maintain consistency of terminology. Nursing education is important for rigorous and detailed assessments, formulation of patient care plans, early intervention, limiting dose reduction, maximizing outcomes and minimizing deteriorating QoL. Poor management of dAEs can lead to disruption in their anticancer therapy and disease progression. Oncology nurses should have a heightened awareness of the importance of assessing for pruritus, advocating for early interventions. It is paramount for patients to have an evaluation, treatment, and management with a dermatologic specialist across the cancer care continuum to avoid complications that can cause therapy dose reduction. Anti-cancer therapy provides increase in patient survival rates, and favorable clinical outcomes. Oncology nurses are vital in patient advocacy, accurate assessment, and minimizing negative impact of pruritus on QoL.

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**LIVING AND FUNCTIONING WITH ADVANCED CANCER: AN INTEGRATIVE REVIEW.** Debra Lundquist, MSN, RN, Boston College, Chestnut Hill, MA; Donna Berry, PhD, RN, AOCN®, FAAN, Dana-Farber Cancer Institute, Boston, MA

People live longer with advanced cancer (locally advanced or metastatic incurable cancer) than in previous decades as a result of improved screening, early detection and treatment advances. Many continue to live, work, and fulfill various roles and responsibilities. Some with advanced cancer may experience accumulating symptom burden and deterioration of function, while others may remain independent and functional. The purpose of this literature review was to examine the experience of people living with advanced cancer. A comprehensive search was conducted using CINAHL, PubMed, and Embase. Search terms included: advanced cancer patients, living with advanced cancer, quality of life and nursing. Reference lists of retrieved articles published between 2006-2016 were manually reviewed for additional articles. Study designs could be randomized controlled trials, or prospective or retrospective cohort studies. Review articles, case reports, editorials, and doctoral dissertations were excluded. An evidence table detailing key study components was compiled. The initial search resulted in 81 titles and abstracts. Thirty-five studies met inclusion criteria. The studies utilized prospective and retrospective designs and were conducted in hospital and community-based populations. The sample sizes ranged from 2 to 4980. Ages ranged from 17 to 85 years old. Existential concerns included hope, meaning, suffering, spirituality and happiness. Physical and psychosocial concerns include symptom management, decision-making, transitions, and quality of life. There is limited literature about day-to-day experiences for people living with advanced cancer from the perspective of daily challenges, social context (roles and responsibilities) and functional status. People living with advanced cancer continue

to be involved with work and familial responsibilities. Limited studies show that people continue to work, take care of their children, and manage roles and responsibilities despite having a diagnosis of advanced cancer. There are no documented details of daily challenges. These challenges, as well as facilitators and barriers to maintain function have not been explored. Therefore, we do not know how to address their survivorship needs. Many people with advanced cancer continue to live and maintain roles and responsibilities. There is a dearth of literature about their day-to-day experiences. Research is needed to better understand this experience from a functional, person-centered approach in order to develop palliative care interventions and inform policy that supports the uptake and dissemination of evidence-based interventions.

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**BELIEFS ABOUT MEDICINE QUESTIONNAIRE: UNIQUE FACTOR STRUCTURE AMONG PATIENTS TREATED WITH ORAL ONCOLYTIC AGENTS.** Victoria Marshall, BSN, RN, College of Nursing, Michigan State University, East Lansing, MI; Alla Sikorskii, PhD, Department of Statistics and Probability, Michigan State University, East Lansing, MI; Barbara Given, PhD, RN, FAAN, College of Nursing, Michigan State University, East Lansing, MI; Charles W. Given, PhD, College of Human Medicine, Michigan State University, East Lansing, MI

Treating advanced cancer with oral oncolytic agents (OAs) is increasingly becoming a standard of care, with an estimated 35% of all newly prescribed cancer treatment delivered in oral form. Despite convenience of OAs, self-management of complex medication regimens and symptoms are required at home, which can negatively impact beliefs and attitudes about OAs. In other chronic illnesses, medication beliefs have been linked to symptom reporting and adherence. The Beliefs about Medicine Questionnaire (BMQ) was designed to evaluate common attitudes about medication. The original 10-item BMQ-Specific consists of two subscales; Necessity and Concerns. Necessity evaluates if patients believe their medication is necessary for illness treatment and Concern evaluates medication distrust. The BMQ does not address how symptoms and/or complex dosing regimens interfere in the daily lives of patients taking OAs. Therefore, an additional item was added to the BMQ-Specific to reflect unpleasant symptoms and all items referenced cancer medication. The purpose of this study was to determine if the original BMQ factor structure could be upheld. Data were derived from a National Cancer Institute Study, Improving Adherence to Oral Cancer Agents and Self Care of Symptoms Using an IVR (1Ro1CA162401-01A1), a two-arm randomized controlled trial of a symptom management and adherence intervention using an interactive voice response system. Patients (N=267) were recruited from seven Midwest cancer centers. An exploratory factor analysis with principal component extraction and promax rotation, was performed at baseline (time of OA initiation), and at weeks 4, 8, and 12. Distribution of items and factor loadings were evaluated. A unique, stable 3-factor structure was observed across baseline (N=267), week 4 (N=222), week 8 (N=186) and week 12 (n=163) and include Necessity, Concerns, with an emergence of an Interference subscale. A new item representing unpleasant symptoms in OA medication changed original BMQ-item factor loadings. Underlying latent construct of medication beliefs differ for patients taking OAs compared to other chronic illnesses. Nurses are positioned to 1) elicit patient's medication beliefs 2) address possible medication misconceptions and 3) facilitate medication beliefs that enhance symptom management and/or adherence. The Interference factor structure underscores the importance of symptom management and ensuring management of complex OA dosing strategies. This study reports a unique BMQ factor structure, Interference, among patients taking OAs.

### **FACTORS AFFECTING QUALITY OF LIFE IN ADOLESCENT AND YOUNG ADULTS (AYAs) WITH CANCER.** Charmaine McKie, MSN, MPH, RN, Howard University, Washington, DC

While the five-year survival rate for pediatric and older adult cancer patients has improved over the past 3 decades, AYAs aged 15-39 years have not seen a similar improvement. AYAs with cancer also experience the poorest outcomes when compared with pediatric and older adult populations. Quality of life is an important outcome measure in cancer treatment. While the effects of cancer therapy on quality of life have been studied extensively in the pediatric and older adult populations, very few publications have investigated this in AYAs with cancer. The purpose of this cross-sectional correlation study is to describe the quality of life and identify the factors influencing quality of life among AYAs with cancer, currently receiving care at two urban outpatient cancer treatment centers in the Mid-Atlantic United States. The Revised Wilson and Cleary model for health-related quality of life will be used as the conceptual framework to guide this study. The impact of biological factors, symptoms, functional status, general health perception, characteristics of the individual, and characteristics of the environment on quality of life will be evaluated. AYAs diagnosed with cancer between the ages of 15 and 39 years will be recruited from the two sites. Power analysis using the G-Power sample size calculator revealed that for a medium effect size and alpha level at 0.05, the sample size needed to attain 80% power would be 125 participants (using 9 predictors). Consented participants will be asked to complete a self-administered questionnaire which includes socio-demographic variables and other questions related to the study variables. Average quality of life for the QOLI-Cancer and its subscales will be calculated. Multiple regression will be used to evaluate how the independent variables correlate with total quality of life and the subscales, and to evaluate how well the independent variables correlate with quality of life when controlling for characteristics of the individual and the environment. Understanding the impact of cancer diagnosis, disease status, functional status, and symptoms on quality of life of AYAs will improve the quality of nursing care administered to this special population. The results can also address gaps in knowledge evident in research surrounding AYA cancer patients.

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### **NEUROPATHIC SYMPTOMS IN PERSONS WITH CANCER AT THE END OF LIFE.** Susan McMillan, PhD, ARNP, FAAN, University of South Florida, Tampa, FL; Cindy Tofthagen, PhD, ARNP, AOCNP®, FAANP, FAAN, University of South Florida, Tampa, FL; Constance Visovsky, PhD, RN, ACNP, University of South Florida, Tampa, FL; Sara Dominic, RN, BSN, University of South Florida, Tampa, FL

Neuropathic symptoms are common among cancer survivors and result from cancer treatments, as well as co-morbid conditions. Previous estimates have described the prevalence of neuropathic symptoms in cancer survivors as 20-40%. The extent to which neuropathy affects individuals with cancer at the end-of-life has not been adequately examined; however, neuropathic symptoms can potentially affect many aspects of quality of life including sleep, physical and role functioning, emotional well-being and enjoyment of life. The purpose of this study was to describe the prevalence of neuropathy symptoms and relationship between neuropathy symptoms, physical and emotional functioning, and quality of life in cancer patients nearing the end of life. This descriptive, cross-sectional study is a secondary analysis of data from two hospices in Central Florida. Adults with a cancer diagnosis, an identified family caregiver, who were receiving homecare, were eligible. Patients

were excluded if they were confused, excessively debilitated, comatose or actively dying. Symptoms, physical and emotional functioning and quality of life were assessed. Chi-square tests were used to determine differences in symptoms on specific Memorial Symptom Assessment Scale items between participants with neuropathic symptoms and those without. Independent sample t tests were used to determine differences in independence with ADL's, depressive symptoms, performance status and quality of life. The total sample consisted of 697 hospice patients with a cancer diagnosis. Of that sample, 40% of the sample (n=279) affirmed numbness/tingling in the hands and/or feet. Participants with neuropathic symptoms had lower quality of life scores, and were more dependent on others for assistance with ADL's. Pain, dizziness, difficulty concentrating, worrying, feeling irritable, and feeling sad were more prevalent in those with neuropathic symptoms than in those without neuropathic symptoms although depression, performance status, pain severity, and pain distress were comparable between the two groups. Neuropathic symptoms are as common among cancer patients nearing the end-of-life as they are among cancer survivors. Neuropathic symptoms may have deleterious effects on physical and emotional function, resulting in more reliance on others for assistance with ADLs, and decreased quality of life during the end-of-life. This is among the first studies investigating the impact of neuropathy at the end-of-life.

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### **IDENTIFYING AND TREATING CYTOKINE RELEASE SYNDROME.** Victoria Miller, FNP-BC, MD Anderson Cancer Center, Houston, TX; Prasamsa Pandey, FNP-BC, MD Anderson Cancer Center, Houston, TX

Immunotherapy is one of the biggest breakthroughs in cancer treatment. Immunotherapy with chimeric antigen receptor (CAR)-modified T-cell and bispecific T-cell engaging antibodies are showing responses in diseases such as chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL), B-cell lymphomas and most recently are being used to treat solid tumors. As these treatments become more popular it is necessary for nurses to be aware of potential toxicities of these treatments. A life threatening complication is cytokine release syndrome (CRS). CRS is characterized by release of inflammatory cytokines due to large number of lymphocytes and/or myeloid cells. Complications of CRS can range from mild fever and myalgia to cardiac dysfunction, neurological symptoms, renal and liver failure. Severe cases can result in critical condition in the ICU and sometimes death. The purpose of this presentation is to provide nursing education on CRS with a goal of reducing CRS related deaths. After reviewing this presentation, the nurse will be able to: 1. Develop knowledge of immunotherapy agents associated with CRS 2. Recognize CRS associated symptoms. 3. Institute nursing interventions in timely and competent manner. Literature review was conducted using key words: cytokine release syndrome, cytokine release syndrome and nursing, cytokine release syndrome treatment, cytokine release syndrome symptoms. Findings: 1. CRS grading and symptoms: Grading of CRS is graded from 1-5. Patients with mild symptoms such as fever and myalgia would be a grade 1. Moderate symptoms requiring IV fluids would be a grade 2. Severe reactions would be grade 3. Grade 4 would require a ventilator and grade 5 would be death. 2. Biomarkers: Measuring circulating cytokine levels could service as a biomarker for diagnosis but there are limitations. 3. Treatments: If the reaction is occurring during therapy, the nurse should first stop the treatment. Tocilizumab is an approved medication for rheumatoid arthritis that has been effective treatment for patients with severe or life threatening CRS. If no improvement after the first infusion of tocilizumab, a second dose and corticosteroids should be

considered. Developing CRS treatment algorithms, providing education to nurses, and pretreatment education for patient and care givers can help with early recognition of CRS and thereby, prevent life-threatening complications.

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**THE ROLE OF MEDICAL SKILLS TRAINING IN CAREGIVER CONFIDENCE AND BURDEN: A CANCORS STUDY.** Michelle Mollica, PhD, MPH, RN, National Cancer Institute, Bethesda, MD; Kristin Litzelman, PhD, University of Wisconsin, Madison, WI; Julia Rowland, PhD, National Cancer Institute, Bethesda, MD; Erin Kent, PhD, National Cancer Institute, Bethesda, MD

Informal cancer caregivers provide essential support to cancer patients, including delivery of direct medical care (e.g., managing symptoms, administering treatment), assistance with activities of daily living, and provision of social support. A number of evidence-based interventions exist to address the burden caregivers often experience. Most, however, focus on building coping skills and stress management. Less is known about the impact of skills training to both increase confidence and mitigate burden. We examined (1) the association between receipt of medical skills training and reduction in caregiver burden, and (2) whether training influenced burden through increasing caregivers' confidence in their ability to care for the survivor's physical needs. Caregivers identified by lung and colorectal cancer patients in the Cancer Care Outcomes Research and Surveillance (CanCORS) Consortium completed a mailed questionnaire that assessed demographic characteristics, type of care provided, type of medical skills training needed and received, burden (as measured by the short-form Zarit Burden Interview), and confidence in caring for physical needs of the care recipient. Univariate and multivariable regressions adjusting for sociodemographic, caregiving, and care recipient characteristics assessed the relationship between training received and burden, and mediation analysis using Sobel's test assessed the role of confidence in this relationship. Fifty-nine percent of caregivers reported that they did not receive the training that they needed. Caregivers reported moderate levels of burden (mean summary score = 32.07, SD = 12.66, range 14-70), consistent with previous studies. Lack of receipt of training was associated with greater levels of burden ( $b = 2.60$ ; SE 0.98;  $p = 0.01$ ). Confidence partially mediated the relationship between training and burden (Sobel's  $t = 1.90$ ;  $p = 0.03$ ). The results indicate that training is a potential area for interventions to reduce caregiver burden. Future research on how best to provide training for caregivers (in terms of content, mode of delivery, timing) is needed. This is the only known study which examines associations between medical/nursing skills training, confidence and burden in a large, multi-site study of cancer caregivers reported from caregivers themselves.

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**PRE-INITIAL TREATMENT TELEPHONE CALL TO NEWLY DIAGNOSED ADULT ONCOLOGY PATIENTS AND IMPROVEMENT IN ANXIETY.** Kathleen Morisson, BSN, RN, OCN®, St. Francis Hospital, Port Washington, NY; Kristin Sobeck, BSN, RN, OCN®, St. Francis Hospital, Port Washington, NY; Patricia Zant, BSN, RN, OCN®, St. Francis Hospital, Port Washington, NY

A new diagnosis of cancer can make any person fearful. The thought of harsh, nauseating, cytotoxic drugs, radiation, or the possibility of surgery can cause a great deal of distress in the newly diagnosed oncology patient. Patients may enter the infusion suites for the first time thinking of loved ones who

had gone through similar treatments or may enter without any idea of what the treatments will entail. Many times, patients will arrive to infusion centers extremely anxious because they have not been educated on what to expect during their infusion appointments. Nurses and the staff of infusion centers are the first and primary educators these patients and their families will see before their first treatments are given. This quantitative study evaluates the patient perceived helpfulness of a pre chemotherapy/biotherapy/immunotherapy treatment educational phone call. From April 2016 to September 2016, 64 patients were called by an oncology certified registered nurse. The RN reviewed vital information about the infusion center and the treatment plan specific to each patient and answered any questions the patient had about their upcoming treatment. The patient filled out a survey with three statements assessing their perceived helpfulness of the pre-treatment phone call in regards to the reduction of anxiety, the satisfaction of the answers provided, and the overall preparation for the first appointment. A Likert scale was used to evaluate the patient perceived effectiveness of the phone call intervention with 5 indicating strongly agree to 1 indicating strongly disagree. Of the 64 patients screened, 58 patients completed the survey. Three were unable to be contacted and three had cancellations in treatment. Of the patients surveyed, 81% of patients indicated they strongly agree that the phone call helped them feel prepared for their first visit. 82% of patients indicated they strongly agree that the intervention answered their questions to their satisfaction and reduced their anxiety. None of the patients surveyed reported dissatisfaction with the intervention. Interventions such as 10-20 minute phone calls are cost effective simple interventions that can provide a great deal of comfort and reduction in anxiety for patients who are about to start a chemotherapy regimen. Reduction in anxiety can help improve quality of life, anticipatory nausea, as well as adherence during treatment.

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**GENETIC AND BEHAVIORAL FACTORS ASSOCIATED WITH PERCEIVED COGNITIVE FUNCTION FOR BREAST CANCER SURVIVORS.** Jamie Myers, PhD, RN, AOCNS®, University of Kansas School of Nursing, Kansas City, KS; Theresa Koleck, PhD, RN, Columbia University, New York, NY; Susan Sereika, PhD, University of Pittsburgh, Pittsburgh, PA; Yvette Conley, PhD, University of Pittsburgh, Pittsburgh, PA; Catherine Bender, PhD, RN, FAAN, University of Pittsburgh, Pittsburgh, PA

Poor perceived cognitive function (PCF) for breast cancer survivors (BCS) varies in severity and duration. Evidence suggests that inflammation related to disease and treatment influences PCF in BCS. However research is needed to identify BCS at increased risk for poor PCF and the genetic and bio-behavioral factors that influence the variability in PCF. Our purpose was to explore relationships between genetic variability for inflammation, behaviorally-related variables, and PCF for BCS. Our primary aim was to explore relationships between select single nucleotide polymorphisms (SNPs) for IL1 Receptor 1 (IL1R1), IL6, TNF genes and PCF. Our secondary aim was to explore whether body mass index (BMI) and exercise frequency moderate these relationships. This exploratory candidate gene substudy (N=101) involved participants from a larger cross-sectional parent study designed to investigate potential predictors of PCF for BCS. Saliva samples were genotyped for 10 SNPs associated with inflammation. Instruments included: Function Assessment of Cancer Therapy-Cognition (PCF), MD Anderson Symptom Inventory (fatigue and distress), and self-reported exercise frequency and BMI. Multiple linear regression analysis was used to explore relationships between genetic variability and



PCF, controlling for age, education level, fatigue, and distress as potential confounding variables. Hierarchical expansion of regression models included main effects for BMI and exercise frequency and interaction effects between BMI, exercise frequency, and each SNP. Our full regression model included age, education, fatigue, and distress, BMI, exercise frequency, and IL1R1rs2287047 minor alleles (AA+AG) ( $R^2 = .237$ , Adjusted  $R^2 = .170$ ). Greater fatigue predicted poorer PCF ( $p = .007$ ). Exercise frequency and IL1R1rs2287047 minor alleles trended towards significant protection of PCF ( $p = 0.0505$ ;  $p = 0.052$ ). Higher exercise frequency and IL1R1rs2287047 minor allele possession predicted better PCF ( $p = 0.017$ ,  $p = 0.024$ ) with one influential participant omitted ( $R^2 = .290$ , Adjusted  $R^2 = .226$ ). The most succinct model included fatigue, exercise frequency and IL1R1rs2287047 ( $R^2 = .242$ , Adjusted  $R^2 = .220$ ). No significant interaction was demonstrated between BMI and exercise related to PCF or between BMI, exercise and IL1R1rs2287047. Our results suggest a protective relationship between IL1R1rs2287047 (AA+AG) and PCF and provide further evidence supporting exercise as a potential intervention for poorer PCF. Future research with a larger, more diverse sample is needed. Ours is the first study to investigate genetic variability associated with inflammation, behaviorally-related variables, and perceived cognitive function (PCF) for BCS.

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**A MEDICAL ONCOLOGY ACUITY SCORING TOOL TO QUANTIFY PATIENT ACUITY.** Shannon O'Leary, BSN, RN, OCN®, University of Rochester Medical Center, Rochester, NY; Karen Abbas, MS, RN, AOCN®, University of Rochester Medical Center, Rochester, NY; Mary Carey, PhD, RN, FAHA, FAAN, University of Rochester Medical Center, Rochester, NY

The hematology/oncology unit noticed frequent transfers of patients to critical care units. Brennan and her colleagues developed the Oncology Acuity Tool (OAT) and demonstrated its reliability and validity for measuring patient acuity prospectively in the oncology and bone marrow transplant population. The purpose of this project was to evaluate and revise an acuity scoring tool and assess if it would be helpful to make acuity-balanced assignments. The original Oncology Acuity Tool was extensively modified to better represent the patient care delivered on the unit. During Trial 1, the tool was used by five nurses for two weeks. Each nurse completed the tool twice per patient during each shift worked, once after receiving report predicting a patient's acuity for their shift (Time 1), and once at the completion of the shift of the actual patient acuity for the shift (Time 2). After the first trial, further modifications were made to the tool and Trial 2 was completed. On the current tool, there are 10 categories with potential patient acuity scores ranging 0-26. Trial 1 results: 325 tools were completed on 51 patients, and patients' scores ranged 2-14, average 6.17. There were only differences between IV medications, teaching, and total acuity scores at Time 1 and Time 2. Total acuity scores of patients, on average, increased by 0.5 (5.96-6.41) from Time 1 and Time 2. Trial 2 results: currently in the data analysis phase. An increase in acuity by 0.5 points is not clinically significant at the patient level, but may be on the nurse assignment level. If each patient on an assignment has an increase in acuity of 0.5 points over a shift, this means an increase in the clinical burden and nursing care demands of the assignment. During the time of Trial 1, there was low acuity on the unit. Acuity is challenging to capture because it is dynamic, and one cannot always predict a decompensating patient. Improved nursing assignments will improve patient outcomes through safer, more effective, and more efficient care, as well as improve nursing sensitive indicators and quality metrics, and increase staff satisfaction with nursing assignments. This tool will be used further to characterize the unit and acuity of the patients.

