ABSTRACTS TO BE PRESENTED AT POSTER AND PODIUM SESSIONS

For your convenience, all Podium and Poster Abstracts have been indexed according to subject (page 58).

The abstracts appear as submitted and have not undergone the *Oncology Nursing Forum* Editorial Board's review process. We have made every effort to be accurate. If any errors or omissions have been made, please accept our apologies.

Abstracts that are not being presented do not appear.

1

THE REVISED I CAN COPE—A MODEL OF COLLABORATION. Donna MacDonald, RNC, BSN, OCN®, CHPN, Visiting Nurse Service of Greater Rhode Island, Lincoln, RI; and Kelly Johnson, MSW, LCSW, Moses Cone Health System Regional Cancer Center, Greensboro, NC.

The American Cancer Society's (ACS's) I Can Cope has been providing factual, straightforward information and answers to cancer-related questions and recognizing the psychosocial needs of patients and their families since 1977. The I Can Cope program has been evaluated and revised several times since then (Bannon, C., 1998; Diekmann, J.M., 1988; McMillan, S.C., Tittle, M.B., Hill, D., 1993). The most recent results have led to a program that is more flexible and has a greater emphasis on collaborative efforts throughout all levels of the program. The updated I Can Cope offers a 16-hour and 8-hour program, as well as three 2-hour modules on pain, nutrition, and money matters. This program features the collaboration and flexibility that is so vital in today's healthcare setting. Group members have the benefit of experiencing the entire healthcare team highlighted throughout the sessions. The ACS collaborates with hospitals, home health agencies, hospices, churches, etc., to cosponsor the program. In addition, the program was designed based on the collaborative work of many individuals, including financial counselors, nurses, social workers, nutritionists, and physicians. These collaborative efforts have led to high-quality programs, decreased facilitator burnout, and information that is accurate and timely.

This poster presentation will highlight the revised I Can Cope program and what it offers to providers and participants. It will focus on the many levels of collaboration; the numerous benefits to participants, facilitators, and cosponsoring agencies; and how easy I Can Cope can be incorporated into one's own clinical practice.

2

DEVELOPING A COMPREHENSIVE ART THERAPY PROGRAM. Shannon Scott, MA, ATR-BC, and Karen Hammelef, RN, MS, CS, University of Michigan Comprehensive Cancer Center, Ann Arbor, MI.

The National Institute of Health's Office of Alternative Medicine recognizes art therapy as a creative modality, which helps patients cope with chronic illness through mind-body intervention. Although patients often have a verbal or medical explanation of their illness, they frequently do not have the means to interpret the nonverbal or intuitive explanation. When words fail to express overwhelming feelings, art offers the opportunity to find new ways of communication through visual means. Focused on self-expression, patients are able to explore, release, and learn to understand the source of their emotional distress. With this theoretical background in mind, an art therapist was funded in 1997 to provide weekly group therapy sessions to adult outpatients at this National Cancer Institute-designated comprehensive cancer center. In the five years since its initial funding, the art therapy program has developed into a comprehensive program providing services to adult and pediatric inpatients and outpatients. Comprehensive services include individual and family therapy sessions and 8-week group therapy sessions for patients, which focus on improved self-awareness, concerns related to illness, and feelings that are difficult to express. The program also supports art therapy on the bone marrow transplant unit, an "art cart" for the chemotherapy infusion areas and a survivor's art gallery in the cancer center. The art therapist collaborates with all other psychosocial disciplines within the cancer center and is a member of the psycho-oncology program.

Through strategic efforts in philanthropy and marketing, the program has been solely and successfully funded by directed donations since its inception. This presentation will include an overview of the program's five-year history, including development and marketing strategies, building collaborative relationships, and pitfalls and challenges experienced.

3

A MULTIDISCIPLINARY APPROACH TO CREATING A BEREAVEMENT PROGRAM IN A TERTIARY HOSPITAL SETTING. Barbara Cashavelly, MSN, RN, AOCN®, Jennifer Tenhover, MSN, RN, BS, AOCN®, and Constance Dahlin, MSN, RN, BC, CHPN, Massachusetts General Hospital, Boston, MA.

Purpose: The purpose of this project is to develop a multidisciplinary bereavement program that will offer emotional, spiritual, and educational support to patients, families, and staff during the dying process and into the period of bereavement.

Background: A critical component of cancer care is the management of grief and bereavement for patients, families, and staff. Bereavement counseling and support assists with adjustment to loss and grief. Although many hospice programs and self-help groups provide bereavement support, formal bereavement programs in large tertiary hospital settings are limited. Through patient care rounds, providers at the Massachusetts General Hospital Cancer Center identified the need for improved bereavement care. This presented an opportunity to develop and implement a formal bereavement program.

Intervention: A multidisciplinary bereavement task force was formed by a group of oncology nurses. The members of the task force include nurses, physicians, social workers, chaplains, and palliative care staff from various practice settings. Within the larger task force, subgroups were created and have focused efforts on six areas: 1) development of a mission statement, 2) benchmarking, 3) development of a death registry and tracking system, 4) needs assessment of bereaved families, 5) needs assessment of staff, and 6) development of practice standards.

Evaluation: A formal bereavement program will be developed utilizing the subgroup findings. The mission statement is guiding the development process. Information has been compiled from 22 inpatient units regarding current bereavement practices. Focus groups are being planned to assess the needs of bereaved families. Finally, a death registry is being piloted in one of the oncology disease centers.

Discussion: The Massachusetts General Hospital Cancer Center staff is developing a bereavement program for care of bereaved patients and families. This program also will address the educational needs of staff in providing bereavement support. Oncology nurses have a direct impact on patients and families in bereavement assessment and care. Implementing this program in a tertiary hospital setting will establish standards of care for bereavement support and ultimately improve care for families during the dying process and into the bereavement period.

4

DELEtCC: DISSEMINATING END-OF-LIFE EDUCATION TO CANCER CENTERS. Jo Hanson, RN, MSN, OCN®, and Marcia Grant, RN, DNSc, FAAN, City of Hope National Medical Center, Duarte, CA.

Within the next 10 to 15 years, cancer will surpass cardiovascular disease as the number one cause of death in the United States. In 2001, 555,500 deaths or 1 in 4 was because of cancer. The 2001 Institute of Medicine (IOM) Report identified the need for education to cancer centers. The overall purpose of this National Cancer Institute (NCI)-funded interdisciplinary educational project is to improve end-of-life (EOL) care for patients with cancer.

The project framework has three components: practice changes via performance improvement (PI); adult education principles; and educational content based on the Precepts of Palliative Care.

The 2002 course attracted 100 participants representing 50 institutions (16 NCI designated, 26 community cancer centers, 8 others) from 29 states. Teams of two healthcare professionals (87 females and 13 males) including 66 nurses, 14 physicians, 9 social workers, and 11 others (psychologists, pharmacists, chaplains, and therapists) completed the three-day intensive EOL care course in Pasadena, CA. Teams developed pre- and postcourse institutional goals. Precourse chart audits, case analysis, and institutional assessment were completed. Six-, 12-, and 18-month goals will be reassessed and revised and chart audits, case analysis, and institutional assessment completed. Curriculum included nine cancer-focused modules: Gaps in EOL Care; Pain Management; Symptom Management; Ethical/Legal Issues; Grief, Loss, Bereavement; Communication; Last Phase of Life; Quality Care at the EOL. Issues of culture were woven throughout each module. Teaching methods included podium lecture, large group and small group breakout sessions, panel discussions, and videotapes with participant interaction.

Course evaluations were extremely positive: overall mean 4.53 on a 1–5 point scale. Participants cited excellence of the speakers, extensive teaching materials, relevance to current issues, and overall course organization and presentation as outstanding. "Best speakers I have had the privilege to hear in 35 years." "Networking, tools/resources are incredible!" "Excellent topics and take-home information for people who are trying to develop palliative care programs."

The 2002 DELEtCC course was an overwhelming success and represents the first step in improving EOL care in cancer centers. The 50 institutions can improve cancer care for hundreds of patients with cancer.

5

DESIGNING OUTPATIENT FLOW: SAILING THROUGH THE STORM.

Joan Strohm, RN, OCN®, Vicki Caraway, RN, BSN, Janice Provenzano, RN, CGRN, and Christine Ellis, RN, BSN, OCN®, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.

Oncology patient care has reached a new level of complexity as patient management continues to shift to outpatient settings. Incorporation of multiple clinical programs into new space and undefined clinic flow has created additional issues for our patients and staff in navigating the system. Four large programs, previously located in separate clinic spaces, were relocated to the same area, presenting a challenge to providing quality, timely care to patients and families at H. Lee Moffitt Cancer Center and Research Institute. A "Clinic Flow Team" was formed to address these challenges. The purpose of this process was to improve overall clinic flow by decreasing wait times for both providers and patients and improving the check-out process, while maintaining confidentiality. Nurses in our clinic work closely with multiple team members to ensure seamless flow through the clinic and comprised most of the team (five nurses). Additional team members included the manager, one medical assistant, and one patient support representative. Initially, the team met on a weekly basis and then bimonthly, focusing on the following: check-in process, getting the patient into the examination room, check-out process, and room turnover. Delays in any one area had an impact on the entire process. After comprehensive review of the issues, several interventions were implemented. These interventions included implementing a flag system outside examination rooms; offering onsite phlebotomy services; implementing patient pagers; moving initial patient triage from central location to examination room; enhancing communication systems; and clarifying responsibilities. Recommendations made by the team first were presented to physician program leaders for input and then to the staff for implementation. Interventions were implemented over a six-month period of time. Staff and patients report satisfaction with the outcome. Patient responses good, very good, or excellent to "waiting time in clinic for appointment" on a satisfaction survey increased from 82% to 90% over a six-month period of time. Clinic staff identified shorter provider wait times, improved communication, and enhanced team cohesiveness as a result of the process. Problem resolution involving those closest to the issue, as in the scenario described, yields a successful and satisfying outcome.

6

EFFECTIVE STRATEGIES FOR DECREASING UNSCHEDULED WALK-IN INFUSION APPOINTMENTS.

Teresa Mazeika, BSN, OCN®, Dana Farber Cancer Institute, Boston, MA.

Background: The solid tumor ambulatory infusion unit at a major comprehensive cancer center serves approximately 120 scheduled patients on a daily basis. This nurse-driven service delivers an extensive range of chemotherapy regimens, transfusions, and hydration, as well as providing symptom management, extensive health teaching, and supportive care. Prior to the implementation of this project, this infusion service would see between 11 and 35 unscheduled patients in addition to the scheduled volume on a daily basis. This unscheduled volume resulted in increased wait times, which in turn resulted in patient, nurse, and physician dissatisfaction. It also provoked concerns regarding the safe delivery of care in a busy ambulatory setting. A review of clinic statistics revealed that approximately 60% of these unscheduled patient visits could have been avoided. A quality improvement task force was convened to evaluate the scope of this concern and to develop a framework for problem solving.

Project: The quality improvement task force included representatives from the infusion service nurses, support staff, and information systems. Physicians and nurse managers served as consultants. The project objectives were to investigate the nature of the unscheduled patient volume and to develop a plan for managing this problem. The task force met weekly to determine factors contributing to unscheduled appointments. Examples of causal factors were patients leaving without checking out, poor guidelines for scheduling patient appointments, and a scheduling process that was confusing for the patients. Subsequently, a rapid cycle improvement analysis was employed to formulate the solution, implementation, and continuous monitoring strategy. This plan was presented to the nursing and support staff, as well as physicians. Consensus was obtained, and the plan was implemented.

Evaluation: After three months, success of this project is evident by a 29% decrease in unscheduled patient visits into the infusion clinic. Continued monitoring occurs on a quarterly basis. Clinicians have voiced increased satisfaction because of the decrease in unscheduled visits and the patients have voiced recognition of improvements in our system since the implementation of the quality improvement initiative.

Interpretation: Clinical oncology nursing staff can successfully lead quality improvement initiatives to improve patient care flow, increase staff and patient satisfaction, and ultimately lead to a safer environment for providing oncology treatments. This initiative can be a useful model for other cancer centers that also have been faced with the dilemma of unscheduled patient visits.

7

CLINICAL INSIGHTS SHARED BY NURSE CANCER SURVIVORS.

Joan Agretelis, PhD, RN, Massachusetts General Hospital, Boston, MA; Carol Picard, PhD, RN, Massachusetts General Hospital Institute for Health Professions, Charlestown, MA; and Rosanna DeMarco, PhD, RN, Boston College, Chestnut Hill, MA.

Accounts of the cancer survivorship experiences of healthcare professionals are anecdotal, told in essays in professional journals, electronic list serve discussions, or published autobiographical accounts but, to date, have not been systematically explored (Fedora, 1985; Frank, 1992; Hamilton, 1999; Leigh, 1992; Mullan, 1986; Nally, 1999; Reinhardt, 2000; Scannell, 1985; Wagner, 1996). Nurse cancer survivors live in two worlds—that of patient and that of healthcare professional. From this perspective as "dual insider," nurse cancer survivors provide a rich understanding of the process of receiving care and negotiating the systems of care delivery. The purpose of this study was to explore the personal and professional experience of cancer survivorship among a group of nurses. It was conducted in a two-step interview process guided by Caring Theory as described by Watson and Newman.

This presentation will focus on the participants' responses to the second research question regarding the professional impact of cancer survivorship. Within the professional realm, four themes were identified: 1) increased level of compassion, 2) advocacy for change, 3) disclosure, and 4) volunteerism. Study participants related personal care encounters and experiences with the care-delivery system that provide clinical insight and present challenges to their colleagues. Participants' accounts are used to highlight the clinical wisdom that nurses took from their personal cancer experiences and can be used to inform oncology nursing practice. Examples of exquisite, and absent, care from healthcare providers and colleagues underscore the significance of communication and empathy in delivering care. Descriptions of multiple dimensions of advocacy demonstrate how nurses can influence the healthcare system. Participants' reports of how, and under what circumstances, they disclosed their own cancer experiences with others, including their patients, show the value that nurses place on being with another human being in the caring moment. Participants' thoughtful reflection of their personal experiences with cancer and cancer treatment contribute pragmatic guidance that is applicable across the spectrum of nursing practice.

8

COMPLEMENTARY AND ALTERNATIVE MEDICINE USE IN THE PROSTATE CANCER POPULATION: THE ROLE OF THE AMBULATORY NURSE.

Mary Ellen Fogarty, RN, BSN, OCN®, and Christine Liebertz, RN, CS, MSN, AOCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

The risk of prostate cancer is related to many factors. Evidence suggests that there is a link between dietary intake and the development of prostate cancer. Because of this, complementary alternative medicine (CAM) and dietary supplement use is gaining popularity. Commonly used supplements include beta-carotene, coenzyme Q, flaxseed, lycopene, selenium, vitamin D, calcium, vitamin E, saw palmetto, green tea, zinc, red clover, shark cartilage, and derivatives of PC-Spes. These can be detrimental when used without proper supervision, in combination with prescription medication, or in excessive amounts. Safe dosing varies between supplements. These substances are frequently self prescribed and may not be regulated by governmental guidelines. They are advertised in magazines, newspapers, support group circulars, radio commercials, and on web sites. An abundance of unregulated information is available and can be confusing to patients. General toxicities include blood clots, bleeding, skin discoloration, photosensitivity, gastrointestinal upset, and interference with prescription medications. Unmonitored production can also cause unforeseen risks, as exemplified by PC-Spes, an herbal formulation that was recently withdrawn when testing by the Federal Drug Administration found traces of coumarins, benzodiazepines, and estrogenic compounds. Oncology nurses are a resource to patients, advising safe doses of supplements, educating on potential risks and drug interactions, assessing CAM and dietary supplement use, and assisting patients to safely interpret and utilize data that is available from many sources.

At this NCI-designated cancer center, the growing CAM interest, use, and potential risks are recognized. This facility has an integrative medicine center program available as a resource to patients and clinicians. In-services are performed to educate nurses on CAMs, safe dosages, and possible side effects. A website allows easy access to an overview of all CAMs, their purpose, recommended dosing, and broad-spectrum toxicities. An electronic library enables clinicians to perform literature reviews and attain current information regarding CAMs.

With more patients using CAM and dietary supplements, it is essential that oncology nurses be well informed. This presentation will provide an overview of CAMs and dietary supplements used for prostate cancer, their mechanism of action, recommended safe dosages, potential side effects, and drug interactions.

9

TRANSCENDING BREAST CANCER. Doris Coward, RN, PhD, University of Texas at Austin, Austin, TX

The diagnosis of cancer initiates a period of spiritual disequilibrium for most women undergoing breast cancer treatment. Previous research in women with both early stage and advanced breast cancer revealed that their sense of aloneness and loss triggered new perspectives and behaviors characteristic of self-transcendence. The purpose of this phenomenological study was to describe how the process of self-transcendence might be facilitated in women following initial diagnosis of breast cancer. Self-transcendence as conceptualized by Viktor Frankl and Pamela Reed involves expansion of self-conceptual boundaries inwardly, outwardly toward others and new experiences, and temporally by using past memories and future hopes to enhance a present situation. The 14 study participants were a subset of 161 women recruited for a cancer support group study. Seven participants attending various community cancer support groups were compared over time with seven others participating in an eight-session breast cancer support group intervention in which self-transcendence views and behaviors were consciously promoted. Audiotaped interviews (obtained at baseline, and three and eight months later) were transcribed verbatim and analyzed using Colaizzi's phenomenological analysis techniques. Standard procedures to assure trustworthiness were implemented. Women described experiences that facilitated maintenance/restoration of emotional, physical, and spiritual well-being. At first, they struggled to maintain their "normal" self-identity. Through reaching out to others for information and support, and using faith resources for support and hope, most women realized they had developed beyond their previously "normal" selves. Later, they accepted their breast cancer experience and described the newly found relationships with themselves and with others as helping them to heal emotionally and spiritually. Women in the intervention support groups developed new perspectives and behaviors earlier than other participants, but all women described reaching beyond previous self-conceptual boundaries to achieve a more positive view of themselves and their life purpose. This process of self-transcendence may be how women who believe they are cancer victims are transformed to find positive meaning as cancer survivors. Oncology nurses can assist in the process by encouraging women with newly diagnosed breast cancer to obtain resources that help them to expand previous self-conceptual boundaries. (Funded by NIH {NINR & NCCAM}).

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ENHANCING ADAPTATION FOLLOWING RADIATION TREATMENT: CONCRETE INFORMATION VERSUS EMOTIONAL EXPRESSION. Lillian Nail, PhD, RN, FAAN, Oregon Health and Science University School of Nursing, Portland, OR; Marcia Grant, DNSc, RN, FAAN, and Grace Dean, PhD, RN, City of Hope National Medical Center, Duarte, CA; Motomi Mori, PhD, Oregon Health and Science University Cancer Institute, Portland, OR; and Lee Ellington, PhD, and Billie Walker, PhD, RN, University of Utah College of Nursing, Salt Lake City, UT.

The completion of RT is stressful because of fears about recurrence, feeling "unsafe," and concern about symptom meaning. This three group RCT was a test of two theory-based approaches to enhancing adaptation: Concrete objective information (COI), written expression of emotions (EE), and an attention control arm. COI was based on Johnson's self-regulation theory and EE intervention was drawn from Pennebaker's work on using writing to integrate traumatic experiences and promote adaptation. Women completing RT for breast cancer (N = 262) provided written consent and completed baseline measures during the last two weeks of treatment. Following random assignment, the COI group listened to a tape-recorded message describing typical experiences (i.e., changes in side effects) experienced by women completing RT for breast cancer. The EE group was instructed to write about their cancer experience 30 minutes/day for 3 days. The control group listened to a brief tape-recorded message about community resources. All study variables were measured using instruments with established reliability and included disruption in activities (SIP), mood (state PANAS), trait negative affectivity (trait PANAS), cancer-specific distress (IES), and side effect severity (SEC). The sample was middle-aged (M = 55 years), white (82%), and married (66%). Repeated measures analysis of variance was used to test theory-driven hypotheses about intervention effects on disruption in function, negative mood, and cancer-specific distress controlling for trait negative affectivity and side effect severity. There were no significant group by time interactions indicating that all groups had similar scores on the dependent variables. Additional analyses revealed 20% nonadherence in the EE group with wide variation in the amount of writing among those who adhered. Unsolicited written comments indicated high levels of enthusiasm for EE in some participants. The pattern of self-report of level of disclosure in the six months following intervention suggests that EE nonadherence may reflect differences in timing of readiness for disclosure. This new finding has significant clinical implications for structuring the use of this increasingly popular intervention to accommodate preferences in participation and timing. Additional issues related to intervention design and the relevance and performance of specific outcome measures in survivorship research are discussed.

11

IMPROVING CANCER PAIN MANAGEMENT FOR HOMECARE NURSES. April Hazard Vallerand, PhD, RN, Cheryl Riley-Doucet, MEd, RN, Susan M. Hasenau, MSN, RNC, CNNP, and Thomas Templin, PhD, Wayne State University, Detroit, MI.

In order for nurses to change practice, especially in the area of pain management, nurses must be experts in pain management strategies and nurses must have the communication skills to present viable options in an acceptable manner both to the physician and to the patient and/or caregiver. A significant concern is the lack of mastery of educational programs regarding pain management and utilization in practice by nurses. The purpose of this study was to determine the effect of a structured educational intervention directed at homecare caring for patients with cancer-related pain. The Conceptual Model of Symptom Management served as the study's conceptual framework. The study used a mixed method 2 x 2 (Nurse Intervention (yes/no) x Patient/Caregiver Intervention (yes/no) longitudinal multi-level design with four treatment levels. This poster reports on the data from the nurses participating in the study. The nurses in the intervention group received a basic session on pain management and communication skills, then an advanced session on pain management and assertiveness skills 4 to 6 weeks later. The data analysis of nurses' responses revealed that knowledge and attitudes of the nurses increased significantly following the basic intervention, maintained the increase for the four weeks prior to the advanced class, and continued to increase after the advanced intervention. Barriers to pain control perceived by the nurses decreased significantly following the basic class and again decreased significantly following the advanced class. The intervention increased the nurses' level of perceived control over pain significantly following the basic intervention. This increased level of perception of control over pain was maintained and continued to increase following the advanced intervention. The findings demonstrated the effectiveness of a 2-tiered educational intervention for homecare nurses caring for patients with cancer-related pain.

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SAFEGUARDING AN ENDANGERED SPECIES: SUSTAINING THE HEART, MIND, AND SPIRIT OF THE ONCOLOGY CAREGIVER. Rebecca Crane-Okada, PhD, RN, AOCN®, Rosalyn Eig, MSW, BCD, Phillip Williams, BSN, RN, and Shirley Edwards, MSN, RN, AOCN®, Saint John's Health Center, Santa Monica, CA.

The confluence of complex patients, fast pace, and physical and emotional demands of an oncology unit have a profound effect on nursing staff. Attention to issues that adversely affect staff is paramount in the environment of a nursing shortage. Preventing the emotional disconnect that can arise from staff caregiver fatigue is one strategy to retain dedicated oncology nurses and support staff. The inpatient oncology unit staff of an urban community hospital, affiliated with a large cancer research program, verbalized a need to explore new ways to manage their stress and understand their emotions. In response to this need, and staff responses to a brief survey, social work and oncology nursing leadership designed a 6-topic, 8-session program in alternating weeks to accommodate 12-hour shift personnel. Since its inception in July 2001, 39 sessions have been held. The underlying purpose of the program was to create a forum in which staff, nurtured in a safe holding environment where rules of confidentiality were observed, could acquire insights, self knowledge, and awareness, in turn improving their ability to work better with each other and patients. Each 30-minute session opened and closed with a meditation, and included a brief presentation, open discussion, and time to draw or write personal thoughts. Reflections on dreams, memories, imagination, and breathing exercises were presented as self-care tools staff could also use with patients. Staff evaluated each session on a visual analog scale (100-mm with verbal anchors) for both personal value and applicability of content in practice, and had the option of adding narrative thoughts about the sessions or future topics. A summary of the overall positive evaluations from a total of 400 in attendance over all sessions, as well as other unexpected consequences will be presented. The health center, by lending full support for this ongoing program, is fostering an atmosphere where preservation, growth, and development of the oncology staff caregiver are a priority. This program may serve as a model for others seeking creative solutions for safeguarding an endangered species.

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BEYOND ORIENTATION: SUPPORTING THE NEW AND EXPERIENCED ONCOLOGY NURSE.

Krista Rowe, RN, BSN, and Ellen Cowan, RN, BSN, OCN®, Duke University Medical Center, Durham, NC.

Standards and guidelines exist to identify best practice in patient care. Evidenced based practice relies on utilizing those standards to improve care for a specific patient population. However, providing consistent nursing care, based on those standards, to the oncology patient population in a tertiary care medical institution can be a challenging task for both new and experienced nurses. Although the individual challenges vary significantly, both groups of nurses working with the adult hematology oncology and solid tumor patient population at Duke University Medical Center in Durham, North Carolina identified the potential value of an easy-to-use reference guide highlighting topics pertinent to the care of their patients. As a result, a group headed by the oncology nurse educator and made up of staff nurses, nurse managers, and clinical nurse specialists, came together to create such a guide. A 160-page pocket reference was created using standards of practice laid out by the Oncology Nursing Society, evidence-based institutional policies and procedures, and well-known oncology reference materials. It contained a wide variety of topics including scope of practice, chemotherapy administration, side effect management, and oncology emergency management. The goal of this project was to reference consistent oncology nursing practice, support the new nurse during and after completing the orientation process, and strengthen uniformity in practice of the experienced nurses. This presentation will discuss the effectiveness of this guide by evaluating user satisfaction from the standpoint of the new graduate nurse as well as the experienced oncology nurse. It will also discuss the impact of such a tool on consistency of nursing practice for an inpatient medical oncology unit.

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DEVELOPING AND IMPLEMENTING A CONSULTATIVE SERVICE FOR NURSES PURSUING OCN® CERTIFICATION.

Norma Sheridan-Leos, RN, MSN, AOCN®, CPHQ, Curtis and Elizabeth Anderson Cancer Institute at Memorial Health, Savannah, GA.

Background: Oncology nursing certification is a means to enhance professional practice and patient care; however, many oncology nurses do not seek certification. This poster will describe how a CNS developed and implemented a consultation service for nurses who wanted to prepare for the OCN® exam.

Interventions: A community cancer center had valued oncology nursing certification as evidenced by a yearly bonus for each year a nurse maintained oncology certification, and management staff members were certified. None of the inpatient nursing staff had current certification. The CNS surveyed all eligible staff to determine the reasons for not seeking certification. Two reasons cited most often were fear of failure and lack of continuing education hours. After reviewing consultation theory, the CNS devised a consultation service for all staff eligible for certification. The CNS worked with each nurse on a one-to-one basis to assist the nurse in devising a personal study plan. The CNS developed a tracking tool to monitor each nurse's progress. The organization purchased practice exams; these were used to diagnosis areas for further education. The CNS developed formal and informal educational offerings for the staff and utilized free or low cost continuing education that met identified learning needs. The organization also supported the staff by allowing the nurses to attend these educational events during duty time. The CNS followed up with each nurse at predetermined intervals.

Interpretation: Thirty-five percent of the eligible staff have registered to take the OCN® test in September 2002. Twenty three percent of the inpatient staff nurses have signed up for the consultative service in preparation for the 2003 certification test.

Discussion: So that other institutions can develop a similar program, this poster will detail 1) activities that best supported the staff, 2) percent of staff that passed the 2002 test, and 3) tracking tool.

15

MONITORING, MEASURING, AND MANAGING CANCER NURSING RESOURCES: RESULTS OF ONE INSTITUTION'S "REPORT CARD" EFFORTS.

Selma Kendrick, RN, MSN, OCN®, Good Samaritan Regional Medical Center, Phoenix, AZ.

Purpose: To describe an administrative initiative to characterize nursing workforce demographics, quantify productivity, and measure satisfaction of oncology nurses by developing a "report card" on cancer nursing practice.

Background/rationale: The American Nurse's Association delineation of a "report card" to document and evaluate nursing contributions to patient care has been broadly accepted as an effective tool to enhance intra- and inter-disciplinary understanding of key issues affecting nursing practice. Ongoing use of this strategy offers important information on trends in manpower, work conditions, quality of care, employee satisfaction, and costs. This strategy is most effective when staff are engaged in analyzing "report card" findings that relate to their work culture.

Intervention: "Report cards" tallied in August 2001 were disseminated to all staff and contained the following data elements: skill mix & demographic information (% licensed & unlicensed staff, years of experience, longevity in the system, % certified, highest degree earned) and clinical indicators (pain severity scores, # falls, code survival to discharge, line-infection rate). Work conditions were measured by quantification of hours of care and work intensity. Employee satisfaction was relayed by use of Press Ganey scores, results of the Nursing Work Index (Aiken, 1997), and the Q12 survey findings (Gallup Organization, 2000–2001). Financial indices (vacancy rate, # employees, turnover, % premium pay, cost per patient day, total paid in FTEs) were also shared. The "report card" also contained comparative data to other units and hospitals in our system. Following dissemination of this information to the oncology nursing staff, focus groups were formed to discuss options for improving the practice environment. Results of these numerous change efforts will be shared. Currently, one-year follow-up data is being tallied which will be compared with baseline survey findings.

Interpretation/discussion: The "oncology nursing report card" has proved to be an effective tool for change, collaboration, and innovation. Sharing our experience with this intervention will assist others interested in fostering improved communication between management and staff.

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THE TREATMENT OF ADVANCED PROSTATE CANCER WITH KETOCONAZOLE.

Patricia Fox, RN, MA, AOCN®, and Christine Liebertz, RN, CS, MSN, AOCN®, Memorial Sloan-Kettering Cancer Center, NY.

Ketoconazole, a well-known antifungal agent, is used as second-line hormone in the treatment of hormone-sensitive metastatic prostate cancer. Ketoconazole lowers serum testosterone levels by blocking adrenal steroidogenesis that is unaffected by luteinizing hormone-releasing-hormone analogue or orchiectomy. Response rates of 63% and a median duration of efficacy of 3.4 months have been reported. The oncology nurse plays a critical role in caring for men receiving ketoconazole for prostate cancer. Patient education regarding the administration of ketoconazole, action, side effects, and ongoing evaluation of adverse effects are of paramount importance. The oncology nurse must be knowledgeable regarding the role of ketoconazole in prostate cancer and familiar with the mechanism of action and toxicity profile of the drug.

At this NCI-designated comprehensive cancer center, the nursing staff developed a fact card to provide essential information patients need to know while taking this medication. Mechanism of action, usual dosage, optimal method of administration, side effects, and potential drug and food interactions are described. Ketoconazole is a potent inhibitor of the cytochrome P450 3A4 enzyme system. Co-administration with certain drugs may result in increased plasma concentrations of these drugs with subsequent prolonged therapeutic or adverse effects of these agents. Some medications are absolutely contraindicated in conjunction with ketoconazole therapy; others need close monitoring for toxicity secondary to concomitant administration.

Ketoconazole is initiated at a dose of 200 mg TID. The dose is doubled if the prostate specific antigen (PSA) continues to increase or if it increases after an initial response. The addition of hydrocortisone twice daily is expected to lessen the likelihood of adrenal insufficiency at this higher dose. Side effects include fatigue, nausea and vomiting, abnormal liver function, impotence, skin reactions, and diarrhea. Patients are instructed on symptoms to report and encouraged to call with any concerns.

Given the complexity of caring for these patients, the oncology nurse must be well informed. This presentation will elaborate on the use of ketoconazole in the treatment of prostate cancer and the nurse's role in educating patients along with the nursing management strategies developed at this center.

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ADVANCING ONCOLOGY NURSING PRACTICE: MONTHLY COLLABORATIVE CASE STUDY PRESENTATIONS.

LiChen Wann, MSN, ANP, RN, CCRN, Frances Cartwright-Alcarese, RN, PhDc, AOCN®, Max Sung, MD, Janet Van Cleave, MSN, ACNP-CS, AOCN®, Jane Brown, RN, BSN, OCN®, and Rita Jakubowski, RN, ANP, MS, Mount Sinai Medical Center, New York, NY.

Expert nursing practice is associated with improved patient outcomes. To develop expert nursing, The Mount Sinai Medical Center's Oncology Care Center Performance Improvement Committee (OCCPIC) explored methods to enhance nurses' knowledge emphasizing evidence-based practice. The OCCPIC reviewed patient outcomes of general satisfaction surveys, chart reviews, and clinical observation. This data revealed that there is a need to include oncology-specific strategies in the patient's plan of care. This article describes the development and implementation of a professional education project of case study presentations to the oncology interdisciplinary team (OIT) using advanced practice nurses (APN) as mentors working collaboratively with clinical nurses (CN) to enhance oncology staff knowledge. The Outcome Present State Test (OPT) Model of Reflective Clinical Reasoning (Pesut & Herman, 1999) provided the framework for this project. The major concepts in the model include the client's story, cue logic, reflective clinical reasoning, framing, decision-making, testing, and judgment. The case presentation consists of comprehensive oncology nursing history, physical examination, pertinent diagnostic testing, interdisciplinary consultation, and nursing diagnoses concerning physical, psychological, social, spiritual, and financial aspects of caring (PPSSF). The APN and CN present two case studies monthly to the OIT using the OPT framework to stimulate discussion and develop clinical reasoning. The OIT includes all professionals in the following areas: inpatient units, bone marrow transplant program, ambulatory units, and radiation oncology. A continuing education credit is offered to all participants. Weekly meetings are held to refine and revise the program based on participant feedback. Program evaluations, increasing attendance, and overall response to the presentations suggest that the interdisciplinary oncology team is eager to learn. Ongoing monitoring of this project is conducted by the OCCPIC. To determine improvement in patient outcomes, there will be periodic reviews of the general satisfaction survey data, chart reviews, and clinical observation will be conducted.

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MULTIDISCIPLINARY MANAGEMENT OF CANCER-RELATED MALNUTRITION IN AN INPATIENT GASTROINTESTINAL/HEPATOBILIARY UNIT.

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Maintaining adequate nutritional status is a serious problem affecting oncology patients. Malnutrition is a major contributor to morbidity, mortality, and decreased quality of life. Gastrointestinal (GI) and hepatobiliary (HB) cancer populations are at high risk for these problems and pose a significant challenge to healthcare providers. Understanding this complicated population can lead to effective management strategies including early nutritional screening and assessment with a well-defined nutritional plan of care. At this NCI-designated comprehensive cancer center, a multidisciplinary team including doctors, nurses, and nutritionists is committed to detecting and managing the malnourished patient with the goals of improving nutrition and enhancing quality of life.

Cancer treatments such as chemotherapy, radiation, and biotherapy administration, and surgery performed to eradicate or control malignancies increase vulnerability to malnutrition. Patients are often malnourished prior to diagnosis, with weight loss as a presenting symptom, and the aforementioned treatments can compound the effects on their nutritional status causing loss of appetite, nausea, vomiting, diarrhea, fatigue, and mucositis, leading to decreased oral intake and subsequent weight loss.

Collaboration among the healthcare team is essential in understanding the scope of the problem and formulating an action plan. The admitting nurse performs an initial assessment for such patients, which is essential for determining those at risk for malnutrition. The nutritionist gathers data from the initial nursing screen and reviews the medical record to determine the patient's level of nutrition risk based on diagnosis, percent weight loss, and planned treatment. The patient is then interviewed to obtain an in-depth diet history, and then a nutrition care plan is instituted.

A team approach is essential in providing patients with comprehensive nutritional care and the best resources to meet their unique needs as they arise along the continuum. This presentation will: 1) provide an overview of malnutrition and its associated symptoms among GI/HB oncology patients, 2) outline the multidisciplinary plan of care for identifying and managing malnutrition, 3) describe the nurse's role and responsibilities on the GI/HB unit, 4) describe an innovative method of meal delivery called Room Service, and 5) describe an effective patient/caregiver education plan for combating treatment or palliation malnutrition.