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**COGNITIVE LIMITATIONS AS DETECTED ON THE CLOCK DRAWING TEST IN OLDER WOMEN DIAGNOSED WITH BREAST CANCER.** Janine Overcash, PhD, GNP-BC, FAANP, The Ohio State University, Columbus, OH; Maddy Perry, Student Nurse, The Ohio State University, Columbus, OH

Dementia often affects older women who are diagnosed with breast cancer as a result of cancer diagnosis, treatment or as a preexisting comorbidity. The purpose was to describe the incidence, demographic characteristics and types of cognitive deficits in older women diagnosed with breast cancer. This project is significant in that millions of cases of dementia and breast cancer are diagnosed annually. This prospective, descriptive study included women aged 65 and over with a diagnosis of breast cancer, at any stage and receiving any type of treatment. Consent was obtained and data were collected while the patient was in an oncology ambulatory care visit. A pre-drawn circle was provided with verbal instruction to draw the numbers of a face of a clock and make the hands represent the time of 1:50. The CDT is a screen for cognitive disabilities which considers the size of the clock, graphic difficulties, stimulus-bound response, conceptual deficit, spatial and/or planning deficit and perseveration. Data were qualitatively analyzed by organizing into groups of similar errors. Mean age was 78 years ( $N = 42$ ), 11% were stage 4, one person was diagnosed with a dementia. 42% had an abnormal CDT. Most (52.4%) had spatial/planning deficits, 23.8% exhibited size difficulties, 14% had conceptual deficits, 12% had perseveration deficits and 21% had two or more abnormalities. Many older patients diagnosed with breast cancer exhibit some abnormality on the CDT. Most abnormalities were spatial/planning difficulties. Dementia screening should be part of the comprehensive physical assessment of the older person diagnosed with cancer.

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**LONGITUDINAL EXAMINATION OF SLEEP IN CAREGIVERS OF PERSONS WITH A PRIMARY MALIGNANT BRAIN TUMOR.** Jean Pawl, PhD, RN, OCN®, Augusta University, Augusta, GA; Paula Sherwood, PhD, University of Pittsburgh, Pittsburgh, PA

Eight weeks after the diagnosis of a primary malignant brain tumor (PMBT), caregivers experience long sleep latencies, shortened total sleep time (TST), and more awake time after sleep onset (WASO). However, the changes in sleep across time or after the death of the care recipient (CR) are not known. Prolonged sleep deficits are known to impact physical, mental, emotional and social health. The purpose of this study was to examine sleep and health across three years in caregivers of those with PMBT and changes after the death of the CR. A secondary data analysis of measures obtained from caregivers at 4, 8, 12, 18, 30 and 36 months enrolled in a longitudinal, descriptive study (R01 CA117811) was conducted. Objective sleep measures included sleep latencies, TST, WASO, and number of arousals during sleep recorded for 3 consecutive 24 hrs using a Bodymedia® Sensewear™ accelerometer. Physical health was measured using the Medical Outcomes Study (MOS-SF36-PH); Mental health- MOS-SF36-VS and Fox Simple Quality of Life (FSQOL) scale; Emotional health- Center for Epidemiological Studies- Depression (CES-D) scale and Functional Assessment of Chronic Illness Therapy (FACIT)-Spiritual; and Social health- Interpersonal Support Evaluation List (ISEL) and Work Limitations Questionnaire (WLQ). Demographics for caregivers and CRs were collected at baseline. Caregiver sleep does not improve across time. Sleep remains at 367 minutes, significantly different than the recommended 420 minutes ( $t(419) = 15.3$ ,  $p < .001$ ), with sleep latencies of 20 minutes, 5 minutes more than the

recommended 15 minutes. Caregivers continue to experience significant WASO ( $t(460) = 12.8, p < .001$ ). Caregivers (70%) experience high anxiety across time, which decreases after CR death in 20% of these caregivers. Another 37% experience depressive symptoms indicating a need for referral across time and after the CR death. Of those caregivers still working, 84% experience high work limitations both before and after the CR death. Caregivers of PMBT CRs have little interaction with the healthcare system as many are cared for at home or seen in radiation centers. Awareness of caregiver sleep deficits has implications for their ability to continue in the caregiver role and their ability to retain information at clinic visits. Educational materials about sleep hygiene and its impact on sleep are areas of further research.

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**ENERGIZE YOUR PRACTICE BY APPLYING THEMES FROM RURAL SURVIVORS AND PROVIDERS ON HEALTH-RELATED QUALITY OF LIFE.** Leli Pedro, DNSc, RN, OCN®, CNE, University of Colorado Denver, College of Nursing, Aurora, CO; Terry Schumaker, DNP, RN, ANP-BC, Hospice of Montezuma, Cortez, CO; Heather Hageman, MSN, RN, CPH, Jefferson County Public Health, Lakewood, CO

Long-term cancer survivorship is understudied. Rural long-term cancer survivors face additional challenges to survivorship and health-related quality of life (HRQOL). Understanding the dynamic influence of the micro-macro rural contexts and the impact of embedded factors offers direction for clinical practice and models of care. In this qualitative study, we aimed to depict the micro/individual and macro/system dimensions of HRQOL for rural long-term (minimum 5 years beyond treatment), breast cancer survivors (LTBCS) in rural Colorado. A precise characterization of LTBCS (micro) and their health care system providers (macro) is foundational to appreciate the interactions between the two contexts necessary to propose interventions that energize, focus, and reinforce nursing practice in this population. Two semi-structured audio taped focus group interviews were organized with eight LTBCS in each group. Eight interviews were conducted with individual key informant providers (KIPs) representing selected rural health entities. All participants were recruited from rural codes 7-9 on the Rural Urban Continuum Codes using a snowball, purposive, convenience sampling method. The research investigators individually then collectively coded and analyzed all participant transcripts using qualitative content analysis methods and Atlas ti software. The micro-LTBCS themes included: guarded optimism, “we do for each other”, choice to live in the rural setting, and acceptance of the unexpected. The macro-KIP themes included: provider scarcity, isolation, navigation, community, and rural quality of life. These themes highlighted the micro and macro perspectives that drew upon participant’s rural lives, circumstances, and roles as context-relevant information and untapped resources for clinical practice and models of care. The combination of micro and macro themes point to areas for development of comprehensive context-specific nursing practice to enhance HRQOL for rural survivors, providers, and communities. For instance, the micro-LTBCS theme acceptance of the unexpected centered around the coexistence of advantages and disadvantages of rural life. Implications from this micro theme could include nurse-led coordination to address behavioral health, symptom management, and follow up cancer screenings for rural survivors. Implications from the macro-KIP themes of isolation and navigation call for system responses from researchers, policy makers, and health organizations. Understanding and incorporation of these themes in oncology nursing practice support development of rural-relevant programs and navigation models.

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**THE EFFECT OF TIMING OF ANTIBIOTICS ON THE OUTCOME OF FEBRILE NEUTROPENIA PATIENTS.** Judith Pennypacker, RN, BSN, OCN®, Winchester Medical Center, Winchester, VA

Febrile neutropenia is a medical emergency occurring in patients treated with chemotherapeutic agents, affecting 7.83 per 1000 cancer patients every year. The standard of care is to administer the first dose of antibiotic “promptly”; in leading cancer centers this translates to within one hour of arrival to the treatment center. In a Cleveland Clinic study published this year, they found an eight hour increase in length of stay for every hour delay in giving the first dose antibiotic. There were two purposes to this study. The first was to determine how promptly antibiotics were administered to febrile neutropenic patients admitted to a regional referral hospital in a rural mid-Atlantic state. The second was to determine the influence, if any, this has on the patient’s length of stay and mortality. This was a retrospective and concurrent descriptive study examining the length of time from admission to antibiotic administration. Data was collected by chart review. Institutional Review Board approval was obtained by expedited review from the Winchester Medical Center IRB. The sample of 217 patients was studied from October 2005 to September 2013. The average time to antibiotic in 2005 was 2.52 hours, decreasing to an average of 1.82 hours in 2013. The patients were treated on several different units in the hospital, including the emergency room. Contrary to the literature, review of the data showed no correlation between length of time to antibiotic and length of stay or mortality. This is perhaps due to the small sample size, and requires further study. However, a significant difference in survival is apparent based on age. The mean age of patients who didn’t survive was 67.7 years, while the mean age of the patients who did survive was 58.43 years ( $t$  test,  $p=0.006$ ). Data shows we are decreasing our time of administration of the first dose intravenous antibiotic after admission through several process improvements made throughout the course of the study. These processes including development of febrile neutropenia order sets, pharmacy changes, implementation of computerized physician order entry, several rounds of staff and patient education repeated throughout the study, among others.

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**IMPACT OF MEDICATION ADHERENCE TO ORAL CANCER AGENTS WHEN USING A STANDARDIZED MEDICATION EDUCATIONAL TOOL AND PERSONALIZED CALENDAR.** Elizabeth Prechtel Dunphy, MSN, CRNP, AOCN®, Abramson Cancer Center, Philadelphia, PA; Nevena Damjanov, MD, Abramson Cancer Center, Philadelphia, PA

Approximately 25-30% of new oncology treatments in development are oral cancer agents (OCAs), leading to significant shifts in the delivery of care from oncology health care provider to patient and caregiver. This shift has effected the process and outcomes in oncology care. This shifting paradigm may lead to disruptions in the checks and balances put in place when intravenous agents are administered. Specific concerns that have been raised include problems with access, adherence, affordability and adverse effects of treatment. In addition to OCAs, cancer patients may have multiple comorbid conditions treated by several providers who prescribe medication which can lead to drug interactions and complicate problems with adherence. Consequently, patients and their caregivers must be knowledgeable about all aspect of care. Oncology nurses and nurse practitioners are positioned in roles to recognize the challenges associated with the changes in treatment regarding OCAs. Review of the literature illustrates that education is the cornerstone of patient adherence. Developing and implementing evidence based programs and interventions

targeting education will improve adherence and ultimately patient outcomes. The purpose of this project was to evaluate the impact of an APRN led educational intervention in gastrointestinal (GI) oncology patients starting an OCA to improve patient knowledge and to assess adherence. The author conducted a quality improvement project, as her Doctor of Nursing Practice Scholarly Project, involving prospective analysis of medication adherence after utilization of the standardized education tool (Multinational Association of Supportive Care in Cancer (MASCC) Oral Teaching Tool (MOATT®), OncoLink® medication information sheet, and a personalized calendar in GI oncology patients starting a new OCA. Medication adherence will be self-reported and collected using the Morisky Medication Adherence Scale (MMAS-8). At this time nineteen patients have been screened and ten patients have enrolled. The data collection is ongoing with data collection expected to continue until 3/23/2017. There is no standard procedure for educating and monitoring adherence in patients on OCAs. The clinical implication for this project is that a standardized practice will be developed and utilized to ensure safe, quality care for oncology patients prescribed OCAs.

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### **SELF-MONITORING: A PATIENT-DRIVEN COMMUNICATION TOOL TO HUMANIZE THE SYMPTOM-REPORTING EXPERIENCE.** Mary Anne Purtzer, PhD, RN, University of Wyoming, Laramie, WY; Carol J. Hermansen-Kobulnicky, PhD, RPh, University of Wyoming, Laramie, WY

Imagine tracking your symptom experience during cancer treatment. The clinician is unaware, does not solicit your insights nor integrate them into symptom assessment. Now, imagine a clinician intentionally delegating symptom tracking and encouraging you to share insights during follow-up. The potential for this type of clinician-patient interaction is not well-understood nor realized. The study objective was to investigate oncology clinician experiences regarding the integration of patient self-monitoring into patient care. Semi-structured interviews were conducted with oncology professionals from four health systems and five cancer centers. Participants included infusion and radiation nurses, nurse practitioners, a nurse administrator, physician assistants, and medical and radiation oncologists. Key interview questions were: What is the exchange like between you and your patients regarding self-monitoring? What could you envision the potential to be for self-monitoring? Authors analyzed transcripts, observation notes and post-interview debriefings using between group constant-comparative analysis. When patient self-monitoring is embraced by clinicians, it becomes a patient-centered communication tool used to humanize the symptom-reporting experience. Participants (n=38) described self-monitoring as “a communication tool where you stop asking all the questions and you’re just able to be in the moment and listen. . . . It’s a way to open the conversation without feeling like the provider and asking 10,000 questions” noting “it’s easier to figure out what they’re saying and incorporate it into how I treat them, than [for] me to give them a form and make them try to stick to [it].” In this way, clinicians validate the patient’s self-monitoring efforts and encourage them to tell their story. Participants described needing to be intentional by offering permission to self-monitor, asking guiding questions and integrating self-monitoring data into the assessment. Self-monitoring acknowledges the whole person while fostering a relational approach. It can contribute to a change in power dynamics between patient and clinician, with the clinician forfeiting some control. Skills are needed by both clinician and patient for self-monitoring to be meaningful. While communication tools exist to promote patient-centered communication, these tools are clinician-driven, e.g. decision support tools. Self-monitoring offers a unique opportunity for clinicians to embrace a patient-driven tool that is humanizing.

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### **FALL RISK AND CANCER-RELATED FATIGUE IN HOSPITALIZED ONCOLOGY PATIENTS.** Robin Randall, BS, RN, OCN®, Sanford USD Medical Center, Sioux Falls, SD; Brenda Wolles, MSN, OCN®, CNL, Sanford USD Medical Center, Sioux Falls, SD; Erica Deboer, MA, RN, CCRN, CNL, Sanford USD Medical Center, Sioux Falls, SD; Gwenneth Jensen, PhD, RN, CNS, Sanford USD Medical Center, Sioux Falls, SD

Little is known about characteristics of adult oncology patients who fall during an acute hospitalization related to their cancer. cancer-related fatigue (CRF) is considered an important dimension of cancer asthenia and is long lasting, disruptive and difficult to treat. CRF has been studied primarily in outpatient settings; there is a gap in knowledge about the contribution of CRF to fall risk and fall events during hospitalization. This study uses a concurrent, repeated measures, correlational design was used to describe relationships between primary endpoints of fall risk and cancer-related fatigue, and fall events and cancer-related fatigue. Demographic and control variables include age, gender, major diagnostic codes (MDC), presence/absence of anemia, severity of illness, history of fall, and length of hospital stay. It was developed in 2011. Staff training for data collection was held in winter 2012, data was collected between July 2012 and May of 2013, and analysis was completed in April 2014. The sample ranged in age from 21 - 86 ( $x = 59.4$ ; SD 13.6) and consisted of 44 men and 36 women. Due to a broad range in the length of stay (LOS) (range 1- 58 days; mean 10.9; SD 10.7) a median LOS of 7 days was used for analysis. Between 31-33% of the sample had a history of a fall within 3-6 months of admission. Only 6.3% of the sample had a secondary anemia and only 5% had primary respiratory disease. In repeated measures pooled correlation, there was no statistically significant relationship between CRF and fall risk ( $R = 0.032$ ). Only two subjects experienced in-hospital fall events during the study period, too few for analysis. Moderate to severe fatigue was experienced by 78% on the day of admission. Between 72 : 92% of fall risk scores for median LOS of 7 days were within the “moderate risk” category; 8 -26% were within the “high risk” category. The symptom of fatigue was pervasive and greatest on the day of admission in the sample. Risk for fall was moderate to high. There was no overall association between severity of fatigue and fall risk, although data diverge at greater than a 5 day LOS. Limitations included ceiling effects of some criterion on the fall risk instrument. Further research is needed.

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### **CAN NURSE REFERRALS TO THE REGISTERED DIETICIAN ON AN ONCOLOGY UNIT RESULT IN OVERALL IMPROVED PATIENT CARE?** Kristen Randolph, BSN, RN, NYU Langone Medical Center, New York, NY; Josephine Luong, BSN, RN, NYU Langone Medical Center, New York, NY

Many patients on the inpatient hematology/oncology unit suffer from malnutrition contributing to disease morbidity and mortality. These issues are perpetuated by targeted cancer treatments. Malnutrition often results in poor response to chemotherapy and poor prognoses. It can also increase length of hospital stay and decrease quality of life for patients. On this unit, there is not a protocol for initiating patient Registered Dietician (RD) referrals resulting in delayed consults. The purpose was to initiate a protocol that allows nurses to more promptly make RD referrals for nutritionally-at-risk patients. 150 hematology/oncology patient charts were audited. Of these, 52 patients met criteria for being nutritionally-at-risk and waited on average 3.8 days before a RD consult. Nurses were educated on the importance of prompt nutrition referrals and a new protocol was developed allowing nurses to more easily make RD referrals. A unit binder was created to provide additional references



for staff. Nurses' awareness of the importance of on-time RD referrals was evaluated by observation of changes in nursing practice throughout the unit. The findings showed that nursing staff were unaware of their critical role in ensuring timely patient RD referrals. Since implementing this protocol, nurses have utilized their resources to advocate for nutrition interventions. After the implementation of this new protocol, there has been an increased awareness of nutritionally-at-risk patients on our unit and timely RD interventions. Next, we hope to collect further data on length of stay prior to RD consult. We also hope to expand this project to other units. This study is unique because it attempts to address a limitation in patient care on this unit by implementing a new protocol. Furthermore, this new protocol empowers nurses, the members of the healthcare team who often know patients best, to initiate nutritional interventions in an effort to improve overall patient care.

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##### **NURSES' APPROACH TOWARDS HEALTH-RELATED QUALITY OF LIFE IN CANCER PATIENT'S CARE IN INDONESIA.** Ummi Pratiwi Rimayanti, Student, University of Tsukuba, Tsukuba; Michiyo Mizuno, University of Tsukuba, Tsukuba

Cancer is one of the major health problems in Indonesia. Nurses, as the largest group of health professionals, play an important role in the care of cancer by providing quality care on an ongoing basis. Health Related Quality of Life (HRQOL) is a term used to focus the effects of health, disease, and treatment to the quality of life. HRQOL was regarded as the outcome of palliative care, including the treatment of cancer. Nurses' perception of HRQOL will affect the direction of care. This study was aimed to explore nurses' understanding of cancer patient's HRQOL and the engagement into the set of nursing process. This study was carried out using descriptive exploratory qualitative method with grounded theory principles to collect, analyze, and interpret findings. The participants were 17 oncology and non-oncology nurses working in inpatient unit of a public hospital in Makassar, South Sulawesi, Indonesia. Four initial questions were used to conduct semi-structured in-depth interview. After the data collection and analysis nurses' understanding of patient's HRQOL was characterized with being in good health condition, able to adapt with their condition, wanted to feel good, could be their selves, and attempted to counterpoise their situation. Nurses' understanding of HRQOL was relevantly incorporated into the nursing process: nursing assessment, nursing diagnosis and care plan, nursing intervention to improve patient's HRQOL, and nursing evaluation of the effectiveness of nursing intervention to improve patients' HRQOL. Nurses believed that the physical symptoms experienced by cancer patients strongly affected patients' appraisal of HRQOL. Building trust was important in the provision of psychosocial cancer care. Culture, religious belief, and family ties were associated with patient's HRQOL and incorporated in the nursing process. Continuing education in cancer care is important to improve nurses' knowledge and skill in cancer practice. This research provide information on how nurses who work in oncology ward understand the concept of HRQOL, do the assessment, and incorporate the result into the nursing care in order to improve patients' HRQOL especially in Indonesia.

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##### **THE EFFECT OF AROMATHERAPY ON INSOMNIA AND OTHER COMMON CANCER PATIENT SYMPTOMS.** Kirsten Roblee, BSN, RN, OCN®, The James Cancer Hospital, Columbus, OH; Lisa Blackburn, MS, RN-BC, AOCNS®, The James Cancer Hospital, Columbus, OH; Danielle Dunnington, RN, OCN®, The James Cancer Hospital, Columbus, OH; Kelly Tomlinson-Pinkham, MSN, RN, OCN®, The James Cancer Hospital,

Columbus, OH; Sara Achor, BSN, RN, OCN®, The James Cancer Hospital, Columbus, OH; Angie Samczak, RN, OCN®, The James Cancer Hospital, Columbus, OH

Aromatherapy has the potential to improve symptoms that plague the leukemia patient, greatly affecting their quality of life. If complementary therapies to control symptoms are proven effective, they will serve as a cost effective method to decrease symptom burden while allowing the patient to increase their own control over their experience with cancer and its treatment. A randomized, cross-over, wash out trial was used, with the experimental group acting as its own control. Newly diagnosed leukemia patients were offered three scents that have been shown in literature to help with insomnia: lavender, peppermint, and chamomile. Each patient was randomized to receive either their chosen scent or a placebo (rose water) on alternating weeks. During the study, sleep quality was measured using the Pittsburg Sleep Quality Index (PSQI) and other symptoms were measured using the Edmonton Symptom Assessment Scale (ESAS). The PSQI scores range from 0 (best sleep) to 21 (worst sleep). Ninety four percent of patients reported poor quality sleep at baseline with an average score of 13. During aromatherapy week, the score decreased to an average of 10. During placebo week, the score increased to an average of 12. Our results indicate that aromatherapy had a statistically significant positive impact on improved quality of sleep ( $p=0.017$ ). The ESAS was used to measure nine other common cancer patient symptoms. Six symptom score changes showed a statistically significant benefit from aromatherapy: tiredness ( $p=0.018$ ), drowsiness ( $p=0.025$ ), lack of appetite ( $p=0.018$ ), depression ( $p=0.003$ ), anxiety ( $p=0.025$ ), and well-being ( $p=0.047$ ). The findings of this study could impact oncology practice through the routine use of aromatherapy. Aromatherapy is less costly can be safely and effectively initiated by nurses with minimal training. Additional studies are needed to confirm the results of this research. The routine option of aromatherapy can enhance management of symptoms in the leukemia patient, decreasing the need for pharmaceutical intervention, lowering the risk for adverse medication interactions, and increasing patient autonomy.

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##### **CUTANEOUS LYMPHOMA INTERNATIONAL PROGNOSTIC INDICATOR SCORE: NURSING DETERMINANT FOR LEVEL FOR CARE COORDINATION IN PATIENTS DIAGNOSED WITH MYCOSIS FUNGOIDES/SÉZARY SYNDROME.** Christa Roe, MA, BS, RN, OCN®, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL; Brett Estrada, AS, Moffitt Cancer Center, Tampa, FL; Denise Lafave, BSN, RN, BMTCN®, Moffitt Cancer Center, Tampa, FL; Rami Komrokji, MD, Moffitt Cancer Center, Tampa, FL; Lubomir Sokol, MD, PhD, Moffitt Cancer Center, Tampa, FL

Cutaneous T-cell Lymphomas with CD4+ t-lymphocytes are rare, complex, and include Mycosis Fungoides (MF)/ Sézary Syndrome (SS). Nursing involvement in the coordination of care according to the Cutaneous Lymphoma International Prognostic Indicator (CLIPi) score, and not stage alone, can improve patient outcomes. This retrospective analysis emphasizes the nurse's role in the coordination of care for patients diagnosed with MF/SS. Utilizing the CLIPi score, nurses can make rational therapeutic choices for patients. Through Moffitt Cancer Center's (MCC) internal review board (IRB) approved CTCL patient database, demographics, overall survival (OS), number of therapies, CLIPi score, and stage were determined. We identified 287 patients with MF/SS. Median age at diagnosis was 62 years. Male to female ratio was 179/108. Most patients were Caucasians (83%). Ninety five (33%) patients had a CLIPi score of equal to or less than 2 and 192 (67%) patients had a

CLUPI score of 3-5. The median number of therapies for patients with a CLUPI score of 2 or less was 2 lines. The median number of therapies for patients with a CLUPI score of 3-5 was 3 lines. The OS for patients with a CLUPI score less than 2 was not reached compared to 123 months (mos.) with a CLUPI score of 3-5 ( $p$  value  $< .005$ ). Cases with known date of first line therapy the mean time to first treatment was 48 mos. in patients with CLUPI score  $< 2$  compared to 24 mos. if CLUPI score  $> 2$  ( $p=0.001$ ). In multivariable analysis, CLUPI score  $< 2$  was predictive of overall survival independent from disease stage at diagnosis (CLUPI score Hazard ratio (HR) 3,  $p=0.003$  and Stage at diagnosis HR 1.3,  $p=<0.005$ ). A majority of patients with CLUPI score of 3 or greater need extensive care coordination, require several lines of therapy, and had a poorer prognosis independent of the disease stage. To our knowledge, this is the only retrospective analysis that has incorporated CLUPI score, rather than stage alone, as a determinant for level of nursing involvement in the coordination of care for patients. This will strengthen nursing clinical knowledge of MF/SS, incorporate the CLUPI score into practice, and improve patient outcomes through specialized coordination of care.

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**FINANCIAL DISTRESS IN METASTATIC BREAST CANCER (MBC).** Margaret Rosenzweig, PhD, CRNP-C, AOCN®, FAAN, University of Pittsburgh School of Nursing, Pittsburgh, PA; B. Marlene West, LSW, Magee Womens Hospital, Pittsburgh, PA; Roseanne Berube, RN, Magee Womens Hospital, Pittsburgh, PA; Jennifer Matthews, RN, Magee Womens Hospital, Pittsburgh, PA; Melina Stokan, RN, Magee Womens Hospital, Pittsburgh, PA

Women with MBC receive sequential treatments during chronic, progressive illness, possibly resulting in financial distress for the patient and their families. The specific aims of this study were: (a) To determine the financial toxicity, quality of life, and overall cancer related distress among women with MBC (b) Compare these variables according to (high/low) income status. Methods Convenience, cross sectional, comparative and correlative study of women with MBC in an urban outpatient medical breast oncology clinic. Four quantitative instruments were used: Quality of Life, (0-148, higher = better); Cancer Related Distress, (0-10, higher=worse distress); Financial Distress (0-44, higher = less distress); and questionnaires of basic demographics and open ended questions regarding financial stressors. Income was dichotomized as low income ( $< 30K$  and not low income ( $> 31K$ )). Packets with consent and questionnaires administered at clinic visit. Descriptive, comparison of mean and correlative statistics used. Between April, 2016 through June 2016, 144 out of 210 (69%) women with metastatic breast cancer completed the surveys. The sample was mean age 58.7 years (SD 12.3), primarily White (89.2%), duration of MBC was 3.8 years. Higher income,  $n=102$ ; Low income,  $n= 28$ . Mean number of medical oncology clinic was 1.5 times/month, costing \$71.47 (Range - \$36.38, \$133.43) /visit including co pay, parking and travel. Mean distress scores - 4.5 (SD 2.9); quality of life - 98.5 (SD 23.8); and financial distress - 22.5 (SD 11.5). Quality of life ( $p=.000$ ) and cancer related distress ( $p=.000$ ) were significantly correlated with financial distress.  $N=52$  (24.7%) attributed financial distress to MBC. Lower income patients (below 30K) reported greater levels of economic distress (16.0 vs., 24.2;  $p=.000$ ) and worse quality of life (87.5 vs. 99;  $p=.010$ ) than those with higher income.  $N=20$  (70%) attributed financial distress to MBC. Women with MBC, particularly low income women, are experiencing financial distress correlated with worsening quality of life and overall cancer related distress. Interventions to address financial toxicity in this unique population will improve quality of life and reduce overall cancer related distress.

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**ENHANCING MEN'S AWARENESS OF TESTICULAR DISORDERS AND SYMPTOMS USING VIRTUAL REALITY: THE E-MAT STUDY.** Mohamad Saab, MSN, BSN, RN, University College Cork, Cork; Margaret Landers, PhD, MSc, BSc, RNT, RGN, University College Cork, Cork; Eoghan Cooke, BA, PgD, University College Cork, Cork; Josephine Hegarty, PhD, MSc, BSc, RNT, RGN, University College Cork, Cork

Testicular cancer is the most common solid tumor among young men. The incidence of this malignancy is on the rise in Western European countries and the United States. Non-malignant disorders such as testicular torsion and epididymitis, are also common and can be life-threatening if left untreated. Findings from three published reviews on men's awareness of malignant and benign testicular disorders suggest that men lack awareness of testicular disorders, and intend to delay help-seeking for testicular symptoms, including lumpiness, swelling, and pain. This abstract describes and discusses the development of an interactive intervention aimed at raising men's awareness of testicular disorders and symptoms. The Medical Research Council Framework guided the development of this intervention. Firstly, the evidence base was identified by conducting two systematic reviews on men's awareness of testicular cancer and self-examination, and one integrative review on awareness of benign testicular disorders. Secondly, a qualitative descriptive study ( $n=29$ ) was conducted to explore men's awareness of testicular disorders, help-seeking intentions for testicular symptoms, and their preferred learning strategies regarding testicular disorders. Thirdly, three behavior change and health communication theories were selected to underpin the intervention. Finally, a feasibility study was conducted. The E-MAT intervention was developed in collaboration with an expert in interactive media. The intervention features a virtual model of testes that men can interact with using a virtual reality headset and joystick. A voice-over accompanies the intervention to provide prompts, feedback, and factual information. The readability of the messages was measured and content validity was established. The interactive intervention is presented in the form of a video game and comprises three key levels whereby men are asked to: (1) familiarize themselves with the normal testes, (2) acquaint themselves with common testicular abnormalities, and (3) get to know common diseases including testicular cancer, epididymitis, orchitis, and testicular torsion. This intervention is not without potential limitations especially when it comes to the cost of the equipment used and the need for basic computer literacy a priori. This novel interactive strategy, however, can be instrumental in familiarizing men with their own testes, and raising their awareness of common testicular problems. The plan is to conduct a pilot study, with the ultimate goal to conduct a randomized controlled trial.

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**SYMPTOMS (PAIN, SLEEP DISTURBANCE, ANXIETY, FATIGUE) IN A SAMPLE OF BREAST CANCER SURVIVORS.** Ann Schreier, PhD, RN, East Carolina University, Greenville, NC

Researchers and clinicians note the time post active radiation and chemotherapy is a critical adjustment period for Breast Cancer Survivors (BCS). Women experience treatment related symptoms at a time when health care provider contact is reduced. Nurse researchers' knowledge of symptom experience assists effective intervention development. The purpose of this study was to describe the symptom cluster of pain, sleep disturbance, fatigue and anxiety in a sample of 40 BCS (Stages I-III) survivors (1 to 5 years). The Theory of Unpleasant Symptoms (TOUS) provided the framework for this study. Symptoms occur in clusters and are influenced

by physical factors such as disease stage, treatment type and hormonal therapy, psychological factors such as anxiety and fear of recurrence and situational factors such as socioeconomic status and social support. A quantitative, descriptive correlation design examined the symptom cluster. University IRB approved the study. Subjects completed the self-report Patient-Reported Outcomes Measurement Information System (PROMIS) short-form instruments of pain intensity, pain interference, sleep disturbance, anxiety and emotional support, and the Piper Fatigue Scale Short form. Women wore a FITBIT activity tracker to measure physical activity for seven days. The sample included 58% black, 40% white and 3% other. The mean age was 58. Mean pain intensity was 43.8 (SD 12.6), mean pain interference was 53.44 (SD 9.8). Mean anxiety was 50.1 (SD 10.66). Mean sleep disturbance was 53.47 (SD 7.59) and mean emotional support was M55.3 (SD8.29). Average steps per day were 5769. Findings included moderately positive statistically significant correlations among sleep disturbance, pain intensity, pain interference, anxiety and weak negative correlation among activity and symptoms. For the 25 subjects reporting pain, statistically significant moderate to strong positive correlations among pain, sleep disturbance, anxiety and fatigue were found. Recommendations for future research are to include Stage IV BCS and limit sample to survivors of 6 months to one year. The activity level was well below the daily recommendations for physical activity. Current research indicates physical activity is associated with improved survival and less frequent recurrence for BSC and cancer survivors in general. In practice, nurses need to provide more guidance on increasing physical activity for BSC.

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**IMPROVING THE PROCESS FOR HEREDITARY RISK ASSESSMENT (HRA) REFERRALS FROM BREAST CASE CONFERENCE.** Camille Servodidio, MS, CGC, Middlesex Hospital, Marlborough, CT; Camille Servodidio, MS, CGC, Middlesex Hospital, Middletown, CT; Susanna Hong, MD, Middlesex Hospital, Middletown, CT; Andrea Malon, MD, Middlesex Hospital, Middletown, CT; Ryann Nocereto, RN, MSN, Middlesex Hospital, Middletown, CT; Kari Mayorga, RN, BSN, OCN®, Middlesex Hospital, Middletown, CT

The purpose of this project was to determine if those breast cancer patients identified at breast case conference for HRA Referral were seen and if appropriate, tested. The Survivorship APRN Coordinator noted that a patient was presented at breast case conference and met criteria for an HRA referral, but was not referred. NCCN guidelines provide specific criteria for when breast cancer patients should be referred for HRA. One study demonstrated that patients did not utilize genetic counseling and risk assessment services because “no one recommended it.” Another study of ovarian, breast and uterine cancer patients demonstrated an overall genetic referral rate of 21.7%. The scope of this project was to determine the number of breast cancer patients who were identified at biweekly 2015 breast case conferences as appropriate for referral to the HRA program. The number of patients who were seen and tested, not seen, as well as whether the reason was documented in the patient’s chart was tracked. 181 breast case conference summaries were reviewed. Each summary documented whether a patient should be referred to the HRA program. 92/181 (51%) presented at breast case conference were appropriate for referral to the HRA program. 48/92 (52%) of the patients were seen in the HRA program, 23/92 (25%) were tested, 2/92 (2%) were scheduled for an appointment in 2016 and 5/92 (5%) declined an appointment. 36/92 (39%) were identified as appropriate but were not referred to the HRA program. 1/92 (1%) died. Documentation of the HRA referral/discussion was noted in 24 % of the surgeons’ charts, 8% of the medical oncologists’ charts and

5 % of the radiation oncologists’ charts. Little is published in the literature about the tracking of HRA referrals for patients identified at breast case conference. An accountable point person and tracking system were needed to follow up on those patients identified at breast case conference. Innovation: The breast nurse navigator initiated a tracking sheet for every patient referral and will follow up with the medical provider to ensure patients are offered an HRA visit. The breast imaging nurse navigator will serve as the backup.

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**CHARACTERISTICS ASSOCIATED WITH SEVERE SEPSIS IN HEMATOLOGIC MALIGNANCY PATIENT ADMISSIONS FOR POSSIBLE INFECTION.** Brenda Shelton, DNP, RN, APRN-CNS, CCRN, AOCN®, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD; Joyce Kane, MSN, RN, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

Severe sepsis occurs in 14% of patients admitted for possible infection and approximately 8.5% die from this complication. Optimal management of severe sepsis/septic shock became a core measure October 2015, but little evidence exists to translate positive sepsis screens to knowledge about which patients develop severe sepsis. Patients with potential infections account for 22% of unplanned admissions in this NCI-designated Comprehensive Cancer Center. Recognizing variables associated with severe sepsis and shock can aid decision-making and reduce morbidity. This IRB approved quality improvement project was designed to analyze acuity variables prior to implementing a protocol for early sepsis management. Data from 38 patients randomly selected from 222 admissions admitted via a hematology-oncology clinic are described. The population includes those meeting criteria for infection/sepsis (n = 18) and those with severe sepsis/septic shock (n= 18). Possible severity of illness variables were analyzed according to host characteristics, oncologic treatment, infectious risks and symptoms, sepsis screening criteria (systemic inflammatory response [SIRS] criteria), organ dysfunction, intervention completeness, and outcomes. One sample T-tests/Mann-Whitney U tests for continuous variables and Chi-square/Fisher’s exact tests for ordinal variables were used to compare patients. The outcome variable of interest was severity of infectious illness. All patients had hematologic malignancy undergoing active treatment, were neutropenic, and had a central venous catheter. The distribution of heart rate (M=107.683, SD=15.009) showed 88.9% of patients meeting SIRS criteria for heart rate despite low numbers with confirmed infection. Patients with sepsis were older (M=60.000, SD= 9.4751) than severely septic patients (M=43.947, SD=16.0571) (p= .001). The median temperature for the sepsis group was higher with a broader range than the severe sepsis group. There were significant differences in minutes to antibiotics and the number of SIRS criteria present at 24 hours, with a greater number of SIRS criteria associated with delayed antibiotic administration (p = .001). Clinical implications include recognition that younger age and prolonged time to antimicrobial administration may be associated with greater severity of infectious illness; heart rate may not be a sensitive indicator of true sepsis; and, higher temperature is not necessarily associated with more severe infectious complications.

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**GENDER DIFFERENCE IN ASSOCIATION BETWEEN FATIGUE AND PHYSICAL FITNESS IN PATIENTS WITH COLORECTAL CANCER.** Shioh-Ching Shun, PhD, National Taiwan University, Taipei; Yun-Jen Chou, MSN, National Taiwan University, Taipei;



**Been-Ren Lin, MD, National Taiwan University, Taipei; Jin-Tung Liang, MD, National Taiwan University, Taipei**

It is important to identify the objective indicators for fatigue and physical fitness might be a good indicator. However, physical fitness is different in gender. Therefore, the aims of this study were to (1) explore the association between fatigue and physical fitness and (2) identify gender differences in association between fatigue characteristics and physical fitness in patients with colorectal cancer. A cross-sectional study design was conducted to recruit the patients with colorectal cancer form surgery and oncology clinics at a medical center in Taipei. A set of Chinese versions of questionnaires was used including four parts: (1) demographic and clinical disease characteristics, (2) the Fatigue Symptom Inventory (FSI), (3) the Cancer Fatigue Scale (CFS), and (4) physical fitness testing (handgrip strength, muscle strength of knee extension and hip flexion, 30-Second Chair Stand test, and 6-Minute Walk Test). Receiver operating characteristic (ROC) curve analysis was used to assess the optimal cutoff point for patients with fatigue in male and female group. Total of 237 colorectal cancer patients participated in this study. There were no significant different in fatigue characteristics between two groups. Male had higher handgrip ( $t=16.009$ ;  $p=.000$ ), hip ( $t=10.761$ ;  $p=.000$ ), and knee ( $t=7.718$ ;  $p=.000$ ) muscle strength than female. Handgrip and knee muscle strength of male had higher correlation with fatigue characteristics. Therefore, the ROC cure analysis was tried find out the cutoff point between handgrip and knee muscle strength and fatigue characteristics. However, the results all showed it didn't have discrimination between handgrip and knee muscle strength and fatigue characteristics (All AUC < 0.5). In female group, the results also showed without discrimination of the test in AUC (All AUC < 0.5). When examining muscle strength as objective indicator for fatigue, gender was an important factor to be considered. However, physical fitness might not be a good objective indicator for identifying fatigue. The objective indicators from several physical fitness testing for cancer related fatigue were examined in this study.

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**A MULTIDISCIPLINARY RANDOMIZED CLINICAL TRIAL TO STUDY THE EFFECT OF AN ORAL CARE INTERVENTION FOR PATIENTS UNDERGOING CHEMO-RADIATION FOR HEAD AND NECK CANCER.** Beverly Smith, DNP, NYULMC, New York, NY; Patricia Corby Corby, DDS, NYU College of Dentistry, New York, NY; Rebeca Vasconcelos, DDS, New York University, College of Dentistry, New York, NY; Alexander Ross Kerr, DDS, NYU College of Dentistry, New York, NY; Nicholas Sanfilippo, MD, New York University Langone Perlmutter Cancer Center, New York, NY

Oral mucositis (OM) is one of the most debilitating adverse effects in patients undergoing radiation and or chemoradiation therapy. Currently, there are no effective therapies or preventive treatments for OM. Rather most suggested treatments are palliative in nature. We conducted a randomized clinical trial to test the safety of a modified oral care protocol for the prevention and management of OM. The objective of this pilot study was to associate the effects of a novel oral care protocol, Oral Mucosal Deterging and Periodontal Debridement (OMDP), on OM severity/pain and to evaluate salivary proinflammatory cytokines in cancer patients undergoing RT or chemo/RT. Subjects were recruited from a population of head and neck cancer patients scheduled to undergo radiation or chemoradiation treatment at the NYU Langone Laura and Isaac Perlmutter Cancer Center. A total of 17 male and female subjects were recruited and 14 completed the study. Nine subjects were randomized to the Intervention Group (IG), and five subjects to the Control Group (CG). Subjects

assigned to the CG received bi-weekly tooth brushing and subjects assigned IG received the OMDP protocol received weekly oral prophylaxis, including the debridement of the periodontium and deterging of the oral mucosa. Patients were examined weekly by the multidisciplinary team. Overall study evaluations included the collection demographic information, targeted physical/head and neck exam, OM assessment, pain, and quality of life (QOL) scales, intra-oral photographs and collection of biological samples (saliva) for salivary proteomics (inflammatory markers) analyses. Our results suggest that the overall inflammation has consistently increased under control treatment and was reduced or stayed the same under OMDP treatment. The OMDP protocol is a simple approach in which targeted oral hygiene and mucosal deterging is implemented as a means of preserving oral health. The change in pain and QOL scores were not statistically significantly. We would like to use this collaborative work to expand our protocol to other cancer centers and healthcare providers. Results of our study will create an incredibly valuable opportunity to bridge the gap between oral health professionals (dentists, periodontists, and dental hygienists) and medical professionals.

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**A PILOT STUDY ON THE IMPACT OF NURSE MENTORSHIP ON ONCOLOGY NURSE SPEAKER ANXIETY.** Deborah Spitzer, MSN, RN, OCN®, Harold C. Simmons Cancer, Dallas, TX; Elaine S. DeMeyer, MSN, RN, AOCN®, Beyond Oncology, Rockwall, TX; Suzy Lockwood, PhD, MSN, RN, OCN®, FAAN, Texas Christian University, Fort Worth, TX

Public speaking, or glossophobia, is listed as American's number-one fear—more than spiders, heights, or even death. Preparation and practice builds confidence and decreases anxiety about public speaking. This leads to self-confidence and improved speaking abilities. All nurses need public speaking leadership skills, but particularly oncology nurses. Oncology nurses educate patients undergoing active treatment, cancer survivors, and the community. They may present to peers, healthcare leaders, policy makers, and advocacy organizations. As a result of a recognized need to help oncology nurses grow in this area, the Dallas ONS Chapter is piloting a speaker mentoring program and participating in a research study to measure the impact of mentorship on oncology nurse speaker anxiety. The purpose of this Texas Christian University IRB-approved pilot study is to examine the impact of a formalized oncology nurse speaker mentorship on perceived nurse speaker anxiety over time. Our hypothesis is that public speaking anxiety level will decrease with education and practice. The Personal Report of Public Speaking Anxiety (PRPSA) tool was selected to measure speaking anxiety across five time intervals. The PRPSA includes 34 self-reported statements to calculate a total PRPSA score. Data will be collected five times from a convenience sample of oncology nurses attending mentorship workshops. Measurement includes a baseline assessment before the first workshop and after each of three workshops held at one month interval, and then 90 days after completion of the workshop series. Scores across these five intervals will be compared to evaluate the impact of preparation on public speaking anxiety. A total of 10 nurses with a mean of 20.5 years of oncology nursing experience, working in a variety of community and academic practice settings, completed the baseline assessment. At the conclusion of the first workshop, the mean post measurement anxiety score showed a slight reduction in anxiety levels. Additional post workshop anxiety score measurements are scheduled for October and November 2016, with the final PRPSA assessment planned for February 2017. Based on the preliminary pilot study results, a more robust sample size will be sought by expanding the workshop and research study participation.

### **SYMPTOM OCCURRENCE, SEVERITY AND QUALITY OF LIFE AS PREDICTED BY VARIABLES RELATED TO THE CANCER CONDITION AND SELECTED DEMOGRAPHIC VARIABLES.**

Jaimol Sreedhar, PhD, RN, OCN®, Lankenau Medical Center, Wynnewood, PA

Patients with advanced cancer often experience multiple coexisting symptoms during treatments. Identifying symptoms and patients' self-care strategies help health care professionals manage patients' symptoms effectively. The primary purpose of the study was to examine the relationship among cancer therapy-related symptom occurrence, and severity, health-related quality of life, selected variables related to the cancer condition (diagnosis/stage, type of treatments, length of time since start of treatment, number of comorbidities), and selected demographic variables (ethnicity, age, gender, marital status, education, economic status). Four secondary purposes were to examine (1) cancer patients' reported symptom occurrence and severity by ethnicity (African-American vs. Caucasian); (2) self-care methods used by ethnicity; (3) difference in symptom occurrence and severity by age group, adolescent-young adult (18-39 years) vs. older adults (40 years or older); and (4) self-care methods used by age groups. This study used a descriptive correlational design. Data were collected from a convenience sample of 110 cancer patients receiving cancer treatments at one eastern U.S.A. site. Tools used included the: Demographic Form, Health Form, Karnofsky Performance/Functional Status, and Treatment/Medication Profile, Therapy-Related Symptoms Checklist (TRSC), Health-Related Quality of Life Linear Analogue Self Assessment (HRQOL-LASA), the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire C-30 (EORTC QLQ-C 30), and the Symptom Alleviation Self-Care Methods (SA-SCM). Data were analyzed using SPSS version 23. Significant relationships were found on multiple linear regression analysis between TRSC symptom occurrence/severity and gender ( $t(103) = 2.07, p=.04$ ), economic status [(Annual income > \$60,000), ( $t(103) = -2.53, p=.01$ )], and disease stage ( $t(103) = 4.31, p=.000$ ). Significant associations were found between HRQOL and economic status [(annual income > \$60,000), ( $t(103) = 2.11, p=.04$ )], and ethnicity [(African American,  $t(103) = 2.01, p=.04$ ), (Asian & Hispanic,  $t(103) = 2.04, p=.04$ )]. Path analysis supported the significant findings. Patients with high symptom occurrence/severity reported low HRQOL. The majority of participants reported their use of self-care strategies was helpful. Oncology nurses are in an influential position to educate, motivate, and support patients and families to manage the patients' treatment-related symptoms effectively.