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MANAGING PATIENT POST HEPATIC ARTERIAL EMBOLIZATION: THE INPATIENT NURSE'S ROLE.

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The incidence of hepatocellular cancer (HCC) is on the rise. Surgical resection is the only curative treatment modality for this aggressive malignancy. Many patients diagnosed with HCC have inoperable disease because of underlying cirrhosis, secondary to predisposing conditions such as viral and alcoholic hepatitis. Distant metastatic disease or locally advanced tumors may preclude a curative resection.

Since only 10%–25% of the patients with HCC are eligible for surgical resection, other treatment modalities have been incorporated into the treatment algorithms. In the past decade, a variety of interventional radiologic procedures have been employed for the local control of HCC. HAE is a palliative radiologic procedure used to control symptoms and delay disease progression. The interventional procedure occludes the specific blood supply to the tumor thereby inducing necrosis and inhibiting growth, while preserving normal liver parenchyma and function.

At this NCI-designated comprehensive cancer center, approximately 150 HAE are performed annually. Clinical management and treatment of these patients is complex and best accomplished by a multidisciplinary healthcare team. Nursing interventions focus on physical care, psychosocial support, and patient/family education. Nurse's collaboration with the medical staff and support disciplines ensures optimal patient care post HAE. Nursing care is directed at prompt recognition of symptom management of potential side effects.

A common complication associated with embolization is Post Embolization Syndrome (PES), which consists of fever, nausea, vomiting, leucytosis, and pain resulting from cell lysis. Other complications include sudden fluctuation in blood pressure, septicemia, bleeding, biliary complications, liver abscess, and hematoma. It is imperative that the inpatient nurse understands the complications associated with this procedure in order to better manage the patient in the post-procedure period.

For nursing, the management focuses on understanding the anatomy, pathophysiology, procedure, and treatment complications, thereby facilitating the care the patient will receive post embolization. This presentation will: 1) provide an overview of the disease and HAE treatment, 2) describe patient/caregiver education, and 3) describe the inpatient nurses role in managing complications post HAE. As more interventional procedures are on the horizon for palliation of HCC, inpatient nurses will face new challenges in order to provide effective, safe patient care.

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END-OF-LIFE EDUCATION FOR CONTINUING EDUCATION PROVIDERS.

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Nursing research has demonstrated that formal education has not prepared practicing nurses to provide optimum EOL care; yet, care of patients at the EOL is contingent on adequate preparation of nurses. The End-of-Life Nursing Education Consortium (ELNEC) is a unified effort to address this need. The purpose of this Robert Wood Johnson Foundation-funded project (2000–2003) is to develop and implement a comprehensive national effort to improve EOL care by nurses through collaboration between the American Association of Colleges of Nursing (AACN) and City of Hope (COH). Based on the AACN "Peaceful Death" document, the ELNEC curriculum focuses on nine EOL core areas with detailed teaching materials to integrate the content from these nine areas into nursing curricula and clinical practices. This project is a synthesis of research and knowledge in EOL care and is intended to assist clinical nurses with implementing scientifically-based care in practice. Two national training courses held in 2001 and 2002 focused on CE providers. This presentation will provide evaluation data from 200 participants in clinical settings (i.e., hospitals, home, cancer centers). Results are derived from the course evaluations, pre-assessment surveys with comparison at 12 month follow-up post course, and participant goals conducted pre-course, immediate post-course, and at 6- and 12-month intervals post course. Preliminary pre-course results have demonstrated that the participants feel that CE programs ($x = 5.99$) and CE educators ($x = 6.93$) are moderately effective in teaching EOL (scale of 1 = not effective to 10 = very effective). EOL is perceived as very important to basic nursing education ($x = 9.51$) (scale of 1 = not important to 10 = very important). Barriers cited to EOL content and implementation in CE programs included time, priority, budget constraints, physician and administrative support, staff fears and anxieties, and lack of clinical experience. This national organized effort is a major step toward preparing clinical nurses and strengthening nursing knowledge in EOL care to improve care of the dying.

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TOTAL SYMPTOM SCORES IMPACT HOSPICE PATIENTS' FUNCTIONAL STATUS AND QUALITY OF LIFE.

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Symptom management is a principle of palliative care. Uncontrolled symptoms, individually or in clusters, affect the functional status and quality of life of hospice patients. Our lack of knowledge about symptom clusters impedes effective symptom relief. Thus, further research is needed on the impact of symptom clusters. The purpose of this study was to identify individual symptoms and symptom combinations or clusters experienced at end of life and evaluate their relationship with functional performance and quality of life. The UCSF School of Nursing Symptom Management Faculty Group's Model for Symptom

Management served as the conceptual framework for this study. The model's broad perspective of symptom management includes three dimensions: Symptom experience, symptom management strategies, and symptom outcomes. This descriptive, correlational study focused on symptom outcomes. Participants were English-speaking adult hospice patients not actively dying and not delirious. The Mini-Mental Exam screened for cognitive impairment. Data collection instruments included the Edmonton Symptom Assessment System, Palliative Performance Scale (function), and Missoula-VITAS Quality-of-Life Index. A convenience sample of 50 hospice patients included 26 females and 24 males. Their ages ranged from 40 to 96 years; mean age was 73 years. Sample was 82% Caucasian, 10% Black, and 8% Hispanic. Sixty-eight percent had a cancer diagnosis. Most common cancers were lung (18%), colon (8%), and prostate (8%). Thirty-two percent had non-cancer diagnoses. Most prevalent non-cancer diagnoses were CHF and COPD. Data were analyzed using descriptive statistics (means, standard deviations, percentages, and frequencies) and Pearson correlation coefficients. Results suggest that symptom combinations may have a synergistic effect on quality of life and functional status. There were significant negative correlations between depression, general well-being, and quality of life. However, none of the univariate symptoms remained significant in the multiple regression analysis. The correlations between the total symptom score, quality of life, and functional status remained significant in the negative direction. Findings support the need for more research in order to understand the effects of symptom clusters (3 symptoms) or multiple symptoms (more than 3) on quality of life and functional status.

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GRIEF AND LOSS FOR PROFESSIONALS: PROVIDING A SHELTERING FORUM FOR EXPRESSION, FEEDBACK, AND VALIDATION THROUGH "STAFF GRIEF AND LOSS ROUNDS."

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Oncology professionals are routinely involved in helping patients and their families cope with the difficult issues surrounding a serious life-threatening illness. This process often involves walking with individuals during the most difficult times in their lives. As a result, these professionals face the enormous task of dealing with their own grief as well as the grief expressed by others. Most emerge as different people for having experienced this process. It is with this in mind that this NCI-designated comprehensive cancer center developed a grief and loss program to assist staff in dealing with this grief. The "Staff Grief and Loss Rounds" are coordinated by an advanced practice nurse in concert with other oncology professionals including individuals from psychiatry, social work, and art therapy. The monthly meetings are comprised of alternating open forums and educational sessions. Topics included: "Coping with Professional Grief through Art Therapy," "Coping with Grief after the Loss of a Pediatric Patient," "Cultural Issues Surrounding Grief and Loss," a panel presentation "Discussing End-of-Life Issues with Patients and Families," and a live butterfly release to celebrate transformations called "Sheltering Wings." These rounds provide a safe shelter for staff by emphasizing sensitivity and respect for all participants. Through open discussion, these professionals obtain support from each other and learn from their peers. Implications for nursing include the provision of a mutually supportive environment that allows for sharing, reflection, and possible referral; the fostering of personal integrity and that of the team; and the validation of oncology professionals' contributions to patient and family care.

This presentation will describe program design and implementation, the successes and challenges realized, ideas for future programs, as well as potential avenues for research.

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TESTING OUTCOMES OF PALLIATIVE CARE AND SYMPTOM MANAGEMENT TRAINING FOR PARAPROFESSIONALS (NURSING ASSISTANTS AND HOME HEALTHCARE AIDES) IN THE NURSING HOME AND REHABILITATION SETTING.

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Paraprofessional caregivers (nursing assistants and home health care aides) provide the most frequent and intimate care to individual patients in nursing homes and are in the best position to observe changes in a resident that signal new symptoms, pain, or other problems. Eighty-four nursing assistants and 70 other staff were trained to observe and report pain, other symptoms, psychosocial, and spiritual needs of residents they cared for, including the use of a 5-POINT Guide to Palliative Care Communications. The nursing assistants were trained to report their observations on a two-page Palliative Care Indicator Report attached to the daily report completed about care given to individual residents. The overall group profile of these CNA trainees was African-American/American Indian, 70%; born outside the United State, 88%; 47% graduated from high school; 40% some college; and 56% 10 or more years of experience in long term care. Post training, 87% showed improvement in understanding and application of observation and reporting skills. The highest amount of change occurred with trainees who had low scores on the pretest, and CNAs who used their native language at home, showed a higher mean level of change. But this was not statistically significant. Data analysis of implementation of the Palliative Care Indicator Report showed that 148 nursing assistant reports of pain or other symptoms, affecting 109 residents, resulted in one or more interventions by clinical staff. Several nursing assistants reported indicators of approaching death for residents who died unexpectedly. More importantly, 76% of nursing assistants stated the reporting process made it easier to report to nurse supervisors, 71% said they were much more aware of resident needs, 83% said reporting helped them give better care to residents, and 54% said it made their work more rewarding. Ninety-eight percent of the nursing assistants said they would continue to observe and report resident palliative care needs, and many voluntarily continued to use the Palliative Care Indicator Report after the conclusion of the study, stating they found it a valuable tool.

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IMPROVING CHEMOTHERAPY SAFETY IN A MULTISPECIALTY TERTIARY REFERRAL CENTER.

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Chemotherapy safety has become an increasingly targeted issue in health centers focusing on the prevention of medication errors.

Multi-specialty tertiary referral centers have many issues in the area of chemotherapy safety. These include both physician and nursing education issues as well as environmental and pharmacy issues. Because tertiary referral centers are both multi-specialty and teaching hospitals with high staff turnover, the potential for chemotherapy errors is even greater. The purpose of this performance improvement project was to identify current practice issues and develop strategies to improve chemotherapy safety on both the medical oncology and bone marrow transplant unit at this center. Preliminary safety issues identified included chemotherapy being a high risk, high volume activity on both units, no clear chemotherapy competency process for nursing, no formal process in place for chemotherapy administration by nursing, and incomplete or unclear orders from physicians.

Interventions: A multidisciplinary chemotherapy safety committee including physicians, pharmacists, and nurses was established. A chemotherapy criterion checklist was devised and included in the chemotherapy administration policy. The chemotherapy documentation note was revised to include required elements of the criterion checklist. A pre-printed chemotherapy order sheet was designed.

Results: The interventions were implemented for one month on both units. At the end of the month, 20 charts were reviewed per unit. Modifications were made to the documents and the nurses were re-educated after the first data set. Two separate data sets were obtained tracking nine identified key elements to determine the percent of compliance with the new process. This poster will present six months of data since the initial implementation of the process changes.

Implications for nursing: The data supports that the changes increased compliance in the administration and documentation process for chemotherapy administration. Standardizing the process has, in turn, increased the safety of the nurses administering chemotherapy and the patients they treat.

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DON'T WAIT FOR SOMETHING BAD TO HAPPEN TO CHANGE PRACTICE: AVOIDANCE OF SENTINEL EVENTS BY LEARNING FROM NEAR MISSES.

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Background: A major area of concern in healthcare is development and maintenance of patient safety standards. One area of patient safety is "near miss" events. "Near miss" events are errors that do not result in harm. When a near miss occurred on an infusion unit in a comprehensive cancer center, it was used as an opportunity to evaluate and change the unit-based practice standards.

Intervention: The near miss event involved a patient in the process of being discharged when it was discovered that the final chemotherapeutic agent had not been administered. Immediate discovery and correction resulted in no patient harm and transformed it into a learning experience: (1) One of the nurses brought her involvement to the attention of the nurse manager. It was recognized that this event created anxiety and frustration for her and the other staff involved. (2) The group of nurses involved was called together to discuss all of the related details, including identification of contributing factors. (3) The group reviewed current unit practice and discussed possible improvements. (4) Suggestions from the group members to change practice were delineated. (5) At a unit staff meeting, the group presented the incident, contribution factors, and suggestions to change unit practice. (6) The entire staff was invited to share any similar situations that they may have witnessed and their ideas for improving current practice. (7) Changes in unit practice standards were implemented.

Evaluation: After six months, no similar near misses have occurred. Staff provided positive feedback on the processes that took place.

Discussion: Critically reviewing near miss incidents is a valuable tool that can be utilized to improve practice and patient safety at the unit level. Discussion of a near miss event gives everyone the opportunity to critically evaluate systems that are currently in place and the role they play in patient safety. Inclusion of staff in the process enables them to proactively evaluate practice, identify concerns, and make changes that result in quality improvement.

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HANDS-ON LEARNING: EDUCATING NEW ONCOLOGY NURSES IN A SKILLS LAB ENVIRONMENT. Michelle Koeppen, RN, MSN, AOCN®, and Deborah Hay, RN, BSN, OCN®, The Cancer Institute, Kansas City, MO.

Rationale: The Cancer Institute provides cancer treatment education to the oncology staff of area hospitals within two hospital systems. A one-day didactic program, "Introduction to Chemotherapy," is offered several times a year. The employees then return to their institutions to complete a hospital certification written exam and complete a skills validation sheet with a mentor on the unit before being allowed to give chemotherapy without supervision. Evaluations from the "Introduction to Chemotherapy" course revealed that many participants found the didactic information to be overwhelming, creating anxiety while they continued the process to administer chemotherapy. The instructors sought to alleviate some of that fear and developed a "skills lab" program to be completed a few weeks after the "Introduction to Chemotherapy" course and before the written exam.

Program: The skills lab contains several components. Four case studies with questions regarding chemotherapy administration, side effects, dosage calculations, and extravasation are used. Participants are given the case studies upon completion of the chemotherapy class, allowing them time to research answers. At the skills lab, each room simulates a client case. Participants circulate through all four rooms receiving hands-on instruction and practice including setting up an infusion pump/system for chemo administration, reviewing assessment/administration skills, accessing a port-a-cath, and having an opportunity to administer a mock vesicant through a peripheral IV. One case discusses a patient with lymphedema and our lymphedema rehabilitation program. An additional station demonstrates how to use a chemotherapy spill kit. Participants are also encouraged to take their certification written exam at the lab.

Conclusion: Skills lab evaluations are full of positive comments from participants. In response to what was most helpful, most responded, "seeing administration demonstrations and discussing the case studies in a relaxed, learning environment." The percent of nurses who successfully complete the written exam at the first sitting has also increased. With the addition of a skills lab into our education process for chemotherapy administration, we have decreased anxiety of the nurses while increasing their learning through hands-on opportunities.

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THE CHEMO OLYMPICS: A FUN APPROACH TO SAFETY IN CHEMOTHERAPY PRACTICE. Aiko Kodaira, RN, MS, OCN®, Johns Hopkins Hospital, Baltimore, MD.

Patient safety is the major focus in our NCI-designated comprehensive cancer center. We have instituted safety measures such as a chemotherapy checklist and pre-printed standing chemotherapy order sets along with a revised chemotherapy orders by nurses, which resulted in more frequent phone calls to physicians for order clarifications to meet the protocol requirements. At times, this caused friction between nurses and physicians with nurses often feeling like the "Chemo Police."

Coinciding with the 2002 Winter Olympics, one of our physicians suggested holding a "chemo olympics." We believed that by making a contest out of chemotherapy protocol, their practice would be improved. Nurses anticipated that this would increase patient safety and decrease the time required to clarify and correct orders. The clinical nurse specialist (CNS) designed a scoreboard with the rules attached. The rules were simple. Physicians were awarded points for perfectly written chemotherapy orders. Each time a physician wrote a chemotherapy order, the CNS evaluated it and awarded points. If orders needed clarification, points were taken away. To make the game even more fun, the nurse manager could award 10 "special points" for outstanding chemo-related jobs. Friendly competition developed with the physicians making sure their orders were correct in order to receive the earned points. The race for the highest score was neck-and-neck, so some friendly bribes, such as bringing bagels for the staff, earned them extra points. The olympics increased awareness of the prescribing requirements of the chemotherapy protocol and promoted a sense of teamwork. The number of phone calls for clarification decreased as the clarity of chemotherapy orders increased. The nurses felt less pressure to be the "chemo police." Subsequently, the "chemo world cup" was held. The "chemo world series" and "chemo super bowl" are upcoming events planned in the spirit of friendly sporting competition to improve chemotherapy safety.

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PERCEIVED CANCER WORRY IN WOMEN WITH HEREDITARY RISK FACTORS FOR BREAST CANCER. Lois Loescher, PhD, RN, University of Arizona, Tucson, AZ.

Cancer worry is a phenomenon receiving increased scrutiny by researchers. Studying cancer worry may elucidate its relationship with other variables, such as perceived risk of cancer. Familiarity with cancer worry also may enhance understanding of its impact on decisions to engage in cancer risk-reducing behaviors. Knowledge of the genetic basis of cancers has generated studies of cancer worry in individuals with strong hereditary risk factors for certain cancers. Cognitive emotions theory implies that such individuals may not only worry about if they will get cancer, but when it will occur and what cues may herald its onset. This cross-sectional, descriptive study assessed cancer worry in 200 healthy women with hereditary risk factors for breast cancer. Women were recruited via a mammography center and network sampling. Participants completed demographic questions and the investigator-developed "Thoughts about Cancer Scale" (TACS) (Cronbach's alpha = .73; intraclass correlation = .83, fit indices > .0.97). The 6 TACS items were generated from previous qualitative work and the literature. TACS total scores ranged from 6 (rare/never thoughts of cancer) to 24 (think about cancer all the time). Data analysis used frequency distributions, t-tests, and simple regression. Participants were a mean age of 49 years (SD = 14). Most participants worried about breast cancer (81%) and thought about it at least sometimes or more often (86%). However, they rarely/never: thought about cancer when sick (81%), were hypervigilant with breast self-exam (55%), felt breast lumps that were not validated by healthcare providers (87%), or thought every ache or pain was cancer (85%). Differences of total mean TACS scores of participants who thought about cancer sometimes or more frequently (20%) and those who rarely/never thought about cancer (80%) were significant (t (47) = -13.4, p < .000). Total TACS scores predicted intent to practice cancer screening/prevention behaviors (p = .001) and genetic testing (p = .000), but did not predict perceived absolute risk of cancer. Assessment of general cancer worry may help guide counseling for cancer risk-reduction in women at high risk for breast cancer. Findings support additional research to characterize relationships of cancer worry, perceived risk, and symptom cues.

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CANCER FAMILY HISTORY: HOW TO DRAW A PEDIGREE. Martha Weinar, RN, MS, Pennsylvania Hospital, Philadelphia, PA; and Lisa Aiello, RN, MSN, Pennsylvania Hematology Oncology Associates, Philadelphia, PA.

The Human Genome Project has allowed us the ability to sequence the entire human genome. Several deleterious genetic mutations have been identified that, when present, dramatically increase one's risk of developing certain cancers. Through DNA sequencing, scientists are often able to determine whether or not an individual carries such a deleterious mutation. Oncology nurses now have the added responsibility of assessing patients and their families for cancer syndromes to help determine if such a mutation might exist. Oncology nurses need to be educated on the most fundamental steps of performing a risk assessment. It is important to identify individuals who are at increased risk of developing cancer so that they can be counseled on appropriate screening guidelines and/or available risk reduction strategies. Perhaps the most important tool in identifying high-risk individuals and families is the pedigree. Through this visual representation, oncology nurses are able to assess the likelihood of an individual or family carrying a particular mutation.

A pedigree is a visual representation of a family tree depicting the presence and pattern of cancer in a family. The pedigree reveals whom in a family had cancer, the age of onset, the type of cancer, and the relationship of those affected by cancer. This multi-generation drawing provides the clinician with a comprehensive view of cancer in the family and dictates whether or not further evaluation (i.e., genetic testing, high risk counseling) is indicated. Circles represent females and squares represent males. Solid figures represent family members who have been affected and open figures represent either carriers of a mutation or unaffected family members. Lines are drawn to represent relationships such as siblings and offspring.

With the use of this visual tool, oncology nurses will be able to screen patients and determine if further evaluation is recommended. If a pedigree reveals that a pattern of cancer exists in a family, the patient can be referred to a cancer risk evaluation program for in-depth genetic counseling and possibly genetic testing. This will provide patients and family members with appropriate information necessary to make informed decisions about their future health care.

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ADVOCATING FOR FUTURE GENERATIONS: SPERM BANKING.

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The topic of sexuality often causes discomfort between nurses and patients. The need for immediate treatment may override the need to discuss the future growth of men wishing to bear children. Cancer treatment may compromise a man's fertility. Oncology nurses are familiar with the concept of sperm banking; however, the difficulty rests in applying this knowledge to the patient's situation. The purpose of this paper is to outline steps in identification and use of community resources to offer oncology patients for whom sperm banking may be an option. Education of oncology nurses of the patients' risk of impaired fertility and the process of sperm banking is crucial.

Prior to treatment for cancer, it is advisable for men who wish to preserve their fertility to have their semen analyzed for consideration of sperm banking. The first step incorporates a sperm analysis for count, morphology, viability, and motility. This requires three ejaculates performed with three days between each collection, possibly delaying treatment. The oncology nurse can provide a quick resource guide that may decrease waiting times and determine if sperm banking is feasible. Resources include use of referrals from local obstetric and gynecology practices, local yellow pages, the Internet, as well as national cryobanks. Exact services provided, addresses, and phone numbers should be included. Wide dissemination of these resources and education includes nurses, physicians, and social workers. Periodic updating is necessary to ensure accuracy. Use of this resource guide has proven useful and increases nurse-patient comfort levels regarding sperm banking.

At time of diagnosis, cognitive, physical, and emotional issues overwhelm many families. Preserving male fertility may not be considered. Oncology nurses and other healthcare professionals are in an optimal position to educate patients on survival and quality-of-life issues. Timing is crucial. As oncology nurses, it is our responsibility to educate our patients at time of diagnosis regarding available options.

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DEVELOPING NICARAGUAN NURSES AS LEADERS IN CANCER PREVENTION AND CONTROL: PREPARATION FOR A NURSE-MANAGED, COMMUNITY-BASED BREAST AND CERVICAL CANCER PREVENTION AND CONTROL PROGRAM.

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Background/rationale/purpose: Prevention and control of breast and cervical cancers has been cited as a health priority in developing countries such as Nicaragua. Nicaraguan nurses can be leaders in improving breast and cervical cancer outcomes for underserved, high-risk women in their country by designing, implementing, and evaluating culturally appropriate cancer prevention and control programs. Nicaraguan nurses need to develop competencies in cancer control tailored to the needs of Nicaraguans in order to attain and sustain this goal of cancer health.

The purpose of this presentation is to describe the development, implementation, and evaluation of a breast and cervical cancer health course for Nicaraguan nurses and physicians to help them become leaders in breast and cervical cancer prevention and control. These efforts will be centered through a nurse-managed clinic and targeted to high-risk women living in a Nicaraguan barrio. Specific outcomes of the course included: 1) explore personal beliefs/values related to breast/cervical cancer prevention and control, 2) strengthen competencies in these same areas, 3) develop culturally-appropriate teaching materials, and 4) design a comprehensive plan for implementing a breast and cervical cancer health program.

Interventions: Course content and teaching strategies were planned by U.S. cancer nurses in partnership with Nicaraguan colleagues, and modeled after past successful projects and cancer control programs. The course served as the first step in a two-phase funded project and included 37 nurses and two physicians. Content included cancer, prevention and control concepts, personal meanings of cancer, Nicaraguan folk practices, and informed consent. Culturally appropriate teaching strategies included focus groups, discussions, group work, skill demonstrations, and clinical visits. A Spanish cancer resource library was developed.

Interpretation: Attainment of course outcomes was determined by pre-tests/post-tests, observation of breast examinations and PAPs, and project team daily self-evaluations. Participants developed realistic intervention plans to be implemented in phase 2. These evaluations and those conducted six months post-course, were positive and reflected attainment of outcomes.

Discussion: This collaborative international course model can assist other oncology nurses interested in developing nurses from other countries as leaders in cancer prevention and control, and in targeting other cancers in an attempt to improve global cancer health.

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PERFORMANCE IMPROVEMENT: STRATEGIES FOR SUCCESS.

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Performance improvement (PI) can be described as a philosophy based upon the continuous improvement of processes leading to improved outcomes and services. At the Clinical Center (CC) of the National Institutes of Health (NIH), PI is viewed as a process approach to problem identification and resolution utilizing systems thinking, data-driven decision-making, and emphasizing a customer/service focus and teamwork. Data is received and incorporated from multiple, sources including process management tools, indicator data, unit/department data, JCAHO preparation, and data from external sources. At the Outpatient Cancer Center (OCC) of the CC of the NIH, a knowledge deficit was identified among nurses regarding the process and implementation of PI. Staff nurses on the units were collecting indicator data at the local level and submitting this data quarterly to the performance improvement committee. Time spent collecting data was not always value-added, as problems pertinent to their units were not always addressed and solved. There was no clear relationship between data collection, use of the occurrence reporting system, and improving patient outcomes and services. To increase PI awareness and involvement at the unit level, and to prepare for a JCAHO audit, an educational approach was developed and implemented by the OCC PI team. Strategies included unit-based education of PI principles, a unit-based audit system, JCAHO "jeopardy" games, and bulletin boards highlighting specific topics. The overall goal was to exert positive influences on clinical practice, research integrity, and cost effectiveness. The program has been highly effective with the level of staff participation quadrupling in the identification and monitoring of performance indicators. JCAHO preparation activities have yielded excellent results reflected in both unit-level mock audits and overall scores received after the JCAHO visit. The implications for clinical practice are that a fun, interactive method to educate staff and increase their investment in the PI process can be developed and operationalized at the unit level. Our PI model promotes staff involvement as well as personal development resulting in increased employee satisfaction. Improving oncology patients' healthcare outcomes and increasing customer satisfaction are rewards beneficial to all.

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CULTIVATING SYMPTOM MANAGEMENT EXPERTISE ON AN INPATIENT ONCOLOGY UNIT.

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Effective symptom management for patients with cancer is essential throughout the cancer care continuum. Processes that enhance symptom management expertise among staff remain essential to the continuous improvement of oncology nursing care. Research on symptom severity ratings indicates that caregivers and healthcare providers, with the exception of hospice care providers, tend to underestimate patients' symptoms. The symptom experience, in the absence of expert nursing and collaborative symptom management, adversely affects patients' self-care and coping abilities and their quality of life, so the development of excellent symptom assessment and effective symptom management skills is a high priority for caregivers.

To determine the prevalence of symptoms in the oncology inpatient population and to evaluate the nursing staff's ability to accurately identify these symptoms, we performed two separate evaluations. The first, a patient interview, assessed a convenience sample of 30 patients for the presence of the following symptoms: pain, nausea and vomiting, diarrhea, constipation, sadness, anxiety, and shortness of breath. Of this group of patients, 87% (26 of 30) reported at least one of these symptoms. The second evaluation included a separate chart review of 30 inpatient records upon admission, revealing that 60% of these patients reported symptoms. Of the patients identified by chart review as symptomatic, 95% were identified by the admitting nurse as having at least one symptom, while 68% were identified by the house staff as symptomatic.

Strategies to improve overall symptom management in our setting have included the appointment of a symptom management nurse as a resource for nursing staff and house staff physicians, as well as an educational effort entitled "Symptom Management: Improving Quality of Life." The educational program, including pre- and post-testing, began with an 8-hour continuing education program and is now continuing with monthly inservices on symptom management including presentations and posters on specific symptoms. As our staff's collective proficiency in symptom management continues to increase as a result of expert mentoring, role modeling, and education, we hope to significantly improve symptom management in our inpatient oncology population.

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STRATEGIES FOR THE SUCCESSFUL INTEGRATION OF AGENCY NURSES: MEETING THE CHALLENGES OF A NURSING SHORTAGE. Lyle Baker, RN, BSN, Johns Hopkins Hospital, Baltimore, MD.

The impact of the nursing shortage has caused an increase in the use of agency nurses in many hospital units. On our hematological malignancies unit, up to 45% of our staff may be agency nurses on a given shift. This presents a challenge in terms of maintaining staff cohesion, teamwork, and a balance in shift coverage. Attention to chemotherapy and side effects, aplasia, infection, bleeding, and psychological support are critical components of patient care standards. To address these challenges, we developed a program to maintain quality while supporting agency nurses. We contract only with agency nurses who are oncology experienced and chemotherapy certified by the ONS. This lessens the orientation time, which allows for an easier transition for them into the unit operation. Agency nurses, who have cancer or hematologic malignancies experiences, are knowledgeable about many of the standards of care for this patient population. The clinical nurse specialist (CNS) provides structured educational supplements to them. The CNS also ensures that self-learning packets and skills checklists are completed during the orientation period. They receive e-mail, including all communications sent to the unit staff. They participate in staff meetings, which keeps them informed about changes in patient care standards. This provides them with a sense of belonging and establishes a climate of teamwork. Charge nurses on each shift are responsible for confirming that they are appropriately practicing within unit standards. We contract with them for full time hours or less desirable shifts over several months. This provides more structure, improves consistency in patient care, and decreases time required to frequently orient new agency nurses, which causes tension. More desirable schedules for the permanent staff improve retention and unit cohesion. Agency nurses have expressed a desire to join permanent staff. Our unit has effectively utilized agency nurses to provide adequate nurse-patient ratios and has maintained our standards of patient care and a climate of camaraderie and teamwork.

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EVIDENCE-BASED PRACTICE: A METHOD OF IMPROVING NURSING PRACTICE. Mary Boyle, RN, OCN®, Deirdre McGee, RN, BSN, Deborah Semple, RN, MSN, OCN®, Susan Derby, RN, MS, CGNP, Joanne Frankel Kelvin, RN, MSN, AOCN®, and Diane Loseth, RN, MSN, Memorial Sloan-Kettering Cancer Center, New York, NY.

Evidence-based practice (EBP) is increasingly advocated as a way of improving nursing practice. At this NCI-designated comprehensive cancer center, ambulatory oncology nurses used an EBP approach to improve nursing communication when breaking bad news to patients. The project was initiated in our research council. Through brainstorming techniques, we identified that healthcare providers often have difficulty communicating to patients that their cancer is no longer treatable and that they are close to dying. Avoiding open communication at this time results in lost opportunities to help patients and families address end-of-life issues and to optimize quality of life before a crisis develops. A team of interested staff was formed and bi-weekly meetings were scheduled. The first two meetings were spent clarifying thoughts and focusing the project. Two clinical questions were identified: “What are the barriers to effectively communicating bad news?” and “What strategies can effectively help to improve communication?” These questions guided the review of literature and search for evidence that the group critiqued and summarized. A lack of nursing resources lead to the use of the SPIKES model developed by Dr. Robert Buckman. This model is a sequential approach to dealing with bad news, initially developed to help physicians deal with difficult patient interactions, yet the group felt it was appropriate and useful for nurses in oncology practice. A two-part educational program was developed for nursing staff. A didactic session, presented as nursing grand rounds, outlined the steps of EBP and described the SPIKES model in detail. This was followed by interactive sessions on each nursing unit with an opportunity for discussion and role-playing.

This presentation will describe the SPIKES model and detail the steps of EBP used by oncology nurses at this center to improve nursing communication related to breaking bad news, thus improving nursing practice.

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MEASURING NAUSEA, VOMITING, AND RETCHING: THE MODIFIED RHODES INDEX OF NAUSEA AND VOMITING SHORT VERSION FOR RESEARCH AND CLINICAL USE. Ellen Saltzman, RN, BSN, Jane C. Shivnan, RN, MScN, Annemarie Tolman-Jager, RN, MS, Richard Mallik, RN, BSN, Mary Melvin, RN, and Jill Roman, RN, BSN, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Medical Center, Baltimore, MD.

Nausea and vomiting (N/V) remain common and distressing side effects of preparative chemotherapy regimens for blood and marrow transplantation (BMT) and other intensive chemotherapy. Planning appropriate treatment interventions is dependent upon accurate assessment and documentation of patients’ perceptions of these symptoms. The purpose of this clinical project was to identify a valid, reliable, and clinically useful instrument to assess N/V and retching in BMT patients. We compared the validity of the 8-item Modified Rhodes Index of Nausea and Vomiting Scale (RINV) with our shortened version of the scale, the Modified Rhodes Index of N/V-Short Version (RINV-SV). The RINV provides information about nausea, vomiting, and retching, and patients’ perceived distress regarding these symptoms (Rhodes, Watson, & Johnson, 1983). It has been widely used in studies of cancer-related N/V and has been shown to have an internal reliability of .90 and .98, respectively, using a split half procedure and Cronbach’s Alpha (Rhodes, Watson, & Johnson, 1983; Rhodes, Watson, & Johnson, 1987). The shortened version consists of 4 items taken from the original instrument and measures each of the sub-scales of N/V and retching. Content validity was confirmed by clinical experts. We compared the RINV with the RINV-SV as part of a randomized placebo-controlled clinical trial investigating the effectiveness of acupressure as adjunct to pharmacological control of emesis during the preparative regimen of BMT. Our instrument showed an internal consistency reliability of .92. The mean score of the RINV was 3.38 (range of 0–32), and the mean score of the RINV-SR was 1.83 (range of 0–16). The RINV-SV is reliable for BMT patients and has been incorporated into daily clinical assessment. In addition, the modified instrument is now the standard at our NCI-designated comprehensive cancer center and is used daily on each patient to assess and manage the symptoms of N/V and retching.

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SYMPTOM TRAJECTORY FOLLOWING 12 WEEKS OF BIOTHERAPY. Constance Visovsky, PhD, RN, ACNP, Case Western Reserve University, Cleveland, OH.

Significance: Patients treated for cancer with biotherapy experience alterations in muscle strength, peripheral nerve function, and increases in symptom distress. Studies of biotherapy-induced physiological changes have been few, and patients are not systematically monitored for long-term effects. Thus, the physiological changes accompanying biotherapy treatment represents changes in function for which patients and families are ill prepared. Limited data exist quantifying physiologic changes in muscle and peripheral nerve function in individuals receiving biotherapy.

Purpose: The purpose of this prospective, exploratory pilot study was to determine: 1) the change in muscle strength, peripheral nerve function, and symptom distress during treatment with biotherapy; 2) the relationship between the extent of these physiologic changes and symptom distress.

Theoretical framework: A physiological framework of neuronal degeneration and skeletal muscle alterations was used.

Methods: A convenience sample of 11 subjects with malignant melanoma receiving biotherapy had measures of peripheral nerve and muscle function measured at baseline, 4, and 12 weeks of treatment. A prospective, exploratory design was used. Data were analyzed using plots and regression slopes to determine change over time in peripheral nerve and muscle function and associated symptom distress. Independent variables were age, gender, and cumulative drug dose. Outcome variables were sensation, gait/balance, vision, hearing, vibratory sense, deep tendon reflexes, blood pressure, and symptom distress.

Results: Declines in hearing, vibratory sensation, deep tendon reflexes, and muscle strength were found. Changes in visual acuity and orthostatic blood pressure were noted from baseline to 12 weeks, while gait/balance remained stable. Alterations in peripheral nerve symptoms were associated with increases in symptom distress. Symptom distress increased from baseline to 4 weeks and began to decline by 12 weeks.

Implications for practice: The characterization of peripheral nerve and muscle changes can assist in understanding the nature of the physiological effects associated with high-dose biotherapy treatment and aid in preparing patients for anticipated changes in function and subsequent life-style adjustments. Study findings are essential to foster the development of interventions aimed at preserving functional status and decreasing symptom distress in patients receiving cancer treatment with biologic agents. (This study was funded by the ONS Foundation.)