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#### **A DESCRIPTIVE QUANTITATIVE STUDY COMPARING THE PERCEIVED SOCIAL SUPPORT FOR CANCER PATIENTS RECEIVING ORAL CHEMOTHERAPY VERSUS INFUSIONAL THERAPY.** Maureen Stannard, RN, BS, BA, OCN®, Dartmouth Hitchcock Medical Center, Lebanon, NH

Increasingly oral chemotherapy is being developed for financial savings and convenience for patients. However, this change in delivery mode requires an assessment of whether oral chemotherapy patients are getting their informational, emotional and instrumental supportive care needs met when compared to patients receiving intravenous (IV) chemotherapy. A descriptive quantitative method was used to survey 20 patients receiving chemotherapy at an academic cancer center. A convenience sampling of 10 patients in each group (IV and oral) consented to complete two questionnaires at two different time points: when starting chemotherapy and approximately three months after treatment initiation. Demo-

graphics, stage of disease and treatment schedule data were collected via chart review. The FACT-G and Supportive Care Needs Survey questionnaires were utilized. To date 3 of 20 patients have completed the first round of questionnaires: 2 oral and 1 IV. The wife of the first patient said "Thank you for your interest in this research. No one has talked to us about this at all yet. and I can tell you that there isn't a comfort cart rolling through our living room for him". Enrollment has been steady in the two weeks since opening with completion and all Results anticipated by February 2017. It is expected that the results will inform oncology nurses regarding the informational, emotional, and instrumental care needs of patients receiving oral chemotherapy and aid them in developing new ways to help meet those needs. Bridging the gap of current practice and meeting the needs for patients on oral chemotherapy may be as simple as having direct conversations with patients and their families about what needs are not being met. There could also be a role for telehealth which would allow nurses to visually check in with patients between clinic visits and answer questions without the need for an office visit. The results of this study will help to define differences in patient supportive care needs depending on their route of chemotherapy delivery.

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#### **GLYCEMIC CHALLENGES IN PATIENTS WITH CANCER: ARE WE MEASURING UP?** Susan Storey, PhD, RN, AOCNS®, Indiana University, Indianapolis, IN; Diane Von Ah, PhD, RN, FAAN, Indiana University, Indianapolis, IN; Marilyn Hammer, PhD, RN, DC, Mount Sinai Hospital, New York, NY

Hyperglycemia, an elevation in blood glucose, is a major side-effect of cancer and cancer treatment and can occur in patients independent of a diagnosis of diabetes mellitus (DM). Researchers have noted discordant findings as it relates to the negative impact of hyperglycemia on health outcomes such as: infection, toxicity, morbidity and/or mortality among patients with cancer. The inconsistency in findings from these studies may be attributed to variations in the definition and measurement of hyperglycemia and can result in the lack of or inappropriate treatment of hyperglycemia. Therefore, understanding the influence of hyperglycemia on health outcomes is imperative to inform the development of treatment plans. The purpose of this integrative review was to explore the definitions and measurement issues related to assessing hyperglycemia in adult patients with cancer. Four electronic databases were searched, using the terms: cancer, hyperglycemia, measurement, adults, and health-related outcomes. Only quantitative manuscripts were reviewed. Articles that focused globally on DM, hyperglycemia and/or cancer that did not discuss health-related outcomes were excluded from this review. Twenty-nine articles were reviewed. Quantitative articles were synthesized using integrative review strategies. Three key gaps were identified in the literature: variations in the calculation of prevalence, and in the measurement of hyperglycemia, and inconsistent utilization of standard guidelines. This review elucidated inconsistencies in measuring/assessing hyperglycemia and the lack of standardized guidelines for treating hyperglycemia in cancer survivors. Failure to have a standard approach to the measurement and management of hyperglycemia impedes the ability to determine the significance of its impact on health outcomes. Evidence-based measurement and treatment guidelines are needed to inform and assist healthcare providers with clinical decision making in cancer patients with hyperglycemia. Standard screening of cancer patients prior to the onset of treatment could be beneficial in predicting and managing those patients who may be a higher risk for development of hyperglycemia. Further research is needed to determine the appropriate measurement guidelines to address hyperglycemia in the cancer patient. To

our knowledge this review is the first to describe the state of the science as it relates to the discrepancies and the need for consistency in the assessment of hyperglycemia in patients with cancer.

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**ASSESSING THE CHANGE IN LEAN BODY MASS IN ONCOLOGY PATIENTS THAT ARE AT RISK FOR MALNUTRITION.** Renee Stubbins, PhD, RD, LD CSO, Houston Methodist Cancer Center, Houston, TX; Heather Vick, BSN, RN, OCN®, Houston Methodist Cancer Center, Houston, TX; Nick Escobedo, MSN, RN, OCN®, NE-BC, Houston Methodist Cancer Center, Houston, TX; Jennifer Berry, MSN, RN, NE-BC, Houston Methodist Cancer Center, Houston, TX

Up to 80% of oncology patients will become malnourished when fighting cancer. Identifying patients that are at risk for malnutrition and losing LBM should be essential in the oncology setting. However, it can be challenging identifying malnutrition in overweight and obese patients. We hypothesize that the change in lean body mass (LBM) will be different in patients that are classified as a low or high risk for malnutrition and in patients that are overweight or obese. We assessed LBM by measuring hand-grip strength (HGS) and screened our patients using the Malnutrition Screening Tool (MST). The MST has been validated in both inpatient and outpatient oncology patients. The MST focuses strongly on weight loss and appetite changes in patients; although a poor appetite can be a sign of low protein intake, it is not an accurate assessment of LBM. Furthermore, body mass index (BMI) is not an indicator of muscle mass; loss of LBM is an independent adverse prognostic indicator in obese patients. Over two-thirds of Americans are overweight or obese, thus we may need additional tools and protocols in actively screening these patients for malnutrition and loss of LBM. Our results suggest that, on average, participants improved their HGS and thus suggesting LBM stability. Although, there was a greater improvement in HGS in the patients classified at a low risk for malnutrition (MST score <2) compared to patients at a high risk for malnutrition (MST score  $\geq$ 2). Additionally, there was a greater improvement in HGS in patients who had a BMI  $\geq$ 25 compared to patients who had a BMI <25. On average, participants had a decrease in their MST score and an increase in their HGS. Our goal is to continue to enroll patients in order to determine if there is a difference in hand-grip strength in lean vs. overweight/obese participants that are at high-risk for malnutrition. Based on the current findings we have found validity in using the hand dynamometer along with the malnutrition screening tool in order to assess our patients LBM and risk for malnutrition.

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**EXPLORING FACTORS ASSOCIATED WITH TELEMTRY USE IN ONCOLOGY: ARE WE MEETING AMERICAN HEART ASSOCIATION GUIDELINES?** Jennifer Sullivan, MSN, RN, ACNS-BC, University Hospitals Seidman Cancer Center, Cleveland, OH; Lindsey Auerbach, BSN, RN, University Hospitals Seidman Cancer Center, Cleveland, OH; Megan Kuhlenschmidt, BSN, RN, OCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Molly White, BSN, RN, OCN®, University Hospitals Seidman Cancer Center, Cleveland, OH; Deborah Virant, BSN, RN, RN-BC, University Hospitals Seidman Cancer Center, Cleveland, OH

The burgeoning use of telemetry for oncology patients has significant impact on oncology nursing practice, requiring specialized nurse training, increased monitoring and surveillance, risk of alarm fatigue, hospital through-put issues, and additional financial burdens for patients. Although evidence-

based telemetry guidelines exist, implementation, utilization and awareness of the guidelines are often overlooked by oncology specialists. Also, there is limited research to determine if factors associated with oncology patients fall outside the scope of telemetry guidelines. The primary aim of this study was to determine if oncology patients met American Heart Association (AHA) guidelines for telemetry and to evaluate demographic and medical oncology factors associated with length of time on telemetry and critical cardiac events. A retrospective chart audit was conducted on all adult inpatients, with a history of cancer, admitted on telemetry to two oncology units from September 1 to November 30, 2015. Sixty charts met criteria. The research team critically evaluated charts, using an audit tool, to determine if actual and applied admission and discharge to telemetry met AHA guidelines. The Common Terminology Criteria for Adverse Events v3.0 was utilized to rank critical cardiac events. Data were collected using physician and nursing documentation in the EHR. Analysis consisted of descriptive statistics and logistic regression models. Oncology patients were appropriately ordered telemetry 71.7% of the time (43/60) based on AHA guidelines. For orders that fell outside AHA guidelines, 58.8 (10/17) had no documented physician rationale for monitoring and 23.5% (4/17) were monitored by nurses, without at telemetry order, because of acute symptoms and adverse cardiac events that would have met AHA guidelines. Medical and demographic factors associated with oncology patients' length of time on telemetry and adverse cardiac events will be presented. Application of AHA guidelines showed 15 charts (25%) were monitored for the appropriate length of time. Applying time-limiting guidelines to the remaining 45 charts, decreased telemetry days by 4.91 days/person without any serious adverse events. Oncology clinicians who are not specialized in cardiology require clear cardiac guidelines to create optimal care plans for hospitalized oncology patients. Application of AHA Guidelines for Telemetry Monitoring would provide evidence-based criteria that would meet the telemetry needs of oncology patients and practitioners, as well as reduce healthcare costs and utilization.

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**NURSING CARE OF PATIENTS UNDERGOING INTRA-PERITONEAL HYPERTHERMIC CHEMOTHERAPY: A BRAZILIAN STUDY.** Gunnar Taets, Federal University of Rio de Janeiro, Macaé; Rafael Jomar, University of the State of Rio de Janeiro, Rio de Janeiro; Laise Santos, National Instituto of Cancer-Brazil, Rio de Janeiro; Marcio Francês, National Institute of Cancer-Brazil, Rio de Janeiro

Estimates for the Brazilian population in 2016 point to 34,280 new cases of colorectal cancer, the second most common cancer among women and the third among men. In this epidemiological context, there is the peritoneal carcinomatosis: one associated with an unfavorable prognosis condition that may be present in the natural history of colorectal cancer and some others, such as peritoneal pseudomyxoma. Until recently the conventional treatment consisted of systemic chemotherapy or only palliative care. However, promising results have been reported after the implementation of radical cytoreductive surgery followed by hyperthermic intraperitoneal chemotherapy during surgery. The objective was to identify nursing care for patients undergoing intraperitoneal hyperthermic chemotherapy during surgery. This is a study of integrative review the following electronic databases: Scientific Electronic Library Online (SciELO), Medical Literature Analysis and Retrieval System Online (MEDLINE), Latin American and Caribbean Health Sciences (LILACS) and Cumulative Index to Nursing and Allied Health (CINAHL). Main found nursing care: continuous monitoring in the intensive care unit for approach mately 48-72 hours; in this environment, the nurse must ob-



serve not receiving nutrition orally via the patient in order to reduce the risk of anastomotic dehiscence. The nurse plays an important role as a member of the multidisciplinary team. The main nursing care found are focused on intensive care in order to avoid or mitigate the well-known complications of intraperitoneal hyperthermic chemotherapy itself. It should be noted that specialized training is highly recommended to improve the quality of participation in the multidisciplinary process.

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**FACTORS PREDICTING EMOTIONAL CUE-RESPONDING BEHAVIORS OF NURSES IN TAIWAN: AN OBSERVATIONAL STUDY.** Chia-Chun Tang, MSN, RN, OCN®, Indiana University, West Lafayette, IN; Mei-Feng Lin, PhD, RN, National Cheng Kung University, Tainan; An-Yu Lee, MSN, RN, Chung Hwa University of Medical Technology, Tainan

Cancer brings profound emotional distress which is negatively linked to patients' health-related quality of life, emotional function, role function, and social function. As emotional cues are reliable indicators of emotional distress, responding to emotional cues is an essential element of therapeutic communication. The purpose of this study is to examine nurses' competence of responding to emotional cues (CRE) and related factors while interacting with standardized patients with cancer. This is an exploratory and predictive correlational study. A convenience sample of registered nurses who have passed the probationary period in southern Taiwan was recruited to participate in 15-minute videotaped interviews with standardized patients. The Medical Interview Aural Rating Scale was used to describe standardized patients' emotional cues and to measure nurses' CRE. The State-Trait Anxiety Inventory was used to evaluate nurses' anxiety level before the conversation. We used descriptive statistics to describe the data and stepwise regression to examine the predictors of nurses' CRE. A total of 110 nurses participated in the study. Regardless of the emotional cue level, participants predominately responded to cues with inappropriate distancing strategies. Four variables were found to be significant predictors of CRE: prior formal communication training, practice at a palliative unit, length of nursing practice, and educational level. These four variables together explain 36.3% variances of the nurses' CRE. Taiwanese nurses tended to respond to patients' emotional cues with more inappropriate strategies compared to nurses in other countries. We identified significant predictors of CRE that show the importance of communication training. Future research and education programs are needed to enhance nurses' CRE and to advocate for emotion-focused communication. This study is the first to explore factors related to Taiwanese nurses' CRE. Analyzing nurses' CRE is an innovative micro-level method to interpret nurse-patient communication.

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**BLOOD STORAGE DURATION AS A PREDICTOR OF WELL-BEING AND FATIGUE.** Susan S. Tavernier, PhD, APRN-CNS, AOCN®, Idaho State University, Meridian, ID; Lisa Mayerhofer, MSN, RN, St. Luke's Health System-Mountain States Tumor Institute, Meridian, ID

The investigator frequently heard the observation from the patients that the return of anemic symptoms varies with the expiration date and blood type of the transfused blood. The purpose of this pilot study was to explore the impact of packed red blood cells (PRBCs) donor type and time to expiration had on the patient's reported overall quality of life (QoL), well-being, activity and fatigue. There is an ongoing debate and tremendous concern exists regarding patient outcomes following transfusion of stored blood. Published studies in the cancer

patient population focus on endpoints of cancer recurrence, infection and mortality rates. Conventional expiration date for PRBCs is 42 days, with age impairment of blood quality a documented risk recognized throughout the medical community as "the storage lesion." This was a prospective pilot study using convenience sampling methods. Data was collected before and 48-72 hours after single-unit blood transfusions in an outpatient cancer center. Patient reported outcomes for activity, fatigue, QoL and wellbeing were collected. Demographic and clinical data were abstracted from the health record. Due to the pilot nature of the study, summary statistics were used. However, inferential statistical tests were completed to inform further research. The study sample (n=20) were mostly older (x=61.68 years) people with advanced stage cancer (56%). A majority (n=15, 70%) received blood with a pre-transfusion hemoglobin of < 7.7 g/dl. The time to expiration of blood from date of transfusion ranged from two to 26 days (x=12; SD= 7.71). While no statistically significant relationship was found between time to expiration and overall quality of life and life satisfaction, both scores improved after transfusion (t=-2.95, p=.009, t=-2.65, p=.02 respectively) with an observed trend in higher improved QoL and life satisfaction in those who received blood with a longer expiration date. Additional analyses addressing donor/patient blood match and predictors of time between transfusions will also be reported. Increasing the time between transfusions has patient outcome, financial and health policy implications. While not statistically supported, there was a trend in people experiencing a greater improvement in QoL and overall life satisfaction when they were transfused with blood that had a longer time to expiration date, lending support for our hypothesis. There is a need for larger randomized studies.

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**RESULTS OF A RANDOMIZED, WAIT LIST CONTROLLED TRIAL OF GROUP ACUPUNCTURE FOR CHEMO-INDUCED NEUROPATHY.** Cindy Toftthagen, PhD, ARNP, AOCNP®, FAANP, FAAN, University of South Florida, Tampa, FL; Gene Healy, AP, DOM, Florida Cancer Specialists, Largo, FL; Sarah Boses, RN, BSN, Florida Cancer Specialists, Largo, FL; Nurrudin Jooma, MD, Florida Cancer Specialists, Largo, FL; Kevin Kip, PhD, University of South Florida, Tampa, FL

Chemotherapy induced peripheral neuropathy (CIPN) negatively affects the health and quality of life of millions of cancer survivors. A few small studies have demonstrated that acupuncture may reduce pain in persons with CIPN, however most of these studies have included small sample sizes, lacked a control group, have not measured other CIPN symptoms, and primarily relied on patient self-report and have not included objective outcomes data. Group acupuncture allows an acupuncture physician to treat several patients at one time at an economical cost but has not been evaluated for CIPN. We sought to examine the effects of group acupuncture on CIPN. Specifically, we aimed to: 1) Evaluate the efficacy of 4 weeks of group acupuncture on pain, neuropathic symptoms and sensation compared to usual care in persons with CIPN. 2) Determine any sustained effects of 4 weeks of group acupuncture on pain, neuropathic symptoms and sensation at 4 weeks post acupuncture. This study employed a prospective, randomized, controlled, cross-over design. 56 participants with CIPN were recruited from an outpatient medical oncology in west, central Florida and randomly assigned to receive bi-weekly group acupuncture during either the first or second four weeks of the eight-week study. CIPN symptoms, pain, and sensation were measured at baseline, 4 weeks, and 8 weeks. Paired sample t-tests were used to evaluate changes over time and independent sample t tests were used to identify differences between groups at each data collection point. There were significant decreases in subjective and objective neuropathy symptoms before and after

acupuncture among the intervention group but no appreciable improvements in sensation or pain. Four weeks after completion of acupuncture, the improvements were sustained. The wait-list control group also reported significant improvements in subjective and objective neuropathy symptoms from pre to post acupuncture. The only significant difference between groups was in objective neuropathy symptoms, at four weeks, with the intervention group having lower neuropathy scores on the Total Neuropathy Score. This data provides new evidence to support the efficacy of group acupuncture for reducing CIPN symptoms. Future studies should attempt to characteristics of individuals most likely to benefit, include larger sample sizes, and a more racially and ethnically diverse population.

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##### **PREVALENCE OF COMPASSION FATIGUE AMONG ONCOLOGY NURSES.** Laurel Tor, DNP, FNP, OCN®, Providence Cancer Center, Portland, OR

The aim of this project was to evaluate the prevalence of compassion fatigue among oncology nurses in a large health care system, across oncology settings. In addition this project evaluated staff awareness and use of current programs in place to reduce compassion fatigue and considered the effect of unit culture on staff resiliency. Compassion fatigue screening was completed using the ProQOL-V screening tool in conjunction with a needs assessment. The needs assessment collected demographic data as well as information regarding available resources and key elements related to unit culture. Included were two large teaching hospitals, four rural critical access hospitals, two outpatient oncology infusion centers and two radiation oncology departments. Descriptive statistics were used to analyze the demographic and needs assessment data. The relationship between setting and compassion fatigue subscales were then analyzed looking at trends within the organization. There were 100 surveys completed representing 55% of all oncology nurses in the organization. The inpatient medical oncology participants had statistically significant lower compassion satisfaction scores than their outpatient colleagues. This study provides evidence of a pervasive culture on oncology units that tolerates nurses regularly missing breaks. In addition, resources available to oncology staff were underutilized and many were not aware of available services. The knowledge gained through compassion fatigue screenings and the needs assessment will guide future implementation of projects. Insights from this study will be used to develop individualized and meaningful compassion fatigue resilience programs that are culturally sensitive and individualized to the needs of each unit. Implementation of a compassion fatigue resiliency programs may reduce the impact of compassion fatigue on oncology nurses. The knowledge gained through compassion fatigue screenings and the needs assessment will guide future implementation of projects going forward.

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##### **NURSE MOBILITY PROGRAMS IN THE ACUTE ONCOLOGY POPULATION.** Nicole Turkoglu, RN, BSN, OCN®, New York Presbyterian, New York, NY; Archana Shenoy, RN, BSN, New York Presbyterian, New York, NY

The purpose is to identify nurse driven mobility programs that have been studied for the acute oncology population. Patients with cancer have a higher frequency of falls and a higher incidence of injury related to falls than patients without cancer in the hospital. Though patient falls continues to be one of the largest factors of decline in oncology patients, little research exists for nurse driven ambulation programs in the adult acute care hospital setting. A systematic literature review was completed to see what nurse lead programs are being done in the hospital to encourage patient mobility

to prevent falls. CINAHL and MEDLINE (via PubMed) were used to search the relevant evidence. The keywords mobility, cancer, and nursing yielded 223 articles. The exclusion criteria applied to the search was academic peer reviewed journals, the English language, and from the years 2011-2016. The search yielded 68 articles after the exclusion criteria was applied. The 68 abstracts were reviewed. Three of the articles were eliminated for being duplicates, 57 of the articles were eliminated for not being relevant to the search because the articles did not contain information on oncology patients or did not involve a mobility intervention. A total of eight articles were identified for this literature review. The literature review revealed that there is a lack of nurse led mobility research in the hospital oncology population. There is a need for further research in the benefits of increasing patient mobility to improve cancer patient outcomes. The literature review revealed a lack of nurse led mobility research in the hospital oncology population. The prior research was not focused on the oncology population in the hospital. There is a need for further research in the benefits of increasing patient mobility to improve cancer patient outcomes. Patients' ability to maintain functionality is an integral component to reducing falls and preventing injury in the acute care hospital setting. An evidence based implementation of a nurse driven mobility protocol will help insure a continuity of treatment from shift to shift as well as reduce gaps in mobilization treatments offered by other disciplines during off and weekend hours.

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##### **RESULT OF THE IMPLEMENTATION OF A NURSE-LED PROGRAM TO PROMOTE GENETIC TESTING IN AN UNDERSERVED POPULATION.** Meghan Underhill, PhD, RN, AOCNS®, Dana-Farber Cancer Institute, Boston, MA; Karleen Habin, MSN, RN, CNS, MGH, Boston, MA; Debra Lundquist, MSN, RN, Boston College, Boston, MA; Kathryn Robinson, MHA/Ed, RN, Northeastern University, Boston, MA; Jean Boucher, PhD, RN, APN, University of Massachusetts Medical School, Graduate School of Nursing, Dana-Farber Cancer Institute, Worcester, MA; Kristen Shannon, MS, CGC, MGH, Boston, MA

Results from genetic testing are an important component of holistic cancer care and can inform treatment, diagnostic, surveillance, and preventative health recommendations. Out of pocket costs associated with genetic testing even in the insured have also been identified as a barrier, regardless of race or ethnicity. In 2009, the Cancer Resource Foundation (CRF), a nurse-led non-profit organization implemented the Genetic Information for Treatment Surveillance and Support (GIFTSS) program to cover the out of pocket expenses associated with cancer predisposition genetic testing. To date in 2016, over 1500 patients have been served, 49% being of racial or ethnic minority and all financially underserved. In this study we (1) Describe the participant characteristics of participants in the Massachusetts (MA) GIFTSS program from 2009-2014 and (2) evaluate mutations found in this diverse sample. A secondary data analysis using de-identified demographic data obtained from requisition forms and cancer genetic testing result information from the laboratory source from participants who utilized the MA GIFTSS program through December of 2014. All data were summarized using descriptive statistics. Positive gene mutations were identified in 123 (13%) of participants. For those with a cancer diagnosis, 65 (12%) were found to have positive mutation and 20 (7%) had an identified variant of uncertain significance (VUS). For those unaffected patients, 10 (3%) were found to have a VUS and 58 (15%) had a positive mutation. Findings indicate that referral to GIFTSS was likely highly selective and that those individuals were appropriately

referred. Results highlight the potential impact of a genetic testing program in an underserved population. Underserved individuals at high risk for cancer face many challenges and potential obstacles to care. Efforts aimed at community outreach, education, and counseling are necessary. Nurses must play a critical role in these efforts in order to reach those most at risk. More work is needed to move policy forward in order to advance the good and well-being of society. Facilitating genetic testing in underserved communities is a timely and important focus of cancer care. The partnership created through CRF with key stakeholders to provide the GIFTSS service is novel and potentially could be replicated in other settings.

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**PERSPECTIVES OF OSTEOPOROSIS SCREENING AMONG BLACK WOMEN.** Angela Wilkins, PhD, Health Services, Walden University, Virginia Beach, VA

Osteoporosis is a serious disease which often brings pain, disability, hospitalization, and even death. An increasing number of studies have been conducted on the prevention and treatment of osteoporosis in White women, yet a paucity of research exists to explain disparities in screening and treatment of osteoporosis in Black women. This narrative study describes the perspectives of Black women regarding individual barriers to osteoporosis screening. The purpose of this study is to better understand the perspectives of Black women regarding prevention of and screening for osteoporosis. Selections included purposive, criterion sampling of 10 Black women who were 50 years and older, could speak and write English, and lived in Southeastern Virginia. Recruitment flyers were distributed to Black women who were members of three local churches. The conceptual framework for this study was the behavioral model of health services, which holds that individual's acceptance to use health service is partly controlled by that individual's predisposing, enablement, and need. Data were collected by in-depth face-to-face interviews and analyzed using open, axial, and selective coding. Four major themes emerged in this study including awareness of osteoporosis, knowledge of the screening, health beliefs, and sharing of information. While the narratives indicated positive effects from engaging in osteoporosis screening, there was a discrepancy in understanding the disease and explanations of screening results. This study addressed social change by identifying how awareness and knowledge helped Black women become more effective when they engaged in osteoporosis screening, which can help to ensure health and a better quality of life.

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**SUSTAINED SYMPTOM CONTROL WITH LANREOTIDE DEPOT IN CARCINOID SYNDROME (CS) IN NEUROENDOCRINE TUMOR PATIENTS: FOLLOW-UP ANALYSIS OF THE ELECT PROSPECTIVE, RANDOMIZED, DOUBLE-BLIND AND OPEN-LABEL PHASES.** Donna Williams, RN, Stanford University School of Medicine, Stanford, CA; Edward Wolin, MD, Montefiore Einstein Center for Cancer Care, Bronx, NY; Beloo Mirakhur, MD, Ipsen Biopharmaceuticals, Basking Ridge, NJ; Rodney Pommier, MD, Oregon Health & Science University, Portland, OR; Aaron Vinik, MD, Eastern Virginia Medical School, Norfolk, VA; George Fisher, MD, Stanford University School of Medicine, Stanford, CA

In ELECT, lanreotide significantly reduced rescue medication use for symptomatic control of CS in Neuroendocrine tumor (NET) patients vs PBO in the 16-week double-blind (DB) phase. Patient-reported symptoms during DB and initial open-label (IOL) treatment are presented. Adults with NETs and CS history, with/without prior somatostatin analog (SSA) use, were

randomized to DB Lanreotide (LAN) 120 mg or PBO every 4 weeks for 16 weeks, followed by a 32-week IOL phase on lanreotide. Each patient recorded daily the frequency and severity of diarrhea and flushing by Interactive Voice (Web) Response System for 1 month pre-randomization until study end. Analysis of covariance models incorporated baseline symptoms, prior SSA, and country. Given high variability of urinary 5HIAA, values were log-transformed. Of 115 patients randomized (n=59 LAN, n=56 PBO), 56 LAN- and 45 PBO-treated patients switched to LAN, continued in IOL (LAN-LAN and PBO-LAN). During DB phase, least square (LS) mean percentage of days with moderate/severe diarrhea and/or flushing were significantly lower for LAN (23.4%) vs placebo (35.8%) (LS mean difference [95% CI] -12.4 [-20.73,-4.07]; p=0.004) Among LAN-LAN patients in IOL, composite (frequency x severity) diarrhea scores improved significantly from DB to IOL and were not significantly different for flushing or diarrhea and flushing. Composite symptom scores improved significantly from DB to IOL for PBO-LAN patients. Mean (95% CI) differences in changes from baseline in urinary 5-HIAA between DB week 12 and IOL week 48 were :14.75  $\mu\text{mol/d}$  (:27.02, 56.51) for LAN-LAN and 73.96  $\mu\text{mol/d}$  (:11.77,159.7) for PBO-LAN. Adverse event frequency during IOL by DB group (LAN, PBO) was 70% vs 71%. The safety profiles observed during IOL and DB were similar. Lanreotide improved control of diarrhea and flushing in carcinoid patients during initial 16 weeks of treatment, and was sustained for an additional 32 weeks through week 48 of this phase 3 study.

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**THE EFFECTS OF EDUCATION ON COMPASSION FATIGUE IN ONCOLOGY NURSES.** Ina Wilson, DNP, RN, Indiana University Simon Cancer Center, Indianapolis, IN

Oncology nurses witness terminal illness, death, physical, and emotional suffering. The nature of oncology nursing is emotionally challenging. The purpose of this evidence based practice project was to determine the effects of education on decreasing the severity of compassion fatigue experienced by oncology nurses. The deleterious effects of compassion fatigue have been described in the literature as decreased quality of patient care, nurse burnout, and increased nursing attrition. Literature indicates that nurses should receive educational training about compassion fatigue that incorporates self-care management to ameliorate the potential negative effects of compassion fatigue. Various interventions to mitigate the negative impact of compassion fatigue have been described, but many lack an objective measurement tool to evaluate their efficacy. The Theory of Human Caring and The Iowa Model were used to support this project. An educational program that incorporated self-care management skills and a web based educational program on secondary traumatic stress was used as the intervention. The project used a pre-test and post-test design. Pre-intervention compassion fatigue scores of the Professional Quality of Life Scale V (ProQOL-V) were compared to post-intervention scores. Participants were recruited from a tertiary care center hospital in central Indiana. Sixteen participants (n=16) were recruited and eleven participants (n=11) completed the post-intervention stage of the project. Data were analyzed using the Wilcoxon signed-rank test to compare mean pre- and post-test compassion fatigue scores. Results demonstrated a statistically significant decrease in compassion fatigue scores following the intervention (z-score = -2.27, p < 0.05). The findings of this evidence-based practice project suggest that implementation of compassion fatigue education can decrease the severity of compassion fatigue experienced by oncology nurses working on a bone marrow and stem cell transplant unit. Potter et al. (2013) noted the importance of programs aimed at empowering nurses to recognize compassion fatigue and self-regulate associated stress. Ameliorating the impact of compassion fatigue could contribute to improved quality



in patient care and decrease nurse attrition. The prevalence, cause, and negative implications of compassion fatigue are well documented in the literature; however, interventions that include a research design and objective measure of compassion fatigue are sparse.

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**DEVELOPMENT, FEASIBILITY AND USE OF AN INTERNET-STREAMED YOGA INTERVENTION FOR BREAST CANCER SURVIVORS.** Loren Winters, MSN, ANP-BC, Massachusetts General Hospital, Boston, MA; Jane Flanagan, RN, ANP-BC, PhD, Massachusetts General Hospital, Boston, MA; Erin Keefe, MSN, ANP-BC, Massachusetts General Hospital, Boston, MA; Cheryl Brunelle, PT, Massachusetts General Hospital, Boston, MA

As a result of research supporting its use, yoga is now increasingly offered by hospital based integrative therapies programs. However, there are barriers to its use such as patients lack of desire to return to the hospital post treatment to participate. An Internet streamed video may offer an alternative to an in person class, but research is needed to determine if this is a feasible approach and how patients perceive using such a strategy. The purpose of this study is to: 1. Develop a yoga video created by a multidisciplinary team of breast cancer care providers and tailored for breast cancer survivors. 2. To describe breast cancer survivors' experience of using an Internet-streamed yoga video including feasibility, barriers and facilitators to its use. The study employed an open ended qualitative descriptive design. The content of the video was prepared by an interdisciplinary team of breast cancer care providers. The gentle yoga practice sequence incorporated postures and movements similar to stretches prescribed post-operatively. Patients with early stage ER+ breast cancer within one year of initiating adjuvant endocrine therapy were recruited in routine follow-up visits by their oncology providers. Participants who were enrolled received the video by email, were asked to complete a demographic questionnaire, view the video twice a week for four weeks and complete open-ended telephone interviews at three time points to determine how the video was used and perceived. Conventional content analysis was used to understand the feasibility and patient experience of using the video. Fourteen women participated in this study. Although participants described needing more instruction about what yoga is and how it can be used for self-care, they also reported having little difficulty opening, viewing and practicing with the video, and particularly because it was easily portable on any device. Additionally, participants like seeing their providers in the video. Although limited by a small homogenous sample, this study suggests that an Internet streamed yoga intervention was an innovative approach to providing access to an integrative intervention for self care after cancer treatment. In conclusion, the internet streamed yoga video was feasible to use and enjoyed by breast cancer survivors.

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**PHYSICAL ACTIVITY AND FATIGUE IN PEDIATRIC ONCOLOGY PATIENTS AND SURVIVORS ATTENDING SUMMER CAMP.** Janice Withycombe, PhD, RN, MN, CCRP, Nell Hodgson Woodruff School of Nursing Emory University, Atlanta, GA; Dorothy Jordan, DNP, APRN, Nell Hodgson Woodruff School of Nursing Emory University, Atlanta, GA; Sally Hale, MN, RN, Camp Sunshine, Atlanta, GA

Pediatric cancer patients and survivors are significantly less active than healthy children and frequently report fatigue as a persistent symptom. Evidence suggests that physical activity (PA) may be effective in reducing fatigue. Creative methods

are needed to encourage PA both during and after therapy. Attendance at summer camp may prove beneficial as PA is hypothesized to increase during camp. The purpose of this study was to evaluate PA and fatigue in pediatric cancer patients and survivors before and after a 6 day summer, residential camp. This study was conducted in June 2016, at a pediatric oncology summer camp for teens (13-17 years old). Study recruitment utilized a convenience sample. An introductory e-mail was sent to families of all eligible campers. Parental consent/child assent were obtained prior to camp. Participants completed surveys (Pediatric PROMIS Fatigue; Pediatric PROMIS PA; Block PA Screener) at the beginning of camp and again on Day 6 (end of camp). PA was objectively measured as steps per day, during camp, using a commercially available PA monitor. 23/24 (95.8%) of teens completed the study. Subject demographics: Female (67%), Male (33%); White (54%), African American (25%), Other (13%), Asian (8%); Off treatment (96%). Average steps per day during camp =18,198 (range 8,990-29,010). Pediatric PROMIS Physical Activity Domain mean scores averaged 47.44 at Baseline, and 55.71 at the end of camp. The increase in PA during camp was significant with a change in PA scores ( $t=-4.5$ ;  $p=.00$ ), with no significant increase in fatigue ( $t=-1.8$ ;  $p=.08$ ). Teens were willing to complete a research study related to PA during a summer recreational camp. Steps per day during camp were higher than the amounts reported in literature for pediatric oncology patients. This study was limited in that it did not objectively measure physical activity prior to camp and it recruited from only one session of camp yielding a small sample size. Future studies should include younger children which would increase the number of participants on active therapy. Summer recreational camps provide a unique and feasible setting for exploring potential benefits associated with increased PA for childhood cancer patients and survivors. Other benefits may be associated with increased PA during camp and should be explored in future studies involving a larger sample.

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**COMMUNICATING ACROSS THE CANCER CONTINUUM: COMFORT COMMUNICATION TRAINING FOR ONCOLOGY NURSES.** Elaine Wittenberg, PhD, City of Hope Comprehensive Cancer Center, Duarte, CA; Jo Hanson, RN, MSN, CNS, City of Hope Comprehensive Cancer Center, Duarte, CA; Betty Ferrell, RN, PhD, MA, FAAN, FPCN, CHPN, City of Hope Comprehensive Cancer Center, Duarte, CA

Although expert communication skills are essential for oncology nurses working across the cancer continuum, few nurses receive formal instruction on communication as part of their training. In 2015 an evidence-based communication training course funded by the National Cancer Institute and identified by the acronym COMFORT was presented to 78 (39 teams) nationwide oncology nurses. This was the first (of four) train-the-trainer communication courses for nurses addressing communication across the cancer continuum. The purpose of this presentation is to describe improvements made by course participants 12 months after the training. A curriculum was created by nurse and communication experts for a two-day training course for implementing evidence-based communication skills into practice. The curriculum, emphasizing team communication, teaches nurses how to provide life-altering news, assess patient/family health literacy needs, practice mindful communication, acknowledge family caregivers, and address communication openings and goals. During the training, each team develops three communication goals to implement at their home institution. Follow-up at 6 and 12 months includes teams' update on goal status and implementation. With a 97% response rate at 12 months participants reported their goals ( $n=111$ ) were 47% complete; 32% in progress; 20% stalled/not started. Overall the goals focused on staff education regarding communication

with interdisciplinary healthcare providers, patients, and family caregivers. Goal(G)/Process(P)/Outcome(O) examples: 1. G-Increase RN navigators' comfort discussing palliative care and having realistic conversations with pancreatic cancer patients/families early in treatment plan. P-Develop educational component using training materials in distress screening and survivorship implementation plans O-RN navigators increased comfortable level discussing palliative care; able to have realistic survivorship plan conversations 2. G-Improve patient satisfaction scores related to nursing communication P-Integrate teaching materials into Unit Collaboration Council meetings O-Overall patient satisfaction scores: "During this hospital stay, how often did nurses listen carefully to you?" increased from 81% to 84% 3. G-Increase nurses' level of confidence in communication P-Communication training-pre/post assessments skill checklist O-1) Nurses' level of confidence increased from 80% to 90% 2) 100% of patients felt they were treated with sensitivity & respect Training is needed to prepare oncology nurses with the skills to provide patient-centered communication across the cancer continuum. These skills include training others in communication and implementing process improvement. The COMFORT train-the-trainer model for communication training is an effective approach to meet this need.

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**THE EFFECT OF ONCOLOGY NURSE NAVIGATORS ON PATIENT SATISFACTION SCORES.** Susan Yackzan, APRN, MSN, AOCN®, Baptist Health Lexington, Lexington, KY; Sara Barker, RN, Baptist Health Lexington, Lexington, KY; Alena Glass, RN, BSN, OCN®, Baptist Health Lexington, Lexington, KY; Stacy Stanifer, APRN, MSN, AOCNS®, Baptist Health Lexington, Lexington, KY; Holly Weyl, APRN, MSN, OCN®, Baptist Health Lexington, Lexington, KY; Peggy Wheeler, RN, OCN®, CBCN®, Baptist Health Lexington, Lexington, KY

Patient satisfaction with care has been proposed as one of the measurable outcomes of navigation. High levels of satisfaction with Oncology Nurse Navigators (ONN) and navigation programs have been reported although methods are varied and measurement is often episodic. In 2012, a yes/no question for self-report of contact with an ONN was added to a standardized, outpatient oncology satisfaction survey, providing a mechanism for measuring the effect of navigators on patient satisfaction on an ongoing basis. The purpose of this study is to evaluate the effect of contact with an ONN on patient satisfaction scores. A retrospective review of outpatient oncology Press Ganey® patient satisfaction surveys was conducted for patients receiving services between 01/01/13 and 12/31/15. Surveys were first sorted by the yes/no question, "did you have contact with a nurse navigator?" A review of the literature and an expert panel provided the basis for retention of survey items for analysis. Retained items for analysis included those related to: nursing care, education and counselling, time to first appointment, coordination, overall care, and likelihood of recommending. Descriptive techniques were used to analyze differences in score means and all-facility rank between the groups with and without ONN contact. For all items, mean scores were higher for the group with ONN contact (n=315) as compared to the group without ONN contact (n=172). Rank as compared to all other facilities was also higher for the group with ONN contact. The largest differences in rank between the groups were found in items related to nursing care, education and counselling including the following: "the degree to which staff addressed your emotional needs", "staff concern to keep your family informed about what to expect from your condition and treatment," "staff sensitivity to the personal difficulties and inconvenience that your condition and treatment can cause," and "quality of care received from nurse." Findings from this study contribute to the body of knowledge about the effect of Oncology Nurse Navigators on patient satisfaction and in mea-

suring differences in patient satisfaction between navigated and non-navigated oncology patients. Using a simple addition of a question to a standardized patient satisfaction survey provided a mechanism for outcome measurement of Oncology Nurse Navigators.

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**CORRELATION BETWEEN CACHEXIA AND CHANGES OF PHYSICAL FITNESS IN THE PATIENTS WITH PANCREACTECTOMY DURING FOUR MONTHS AFTER OPERATION.** Liou Yan-Ting, Student, National Taiwan University, Taipei; Shun Shio-Ching, PhD, RN, School of Nursing, National Taiwan University, Taipei; Tien Yu-Wen, PhD, MD, Department of Surgery, National Taiwan University Hospital, Taipei; Tsauo Jau-Yih, PhD, LPT, School and Graduate Institute of Physical Therapy, University of Physical Therapy, Taipei; Yang, Ching-Yao, PhD, MD, Department of Surgery, National Taiwan University Hospital, Taipei

Cachexia is the distressing syndrome in cancer patients. More than 80% of patients with pancreatic cancer had cachexia and approximately 30% of them were dead for its complications. However, there is no study to explore the correlation between cachexia and changes of physical fitness in patients after pancreatectomy. Therefore, the purpose of this study was to investigate the trends of physical fitness and its associations with cachexia pre- and post-operation within four months. A longitudinal design was conducted with four time points (collecting data including pre-operation (T0), 30-day (T1), 60-day (T2) and 90-day (T3) post-operation. Eligible participants were undergoing operable pancreatic tumor. The structured questionnaire was used to assess patients' demographic and clinical characteristics and physical fitness. The physical fitness were included the body composition (body weight, fat mass, skeletal muscle mass (SMM)) and muscle strength (handgrip strength (HG) and sit-to-stand test (STS)). Generalized estimating equation (GEE) was used to explore the correlation between cachexia and physical fitness. The prevalence of cachexia was 47.7% among 65 patients with being significantly diagnosed malignant diagnosis ( $p = 0.022$ ). Although physical fitness in patients with cachexia were lower than those without cachexia in pre-operation, the postoperative course of SMM, HG and STS in patients with cachexia turned higher than those without cachexia in the third month. Lastly, the changes of physical fitness were not related to cachexia but were significantly related to other factors, such as gender, age, KPS, Hb and time. Cachexia was not an independent predictor of physical fitness in patients with pancreatectomy within three months postoperatively. Indeed, patients with cachexia undergoing tumor resection do not have worse physical fitness than those without cachexia. However, the significant factors with the trends of physical fitness were gender, age, KPS, Hb and time variables. Therefore, cachexia could not be a significant barrier to undergo operation and healthcare providers should put more attentions to the female, elder people with lower KPS or Hb about the rehabilitation from the pancreatic surgery. This preliminary study may have a contribution to clinicians concretely understand the relationship between cachexia and changes of physical fitness based on objectively the body composition and physical performance during pre-operation and post-operation within four months.

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**AURICULAR POINT ACUPRESSURE TO MANAGE CANCER-RELATED SYMPTOMS IN BREAST CANCER PATIENTS.** Chao Hsing Yeh, PhD, Johns Hopkins, Baltimore, MD

This prospective, randomized controlled trial (RCT) pilot study was designed to (1) assess the feasibility of an easily

administered, auricular point acupressure (APA) intervention to manage cancer-related symptoms, and (2) provide an initial appraisal of effect size as compared to a sham treatment. Thirty-one participants (including 22 who completed cancer-related treatment and 9 who were receiving cancer-related treatment) were randomized into either a real APA group (n = 16) or a sham APA group (n = 15). All participants were treated once a week for 4 weeks. MD Anderson Symptom Inventory (MDASI) was used to assess symptoms at baseline, weekly during treatment, at end-of-intervention (EOI), and at a 1-month follow-up. A dropout rate of 12% in the real APA group and 27% in the sham group was observed. For participants in the real APA group, pain, fatigue, sleep disturbance, and upset were decreased at least 30% after 1 week of treatment and were maintained after completion of the 4-week APA treatment and 1 month follow-up, compared to baseline. Participants in the sham APA group experienced only moderate reduction in these symptoms. Given that this was a pilot study with a small sample size, results must be interpreted with caution; nevertheless, our results suggest that APA may provide an inexpensive and effective complementary approach for the management of symptom clusters for breast cancer patients, and further study is warranted.

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### **COMPARE THE DIFFERENCES OF PHYSICAL AND PSYCHOLOGICAL DISTRESS AMONG ADVANCED LUNG CANCER PATIENTS WITH DIFFERENT DISEASE TYPES.**

**Chia-Yu Yen, MS, RN, National Taiwan University Hospital, Taipei; Yu-Chien Liao, PhD, RN, Department of Nursing, Yuanpei University, Taipei; Wei-Yu Liao, PhD, Department of Internal Medicine, National Taiwan University Hospital, Taipei; Yeur-Hur Lai, PhD, RN, Department of Nursing, College of Medicine, National Taiwan University, Taipei**

The rapid development of epidermal growth factor receptor tyrosine kinase inhibitor (EGFR-TKI) leads the promising survival times for lung cancer patients with EGFR mutation. However, limited information has known about patients' distress in the treatment process. The purposes of this study was to examine the levels of psychological distress (depression and uncertainty) between patients with various types of EGFR mutation in advanced lung cancer patients after receiving anti-cancer treatment one month. This was a cross-sectional study and a total of 84 newly diagnosed advanced lung cancer patients were recruited at outpatient department of a medical center in Taiwan. The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire, (EORTC QLQ-C30), Hospital Anxiety and Depression Scale (HADS), and Mishel's Uncertainty in Illness Scale-Community, (MUIS-C) were applied to assess physical symptoms and psychological distress. Over half of patients were EGFR wild type (57.1%). Our study showed that (1) the level of depression in patients with EGFR wild type was higher than patients with EGFR mutation-positive ( $p < .01$ ); (2) EGFR wild type patients had higher level of symptom severity ( $p = .01$ ); (3) after controlling for symptom severity, there were no difference in psychological distress between patients with various types of EGFR mutation. All patients suffer from psychological distress but the patients with EGFR wild-types experienced more severe symptoms. In future, longitudinal follow-up and providing appropriate interventions to these patients to decrease symptom severity, reduce psychological distress, and improve their quality of life.