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EVALUATING THE RELATIONSHIP BETWEEN CANCER PAIN INTENSITY, SATISFACTION WITH PAIN RELIEF, AND ATTITUDINAL BARRIERS TO PAIN MANAGEMENT: ANOTHER LOOK. Mary Thomas, RN, MS, AOCN®, Kathleen Fahey, RN, MS, and Marilyn Douglas, DNSc, RN, FAAN, VA Palo Alto Health Care System, Palo Alto, CA.

Despite increased focus on the problem, cancer pain (CP) remains a significant issue. Studies document that although some patients report high satisfaction with pain management, they also report high pain ratings (Dawson et al., 2002). The influence of attitudinal barriers to CP might be a factor in this paradox; research has documented that those with high CP have more attitudinal barriers (Ward et al., 1998). The purpose of this descriptive study was to further test the association between CP intensity ratings, satisfaction with, and attitudinal barriers to, CP management. Stress and coping theory provided the theoretical foundation of the study. Attitudinal barriers were measured by the Barriers Questionnaire (BQ); CP ratings were measured by the Brief Pain Inventory (both with established reliability and validity).

The sample of 151 non-hospitalized adults with pain due to cancer or its treatment was predominately male, middle-aged (M = 59.8 years, SD 12.2), and had a wide variety of cancer types. Patients rated their CP and satisfaction with pain relief using 0–10 numeric rating scales, their average CP over the previous week was rated at 4.7 (SD 2.1), worst pain was rated at 6.6 (SD 2.3), and least pain at 2.8 (SD 2.2). Pain management strategies provided an average relief of 59% (SD 30.1%); pain relief satisfaction ratings were similar (M = 6; SD 2.9). Current CP and lowest CP ratings were moderately correlated with % relief scores (r = -.40, -.312, respectively; p < .001). However, CP ratings were not well correlated with pain relief satisfaction. BQ subscale and total scores were low; they did not correlate with any of the CP, relief, or satisfaction ratings.

A subset of patients (n = 44) was interviewed. Qualitative data substantiated earlier findings that many barriers to CP management were based on communication and information issues, and on misunderstandings.

In contrast with previous studies, data from this study suggest that pain intensity, satisfaction with pain relief, or attitudinal barriers to CP management may not be well correlated. Further study is needed to understand these relationships. Efforts to enhance patients' understanding and to improve communication with providers may help patients better manage their CP.

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THE EXPERIENCE OF CHEMOTHERAPY-INDUCED NEUTROPENIA: QUALITY-OF-LIFE INTERVIEWS WITH ADULT CANCER PATIENTS.

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Background: CIN is a problem for many cancer patients, but its impact on quality of life (QoL) is not well understood, particularly in those cases where patients become neutropenic but never develop fever or other alarming signs of infection. This paper presents the results of a series of structured interviews with adult cancer patients about the effects of CIN on QoL.

Methods: Participation was restricted to cancer patients receiving the first cycle of a 21–28 day myelosuppressive chemotherapy regimen. Absolute neutrophil count (ANC) was assessed on days 7, 10, 14, 21, and 28 (if necessary). QoL interviews commenced when ANC fell below 1.5 x 109/L and at every time point thereafter. The QoL interviews asked about the effects of neutropenia since the previous visit in the following areas: physical feelings and sensations, daily activities, interactions with others, financial impacts, ability to work, sex life, emotions, satisfaction with medical care, thoughts about disease, thoughts about treatment procedures, and overall QoL. All interviews were transcribed and reviewed independently by two reviewers to isolate specific complaints and problem domains.

Results: 34 patients developed grade 4 neutropenia and were included in the analysis. 100 QoL interviews (mode per patient = 4) were transcribed, and two independent raters inductively developed 5 broad categories comprising 80 specific complaint domains. Fatigue was the most common physical symptom and was described in terms of being tired, exhausted, or weak. Interference in daily routine and social isolation were also common complaints that focused on restrictions attributed to being ill and prevention of infection. Patients reported psychological problems including feelings of reduced self-worth associated with inability to fulfill normal roles and feelings of sadness and anxiety about their disease and treatment.

Discussion: The results provide a rich description of the perceived impact of CIN on QoL and underscore the need for further consideration of treatments that minimize severity of CIN. Furthermore, the results can serve as a foundation for the development of neutropenia-specific research and clinical measures and guide research methods aimed at better understanding of the effects of CIN and the potential benefit of therapeutic and prophylactic treatments for CIN.

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ENGRAFTMENT SYNDROME POST NONMYELOABLATIVE ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION: NURSING'S ROLE IN EARLY DETECTION AND TREATMENT.

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The advent of non-myeloablative hematopoietic stem cell transplantation (NM-HSCT) has decreased the early morbidity and mortality associated with the procedure, thus allowing more patients to be transplanted. Although non-myeloablative preparative regimens decrease toxicities such as nausea, vomiting, and mucositis, NM-HSCT is still associated with transplant complications such as GVHD and engraftment syndrome (ES). Our purpose is to outline nursing's role in early detection and treatment of ES. The pathophysiology of ES likely includes initiation by alloreactive T cells, with subsequent inflammatory cytokine production, neutrophil degranulation, and oxidation, which clinically manifests as fever, rash, pulmonary infiltration, and generalized capillary leak. Diagnostic criteria used to define ES are: temperature of > 38.3 C with no infectious etiology, erythematous rash not attributable to medication, and noncardiogeneic pulmonary edema with oxygen desaturation. Twenty patients received a non-myeloablative conditioning regimen (cyclophosphamide and fludarabine) followed by HSCT from a 5/6 or 6/6 HLA-matched sibling. Eight of 20 patients (40%) experienced ES at the time of neutrophil recovery (median, day 8 post-SCT). Systemic steroid therapy (Methyprednisolone 250 mg q 6 hours) was initiated for patients who experienced pulmonary symptoms and/or a decrease in oxygen saturation (typically < 92%). A rapid steroid taper and close monitoring resulted in clinical recovery in all patients. Early detection and treatment for ES is crucial for positive patient outcomes. Nurses must be aware of this complication and its early symptoms in order to detect subtle, but significant changes in patient status and promptly inform the physician. Our nursing assessment during the engraftment period focuses on fluid, respiratory and skin assessment, as well as every 2–4 hour monitoring of vital signs, especially pulse oximetry, temperature, and BID weights. A well-established baseline of pulse oximetry and weight is critical in the detection of early changes. Engraftment syndrome and GVHD likely share pathophysiologic mechanisms and, as such, nursing attention should also be focused on signs and symptoms of GVHD, in particular, gut involvement. In conclusion, engraftment syndrome is a life threatening complication during non-myeloablative transplant, which requires astute nursing assessment and rapid intervention to improve patient outcomes.

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HEALTH PROMOTION AND BACK TO BASICS: INFLUENZA VACCINATION IN AN ADULT ONCOLOGY POPULATION.

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Purpose: The purpose of this project was to establish an influenza vaccination program within our ambulatory oncology practice. The goals were to provide patient education, establish easy accessibility to the influenza vaccine, and increase the rate of vaccination in our high-risk oncology population.

Background: The Centers for Disease Control and Prevention (CDC) have developed standards that recommend influenza vaccination for persons with altered immunocompetence. At the MGH Cancer Center, the majority of the patients fall within this criteria on the basis of having leukemia, lymphoma, generalized malignancy, therapy with alkylating agents or antimetabolites, and receiving radiation or large amounts of corticosteroids. Receiving the flu vaccination can prevent serious complications, illness, and even death from the virus. The MGH Cancer Center did not have a formal influenza vaccination program. This impacted on clinical operations and led to inconsistent practice.

Intervention: The importance for providing the vaccine presented an opportunity to develop and implement a vaccination program that would meet the CDC recommendations. A multidisciplinary task force designed the program to be easy, visible, and accessible for patients and staff. Through the support of the cancer center administration, funding was obtained. Educational materials based on the CDC recommendations for influenza vaccination and the new cancer center flu shot program were widely distributed.

A walk-in flu shot clinic occurred over a 4-week period during the month of November. A central location provided visibility and easy accessibility. Oncology RNs from various settings, pharmacists, and volunteers staffed the clinic.

Interpretation: The task force successfully developed a formal vaccination program for a high-risk oncology population. This program provided education related to the CDC recommendations. The walk-in design provided an easy, streamlined service. We were able to increase the previous vaccination rate by 125%. Positive feedback was received from both patients and cancer center staff. This program will be expanded and repeated on an annual basis.

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THE DEVELOPMENT OF A COMMUNITY ONCOLOGY COST MODEL FOR CHEMOTHERAPY-INDUCED NEUTROPENIA.

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Background: Chemotherapy-induced neutropenia (CIN) is a frequent problem for cancer patients that has been shown to produce significant financial burden. However, previous research has focused primarily on the medical treatment costs of febrile neutropenia (FN) defined in relation to patients, hospitals, and third-party payers. Less is known about costs incurred and staff resources utilized, especially by community oncology nurses in the continuous care of the full range of CIN, including patient education, monitoring of blood counts, and treating CIN. This paper describes a resource cost model currently being used in a national economic impact study of CIN in community oncology clinics.

Methods: The model is based on 21-day chemotherapy regimens. Two neutropenia-treatment scenarios are the focus of the model: chemotherapy with prophylactic granulocyte colony-stimulating factor (G-CSF) and chemotherapy without prophylactic G-CSF. Data were collected in four specific areas: Patient medical encounters (chemotherapy administration, nadir check, G-CSF treatment, etc.); practice medical events (phlebotomy, nurse triage, billing, etc.); medical tasks (specific, discrete behaviors of medical staff that constitute medical events such as patient teaching, hanging an IV antibiotic, marking the fee ticket, etc); and practice costs defined by dollar figures corresponding to the time expended by paid employees including physicians, nurses, technicians, and all supporting staff in performing medical tasks.

Results: A flexible outpatient-based cost model was developed. One hundred ninety-six (196) medical tasks (approximately 40% performed by nurses), 21 medical events, and 15 medical encounters were defined to form the basis of the model. The model is described in detail and graphical representations of treatment scenarios, medical encounters, medical events, and medial tasks are presented.

Discussion: The treatment of neutropenia in community oncology is a complex phenomenon that involves many professional people and activities resulting in substantial human resource cost. The model developed will serve as a useful tool in developing a national picture of these costs in community oncology. The identification of these costs may further understanding of practice dynamics operating in the care of CIN and will provide needed information to evaluate the cost effectiveness of G-CSF in the community oncology setting.

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A PROSPECTIVE EVALUATION OF PALLIATIVE OUTCOMES OF SURGERY FOR ADVANCED MALIGNANCIES.

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Surgery for malignant disease has focused on patient survival with less focus on the role of surgery in improved quality of life (QOL). Palliative surgery can improve QOL by relieving symptoms related to advanced malignancy. The purpose of this study was to evaluate patient outcomes following surgery. The QOL framework (Ferrell & Grant) and a clinical decision-making model served as the study theoretical framework. The sample included 59 patients who required a major operation and had advanced malignancy. Methods included medical record review and symptom assessment performed pre-operatively and at 2, 6, and 12 weeks postoperatively utilizing the Memorial Symptom Assessment Scale (MSAS) and the City of Hope QOL instrument. Data were analyzed using descriptive statistics and repeated measures analysis. Findings indicate that surgical indications were resection of recurrent disease (n = 28, 47%), metastasectomy (n = 17, 28%), or initial resection (n = 14, 24%) for gastrointestinal malignancy (n = 28, 47%), sarcoma (n = 16, 27%), and other (n = 15, 25%). The mean age was 58.5 years, M:F 28:31, hospital stay was 8.5 days (2–24), and 30-day mortality was 3/59 (5%). Six-month survival was 62%. Symptoms intended to treat among 33 symptomatic patients were pain (27/33, 82%), heaviness/pressure (7), tumor discharge/malodor (6), nausea/vomiting (6), and bleeding (4), with 20/33 (61%) reporting multiple severe symptoms. Other moderate to severe symptoms (= 2 on a 1–4 MSAS scale, 4 = very severe) reported were lethargy (46%), worrying (32%), lack of appetite (30%), difficulty sleeping (28%), nervousness (26%), and feeling sad (25%). While global QOL indices were unchanged at 3 months compared to baseline (MSAS -1.1, p = 0.3, QOL + 0.04, p = 0.97), symptom improvement for patients with symptom severity scores > 2 on MSAS scale were documented for pain (-1.17, p = .001), itching (-2.61, p = .001), vomiting (-2.14, p = .02), and lack of appetite (-1.55, p = .01). Findings suggest that symptomatic patients undergoing surgery for advanced malignancies can attain symptom relief. QOL outcomes can guide clinical decision making and study findings suggests that surgery is an important component of palliative care. Advanced understanding of the needs of patients undergoing palliative surgery and its impact on QOL is an important aspect of cancer care.

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RESPIRATORY SYMPTOMS AND PULMONARY STATUS OF SURVIVORS OF NON-SMALL CELL LUNG CANCER.

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Respiratory symptoms and pulmonary status of long-term survivors of non-small cell lung cancer (NSCLC), and the impact of these consequences on quality of life (QOL) have not been reported.

Purpose: To describe the pulmonary function and respiratory symptoms among long-term survivors of NSCLC and their relationship to QOL.

Methods: Cross-sectional survey of 5-year minimum survivors of NSCLC (n = 142), the majority (54%) female, average age 71 years. A multidimensional model of QOL served as the conceptual framework. Assessments included self-reported demographic and health status variables, frequency of respiratory symptoms as measured by the American Thoracic Society, the Short-Form 36 (SF-36), and hand-held spirometry. Data were analyzed using multivariate logistic regression to determine risk factors associated with presence of symptoms; multiple regression was used to examine the contribution of variables to dimensions of QOL.

Results: Survivors described an average of 1.3 (SD 1.2) symptoms: 25% cough, 28% phlegm, 31% wheezing, and 39% dyspnea at rest. The majority of those reporting cough also reported phlegm, wheezing, and dyspnea at rest. Thirty percent reported that they spent most of the day in bed because of respiratory symptoms; 22% had < 50% FEV 1% predicted; and based upon spirometry results, 50%, severe obstructive/restrictive disease. Risk of symptoms included use of bronchodilators (cough, OR = 2.9, wheeze, OR = 4.7), gender (phlegm, OR = .42), current smoking (phlegm, OR = 3.40), moderate/severe ventilatory disease (phlegm, OR = 2.5, wheeze, OR = 2.5, dyspnea at rest, OR = 3.5), comorbid conditions (dyspnea at rest, OR = 1.4), and exposure to second-hand smoke (presence of respiratory symptoms, OR= 3.6). Marital status, comorbid conditions, number of respiratory symptoms, and dyspnea at rest contributed to physical functioning (R2 = .38) and, excluding number of symptoms, to physical role limits (R2 = .27). Comorbid conditions, respiratory symptoms, and presence of cough and phlegm > 3 months contributed to general health perceptions (R2 = .26). Our findings suggest that the majority of survivors have few respiratory symptoms, but 50% have significant pulmonary impairment. Assessment of potential risk factors and management of respiratory symptoms is essential for survivors of NSCLC.

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A PROSPECTIVE STUDY OF PATIENT SENSATIONS AFTER BREAST CANCER SURGERY: A TWO-YEAR FOLLOW-UP.

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Topic: Many breast cancer patients describe distressing postoperative sensations and question if these feelings are normal. This phenomenon remains poorly understood. Few studies have evaluated sensations in patients who had sentinel lymph node biopsy (SLNB) compared to axillary lymph node dissection (ALND). Our study evaluated sensations over time and with different surgical procedures.

Purpose: To evaluate prevalence, severity, and level of distress of sensations at one week (baseline), 3, 6, 12, and 24 months after breast cancer surgery.

Theoretical Framework: This study is based on the University of California San Francisco Symptom Management Model in which careful symptom assessment is a prerequisite for effective symptom management.

Methods: Patients completed the Breast Sensation Assessment Scale (BSAS), an instrument developed by the investigators. The BSAS contains 18 descriptors of breast/axilla sensations. Patients recorded each sensation as present or absent, and if present, rated it on severity and level of distress. The BSAS demonstrated good reliability and validity in our previous studies.

Data Analysis: Prevalence, severity, and distress of sensations in different populations were compared using Fisher's Exact Test.

Findings and Implications: 246 patients completed the BSAS at baseline, 3, 6, 12, and 24 months. Surgery included SLNB+Breast Conservation (BCT)(51%), SLNB+Total Mastectomy (TM)(14%), ALND+BCT (19%), and ALND+TM (16%). At baseline, tenderness was the most prevalent sensation in SLNB and ALND and persisted in SLNB through 24 months. At 24 months, tenderness caused the most distress in both groups. Numbness and tightness became most prevalent in ALND at 3, 6, 12, and 24 months, and numbness was significantly more severe (p < .01) at those time points when compared to SLNB. Prevalence of phantom breast/nipple sensations in the TM population remained constant at baseline (39%), 3, and 6 months (38%), 12 months (37%), and decreased at 24 months (27%). In the total population, younger patients (< 50 years) had significantly more sensations at baseline (p < .01) than older patients (>50), and reported more numbness through 24 months. Certain sensations remain prevalent, severe, and distressing even two years after surgery. This information provides nurses with a better understanding of patients' experiences over time leading to more accurate patient education and preoperative preparation.

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EVIDENCE-BASED PRACTICE GUIDELINES FOR PROACTIVE MANAGEMENT OF NEUTROPENIA.

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Evidence-based practice guidelines are an important component of quality nursing care. Recently, several risk models for the evaluation and management of neutropenia have appeared in the literature. Since neutropenia is the most severe complication of myelosuppressive chemotherapy, the prevention and management of neutropenia and its complications represents an excellent opportunity for the development and implementation of evidence-based practice guidelines. As direct caregivers, oncology nurses are well situated to assess patients for potential risk factors for neutropenia and implement guidelines for the proactive management of this serious side effect. Our clinic reviewed various risk factors and risk models related to neutropenia in an effort to develop guidelines which we believe will ultimately decrease hospitalizations and maintain chemotherapy planned dose on time. Risk models of various states such as the Silber Risk Model for breast cancer and a model developed by Intragumtornchai for non-Hodgkins lymphoma (NHL) patients were evaluated. Studies by Lyman et al., Morrison et al., Gomez et al., and Caggiano et al. provided additional information regarding the risk of neutropenia in NHL patients. Important clinical risk factors identified by these models include first cycle absolute neutrophil count (ANC), age, chemotherapy dose, performance status, serum LDH, bone marrow involvement, and serum albumin of less than 3.5. We utilized risk factors and risk models developed for breast cancer patients, for NHL patients, and for elderly patients to develop evidence-based practice guidelines for the proactive management of neutropenia. Factors involved in guideline development and implementation included identification of a problem, review of available literature, a draft of guidelines, implementation of guidelines, and evaluation of the guidelines after use in the practice setting. Since development of the risk-based neutropenic guidelines, we have proactively implemented the guidelines on ten patients with breast cancer and NHL over the past eight months. Patient assessment since guideline implementation has been an ongoing evaluation of chemotherapy dose delivery and hospitalizations for febrile neutropenia. Follow-up of the first ten patients will be discussed.

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IMPROVING PAIN MANAGEMENT FOR THE POSTOPERATIVE THORACIC SURGERY ONCOLOGY PATIENT UTILIZING EPIDURAL INFUSIONS. Louisa Kan, RN, BSN, OCN®, Janet Taubert, RN, MSN, OCN®, and Tai Ly, RN, MSN, CS, CCRN, M.D. Anderson Cancer Center, Houston, TX.

An epidural infusion creates a localized band of analgesia at the site of incision without sedation, which is especially useful in thoracic surgery to overcome the splinting induced by pain. Patients are able to cooperate with respiratory therapy, mobilize secretions, and begin early ambulation. In the patient's satisfaction review in our inpatient thoracic surgery unit, 75% of the patients were satisfied with their epidural infusion pain control. Others experienced either pain during their pulmonary exercise and mobility or undesirable epidural narcotic complications. Pneumonia, or atelectasis, was complicated with the reluctant pulmonary exercise and mobility. Epidural narcotic complications, staff's inexperience in epidural administration, and patient's insufficient knowledge in epidural pain relief and use of the infusion pump were major causes of ineffective pain control. The goal of this project is to improve patient's pain management and decrease pulmonary complications. The PDCA (Plan, Do, Check, Act) quality improvement process is applied to identify the key elements of patient education, implement guidelines for epidural use for postoperative pain management into our nursing pain assessment and management standards, and to enhance effective communication amongst the staff and pharmacy. A postoperative pain service (PPS) committee was formed, consisting of an anesthesiologist, nurse practitioner, clinical nurse specialist, instructor, pharmacist, and clinical staff from thoracic in-patient unit and outpatient clinic to develop a patient teaching pathway, which provides a continuum of education. The committee also created a new pain assessment and documentation form for epidural infusions; the next step is to formulate in-services for educating staff. A new delivery schedule and paging system has been developed to directly page the corresponding pharmacist to reduce the waiting time for the epidural infusion bag. Our expected outcome is that the patient satisfaction rate with pain control will increase from 75% to 90% and there will be a decrease in the incidence of pulmonary complications. This remains a work in progress.

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THE NURSING ROLE IN THE MANAGEMENT OF STEREOTACTIC RADIOSURGERY FOR BRAIN TUMORS. Elisa Mangarin, OCN®, BSN, and Ethel Law, RN, BSN, NP, Memorial Sloan-Kettering Cancer Center, New York, NY.

Stereotactic radiosurgery (SRS) delivers a single high dose of focused radiation to a primary or metastatic brain tumor. It is indicated for patients who have ¼ 3 well-circumscribed lesions of < 4 cms each that are not easily accessed by surgery. A stereotactic head frame, secured by pins to the skull, is used for localization of the tumor and immobilization during treatment. The precision of this treatment minimizes side effects to normal brain tissue. SRS is an ambulatory procedure, and patients may resume normal activities within 24 hours post treatment. SRS has good clinical outcomes, is cost-effective, and has minimal adverse effects on quality of life. As a result, it is increasingly being offered to patients as a treatment option.

Safe and effective treatment with SRS requires a multidisciplinary approach and includes clinicians from radiation oncology, neurosurgery, neurology, physics, and MRI imaging. Radiation oncology (RO) nurses, as part of the SRS team, have a unique role and responsibility in caring for patients receiving this treatment. The RO nurse's involvement begins at consultation, assessing the patient for factors that may impact on treatment, and preparing the patient and family for the procedure with one-on-one teaching, supplemented by viewing a videotape and reading an educational booklet. Once the treatment date is established, the RO nurse coordinates scheduling with the radiology and neurosurgery services. On the treatment day, the nurse cares for the patient while the treatment is planned and administered, and provides and reviews discharge instructions, including a Decadron taper calendar. The nurse calls the patient the day after the procedure to assess for acute side effects and medication compliance.

To ensure continuity of care throughout the SRS experience, from consultation to treatment completion, radiation oncology nurses developed an SRS flow sheet. This systematically lists all steps in the process, ensures safety, especially when multiple nurses are involved in the patient's care, and enables easy patient care documentation.

This presentation will describe SRS, the RO nursing role, and the tools that have been developed by the RO nurse to assist in role implementation.

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A NOVEL APPROACH TO TREATING PATIENTS AFTER RESECTION OF MALIGNANT BRAIN TUMORS: DEVELOPMENT OF A NURSING CARE PLAN. Lisa Bowers, AA, and Mikaela Olsen, RN, MS, OCN®, Johns Hopkins Hospital, Baltimore, MD.

Traditional treatment of malignant brain tumors involves surgery to remove the tumor in combination with external beam radiation therapy. If the tumor cannot be fully resected, treatment includes external bean radiation therapy with or without chemotherapy. External beam radiation produces harmful side effects as normal brain tissues are unavoidably affected. These radiation treatments last approximately six weeks and while initially effective, tumors often recur. Due to the toxicities associated with external beam radiation, repeat treatment is not an option for recurrences. A new novel approach to treating malignant brain tumors after resection is GliaSite.

GliaSite is a unique balloon and catheter device designed to deliver a radioisotope to the resected tumor bed. An infusion port is located on one end of the catheter and a balloon at the opposite end. The infusion port is placed under the skull and the balloon is placed in the tumor bed. After implantation, the radioisotope is instilled into the balloon through the port using a non-coring needle. The radioisotope is contained within the balloon, allowing for emission of radiation through the balloon wall to the surrounding tissues for a time period of 3–7 days. This localized treatment targets the tumor bed while minimizing exposure to healthy tissue, making it an exciting option for malignant brain tumor patients.

Currently there is limited information available to nurses caring for GliaSite patients. In this presentation, a comprehensive nursing plan of care for a unique brain tumor therapy will be described as well as a review of the technology. The nurse plays a pivotal role in ensuring patient safety, minimizing radiation exposure to staff and visitors, and providing patient education and support. Thorough nursing assessment and prompt nursing intervention are essential in managing this patient population. Patients are at risk for seizures, mass effect, leakage of radioisotope from the balloon, and falls. Successful management of this patient population requires collaboration between the oncology nurse and the neurosurgery team, the radiation oncology team, and radiation safety. Oncology nurses should be familiar with this novel device in order to provide appropriate patient education and to ensure safe, quality care.

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PROVIDING INFORMATION FOR PATIENT RECOVERY: CREATION OF AN EDUCATION BOOKLET FOR BLADDER CANCER PATIENTS FOLLOWING CYSTECTOMY WITH NEOBLADDER RECONSTRUCTION. Mary Ellen Haisfield-Wolfe, RN, MS, OCN®, The James Buchanan Brady Urological Institute, Johns Hopkins Hospital, Baltimore, MD.

As health care continues to shift from shorter inpatient hospital stays to outpatient care, patient education increasingly is an important strategy in achieving a complication free and complete recovery. Treatment for organ-confined muscle invasive bladder cancer requires bladder removal and construction of a urinary diversion. A commonly performed urinary diversion is an orthotopic neobladder, which is the construction of a new bladder using a piece of intestine to construct a reservoir, which is anastomosed to the urethra. Even though a neobladder is a standard reconstruction, there is a deficit of literature and educational materials for patients. Providing patients with a booklet at the time of hospital discharge, explaining the immediate post-operative discharge instructions, symptom management guidelines, information on bladder retraining to recover continence, neobladder sexuality issues, and a follow-up surveillance schedule for cancer recurrence, can promote patient autonomy and improve the experience for patients and their families. A performance improvement project was initiated to develop a patient information booklet. The goal was to reduce fragmented and inconsistent care. Information to create the booklet was drawn from articles, procedure manuals, experts in urologic-oncology care, and physical therapy. The booklet was peer-reviewed and revised. Currently, 15 patients have used the booklet. After 20 patients have evaluated the booklet, it will again be revised and peer-reviewed. Patient evaluation results have been favorable. All 15 patients have rated the booklet as extremely helpful. Patients have asked for more information regarding incontinence supplies, sexual continence, mucous in the urine, and continence physical therapy. Information addressing these suggestions is currently being written and will be included in the revision. This project has created an educational booklet, which is literature based and peer reviewed. Although the booklet will only be used by a small percentage of bladder cancer patients, those with a neobladder reconstruction, all patients need quality educational materials to facilitate their recovery. Patients have reported routinely sharing the booklet with healthcare providers not familiar with neobladder reconstruction. Consequently, future plans include using the booklet to educate oncology nurses regarding the care of these patients and providing the information on-line.

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A PHASE I/II STUDY TO EVALUATE THE OPTIMUM DOSE OF PEGYLATED-INTERFERON IN PATIENTS WITH PLATINUM-RESISTANT OVARIAN, PERITONEAL, OR FALLOPIAN TUBE CANCER: A NEW TREATMENT APPROACH FOR PATIENTS WITH RECURRENT DISEASE. Jacalyn Gano, RN, MSW, OCN®, and Judith Wolf, MD, M.D. Anderson Cancer Center, Houston, TX.

Ovarian cancer is the leading cause of gynecologic cancer death in the United States. Most patients present with advanced disease and eventually relapse in spite of aggressive tumor reductive surgery and chemotherapy. Patients with peritoneal and fallopian tube cancers have a similar presentation. Unfortunately, responses to salvage chemotherapy in all three groups are disappointing. New agents are needed to improve responses and survival in these patients.

Interferons are a family of naturally occurring proteins that exert their multiple effects on cell proliferation and differentiation by binding to cell surface receptors. In addition to their antiproliferative effects, interferons down regulate bFGF and collagenase (agents involved in angiogenesis and metastasis). Interferons are active in several human tumors, including ovarian carcinomas. However, early studies of recombinant alpha interferon reported low response rates. Factors such as large tumor burden, short half-life, variations in dose and administration schedules, and frequent dose reductions due to toxicity may explain its limited activity. PEG-Intron is the union of interferon alpha 2b (Intron) and polyethylene glycol (PEG). The objective of conjugating Intron with PEG is to prolong plasma half-life, thus protracting the activity of the drug.

A clinical trial to establish the optimum dose of PEG-Intron is underway in patients with recurrent, platinum-resistant ovarian, peritoneal, or fallopian tube cancer. The potential utility of bFGF, VEGF, or IL-8 serum levels as surrogate biomarkers for predicting tumor response is also being studied. Eligible patients are randomized to either 1.0, 1.25, or 1.5 mcg/kg/week of PEG-Intron using a weighted randomization schema. Toxicity diaries and protocol compliance are monitored weekly by the research nurse. Patients are evaluated for response after 2 courses (8 weeks) of treatment. The most frequently reported side effects are asthenia, headache, flu-like symptoms, injection site reaction, rigors, myalgia, irritability, and depression. Reductions in neutrophils, white cells, and platelets have also been observed.

This presentation will review the protocol design and objectives, treatment plan, randomization schema, and patient response and toxicity data. The nurses' role in protocol planning and implementation, interventions used to manage/minimize side effects, and protocol-specific educational materials and data collection tools will also be highlighted.

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WHAT'S OLD IS NEW AGAIN: PATIENTS RECEIVING HEPATIC INTRA-ARTERIAL CHEMOTHERAPY. Diane Barber Fedricker, RN, ANP, BC, AOCN®, M.D. Anderson Cancer Center, Houston, TX.

Hepatocellular carcinoma (HCC) ranks as the eighth most common cancer in the world. Although rare in Canada and the United States, the incident rate of HCC in the United States has increased by 70% within the past two decades. Generally, the most frequent causes of malignant hepatic disease in the United States are metastases from primary tumors of the gastrointestinal tract, breast, and lung. Surgical resection and systemic chemotherapy are the standard treatments for this disease. However, surgery is not an option for patients with advanced disease, and the response rate from systemic chemotherapy remains low. An alternative therapy for patients with HCC or metastatic liver cancer is hepatic intra-arterial chemotherapy (HAI). HAI chemotherapy is the infusion of a chemotherapeutic drug through the hepatic artery directly into the liver. This method allows a high total body clearance and hepatic extraction, so as to generate high hepatic and low systemic exposures. Several methods are used to deliver HAI chemotherapy: Percutaneous arterial catheters, implanted arterial ports, or an implanted arterial infusion pump. Our center uses the percutaneous arterial catheters. The catheter is placed percutaneously via a femoral approach by the interventional radiologist. A radionucleotide flow study is performed after placement to verify hepatic perfusion. Once the placement is verified, the catheter is connected to an external pump for HAI chemotherapy administration. Patients are placed on bed rest while the HAI catheter is in place. Intra-arterial or peripheral heparin is administered to maintain therapeutic anticoagulation to prevent thrombus formation. Once the HAI chemotherapy is complete, the HAI catheter is removed. Side effects most commonly reported by patients receiving HAI chemotherapy include nausea, vomiting, and gastritis. Catheter displacement and hepatotoxicity are the major complications associated with HAI therapy. Nursing implications for patients receiving HAI therapy include nursing assessment for sign/symptoms of HAI catheter displacement and diligent daily monitoring of liver function tests and activated partial thromboplastin time. Another component of the oncology nurse's role is teaching patients and their families about this unique procedure, the chemotherapy, potential side effects, possible complications, information regarding follow up and insurance coverage, and referral to social services.

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TREATMENT OF PRIMARY CENTRAL NERVOUS SYSTEM LYMPHOMA WITH HIGH-DOSE METHOTREXATE: NURSING'S UNIQUE CONTRIBUTION. Jessica Cloud, RN, AA, Jennifer Hauck, RN, BSN, and MiKaela Olsen, RN, MS, OCN®, Johns Hopkins Hospital, Baltimore, MD.

Primary central nervous system (CNS) lymphoma is a malignancy limited to the cranial and spinal axis without systemic metastasis. Untreated, the prognosis for primary CNS lymphoma is poor, with a median survival of approximately three months.

Methotrexate has been a key drug in the therapy provided to these patients. Clearance of high dose methotrexate is largely dependent upon renal function and urine Ph. Single agent high dose methotrexate used with leukovorin rescue is becoming a standard therapy for primary CNS lymphoma. High dose methotrexate administration is potentially lethal, with severe acute toxicities. Potential adverse reactions include renal failure, hepatic dysfunction, myelosuppression, and a host of other less serious adverse effects. Meticulous nursing care plans are essential for the successful treatment of these patients.

This presentation will showcase nursing's significant contribution in preventing the potential adverse effects of high dose methotrexate. The pathophysiology of CNS lymphoma and mechanism of action of methotrexate used in conjunction with leukovorin rescue will be reviewed. A nursing care plan will identify risk factors to consider prior to administration; preparation for administration; and close clinical monitoring required such as blood pressure, intake and output, frequent weights, urine pH, serum renal and liver function, electrolytes, and serum methotrexate levels. Specific strategies to manage patients during the clearance period and for those patients who are slow to clear methotrexate or who have toxic methotrexate levels will be reviewed.

Two case studies will present toxic versus non-toxic outcomes of high dose methotrexate utilizing a serum methotrexate level graphing tool. The tool assists with the early identification of potentially toxic patients ensuring early intervention. Nursing assessment and early interventions provided during high dose methotrexate treatments have made a significant difference in the prevention of potential serious adverse effects in this patient population.

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ARSENIC TRIOXIDE: NURSING CONSIDERATIONS FOR SAFE ADMINISTRATION. Bonny Mombrea, RN, BS, OCN®, and Kelly Stawicki, RN, Roswell Park Cancer Institute, Buffalo, NY.

Arsenic trioxide (ATO) has been used medicinally in ancient Greece and Rome for over twenty four thousand years. More recently, interest in arsenic-based therapy was revived by reports of the anti-leukemic activity in some traditional Chinese preparations. Roswell Park, our comprehensive cancer center, is currently using ATO along with the other centers in a Phase II study for myelodysplastic syndromes (MDS). It has been FDA approved for the treatment of promyelocytic leukemia (APL). ATO has also been used in combination with other chemotherapies for the treatment of other hematological malignancies and solid tumors. ATO may lead to partial or complete remission of disease and can be given in a clinic setting.

Arsenic trioxide can have severe adverse effects. It causes morphological changes and DNA fragmentation. ATO converts immature cancerous white blood cells into normal white blood cells, resulting in an elevated white blood cell count. "APL Differentiation Syndrome," inflammation and fluid accumulation, particularly in the lining of the heart and lungs, can also accompany ATO use and can be fatal. ATO can increase the Q-T interval and, in some cases, lead to fatal irregular heart rhythms. Careful nurse monitoring for the subtle signs and symptoms is crucial.

Psychosocial support and patient education are essential in ATO treatment. Most of the general public associate arsenic with poison. For example, in the play Arsenic and Old Lace, arsenic is used as a murder weapon. Arsenic has also been used to exterminate insects and rodents. A common reaction by patients: "You want to put poison in my body?!" The nurse has an important role in educating the patient about non-toxic doses of ATO, effects, potential reactions to ATO, and reassuring the patient that they will be thoroughly monitored.

This poster presentation will highlight nursing considerations regarding the following: Pre-treatment assessment, testing, dosage, administration of ATO, infusion considerations, monitoring for "APL Differentiation Syndrome," electrolytes, blood chemistries, hematology, and cardiac status. In addition, it will summarize recommended tests during treatment with rationale, give common drug-related toxicities including the follow-up treatments, and identify benefits of treatment with ATO.