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**THERAPEUTIC INTERVENTIONS FOR AROMATASE INHIBITOR ASSOCIATED MUSCULOSKELETAL SYMPTOMS (AIAMS) AMONG WOMEN WITH BREAST CANCER.** Yehui Zhu, BSN, MSN, School of Nursing, University of Pittsburgh, Pittsburgh, PA; Catherine Bender, PhD, RN, FAAN, School of

**Nursing, University of Pittsburgh, Pittsburgh, PA; Margaret Rosenzweig, PhD, CRNP-C, AOCN®, FAAN, School of Nursing, University of Pittsburgh, Pittsburgh, PA**

Third generation of aromatase inhibitors (AIs), including anastrozole, letrozole, and exemestane, can significantly improve the disease-free survival and decrease the recurrence rate in postmenopausal women with breast cancer. However, 5-10% of AI users in clinical trials and 25% of AI users in clinical settings prematurely discontinue treatment due to aromatase inhibitor associated musculoskeletal symptoms (AIAMS). As the most commonly reported symptoms, AIAMS affect 40-81% of all AI users. The purpose of this literature review was to evaluate and integrate the published English and Chinese language research on the therapeutic interventions for AIAMS. English- and Chinese-language studies published before February 2016 were searched in Medline, PubMed, CINAHL, and China Science Periodical Databases (CSPD) with the combination of key terms (breast cancer, breast neoplasm, aromatase inhibitors, antineoplastic agents, musculoskeletal disease, musculoskeletal pain, arthralgia, myalgia, and stiffness). Pilot studies and randomized controlled trials examining the effect of an intervention on AIAMS were included. Effect sizes were calculated for included studies. A total of 20 articles (17 English, 3 Chinese language) were included in this literature review. Published pharmaceutical interventions targeted at AIAMS include vitamin D, Omega-3 fatty acid, glucosamine plus chondroitin, duloxetine, and traditional Chinese medications. However, only vitamin D supplements (with medium positive effect size) and some traditional Chinese medications showed significant reduction in AIAMS. Non-pharmaceutical interventions included acupuncture, yoga, tai chi, and aerobic exercise. Medium to large positive effect sizes were identified for the interventions of acupuncture, yoga and aerobic exercise. Except for Vitamin D supplements, pharmaceutical interventions may not reduce AIAMS. Acupuncture, yoga, and aerobic exercise may reduce AIAMS. Additional research with randomized controlled trials is needed to confirm these results. Innovation: This is the first study to analyze the evidence from published English and Chinese languages studies related to current therapeutic strategies to manage AIAMS, a critical symptom associated with endocrine therapy in women with breast cancer.

## **Industry-Supported Poster Abstracts**

### **IS-1**

### **PATIENT-REPORTED OUTCOMES: EVALUATION OF A WORK INTERVENTION BY ONCOLOGY NURSE NAVIGATORS.**

**Dawn Aubel, EdD, MS, MPH, APNc, Novartis Oncology, East Hanover, NJ**

Nearly two-thirds of cancer survivors return to work after their diagnosis, experiencing unique challenges as they strive to maintain health and career goals. Dedicated supportive interventions and programs for workers are few. Interventions by oncology nurse navigators can be a significant resource in optimizing work ability, employment, and social reintegration. This is an innovative approach to nursing care coordination, particularly in the workplace. There is a dearth of evidence to guide clinical evaluation of outcomes and quality improvement efforts. The purpose of this initiative was to find valid and relevant outcomes measurement instruments to evaluate and improve the nurse navigation intervention for cancer survivors and work. A search of the literature published from 2004 to 2016 was performed. Databases including CINAHL, PsychInfo, Scopus, and PubMed were searched using the keywords cancer, cancer survivor, employment, nursing, navigation, patient-reported outcomes, and return to work. A conceptual model link-



ing navigation to patient-reported outcomes, and the Cancer Survivorship and Work Model outlining the multitude of factors related to employment were identified. Validated instruments aligned with the conceptual models and intervention goals were chosen for program evaluation and improvement. The pinnacle of clinical effectiveness research is patient-reported outcome (PRO) investigation. PROs reveal the relevance of interventions to patients, while also providing valuable information for program development. Nurse navigation service categories and work factors, defined by the conceptual models, were correlated with an established work intervention for cancer survivors. Four validated and significant PROs were then identified and include the following. The PROMIS informational social support instrument measures technical competence in referral to resources and addressing instrumental needs and barriers. PROMIS' emotional social support, health-related empowerment, and patient satisfaction with navigator relationship instruments measure relational alliance in providing emotional support, education and coaching, and advocacy. The outcome measures proffered from these instruments will determine if the oncology nursing navigation program makes a difference for the participants. Future research should include intervention evaluation, sustainability, and work-related outcomes such as work ability, satisfaction, and productivity. Oncology nurses have increasing opportunities to lead in practice and research of innovative solutions in support of the growing number of cancer survivors returning to work. Patient-reported outcomes measures provide valuable information for effectiveness evaluation and intervention improvement.

## IS-2

**MECHANISM OF ACTION OF NERATINIB: AN IRREVERSIBLE PAN-HER INHIBITOR IN LATE-STAGE CLINICAL DEVELOPMENT.** Carlos Barrios, MD, PUCRS School of Medicine, Porto Alegre; Isil Somali, MD, Dokuz Eylul Universitesi Tip Fakultesi, Inciralti/Izmir; Snezhana Smichkoska, MD, PhD, University Clinic for Radiotherapy and Oncology, Medical Faculty, University Ss Cyril and Methodius, Skopje; Sung-Bae Kim, MD, Asan Medical Center, Seoul; Alvin Wong, PharmD, Puma Biotechnology Inc., Los Angeles, CA; Arlene Chan, MD, School of Medicine, Curtin University, Nedlands

Patients with overexpression of human epidermal growth factor receptor 2 (HER2) have a poor prognosis. Use of trastuzumab in the adjuvant setting has led to a reduction in disease recurrence, although 1 in 4 patients will recur. Neratinib (Puma Biotechnology Inc) is a potent, irreversible, pan-HER inhibitor that results in sustained inhibition of EGFR (HER1), HER2, and HER4 signaling by irreversibly binding to the intracellular signaling domain of these receptors. Inhibition of HER receptor phosphorylation by neratinib inhibits several downstream HER signaling pathways leading to decreased proliferation and increased cell death. The potent intracellular inhibition by neratinib of HER signaling results in more effective suppression of HER-mediated growth signals and can overcome resistance mechanisms from current HER2-targeted therapies. Neratinib can be conveniently given with once-daily oral administration. The multicenter, randomized, double-blind, phase 3 ExteNET pivotal study in patients with HER2+ breast cancer demonstrated that extended adjuvant therapy with neratinib after up to 1 year of trastuzumab therapy significantly improved invasive disease-free survival (iDFS), sparing half the patients from invasive tumor recurrence 2 years after randomization. Neratinib has a predictable and manageable safety profile and is well-tolerated in a large patient population. Common grade 1 or 2 adverse events from the ExteNET study were diarrhea, nausea, fatigue, vomiting, abdominal pain, headache, and rash. While grade 3 diarrhea occurred in up to 40% of patients in

ExteNET, in which no anti-diarrheal prophylaxis was used, a structured loperamide prophylaxis regimen in the first cycle(s) of neratinib treatment reduces incidence, severity, and frequency of diarrhea, enabling patients to stay on therapy. In the first-line treatment of metastatic HER2+ breast cancer, neratinib in combination with paclitaxel has similar efficacy to trastuzumab plus paclitaxel and may reduce CNS events. Preliminary data also indicate that neratinib improves patient outcomes in HER2-mutated breast cancer. Therapies to combat mechanisms of escape from HER2-targeted approaches require more comprehensive blockade of HER signaling. Neratinib is the first therapy that significantly reduces the risk of recurrence in patients with early HER2+ breast cancer in the extended adjuvant setting. It is anticipated that this activity in early-stage disease, together with activity in metastatic breast cancer and in HER2-mutant tumors, will establish neratinib as a new standard of care across multiple breast cancer treatment settings.

## IS-3

**PRACTICAL MANAGEMENT AND CARE FOR PATIENTS TAKING VENETOCLAX FOR RELAPSED/REFRACTORY CHRONIC LYMPHOCYTIC LEUKEMIA.** Kristen Battiato, BSN, RN, OCN®, Memorial Sloan Kettering Cancer Center, New York, NY; Heather Brumbaugh Paradis, RN, MSN, ANP-BC, AOCN®, Duke University Medical Center, Durham, NC; Peggy Alton, RN, BSN, OCN®, Duke University Medical Center, Durham, NC; Debbie Alter, RN, BSN, AbbVie Inc., North Chicago, IL; Donna Miale-Mayer, RN, MSN, CNML, Memorial Sloan Kettering Cancer Center, New York, NY; Diane Llerandi, MA, RN, AOCNS®, Memorial Sloan Kettering Cancer Center, New York, NY

Venetoclax is an orally bioavailable, selective BCL-2 inhibitor that induces objective responses in ~80% of patients with relapsed/refractory chronic lymphocytic leukemia (CLL) (16:20% complete remission). Venetoclax is FDA-approved for patients with 17p deletion CLL whom have had at least one prior therapy, a group with historically very poor prognosis. Treatment management considerations when caring for patients using venetoclax are discussed here. Over 500 patients have received venetoclax monotherapy on AbbVie and Genentech/Roche sponsored clinical trials. Common adverse events (>20%) reported were neutropenia, diarrhea, nausea, anemia, upper respiratory tract infection, thrombocytopenia, and fatigue. Serious adverse events in >2% of patients were pneumonia, febrile neutropenia, pyrexia, autoimmune hemolytic anemia, anemia, and tumor lysis syndrome (TLS). Key points of patient education include TLS and neutropenia while receiving venetoclax. Nurses should be aware of the potential for TLS in order to educate patients on steps to minimize the risk, which include adequate hydration and prophylactic anti-hyperuricemia agents starting 3 days prior to initiating venetoclax. To reduce rapid tumor debulking and TLS, venetoclax is now administered with an initial 5-week ramp-up, starting at 20mg daily for a week, followed by weekly increases to 50, 100, 200mg, up to the target dose of 400mg daily. There have been no clinical TLS events in venetoclax trials since implementation of this dosing schedule. Patients with high tumor burden or reduced creatinine clearance should be considered for hospitalization during initial dosing. With all patients, it is critical that laboratory values associated with TLS (potassium, calcium, phosphate, uric acid, and creatinine) are assessed at scheduled times to be able to identify and correct any abnormalities. Neutropenia risks and precautions, and potential management with growth factors, should also be part of the nurse's routine practice to ensure compliance and safety. Other instructions may include restriction of certain juices and food that interfere with CYP3A

metabolism. With the addition of novel approaches and therapies for CLL, disease outcomes have vastly improved. While patients have responsibility in understanding their treatments, it is the role of the nurse to foster autonomy, and to provide guidance, education, and support on the administration and effects of these medications. More than ever, it is important for nurses to be up-to-date on these current approaches for novel therapies like venetoclax.

#### IS-4

**OVERCOMING HER2/ESTROGEN RECEPTOR (ER) CROSSTALK: NERATINIB ± FULVESTRANT IN ER+ HER2-MUTANT METASTATIC BREAST CANCER (MBC) IN THE PHASE II SUMMIT TRIAL.** Hannah Beer, BA, Memorial Sloan Kettering Cancer Center, New York, NY; Rich Cutler, PhD, Puma Biotechnology Inc., Los Angeles, CA; Sarina Piha-Paul, MD, MD Anderson Cancer Center, Houston, TX; Cristina Saura, MD, Vall d'Hebron University Hospital, Barcelona; Alshad Lalani, PhD, Puma Biotechnology Inc., Los Angeles, CA; David Hyman, MD, Memorial Sloan Kettering Cancer Center, New York, NY

Bidirectional cross-talk between HER2 and ER provides an escape mechanism for tumors exposed to HER2-directed or endocrine agents, and may limit the effectiveness of these agents when given individually. Simultaneous inhibition of both HER2 and ER may overcome HER2/ER cross-talk and provide a more effective treatment approach for ER+ HER2+ tumors. Neratinib (Puma Biotechnology Inc.) is an irreversible pan-HER tyrosine kinase inhibitor that is currently being investigated in the treatment of HER2+ early-stage BC, MBC and HER2-mutant MBC. The possible relevance of the HER2/ER cross talk hypothesis to neratinib is currently being investigated in SUMMIT, an international multicenter multi-histology phase II trial, which includes a cohort of patients with HER2 mutant MBC. Patients with MBC and documented HER2 mutations received oral neratinib 240 mg once daily alone (for ER+ and ER patients) or in combination with the selective ER degrader fulvestrant 500 mg on days 1 and 15 of month 1 then on day 1 every 4 weeks (ER+ patients only). Patients received high-dose loperamide prophylaxis during cycle 1. Primary study endpoint is objective response rate (ORR) at 8 weeks, secondary endpoints include clinical benefit rate (CBR), progression-free survival (PFS), and safety. Clinicaltrials.gov: NCT01953926. As of September 2016, a total of 35 patients had received single-agent neratinib (n=24) or neratinib + fulvestrant (n=11). Patients were heavily pretreated and had received a median of 4 and 3 (respectively) prior cancer therapies in the metastatic setting. ORR at 8 weeks was 33.3% with single-agent neratinib and 45.5% with neratinib + fulvestrant; CBR was 41.7% and 54.5%, respectively. The incidence of grade 3 diarrhea was 24% with single-agent neratinib and 18% with neratinib + fulvestrant. Neratinib shows promising anti-tumor efficacy in patients with HER2-mutant MBC. In patients with ER+ HER2-mutant MBC, dual inhibition of both HER2 (with neratinib) and ER (with fulvestrant) improved outcomes compared with inhibition of HER2 alone. Our findings support the HER2/ER cross-talk theory and provide support for dual targeting of both HER2 and ER pathways in ER+ HER2+ breast cancers. Enrollment into SUMMIT is continuing. Other clinical trials investigating neratinib ± fulvestrant in HER2-mutant breast cancers are currently in progress or in planning.

#### IS-5

**TUMOR TREATING FIELDS DELIVERY USING SECOND GENERATION OPTUNE® SYSTEM FOR GLIOBLASTOMA: PATIENT EXPERIENCE AND COMPLIANCE.** Laura Benson, RN, MS, ANP, Novocure, New York, NY; Jeanine Certo, MS,

Novocure, Inc., New York, NY; Melissa Shackelford, RN, BSN, MSN, MPPM, Novocure Inc., New York, NY

Tumor Treating Fields (TTFields) are non-invasive, low-intensity electric fields with anti-mitotic activity delivered using the Optune® System, which is approved for the treatment of adult patients with newly diagnosed and recurrent supratentorial glioblastoma (GBM). TTFields are delivered via 4 transducer arrays that are applied directly to the scalp to target the tumor. The first generation Optune® system consisting of a field generator, portable lithium batteries, carrying bag, and transducer arrays weighed approximately 6 pounds. The system has been redesigned to improve the convenience and manageability of TTFields therapy for GBM patients. The second generation Optune® System, approved by the FDA in July of 2016, uses new digital signal generation technology to reduce the size and weight to 2.7 pounds including the battery, which may positively affect patient convenience and compliance with treatment. The purpose was to understand the effect of size and weight advantages of the second generation Optune® System on patient satisfaction, compliance (time on therapy), and usability. Ten GBM patients (N=10, male = 8, female = 2, median age: 52.9 years [31-79]) were monitored at multiple time points over the first month of transitioning to the second generation Optune® System using a questionnaire assessing the convenience and ease of daily usage as well as duration of daily use and frequency of complications associated with usage (alarms). A 10 point numerical analog scale was utilized to assess feedback at baseline (on the original system) and at 5 specific time points over the first month of second generation Optune System usage. Patient feedback highlighted the benefits of enhanced features such as quieter operation and portability. Overall, patients were very satisfied with the new system in terms of convenience and usability and experienced less number of alarms. Patient compliance using the second generation Optune® System was maintained and in most cases improved compared with the original Optune® System. It is well established that TTFields treatment that target compliance rates of 75% (18 hours per day) improve survival outcomes as observed in GBM clinical trials. The results of this patient survey indicate that the improved size, weight and convenience of the second generation Optune® System help patients comply with daily treatment duration goals.

#### IS-6

**AMOTOSALEN AND UVA IS MORE EFFECTIVE IN THE INACTIVATION OF T-CELLS THAN GAMMA IRRADIATION WHEN ASSESSED BY A LIMITING DILUTION ASSAY (LDA).** Kent Carter, BS, PharmD, Cerus Corporation, Concord, CA; Patricia A. Merkel, MS, Molecular and Cell Biology, National Jewish Health, Denver, CO; Hannah E. Giclas, National Jewish Health, Denver, CO; Vijaya Knight, National Jewish Health, Denver, CO; Grace Castro, Cerus Corporation, Concord, CA; Adonis Stassinopoulos, PhD, Cerus Corporation, Concord, CA

Viable T-cells in blood components cause Transfusion Associated Graft vs. Host Disease (TA-GVHD) with high mortality. Gamma irradiation (GIRR) (2500 cGy) of platelet components (PC) is used to mitigate this risk. Photochemical treatment (PCT) of PC with a psoralen (amotosalen) and UVA light (INTERCEPT TM Blood System) has replaced GIRR in Europe for >10 years and is authorized by AABB to reduce the risk of TA-GVHD. We compared T-cell inactivation by PCT and GIRR using a sensitive limiting dilution assay (LDA). An LDA assay with culture of 10<sup>7</sup> peripheral blood mononuclear cells (PBMCs) in a single well and detection of proliferating T-cells was validated by comparison of T-cell proliferation in culture media, plasma, and plasma containing 10<sup>7</sup> inactivated T-cells. PBMCs harvested

by leukapheresis from individual donors were spiked ( $10^6$ /mL) into identical units of human plasma and inactivated using either PCT or GIRR, or left untreated. PCT and GIRR cells were incubated ( $10^7$ /mL) for 14 days with pooled allostimulator PBMCs from 10 unrelated donors ( $5 \times 10^6$  treated with 7500 cGy) and growth stimulating factors (PHA, IL-2). T-cell inactivation by PCT ( $10^7$  PBMCs/well) was compared to that by GIRR ( $10^5$  or  $10^6$  PBMCs/well). Proliferation was assessed by H3-thymidine (6.7 Ci/mmol) incorporation into PBMCs. Wells were inspected microscopically and scored for clonal growth. T-cell precursor frequency for each donor was measured by incubation of untreated PBMCs (50, 25, 13, 6.5, 3, 1 /well) in the presence of  $10^7$  inactivated PBMCs. Twelve wells were used for each dilution and the protocol was conducted in 6 replicates. No T-cell growth for PCT PBMCs was detected by 3H-Thy incorporation above the cut-off for viable PBMCs with  $10^7$  cells/well cultured. However, 3H-Thy incorporation above the cut-off was observed when  $10^6$  GIRR PBMCs/well were cultured. No incorporation was observed when  $10^5$  GIRR PBMCs/well were cultured. Proliferating T-cell colonies were observed in 4/6 replicates with  $10^6$  GIRR PBMCs/well, and in none of the cultures with  $10^5$  GIRR or PCT PBMCs/well. T-cell inactivation with PCT (amotosalen/UVA treatment) is more robust ( $>6.2 \log_{10}$ ) than with 2500 cGy GIRR ( $4.2 \log_{10}$  -  $6.2 \log_{10}$ ). FDA has not reviewed these data.

### IS-7

**INVESTIGATION OF GELCLAIR® BIOADHERENT ORAL GEL: NOVEL ANALYSES AND A PROPOSED STUDY ON ORAL MUCOSITIS DEVELOPMENT AND MANAGEMENT IN COMPARISON TO MAGIC MOUTHWASH.** Mark Chambers, DMD, MS, The University of Texas MD Anderson Cancer Center, Houston, TX; Katharine Ciarrocca, DMD, MSED, Augusta University, The Dental College of Georgia, Augusta, GA; Mary Kay Delmedico, PhD, Midatech Pharma US Inc., Raleigh, NC; Andrea True Kelly, PhD, Midatech Pharma US Inc., Raleigh, NC

Oral Mucositis (OM) is a debilitating side-effect of chemo/radio-therapy occurring in most patients receiving myeloablative (MA) conditioning prior to stem cell transplantation (SCT). Severe OM may result in opiate use, total parenteral nutrition (TPN), secondary infections, decreased QoL and reduction/interruption of therapy, ultimately compromising outcomes and increasing costs. Magic mouthwash (MMW) is frequently utilized for OM despite recommendations against by professional organizations due to limited efficacy and adverse effects including dysgeusia, numbness, burning, or aspiration. Gelclair® (GEL) is a well-tolerated, alcohol-free, bioadherent, oral/topical gel containing polyvinylpyrrolidone, sodium-hyaluronate and glycyrrhetic acid (from licorice root), broadly indicated for the management of oral lesions, including OM. Promising results on duration and level of pain control and reduced analgesic use, incidence of OM and infection have been reported with GEL use in cancer patients prior to lesion development. Additional trials that minimize bias with a relevant active relevant comparator would be helpful to support these positive findings. The purpose is to determine the impact of GEL or MMW treatment on OM in SCT recipients receiving MA conditioning, when initiated during conditioning or after OM is noted, in patients following a standardized oral care protocol in a blinded, randomized, controlled trial. Subjects will be randomized (1:1:1) to initiate GEL for 28d on conditioning day 1 or after G1 or 2 OM is diagnosed (WHO scale) within 14d of conditioning vs. MMW. Daily assessments by a blinded clinician will occur and the incidence, time to onset, duration of any or severe OM (G3 or 4), overall mouth/throat pain, duration of effect, healthcare resources and subject burden associated with OM (e.g., # treatments/day, opiate use, TPN, infection, impact on ADL, etc.) will be determined. New hypothesis-generating analyses of existing

datasets will also be presented showing that in patients with chemo/rad-induced OM, by 3 and 5hr post-treatment, only 10% and 35% of GEL patients required a 2nd dose vs. 27% and 50% of MMW patients ( $p=0.037$  or  $0.034$ ), respectively, suggesting that GEL may control pain longer than MMW. The randomized/blinded study under development at leading US cancer centers will address the impact of GEL on the incidence and severity of OM and related symptoms, complications and costs in SCT recipients receiving MA conditioning relative to MMW.