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LYMPHEDEMA FOLLOWING BREAST CANCER TREATMENT, INCLUDING SENTINEL LYMPH NODE BIOPSY.

Jane Armer, RN, PhD, Mei R. Fu, RN, MS, CNS, PhD(c), Donna A. Williams, PhD, Deidre D. Wipke-Tevis, RNC, PhD, Davina Porock, PhD, Jean M. Wainstock, RN, MS, FNP, AOCN®, Eris Zagar, RN, MS(N), AOCN®, and Lisa Jacobs, MD, University of Missouri, Columbia, MO.

Purpose/Objectives: To compare breast cancer lymphedema (LE) occurrence and signs and symptoms among those with/without LE; and those who underwent axillary lymph node dissection (ALND), sentinel lymph node biopsy (SLNB), combined SLNB and ALND (Both), or neither as part of breast cancer diagnosis.

Design: Concurrent descriptive-comparative cross-sectional four-group design.

Sample: Convenience sample of 102 women treated for breast cancer. Methods: Sequential circumferential measurements at five selected upper extremity sites were used to determine the presence of LE (> 2 cm differences). Signs and symptoms were elicited by interview using an investigator-developed tool. Retrospective chart review was carried out to verify lymph node-related diagnostic/treatment procedures.

Data Analysis: Descriptive statistics were utilized, followed by Shapiro-Wilk test; Fisher's Exact test; signed rank test; Wilcoxan Rank Sum tests, and Chi-square tests.

Findings: Based on node group, LE occurred as follows: 43.3% (29 of 67) of women who underwent ALND alone; 22.2% (2 of 9) of those who underwent SLNB alone; 25.0% (3 of 12) of those with both; and 22.2% (2 of 9) with neither ($p = 0.37$). Ten reported signs and symptoms were related ($p < 0.01$) to LE occurrence. LE-related symptoms were reported by all node groups. Among the node groups, three symptoms were more common ($p < 0.01$): larger arm size, firmness/tightness, and numbness. Tenderness was frequently reported among all four node groups ($p > 0.05$).

Conclusions: Although statistically nonsignificant, 43.3% of women who underwent ALND were found to have LE, a clinically relevant observation. Overall, the proportion of women who experienced LE-related signs and symptoms was higher among women who underwent ALND versus SLNB. However, numbness and tenderness frequently were reported by those undergoing ALND, SLNB or both; and by women without LE. These may be related to breast cancer surgery and not LE.

Implications For Nursing: Findings from this study can assist nurses in educating women with breast cancer about LE risk factors as well as early detection and management of LE. Symptom assessment and sequential circumferential arm measurements are recommended to evaluate limb changes subjectively and objectively concurrent with each breast cancer survivor's follow-up care.

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NURSING BEHAVIORAL INTERVENTION TRIAL RESULTS IN FEWER HOSPITALIZATIONS AMONG CANCER PATIENTS UNDERGOING CHEMOTHERAPY.

Barbara Given, PhD, FAAN, CW Given, PhD, Mohammad Rahbar, PhD, and Cathy Bradley, PhD, Michigan State University, East Lansing, MI; Sharon Kozachik, MSN, RN, Johns Hopkins School of Nursing, Baltimore, MD; Sanjchoon Jeon, MS, Michigan State University, East Lansing, MI.

Purpose: This report describes how a cognitive behavioral intervention delivered by nurses and directed toward lowering the severity of symptoms reduced numbers of hospitalizations reported by patients during this 20-week trial.

Conceptual Framework: A cognitive behavioral model using a problem-solving format guided intervention strategies that focused on the severity of 14 symptoms. Strategies included; information, self-care management, and counseling and support individualized for each patient. Nurses assessed effects of interventions at subsequent visits and modified interventions as necessary.

Design: A randomized design assigned 118 patients to the experimental and 119 to the control group. Sample: Patients with solid tumors who signed consents were accrued. Mean age was 59 with 75% being female, and 66% had stage 3 or higher disease.

Methods: Age, gender, comorbidity, severity of 15 symptoms each rated on a ten point scale (0-150) were measured at intake, 10, and 20 weeks. Hospitalizations were based on patient report over 20 weeks.

Data Analysis: A Zero-inflated Poisson regression model was used to compare between groups the distribution of numbers of hospitalizations during the 20-week intervention. Absence or presence of hospitalizations was considered a binary random variable. For the number of hospitalizations a Poisson random variable with the probability of zero inflated using group, age, lung compared with other sites, as covariates. The binary component included only symptom severity as a covariate.

Findings: All measures and treatment protocols between the experimental and control group were equivalent. Twenty control group patients accounted for 37 admissions; 9 experimental patients accounted for 14 admissions. Zero-inflated Poisson regression modeled these events and group was significant after adjusting for age, lung vs. other sites, and symptom severity.

Conclusions: These findings indicate that nursing interventions that reduce symptoms can have a positive impact on patient outcomes including, use of services and subsequent costs.

Implications: The "value added" of these interventions must be considered as a part of cancer treatment.

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OUTCOMES OF COMPLEMENTARY THERAPY USE BY CHEMOTHERAPY PATIENTS.

Gwen Wyatt, RN, PhD; Sharon Kozachik, RN, MSN; Charles Given, PhD; Barbara Given, RN, PhD, FAAN all from Michigan State University, East Lansing, MI.

Purpose: The purpose of this pre- to post-test design was to compare outcomes of patients undergoing chemotherapy for cancer who received standard cancer care with those who received standard cancer care plus an eight-week program of complementary therapies, including: 1) guided imagery (healing images set to music), and/or 2) reflexology (10-minute massage of each hand or foot), and/or 3) reminiscence therapy (family storytelling discussions between the patient and the family caregiver).

Theoretical Framework: The Wyatt Quality of Life Model guided this study, which is a derivation of the Ferrell Quality of Life Model.

Design: A pre- to post-test design was utilized.

Sample: **A convenience sample was used, with the majority of participants be**ing women with breast cancer. To be eligible, participants had to be 21 years of age or older, and be willing to engage in the complementary therapy program during chemotherapy.

Methods: Family caregivers participated in the intervention with their family member (patient). An educational session for the complementary therapies was provided to the family caregiver and patient at the initial chemotherapy appointment, with 4 reinforcement sessions over an 8-week period.

Analysis: Using t-tests, the intervention group was compared on the following variables: depression, anxiety, spirituality, and patients' reports of quality of life.

Findings: Findings indicate that: 1) patients who used one or more complementary therapies experienced lowered levels of depression ($p<.024$) and anxiety ($p<.006$) over time; and 2) patients who used one or more complementary therapies experienced increased levels of spirituality ($p<.019$), emotional quality of life ($p<.000$) and total quality of life ($p<.000$).

Conclusions: Participants who took part in the complementary therapies achieved significantly lower levels of depression and anxiety and higher levels of spirituality, emotional quality of life and total quality of life.

Implications: Findings from this study will be used as a model for designing future randomized clinical trials that utilize complementary therapies with cancer patients who are undergoing treatment.

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SLEEP, FATIGUE, AND DEPRESSIVE SYMPTOMS IN BREAST CANCER SURVIVORS AND MATCHED HEALTHY WOMEN EXPERIENCING HOT FLASHES.

Julie Elam, RN, MSN, OCN®, Janet S. Carpenter, PhD, RN,Shelia H. Ridner, PhD(c), RN, Pamela Carney, BSN, RN, Gloria J. Cherry, BA, RN, Heather Cucullu, BSN, RN, Vanderbilt University School of Nursing, Nashville, TN.

Purpose/Objectives: (1) to compare sleep quality and disturbance, fatigue and depressive symptoms between breast cancer survivors (BCS) and healthy women (HW) experiencing hot flashes and (2) to examine relationships between sleep and remaining variables (fatigue, depressive symptoms,and hot flash frequency).

Theoretical/scientific framework: Lenz Theory of Unpleasant Symptoms.

Design: Cross-sectional, descriptive, comparative study.

Sample: 15 BCS and 15 HW matched on age, race, and menopausal status from a University based outpatient setting. All women had untreated hot flashes (no hormone replacement therapy or other hot flash treatments).

Methods: Questionnaires (sleep quality and disturbance, fatigue, and depression), two ambulatory 24-hour sternal skin conductance monitoring sessions (hot flash frequency), and medical records review.

Data analysis: t-tests, chi square, Mann -Whitney, Pearson correlation,and nonparametric Spearman's rho. Findings: The majority evidenced poor sleep quality and high sleep disturbance (73% of BCS and 67% of HW above a cutoff score of 5). Sleep duration was significantly shorter for BCS in comparison to HW ($p < .05$). Nighttime flashes were experienced by 67% of BCS and 37% of HW. No group differences were found fatigue, depressive symptoms, or objective hot flash frequency. Global sleep scores were significantly correlated with fatigue and depression, but not with hot flash frequency.

Conclusions: Findings suggest sleep disturbance is common in menopausal BCS and HW, is not necessarily related to hot flashes, and may stem from a multifactorial etiology.

Implications for Nursing Practice: Menopausal BCS who present with any one of these symptoms should be screened for all symptoms both during and after treatment.

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EMPLOYEE MAMMOGRAPHY INREACH PROGRAM AS A MODEL FOR EFFECTIVE BREAST CANCER SCREENING. Joanne Robinson, RN, MSPH, Rose Taibbi, RN, BSN, OCN®, and Lori Usak, RN, BSN, North Shore–Long Island Jewish Health System, Great Neck, NY.

The North Shore-Long Island Jewish Health System (NSLIJHS) is a multi-hospital system with over 30,000 employees, 75% of which are female. Based on a 1999 sample survey of 100 female employees, approximately 50% of the female employees within our health system over the age of 40 were estimated to be non-compliant with having annual mammograms. In response to this finding, the NSLIJHS developed an employee in-reach program to educate employees and encourage annual mammograms.

The program is conducted via confidential mailings, which are sent to the homes of all female employees with information about national breast cancer screening guidelines and a response postcard to encourage the scheduling of a mammogram. The in-reach program is funded by a grant that covers the cost of the materials and mailings but not the mammograms, which are billed to the employee's health insurance. Women who present for a mammogram through this special program receive a gift bag, containing products donated by the Estee Lauder Company.

At the end of the program's first year of implementation, the initial group of 2,700 eligible female employees, age 40 and over, there were 2,235 responses (82.7%) to the mailings that yielded 1,455 scheduled mammogram appointments (54%). Of this group, 272 women never had a previous mammogram and a total of 622 were overdue for a mammogram (43%). There were a total of 40 mammograms considered positive (BIRAD 4 or 5), which, upon further diagnostic testing, resulted in 9 positive biopsies. Pathology identified four cases of intraductal breast cancer and five invasive breast cancers.

The NSLIJHS in-reach project was recently presented to the statewide group of hospital grantees for the Healthcare Association of New York State (HANYS) Breast Cancer Demonstration Project. The program was so well received that the hospitals are planning to adopt this program, and HANYS will write letters to all New York State hospital CEOs with a tool kit based on the NSLIJHS in-reach project.

The development of an employee mammography in-reach program has been found to be an inexpensive method to effectively reach large numbers of women in the workplace for breast cancer screening.

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WALKER COUNTY, AL, CANCER SCREENING PROJECT. Elizabeth F. Mays, RN, OCN®, Baptist Cancer Center, Walker Jasper, AL; Arlene Hayne, RN, DSN, Samford University School of Nursing, Birmingham, AL; and Terri Salter, RN, MSN, MBA, Baptist Health Systems, Birmingham, AL.

Estimates from the American Cancer Society indicate that approximately 33% of all Americans will develop some form of cancer during their lifetimes. Of the 16,191 new cancer diagnoses in the state of Alabama, 414 of these were in Walker County. The top four diagnoses were lung (100), breast (70), colorectal (49), and prostate (31). The cancer-related mortality in this area was reported as 20%.

In February 2000, Baptist Health System, Inc (BHS) developed a proposal to pilot a comprehensive cancer screening program for Walker County, AL. Upon reviewing the proposal, the BHS Foundation agreed to finance a pilot community screening program.

Patterned after an existing urban screening program in Birmingham, AL, the pilot was designed to establish comprehensive cancer screening services in a rural community. Screening examinations were performed by an oncology certified nurse. They included a personal/family risk assessment as well as a body type assessment; oral, superficial lymph gland, skin, breast, and testicular examinations; PAP smear, mammogram, prostate-specific antigen, hematocrit, digital rectal exam, and both rectal and urine occult blood checks. The goal of this project was to reduce the burden of cancer on residents of Walker County through early diagnosis and intervention, thus decreasing the morbidity and mortality rates.

Patient outcomes measured were number/types of positive screens, number/types of cancers identified, and overall satisfaction with the screening process. The number and types of physician referrals were also tracked. Of the 44% participants completing the satisfaction survey, over 90% indicated a high degree of satisfaction with the screening process. Of 149 people screened, 111 were referred to primary care physicians due to some type of identified abnormality. During these follow up visits, one case of cervical cancer, two cases of breast cancer, and one case of leukemia were diagnosed and subsequently treated. Based on the overall project goals, there was an identified need for and community acceptance of the activity. As a result of this pilot, recommendation was made to establish comprehensive cancer screening within the community on a regular basis.

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MEDICATION ERROR PREVENTION IN THE OFFICE SETTING. Kathleen Shuey, MS, RN, AOCN®, CS, Dori Greene, MS, RN, AOCN®, and Dianne Richardson, RN, OCN®, U.S. Oncology, Houston, TX.

The USON network, which consists of over 450 sites of service located in 28 states, is concerned with promoting medication safety and preventing medication errors. The Quality of Care (QOC) Committee has proposed the development of a comprehensive medication error prevention program to be implemented at the practice level. The program purpose is to reduce number of medication errors throughout the network, establish a safe mechanism for processing orders, implement systems/process changes that reduce the risk of future errors and improve patient care, and provide guidelines for safe medication administration.

In 1999, the Institute of Medicine released the report "To Err is Human." Available data suggested that anywhere from 44,000–100,000 inpatient deaths/year are due to medication errors. The estimated cost runs anywhere from $17–$29. This cost includes additional medical care, lost income and household productivity, and disability. Despite having practice level performance improvement committees, few resources focus on prevention. A review of medication variance records revealed that our data was incomplete and did not allow for effective problem solving and trending. The first step in the prevention program development was to revise the current variance-reporting tool to obtain complete data concerning medication related "events." This included information on "near misses." Other recommended program components include a staff education program, promoting a non-punitive culture, best practice tools, a clinical tips sheet, and a similar drug name list. Two additional components will involve database development and determination of an accurate denominator for the number of admixtures prepared.

Some tools and resources have been shared with network clinical leadership, but further dissemination to all clinical staff is needed.

Future plans include moving the educational program into an intranet, web-based offering to provide sharing with all clinical staff. Additionally, the best practice tools will provide individual sites a development plan for the implementation of procedures and practices to minimize the risk of errors. Ongoing monitoring and reporting will occur at a network level through the USON Safety Officer. Continuing evaluation will allow for development of additional tools, resources, or guidelines, as needed, resulting in a safe environment for patients to receive cancer treatment.

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A RECOGNIZED NEED: BLADDER CANCER SUPPORT GROUP AND THE ROLE OF THE AMBULATORY NURSE. Dominique DePalma, RN, MA, OCN®, and Marisa Schneider-Regan, RN, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY.

The American Cancer Society (2002) predicts there will be 56,500 new cases of bladder cancer diagnosed this year. A review determined that there were few, if any, support groups available for this population of patients.

Two ambulatory urology nurses at this NCI-designated cancer center coordinated a multidisciplinary team comprised of ambulatory nurses, outpatient social workers from the post treatment resource center, physicians, and a clinical nurse specialist (CNS) to form a support group.

We identified the target population, which consists of patients with superficial and muscle invasive bladder cancer. All patients were required to have had some sort of treatment for their bladder cancer—surveillance, TURBT, or cystectomy. To raise awareness for this new support group, each of the following was done: 1) flyers were posted in clinical areas, 2) brochures were mailed to patients, 3) individual patients were informed during treatment.

The bladder cancer support group was divided into two components: Educational lectures alternating with open discussion groups, quarterly. Educational lectures are conducted by physicians on the urology service based on their specific expertise in bladder cancer. The ambulatory nurse, CNS, and the social worker facilitate open discussion groups. Patients are divided into superficial bladder cancer and urinary diversions subgroups to network and provided emotional support for one another.

Evaluation forms are distributed at these meetings to identify strengths and areas for improvement for the group.

The ambulatory nurse's role in the bladder cancer support group is diverse. As coordinator, the nurse accrues new patients and prepares the topics and agenda for each meeting. As facilitator, the nurse leads the group to encourage open discussion. As educator, the nurse is the clinical expert and resource on all aspects of bladder cancer.

This presentation will inform oncology nurses of the growing need for bladder cancer support groups to assist patients in coping with the functional changes and adjustment post treatment. The bladder cancer support group is well received with approximately 40 participants attending each program. Nurses can play a significant role in initiating and participating in bladder cancer support groups.

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AN EVALUATION OF A STRUCTURED CHEMOTHERAPY TEACHING PROGRAM IN AN AMBULATORY SETTING. Chow Ying Leng, RN, ONC, BN, Teo Catherine, RN, Adv Dip (Onco), BN, Emily Ang, RN, ONC, BN, MN, and Cheang Grace, RN, Adv Dip (Onco), BN, The Cancer Institute at National University Hospital, National Healthcare, Singapore.

Introduction: With the increasing incidence of cancer and the moving trend of cancer treatment to the ambulatory setting, patient education on coping with the side effects of chemotherapy posed a challenge for oncology nurses. A structured chemotherapy-teaching program was introduced for all patients receiving chemotherapy in an ambulatory cancer clinic. It is targeted to empower patients and their caregivers to cope with the side effects of chemotherapy at home.

Purpose of the study: To evaluate the effectiveness of the structured chemotherapy-teaching program.

Criteria: Patients who have undergone the structured chemotherapy-teaching program and had completed at least two cycles of chemotherapy.

Methodology: A set of structured questions measuring patients' satisfaction with the chemotherapy-teaching program was developed. A number of 38 participants were selected from a total of 100 participants using simple random sampling method.

The data was collected via a telephone interview using the structured questionnaires.

Results: Of the patients (n = 38) that were interviewed, 87% (n = 33) mentioned that the information given to them was adequate. For this group of patients, 42% (n = 25) reported that the program had prepared them for the chemotherapy experience. 40% (n = 23) mentioned that it empowered them to manage the side effects, and 16% (n = 9) reported that it reduced their anxiety. The remaining 13% (n = 5) of all the patients that were interviewed found that they could not recall the information and desired more information on diet.

Discussion and Conclusion: From the study, the teaching program has adequately prepared patients to cope with their chemotherapy experience. However, it should be an ongoing process for patients who could not recall what they were taught.

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USE OF THE TELEPHONE FOR DELIVERY OF NURSING INTERVENTIONS. Kyra Whitmer, PhD, RN, University of Cincinnati, Cincinnati, OH; Gail Towsley, MS, and Susan Beck, PhD, RN, University of Utah, Salt Lake City, UT; and Carole Sweeney, MSN, AOCN®, Anne Slivjak, MSN, AOCN®, and Andrea Barsevick, DNSc, RN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA.

Symptom management is a nursing practice issue. Patients with cancer often experience multiple symptoms that need addressing. However, current practice settings are often characterized by barriers that impede nurse-patient interactions such as abbreviated length of stay and minimal staffing. Creative strategies to provide nursing interventions can facilitate effective symptom management.

While carrying out a randomized trial of an intervention to manage cancer-related fatigue, the feasibility of using the telephone for the delivery of a nursing intervention was assessed.

Specially trained oncology nurses delivered the nursing interventions during three weekly telephone sessions. Participants (n = 396) with breast, lung, colorectal, prostate, gynecologic, or testicular cancer or lymphoma, and receiving either 5-6 weeks of radiation, 3 cycles of chemotherapy, or combined therapy were randomly assigned to receive either the ECAM (energy conservation and activity management) or a nutrition intervention. Upon completion of participation, a random sample of 42 participants was surveyed with regard to their satisfaction with the telephone delivery of the nursing intervention.

Study participants found the telephone delivery of nursing intervention to be both convenient and as effective as face-to-face contact with a nurse. Additionally, they found the information important and helpful and felt the number of telephone calls was appropriate. The telephone, one-on-one, contact was valued by the participants, and they would recommend it. More importantly, the participants used the information provided.

Historically, practitioners have used the telephone as a vehicle for assessment, surveillance, and counseling. Use of the telephone to deliver nursing interventions is feasible, acceptable, and effective. In light of current healthcare constraints, the use of the telephone can extend the ability of the nurse to assist patients in managing their symptoms. (Source of funding: NINR Grant #RO1 04573.)

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HOME HEALTH VERSUS TELENURSING OUTPATIENT MANAGEMENT OF ONCOLOGY PATIENTS WITH NEW OSTOMIES. Susan Bohnenkamp, RN, MS, CCM, and Pat Mc Donald, RN, MS, NP, CWOCN, CS, University Medical Center, Tucson, AZ; Elizabeth Krupinski, PhD, University of Arizona, Tucson, AZ; and Ana Maria Lopez, MD, Arizona Cancer Center, Tucson, AZ.

Introduction: Patients with new ostomies due to a cancer diagnosis have recognized special needs: 1) The patient must not only adjust to the cancer diagnosis, but also to the ostomy. 2) New psychomotor skills must be learned, coupled with the underlying concern of acceptance by the patient, their family, and society. Patient education outcomes include not only the ability to perform self-care, but also the ability to return to previous activities performed prior to surgery. 3) The follow-up and education may require patients to travel long distances to see enterostomal therapy nurses or clinical nurse specialists. Nurses who specialize in ostomy care and cancer are extremely important to the continuum of care for ostomy patients and their families.

Purpose: The purpose of this study was to measure the impact of telenursing technology on patients discharged with an ostomy related to a cancer diagnosis.

Method: Impact was measured by examining costs, patient satisfaction, adjustment to ostomy, and time to achieve ostomy self care. A quasi-experimental design was used to place 28 oncology patients into one of two groups: (1) traditional home health. (2) The traditional/telenursing combination incorporated home health nursing visits with telenursing technology, allowing an ostomy nurse expert to continue ostomy education with the patient and family. Fourteen subjects were assigned to each group. Data was collected on the number of home health visits or telenursing contacts, dates when ostomy self-care needs were met, supplies used, and distance traveled. Each patient had a 6-week follow-up satisfaction survey regarding each type of visit. At three months, the patients were asked to complete J. Maklebust's ostomy-adjustment scale. (3) Data were analyzed using correlation, descriptive, and inferential techniques.

Results: Patients indicated a higher satisfaction with the use of telenursing technology. There was one more home health visit for the home health group per patient. An average of three telenursing visits were done on the telenursing group. Cost for the nursing visits for both groups were about equal. The home health group used an average of four more pouches per patient, with an increased cost of $52.00 per patient. The telenursing group agreed more often (100% versus 89%) that the nurse seemed to understand the patients' problem and the patient was comfortable with what the nurse told them about their ostomy.

Conclusion: The results indicate that home health/telenursing is a viable option to support patients discharged from the hospital with new ostomies related to a cancer diagnosis.

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THE ADMINISTRATIVE CHALLENGE IN THE DEVELOPMENT OF A POINT-OF-SERVICE CLINIC FOR POST BLOOD AND MARROW TRANSPLANTATION PATIENTS. Susan Stary, RN, BSN, OCN®, Serry Sorensen, RN, BSN, OCN®, Debra Adornetto, RN, BSN, MS, Joyce Neumann, RN, MS, AOCN®, and Cindy Ippoliti, PharmD, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Today's healthcare climate and advancements in blood and marrow transplantation have challenged the outpatient administrative staff to develop innovative strategies in caring for higher acuity patients. Autologus transplantation patients are frequently discharged from the hospital immediately following chemotherapy for mobilization, or soon after engraftment. The challenge was to integrate this patient population into the outpatient clinic, which has traditionally been set up to assess patients pre- and post-transplant. These "early discharges" challenge the entire outpatient staff to provide quality care while balancing the benefits, risks, and needs of all patients. The rationale for the development of the "Fast Track Clinic" is to perform laboratory testing and patient evaluation by an experienced bone marrow transplant nurse, APN, and clinical pharmacist in a familiar environment. Identified treatment needs such as fluid and electrolyte replacement or antibiotics are also performed in the clinical area. Long-term fluid infusion and blood product transfusion are transitioned to clinical areas capable of providing infusions greater than one hour.

The administrative staff faced various challenges in developing this new clinical area, which included space feasibility, level of staff education/skills, equipment/supply issues, financial issues, room utilization, and staff buy-in. Space feasibility was evaluated by a room utilization study indicating low usage in the morning hours.

The staff educator provided intense training on pump usage, CVC care, and IV drug administration, as these new patients demanded a different set of skills. Strategies were planned in collaborative multidisciplinary meetings with the administrative and clinical staff. The meetings provided a sense of ownership and allowed the staff to come up with "out of the box" solutions regarding the flow of the clinic. One advantage of the fast track clinic is that patients are followed by the same personnel from initial consultation throughout the transplant journey. Another impact of the implementation of the fast track clinic is the enhancement of the RN's technical, critical thinking, and problem solving skills. Patient satisfaction surveys and comment cards are obtained on a monthly basis and reviewed for possible improvements. The results demonstrate a high level of satisfaction regarding care of the patient.

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ADVANCED CANCERS OF THE ORAL CAVITY: THE ROLE OF THE AMBULATORY CARE NURSE. Jill Solan, RN, MS, ANP, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Advanced cancers of the oral cavity can be very aggressive and debilitating, involving a primary site within the oral cavity (e.g., tongue, floor of mouth, palate, buccal mucosa, tonsil) and can invade soft tissue, bone, muscle, and nerves, and metastasize to regional lymph nodes of the neck. Individuals with these cancers of the oral cavity may have interference with performing activities of daily living, eating, and communicating. Cancers in this site can be foul smelling and painful causing social isolation and depression. There can be alterations in physical appearance as well as functional status. The quality of life for individuals with oral cavity cancers can be compromised physically, psychologically, socially, and economically. The ambulatory care nurse/patient relationship begins at initial consultation and continues throughout the whole spectrum of illness, treatment, and recovery. The ambulatory care nurses' major roles throughout these phases are educator, patient care provider, advocate, and facilitator. The ambulatory care nurse educates patients and families about the disease, treatment, side effects, symptom management, patient self-care measures (range of motion shoulder exercises, prevention of trismus), risk prevention (smoking and alcohol cessation), and available resources in the institution and the community. Patient and family education offers a didactic approach as well as written educational materials. The educational materials that will be discussed are specific for this disease site. (Mandibulectomy: Immediate mandible reconstruction with fibula free flap, glossectomy, tracheostomy care, tube feeding). The treatment and care of individuals with advanced cancers of the oral cavity is multimodality and multidisciplinary. The ambulatory care nurse collaborates and communicates with other members of the healthcare team (plastic and reconstructive surgery, radiation oncology, medical oncology, dental service, nutrition, social work, pain service, inpatient nurses, case managers, insurance companies, visiting nurses) to assure that the care is cohesive and patient needs are met. It is imperative that all members of the healthcare team work toward the ultimate goal of returning the patient to maximum functioning. This presentation will provide an overview of the complex care and unique needs of patients with advanced cancers of the oral cavity and the role of the ambulatory care nurse working with this patient population.

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IMPROVING THE USE OF ANTIEMETICS FOR PROPHYLAXIS OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING IN AN OUTPATIENT CANCER CENTER. Elizabeth Prechtel, RN, MSN, CRNP, AOCN®, and Suzanne Walker, RN, MSN, CRNP, AOCN®, Temple University, Philadelphia, PA.

Although the prevention of chemotherapy-induced nausea and vomiting (CINV) has markedly improved since the introduction of 5HT-3 inhibitors in the early 1990s, patients still report nausea as being the most distressing side effect of chemotherapy. A possible explanation for this perception is the inappropriate prescription of antiemetics by clinicians. Despite the fact that guidelines for prophylaxis of CINV have been published by the American Society of Clinical Oncology (ASCO), American Society of Hospital Pharmacists (ASHP), and the National Comprehensive Cancer Network (NCCN), studies indicate that antiemetics are still being prescribed incorrectly by providers. They are being under utilized, particularly in prevention of delayed emesis, and over utilized for mildly emetogenic agents. In our practice, we are in the process of conducting a drug utilization evaluation (DUE) based on anecdotal evidence that antiemetics have been prescribed inconsistently for CINV by our providers. Preliminary data indicate that few patients are getting antiemetic prophylaxis for delayed emesis and that patients receiving chemotherapy agents of low emetogenic potential are being overmedicated. The implications of insufficient prophylaxis include uncontrolled nausea and vomiting, and the disadvantages of excessive prophylaxis are inflated cost and the potential for unwarranted adverse effects. The goal of this DUE is to apply the findings to our clinical practice by educating the providers and nurses regarding the proper use of antiemetics with chemotherapy, utilizing the ASHP guidelines as our model. A summary of the guidelines will be placed in the clinic area where chemotherapy orders are written, as well as in the pharmacy and the nurses' station. We plan to repeat the DUE in three months to determine if prescribing practices were positively influenced by this information.

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A SYSTEM FOR THE SAFE ADMINISTRATION OF ORAL CHEMOTHERAPEUTIC AGENTS IN THE HOME SETTING. Susanne Conley, BSN, RN, CPON®, Kristen Graham, BSN, RN, Maryann Lefrancois, MS, PNP, RN, Christine Chordas, MS, PNP, RN, and Peter Blanding, MS, RPh, Dana-Farber Cancer Institute, Boston, MA.

Background: The increased use of oral chemotherapy agents in children becomes problematic when patients are unable to swallow the tablets or capsules. The dilemma occurs because: 1) pharmaceutical directions state that capsules should not be opened or tablets crushed, and 2) they recommend rigorous precautions if the agents are accidentally opened. The need to develop safety guidelines for the home setting when oral agents needed to be crushed or opened for patients unable to swallow capsules was recognized.

A quality improvement initiative at an NCI-designated comprehensive cancer center embarked to develop guidelines that would maximize safety and promote correct administration of the prescribed dose. The issues identified were as follows: 1) Precautions for family members to protect themselves against exposure to the agent, particularly female caregivers of childbearing age or who are currently pregnant/nursing; 2) Manufacturer guidelines regarding the pharmacokinetics of the drug when mixed with a food vehicle and a list of compatible food substances that do not degrade the drug; 3) Safe disposal of utensils and capsule remnants; 4) Emergency interventions and reporting mechanisms for accidental drug exposures (e.g., splashes, inhalation); 5) Routine monitoring of the quantity of drugs in the home setting to ensure correct dosing and compliance with prescribed therapy. To address these issues, a comprehensive program for the safe administration of oral agents in the home setting and a new standard of care for our patients and families were developed. The tools developed included policies and procedures, patient and family teaching sheets, patient diaries, and a system to periodically count the number of dispensed oral agents. In addition, all staff members were required to attend inservices to learn about the new system and incorporate this standard of care into their practice.

Evaluation: Healthcare providers have expressed a new level of confidence with these guidelines. It has provided a mechanism to monitor compliance with prescribed therapy and maximize safety for family caregivers. Protocols with oral agents continue to open, expanding the applicability of the guidelines. The program is newly implemented and formal evaluation is in progress.

Interpretation/Discussion: Even though this was initially developed for pediatric patients in the home setting, we have found that our guidelines are applicable to inpatient and outpatient settings and are also appropriate for adult populations. As therapies for cancer develop and change, the oncology nurse must continuously evaluate teaching materials and evolving patient and caregiver safety issues.

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OUTPATIENT DOCUMENTATION FORMS FOR CHEMOTHERAPY AND RADIATION: COMPLYING WITH ONCOLOGY NURSING SOCIETY GUIDELINES. Jeanene G. Robison, MSN, RN, AOCN®, OCN®, and Connie Cook, RN, BSN, The Christ Hospital, Cincinnati, OH.

Documentation is an ongoing challenge for nurses who administer chemotherapy or care for patients receiving radiation therapy on an outpatient basis. ONS encourages the implementation of their guidelines and recommendations for practice in order to provide safe, effective patient care and to improve clinical performance.

Nurses from five hospitals, which are located in the Midwest region and which are part of a multi-hospital system, collaborated to develop two documentation tools. The purpose of these documentation tools was to promote consistency in documentation practices and to meet national standards for documentation on a consistent basis.

This committee of nurses included staff nurses, nurse managers, and an oncology CNS. Additional staff nurses, pharmacists, physicians, and risk management reviewed the documentation form for its usefulness and thoroughness. The form was revised based on their feedback, and was piloted at each facility. The final documentation tools are in the implementation phase.

Two documentation tools were developed. One tool, the "Oncology /Hematology Outpatient Flow Sheet," was developed for use by nurses in both medical oncology and radiation oncology outpatient units. It includes areas to document vital signs, height/weight, BSA, chemotherapy and other meds, flush solutions, transfusions, and VAD site assessment and access. A second tool was developed for use by radiation oncology outpatient units and includes areas to document side effects related to radiation therapy and side effect management.

The documentation guidelines in the ONS Chemotherapy and Biotherapy book (2001) and in the ONS Manual for Radiation Oncology, Nursing Practice and Education (1998), which have been used as the basis for development of these documentation tools, will also be used as the basis for the performance improvement monitors. It is anticipated that documentation of practice and patient care will improve and will be standardized in each of the five facilities. This improvement will be evaluated through staff feedback and medical record evaluation.

Both of these documentation tools will be presented, and can easily be adapted for use in other medical oncology or radiation oncology settings. Staff feedback, performance improvement data, and logistical issues will also be presented.

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CARING FOR OUTPATIENTS RECEIVING RADIOLABELED PHARMACEUTICAL AGENTS: GUIDELINES AND EDUCATIONAL TOOLS.

Elizabeth Anderson, RN, BSN, Duke University Cancer Center, Durham, NC; and Donna Adams, RN, BSN, OCN®, and Traci Foster, RN, OCN®, Duke University Medical Center, Durham, NC.

Radiolabeled pharmaceutical agents are increasingly being investigated as a therapy for patients with non-Hodgkin's lymphoma. Many of these patients spend little time with radiation therapy staff and leave the hospital or clinic immediately following therapy. In most cases, individuals with the greatest exposure to radiation will be the outpatient nurse and the patient's family, both of whom may have limited knowledge of radiation safety. This poster will provide educational tools and guidelines for nurses to enable them to provide care to outpatients being treated with radiolabeled pharmaceutical agents. It also has information on safety issues that nurses and patients must know specific to outpatient therapy.

The authors found that regulatory standards and the literature review provide instruction to the nurse who works in the inpatient setting. However, little information has been developed for oncology or clinical trials nurses in the outpatient setting. It is important that nurses who assist in the administration of radiolabeled agents receive education about safety parameters that should be incorporated into practice as well as foster development of patient education materials. The authors developed a policy that incorporated care specific to the outpatient arena, provided education to the nursing staff, and identified patient education resources.

In preparing the policy and education information, the authors used the Nuclear Regulatory Commission and State Agencies regulations as resources. A key consideration in caring for these patients is how to monitor radiation exposure. The outpatient or clinical trials nurse must wear a personal radiation monitoring device (film badge). However, the family and patient do not. Thus, patient and family education is essential. The radiation safety division staff is an excellent partner for nurses, patients, and families.

Given the advances in cancer treatment, it is likely that outpatient therapies with radiolabeled nucleotides will increase. This poster gives a comprehensive display of how one organization prepared staff and patients to manage this therapy.