### IS-8

**MEDICAL INFORMATION GROUP: A DRUG DEVELOPER'S MEDICAL RESOURCE FOR YOUR QUESTIONS.** AnnaMaria D'Ascoli, RPh, PharmD, MBA, Pfizer, New York, NY; Joanne Ryan, PhD, RN, Pfizer, New York, NY; Annamaria Crisan, BPharm, MSc, Pfizer, New York, NY

Nurses and nurse practitioners (NPs) are valuable members of the multidisciplinary team. In the ever-changing landscape of oncology care, it is difficult to keep up to date with the latest information regarding therapeutic options. One way to obtain timely and trusted clinical and scientific information is through a drug developer's Medical Information (MI) team. Pfizer's MI team is comprised of pharmacists and nurses who respond to queries about drugs that are either FDA-approved or still in clinical development. At Pfizer, inquiries to MI can be made by phone, online chat, MI website, in-person (e.g., at professional meetings), and via Pfizer field-based colleagues. MI answers requests for information from individuals and groups, such as healthcare professionals (HCPs), patients, caregivers, clinical pathways and managed care organizations. Specifically, Scientific Response Documents (SRDs) are developed to respond to unsolicited requests from HCPs. Between September 1, 2015 and August 31, 2016, Pfizer MI received 4927 inquiries for our Pfizer Oncology products. Of these, 314 inquiries were received from nurses/NPs, (representing 6% of the total volume of inquiries) and the most commonly asked questions focused on safety issues. The majority of inquiries were received by phone or forwarded to our group by a field-based Pfizer colleague, and 68% of the queries were answered using our pre-approved materials. This implies that the response was both quick and complete, requiring no additional follow-up. These pre-approved materials are also available on the Pfizer Medical Information website for HCPs to access (a demo of this website will be provided to the interested HCPs). Additionally, when a query is raised for which no pre-approved response exists, custom responses can be generated to address the clinical need. In today's complex oncology care environment the need to obtain easy access to updated clinical information is critical to the delivery of safe and effective patient care. Drug-related medical information can be accessed through multiple channels (website, live personnel) allowing for flexibility to meet the needs and preferences of the HCPs. Nurses and NPs can consider MI as a resource to support their clinical practice needs and anticipate quick and targeted responses to their clinical questions.

### IS-9

**EVALUATION OF SAFE SEDATION TRAINING®: AN INTERACTIVE, WEB-BASED TRAINING FOR MODERATE SEDATION ADMINISTRATION.** Alexa K. Doig, PhD, RN, University of Utah College of Nursing and the Huntsman Cancer Hospital, Salt Lake City, UT; Aruni Mudalige, DNP, A-GACNP, University of Utah Health Care, Salt Lake City, UT

Moderate sedation is the most common form of sedation provided by oncology nurses for the purpose of decreasing patient anxiety, discomfort, and pain during procedures such as bone marrow biopsies, brachytherapy and lumbar punctures. Moder-



ate sedation is defined by the patient's ability to maintain purposeful responses to verbal stimuli with or without light tactile stimuli, while maintaining the airway, spontaneous ventilation and cardiovascular function. By the virtue of pharmacokinetics of medications used to induce moderate sedation, complications such as deeper-than-intended level of sedation, ventilatory and/or cardiovascular depression can lead to cerebral anoxia, cardiac and respiratory arrest, and death. Health care institutions are challenged with providing engaging, relevant, cost-effective sedation training to non-anesthesiologist clinicians. The purpose of this study was to evaluate the effectiveness of a new web-based training on novice nurse knowledge of moderate sedation administration principles and practices. Safe Sedation Training® (SST®), is an interactive, web-based training that includes content on pre-procedural evaluation, pharmacologic agents, assessment of sedation state, physiological monitoring, oxygen supplementation, and rescue maneuvers. Twenty-five registered nurses (0 to 2 years experience) without previous moderate sedation training completed a proctored 40-question baseline knowledge test on the principles and practices of moderate sedation, after which they completed the six online SST® learning modules, and repeated the proctored knowledge-based test. Pre- and post-training test scores were compared using a paired t-test. Nurses also completed a comprehensive evaluation of SST® that was based on a framework for online learning. The mean pre-training test score was 40.8% (SD 15.8%, range = 10-62.5%). Baseline knowledge deficits in multiple areas were identified. Following completion of SST®, the mean test score increased to 86.8% (SD 11.0%) ( $t = -12.7, p < .0001$ ). Feedback on the applicability of content, design, usability, and interactivity of SST® was positive. Standardizing education and training for moderate sedation administration is a means of improving safety and care quality for oncology patients. SST® is an effective and cost efficient way for healthcare institutions to provide sedation training for oncology nurses.

#### IS-10

**ERBB2 MUTATION PROFILING IN BREAST CANCER: FINDINGS FROM THE PHASE II SUMMIT TRIAL.** Lisa Eli, PhD, Puma Biotechnology Inc., Los Angeles, CA; Helen Won, MS, Memorial Sloan Kettering Cancer Center, New York, NY; Nancy Bouvier, BS, Memorial Sloan Kettering Cancer Center, New York, NY; Alshad Lalani, PhD, Puma Biotechnology Inc., Los Angeles, CA; Richard Bryce, MBChB, Puma Biotechnology Inc., Los Angeles, CA; David Hyman, MD, Memorial Sloan Kettering Cancer Center, New York, NY

Somatic mutations in epidermal growth factor receptor (ERBB2, also known as HER2) occur in a broad range of solid tumors and may be clinically actionable. In breast cancer, ERBB2 mutations occur at an incidence of ~2% and are usually identified in HER2-negative cancers (as categorized by FISH or IHC). SUMMIT is an ongoing, multicenter, multi-histology phase II trial that is investigating the efficacy and safety of neratinib, a pan-HER tyrosine kinase inhibitor, in ERBB-mutant or epithelial growth factor receptor (EGFR)-amplified solid tumors. Breast cancer patients with documented ERBB2 mutations were eligible for the breast cohort of the SUMMIT trial. Here we report the spectrum of ERBB2 mutations in metastatic breast cancer patients enrolled in SUMMIT. Documented ERBB2 mutations were confirmed with central next generation sequencing (NGS) testing on archival and fresh tumor tissue and in plasma. All patients received oral neratinib 240 mg once daily plus high-dose loperamide prophylaxis for cycle 1 of neratinib treatment. Archival tumor tissue and fresh, pre-treatment biopsies were molecularly profiled by MSK-IMPACT™ (Memorial Sloan Kettering-Integrated Mutation Profiling of Actionable Cancer Targets) NGS test. ERBB2 mutations from cfDNA obtained from plasma samples were detected using a single-gene ERBB2 NGS

test. At the 12 August 2016 data cut-off, of the 36 metastatic breast cancer patients with documented ERBB2 mutations enrolled in SUMMIT, 27 (75%) had single nucleotide variants (SNVs), while 9 (25%) had insertion/deletion mutations. The highest frequency mutation was L755S (12 patients, 33%). The vast majority of the mutations were in the tyrosine kinase domain of ERBB2 (31 patients, 86%), four (11%) were located at position S310 in the furin-like domain, and one was located in the juxtamembrane domain. The spectrum of ERBB2 mutations identified by tumor tissue or plasma cfDNA in the SUMMIT trial is consistent with those reported in publically available databases. An understanding of the full molecular profile of ERBB2 mutant breast cancers may allow the determination of response to neratinib therapy and optimization of patient management.

#### IS-11

**INCIDENCE AND SEVERITY OF DIARRHEA WITH NERATINIB + INTENSIVE LOPERAMIDE PROPHYLAXIS IN PATIENTS WITH HER2+ EARLY-STAGE BREAST CANCER (BC): INTERIM ANALYSIS FROM THE MULTICENTER, OPEN LABEL, PHASE II CONTROL TRIAL.** Pearl Fang, PhD, Puma Biotechnology Inc., Los Angeles, CA; Elizabeth Olek, DO, MPH, Puma Biotechnology Inc., Los Angeles, CA; Daniel Hunt, PhD, Puma Biotechnology Inc., Los Angeles, CA; Azita Ebtahaj, PhD, Puma Biotechnology Inc., Los Angeles, CA; Patricia Ramos, RN, ASN, Beaver Medical Group, Highland, CA; Marthe Thomas, RN, North Mississippi Medical Center-Hematology and Oncology, Tupelo, MS

Neratinib (Puma Biotechnology Inc) is an irreversible pan-HER inhibitor in late-phase development for the treatment of early-stage and metastatic HER2+ BC. The phase 3 ExteNET trial in women with early stage HER2+ BC demonstrated a significant 2.3% absolute improvement in invasive disease-free survival (iDFS) with 12 months of neratinib treatment vs placebo after previous trastuzumab-based adjuvant therapy. Diarrhea, the main toxicity of neratinib, requires active management with loperamide prophylaxis given early in the course of treatment. CONTROL (PUMA-NER-6201) is an international, open-label, phase II study investigating the efficacy of loperamide prophylaxis in the prevention of neratinib-associated diarrhea. Patients with HER2+ early-stage BC who had completed trastuzumab-based adjuvant therapy were eligible. Patients received oral neratinib 240 mg/day for 1 year + structured loperamide prophylaxis on d-56 (2 cycles) ± other investigational agents (including the corticosteroid budesonide). Adverse events were graded according to NCI-CTCAE v4.0. Primary endpoint was the incidence of grade ≥3 diarrhea. A protocol defined interim analysis (data cut-off July 2016) was performed when ~120 patients had completed ≥2 cycles of neratinib + loperamide prophylaxis. A preliminary analysis of the loperamide + budesonide cohort was also performed at this time. Clinicaltrials.gov: NCT02400476. For the interim analysis, 133 patients received neratinib + loperamide prophylaxis. A further 16 (of 40 planned) patients received neratinib + loperamide + budesonide prophylaxis for 1 cycle. The incidence of grade ≥3 diarrhea was 27.1% with loperamide prophylaxis, 12.5% with loperamide + budesonide prophylaxis vs 39.9% without protocol-mandated loperamide prophylaxis (as seen in the ExteNET phase 3 trial). Grade 2 diarrhea also decreased (20.3%, 18.8% vs 32.5%, respectively). Grade 3 diarrhea after cycle 1 was uncommon with loperamide prophylaxis (original protocol, 0%; amendment 1/2, 7.0%; total, 5.6%). Of the patients who experience diarrhea, most have 1 event only; diarrhea severity and duration was decreased; and dose modifications were greatly reduced. A structured loperamide prophylactic regimen for 2 cycles is associated with a lower incidence and severity of neratinib associated diarrhea, with notably reduced grade 2/3 diarrhea compared to ExteNET events. There appears to be some adaptation to the effects of

neratinib, as higher grade diarrhea occurs early and does not typically recur. Overall, neratinib-related diarrhea is acute, manageable and self-limiting. Preliminary data suggest that adding budesonide may further improve outcomes.

### IS-12

**MANAGEMENT OF TREATMENT-RELATED ADVERSE EVENTS ASSOCIATED WITH NIVOLUMAB AND IPILIMUMAB COMBINATION THERAPY IN PATIENTS WITH METASTATIC MELANOMA, NSCLC, OR RCC.** Rajni Kannan, BS, MS, RN, ANP-BC, NYU Langone Laura and Isaac Perlmutter Cancer Center, New York, NY; Teresa Mitchell, RN, BSN, BC Cancer Agency-Vancouver Centre, Vancouver; Victoria Sherry, DNP, CRNP, ANP-BC, AOCNP®, Hospital of the University of Pennsylvania, Philadelphia, PA; Alice Pons, RN, BSN, Johns Hopkins Medicine, Baltimore, MD; Kristen Kreamer, MSN, CRNP, AOCNP®, APRN-BC, Fox Chase Cancer Center, Philadelphia, PA; Yelena Shames, MSA, ACNP-BC, CNRN, Memorial Sloan Kettering Cancer Center, New York, NY

The immune checkpoint inhibitor nivolumab (N) monotherapy extends survival for patients with metastatic melanoma (MEL), non-small cell lung cancer (NSCLC), and renal cell carcinoma (RCC). Combining N with another checkpoint inhibitor, ipilimumab (I), results in higher tumor response and progression-free survival than either monotherapy in MEL; in NSCLC and RCC, N+I combination shows promising efficacy. N+I therapy is associated with higher rates of drug-related AEs vs N monotherapy. N and I AEs are often immune-related, differ markedly from chemotherapy AEs, and require prompt recognition and treatment. The purpose is to educate the multidisciplinary team on the safety profile of N+I therapy vs N monotherapy across MEL, NSCLC, and RCC and to provide evidence-based AE management guidance. N+I safety data were analyzed from 3 MEL studies (CA209-004, CheckMate069, and CheckMate067, n=448; N 1mg/kg + I 3mg/kg Q3W x4, followed by N 3mg/kg Q2W); 1 NSCLC study (CheckMate012, n=39; N 3mg/kg Q2W + I 1mg/kg Q6W); and 1 RCC study (CheckMate016; N 3mg/kg + I 1mg/kg Q3W x4 [N3I1, n=47], or N 1mg/kg + I 3mg/kg Q3W x4 [N1I3, n=47]). N+I therapy resulted in treatment-related grade 3-4 immune-related AEs (select AEs) in 41.5% MEL, 0:5.1% NSCLC, 0:6.4% RCC-N3I1, 0:23.4% RCC-N1I3 patients, most commonly gastrointestinal (16.3% MEL, 5.1% NSCLC, 4.3% RCC-N3I1, 23.4% RCC-N1I3) and hepatic (17.0% MEL, 5.1% NSCLC, 6.4% RCC-N3I1, 21.3% RCC-N1I3). Median times to onset and resolution of treatment-related select grade 3-4 AEs in MEL ranged from 3.1:16.3 and 1.9:15.1 weeks, respectively. Excluding endocrinopathies that may require long-term hormone replacement therapy, 81.8:100.0% of MEL patients' select AEs resolved. N+I therapy is associated with a higher incidence and more rapid onset of treatment-related select AEs vs N or I monotherapy. However, prompt AE recognition and management is critical for patients on either monotherapy or combination N+I therapy. Select AEs are manageable if recognized and treated promptly. As the use of combination immunotherapy increases across multiple tumor types, understanding the unique safety profile of immune checkpoint inhibitors and AE management is critical to providing quality patient care. Nurses will be given a summary of the select AE profile of N+I therapy as well as evidence-based management guidelines to ensure quality care across academic and community oncology settings.

### IS-13

**USING THE NURSING PROCESS TO CREATE AN ADVANCE CARE PLANNING NEEDS SELF-ASSESSMENT.** Mary Beth Kean, DNP, RN-ACNS, Iris Plans, Austin, TX

Patients diagnosed with serious illness who have Advance Care Plans are 2x more likely to make informed care decisions

and receive care aligned with their goals, less likely to experience distressing symptoms, spend approximately 7 fewer days in the hospital, and can live longer. Families of patients undergoing ACP report improved mental and physical health. These improvements are accompanied by lower costs of care. While many individuals have experience with family or friends receiving excessive and/or ineffective end of life care, the need for comprehensive ACP is difficult to explain to patients early in their disease process. Many patients feel they may have adequately addressed a single component of ACP, like those who have completed an Advance Directives with their attorney, and do not recognize the need for additional components of the process. The American Nurses Association's position statement "Nursing and the Patient Self Determination Act" asserts that it is the responsibility of the nurse to facilitate the process of informed healthcare decision making as it naturally occurs within the development of the therapeutic relationship. The Oncology Nursing Society position statement, "Palliative Care for People with Cancer", supports making ACP a priority for healthcare systems to make sure patient wishes and values are honored. The purpose of this project is to validate and implement a patient self-administered ACP needs assessment tool providing a "readiness score" conceptualized by an Advance Practice RN and developed by a multidisciplinary medical, business and technology team. Following analysis of current state failure points experienced by patients receiving acute care at the end of life, a tool was developed to capture specific components of ACP. This tool serves to both educate patients and families about gaps in planning and to drive patient and disease specific intake to personalize the ACP process. The tool is in the process of being validated for pilot study by multidisciplinary palliative care and oncology professionals for application in a select population of high risk patients identified by algorithm as having one or more ICD-9 and ICD-10 codes for serious medical illness. Implications for oncology nursing practice include use as a standardized assessment tool for use at time of diagnosis of metastatic oncologic disease as part of routine care planning process.

### IS-14

**OUTCOMES OF THE XPAND STUDY: A PROSPECTIVE, MULTI-CENTER, RANDOMIZED, OPEN LABEL CLINICAL STUDY COMPARING THE AEROFORM TISSUE EXPANDER SYSTEM TO SALINE EXPANSION FOR TWO-STAGE BREAST RECONSTRUCTION.** Kathy Kelley, RN, BSN, AirXpanders, Inc., Palo Alto, CA

Data from the first randomized controlled trial in two-stage breast reconstruction compares the AeroForm CO2 tissue expander to traditional saline expanders. The rate of breast reconstruction in women following mastectomy has risen significantly since the 1998 passage of the Women's Health and Cancer Rights Act requiring insurers to cover reconstruction procedures. The 2015 Breast Cancer Patient Education Act aims to raise awareness and educate breast cancer patients about the availability and coverage of breast reconstruction options. Two-stage reconstruction with tissue expansion followed by placement of a breast implant is the most popular reconstruction choice in the U.S. A novel needle-free tissue expander using CO2 as the filling medium has been developed and tested in a randomized clinical trial. The device, which allows expansion via a patient-operated remote dosage controller, represents a new alternative to expansion with traditional needle injections of saline. Women between 18-70 years scheduled for two-stage breast reconstruction were randomized (2:1) to the AeroForm or saline control group. Successful completion of the second stage surgery (breast implant placement) was the primary measure of success, followed by secondary endpoints of complications, time to complete the expansion and satisfaction rates of physi-

cians and patients. Of the 150 subjects enrolled (98 AeroForm, 52 saline), 71% were bilateral cases and 90% were immediate reconstructions. Overall, 96.1% subjects in the AeroForm group completed their second stage surgery successfully, compared to 98.8% in the saline group. Time to complete expansion was 21 days for AeroForm vs 46 days for the saline group. Final reconstruction for the AeroForm group was completed in 108 vs 136 days for saline. Complication rates were similar between groups. Overall physician satisfaction was 89% and patient satisfaction was 84% at the end of the study. Two-stage breast reconstruction is a reliable reconstructive method and provides good aesthetic outcomes. As patients become more educated about their options, health care providers should be aware of developments in reconstructive surgery. The AeroForm Tissue Expander System represents one of the first advancements in two-stage breast reconstruction in over 40 year and data from this clinical trial indicates it has the potential to be an excellent alternative when commercially available.

### IS-15

**ONCOLOGY NURSE PREFERENCES FOR ATTRIBUTES OF DRUG THERAPY IN ADVANCED MELANOMA.** Frank Xiaoqing Liu, PhD, Merck & Co., Inc., Kenilworth, NJ; Edward A. Witt, PhD, Kantar Health, New York, NY; Scot Ebbinghaus, MD, Merck & Co., Inc., Kenilworth, NJ; Grace DiBonaventura Beyer, MBA, Kantar Health, New York, NY; Enrique Basurto, MSc, Kantar Health, New York, NY; Richard Joseph, MD, Mayo Clinic, Jacksonville, FL

Multiple treatment options, each with their own set of benefits and risks, are available for advanced melanoma. Oncology nurses' preference for and tradeoffs regarding treatment attributes may play a role in patient decision making. This study aimed to explore oncology nurses' preferences for drug treatment attributes in advanced melanoma. A discrete choice experiment (DCE) was conducted among US-based oncology nurses who spent  $\geq 75\%$  of their time in direct patient care and treated  $\geq 4$  patients with advanced melanoma per month. In a series of scenarios, oncology nurses had to choose between two hypothetical treatments, each with 7 attributes: mode of administration (oral, IV, subcutaneous), dosing schedule, median duration of therapy (3, 8, or 12 months), objective response rate (ORR) (15%, 33%, or 65% chance of response), progression free survival (PFS) (3, 5, or 11.5 months), overall survival (OS) (45%, 55%, or 75% chance of survival to 12 months), and grade 3/4 toxicities/adverse events (AEs) (10%, 32%, or 55% likelihood). Each attribute was structured in 3 levels except dosing schedule (8 levels). Hierarchical Bayesian logistic regression models were used to estimate preference weights for each attribute. A total of 13,544 Oncology Nurses were invited, 1,546 (11.4%) responded and 150 (1.1%) met screening criteria and completed the study. Among them, 78.7% were nurses and 21.3% nurse practitioners. On average, these nurses had been practicing for 16.7 years and provided care to over 192 cancer patients a month, with over 28 advanced melanoma patients. The relative importance estimates of attributes for these nurses were: OS (28%), AEs (26%), ORR (27%), PFS (15%), dosing schedule (3%), mode of administration (1%), and median duration of therapy (0%). An improvement of 1-year OS from 45% to 55% was valued similar in magnitude to a decrease from 55% to 32% in likelihood of AEs. Subgroup analyses, including nurse vs. nurse practitioners, urban vs. rural, and years in practices, showed similar preferences in all attributes, except nurse and nurse practitioners differed significantly in preference for PFS. These findings suggest that oncology nurses valued OS, ORR and AEs as the most important drug therapy attributes for advanced melanoma, followed by PFS, whereas dosing schedule, mode of administration, and median duration of therapy were considered much less important in their treatment decisions.