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A COMMUNITY-FOCUSED MODEL FOR INTEGRATING A COMMUNITY-BASED GENETIC PROGRAM WITH A COMMUNITY CLINICAL ONCOLOGY PROGRAM: A NURSING INITIATIVE FOR PROGRAM DEVELOPMENT AND CANCER INTERVENTION.

Twilla Westercamp, RN, BSN, OCN®, Alegent Health Cancer Center, Omaha, NE; and Mary Beth Wilwerding, RN, BSN, OCN®, Executive D, Missouri Valley Cancer Consortium, Omaha, NE.

The purpose of this initiative is to explore the patient care benefit of combining services of a community based genetic program with services of a CCOP.

The individual benefits of clinical trials and cancer genetics has been recognized extensively in the educational setting. The National Cancer Institute recognized, in the 1970s, the need for clinical trials to become available in the community setting and developed the CCOP program. The Missouri Valley Cancer Consortium CCOP was formed in 1993, in response to the NCI initiative. Cancer genetics is a growing intervention that is impacting not only cancer screening, early detection, and cancer prevention, but also cancer treatment, prognosis, and disease management. Alegent Health has opened a cancer genetic program to serve a portion of the same community population as the Missouri Valley Cancer Consortium CCOP.

Two oncology nurses will combine their efforts to involve individuals from the community in both clinical trials offered by he CCOP and the services of the cancer genetic program. These programs are uniquely nurse initiated and executed. It is anticipated that the model will allow genetic patients and family members to be referred easily to clinical trials and clinical trial patients, and family members to be referred to the genetic program when appropriate.

The goal of this project is to increase awareness of the importance of a genetic program and clinical trials and how they can enhance each other. An emphasis on education of the public and of the staff will be necessary to achieve this goal. A measurement of the success of this program will be achieved through expanded education initiatives, increased accrual to clinical trials, and increased referrals to the genetic program. Clinical trial nurses, cancer genetic nurses, program administrators, and patients will benefit from this unique model. It is hoped that the integration of these two programs will bring to the community the very best of cancer prevention, detection, and treatment, and most of all, HOPE for the future of cancer care.

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THE IMPACT OF MEDICAL VISITS ON PATIENTS WITH CANCER.

Kelley Moore, RN, and Barry Fortner, PhD, The West Clinic, Memphis, TN; and Ted Okon, MBA, Supportive Oncology Services/Accelerated Community Oncology, Monroe, CT.

It is apparent from contact with cancer patients and their caregivers that clinic visits impact quality of life in ways that may not be immediately obvious. To identify some of these "hidden" impacts on patients and caregivers, informal interviews were conducted in which open-ended and exploratory questions were asked about cancer, treatment, and visits to the clinic. Over 50 cancer patients or caregivers were questioned from January to June 2002 at The West Clinic, Memphis, TN, a private community oncology practice. Patients interviewed were mainly between 40 and 85 years of age and had various types of cancer including colon, prostate, head and neck, breast, and lung tumors.

The findings of the interviews indicated that the need for multiple visits in cancer treatment regimens did have a substantial impact on the lives of both patients and caregivers. Although patients generally accepted multiple visits as necessary to their treatment, it was found that the time and expense associated with multiple clinic visits affected their ability to participate in many activities of daily life. Concerns resulting from multiple medical visits reported by patients and caregivers included the following: The need to take leave from work; having to change or cancel social functions; the inability to meet household and other responsibilities because of time constraints or depleted energy; and the additional financial burden of transportation costs, expending funds available for food and daily activities. Patients with anemia and fatigue reported that visiting the clinic was an extra burden on their already low energy reserve. Interestingly, coming to the clinic was also associated with psychological concerns as some patients reported that these visits reinforced the perception of being "cancer patients" and prompted a sense of anxiety and sadness.

In conclusion, this information underscores the negative impact of multiple medical visits on cancer patients and highlights the need to minimize the number of clinic visits as this will have a positive impact on patients' quality of life and will enable patients and caregivers to live as normal a life as possible.

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A UROLOGIC CANCER SECOND OPINION SERVICE: HELPING PATIENTS MAKE INFORMED TREATMENT DECISIONS.

Melissa K. Kratz, RN, MSN, AOCN®, Lehigh Valley Hospital and Health Network, Allentown, PA.

The diagnosis of cancer often leaves the patient and family feeling overwhelmed confused and in search of answers to questions they may have not yet even formulated. In many cases, the patient is coordinator of their care and is accountable to relay information to multiple physician specialists and family members to, in turn, make an informed treatment decision.

At Lehigh Valley Hospital and Health Network, we recognized the challenges and turmoil patients face in their quest to determine an optimum treatment plan, and created a program, which we believe is the only one of its kind in our region. The program is a "Urologic Cancer Second Opinion Service" whose target audience are patients diagnosed with prostate, bladder, testicular, or kidney cancer. The hallmark of this innovative service is a consultation with up to four different attending physician specialists—a urologic oncologist, urologist, medical oncologist, and radiation oncologist—during a single appointment. Other unique aspects of the service include the following: A nurse remains with the patient throughout their consultation and assures all questions are answered, including a follow-up telephone call the next day; patients leave the appointment with written treatment options; patients and their family members are encouraged to be active participants in the consultation process; the consultation is scheduled within two weeks of the request; the patient is given information regarding available clinical trials; and, the nurse coordinator for the service assumes responsibility for investigating third party payment and obtaining and verifying patient records, radiology studies, and pathology slides. The program has been operational since August 2000 and, to date, we have seen over 100 patients. Outcomes include a high degree of patient satisfaction as measured by an internally developed valid and reliable survey and fulfillment of our mission as a regional referral cancer center. Poster participants will be given a copy of the poster itself, the "Urologic Cancer Second Opinion Service" brochure, and the patient satisfaction survey.

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MANAGING VANCOMYCIN-RESISTANT ENTEROCOCCI IN IMMUNOSUPPRESSED BLOOD AND MARROW STEM CELL TRANSPLANTATION PATIENTS IN THE OUTPATIENT SETTING: ARE WE DOING ENOUGH?

Elaine Brannan, RN, MSN, AOCN®, and Elsie Gumabong, RN, BSN, OCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Vancomycin-resistant enterococci (VRE) have emerged as prominent nosocomial pathogens in hospitals. The incidence of VRE has increased dramatically in immunosuppressed blood and marrow stem cell transplantation (BMSCT) patients. These patients are at high risk for colonization and development of infection with the most common sites, gastrointestinal and urinary tracts. Infection control recommendations are being practiced in the hospital setting and in the outpatient areas. This study is designed to determine if the present method of infection control is adequate to prevent horizontal transmission of VRE in the immunosuppressed allogeneic, matched unrelated, and cord blood BMSCT patients in the outpatient setting. All of these patients are followed post transplant from discharge until day 100 in the ambulatory treatment center (ATC). BMSCT patients are cultured by rectal swab on admission to the hospital and every 7 days during hospitalization. Patients who develop diarrhea or cystitis are also cultured. Those patients identified as VRE positive are placed in contact isolation. The patients and their caregivers are educated about infection control to prevent the transmission of VRE. In the outpatient setting, patients identified as VRE positive in the hospital continue weekly testing using the same methods. They continue the same infection control measures with the exception of usage of common bathroom facilities in the outpatient area. This study will monitor VRE negative patients to determine if they become infected or colonized. They will be cultured by rectal swab at day 30, 60, and 90 post transplantation and if they develop diarrhea, with diarrhea defined as 5 or more watery stools per day, and/or symptoms of cystitis. We will monitor all allogeneic, cord blood, and matched unrelated donor BMSCT patients seen in the ATC. The current census of BMSCT patients is 47. Four were identified as VRE positive while inpatients. The number of daily visits by this entire group is 25–35 per day. The length of the study will be 6 months. Findings will be reviewed at 3 months and analyzed at 6 months. The number of patients and length of time will provide information to determine if the current infection control procedure is adequate.

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EFFICIENT SYSTEM TO SCHEDULE CHEMOTHERAPY and SUPPORT THERAPIES FOR ONCOLOGY NURSES.

Julene Diedrich, RN, OCN®, and Darlene Pawlik Plank, RN, MSN, AOCN®, Marshfield Clinic, Marshfield, WI.

Oncology nurses are challenged to efficiently schedule chemotherapy regimens that vary widely in the amount of direct nursing care required, length of treatment, multiple day treatments, and support therapies required. A large oncology ambulatory care clinic in the rural Midwest developed a chemotherapy scheduling system to address these issues.

Oncology nurse chemotherapy schedules typically follow the physician office visits. In general, the majority of patients receiving chemotherapy tend to show up in the chemotherapy infusion center between 10:00 am and 2:00 pm. The flow of patients through the chemotherapy infusion center at these times created a gridlock for nurse and/or room availability. Oncology nursing staff, along with the appointment coordinator (AC) and oncology managers, identified criteria for best appointment practices and utilization of space and staff.

A return appointment sheet was developed to capture the nuances of chemotherapy scheduling and to drive the appointing process. Patients with a new diagnosis or patients who required a change in treatment were often added onto an already busy schedule. A nurse master schedule (NMC) was created to include structured appointment times that accommodated patients new to treatment and with treatment changes. The NMC also included staggered lunch breaks for the nurses. All chemotherapy regimens were categorized to provide the AC with the amount of time required by the oncology nurse to initiate therapy and the total length of treatment time. This guideline provided the AC with information needed to appropriately appoint the patient. AC guidelines focused on spreading the chemotherapy treatments throughout the day. When feasible, patients being seen only by the nurse are scheduled early or late in the day to avoid the peak volume times.

As a result of fine-tuning the appointing system, patient and staff satisfaction has improved significantly.

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NEUTROPENIA IN ONCOLOGY PATIENTS: STANDARDIZING AN EDUCATIONAL APPROACH AND MEASURING OUTCOMES.

Judy Finkler, RN, BSN, OCN®, Oconomowoc Memorial Hospital, Oconomowoc, WI; and Catherine Rapp, RN, MS, AOCN®, Mary Pat Johnston, RN, MS, AOCN®, Patty LeRoy, RN, OCN®, and Patricia Walden, RN, OCN®, Waukesha Memorial Hospital, Waukesha, WI.

Despite advances in supportive care for patients receiving cancer treatments, life-threatening infections related to chemotherapy-induced neutropenia continue to place them at risk. Patient education is critical to prevention, early detection, and successful patient outcomes. The purpose of this project was to standardize a consistent approach to educating patients about chemotherapy-induced neutropenia across multiple oncology settings. Several factors influence patient's understanding of what is taught, including oncology nurse expertise and patient preferred learning style. A survey, assessing patient understanding of key elements of neutropenia teaching, was developed and distributed to patients receiving chemotherapy treatment (N = 79) in a dedicated inpatient unit and two medical oncology clinics. While the majority of oncology patients had a thermometer, 32% of patients did not know when to take their temperature, and 60% of patients were not able to state when to call their physician or oncology nurse. In addition, 50% of patients did not know how to contact their physician after clinic hours; 33% of patients did not know the signs and symptoms of an infection; and 41% of patients were not able to describe self-care measures. The findings supported the need to develop a standardized approach, differentiating two categories: 1) ALL patients receiving chemotherapy, and 2) the high risk/febrile neutropenia patient. For all patients receiving chemotherapy, key interventions included distributing thermometers, reviewing how and when to use thermometers, creating refrigerator magnets with after-hours contact numbers, and utilizing a self-care after chemotherapy teaching tool. The high risk/febrile neutropenia patients were identified as those patients with diagnoses of leukemia, lymphoma, or sarcoma, as well as patients who had a stem cell transplant or prior episode of febrile neutropenia. A more detailed tool was developed to address rationale for concern, when to be concerned, length of risk, how to reduce risk, and what to do if fever or infection develop. Full implementation of the project is planned for October, with staff education about this new simplified, standardized approach. The survey will be repeated to measure the impact of this project in December 2002.

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"BUTT BUSTERS: KIDS AGAINST SMOKING": A PROGRAM TO EDUCATE ELEMENTARY STUDENTS ABOUT THE DANGERS OF SMOKING.

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Lung cancer is the number one cause of cancer deaths. According to the American Cancer Society, in 2001, an estimated 169,500 were diagnosed and 157,400 died from the disease. More than 90% of lung cancers are smoking related. According to Health and Human Services, more than three million kids age 12–17 are current smokers.

As oncology nurses play a key role in educating the public, we can make children aware of the dangers of smoking and influence decisions to never start smoking. With grants from Cancer Care Inc. and a National ONS chapter grant, the Greater Pittsburgh Chapter partnered with local elementary schools to promote anti-smoking efforts. The goals of the program were to bring attention to dangers of smoking and provide a much needed community service. Children in either 4th or 6th grade were invited to participate in one of two "Butt Busters" educational competitions, a poster presentation, or an essay. One school each from the north, south, east, and west suburbs was chosen. School principals selected which grade would be involved. Packets of information were sent to student homes to inform parents of the project, and introduce ONS and the importance of smoking cessation.

"Butt Busters" involved 3 visits over 6 weeks. The 1st visit introduced ONS, "Butt Busters," and a brief discussion to assess students' knowledge of smoking. Smoking aerobic exercises were conducted to mimic changes in lungs secondary to emphysema. The students had two weeks to complete posters or essays. At the second visit, posters were collected and "Butt Busters" T-shirts were handed out. Teachers and principals judged posters on originality and relevance (no essays were submitted). At the third visit, trophies were awarded for first, second, and third place, as well as honorable mention.

Two programs were successfully completed as of March 2002, involving a total of 163 students. The feedback from both principals and students has been positive. The program was featured in the Pittsburgh Post-Gazette health section. Plans for future programs include pre- and post-tests to assess anti-smoking knowledge. “Butt Busters” is ongoing with two programs scheduled for fall and winter 2002.

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A BREATH OF FRESH AIR: ONCOLOGY NURSES INCREASING THE COMMUNITY’S AWARENESS ABOUT LUNG CANCER. Barbara Biedrzycki, RN, MSN, AOCN®, CRNP, Gina Szymanski, MS, RN, and Sallie Brovitz-Palmer, RN, BSN, OCN®, Johns Hopkins, Baltimore, MD; Sue Markus, RN, BSN, OCN®, Mercy Medical Center, Baltimore, MD; and Dawn Stefanik, RN, BSN, OCN®, Greater Baltimore Medical Center, Baltimore, MD.

Oncology nurses know all too well the health challenges smokers face. In our practice settings we see smokers only after the cigarettes have taken their toll. Our chapter wanted to explore what impact we would have on our community and potential patients’ lives before the lung cancer diagnosis is made. What a refreshing opportunity our chapter had when we talked with mall shoppers about the hazards of smoking. Armed with lots of graphic educational materials (brochures, magnets, posters) and smoking substitute samples (gum, hard candy, lollipops, balloons), a dozen oncology nurses and two respiratory therapists shared vital information with shoppers and demonstrated the biological detrimental effects smoking has on their lungs. A diverse group of shoppers stopped at elderly smokers, illegal underage smokers, people who lost a loved one to smoking, former smokers, and the curious. Most were interested in what we had to say, but all were interested in telling us their life experiences with smoking. Not only did the shoppers learn about the hazards of smoking, but we learned a lot too. We discovered that we could not convince some people to say they were going to quit even though they verbalized an understanding of the health consequences of smoking. Understanding the different “stages of change” allows the oncology nurse to not consider it a professional defeat when, after a long discussion, the person indicates that they are going to continue smoking just as they always have. For our next community project, the oncology nurses’ educational strategies will have a theoretical basis in Prochaska’s transtheoretical model and stages of change. After identifying the person’s readiness to change, the discussion will be geared toward information that will be most helpful to the person. Through this poster we will share project strategies that made the community event a success. We would like to share our energizing experiences about how young and old people alike were so very impressed that the “cancer nurses” gave up their weekend time for this project...to talk to them...to listen to their struggles with smoking...to provide some good, old-fashioned nursing care.

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DEVELOPMENT AND IMPLEMENTATION OF PATIENT AND FAMILY EDUCATION COORDINATOR ROLE FOR HOSPITALIZED ONCOLOGY PATIENTS. Tina G. Ban, RN, OCN®, Northwestern Memorial Hospital, Chicago, IL.

There is an emergent need for increased patient and family education in the oncology population. This trend has occurred as a result of system related changes such as the increasing acuity of hospitalized patients and the availability of health information to the average consumer. This poster presentation will review the contributing factors of, and the steps taken by the oncology division of a large midwestern medical center to meet this increased demand for specialized patient education. The primary intervention of the medical center was to create and implement the role of patient and family education coordinator for oncology services. The PFEC’s essential functions include: a) Assess the educational needs of patients/families with new diagnoses, low literacy, language barriers..., b) Plan education based on identified learning needs with consideration to educational, cultural, and religious background, c) Oversee unit-based educational resources (written, audiovisual, and computer), d) Assist APN with implementation of “Education at the Bedside” project, e) Provide staff education related to resources available, principles of adult learning,..., and f) Coordinate and/or conduct “Essentials...for Living with Cancer” classes. The class evaluations completed by patients/families and verbal feedback from the staff indicate that the PFEC serves as an integral member of the interdisciplinary team.

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THE HEPATIC ARTERIAL INFUSION THERAPY: THE INPATIENT NURSE’S ROLE IN PREVENTING COMPLICATIONS AND MAINTAINING PATIENT SAFETY THROUGH PATIENT EDUCATION. Patricia Gabriel, RN, MSN, ANP, Donna Fitzmaurice, BSN, RN, Rita Moore, RN, and Kim Borg, RN, Memorial Sloan-Kettering Cancer Center, New York, NY.

Colorectal cancer’s most frequent site of metastases is the liver. A current therapy for treatment of liver metastasis at this NCI-designated comprehensive cancer center is the hepatic arterial infusion therapy (HAI). Nursing knowledge of hepatic physiology is essential to effectively manage this patient population. It is imperative for nurses to educate these patients to effectively manage complications post pump placement.

The hepatic arterial infusion therapy is a treatment approach used for liver metastases in combination with surgical resection. This method of therapy delivers chemotherapy directly to the liver on a continuous basis via a surgically implanted pump. The nurse instructs the patient that a flow scan is necessary to assure proper pump function. Studies have shown that there was a significant decrease in liver cancer recurrence, and a trend toward an improved five-year overall survivor rate with HAI therapy. The nurse needs to understand the procedure, treatment, and complications associated with the HAI therapy to enhance the management of this complex patient population.

The inpatient nurses role on this hepatobiliary/gastrointestinal medicine unit specializes in the management of patients receiving HAI therapy, focusing on preventing complications and maintaining safety through patient education. Patient education is facilitated through written and verbal instructions. In the immediate postoperative period, the nurse assesses for pump pocket hematoma, seroma, infection, and inflammation, as well as pump pocket erosion and wound dehiscence.

The pump flow rate will vary depending on factors such as body temperature, altitude, arterial pressure at the catheter tip, and solution viscosity. Therefore, the nurses instruct the patients to avoid any heating equipment since they may cause a rise in the patient’s body temperature altering the flow rate. Patients are instructed to keep scheduled appointments for the pump’s drug chamber to be filled every fourteen days.

Patient education is imperative before HAI patients are discharged home from the inpatient setting. Inpatient nurses provide patients with the information they need to ensure that safety measures will be implemented. This presentation will provide an overview of the nursing care of patients with HAI through effective postoperative assessment, potential side effects, and patient education.

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A PATIENT EDUCATION VIDEO TO ENHANCE LEARNING OF ESSENTIAL INFORMATION IN THE IMMEDIATE POSTOPERATIVE PERIOD FOLLOWING SURGERY FOR BREAST CANCER. Patricia Simpson, RN, BA, BSN, Bettye Smedley, RN, and Jan Hawthorne Maxson, RN, MSN, AOCN®, University Hospitals of Cleveland, Cleveland, OH.

Educators have long recognized that educational tools that stimulate multiple senses are more successful in achieving academic objectives. Nurses must often circumvent senses altered by disease to appeal to those senses that remain. An additional challenge faced by nurses is that patients are often so overwhelmed by their diagnosis and treatment decisions that their capacity to learn essential information for optimal recovery is compromised. The nursing staff of our women’s surgical oncology unit identified patients with breast cancer as an especially vulnerable population. This group of patients is often required to make important treatment decisions in a short period of time. Despite printed resources and one-on-one instructional sessions preoperatively, patients struggle to retain the required content nursing identified as essential to their immediate postoperative recovery. The twenty-four hour inpatient hospitalization served as an additional challenge to our nursing staff to meet the unique learning needs of this group of patients. A patient education video appealing to the senses of vision, hearing, and touch was developed as an instructional tool to meet constraints imposed by time and human retention. Our unit staff, with the benefit of a wealth of nursing experience and existing patient instructional resources, developed the script for the video. Funding was secured and a production company was identified to produce the video according to our specifications. Nurses previewed and critiqued several demonstration tapes to achieve a final product that accurately communicated critical clinical information to the diverse population that we serve. The result is a patient instruction video that is available to all patients undergoing surgery for breast cancer. Patient evaluations have demonstrated that our video has become a valuable component in the comprehensive care that our unit and our institution supports and cherishes.

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NURSES AND PATIENTS: PARTNERS IN DEFINING EDUCATIONAL NEEDS. Lisa Toland, RN, BNS, DONS, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Chemotherapy can be a daunting and overwhelming experience for patients. The clinic nurse is often the first link and source of information and encouragement for these patients. The nurse plays a vital role in maintaining open channels of communication between the patient, physician, and other team members. In the head and neck medical oncology ambulatory clinic, a retrospective review of telephone records revealed that patients called with questions or concerns regarding the side effects of chemotherapy and treatment modalities. Other patient issues involved the use of prescribed antiemetics and scheduling of appointments. This review prompted a re-evaluation of the patient/family pre-treatment education session.

A program evaluation project was initiated using a patient survey regarding the adequacy of preparation for chemotherapy. A telephone call was planned after the first course of chemotherapy to determine whether a call to the patient/family during the first 48 hours after chemotherapy would reduce telephone calls to the clinic nurse and unscheduled clinic and ER visits. Patients starting on chemotherapy were randomly assigned to the telephone group or no call group.

Fifteen patients have returned questionnaires at this time, 6 (40%) in the telephone group and 9 (60%)in the no call group.

Preliminary results indicate that all of the patients felt prepared for the experience by the pre-chemotherapy education. All, but one patient, understood how to take medications. All patients in the call group and five (55.5%) in the no call group thought that the call was a good idea. Three patients in the call group appropriately visited the ER for significant side effects. Analysis of ER and clinic telephone logs for the clinic and ER calls and additional questionnaires is in progress.

Results of this evaluation will be used to redefine the education program and educational materials. In addition, written protocols for these patients will be shared with the ER. A collaborative approach will be used to reduce the occurrence of unnecessary unscheduled visits.

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OUTCOME EVALUATION OF A PATIENT EDUCATION NOTEBOOK FOR WOMEN WITH GYNECOLOGIC MALIGNANCY. Kerry Harwood, RN, MSN, Duke University Health System, Durham, NC.

Patients with cancer have extensive learning needs in order to understand their disease, make treatment decisions, manage care and symptoms at home, utilize resources, and cope effectively. Healthcare professionals are challenged in meeting these extensive learning needs at a time of crisis. Disease-specific patient education notebooks were developed to assist patients and staff in this process. An evaluation project was done with women with gynecologic malignancies to determine how notebooks were being used, benefits, detriments, predictors for use/benefits/detriments, and opportunities to improve content and process.

This convenience sample consisted of 50 sequential women who had received the notebook 5–6 months earlier. They were contacted by letter, invited to participate, and given the option to opt out by leaving a telephone message. Those who did not opt out were called (47). 29 were successfully interviewed. Reasons for no interview were disconnected phone/no answer (13) and death/too ill to participate (5). Structured interviews were conducted by either the patient education program director or health education graduate student.

Of 29 interviewed, 22 used the notebook. Users versus non-users were not different in age, diagnoses, types of treatment received, preferred learning style, educational level, marital status, family support, or previous experience with cancer.

Data presented are from the user group. Greater than 90% of participants identified knowledge, anticipation, and control benefits. 77% had a clinical problem at home, went to the notebook, and were able to manage the problem themselves, while 64% in that situation used the notebook to determine they needed to call the doctor. Financial implications of these two data points have been calculated.

Several observations were made from this data. Families used the notebooks extensively as they helped patients make decisions and care for themselves at home. Patients who were functionally illiterate used the materials by having others read it to them.

Efforts were made in developing the content to clarify clinical practice; patients identified no areas of inconsistency.

Opportunities were identified for staff to utilize the notebook more frequently in their ongoing patient education, particularly around symptom management.

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A PATIENT GUIDE TO CARE: COLLABORATION BY DEPARTMENT OF PATIENT PROVIDERS TO IMPROVE PATIENT EDUCATION. Diane E. Johnson, RN, OCN®, Froedtert Hospital, Milwaukee, WI.

The cancer center at Froedtert Hospital includes many specialty departments. Patients often visit several departments during the course of their cancer treatment. The purpose for developing the Patient's Guide to Care was to provide an organized approach to patient education that links the specialty departments. The Patient's Guide to Care meets our patient education goals by providing education materials in a simple standardized format in a single binder, providing only the pertinent information for the patient at the time they receive care in a specialty area, and empowering the patient to be educated, informed partners in their care.

A multidisciplinary committee was formed consisting of nurses, ministers, dieticians, social services, physicians, and public relations. Concerns identified included inadequate patient education, fragmentation of patient information, and patient dissatisfaction. The project goals were to reduce patient anxiety with increased patient/family compliance, increase patient satisfaction, and provide consistent, comprehensive patient education.

The guide includes an opening letter welcoming the patient to the cancer center and explaining the use of the guide. Information includes sections on disease process, treatment(s), medications, communication tips, glossary of medical terms, and follow-up care. Names and addresses of equipment/supply vendors, support groups, and calendar for medications and appointments are added features.

The nurse presenting the patient's guide signs the introductory letter. Each specialty department then has an information section to be added to the generic binder on the patient's first admission or treatment. For example, if a patient moves from outpatient radiation oncology to inpatient oncology, the patient receives another information section. The binder is brought by the patient to each visit to facilitate ongoing assessment of patient needs. Homecare agencies also use the information to facilitate a coordinated continuum of care.

The Press Ganey patient satisfaction scores validated increased satisfaction with the education process. The patient's guide facilitates consistent, comprehensive patient teaching by staff, as well as providing an orientation tool for new staff. Patients and families have identified decreased anxiety related to the availability of written information for use at home under a more relaxed atmosphere.

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SERVING MINORITIES: CREATING A COLLABORATIVE APPROACH TO MEET THE EDUCATIONAL NEEDS OF MULTICULTURAL INDIGENT GYNECOLOGIC CANCER PATIENTS. JoAnn Saldua, RN, BSN, OCN®, Inova Fairfax Hospital, Falls Church, VA.

The importance of patient education has been well documented throughout the healthcare field. Proper education about one's own cancer diagnosis can lead to increased compliance with treatment and increased awareness of when and where to access supportive care in emergency situations. The Northern Virginia area is one of the most culturally diverse areas within the United States. Nearly 80% of the entire state's immigrants reside within its 4 small counties. These residents have arrived from more than 170 different countries. In over 100,000 Northern Virginia households, English is not the primary language. When faced with such diversity, patient education becomes not only a challenge in the healthcare arena but also a necessity.

Through collaborative efforts with an obstetrical/gynecological clinic at a 626-bed not-for-profit hospital, oncology nurses in a community-based cancer support program have been able to make positive strides in helping to meet the educational needs of its multicultural indigent gynecological cancer patient population. Prior to the development and implementation of this collaborative effort, it was recognized that patients were provided little educational support before beginning treatment interventions. This left many without the knowledge of how to manage and control side effects from treatment including, but not limited to, nausea/vomiting, peripheral neuropathy, mucositis, alopecia, fatigue, pain management, and appetite changes. Overcoming language barriers, organizing translated educational material, accessing community resources, rounding with physicians, and providing one-on-one supportive contact with patients and their families have proven effective in serving this population of patients. These patients are empowered and encouraged to meet the challenges that evolve through their own cancer journey. This is evident by the active roles they take on in their own care.

Cases will be presented along with highlighted material and steps to which barriers were overcome through oncology nursing intervention. The milestones made in developing this collaborative approach to providing and meeting high standards of oncology care among the multicultural indigent gynecological cancer patient will also be depicted.

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PATIENT EDUCATION MATERIAL FOR CUTTING-EDGE CANCER TREATMENTS: NURSES IN INDUSTRY AND AT THE BEDSIDE COLLABORATING ON A CANCER VACCINE EDUCATIONAL TOOL. Dory Sample, RN, MSN, MPH, OCN®, Biomira, Inc., Edmonton, Alberta, Canada.

New therapeutic agents are rapidly being developed for cancer patients. Current advances in gene therapy, targeted therapies via molecular pathways, and immunotherapy are just a few of the new, cutting edge approaches that have begun to contribute to the battle against cancer. Access to these new agents through clinical trials has created a tremendous, specialized educational need for healthcare professionals and, subsequently, patients and their families and the community at large.

Patient education is an essential component of nursing care, and the oncology nurse is in a unique position to explain the pros and cons of therapies to patients and their families in order to optimize patient outcomes. Unfortunately, educational materials, particularly those geared at the patient level, are still largely lacking for many new treatments. Oncology nurses involved in the direct education of patients and industry nurses who have access to detailed information regarding investigational products, and perhaps financial resources, have an opportunity to work together to develop educational tools. The resulting materials could facilitate a patients' improved understanding of the therapy in question, while also assisting the healthcare provider charged with providing current and accurate information.

This presentation will detail one such collaboration, between an oncology nurse at Biomira, Inc., a biotechnology company in Edmonton, Canada, and nurses at sites enrolling patients into a vaccine clinical trial. Together, these nurses developed a much-appreciated educational tool, a flip chart, geared on one side of each page with information at a general patient level and on the other side, with more detailed information for healthcare professionals (which could be, if appropriate, shared with the patient). The steps undertaken in the development of this tool could be used as a model for nurses struggling with the creation of their own educational products related to novel therapies.

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GETTING MORE INFORMATION ABOUT THE PROBLEM: AN IMPORTANT COMPONENT FOR IMPROVEMENT OF PATIENT SATISFACTION. Valsamma A. Varghese, RN, Marlene Z. Cohen, RN, PhD, JoAnn Mick, RN, MSN, MBA, AOCN®, Rosanne Arlington, RN, MSN, CNS, ONC, and Sherry Preston, RN, BS, CPHQ, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Patient satisfaction is important to the patient, the patient's family, the healthcare workers, and the hospital. It is an important overall indicator of patients' perception of the care they receive while hospitalized. It was noted that the mean satisfaction scores regarding nurse response time was 80. The initial purpose of conducting a call light study was to identify the number of call lights occurring and our nursing staff response time. Data were also collected to determine the pattern of the type of requests patients were making when they used the call light system. The goal was to use the data to increase our understanding of the issues leading to patient dissatisfaction with the response time of nursing personnel. To identify specific issues related to patient calls, a log was maintained to identify the number of patient calls, the purpose of the call, and the length of time before the call was answered by a team member. We discovered that of the 250 calls recorded, 80% of the calls were answered within 3 minutes. We also determined that 25% (the highest single percentage) of the calls were requests for pain medication. We were then able to look at factors that more closely affected our management of the patient's pain to proactively develop and implement a program focusing on pain management to eliminate the necessity for a patient to use the call light to request pain medication. As a result of implementation of our team's strategies, our overall mean patient satisfaction scores increased to 84 and there has been a narrowing of the variability of these scores. The satisfaction of patients regarding nurse response time increased. Many social forces, such as consumerism, customer satisfaction, JCAHO standards, and monetary constraints contribute to the increasing demand that oncology nurses provide cost-effective, high-quality clinical services. Through this process of data collection and analysis, we were able to design and implement specific strategies to improve pain management and patient satisfaction.

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AN INNOVATIVE APPROACH TO UTILIZING CANCER SURVIVORS IN TELEPHONE PEER SUPPORT PROGRAMS FOR BREAST CANCER AND PROSTATE CANCER PATIENTS. Teresa Money McLaughlin, RN, MSN, AOCN®, St. Vincent's Medical Center, Bridgeport, CT.

While extensive work has been done in recent years addressing traditional cancer support groups, few projects have addressed the area of one-to-one telephone peer support provided by a cancer survivor. Patient support programs and support groups based in community hospital settings are, at times, difficult for patients to attend. Homebound status, debilitation by treatment, caregivers who have competing demands on their time, and lack of transportation are all obstacles for patients.

Two innovative programs were developed and implemented for prostate cancer and breast cancer patients. It was found to be cost efficient, highly effective, and very user friendly. Privacy was maintained and patient contacts served to diminish social isolation, anxiety, depression, and served varied ages and ethnic backgrounds.

The two programs developed focused on a peer support model utilizing cancer survivors greater than one year out of treatment. Each group of peer volunteers completed a 7-hour training program which included confidentiality, active listening skills, stress management, skills to handle problem callers, counseling skills, body image and sexuality, coping strategies, and active role play.

The two groups are self-sufficient and rotate frequency of calls. Contact with the APRN is maintained by several means; continuing education and training is provided every 6 months, and continual supervision and resource referrals are available daily with both groups.

Ongoing evaluation is done within the programs by the APRN and adaptations are implemented accordingly. Other benefits that have been seen are increased follow-up contact following procedures and surgeries, increased attendance in our traditional cancer support groups, empowerment of cancer survivors who are willing to volunteer some of their time to make a difference with a newly diagnosed breast or prostate cancer patient, excellent volunteer and participant satisfaction, and an increase in the APRN's time utilization due to the availability of trained peer volunteers.

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GLEEVEC™ TREATMENT FOR CHRONIC MYELOID LEUKEMIA: THE NURSING MANAGEMENT CHALLENGE FROM CLINICAL TRIALS TO THE PRESENT. Suzanne Chanel, RN, OCN®, Farah Hossain, MA, and Janice Reid, RN, MA, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Gleevec, (formerly STI-571), a novel oral tyrosine kinase inhibitor, was granted FDA approval in May 2001 for use in patients with chronic myelogenous leukemia (CML). CML is a hematologic stem cell malignancy, characterized cytogenetically by a chromosomal translocation known as the Philadelphia Chromosome, which consequently expresses the bcr-abl tyrosine kinase; an abnormal protein, giving rise to this form of myeloid leukemia. CML progresses through three distinctive phases: chronic, accelerated, and blastic disease. Historically, the vanguard therapy approaches have been Interferon-alpha, Cytarabine (Ara-C), and allogeneic bone marrow transplantation. This NCI-designated comprehensive cancer center participated in an international, multicenter trial, preceding the licensure of Gleevec, comprised of patients with either chronic or accelerated phase disease. Efficacy data derived from this collaborative study continues to undergo analyses. To date, interim results of such trials have demonstrated durable hematologic and cytogenetic responses. However, early in the trial, it was apparent that this therapy would present significant challenges to nursing management. The understanding of Gleevec, as it pertains to safety and toxicity, is a consistently evolving process with frequent emergence of new information. Most notable, is Gleevec's potential drug interaction profile. Gleevec and numerous drug classifications share a common metabolism via the CYP3A4 isoenzyme system, thus, potentially inhibiting or synergizing the effects of either Gleevec or the concomitant medication(s). Such drug interactions are potentially life threatening. Case reports have demonstrated serious sequelae resultant from these interactions. Gleevec has a modest toxicity profile, lacks the myeloablative side effects of standardized therapies, hence preserving and enhancing quality of life. This has dramatically altered the landscape of CML management and outcomes.

This presentation will delineate the complex patient care management issues experienced during the course of these clinical trials. Methodologies of patient monitoring, preventative strategies, patient education, and the standard of care for patients receiving Gleevec at this institution will be illustrated.