### IS-16

**NERATINIB AFTER TRASTUZUMAB-BASED ADJUVANT THERAPY IN EARLY-STAGE HER2+ BREAST CANCER: 5-YEAR INTERIM ANALYSIS FROM A PHASE 3 RANDOMIZED, PLACEBO-CONTROLLED, DOUBLE-BLIND TRIAL (EXTENET).**

Miguel Martin, MD, PhD, Hospital General Universitario Gregorio Marañón, Madrid; Marc Buyse, ScD, IDDI & CluePoints, San Francisco, CA; Jeannette Devoto, Breast Cancer Research Centre Western Australia, Nedlands; Feng Xu, MD, Puma Biotechnology Inc., Los Angeles, CA; Alvin Wong, PharmD, Puma Biotechnology Inc., Los Angeles, CA; Arlene Chan, MD, School of Medicine, Curtin University, Nedlands

Up to 26% of patients with early-stage HER2+ breast cancer develop recurrences within 5 to 8 years, despite receiving trastuzumab-based adjuvant therapy. Neratinib (Puma Biotechnology Inc), an irreversible pan-HER tyrosine kinase inhibitor, has been evaluated in a large phase 3 randomized, placebo-controlled, double-blind trial (ExteNET) to determine if it can further reduce the risk of recurrence in women with early stage HER2+ breast cancer after trastuzumab-based adjuvant therapy (clinicaltrials.gov NCT00878709). The primary 2-year analysis (after a median follow-up time of 24 months) demonstrated a significant invasive disease-free survival (iDFS) benefit with 12 months of neratinib treatment with: a 2.3% absolute improvement in iDFS with neratinib vs placebo (hazard ratio 0.67, 95% CI 0.50:0.91;  $P=0.009$ ); and a 4.2% absolute benefit in the hormone receptor (HR)+ cohort. Neratinib was generally well tolerated with a low incidence of grade 3/4 events; diarrhea was the most common adverse event (grade 3, 39.8%, grade 4, 0.1%). Here we report an interim analysis of efficacy from ExteNET after 5 years of follow-up. Women with HER2+ breast cancer were randomly assigned to oral neratinib 240 mg/day or matching placebo for 1 year, stratified by nodal status, hormone-receptor status and prior trastuzumab regimen. The primary study endpoint is iDFS; secondary efficacy endpoints are DFS including ductal carcinoma in situ (DFS-DCIS), time to distant recurrence (TDR), distant disease-free survival (DDFS), cumulative incidence of central nervous system (CNS) recurrences and overall survival. The intention-to-treat population included 2840 patients (neratinib,  $N=1420$ ; placebo,  $N=1420$ ). Interim 5-year rates for iDFS (after a median follow-up of 4.3 years) were 90.4% with neratinib and 87.9% with placebo (hazard ratio 0.74, 95% CI 0.58:0.95;  $P=0.017$ ), indicating that the absolute benefit has been maintained at 5-years (2.5%). The data also show a 4.8% absolute benefit in the HR+ cohort. Final 5-year iDFS findings are expected in Q2 2017. Overall survival data are not yet mature. The interim 5-year analysis confirms a sustained benefit with neratinib with a significant iDFS benefit with a 1-year course of neratinib versus placebo in women with early-stage HER2+ breast cancer after trastuzumab-based adjuvant therapy.

### IS-17

**OPTICAL DETECTION OF PEDIATRIC EXTRAVASATIONS.**

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Peripheral IVs are the one of the most common invasive medical procedures performed with over 150 million IV catheters placed in the U.S. annually. Yet, current medical reports peg the failure rate of IVs in excess of 20% due to infiltrations. An IRB-approved clinical study was performed to measure the performance of a device for detecting early stage infiltrations on pediatric patients under the age of 18. The device uses visible and near-infrared light to detect changes in the optical properties of the subcutaneous tissue that are consistent with infiltrated fluid. Over three hundred hospitalized pediatric pa-



tients under the age of 18 who received continuous IV therapy were monitored with the device. The study included two arms, one hundred fifty-six subjects in a blinded non-alarming group, and fifty-six subjects in the alarming group. The objectives of the study were to determine the amount of time between infiltration detection by the nurse and the device, the device sensitivity and specificity. Each site was continuously monitored during IV therapy and was terminated if an infiltration was detected or other complications were identified. Results indicate the device detected the majority of infiltrations prior to the nurse detecting the infiltration. The number of device notifications not associated with an infiltration was minimal and did not significantly contribute to alarm fatigue. The infiltration detection device can significantly reduce the amount of time to infiltration detection without causing alarm fatigue or interfering with patient care.

### IS-18

**EFFECTIVE MANAGEMENT AND PREVENTION OF DIARRHEA ASSOCIATED WITH NERATINIB: AN IRREVERSIBLE PAN-HER INHIBITOR.** Elizabeth Olek, DO, MPH, Puma Biotechnology Inc., Los Angeles, CA; Daniel Hunt, PhD, Puma Biotechnology Inc., Los Angeles, CA; Pearl Fang, PhD, Puma Biotechnology Inc., Los Angeles, CA; Azita Ebtahaj, PhD, Puma Biotechnology Inc., Los Angeles, CA; Lori Glass, RN, UCLA Health System, Pasadena Hematology/Oncology, Pasadena, CA; Crystal Nayock, BSCR, CCRC, Maine Research Associates, Lewiston, ME

Diarrhea is a recognized adverse event of many cancer treatments and a side effect well understood by most oncologists and oncology nurses. Once diarrhea occurs, it requires prompt and aggressive management to prevent an escalation in severity and patient morbidity, and to maintain full-dose therapy. Neratinib (Puma Biotechnology Inc) is an irreversible pan HER inhibitor in late-phase clinical development. Diarrhea, the most common toxicity associated with neratinib, is acute (generally occurring during the first cycle of treatment), manageable and self-limiting. However, initial trials with neratinib were all performed without effective antidiarrheal prophylaxis. For patients receiving neratinib, preventive management with loperamide prophylaxis is required to reduce the severity and duration of diarrhea. Structured loperamide prophylaxis (ie, 16 mg on day 1, tapering to 12 mg/day then 6–8 mg/day over the course of 1–2 cycles) has been introduced in clinical trials of neratinib to better manage this toxicity. Loperamide prophylaxis should be started with the first dose of treatment and continued for 1–2 cycles, regardless of the presence or absence of diarrhea. Any treatment-emergent diarrhea should be managed according to standard guidelines. One key trial is CONTROL (PUMA-NER-6201), an international, open-label, phase II study investigating the efficacy of loperamide prophylaxis ± investigational agents in the prevention of neratinib-associated diarrhea (Clinicaltrials.gov: NCT02400476). Preliminary safety data from trials including diarrhea prophylaxis suggest that active management with loperamide prophylaxis reduces the incidence, severity and duration of neratinib-associated diarrhea. Interim analysis from the CONTROL trial showed that the incidence of grade ≥3 diarrhea, the primary study endpoint, was 27.1% with loperamide prophylaxis (2 cycles), 12.5% with loperamide prophylaxis (2 cycles) + oral budesonide (1 cycle) vs 39.9% without protocol-mandated loperamide prophylaxis (ExteNET trial). Grade 3 diarrhea events were uncommon after cycle 1 with loperamide prophylaxis and no grade 4 events occurred. A structured loperamide prophylaxis regimen provides an effective means of reducing the incidence, severity and duration of neratinib-associated diarrhea and should be given for the first 1–2 cycles of treatment in all patients receiving neratinib. Overall, neratinib-related diarrhea is acute, manageable and self-limiting but requires active management with loperamide

prophylaxis given early in the course of treatment. Oncology nurses are likely to play a key role in managing patients receiving neratinib in the future.

### IS-19

**QUALITY OF LIFE OF CAREGIVERS OF PATIENTS WITH CHRONIC MYELOGENOUS LEUKEMIA.** Ashutosh Pathak, MD, PhD, MBA, FRCP (Edin), Teva Pharmaceuticals, Frazer, PA; Erika Szabo, MPH, MsPHARM, Teva Pharmaceuticals, Frazer, PA; Ian Kudel, PhD, Health Outcomes Practice, Kantar Health, Schenectady, NY; Ryan Liebert, MS, Health Outcomes Practice, Kantar Health, Schenectady, NY; Susan Gabriel, MSc, Teva Pharmaceuticals, Frazer, PA; Jean-Pierre Issa, MD, Fels Institute for Cancer Research & Molecular Biology, Temple University Hospital, Philadelphia, PA

Research has consistently found that caregivers for people with cancer report distress; however, it is not clear whether recent improvements in the treatment of chronic myelogenous leukemia (CML) have reduced caregiver burden. This study elucidates the experiences of caregivers in a population not previously explored. The responses of caregivers for CML are compared with others including those who care for people with cancer other than CML (e.g. breast cancer, lymphoma) and non-cancer conditions (e.g. Alzheimer's) and non-caregivers on a measure assessing function. This study used data from 3 administrations (2012, 2013, 2015; n=243,500) of the United States (US) National Health and Wellness Survey, an Internet-based survey administered to a demographically-representative sample of the US adult (≥18 years) population. Unique participants who supplied socioeconomic status, medical history, CML caregiver status, comorbidity measure (Charlson Comorbidity Index), and behavioral data were included. All participants also responded to the Mental Component Scale (MCS), Physical Component Scale (PCS), and SF-6D of the SF-36 (version 2). The minimally important difference (MID) is 3 points for the MCS and PCS, and 0.03 points for the SF-6D. Propensity score weights for caregivers of patients with CML (n=49) and a second group (control group; CG) composed of non-cancer caregivers (n=11,653), non-CML cancer caregivers (n=2,654), and non-caregivers (n=182,246) were derived using the Toolkit for Weighting and Analysis of Nonequivalent Groups. Separate generalized linear models (GLMs) using a normal distribution with identity link functions were used for all the analyses. The GLM analyses found that the CML caregiver group demonstrated significantly worse functioning (p<.0001) across all outcomes. Further, the adjusted means between the two groups exceeded the MID for the MCS and SF-6D. The adjusted MCS mean was 39.74 (95% CI: 36.67-39.81) for the CML caregiver group and 46.39 (95% CI: 46.32-46.46) for the CG. The adjusted PCS mean was 47.07 (95% CI: 47.02-47.13) for the CML group and 49.79 (95% CI: 49.73-49.85) for the CG. Finally, the adjusted SF-6D mean was 0.62 (95% CI: 0.62-0.63) for the CML caregiver group and 0.71 (95% CI: 0.70-0.71) for the CG. Analyses affirm that caregiving for patients with CML is associated with poor self-reported health outcomes. These caregivers are reporting significantly greater distress than the population despite recent improvements in treatment.

### IS-20

**GAINING AN UNDERSTANDING OF ALTERNATIVE DOSING SCHEDULES AS AN APPROACH TO ADVERSE EVENT MANAGEMENT OF METASTATIC RENAL CELL CARCINOMA (MRCC) PATIENTS RECEIVING SUNITINIB.** Joanne C. Ryan, PhD, RN, Pfizer Oncology, New York, NY; Andrew G. Clair, PhD, Pfizer Oncology, New York, NY

A necessary goal in treating patients with cancer is to help them stay on their prescribed therapy so that they may achieve

a potential benefit. This requires a focus on safety and nurses/Nurse Practitioners (NPs) play critical roles in the identification of adverse events (AEs) and the implementation of interventions aimed at balancing efficacy and tolerability. The management of AEs is generally achieved through a variety of approaches, which may include lifestyle changes (such as diet and exercise), concomitant treatments to alleviate symptoms, and dose adjustments of the therapeutic agent (for example, dose reductions, and holding doses). Sunitinib (Sutent®) has been considered a standard of care in the treatment of metastatic renal cell carcinoma (mRCC) since receiving FDA-approval in January of 2006. To date, more than 94,000 mRCC patients have been treated with this oral tyrosine kinase inhibitor in the U.S. and thousands more globally. The FDA recommendation for treating mRCC is to give sunitinib at 50mg orally, once daily for 4 weeks followed by a 2-week break in treatment (totaling a 6-week cycle); this is known as the 4/2 schedule. Recently, clinicians interested in identifying alternative dosing schedules to improve tolerability to sunitinib as an alternative to dose reductions, have made their prospective and retrospective findings public. This poster will highlight the results of several studies that demonstrate how alternative dosing schedules of sunitinib support an improved AE experience, without negatively impacting efficacy, in the subjects under study. The majority of the research reviewed includes a 2/1 dosing schedule (2 weeks on therapy followed by a 1-week break : still achieving 4 weeks of treatment and 2 weeks of rest in a 6 week cycle); no cross-study comparisons will be made. Understanding the findings that support alternative dosing schedules for sunitinib is critical for nurses and NPs to ensure the performance of evidence-based practice in the treatment of patients with mRCC.

## IS-21

**SECOND GENERATION OPTUNE SYSTEM UTILIZING TUMOR TREATING FIELDS IN COMBINATION WITH TEMOZOLOMIDE FOR NEWLY DIAGNOSED GLIOMAS: PATIENT MANAGEMENT.** Melissa Shackelford, RN, BSN, MSN, MPPM, Novocure Inc, New York, NY; Jeanine Certo, MS, Novocure, Inc, New York, NY; Kelly Stone, BS, MT (ASCP), Novocure, New York, NY

Glioblastoma multiforme (GBM) continues to be the most common primary malignant brain tumor in adults with poor survival outcomes. Optune, which utilizes Tumor Treating Fields (TTFields) is the first FDA approved GBM therapy in a decade to report a survival advantage when combined with temozolomide (TMZ) in the newly diagnosed setting. TTFields, a noninvasive treatment modality, alters polarity of rapidly dividing tumor cells leading to mitotic arrest and apoptosis. This unique mechanism of action is highly selective, spares healthy non-dividing cells and demonstrates a low toxicity profile. Optune is a wearable portable device. More than 3100 GBM patients worldwide have received treatment with Optune. In July, 2016, the FDA approved the new Second Generation Optune system (SGOS), for use by GBM patients. The SGOS is designed to improve treatment delivery for patients and caregivers and is intended to be worn continuously throughout the day and night for optimal efficacy. Data demonstrate a clear survival benefit when Optune is worn and therapy is delivered at  $\geq 75\%$  (~18h) each day. The SGOS contains an internal log which objectively records treatment compliance providing a useful tool to guide oncology nurses in assisting patients in reaching treatment compliance goals. In clinical trials with Optune, the most common device related adverse event (dAE) was mild to moderate skin irritation beneath the device transducer arrays. Device related AEs can impact patient's quality of life, adherence to therapy, and medical costs. The purpose of this report is to increase the oncology nurse's understanding of Optune, while raising awareness of key strategies to enhance support and compliance of patients on therapy. With enhanced understanding of Optune therapy,

including: importance of setting and achieving patient centric compliance goals, diligent skin care management, and effective lifestyle integration of at home Optune therapy, oncology nurses can partner successfully with patients and caregivers to enhance outcomes in GBM. Oncology nurses promote excellence in cancer care as they strive to remain up-to-date regarding emerging treatment options. As leaders of transformative cancer care, they are poised to play a key role in supporting GBM patients receiving Optune therapy. By enhancing their understanding of Optune therapy, they become paramount in assisting patients and caregivers in their battle against GBM.

## IS-22

**REVIEW OF BEST PRACTICES FOR LARGE-VOLUME INTRAMUSCULAR INJECTION OF FULVESTRANT.** Heather Vanderploeg, RN, OCN®, BSN, CBCN®, AstraZeneca, Gaithersburg, MD; Patricia McLaughlin, RN, BSN, MSN, ARNP-C, AstraZeneca, Gaithersburg, MD; Jiefen Munley, MD, AstraZeneca, Gaithersburg, MD

Because large-volume ( $\geq 3$  mL) intramuscular (IM) injections are infrequently administered, some oncology nurses may be unfamiliar with injection best practices. Fulvestrant, a selective estrogen receptor degrader indicated for advanced breast cancer as monotherapy or in combination with palbociclib, requires large-volume IM injections. The purpose is to provide a review of best practices and injection-related adverse reactions associated with large-volume IM injection of fulvestrant. Fulvestrant is administered on Days 1, 15, and 29, then once monthly at doses of 500 mg. Because 5 mL is the maximum volume recommended for a single IM injection, packages contain two prefilled syringes of 250 mg/5 mL fulvestrant, each administered slowly (1:2 minutes) at two separate gluteal injection sites. Injection site pain has been reported with fulvestrant, including sciatica, neuralgia, neuropathic pain, and peripheral neuropathy. Traditionally, nurses were trained to inject large volumes in the dorsogluteal site, however, caution should be exercised due to its close proximity to the sciatic nerve. The ventrogluteal site is evolving as a safer IM injection site, as it is easily accessed and is distant from major nerves and blood vessels. In patients with excessive subcutaneous fat, a 90-degree angle should be used to avoid injecting subcutaneously. Identifying bony anatomical landmarks and ensuring proper patient positioning offer a safe and effective means of IM delivery. Rotation of injection sites should be considered with repeated monthly injections. Fulvestrant is highly viscous and passively warming to room temperature for 30 minutes before use has been suggested in the nursing literature. Alternatively, slowly rolling fulvestrant between the hands can minimize viscosity. The Z-track method has been used to administer large-volume IM injections to reduce pain and subcutaneous tissue dispersion. Other steps to minimize injection site reactions include the use of warm compresses and topical anesthetics. In the CONFIRM trial, 11.6% of 361 patients receiving 500 mg monthly fulvestrant reported injection site pain. Only 1 patient (0.3%) experienced a grade 3 or greater injection site reaction. Fulvestrant must be used with special consideration in patients with bleeding diatheses, thrombocytopenia, or anticoagulant use. Observance of best injection practices, patient education, and follow-up may increase patient comfort and clinician confidence.

## IS-23

**IS RISK FOR TUMOR LYSIS SYNDROME PART OF YOUR NURSING ASSESSMENT?** Colleen Weber, RN, BSN, Genentech, S. San Francisco, CA; Loretta Morehead, RN, BSN, Genentech, S. San Francisco, CA; Linda Schnell, RN, MSN, OCN®, Genentech, S. San Francisco, CA; Allister Ben Chase, MSN, FNP-BC, AOCNP®, Genentech, S. San Francisco, CA;

Karen Groth, MSN, CNS, ARNP, Genentech, S. San Francisco, CA

Tumor Lysis Syndrome (TLS) is a potentially life threatening disorder that results from the rapid breakdown of malignant cells and their contents into the body's circulation. This metabolic disorder may occur spontaneously in patients with a high tumor burden or after the initiation of an oncologic treatment. This cellular breakdown may lead to a rapid fluid and electrolyte imbalance that can overwhelm the body's homeostatic mechanisms resulting in prompt damage to the kidneys, heart, and central nervous system. Patients at highest risk are those with high tumor burden, rapid proliferating cells that are sensitive to treatment and pre-existing renal insufficiency. It is important for oncology nurses to identify patients at risk for TLS so that plan of care and patient education can mitigate the occurrence &/or effects of this serious complication. A thorough assessment of the patient's clinical evaluation, comorbidities, tumor status and treatment plan is essential. Nursing interventions would include physical assessment, monitoring of labs, providing intravenous hydration, administering hypouricemic agents, and patient monitoring. It is necessary to educate the patient on medication administration, the necessity of clinical and laboratory monitoring and reportable signs and symptoms. Early recognition of whether a patient is at risk for TLS may assist the practitioner in the monitoring and management. The timing of clinical and laboratory assessment is dependent upon the treatment plan and patient's TLS risk factors. The understanding of the pathophysiology of risk factors, the occurrence of TLS, preventative and supportive measures provide nurses the rationale of the importance of nursing interventions. Knowing your oncology patient's risk for TLS can be crucial in the early recognition of clinical symptoms and abnormal laboratory values. This initiation can lead to successful prevention and/or management of life-threatening metabolic disorder of TLS.

#### IS-24

**TREATMENT-RELATED ADVERSE EVENTS WITH NIVOLUMAB IN PATIENTS WITH RELAPSED/REFRACTORY CLASSICAL HODGKIN LYMPHOMA: RESULTS FROM A COHORT ANALYSIS OF THE PHASE 2 CHECKMATE 205 STUDY.** Emily Wesson, MSN, RN, CCRP, NP-C, University of Texas MD Anderson Cancer Center, Houston, TX; Robin Klebig, APRN, CNP, AOCNP®, Mayo Clinic, Rochester, MN; Katherine Stephans, NP, Dana-Farber Cancer Institute, Boston, MA; Alexandra Palmer, MSN, FNP-BC, Winship Cancer Institute of Emory University, Atlanta, GA; Alanna Kurosky, MSN, ANP-BC,

Barbara Ann Karmanos Cancer Institute, Detroit, MI; Amanda Copeland, MSN, CNS, RN, BA, Memorial Sloan Kettering Cancer Center, New York, NY

Nivolumab is an immune checkpoint inhibitor antibody targeting programmed death receptor-1, approved for the treatment of patients with relapsed/refractory classical Hodgkin lymphoma (cHL). Immune checkpoint inhibitors may result in distinct immune-mediated or "select" adverse events (AEs), including gastrointestinal, hepatic, pulmonary, renal, endocrine, skin, and hypersensitivity/infusion-related toxicities. Understanding these AEs is important for optimal care of patients with cHL with nivolumab. We report a pooled analysis of AEs in relapsed/refractory cHL patients receiving nivolumab after autologous hematopoietic stem cell transplantation (HSCT) in CheckMate 205 (NCT02181738) Cohorts A+B+C. Interventions Adults with cHL after HSCT failure, naive to brentuximab vedotin (BV; Cohort A), BV-treated after HSCT (Cohort B), or before and/or after HSCT (Cohort C) received nivolumab 3 mg/kg intravenously every 2 weeks until progression/unacceptable toxicity. AEs were recorded on-treatment every 2 weeks between first and last dose and 30 days after last dose. Because several preferred terms may describe similar organ-related AEs, treatment-related select AEs (TRSLAEs) were grouped by organ category. Corticosteroids were a primary therapy for immuno-oncology treatment-related AEs (TRAES). Patients (N=243: Cohort A, n=63; Cohort B, n=80; Cohort C, n=100), median age 34 years, received a median of 4 prior therapies. With a median of 20 doses of nivolumab, dose delay ( $\geq 1$ ) was required in 54% of patients, mostly AE related (53%). TRAEs occurred in 77% of patients (20% grade 3-4; no grade 5). The most common any-grade individual TRAEs ( $\geq 10\%$  of patients) were fatigue (21%), diarrhea (14%), infusion-related reaction (13%), and rash (12%). TRSLAEs occurred in these categories: skin (21%), gastrointestinal (15%), hypersensitivity/infusion-related reaction (15%), hepatic (10%), pulmonary (5%), and renal (2%), leading to discontinuation in 0%, 0.4%, 0%, 2%, 0.8%, and 0.4% of patients, respectively. Endocrine TRSLAEs (thyroid disorders) occurred in 13% of patients; none grade 3-5. AEs requiring immune-modulating medication occurred in 40% of patients; most common ( $\geq 4\%$ ) were rash (5%) and pneumonitis (4%). No treatment-related deaths occurred. Nivolumab is well tolerated in relapsed/refractory cHL, with a safety profile consistent with prior studies in solid tumors. Although most TRAEs/TRSLAEs were low grade, prompt identification is crucial to ensure successful management and resolution. Innovation Nivolumab is the first PD-1 inhibitor approved for hematologic malignancies, having shown improvements in clinically relevant outcomes in cHL and manageable TRAEs.