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HORMONAL MANIPULATIONS FOR PROSTATE CANCER: THE AMBULATORY NURSE PRACTITIONER'S ROLE. Christine Liebertz, RN, CS, MSN, AOCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Multiple hormones and combinations of hormones, with a diversity of side effects and various mechanisms of action, are used for the treatment of prostate cancer. Oncology nurse practitioners are instrumental in educating, monitoring, and providing symptom management to patients while on therapy. Hormonal manipulation occurs through the disruption of the hypothalamic-pituitary gonadal axis by surgical or medical castration, adrenal suppression, and/or testosterone blockage by nonsteroidal and steroidal antiandrogens. No other therapies surpass hormonal manipulations for controlling growth, decreasing tumor burden, or stabilizing or promoting disease regression; however, eventually, most men will become refractory to their first line hormones. Historically, this progression of disease was considered to be the hormone refractory stage. Studies now show that many individuals have continued responses to further hormonal manipulations such as ketoconazole, steroids, alternate anti-androgens, and hormonal withdrawal.

Non-conventional approaches to standard castrating regimens include intermittent hormones (cycling on and off) or non-castrating regimens (high dose anti-androgens). These treatments are used to decrease potential side effects and may also prolong the hormonal response. For a population of patients who may live many years and may have multiple hormonal interventions, it is essential that the nurse be aware of all treatment options in order to help optimize the patient's quality of life as well as to help in decision-making, side effect management, and overall understanding of the disease process. At this NCI-designated cancer center, treatment decisions are based on disease state and hormonal sensitivity, co-morbidities, patient preference, performance status, and age.

This presentation will provide an overview of hormonal manipulations and educate NP's and nurses about the expert nursing management that has been developed at this center that can be used to provide comprehensive care to men with prostate cancer. It will provide information that the NP and nurse can use to educate patients about disease states of prostate cancer, effects of hormones on prostate cancer growth, hormonal sensitivities, mechanisms of action, standard and alternative hormonal combinations, along with the rationale for the use of therapies at various stages of the prostate cancer disease continuum.

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THE ROLE OF THE ONCOLOGY NURSE IN IMPLEMENTING NEW TARGETED THERAPIES. Tracy Curley, RN, OCN®, Anthony Delacruz, RN, OCN®, BSN, MS, MBA, Susan Reyes, RN, and Michael Morris, MD, Memorial Sloan-Kettering Cancer Center, New York, NY.

The oncology nurse has an essential role as new targeted therapies are introduced. The development of these therapies requires nursing interventions such as patient education, ongoing symptom assessment, and monitoring for prevention and management of adverse effects. Prostate specific membrane antigen is a cell surface glycoprotein expressed on benign and malignant prostate epithelial cells and the neovasculature of non-prostate solid tumors. J591 is a monoclonal antibody that targets the external domain of this antigen and has the potential to specifically target tumor sites while sparing normal tissue. Pre-clinical data indicate that unlabeled J591 induces antibody dependent cellular cytotoxicity (ADCC). The antibody can also be radiolabeled as a vehicle to deliver tumor-directed radiation therapy. There is an ongoing clinical study examining the efficacy of unlabeled antibody for patients with androgen independent prostate cancer, and another trial for patients with non-prostate solid tumors. Antibody is labeled with tracer levels of indium-111 and is used to define dosimetry and drug localization. Nurses are an integral part of a multidisciplinary team comprised of medical oncology, nuclear medicine, radiochemistry, immunology, diagnostic radiology, and medical physics to coordinate care and to ensure the execution of all correlative studies. The oncology nurse educates patients regarding this novel mechanism of the therapy, the unique assays used to assess its activity, and communicates these elements of the trial to the patient. Comprehensive understanding of the rationale for performing ADCC and human anti-human antibodies (HAHA) assays is crucial. The nurse must be aware of the concept of assessing radiation counts to evaluate normal organ dosimetry, drug localization, and pharmacokinetics of the agent. Clinical responsibilities include screening eligible patients, educating patients about the treatment schedule, and monitoring enrolled patients. This presentation will: 1) provide the scientific knowledge to understand the concepts involved in targeted therapy, 2) describe the therapeutic agent and treatment plan, and 3) discuss the expert role and responsibility of the oncology nurse required to care for patients enrolled in this complex study.

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NURSING PRIMER ON CANCER VACCINES: WHAT YOU NEED TO KNOW TO EDUCATE YOUR PATIENTS. Susan King, MS, RN, OCN®, Genitope Corporation, Redwood City, CA; and Terri O'Brien, RN, BS, OCN®, Rush Cancer Institute, Chicago, IL.

For most of us, our exposure to vaccines has been as a way to prevent disease. However, in a variety of cancers, vaccine therapy is being investigated as a way to prevent disease recurrence.

Recently, scientists have gained a wealth of knowledge about the biology of tumors and a better understanding of the immune system's role in cancer. This knowledge has allowed investigators to develop vaccines that use the patient's immune system to fight disease.

A recent PDQ search revealed 33 vaccine trials currently being conducted. This indicates how important it is that oncology nurses be prepared to discuss vaccine therapy intelligently and educate patients on the topic.

It is important to know that there are several different approaches to making these vaccines. There are patient-specific cancer associated proteins used to make idiotype vaccines. These vaccines use tumor-associated immunoglobulins that produce vaccines composed of large proteins. Advances in molecular techniques allow investigators to mass-produce immunoglobulin proteins to produce patient-specific idiotype vaccines.

There are also naked DNA and DNA fusion vaccines. Disease-associated genes are used to make these vaccines. Dendritic cells may also be used in vaccines to help stimulate the immune system to identify and kill cancer cells.

In order for us to adequately educate outpatients about these vaccines, we need to become more educated ourselves. Some of this can be done through on-the-job training, but it is often difficult to find the time for such education in our busy schedules. It is often equally difficult to identify someone who can explain topics such as this without our eyes glazing over or us becoming overwhelmed with information that is too detailed or complex for us to understand without some other background.

This presentation will provide the participant with a basic understanding of vaccines, including basic molecular biology and immunology. The information presented should allow nurses to discuss vaccine therapy with patients and may stimulate participants to seek to learn more about vaccine therapies.

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GELCLAIR™: A NEW, PROMISING, COST-EFFECTIVE, ORAL AGENT FOR THE REDUCTION OF MUCOSITIS SEQUELAE. Patricia Buchsel, RN, MSN, FAAN, and Elaine DeMeyer, RN, MN, AOCN®, Creative Cancer Care, Dallas, TX.

Mucositis and stomatitis are experienced by 47%–75% of patients with cancer receiving immunosuppressive chemotherapy and irradiation (Sonis, 1993). A wide variety of treatment approaches exist, but results of most agents are disappointing. New, effective, cost-effective, and easy-to-use oral agents are needed to treat pain, secondary infection, and improve quality of life for patients with treatment-related mucositis. Gelclair™ (Propharma, Inc., Dallas, TX) is a new agent that shows promise in mucositis management. A recent open-label clinical trial indicates that grades of mucositis (43%), levels of pain (83%), and patient ability to eat and drink (83%) were diminished in a study cohort of 30 evaluable patients undergoing chemotherapy and irradiation for a variety of cancers (DeCordi, 2001). Another study by Innocenti et al. evaluated 30 patients with human immunosuppressive virus having painful inflammatory and ulcerative conditions of the mouth and oropharynx. Patients were assessed for mucositis pain using a visual numerical scale ranging from 1–10, with 10 being the highest number related to worst pain experienced. A mean reduction of 7.5 points from baseline was reported between five and seven hours after the first dose of Gelclair™. After one week of treatment, an overall improvement from baseline scores related to pain and discomfort on swallowing food, liquids, and saliva was reported by 87% of patients. Forty percent of the patients felt that the optimum effect of a dose of Gelclair™ persisted for 2–3 hours, and fifty-seven percent felt that pain relief lasted longer than three hours. Overall, patients reported that Gelclair™ was easy to use and well tolerated. Although randomized clinical trials are needed to further test the efficacy of Gelclair™, it appears to be a new promising cost effect agent that diminishes the painful sequelae of mucositis. In addition, nursing time currently required for mucositis management and patient and caregiver teaching can be shortened.

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PS 341: A NEW DRUG FOR THE TREATMENT OF RENAL CELL CARCINOMA: THE AMBULATORY NURSE'S ROLE. Suzanne Sweeney, RN, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY.

PS 341 is one of a promising new classification of drugs being used to treat metastatic renal cancer. Surgical resection at early stages of the disease is the only curative therapy, and since 50% of those diagnosed already have distant metastasis, and standards therapies are not curative, new forms of therapy are needed. The ambulatory oncology nurse's role is key in managing and monitoring patients while on investigational protocols, along with intervening and supporting the patient and family throughout treatment.

PS 341 is the first proteasome inhibitor to enter clinical trials. Proteasome degradation system is one of the most efficient processes in living cells; it breaks down complex proteins into simpler ones (proteolysis). Proteasomes play a pivotal role in the cell process, and the inhibition can lead to cell death.

PS 341 is being studied, at this NCI-designated center and other cancer centers, in its ability to arrest tumor growth and tumor spread in renal cancer and various other tumors such as ovarian, lymphoma, multiple myeloma, and prostate cancer.

PS 341 is administered via IV push twice a week for two weeks, followed by a week of rest. The patient is then restaged with a CT scan after two completed cycles. Since this is a new therapy for renal cancer, the ambulatory nurse needs to be prepared for unexpected side effects. The most common side effects reported are loss of appetite, loss of weight, diarrhea, nausea, vomiting, thrombocytopenia, fatigue, and peripheral neuropathy.

The nurse following patients on protocol is responsible for screening for eligibility, maintaining protocol adherence, and symptom management. The nurse assesses and documents symptoms and toxicities and determines symptoms related to drug versus disease progression. When there is disease progression, the nurse is instrumental in providing psychosocial support, referral for alternative therapies, and/or palliative care. This presentation will give an overview of the expert nursing management and strategies developed at this center to care for this population of patients. It will educate the nurse about this new class of drug, its mechanism of action, potential side effects, along with the clinical trial for renal cancer.

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A PHASE I/II STUDY OF XYOTAX™ (CT-2103), A TUMOR-TARGETED TAXANE, IN PATIENTS WITH RECURRENT OVARIAN CANCER. Cheri Graham, RN, BSN, Gynecologic Oncology Associates, Newport Beach, CA; Paul Sabbatini, MD, Memorial Sloan-Kettering Cancer Center, New York, NY; John Brown, MD, Gynecologic Oncology Associates, Newport Beach, CA; and Mary Bolton, MD, PhD, Cell Therapeutics, Inc., Seattle, WA.

Xyotax is a novel taxane designed to concentrate selectively in tumors and result in superior efficacy, safety, and symptom control, compared to standard taxane therapy. Conjugation of paclitaxel to poly-L-glutamate (a chain of a naturally occurring amino acids) enhances aqueous solubility and eliminates the need for the toxic solubilizing agent, Cremophor. Xyotax was evaluated in a multicenter phase I/II study of patients with heavily pretreated recurrent ovarian cancer; this study is now closed to enrollment. Ninety-nine patients received 1 to 11 cycles of Xyotax, each cycle administered as a 10-minute infusion, via a peripheral vein, at a dose of 175 mg/m2 conjugated paclitaxel every 21 days. Forty two percent of the patients received less than or equal to 4 cycles. Twelve patients remain on the study. The median number of prior regimens is 3 (range, 1–10). The data available to date are: PR in 9 patients, SD in 35 patients, and PD in 44 patients. As of July 2002, the 6-month survival rate was 92%. No baldness has been observed, and only 4 patients have developed mild hair thinning. Hypersensitivity reactions (HSRs), which occurred in only 10% of patients, were easily managed with steroid/antihistamine therapy. Many of these patients continued to receive additional cycles of the study drug with premedications to prevent recurrent HSRs. Only 2 patients discontinued the study due to HSRs. The routine use of steroid, antihistamine, and antiemetic premedications is not required in most patients. Almost all reported adverse events have been mild to moderate. Grade 3 (severe) drug-related events reported to date are leukopenia, neutropenia, neuropathy (4 patients each), HSRs (2 patients), and fatigue (1 patient). No drug-related grade 4 events have been reported. Response rates and times-to-progression for patients with platinum-resistant and platinum-sensitive disease will be presented separately. The promising activity and good tolerability of Xyotax seen in these heavily pretreated patients has prompted CTI to initiate a phase III trial of Xyotax for the first-line treatment of ovarian cancer.

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"WHAT SHOULD I TELL MY CHILDREN?": AN ONCOLOGY NURSING PERSPECTIVE. Fran Spiro, RN, BA, BS, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

A diagnosis of breast cancer is devastating to a woman at any stage of life, but even more so for the mother of young children. While navigating a maze of treatment options, she must face the terrifying reality that one of her major developmental tasks, nurturing her children to maturity and independence, might be left unfinished. Observation of clinical practice in our comprehensive cancer center suggests that the surgical oncology nurse is ideally positioned to broach the subject of telling the children, following the surgical consultation and determination of a treatment plan. The nurse's ability to explore why it's important to inform the children can have a tremendous impact on both the woman and her family. Parents often express their reluctance to share this serious diagnosis with school-age children by stating, "I don't want them to worry." The nurse can explain that even young children are aware of anxiety and sadness in the home and that what a child imagines may be far more frightening than the truth. Parents can be helped to understand that maintaining trust and honesty within their nuclear family will have far-reaching benefits for all members. Above and beyond a willingness to put the question on the table, the nurse needs: 1) parent guidelines that are developmentally geared to the childrens ages, 2) the ability to recognize and address certain barriers (language, culture, religious beliefs, and personal history), and 3) institutional resources such as support groups and individual counseling facilitated by qualified staff members.

This presentation will outline the issues women deal with when discussing their illness with their children, identify appropriate interventions/resources, and review potential barriers to this process. By adapting this proactive intervention wherever cancer patients are treated, the oncology nurse can help restore that sense of control of one's life that is so essential to a state of well-being.

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RELIEF FROM HOT FLASHES: DEFINING DISTRESS AND SATISFACTION. Debra Barton, RN, PhD, AOCN®, Julia Parkinson, Charles Loprinzi, MD, Jeff Sloan, PhD, and Paul Novotny, MS, Mayo Clinic, Rochester, MN.

Although menopause is an expected event in the natural life of a woman, premature menopause induced by treatment for breast cancer can be a distressing experience. Previous research has shown that breast cancer survivors can experience more frequent, more severe, and more distressing hot flashes than women going through natural menopause. Even effective non-hormonal treatments do not reduce hot flashes by the 80% or more seen with hormonal treatments, and some have unwanted side effects. Therefore, it would help to understand more about what variables are associated with distress related to hot flashes as well as satisfaction with treatment. The purposes of these pilot studies was to find predictors of satisfaction with hot flash treatment and predictors of distress related to hot flashes. The sample included 62 women who participated in one of 4 pilot studies with new medications for hot flashes. Forty-nine percent of the women had a history of breast cancer, a mean age of 56, and were from 6 outpatient oncology clinics in the Midwest. Self-report questionnaires were completed at baseline and weekly during the medication for a total of 5 weeks. Validated hot flash diaries and numerical analogue scale questions (Cronbach alphas ranged from .80–.84) were used to assess satisfaction and the severity of various symptoms related to menopause, as well as side effects of the medications. Data were analyzed using Pearson Correlations and univariate regression equations. Dependent variables were distress and satisfaction. Independent variables were hot flash score, frequency, average severity, type of treatment, and symptom score. Results indicate percent of baseline hot flash score predicted satisfaction with treatment. At baseline, frequency and symptom scores were significant predictors of distress, with symptom score accounting for 17% of the variance. Many of the symptoms reported at baseline were related to sleep and fatigue problems. Implications of these results are that both frequency and severity are important considerations in hot flash management. Hot flash associated symptoms, such as sleep disturbances, are important to assess as they may be indicative of distress.

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CHEMOTHERAPY-INDUCED MENOPAUSAL SYMPTOMS IN WOMEN 21–45 YEARS OF AGE. Barbara Poniatowski, MS, RN, C, AOCN®, GlaxoSmithKline Oncology, Philadelphia, PA; and Patricia Grimm, PhD, RN, CS-P, American Cancer Society, Baltimore, MD.

Breast cancer patients under the age of 40 receiving adjuvant chemotherapy may experience a menopause that is permanent or reversible. If permanent, these women can expect to spend as much as fifty percent of their lives post menopause.

Menopausal symptoms and their sequelae can produce physical as well as psychological distress. The purpose of this study was to identify menopausal symptoms and determine the severity of distress produced by these symptoms as experienced by breast cancer survivors, age 21–45 years, who had received adjuvant chemotherapy. The conceptual framework for this study was based upon the Model of Symptom Management (The University of California San Francisco School of Nursing). The symptom experience dimension of this model, which involves perception, meaning, and response to symptoms, guided this project.

Using a descriptive, cross-sectional, retrospective design, a convenience sample of 28 breast cancer survivors, age 25–45 years, were asked to describe their menopausal symptoms, symptom severity, and the degree of symptom distress using the Menopause Symptom Assessment and the Urogenital Symptom Index. Selected demographic and clinical data were also obtained including age, income, education, race, marital status, and employment. Clinical data included type of surgery, chemotherapy or radiation therapy received, and use of complimentary therapies for menopausal symptoms. Analysis of the data revealed that menopausal symptoms experienced daily or several times a week include hot flashes (n = 14), fatigue and tiredness (n = 13), anxiety/nervousness (n = 12), and sleep disturbances (n = 12). Of these symptoms, the most severe were sleep disturbances and anxiety/nervousness. The most frequently reported urogential symptoms were vaginal dryness (n = 17) and urinary frequency (n = 11). Subjects had 12–21 years of education and most were employed (71%). The majority were married (79%), white (82%), with 57% reporting an income > $50,000. All had had surgery with 61% having a lumpectomy. Adjuvant treatment included cytoxan/adriamycin (CA) or CA + taxol (76%) and radiation (75%). Minimal use of complimentary therapies for the management of menopausal symptoms was reported.

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OPENING THE WINDOW ON HOT FLASHES. Nancy Gantz, MSN, RN, CS, AOCN®, Dana-Farber Cancer Institute, Boston, MA.

Background/Rationale: Data suggests that 65% of breast cancer survivors experience hot flashes, reported as severe by the majority of women. Breast cancer treatment often results in acceleration of menopause, causing women to experience hot flashes. Daily activity, sleep, sexuality, and mood are impacted by the hot flash experience. Current approaches to management of hot flashes, utilizing pharmacologic and nonpharmacologic interventions, should be based on available data from clinical trials. Much research has been weak in supporting various interventions and the data is mixed. To date, there is no definitive effective treatment. Oncology advanced practice nurses face a dilemma in choosing appropriate treatment and are in need of guidelines to better inform their practice.

Intervention: An algorithm was developed to better manage the distressing symptom of hot flashes. A flow chart details a menu incorporating past medical history, risk factors, and review of systems. Interventions with supportive data based on recent clinical trials are highlighted at several points. Examples are SSRI antidepressants, Soy, and Black Cohash. Decision consequences lead to clinical end points. The algorithm was mailed with an explanatory letter to 10 APNs in breast oncology in the New England area.

Evaluation: Results of the algorithm utilization in a variety of clinical practice settings are pending. For purposes of feedback, a five-item response summary was included with the explanatory letter mailed to 10 APNs. Responses will reflect usefulness, ease of interpretation, and suggestions for improvement.

Discussion: APNs can benefit from an algorithm on hot flash management for breast cancer patients. Current mixed data on effective interventions for this population warrant a tool that is useful to the clinician and beneficial for the patient.

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PEGFILGRASTIM WAS OBSERVED TO BE AS SAFE AND EFFECTIVE AS FILGRASTIM IN ELDERLY PATIENTS WITH BREAST CANCER. Cindi Bedell, RN, MSN, OCN®, U.S. Oncology, Dallas, TX.

Elderly cancer patients have been identified as a population at greater risk for neutropenic complications (Balducci, 2001). The elderly may have unique challenges with daily Filgrastim therapy, including daily transportation to the doctor's office, potentially placing a significant burden on the patient and caregiver, especially if the caregiver must take off work. The oncology nurse is in a position to assess and identify elderly patients at risk for neutropenia. We have previously reported the comparability of pegfilgrastim, a pegylated long-acting analog of filgrastim dosed once-per-chemotherapy cycle, and filgrastim in 2 trials of breast cancer patients receiving doxorubicin and docetaxel, a regimen where approximately 40% of patients experience febrile neutropenia (FN) without growth factor support (Misset, 1999).

We retrospectively analyzed pooled data from these pivotal trials assessing the comparability of a single subcutaneous injection of pegfilgrastim, either at a fixed 6 mg dose, irrespective of patient weight, or 100 mcg/kg, and daily filgrastim (5 mcg/kg) among younger (< 65 years) and older (≥65 years) patients the all-cycle incidence of FN, IV anti-infective use (IV), and hospitalization (HSP). Adverse events and concomitant medications (CM) were safety end points.

The age-adjusted relative risk (RR) of FN was significantly lower for pegfilgrastim (RR = 0.57; 95% CI: 0.36, 0.90) compared with Filgrastim. The proportions of pegfilgrastim and filgrastim patients with FN was 10% and 18%, respectively, in the younger age group, and 15% and 22%, respectively, in the older age group. The observed incidence of IV and HSP were lower among pegfilgrastim patients, regardless of age. Pegfilgrastim was well tolerated in both older and younger patients with side effects including cytokine-related bone pain, similar to filgrastim. No treatment group differences were found in the 9 CM classes analyzed.

Pegfilgrastim was observed to have a significantly reduced risk of FN with comparable safety to filgrastim among elderly patients.

Administering pegfilgrastim at a fixed 6 mg dose once-per-cycle simplifies treatment, while raising nursing challenges to equip the elderly patients to care for themselves at home, including self-monitoring for signs of infection or other complications of chemotherapy.

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PROMOTING BREAST HEALTH AMONG YOUNG WOMEN IN COLLEGE THROUGH BREASTIVAL EVENTS. Lillie Shockney, RN, BS, MAS, Johns Hopkins Breast Center, Baltimore, MD.

Numerous attempts have been made to conduct education and outreach programs on college campuses regarding the topic of breast cancer, and most have fallen short of their goal. This is a challenging consumer audience to effectively reach, who either already fears the disease so much they do not attend educational programs or believe that they are immune or untouchable by the disease at this point in time in their lives.

In 2001, the director of education and outreach of the Johns Hopkins Breast Center created a program, with the support of a small sorority of 13 female students of JHU, that would address many goals including: create an interactive event that students would willingly attend with enthusiasm and demonstrate an interest in learning about how to improve and maintain good breast health; educate students about at least 8 facts regarding breast health/breast cancer; train students how to perform breast self exams; educate students about proactive steps they can do to reduce their risk; create an event that can be replicated at other college campuses.

Seven breast cancer organizations participated and were given flash card questions about breast health and breast cancer for students to answer at each booth (true/false and multiple choice). Upon correctly answering questions at every booth, the student was then rewarded with food from Hard Rock Café, given a free dessert, cosmetics, hair care products, and a chance to win a "booby prize" (door prize).

Out of a campus of 1,100 students, 600 students attended with 347 students visiting every booth and answering flash card questions correctly. 252 female students signed the banner, "I got the message. I understand the importance of my breast health." 61% surveyed said they learned something new about breast cancer. 100% surveyed said they would attend a Breastival event again.

The Johns Hopkins Breast Center has created a Breastival Resource and Planning Kit to help other breast centers and colleges easily replicate this event. As of June 1, 2002, fourteen other breast centers/colleges have obtained the kit and are holding breastivals now. This innovative method of educating students has proven very effective!

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"NO, IT'S NOT MASTITIS": DIAGNOSIS OF AND INNOVATIVE COMBINATION TREATMENT FOR INFLAMMATORY BREAST CANCER. Arlene Berman, RN, MS, OCN®, Sandra Swain, MD, Jennifer Low, MD, and Pia Nierman, RN, BSN, National Institutes of Health, National Cancer Institute, Bethesda, MD.

Inflammatory breast cancer (IBC) is an aggressive form of locally advanced breast cancer (LABC), which affects approximately 5% of women with breast cancer. Signs and symptoms may include redness of the breast, increase in breast size, breast induration, edema, and heaviness. Color changes are not always bright red but may vary from reddish purple or reddish brown to faint pink. Prompt diagnosis of IBC is often delayed because these women present with mastitis-like symptoms and are treated with a course of antibiotics for a presumed infection. Diagnosis may be made more difficult because a definite mass cannot be found in many patients. Pathologically, IBC is associated with dermal lymphatic invasion by breast cancer cells, but this is not required for diagnosis. Education of nurses is necessary to increase awareness of the signs and symptoms of IBC.

Increased micro vessel density and vascular endothelial growth factor (VEGF) expression are associated with IBC. We are using Bevacizumab, an anti-angiogeneic agent directed against VEGF-A, in combination with standard chemotherapy for patients with IBC. Patients receive bevacizumab alone for cycle 1, and then receive bevacizumab, doxorubicin, and docetaxel every three weeks for cycles 2 through 7. Local control is achieved with mastectomy and radiation therapy. After completion of radiation therapy, patients receive bevacizumab alone for 8 additional cycles. Serial tumor biopsies and dynamic contrast-enhanced MRI are used to evaluate tumor responses to bevacizumab and to chemotherapy. Seven patients have been enrolled to date, and the combination therapy and the planned studies have been well tolerated. Clinical trials with molecular and functional endpoints to assess drug effectiveness are feasible and may provide valuable insight into both angiogenesis and IBC.

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EXPANDING THE COMFORT OF MASTECTOMY PATIENTS WITH THE PAPILLA GOWN. Ho-Soon M. Cho, PhD, RN, Jae-Eun Paek, PhD, Tara Fedric, MS, RN, Maisie S. Kashka, PhD, RN, and Albert Y. Choi, MA, Texas Woman's University College of Nursing, Dallas, TX.

Currently, 175,000 women undergo invasive surgery for breast cancer in United States every year, and many require the placement of Jackson-Pratt drains which are secured with large safety pins on the hospital gown. The hospital gowns are tied in the back, increasing the discomfort for breast surgery patients. The patients also experience fear that the JP drainage tubes will be pulled out or will tug on the surgical wound site. The papilla gown addresses these issues and attempts to remedy them.

The purpose of this study is to compare the patient's physiological and psychological comfort level in three types of clothing: standard hospital gown, patient's own clothing, and the modified standard gown, namely the papilla gown. The papilla gown was invented and designed by these investigators. Patients using the papilla gown will report higher scores of ambulation than those using their own clothing or the hospital gown. The study will use the quasi-experimental design in physician offices setting with mastectomy patients. The data will be completed on the second and on the seventh postoperative day using the comfort questionnaire and patient data form developed by the investigators. The evaluation method will be used to measure the content validity based on Lynn's criteria. In order to test the reliability of the instrument, the Cronbach's alpha test will be used. Specially trained physician's office nurses will explain the purpose of the research and the confidentiality of the study, as well as distribute the papilla gowns and questionnaires on their visiting day prior to their surgery. Thirty mastectomy patients from physician's offices will be recruited using a non-probability randomized sampling technique. Data will be analyzed using the statistical package for social science. To determine if differences in age exists between the two groups, a two independent samples t-test will be conducted. A univariate ANOVA will be conducted to determine if significant differences exist in comfort based on group, age, marital status, pain management, and type of surgery. In cases where significant factors consist of more than two levels, Tukey's t-test will be the post-hoc test to determine which levels of the factors differ in comfort.

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FATIGUE, DEPRESSION, AND BIOMARKERS IN WOMEN WITH BREAST CANCER: A PILOT STUDY. Barbara Piper, DNSc, RN, AOCN®, FAAN, University of Nebraska Medical Center, Omaha, NE; Judith Payne, PhD, RN, Wayne State University, Detroit, MI; Ian Rabinowitz, MD, University of New Mexico, Albuquerque, NM; and M. Bridget Zimmerman, PhD, University of Iowa, Iowa City, IA.

Because fatigue and depression frequently correlate with one another, a common biologic pathway has been proposed for these states. This is the first study to examine how specific biologic markers, serotonin and bilirubin, are related to these states. This is a significant area for research as findings can contribute to an improved understanding of underlying mechanisms, risk factors, and treatments. Components of the integrated fatigue model guided this correlational, repeated measures study at a large southwestern university cancer center. Data were collected using the standardized Piper Fatigue Scale (PFS), the Center for Epidemiologic Depression Survey (CES-D), a demographic form, and medical record data. Newly diagnosed breast cancer patients (N = 11), stages I or II, and age and menopausally-matched healthy controls (N = 11) completed instruments during chemotherapy (CT) cycles 1 and 4, on day 1 before CT, and two weeks later at nadirs (T1–T4). All women were admitted days 1–3, cycles 1 and 4. Bilirubins and CBCs were drawn day 1; serotonins days 2 and 3. Descriptive and inferential statistics were used in data analysis. Subjects were Caucasian (54.5%) and Hispanic (36.5%), high school educated, with a mean age of 47.5 years. Patients had significantly higher mean fatigue (PFS)($p < .0001$) and depression scores (CES-D) ($p = .006$), and bilirubin and serotonin were significantly reduced ($p < .05$). Serotonin ($p = .03$) and bilirubin ($p = .007$) significantly correlated with fatigue, and serotonin significantly correlated with depression ($p = .004$). These differences in patients and their associated biomarkers warrant further study and underscores the need to screen for these states in practice.

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CONTEMPORARY MEASUREMENT OF SYMPTOM DISTRESS IN WOMEN WITH BREAST CANCER. Marcia Boehmke, DNS, ANP, RN, University at Buffalo, State University of New York, Buffalo, NY.

Cancer evokes considerable stress from diagnosis through treatment, with each patient's trek unique. This unique response is known as "symptom distress" and refers to the perception of discomfort as experienced by the individual. Identification and management of patients at risk for high levels of symptom distress are essential because higher levels of distress have been equated with diminished self-care, altered social relationships, and decreased adherence to treatment protocols, curtailing survival.

A limitation of research to date has been the lack of consensus related to the measurement of the symptom distress construct. To date, observable signs and symptoms have received greater attention than the women's response to and coping with the occurrence of these symptoms. Ehlke (1988) points out that women with breast cancer do not experience difficulty breathing and coughing (measured by most symptom distress tools) and omit variables like child-care, marriage, and body image, commonly experienced. One aim of this study was to examine instrument sensitivity in the measurement of symptom distress levels experienced by women with early stage breast cancer undergoing adjunct chemotherapy.

The theoretical framework chosen for this study was the Lazarus and Folkman Model of Stress and Coping. This descriptive, correlational, longitudinal study used convenience sampling to recruit 120 women with stage I and II breast cancer from six socio-economically diverse oncology settings in Buffalo, New York.

The analysis determined that the McCorkle and Rhodes symptom distress scales were highly correlated for all data collection points ($r = .90$; $r = .84$; $r = .77$, respectively), but not correlated with a visual analogue scale measuring anxiety levels (-.042). Anecdotal comments from women suggest that the instruments might not be sensitive measures.

The results of this study implicated fatigue, insomnia, body image, and diminished concentration as symptoms causing women the most symptom distress; however, comments made by the women suggest accessing women's perspectives on their total symptom experiences have not been taken into account. A qualitative study is needed to access symptoms most bothersome to these women (taking into account the advent of new therapies/antiemetics, which were absent when current symptom distress measurements were developed) as well as self-care strategies employed.

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WEIGHT AND BODY COMPOSITION CHANGES IN PREMENOPAUSAL WOMEN RECEIVING ADJUVANT CHEMOTHERAPY FOR BREAST CANCER. Carolyn Ingram, RN, DNSc, CON(C), McMaster University School of Nursing, Hamilton, Ontario, Canada.

Research indicates a decrease in chemotherapy-associated weight gain related to modern breast cancer chemotherapy. However, studies have begun to suggest that there are important body composition changes at this time. This study examined weight change during adjuvant chemotherapy, changes in body composition, and relationships between body composition and weight change. Brown's Conceptual Framework for Cancer-Related Weight Change guided the research. This prospective, correlational study examined a convenience sample of 91 pre-menopausal women with stage I and II breast cancer receiving adjuvant chemotherapy (AC, CEF, or CMF) at two clinics in Ontario. Eight AC subjects also received tamoxifen. Most had lumpectomies and stage II disease. Their mean age was 44 years (SD 5.9). Most were white, married, working, and had some post-secondary education. Data were collected before treatment began, at the start of cycles 2, 4, and 6 (if applicable), and at the end of treatment. The body composition measure was bioelectrical impedance analysis. Weights and heights were obtained using standardized techniques. Reliability and validity for all measures were well established. Data analysis included descriptive statistics, correlations, and regression analysis. Subjects' BMI indicated slight overweight at baseline (M = 26 kg/m2, SD 6.6). Of these, 45% were significantly overweight (M = 30.7 kg/m2, SD 7.1). Overall, the sample gained 1.4 kg (SD 3.4) during therapy. An increase or decrease of > 2.5 kg defined "weight change." Using this definition, 55% of women maintained stable weights, while 34% gained (M = 5 kg, SD 1.4), and 11% lost weight (M = 4.2 kg, SD 1.4). Although adult weight gain is primarily associated with increased fat mass, weight gainers in this study also gained lean body mass (54% lean increase for AC, 35% for CMF, and 19% for CEF subjects). These findings lay the groundwork for targeting interventions to treatment, weight, and body composition profiles.

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INFORMATION NEEDS OF WOMEN WITH BREAST CANCER IN RECOVERY. Frances Cartwright-Alcarese, RN, PhD(c), AOCN®, Mount Sinai Medical Center, New York, NY.

An estimated 203,500 women in the United States in 2002 will be diagnosed with breast cancer. The five-year survival rate for localized breast cancer is 97%, and the survival rate for all stages combined continues to improve. After primary therapy is completed, these women face the challenges of ongoing survival related to their symptom experience (number of symptoms [NOS], severity of symptoms [SOS], and symptom distress [SD]) associated with stage of disease (SOD) and ongoing therapy (OT). The need to examine information needs (IN) of women who are in breast cancer recovery is strongly indicated in the adjustment and quality-of-life literature. This study integrates components of Derdiarian's (1987a, 1987b) cancer information needs model and Coping Theory (Lazarus, 1993; Lazarus & Folkman, 1984). This framework suggests that dimensions of IN are related to symptom experience associated with SOD and OT among survivors of breast cancer. IN are measured as a score on the Toronto Information Needs Questionnaire – Breast Cancer (TINQ – BC) (Galloway et al., 1998). Symptom experience is measured as the incidence, severity, and distress subscale on the Breast Cancer Treatment Response Inventory (BCTRI) (Hoskins, 1990). A descriptive, correlational design will examine the relationship between IN related to symptom experience associated with SOD and OT among survivors in the recovery phase of breast cancer. A sample of 134 women diagnosed with breast cancer, who have completed primary therapy, and are in ongoing recovery is being accrued. Descriptive statistics including means, standard deviation (SD), ranges, and skewness for all data will be calculated and reported. Pearson correlation matrix of IN, NOS, SOS, and SOD will be generated and examined for relevant zero-order correlations. To assess the main effects of SOD and OT, as well as their possible interaction on the other variables, four two-way analyses of variance will be performed, treating IN, NOS, SOS, and SOD each as the dependent variable. This data will identify needs specific to the growing number of breast cancer survivors in recovery. This information can be used by the oncology nurse to guide development of interventions that will address these women's perceptions of information need.

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VIRTUAL REALITY INTERVENTION FOR OLDER WOMEN WITH BREAST CANCER. Susan Schneider, PhD, RN, AOCN®, Duke University, Durham, NC.

This pilot study explored the feasibility of using virtual reality (VR) as a distraction intervention with 20 women, aged 50 and older, who received outpatient chemotherapy for breast cancer at a comprehensive cancer center.

Seventy five percent of new cases and 84% of breast cancer deaths occur in women aged 50 and older. Chemotherapy is prescribed to diminish tumor mass and increase disease-free survival. Chances for survival are enhanced if women receive all of the recommended chemotherapy treatments. However, because of chemotherapy-related distress symptoms, patients often have difficulty adhering to the regimen. It is imperative that potentially effective interventions be tested on the elderly since these adults have often been excluded from intervention trials, leading to a gap in the evidence base for care of older adults.

With VR, the individual wears a headset that projects images with the corresponding sounds. A computer mouse manipulates the image. For this study, a head-mounted display was used to display encompassing images and block competing stimuli in the chemotherapy treatment room. Lazarus and Folkman's Stress and Coping Model was used to guide the study. A crossover design was used to determine whether VR was an effective distraction intervention for reducing chemotherapy-related symptom distress in older women. The Symptom Distress Scale, the Revised Piper Fatigue Scale, and the State Anxiety Inventory were used to measure symptom distress.

For two matched chemotherapy treatments, one pre-test and two post-test measures were employed. Participants were randomly assigned to receive the VR distraction intervention during one chemotherapy treatment and to receive no distraction intervention (control condition) during an alternate treatment.

Data collection will be completed September 2002. Final results will be presented. Paired t-tests will be used to test for differences in levels of symptom distress immediately and 48 hours following chemotherapy treatments. An open-ended questionnaire was used to elicit responses regarding the ease of equipment use, length of time used, and effectiveness of VR as a distracter.

Preliminary findings suggest that it is feasible to use VR with older adults. Subjective comments suggest that the VR distracter is effective at relieving symptom distress. (Funding: NINR (1-P20-NR07795-01.)

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FACTORS RELATED TO DELAYED HEALTH-SEEKING BEHAVIOR IN PATIENTS WITH BREAST CANCER. Young-Ja Lee, RN, MS, Doctoral Candidate, Seoul Junior Health College, Seoul, Korea; and Won-Hee Lee, RN, PhD, Yonsei University College of Nursing, Seoul, Korea.

Purpose/Objectives: Because early diagnosis and treatment of breast cancer is very important, this study was done to explore the factors related to delayed health seeking behavior with regard to mammography test for breast screening based on health belief model.

Design: Descriptive, correlational study.

Sample: 400 women over age 30, obtained through purposive sampling. Subjects who found lump in her breast recruited at the breast cancer outpatient department and X-ray department for checking mammography and had agreed to participate in this study in five cancer centers of university teaching hospital in Seoul, Korea.

Instrument: Instrument was developed by the Korean Version of Champion's Health Belief Model Scale: Perceptions of breast cancer susceptibility, seriousness, perceived benefits of and barriers to mammography, health motivation, and perceived confidence over using the context of breast cancer and mammography. Research team developed the scale to measure the demographic data and health- related behaviors including breast cancer risk factors.

Data Analysis: Descriptive, correlational analysis and logistic regression were used.

Findings: Now data is in the process of analysis.

Implications for Nursing Practice: These results will contribute to expand the understanding of Korean women health-seeking behaviors, specifically, delayed health-seeking behaviors in obtaining mammograms. We can suggest the clinical approaches for counseling women about the risk of delaying the hospital check-up and new media approaches for early cancer detection. These study results will be utilized to develop interventions for Korean women.

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EVIDENCE-BASED PRACTICE: PSYCHOSOCIAL CARE FOR WOMEN NEWLY DIAGNOSED WITH BREAST CANCER. Sheila Evans, RN, MS, AOCN®, Sibley Memorial Hospital, Washington, DC.

Feelings of distress and anxiety are common symptoms among women newly diagnosed with breast cancer. Research reports that the most effective psychosocial interventions for these patients include health education, information about effective coping skills, and emotional support.

In January 2000, we implemented our first formal psychosocial program for women newly diagnosed with breast cancer. Entitled Coping Skills, it was modeled after the Fawzy and Fawzy structured psychoeducational intervention published in 1994. The Fawzy and Fawzy intervention used a supportive group format that met for six weekly sessions lasting 90 to 120 minutes. We adapted the original model for our urban, east coast community hospital population. As a result, Coping Skills is offered every other month and consists of four, 90-minute sessions facilitated by a social worker. Participants receive a copy of the patient manual developed by Fawzy and Fawzy. Session content follows the intervention model including health education, coping skills training, stress management, and psychological support.

Initially, participant satisfaction surveys alone were used for program evaluation. The evaluation process has evolved during the past year to include F. Fawzy's Dealing with Illness-R tool. Informal verbal feedback is consistently positive.

In conclusion, Fawzys' research identified effective ways to meet the psychosocial needs of individuals newly diagnosed with cancer. The continuing success of the coping skills program is the result of implementing evidence-based practice into clinical care. (Funding from the Susan G. Komen Breast Cancer Foundation assisted with implementing the program.)

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A PILOT STUDY TO EXPLORE THE RESOURCES AND THE SELF-CARE ACTIVITIES OF WOMEN WITH SIDE EFFECTS FROM CONVENTIONAL BREAST CANCER THERAPY. Barbara Owens, RN, MSN, University of Texas Health Science Center at San Antonio, San Antonio, TX.

Purpose and Background: The purpose of this pilot study was to examine complementary and alternative therapies (CAT) used for the side effects experienced after conventional therapy(s) for breast cancer. Braden's Self-Help Model was the framework for this study (Nursing Research, 39: 42–47, 1990). The five categories of self-care activities designated by the National Center for Complementary and Alternative Medicine (NCCAM) were explored to improve the conceptual identification of CAT. The rates of CAT used by women after diagnosis of breast cancer in the literature range from 39% to 84%, which reflect different variables used for exploration of CAT. Controlled clinical trials have generated little data on the relationship between CAT and quality of life outcome.

Method: A convenience sample of 33 Black, Hispanic, and non-Hispanic white women during the time they experienced side effects of breast cancer treatment were asked about the prevalence and types of CAT used. A descriptive statistical analysis was used to examine which CATs were used as resources that moderated uncertainty and improved quality of life.

Results: The percent of each NCCAM category used by this sample was: 1) Alternative medical systems = 12%, 2) Mind/body therapies = 91%, 3) Biologically-based therapies = 73%, 4) Manual therapies = 21%, and 5) Energy therapies = 3%. All but one in this sample had used at least two complementary treatments or remedies. The most frequently used therapies were humor (91%), music (88%), and prayer (88%). Energy therapy and hypnosis were each used by only one person, followed by chiropractic and acupuncture treatments used by only 12% in this sample. Ninety percent of the women reported perceived improvement in quality of life with use of CAT.

Conclusions: Based on the results of this study, information to guide development of CAT among women during treatment of breast cancer in this cancer treatment and research center in South Texas will be offered. This study also provided information that will be useful in constructing an instrument to measure CAT and in clarifying the conceptual entities to separate CAT into different variables during the experience of breast cancer.

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USING A SYMTOM DISTRESS TOOL IN AN OUTPATIENT BREAST CENTER. Michelle Willman, RN, BSN, OCN®, Waukesha Memorial Hospital Center for Breast Care, Waukesha, WI; Joan Bink, RN, BSN, Oconomowoc Memorial Hospital Center for Breast Care, Oconomowoc, WI; and Joy Swain, RN, BSN, OCN®, and Catherine Rapp, MS, RN, AOCN®, Waukesha Memorial Hospital, Waukesha, WI.

Learning of an abnormal mammogram and having a breast biopsy are stressful events. In the literature, anxiety is often correlated to lengthy wait times and more invasive biopsy procedures. In spite of wait times less than two weeks, many women were significantly anxious when they presented for needle biopsy in our centers for breast care. The goal of this project was to find a tool that would allow for assessment of women's levels and sources of distress. The Psychosocial Distress Thermometer and Problem List (PDT) was adapted from the NCCN Psychosocial Distress Practice Guidelines. The PDT was given to a convenience sample of 51 women to complete on the day of, but prior to their breast biopsies. In our sample, 55% of the women experienced significant distress (score of 5 or greater). Not surprisingly, the most prevalent cause of distress was emotional problems (89%). However, additional sources of distress included physical problems (61%), practical problems (46%), family problems (25%), and spiritual concerns (14%). Oncology nurses intervened with any woman indicating a distress level of 5 or greater, and made interdisciplinary referrals as needed. For most women with a benign result, the distress was relieved by knowledge of their biopsy results. Of the 45% of women who indicated a distress level less than 5, emotional problems (57%) were again the most prevalent source, followed by physical problems (52%), practical problems (26%), family problems (13%), and spiritual concerns (4%). An incidental finding was that women who requested an anti-anxiety medication prior to the procedure did not necessarily have correspondingly high distress scores on the PDT. The results demonstrated that the PDT is a usable and appropriate tool for our outpatient setting. Women appreciated and were surprised by attention to their "other" needs. Continued use of the PDT will provide consistent assessment and communication across our breast cancer treatment continuum. In addition, it will facilitate identification and early intervention for women with both benign and malignant results.

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SISTERS FOR BREAST HEALTH: IMPROVING THE HEALTH OF THE COMMUNITY. Karen McGough, ARNP, MS, AOCN®, Sandra Jones, MS, ARNP, and Maria Scruggs-Weston, BS, St. Anthony's Health Care, St. Petersburg, FL.

Sisters for Breast Health (SFBH) is an innovative community health program whose purpose is to promote early detection of breast cancer by providing breast health education and facilitating mammogram utilization for African-American women over 40 who reside in South Pinellas County, Florida. Needs assessment have determined that African-American women in South Pinellas County are medically underserved, specifically in the area of breast health. Data from the American Cancer Society and the tumor registry of St. Anthony's Health Care is consistent: African-American women have a slightly lower incidence of breast cancer than white women, but higher mortality. Furthermore, the American Cancer Society recommends increased participation in routine screening mammography and detection to decrease mortality and improve survival.

SFBH utilizes the concept of "Sistah Parties" with women in the African-American community coming forward to serve as hostesses in their own homes. The "Sistah Parties" offer women a chance to get together for an enjoyable evening where the focus is breast health. The program revolves around the concept that, with knowledge and support, women are strengthened and empowered to take control of their health. Barriers to participation in annual screening mammograms are fear, putting needs of others before self needs, lack of trust in the system, little knowledge about prevention, and a fatalistic attitude that breast cancer cannot be successfully treated. SFBH specifically addresses these barriers through "Sistah Parties."

Health behavior change is a process that is dynamic; therefore, evaluation of long-term cultural change is in process. It is evident that that "Sistahs" are progressing along the continuum. Current evaluation methods consist of measuring the number of women who participated and received education and the number of participants who followed though with having a mammogram. Through pre-tests, post-tests, and surveys, the "Sistahs" have shown statistical improvements in knowledge about breast health, likelihood of having yearly mammogram, comfort level in having a mammogram, and comfort level in speaking with women in your family about breast health. Cancer early-detection programs in the African-American community can be improved by designing programs that incorporate methods to promote health behavior change within the culture.

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RATIONALE FOR THE DEVELOPMENT OF THE FACT-N: A NEUTROPENIA-SPECIFIC QUALITY-OF-LIFE TOOL. Nancy Anderson, BSN, OCN®, Northwestern Medical Faculty Foundation, Inc., Chicago, IL; and David Cella, PhD, Elizabeth Calhoun, PhD, Karen Novak, RN, MSN, OCN®, ACNP, Northwestern Medical Faculty Foundation, Inc., Chicago, IL; Chih-Hung Chang, PhD, and Emily Welshman, MSW, Feinberg School of Medicine, Institute for Health Services Research and Policy Studies, Chicago, IL.

Quality-of-life (QOL) is an increasingly important measure for assessing cancer treatments. QOL is affected by changes in physical, functional, emotional, and social well-being. Clearly, chemotherapy is expected to produce changes in QOL, and validated tools that capture QOL changes have been used in clinical trials. One such tool, the FACT-G (Functional Assessment of Cancer Therapy – General), uses a 5-point scale ("0" means "not at all" while "4" means "very much") to assess how patients view their current condition, with questions regarding specific symptoms, concerns, and emotions. The FACT-N is a neutropenia-specific QOL tool currently being developed and validated as a companion tool to the 27-item FACT-G. Validation is an important step in the development of a QOL tool because it indicates that the survey questions capture meaningful and relevant issues specific to the topic (in this case, neutropenia), and that the tool can reasonably be expected to produce accurate responses when used in different studies. The FACT-N questions were developed after reviewing medical literature and conducting interviews with 10 clinicians, 25 patients with cyclic neutropenia, 25 with congenital neutropenia, and 25 patients with chemotherapy-induced neutropenia (CIN). Fifty-one questions were initially generated. Twelve experts rated the items for clarity, relevance, and redundancy, and identified 19 items that came to comprise the FACT-N. In order to test reliability and validity, the FACT-N was administered to 60 chemotherapy patients. All patients completed the FACT-N at baseline, and those experiencing neutropenia received the survey again. All patients completed the FACT-N with the last chemotherapy cycle. The results suggest that the FACT-N has internal consistency, meaning that the items measure the underlying concept. Additionally, two subscales, a 7-item fatigue subscale and a 4-item worry subscale, exist within the FACT-N. Preliminary data on the relationship of FACT-N responses to neutrophil count changes during chemotherapy will be presented. In summary, the FACT-N represents the first neutropenia-specific QOL tool. It will ultimately be incorporated into oncology clinical trials, providing oncology nurses with a better understanding of the overall impact of chemotherapy on patient's lives and the effectiveness of interventions designed to minimize this impact.

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PATIENT-REPORTED DEPRESSION AND ANXIETY IN PATIENTS WITH CANCER IMPROVES FOLLOWING REDUCTION IN ANEMIA-RELATED FATIGUE WITH DARBEPOETIN ALFA THERAPY. Mary Amorajabi, RN, and Simon Tchekmedyian, MD, Pacific Shores Medical Group, Long Beach, CA; and Joel Kallich, PhD, Amgen Inc., Thousand Oaks, CA.

Introduction: Fatigue is associated with the anemia that is frequently observed in patients with cancer, and can have a greater impact on patients than pain, potentially decreasing emotional well-being and reducing health-related quality of life (HRQOL) (Vogelzang 1997; Ludwig 1998).

Treatment of anemia with erythropoietic agents has been shown to reduce fatigue and improve HRQOL (Demetri 1998). This analysis investigated the psychologic outcomes associated with treating anemia.

Methods: Anemic (hemoglobin < = 11 g/dL) patients with cancer undergoing chemotherapy, who were enrolled in two international clinical trials, received 12 weeks of treatment with darbepoetin alfa, epoetin alfa, or placebo (n = 607). Darbepoetin alfa has a longer serum half-life and greater biologic activity than epoetin alfa, allowing less-frequent administration. The psychologic status of patients was assessed using the Brief Symptom Inventory (BSI), Depression and Anxiety scales, and the Functional Assessment of Cancer Therapy (FACT)-General scale (including fatigue as well as functional, physical, emotional, and social/family well-being scales).

Results: Patients with a > or = 2 g/dL increase in hemoglobin (n = 200) reported a mean change in FACT-Fatigue scale score of 3.8 (95% CI: 2.2, 5.5), compared with only 1.0 (95% CI: -0.1, 2.0) for patients with a < 2 g/dL increase in hemoglobin (n = 402). Patients reporting clinically important reductions in fatigue (> = 3-point increase in FACT-Fatigue scale score) exhibited a reduction in depression and anxiety as reflected in the change from baseline of -5.1 (95% CI: -6.8, -3.5) (n = 271) and -6.1 (95% CI: -7.7, -4.5) (n = 270) in the BSI Depression and Anxiety scale scores, respectively. Patients without clinically important reductions in fatigue (< 3-point increase in FACT-Fatigue scale score) exhibited an increase in depression and anxiety as reflected in the change from baseline of 3.1 (95% CI: 1.5, 4.7) (n = 333) and 1.6 (95% CI: 0.1, 3.1) (n = 335) in the BSI Depression and Anxiety scale scores, respectively. Change in FACT-Fatigue score was significantly correlated with change in BSI Depression score (r = -0.3495; p < 0.001) and BSI Anxiety score (r = -0.3529; p < 0.001). Clinically important reductions in fatigue were also associated with improvements in emotional well-being and overall health scores.

Conclusions: These findings indicate that the treatment of anemia in patients with cancer reduces fatigue, which subsequently reduces depression and anxiety, and improves emotional well-being and overall health. It is therefore important to recognize and appropriately manage anemia-related fatigue in patients with cancer.

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EFFECTS OF THE NEUTROPENIC DIET IN THE OUTPATIENT SETTING. Debra DeMille, MS, RD, Pennsylvania Hospital, Joan Karnell Cancer Center, Philadelphia, PA; Cathy Fortenbaugh, RN, AOCN®, CNS, Capital Health System, Trenton, NJ; Mary Pat Lynch, CRNP, MSN, AOCN®, Pennsylvania Hospital, Philadelphia, PA; Priscilla Deming, RN, MSN, Hospital of the University of Pennsylvania, Philadelphia, PA; and Milagros Cappa, RN, BSN, CCRP, and Ann Christian, RN, OCN®, Pennsylvania Oncology Hematology Associates, Philadelphia, PA.

Chemotherapy patients are being instructed in the neutropenic diet based on past research involving a total protective environment. There have been no studies evaluating the effects of the neutropenic diet alone in the outpatient setting. This descriptive pilot study asks 3 questions: Are outpatients receiving chemotherapy able to comply with a neutropenic diet? Is there a difference in the number of febrile admissions between compliant versus non-compliant patients? Is there a difference in the number of positive blood cultures between compliant versus non-compliant patients? Patients between 18 and 70 years old receiving outpatient chemotherapy are recruited from the Pennsylvania Hospital Joan Karnell Cancer Center and Pennsylvania Oncology and Hematology Associates. Enrollment is 12 weeks starting day 1 of cycle 1. Patients are instructed in the neutropenic diet before starting chemotherapy. Compliance assessment telephone calls are made at weeks 6 and 12. Hospital admission charts are reviewed at study completion. This study's neutropenic diet is based on a 120-institution survey by Smith and Besser. The evaluation tool measures dietary compliance through target questions about food safety and diet restrictions utilizing the Likert scale. Admission, blood culture events, and patient perception of compliance are questioned. The content validity was established through review of the tool by a multi-disciplinary team. Descriptive statistics will be used to address the first question. Occurrence of compliance within the sample will be analyzed as both raw and frequency data. Sample demographic data will be analyzed descriptively using mean, median, mode, and standard deviation calculations. Inferential statistics will be used to address the second and third questions. T-test analysis with a p value of 0.05 will be used to determine statistically significant differences in mean number of febrile admissions and positive blood cultures between subjects who are compliant versus non-compliant. Statistically significant differences will be reported as trends for guiding future design of a broader, randomized clinical trial. Healthcare professionals may change dietary education based on compliance and outcome information from this study. 16 patients have been enrolled to date. The study will be completed by November 1, 2002.

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TARGETED COLONY-STIMULATING FACTOR USE IN PATIENTS AT RISK FOR NEUTROPENIC COMPLICATIONS FROM BREAST CANCER ADJUVANT CHEMOTHERAPY: CLINICAL IMPACT OF A PREDICTIVE RISK MODEL. Anne Zobec, RN, MS, NP, AOCN®, The Oncology Clinic, P.C., Colorado Springs, CO; Judy DeGroot, RN, MSN, OCN®, Amgen, Colorado Springs, CO; and Kelly Mack, RN, MSN, NP, AOCN®, Rocky Mountain Cancer Center, Denver, CO.

Full-dose chemotherapy improves survival in early stage breast cancer (ESBC). Delivery of at least 85% of the planned dose on time (PDOT) may be necessary for an optimal outcome, yet a significant portion of ESBC patients treated in community practice do not receive this level of dose intensity. Neutropenia is often responsible for the dose delays and reductions that result in frequent failure to reach PDOT. While prophylactic colony-stimulating factor (CSF) is an alternative to dose modifications, its universal use in all patients is not considered cost-effective. Identifying patients at risk for neutropenic complications (NC) would allow targeted use of CSF, providing cost-effective protection to the patients who need it most. Silber et al. (1998) determined that the first cycle absolute neutrophil count nadir (FCANC) may be useful to stratify ESBC patients according to their risk of subsequent NC, including episodes of severe neutropenia (ANC < 500 cells/mm3) and febrile neutropenia (FN), and chemotherapy dose delays and reductions. We report on the prospective application of this risk model to determine its clinical impact in a population of ESBC patients receiving standard adjuvant chemotherapy. Patients were assigned to CSF based on their FCANC: Those with FCANC £500 cells/mm3 (high-risk patients; n = 360) received filgrastim 5 mcg/kg/day in all subsequent cycles, while those with FCANC > 500 cells/mm3 (low-risk; n = 264) received filgrastim only if they developed FN or had a neutropenia-related dose modification. Study patients were compared to 1,022 historical control ESBC patients treated with similar regimens. While most study patients (95%) received at least 85% PDOT, with no difference between the high-risk and low-risk groups, only 78.7% of the historical controls received at least 85% PDOT. Hospitalization and FN were more common in the high-risk patients compared to the low-risk patients, but were lower overall in the study patients than in the historical controls (2.9% versus 7.3%, and 7.5% versus 10.3%, respectively). These results suggest that risk model-guided prophylactic CSF use improves outcomes compared to current standard practice. Nurses can proactively evaluate an individual patient's risk using factors such as FCANC and recommend appropriate supportive therapy to help their patients achieve optimal treatment outcomes.

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PEGFILGRASTIM (NEULASTA™) SUPPORTS DOSE-DENSE CHOP-R GIVEN EVERY 14 DAYS TO PATIENTS WITH NON-HODGKIN'S LYMPHOMA. Jerry Hinton, RN, OCN®, CCRC, Erin O'Rourke, RN, OCN®, Susan Dyer, BSN, OCN®, Timothy Moore, MD, Nancy Merriman, RN, OCN®, and Kevin Miller, BSN, OCN®, Mid-Ohio Oncology/Hematology, Columbus, OH.

CHOP has long been the treatment of choice for aggressive NHL. Attempts to improve upon CHOP with more complex or higher dose regimens have resulted in greater toxicity, but not greater efficacy. Maintaining CHOP dose intensity has been associated with improved survival, and it is possible that increasing the dose-intensity by decreasing the time between cycles may further improve outcomes. Recently, investigators have shown that CHOP given every 14 days with Filgrastim support is superior to standard 21-day CHOP (Blood 2001; 98:725a). In addition, adding the monoclonal antibody rituximab to standard CHOP (CHOP-R) has also been shown to improve survival (NEJM 2002; 346:235). Given these advances, the next logical step is to evaluate dose-dense CHOP-R. This phase II trial was designed to assess the feasibility of giving CHOP-R every 14 days with pegfilgrastim, rather than daily Filgrastim. Pegfilgrastim, a pegylated version of Filgrastim, is administered as a single 6 mg fixed dose just once per chemotherapy cycle. Patients with previously untreated intermediate or aggressive NHL and relapsed low-grade NHL were eligible for this study. Rituximab was given on day 1, CHOP on day 3, and pegfilgrastim on day 4, for up to 8 cycles. To date, 15 patients have entered the trial (mean age of 61, range 37–77; 8 females, 7 males); 10 have completed therapy and 5 remain in treatment. A total of 84 cycles have been administered. Eight cycles have been delayed for toxicity (grade 2 diarrhea, n = 1; grade 3 stomatitis/pharyngitis, n = 4; grade 4 thrombocytopenia and neutropenia, n = 3) and 4 patients have had an episode of febrile neutropenia. Fully 90% of planned cycles were given on time, with no dose reductions, and all patients have attained a CR or near-CR status with no evidence of progressive disease. Complete data for the protocol-planned 30 enrolled patients will be presented at the meeting. These preliminary results suggest that CHOP-R can be given safely every 14 days with pegfilgrastim support. Oncology nurses may see dose-dense CHOP and CHOP-R increasingly used in practice. Data regarding the effects of pegfilgrastim with these regimens are important, as nurses will be integral in administering this therapy.

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NEUTROPENIC PRECAUTIONS: A JOURNEY TO THE DEVELOPMENT OF EVIDENCE-BASED STANDARDS. Bonnie Wivell (Setters), RN, BSN, OCN®, University of Colorado Hospital, Aurora, CO; Cyndi Cramer, BA, RN, OCN®, Tampa General Hospital, Tampa, FL; Patricia Will, RN, OCN®, North Colorado Medical Center, Greeley, CO; and Elizabeth "Dianna" Johnson, RN, OCN®, St. Mary's Hospital, Tucson, AZ.

Neutropenia is a common side effect of cancer treatment. It is the primary dose limiting toxicity of most chemotherapy regimens often resulting in neutropenic complications such as dose delays/reductions and febrile neutropenia, which can have an overall mortality rate as high as 10%. Concern over the potential negative clinical outcomes due to neutropenic complications, the inconsistencies in nursing management of the neutropenic patient, and the lack of nursing research to guide the development of evidenced-based neutropenia standards of practice lead to the formation of the ONS Neutropenia Focus Group in 2000. The ultimate goal of this focus group is to establish a set of national evidenced-based neutropenic precaution guidelines and patient/caregiver teaching strategies. The process has at least three phases, two of which have now been completed. Phase I was a collection of information by focus group members with regard to neutropenic precautions currently utilized at various healthcare institutions. This collection of information lead to Phase II, the development of a neutropenic precautions survey. The goal of this survey was to identify the following: 1) Neutropenic precautions utilized in inpatient/outpatient settings, if any, 2) Patient care standards currently employed in various healthcare institutions, and 3) Patient/caregiver teaching strategies. The survey was sent to 1,500 randomly selected oncology nurses nationwide utilizing the ONS membership database. Returned surveys will be analyzed with the intent of sharing these results at the 2003 ONS Congress in a poster abstract format. Data available for presentation will include the most consistently utilized neutropenic precautions, associated patient care standards, and patient/caregiver educational strategies utilized in both the inpatient and outpatient settings. Analysis of the Phase II results will determine development of Phase III, including identification of nursing research opportunities to further clarify and develop evidenced-based neutropenia standards of practice.

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OPTIMIZED USE OF PHARMACOLOGIC AND COMPLEMENTARY THERAPIES TO DECREASE CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING. Maryann Rosenthal, RN, MSN, OCN®, Jennifer Hood, RN, OCN®, Mary Booher, RN, BSN, OCN®, Debra Ann Peter, RN, MSN, and Nicole Reimer, RN, BSN, OCN®, Lehigh Valley Hospital, Allentown, PA.

Staff nurses on a 26 bed, inpatient hematology-oncology unit in a tertiary care community teaching hospital questioned whether their patients were achieving adequate control of chemotherapy induced nausea and vomiting. Their initial belief, based on clinical observations of patients, was that symptom management could be improved with optimized use of pharmacologic interventions. Despite having evidenced-based chemotherapy administration clinical practice guidelines that include pre-, concomitant-, and post-chemotherapy antiemetics, some patients receiving chemotherapy suffered nausea and vomiting. The first step in the performance improvement (PI) process was to confirm the nurses' beliefs with the patients' perceptions. Following completion of their chemotherapy regimen, patients were asked by a professional nurse to state "yes" or "no" to the question, "Did you feel satisfied with the way your nausea was controlled during your hospital stay?" The study confirmed that opportunities for improvement existed related to nausea control. Working in collaboration with our nurse researcher and unit-based pharmacist, retrospective medical record data was collected for each patient who had been surveyed. We investigated whether the patients had antiemetics ordered and administered according to the clinical practice guidelines. We found that the majority of patients who were not satisfied with the way their nausea was controlled did not have antiemetics ordered and/or administered in accordance with the clinical practice guidelines. For example, antiemetics were not consistently ordered according to the clinical practice guidelines and antiemetics ordered "prn" were not always administered in a timely manner. In conjunction with the aforementioned investigation, we completed an evidence table utilizing related literature from the past three years. The evidence revealed that antiemetic orders included within our clinical practice guidelines are consistent with the most recent research; however, we did we include a full range of complementary antiemetic therapies within our chemotherapy nausea and vomiting prevention standard. This presentation will describe these first steps in our PI initiative, as well as relate the action plans implemented to address the aforementioned opportunities for improvement. Participants will receive copies of our evidence table and evidenced-based chemotherapy administration clinical practice guidelines and associated nursing standards of care, including complementary therapies.

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EDUCATION FOR ONCOLOGY NURSING: APPLYING COMPLEMENTARY AND ALTERNATIVE MEDINCE IN THE PRACTICE SETTING. Teresa Rojas-Cooley, RN, BSN, Marcia Grant, RN, DNSc, FAAN, and Grace Dean, RN, PhD, City of Hope National Medical Center and Beckman Research Institute, Duarte, CA.

Background and Rationale: Complementary and alternative medicine (CAM) use in the oncology population has recently increased from 30% to 85%. A 2001 study reported that 65% of oncology patients do not disclose CAM use to the tealthcare team. CAM therapies may have harmful effects for patients when used with radiation or chemotherapy, and many nurses are not prepared to assess CAM use or adverse reactions. CAM information, however, is readily available. Analysis of published CAM information revealed 52 articles in 20 journals over 6 years. In addition, 43 published studies included 18 articles in *ONF* or *Cancer Nursing*.

Methods/Practices: Two educational sessions were used to identify what practicing nurses want to know about CAM. A roundtable session at ONS Congress 2002 attracted 7 oncology nurses (range of experience of 2–25 years). High interest areas were aromatherapy, Reiki, herbs, and CAM research. Lively discussions included what therapies were safe, whether CAM is within the scope of nursing practice, and what research supports CAM. A written evaluation revealed the need to know more about aromatherapy and meditation. The second session, interdisciplinary grand rounds held at a cancer center, included nine nurses (range of experience of 7–25 years), and five other disciplines. Minimal discussion occurred despite several attempts at open-ended questions regarding scope of practice, legality, and evidence-based practice issues. The evaluation revealed a need for information on all types of CAM.

Interpretation: Assessing and evaluating CAM use in cancer patients should be a high priority for oncology nurses. However, even nurses who sought out a CAM educational session are uncomfortable with their CAM knowledge and its application to practice. The lack of discussion in grand rounds may indicate staff nurses' discomfort with CAM. Nonetheless, it is essential for nurses to become competent in assessing CAM use in cancer patients.

Discussion: Staff nurses need to support the growing number (85%) of cancer patients already using CAM. The priority for education is to help integrate evidenced-based CAM into standard oncology nursing care. This presentation includes available CAM resources.

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AROMATHERAPY: GUIDELINES FOR SAFE INCORPORTATION INTO NURSING PRACTICE. Cherie Perez, RN, BS, CCRA, RMT, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Complimentary therapies are used by a number of cancer patients to either manage symptoms or supplement treatment. A survey at University of Texas M.D. Anderson Cancer Center in 1999 showed that 70% of patients had tried complimentary therapies. These therapies are readily available, often reasonably priced, and can be self managed. Recent surveys have indicated that aromatherapy is growing in popularity in acute and long term care settings. However, there is little reported research with aromatherapy in these settings. In fact, a review of the literature indicates a lack of knowledge in terms of dosing, methods of administration, and therapeutic outcomes. Although many people who use aromatherapy are not formally certified, it is important that they have a level of knowledge regarding essential oils, their potential side effects, and dosing. There are licensed caregivers, such as massage therapists or estheticians who regularly utilize aromatherapy within their practice. These practitioners have received an introduction to the use of essential oils and are not excluded from using them, although they may not have received formal certification. There is an increasing interest in aromatherapy by nursing caregivers, especially related to symptom management for cancer therapy. However, most nurses have not received specific education in the use of essential oils, selection of oils, contraindication, or interactions. Despite this lack of knowledge, aromatherapy is increasingly included as a part of holistic nursing care and has been recognized as such by one state board of nursing. It is important to realize that recognition or interest does not negate the need for some type of formal training for preparation and use. This presentation will provide an overview of aromatherapy, qualifications necessary for practice, and information related to the safety and toxicity of the commonly used essential oils. It will also include information regarding the best approaches for safe administration. Finally, it will include an overview of the research that has been completed in acute and long-term care settings. Although these studies are relatively few in number and most include small samples, there is some support showing the value of aromatherapy in patient care.

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SUPPORTING THE SPIRITUAL CONNECTION: CREATION AND DEVELOPMENT OF A SPIRITUALITY QUEST GROUP FOR CANCER SURVIVORS. Marsha Komandt, RN, BSN, OCN®, Inova Fairfax Hospital, Falls Church, VA.

The spiritual quest of an individual is a very personal one, in particular those struggling with a serious illness such as cancer, as they frequently turn to spiritual values to help them cope with or understand their illness. Research and patients' and family writings, stories, and support groups have validated this basic tenet. Therefore, a spirituality quest group was implemented within our community hospital's cancer program. From an initial one-evening spiritual class offered to cancer survivors ten years ago to the successful development of a monthly spiritual group, five years occurred. Groundwork consisted of collaboration with the chaplaincy services department of our hospital and the initial co-facilitators' participation in a parish nursing program. We were also influenced by the Joint Commission on Accreditation of Healthcare Organizations, which recommends that hospitals provide pastoral care and spiritual services for patients since, for many, it is an "integral part of health care and daily life." When the actual spirituality group met for its first session, much discussion naturally centered on "what is spirituality?" and what name the group would be called. After many creative names, the fundamental "Spirituality Quest" was chosen, as it reflected the connection between the questioning and the experiencing of one's beliefs. The group's quest for spirituality has been more closely linked to their hopefulness and their connection with each other, even though guest speakers have addressed various kinds of spirituality, for example, Salesian, Tibetan, Native American, as well as ways of touching the soul through our senses with music, art, sound, and nature. This presentation will review the literature on the role of spirituality in health and cancer care, the multi-disciplined approach of establishing a spirituality group within a cancer center, the variety of themes covered in the group, the meaning of spirituality shared, and the impact on participants' quality of life. It is hoped that our experience will encourage oncology nurses to tap into the resources that may already exist within their own healthcare facilities or to create a program that will address the holistic approach, including spirituality, to oncology patient centered care.

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LAUNCHING A COMPLEMENTARY THERAPY PROGRAM IN ONCOLOGY: A NURSING INITIATIVE IN HOLISTIC CARE. Judith Kostka, RN, MS, MBA, and Barbara Coughlin, RN, LMT, Cape Cod Hospital, Hyannis, MA; and Jeanne Jackson, RN, Falmouth Hospital, Falmouth, MA.

A complementary therapy program in oncology was launched by two hospitals in the Cape Cod HealthCare (CCHC) system in 2001. Two pilot studies using complementary therapies with chemotherapy outpatients were conducted to evaluate patient benefit. The program has grown to include three locations, including radiation therapy. Two nurses, trained in complementary therapies, provide these services.

CCHC executive management decided to explore options for integrating complementary therapy in oncology in 2000. A consultant provided background information, and the oncology nurse manager assumed project oversight. The cancer leadership team approved a three-month pilot offering five to fifteen minutes of gentle massage to interested patients in the infusion room two days a week. The goal was to offer a voluntary, non-invasive and holistic opportunity for patients to experience increased comfort and relaxation in the midst of their treatment experience. The purpose of the study was to assess patient and staff satisfaction. The findings from the pilot (n = 50) demonstrated an extremely high level of patient satisfaction with 100% of respondents saying that massage therapy services should continue to be offered. Trends included reports of decreased pain, nausea, and anxiety, and increased physical comfort and overall well-being. In addition, staff reported benefit to their patients, improvement of patient symptoms, no disruption in their job responsibilities, and a consensus that massage therapy services should continue to be made available to patients.

At the conclusion of the pilot, the cancer leadership team approved expanded services to medical oncology and the inclusion of radiation therapy. The hours of service were doubled to 20/week. A three-month pilot study was then conducted at the other CCHC outpatient chemotherapy clinic (n = 47), and included additional modalities (reflexology, aromatherapy, and therapeutic touch). Findings demonstrated an equally high level of satisfaction with 100% of patients requesting that services be continued. Services average an additional 10 hours/week at this facility. The hospitals assume the full cost of the program, and hospitals' complementary therapy committee credentials the holistic nurses. Plans to expand the program are under consideration and include offering services to oncology inpatients as well as hospice and palliative care patients.

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CREATING AN ENVIRONMENT FOR CARING THROUGH STORYTELLING.

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The stresses inherent in oncology nursing are well documented. Add to them, concerns about the nursing shortage, economic downturns, and fast-paced home lives, and you have a situation ripe for oncology nurse burn out and attrition. In our multi-site regional cancer center, our goal was to create an environment that maximizes support and growth, with the belief that such an environment will foster a workplace where care and caring happens for patients, families, and colleagues. To accomplish this goal, two interactive small group sessions were designed, focusing on mentoring. Each set of 2 sessions was limited to eight participants. Sessions were scheduled throughout the summer. Mentoring was defined as "A developmental, empowering, and nurturing relationship that extends over time. It involves mutual sharing, learning, and growth that occurs in an atmosphere of respect and affirmation" (Haley-Andrews). This definition is different than the paired "precepting" that is so often described in the literature. First, ground rules were established, emphasizing the need for confidentiality and safety in disclosure. Participants identified and discussed key characteristics of a mentor, and were led, using guided-imagery, through a journey with the mentors in their lives. Then, storytelling was introduced as a means for making visible our work as oncology nurses, connecting with patients and families during some of the most vulnerable times of their lives. The facilitator told a professional story of mentoring to model the process and to create a desire for group members to explore their own stories. Once the stage was set, each one wrote a story of a significant personal or professional mentoring event in their life. During the second session, each person told her story, reflecting on its personal meaning. Group members were asked to respond to each story, describing its meaning and impact for them. On conclusion, they wrote brief evaluative thoughts about the experience. Though just a beginning, the impact of the shared experiences in the stories is clear. The 36 oncology nurses attending have a renewed commitment to each other and to the work that they do every day.

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CANCER FITNESS: OUTCOME MEASURES AND FEATURES OF A THREE-TIERED PROGRAM.

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Until recently, the concept of a physically fit cancer survivor was seen as an oxymoron. Today, cancer survivors want to incorporate fitness into their treatment regimen to combat fatigue, aid in the healing process, and counteract the negative effects of cancer treatments.

Jones and Courneya (*Cancer Practice,* March/April 2002, Vol. 10, No. 2) reported that 82.2% of cancer survivors did not want to have to initiate the topic of exercise to their healthcare providers. Practical information must be available to oncology nurses so that they can offer exercise as a viable treatment adjunct to their patients.

In 2002, HealthONE Clinic Services developed a fitness program sponsored by HCA Cancer Care, part of HCA, Inc. Approximately 250 individuals have graduated from this program. In addition to the outcome measures and results, this poster session will offer specific and clinically appropriate information that nurses can use to educate patients on exercise strategies at all stages of their cancer journey.

The topics specifically addressed include relevant research on the importance of cancer fitness, precautionary risks and contraindications, clinical performance measures for documentation of changes in functional status, fatigue, and overall well-being, sample exercise plans and logs, reimbursement concerns, marketing materials, physician referral strategies, community resources, patient's responses to the program, and specifics of the three tiers as listed below.

The rehabilitation tier provides lymphedema services, patient specific programs for bone marrow transplant and brain tumor patients, energy conservation techniques to reduce fatigue, and strategies to enhance activities of daily living.

The second tier is for more physically fit patients. Individualized exercise treatment plans and fitness goals are established. Cancer exercise specialists supervise all workouts.

The most independent tier allows individuals to design their own exercise programs. Assistance is provided in establishing fitness goals and documenting outcomes using a cancer exercise guide developed for this program.

Through fitness opportunities, cancer survivors are empowered to enjoy healthier lifestyles, to create opportunities for psychological support, and to make changes to reverse the affects of cancer related symptoms.

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COMPLEMENTARY AND ALTERNATIVE MEDICINE IN THE 21ST CENTURY IN THE UNITED STATES.

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Complementary and alternative medicine (CAM) has advanced to the forefront of western medicine in the 21st century in the U.S. Either as treatment for medical conditions or symptomatic relief, CAM is sought by itself or in addition to conventional medicine. While percentages of cancer patients who use CAM remain variable, APNs are compelled to become well informed regarding CAM practices. The acronym C-A-M is suggested as an approach that oncology nurses can reliably use when advocating CAM and cancer care. "C" represents clarifying fact from fiction. "A" represents acknowledging our perceptions. "M" represents mixing and Un-mixing medicines. Clarifying fact from fiction. Mainstream oncologists and CAM practitioners struggle with a comprehensive definition of CAM. Complementary medicine in cancer care includes interventions that augment surgery, chemotherapy, and/or radiation or for symptom management. Alternative medicine in cancer care includes interventions independent of standard treatment. The known facts about CAM may be accurate in certain circumstances. The fiction may be that results are universal for all individuals. Inconsistencies with quality control, scientific design, and confounding variables undermine "facts." APNs need to become experts in recognizing reputable CAM research data and promoting sound research design. Acknowledging our perceptions. Popularity of CAM in cancer care is complex. When cancer patients are terminally ill, who would question a patient's desire to extend life with an alternative approach? But what if that same patient used an alternative approach upfront? Oncology nursing undergraduate and graduate curriculums train nurses to approach the cancer diagnosis with uniform principles and practices of western medicine. Personal and corporate biases need to be acknowledged. A profitable way to accomplish this is through dialogue. Alternately, APNs need to recognize that ridicule is often a mask for ignorance. Non-judgmental responses are optimal. Mixing and un-mixing medicines. The hippocratic oath of "Do no harm" is vital when CAM is paired with conventional cancer therapy. APNs have a responsibility to the practice of oncology and patients. Supportive avenues are: 1) encourage partnering in planning care, 2) promote access to CAM databases, journals, and reputable internet sites, 3) generate surveys to discover reasons for nondisclosure, 4) support licensure of colleagues practicing CAM, 5) develop clinical trials and publish results in peer-reviewed journals, 6) generate scholarly papers examining CAM practice, perceptions, and opportunities to build bridges in CAM and cancer care.

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ROCKY MOUNTAIN TEAM SURVIVOR: A MODEL FOR A FITNESS AND ACTIVITY SUPPORT PROGRAM DESIGNED TO ENHANCE AND IMPROVE OVERALL QUALITY OF LIFE FOR WOMEN CANCER SURVIVORS.

Mary Malkiel, RN, BSN, MS, LAc, OCN®, Rocky Mountain Cancer Center–Midtown, Denver, CO.

Cancer and its ensuing treatment often compromise the well-being and quality of life (QOL) for those with a current or past diagnosis of cancer. Recent studies and anecdotal evidence have shown that exercise, as part of an integrated cancer care program, can improve mood (Segar, M.L., Katch, V.L., & Roth, R.S., (1998). *Oncology Nursing Forum, 25*(1), 107–113), enhance immunity (Shephard, R.J., & Shek, P.N. (1995). *Can J Appl Physiol, 20*(1), 1–25), reduce symptoms (Courneya, K.S., & Friedenreich, C.M. (1999). *Ann Behav Med, 21*(2), 171–179), increase longevity and decrease risk of cancer (Rockhill, B., et al. (1999). *Arch Intern Med, 159*(19), 2290–2296).

Rocky Mountain Team Survivor (RMTS) is a non-profit organization providing fitness and activity programs for free or at minimal cost, to all women cancer survivors (WCSs) within the Denver metro area. Founded by an oncology nurse who is also a cancer survivor, a priority of RMTS is to provide fun, informal activities in a safe and supportive environment. These activities are open to women in any stage of treatment or recovery, with any type of cancer, regardless of age or ability. The ultimate goal is to empower WCSs to take an active role in their ongoing physical and emotional healing, while improving their quality of life. Core programs include weekly walks, a weekly indoor training program, and monthly swim clinics. Seasonal activities include snowshoeing, cross-country skiing, hiking, and biking. RMTS also participates as a group in local events such as the Danskin Women's Triathlon, and Race for the Cure. This year, 110 WCSs participated in the Danskin Triathlon as part of RMTS.

The goal of this poster session is to educate 2003 Congress participants about relevant research on cancer and exercise, specific information about RMTS, how to develop a similar model exercise support program, women's responses to the programs, and community support and resources.

Nurses are in a unique position to educate and counsel their patients on the benefits of exercise both during and after cancer treatment. By informing oncology nurses about this topic and the possibilities for similar programs within their community, they have the opportunity to affect significant change in their patient's QOL.

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DEVELOPING AND IMPLEMENTING A FAMILY-CENTERED CARE PROGRAM IN AN ACUTE CARE ONCOLOGY UNIT.

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Families and friends bring important support to their loved one's healthcare experience. Encouraging a caring individual's presence helps reassure, comfort, and heal a patient. For our 41-bed inpatient oncology unit at Park Nicollet Health Services, we wanted to formally offer families the opportunity to be directly involved in their loved one's care.

Our voluntary program took the informal family involvement we already incorporated into patient care, gave permission to the caregiver to participate in care, and added formalized education and recognition. The patient would select a loved one who would assist with their physical, emotional, and spiritual support and their education. Staff would validate and support the level of care the caregiver wished to provide. Participants in this program varied from wanting to wear identification that they were a VIP (as we called them) to their loved one, to assisting with feeding, bathing, and ambulation.

Essential components of developing this program included nursing administration support, learning from other institutions using similar models, forming a unit committee including staff, developing processes specific to our unit, and educating all staff—nurses, nursing assistants, physicians, and other professionals in contact with our patients.

The success of this program comes from our commitment to establish a healthcare environment involving family collaboration and participation, and encouraging open communication between patients, families, and healthcare professionals. We recognize and support family strengths and individuality, while respecting different methods of coping and healing. The result is an atmosphere that respects the patient's dignity and independence, and welcomes and honors racial, ethnic, cultural, and socioeconomic diversity. Patient and family feedback has been positive and they have been more active members of the healthcare team.

Currently, we continue to adjust the program to fit our culture and patient and family needs. We plan to expand the family-centered care program to other inpatient units at this hospital, who have been eager for us to bring it to them.

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MEETING PATIENT NEEDS: INTEGRATING A HEALING ARTS PROGRAM TO CANCER CARE AND INTRODUCING THEM IN A UNIQUE AND MEANINGFUL WAY.

Patrick McLaughlin, MD, and Kelly Sakalian, RN, MSN, CS, AOCN®, Providence Hospital, Southfield, MI.

Surgery, chemotherapy, and radiation have long been standard treatments for cancer. In addition to these therapies that focus on disease, there exists a healing tradition, which emphasizes not only the disease, but also the individual. These two approaches should not be seen as mutually exclusive, but as complementary to each other. With the understanding that many patients are already seeking complementary therapies before, during, and after cancer treatment, a healing arts program was developed. The primary goal of the program is to augment state-of-the-art clinical care with a healing arts program that supports cancer patients along their journey. The programs address the person as a whole, including body, mind, and spirit. Included are programs on spirituality, patient education, art, massage, Reiki, music therapy, meditation, humor, exercise, journaling, and nutrition.

To introduce the variety of healing arts programs available to cancer patients and their support people, Boost Camp, a daylong orientation program, was made available. Served up like a "Whitman's sampler," Boost Camp is informational, interactive, engaging, and highly entertaining. Boost Camp is held once a month and gives participants a chance to meet the practitioners, try out each of the programs, ask questions, and learn about the healing arts programs. Throughout the day, participants receive healing tools to add to their toolkits from each of the different healing arts practitioners. By the end of the day, each participant goes home with a wide array of small treasures.

Since the inception of the program in December 2000, 310 patients and their support people have attended. The response to the program by the participants has been overwhelmingly favorable. The evaluations showed that the participants would recommend the program to a friend, and Boost Camp definitely, or mostly, provided an orientation to the healing arts programs. Data regarding programs patients are attending or those that they have an interest in will be presented.

We believe that our healing arts program offers the cancer patient a unique approach to healing the body, mind, and spirit. The presentation of the programs in a one-day program has proven to be very effective.

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EFFECTS OF EXERCISE ON DAILY FATIGUE IN WOMEN WITH BREAST CANCER UNDERGOING CHEMOTHERAPY.

Hsin-Tien Hsu, RN, MSN, Noreen C. Facione, RN, PhD, FNP, Maria Cho, RN, MS, Marylin J. Dodd, RN, PhD, FAAN, Steven M. Paul, PhD, and Christine A. Miaskowski, RN, PhD, FAAN, University of California, San Francisco, San Francisco, CA.

Significance & Problem: Breast cancer was the leading cancer for American women in 2000. Cancer-related fatigue (CRF) has been recognized as a distressing side effect of cancer treatment. Studies have shown that adriamycin and cyclophosphamide (AC), a frequent chemotherapy regimen for breast cancer, is associated with higher fatigue levels 48 to 72 hours post administration. Exercise is one of the few interventions suggested to alleviate CRF. The present investigators observed a dramatic day-to-day fluctuation in fatigue. Although two studies have reported daily fatigue levels, our analyses of fatigue scores further extend our knowledge in the area.

Purpose: To compare daily patterns of fatigue in breast cancer women who did and did not exercise while receiving 4 cycles of AC chemotherapy.

Theoretical Framework: Piper's Integrated Fatigue Model.

Methods: Longitudinal, randomized repeated measures design. 46 women (exercise = 16; control = 30), ages 33–69 (mean = 48.9) with stage I or II breast cancer receiving four 21-day cycles of AC. Exercisers followed a formal, individualized exercise prescription during chemotherapy. Fatigue intensity was measured daily from cycle 2 to cycle 4 of AC (range 53–29 days).

Data Analysis: Descriptive analyses, repeated measures analysis of variance.

Findings: Exercisers experienced shorter duration of peak fatigue and greater amplitude of fatigue scores than non-exercisers. The average levels of peak fatigue for both groups were 5 to 7 (moderate fatigue) on a 0 to 10 scale. 60% of exercisers reported peak fatigue levels within days 14 to 17 after chemotherapy during cycle 2 and within days 16 to 19 during cycle 3. Peak fatigue of some non-exercisers was reported for the first 3 days or days 13 to 17 during cycles 2 and 3. The most common peak fatigue pattern during cycle 4 in both groups was a sharply increased fatigue level within 24 hours after chemotherapy. Highest fatigue often occurred during the latter half of cycle 3 or beginning of cycle 4. Exercisers reported slightly higher average fatigue level than non-exercisers over four cycles of chemotherapy.

Implication for Nursing Practice: Results show shorter duration, but greater amplitude of fatigue, therefore clinical implications are premature. (Funded by NIH, National Cancer Institute, RO1 CA83316.)

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QUALITY OF LIFE AND FATIGUE IN LUNG CANCER PATIENTS: DOES A SEATED EXERCISE PROGRAM MAKE A DIFFERENCE?

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Problem/Purpose: Fatigue has frequently been implicated as a distressing effect of lung cancer and its treatment that negatively affects quality of life (QOL). Studies have shown that walking programs reduce fatigue and improve general well-being in women with breast cancer; however, there are no studies of the effects of modified exercise programs on QOL in lung cancer patients, whose participation in a walking program might be limited due to climate, safety, and/or scheduling concerns. The purpose of this pilot study is to determine the feasibility of a major research study to determine the effects of a seated exercise program on QOL and fatigue in lung cancer patients and to explore strategies used by lung cancer patients to maintain or promote QOL.

Framework: Roy's Adaptation Model.

Design: Randomized clinical trial with repeated measures.

Setting: Participants will be recruited from oncology clinics in central Texas. The study will take place in participants' homes.

Sample: Twenty lung cancer patients who are beginning outpatient chemotherapy with or without radiation therapy and are medically able to participate in a low to moderate intensity seated exercise program.

Methods: All participants will receive standard instructions about fatigue management, maintain a daily activity diary, and complete the Functional

Assessment of Cancer Therapy-Lung (FACT-L), which measures QOL in lung cancer patients, and the Fatigue Subscale of the FACT, which measures fatigue every two weeks for three months. Participants randomized to the intervention group will be given a videotape of a low to moderate intensity seated exercise program and individualized instructions about how to modify exercise intensity. They will be encouraged to perform the exercises at least three times per week. Qualitative data regarding all participants' perceptions of QOL and fatigue, as well as strategies used by lung cancer patients to maintain or promote QOL will be assessed at the end of the three-month study period.

Implications: Inclusion of a tailored exercise program in chemotherapy teaching for patients with lung cancer may improve quality of life, reduce fatigue, and improve treatment tolerance.

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SYMPTOM CLUSTERS PREDICT FATIGUE SEVERITY IN ONCOLOGY OUTPATIENTS. Claudia West, RN, MS, Steven Paul, PhD, Christine Miaskowski, RN, PhD, Marylin Dodd, RN, PhD, and Kathryn Lee, RN, PhD, University of California, San Francisco, San Francisco, CA.

Recent work suggests that the presence of one or more symptoms (specifically pain, fatigue, or sleep disturbance) can influence outcomes in oncology outpatients. The purpose of this study was to determine whether the number of symptoms an oncology outpatient reported affects fatigue severity. Oncology outpatients (n = 117) who were receiving active treatment for their disease were recruited from four sites. The majority of the patients were female (75.2%) and Caucasian (86.2%) with a mean age of 59.6 years. The patients completed a demographic questionnaire, a numeric rating scale for worst pain, the Lee Fatigue Scale (LFS), the General Sleep Disturbance Scale (GSDS), and the Center for Epidemiological Studies - Depression Scale (CES-D). Patients were classified into one of four symptom groupings (i.e., 0, 1, 2, or 3 symptoms) based on pre-established cutoffs for pain, fatigue, and sleep disturbance. A linear stepwise multiple regression analysis was used to determine which of the following ten variables were significant, independent predictors of fatigue: age, gender, years of education, living arrangements, hematocrit, Karnofsky Performance Status score, CES-D score, quality of sleep score, excessive daytime sleepiness score, and total number of symptoms. The optimal regression equation included only four of these ten variables and explained 56.7% of the total variance in fatigue (F {4, 92} = 30.06, p = 0.000). The significant, unique contributions of these four variables were: 7.84% for number of symptoms (p = 0.000), 7.45% for excessive daytime sleepiness (p = 0.000), 5.06% for depression (p = 0.001), and 2.79% for quality of sleep (p = 0.017). These findings suggest that increased levels of fatigue occur in patients who are experiencing multiple symptoms, are depressed, have poorer sleep quality, and report excessive daytime sleepiness.

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INFLUENCE OF INTENSIVE CANCER PAIN MANAGEMENT IN THE DEVELOPMENT OF FATIGUE, HALLUCINATION, AND SEDATION. Shirley Hwang, RN, MS, Janet Cogswell, RN, MSN, AOCN®, Erma Morales, RN, MSN, Victor Chang, MD, Yvette Alejandro, RN, BSN, and Pamela Osenenko, RN, VA New Jersey Health Care System, East Orange, NJ.

The purpose of this study was to identify independent predictors of clinically significant fatigue (usual fatigue = > 3/10) and analgesic related CNS toxicity (hallucinations and sedation) 1 week after intensive opioid management. The study is based on a multidimensional biopsychosocial framework. One hundred and thirty eight (138) patients with worst cancer pain severity = > 4/10 completed the Brief Pain Inventory, Brief Fatigue Inventory, and Memorial Symptom Assessment Scale-Short Form at baseline and week 1. Patients reporting hallucinations, confusion, sedation, and myoclonus were assessed at both time points. The median age was 67 years (43–86). At day 1, median KPS was 60 (40–80), hemoglobin 11.8 mg/dL (6.8–16), usual fatigue severity 5 (0–10), and worst pain severity 9 (4–10) with morphine equivalent daily dose (MEDD) 20 mg (0–3, 120). At week 1, there was a significant improvement in KPS (median 70 {20–90}, p < 0.0001), and in worst pain severity (6 {0–10}, p < 0.0001). The MEDD was 90 mg (0–3, 120), and the percentage of patients on opioids increased from 65% to 96%. CNS toxicity included greater sedation in 49 patients (28%), difficulty concentrating in 25 patients (19%), confusion in 28 patients (18%), myoclonus in 25 patients (17%), and hallucinations 18 patients (13.6%). However, only hallucinations (7% versus 18%, p = 0.007) and sedation (34% versus 54%, p = 0.001) showed a significantly higher incidence at week 1. Patients with hallucinations (RR = 0.44, p = 0.004) and sedation (RR = 0.67, p = 0.02) were at increased risk for poor pain outcome at week 1. By multidimensional multivariate logistic analysis, the presence of feeling confused, hemoglobin level, preexisting hallucinations, and difficulty sleeping (p < 0.0001 & = 0.02, 0.03, 0.02, respectively) predicted hallucinations independently. Feeling drowsy, preexisting sedation, older age, and KPS (p = 0.001, 0.007, 0.005, 0.03, respectively) predicted sedation independently. Clinically significant fatigue was present in 71% of patients; feeling drowsy, feeling nervous, sedation, and difficulty concentrating (p < 0.0001 & = 0.03, 0.05, 0.05, respectively) predicted clinically significant fatigue independently. Most patients required further fatigue management. MEDD did not predict hallucinations, sedation, or fatigue in univariate analyses. In conclusion, patients with preexisting CNS symptoms, difficulty sleeping, older age, lower hemoglobin, and poor KPS are at increased risk for developing hallucinations and sedation after intensive cancer pain management.

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WHO BENEFITS FROM ENERGY CONSERVATION FOR CANCER-RELATED FATIGUE? Andrea Barsevick, DNSc, RN, AOCN®, Fox Chase Cancer Center, Philadelphia, PA; William Dudley, PhD, University of Utah, Salt Lake City, UT; Lillian Nail, PhD, RN, FAAN, Oregon Health and Science University, Portland, OR; and Susan Beck, PhD, APRN, University of Utah, Salt Lake City, UT.

The purpose of this secondary analysis of data from a randomized clinical trial (RCT) was to identify characteristics that predict benefit from an energy conservation/activity management (ECAM) intervention for cancer-related fatigue. The Common Sense Model provided the conceptual basis for the RCT. Valid and reliable measures were used to evaluate fatigue at baseline and two follow-up points of expected high fatigue. The RCT demonstrated that teaching energy conservation (delegation, priority setting, pacing oneself, and planning activities at times of peak energy) benefited a diverse sample of 396 men and women. The ECAM group reported less fatigue, distress, and impact than a comparison group. Given the positive result, it is essential to identify patient characteristics that will enable busy clinicians to target individuals most likely to benefit from this intervention. The secondary analysis included 111 participants in the ECAM group who completed measures at all three data points. Multiple regression with residual analysis was used to create a dichotomous variable indicating high or low change in fatigue scores. Change scores indicated greater or less benefit from the ECAM intervention. Chi-square and t-tests were used to evaluate demographic (age, education, marital, or work status), clinical (diagnosis, disease stage, performance status, treatment type, or side effects), and behavioral characteristics (baseline function in usual activities, sleep disturbance, and mood disturbance) as candidate predictors of benefit from the intervention. Only cancer treatment group (p = .001) and functional performance of household duties (.01) distinguished the groups with greater or less benefit from the intervention. More than two thirds of those in the high benefit group (71%) had been treated with RT compared with 29% of those receiving CTX/concurrent therapy. Persons in the high benefit group had significantly better baseline performance of household activities than the low benefit group. The findings indicate that persons receiving less intensive therapy, such as RT, and those who start out with higher baseline functioning are most likely to benefit from the ECAM intervention. The results suggest that persons treated with intensive therapy or whose usual functioning is compromised at the start of therapy may require more intensive or more comprehensive symptom management.

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FACTORS ASSOCIATED WITH FATIGUE IN WOMEN BEFORE AND AFTER SURGERY FOR BREAST CANCER. Grace Dean, RN, PhD, City of Hope, Duarte, CA; Linda Sarna, RN, DNSc, FAAN, University of California, Los Angeles, Los Angeles, CA; and Marcia Grant, RN, DNSc, FAAN, City of Hope, Duarte, CA.

Significance: While significant literature supports the occurrence and distress of cancer treatment-related fatigue and fatigue in advanced cancer, little evidence is available on the newly diagnosed cancer patient.

Purpose: This study explored the occurrence of fatigue and relationship of mood and symptom distress on fatigue in women before and one month after surgery for breast cancer.

Theoretical Framework: Piper's Integrated Fatigue Model was used to guide this study.

Methods: A descriptive prospective one group pre-post design was used to describe changes in, and relationships between fatigue, mood, and symptom distress. Twenty women scheduled for breast cancer surgery were recruited from a cancer center in Southern California. Data were collected on fatigue (Piper Fatigue Scale, Profile of Mood States fatigue and vigor subscales), mood (Hospital Anxiety and Depression Scale), and symptom distress (Symptom Distress Scale = SDS). Higher scores indicate more fatigue, negative mood, and more symptom distress.

Data Analysis: Descriptive statistics, correlations, and paired t-tests were used for the analysis.

Findings and Implications: Mean scores for fatigue revealed nonsignificant differences (4.63 pre-op to 4.68 postop; p = 0.94). Mean scores for anxiety decreased significantly (9.25 pre-op to 7.26 postop; p < 0.02). Anxiety subscale scores of 11 or greater (need further evaluation) were found in 10 (50%) participants pre-operatively and only 4 (20%) participants postoperatively. Mean scores for depression revealed nonsignificant differences (5.50 pre-op to 5.42 postop; p < 0.79). Depression subscale scores of 11 or greater (need further evaluation) were found in 3 (15%) participants pre-operatively and 2 (10%) participants postoperatively. Mean scores for the SDS demonstrated nonsignificant differences (23.05 pre-op to 23.89 post-op; p < 0.84). Three symptoms reported with greater frequency and varying levels of distress both pre- and post-operatively were outlook, insomnia, and fatigue. Fatigue, mood, and symptom distress were moderately to highly correlated. These results confirm previous research findings on newly diagnosed women with breast cancer (Cimprich, 1999). (This research was supported by the Sigma Theta Tau/Oncology Nursing Foundation Grant.)

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FACTORS INFLUENCING FATIGUE DURING AND AFTER CHEMOTHERAPY: RESULTS OF A FEASIBILITY SLEEP INTERVENTION STUDY. Ann Berger, PhD, RN, AOCN®, and Barbara Piper, DNS, RN, AOCN®, FAAN, University of Nebraska Medical Center, Omaha, NE; and Patti Higginbotham, MSN, RN, OCN®, **Alegent Health, Omaha, NE.**

Significance: The number of women undergoing adjuvant breast cancer chemotherapy continues to increase due to the aging of baby boomers and use of more aggressive first-line therapies. Previous descriptive research has found that symptoms, physical functioning, psychological status, activity/rest, and sleep/wake patterns are associated with fatigue in women during and after treatments.

Purpose: A behavioral intervention promoting quality sleep was tested to determine its impact on sleep and fatigue during and after adjuvant breast cancer chemotherapy.

Theoretical Framework: Piper's Integrated Fatigue Model.

Methods: Prospective, repeated measures, feasibility design; enrolled 25 post-op women with stage I or II breast cancer receiving four cycles of Adriamycin-based chemotherapy. Mean age 54.3, most were married, employed full or part time, with some college education. After the four cycles of Adriamycin-based chemotherapy, 21 women remained in the study until the last measurement, of which 8 also had 4 cycles of Taxol, 10 also had radiation, and 18 were taking Tamoxifen. Instruments used had adequate reliability and validity, and included symptom experience scale, MOS- SF-36, wrist actigraph, Pittsburgh Sleep Quality Index, Morin Sleep Diary, and Piper Fatigue Scale. SPSS was used to test relationships among variables at 8 times over 1 year beginning with the first treatment.

Findings: During all 4 cycles of chemotherapy, night awakenings combined with symptoms at cycles 1 and 2, sleep latency at cycle 3, and anxiety at cycle 4 contributed significantly to fatigue in tensity (p< .05–.007). At all times after chemotherapy, symptoms contributed significantly to fatigue. Symptoms combined with length/naps were significant 30 days afterwards; physical functioning status and depression were significant 60 and 90 days after and 1 year after the first chemotherapy treatment (p < .05–.003). Additional contributors to later fatigue combined with symptoms at various times were decreased sleep efficiency, sleep quality, increased night awakenings, or anxiety.

Implications: Interventions that focus on reducing disruptions from symptoms and maintain physical functioning, psychological status, activity/rest, and sleep/wake patterns are most likely to modify fatigue during and after chemotherapy. Interventions should be tailored and contain elements from each of these areas, with particular emphasis on symptoms, especially sleep disturbances.

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EVALUATING THE CLINICAL IMPORTANCE OF A FATIGUE ASSESSMENT TOOL: A PILOT STUDY. Maureen Quick, RN, BSN, OCN®, Self-Employed, Contracted Consultant for Oncology Education Services, Inc., Bloomington, MN; and Elizabeth Kraatz, RN, PhD, AOCN®, University of Minnesota School of Nursing, Minneapolis, MN.

Patients can experience a multitude of symptoms related to their cancer and cancer treatment. Pain, nausea, and vomiting have been the focus of considerable research over the years. Providing evidence-based clinical interventions has improved patient care and successful management of these side effects is a hallmark of cancer nursing. In recent years, fatigue has been recognized as a prevalent and often debilitating symptom for cancer patients. Despite the increased recognition of cancer-related fatigue (CRF), it is often not assessed in the clinical setting. Clinicians do not always recognize fatigue as a critical symptom and perceive a lack of effective therapy. Assessment of fatigue is also difficult because it is complex and multi-dimensional.

A study was designed to evaluate the clinical importance of a patient fatigue assessment tool for nurses in the clinical setting. The purpose was to identify whether assessing fatigue and potential contributing factors is beneficial in assisting nurses in identifying interventions to minimize the impact of CRF. The fatigue assessment tool is a survey that includes questions about the onset, intensity, and duration of fatigue as well as known factors that contribute to the experience and severity of fatigue. A pilot study conducted at four outpatient oncology clinics in a large urban area included a sample of 112 cancer patients and 24 oncology nurses. Patients were asked by their clinic nurses to be participants in the study and complete a fatigue assessment tool. At the end of data collection, the nurses were asked to complete a questionnaire evaluating the utility of the fatigue assessment tool in clinical practice. Data collection is complete and will be analyzed using the SPSS statistical program.

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WOMEN RECEIVING ADJUVANT CHEMOTHERAPY FOR BREAST CANCER: IMPACT ON QUALITY OF LIFE AND FATIGUE. Katherine Byar, RN, BSN, and Ann Berger, RN, PhD, AOCN®, University of Nebraska Medical Center, Omaha, NE.

Significance: As more women receive adjuvant chemotherapy for breast cancer, there is a growing recognition of the potential long-term side effects such as increased fatigue, decreased stamina, and loss of energy that impact quality of life (QOL).

Purpose: The first was to determine the domains of QOL most affected by chemotherapy. The second was to determine relationships between fatigue and QOL domains. The third was to examine relationships between demographic variables and QOL domains.

Conceptual Framework: Components of the Piper's Integrated Fatigue Model.

Methods: Prospective repeated measures study. Caucasian women (n = 25) following surgery for stage I or II breast cancer, followed by Adriamycin-based chemotherapy (8 received Taxol, 10 received radiation, 18 received Tamoxifen).

Reliable and Valid Instruments: Piper Fatigue Scale (PFS), Medical Outcomes Short Form-SF-36, Fatigue Intensity (Item #7 on the PFS), Symptom Experience Scale (SES). Data collected at eight times; two days prior to and seven days following four chemotherapy treatments, then for seven days at 30, 60, and 90 days following the last chemotherapy treatment, and one-year after the first treatment.

Results: At the beginning of the first chemotherapy, six domains of QOL were significantly below population norms, mental and general health was WNL. Sixty days after the chemotherapy was completed, physical (X = 70.71) and role-physical (X = 47.62) domains, were still significantly below norms, with other domains returning to norms, except mental (X = 80.38) which was higher. At one-year, five domains returned to norms, and mental, social, and general health was higher than norms.

Women who reported higher fatigue at the beginning of the first chemotherapy had lower mental functioning (r = -0.433, p < 0.05). Sixty days after chemotherapy, women reporting higher fatigue had lower functioning for all QOL domains except bodily pain (r = -0.784 to 0.785, p < 0.01). One year after the first treatment, women who reported higher fatigue had lower social functioning, vitality, general health, and more pain (r = -0.625 to –0.597, p < 0.01). No demographic variables were associated with significant differences in the QOL domains.

Implications: Data regarding QOL and fatigue is important so nurses can determine the most effective intervention to improve outcomes and individualize care.

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THE INFLUENCE OF CAREGIVER AGE AND GENDER, AND PATIENT CLINICAL FACTORS ON FAMILY CAREGIVERS' PERCEPTIONS OF AND INVOLVEMENT IN CANCER PAIN MANAGEMENT. Patsy Yates, PhD, RN, Helen Skerman, MsocSc, and Helen Edwards, PhD, RN, Queensland University of Technology, Brisbane, Queensland, Australia; Sanchia Aranda, PhD, RN, and Peter MacCallum, Sancha Cancer Institute, Melbourne, Victoria, Australia; and Robyn Nash, MHlthSc, Queensland University of Technology, Brisbane, QLD, AU.

Many family caregivers are actively involved in managing their relative's cancer pain; however little is known about their pain management experiences and their impact on caregivers and patients. Based on the PRECEDE model of health behavior, the purpose of this study was to identify factors which may influence family caregivers' experiences with cancer pain management. A consecutively recruited cohort of 75 family members attending outpatient oncology clinics with a relative who had experienced cancer pain in the past month completed a self-administered survey. The sample had a mean age of 55 years (SD = 13.5), with 75% being female. 68% of the sample rated their family member's average pain in the past week as 5 or higher on an 11-point numeric rating scale. The survey comprised measures of: 1) demographics/medical characteristics, 2) pain knowledge, 3) concerns about addiction, side effects, progression, tolerance, 4) perceived difficulty communicating regarding pain, and 5) pain management actions. On a scale from 0 = none to 10 = a great deal, family caregiver's mean knowledge score was 5.5 (SD = 2.5), while their mean preparedness and confidence scores were 7.8 (SD = 2.5) and 6.8 (SD = 2.9), respectively. All family caregivers (100%) stated they wanted to be involved in pain management, although 7% stated they were more involved than they wanted to be, almost 20% reported difficulty talking to their relative about pain, and 14% experienced difficulty giving medication. While no age or gender differences in involvement in pain management were identified, male caregivers reported higher mean preparedness (p < .05) and confidence scores (p < .05) than females. Caregivers over 55 years reported greater difficulty communicating with healthcare professionals (p < .05) and family and friends (p < .05) about pain than caregivers 55 years or under. Caregivers who rated their relative's pain as 5 or more reported higher levels of distress (p < .001), and lower satisfaction with pain management (p < .01). These findings reinforce the substantial role caregivers have in managing cancer pain in outpatient populations, and that caregivers' experiences may vary depending on age, gender, and clinical factors. Further work is required to identify factors influencing caregivers' experiences with pain management, and ways to facilitate caregivers' desired levels of involvement to achieve better pain outcomes.

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A PILOT STUDY COMPARING PAIN INTENSITY, INFORMATION SEEKING, AND ADJUSTMENT TO PROSTATE CANCER AND METASTASIS IN FIRST-GENERATION JAPANESE AMERICAN MEN AND THIRD-GENERATION EUROPEAN AMERICAN MEN.

Mildred Kowalski, RN, BSN, MPA, Novartis Oncology, East Hanover, NJ.

Adjustment to illness is a complicated, multi-dimensional, and difficult process for many patients facing a chronic or life-threatening illness. Adjustment encompasses changes in social interactions, physical limitations, and resultant alterations in role function (Germino et al., 1998; Hoskins, 1995; Hoskins et al., 1996; Northouse & Swain, 1987).

Each aspect of adjustment interfaces with categories of behaviors, defined by the Roy Adaptations Model (RAM) (Boston Based Adaptation Research in Nursing Society [BBARNS, 1999). In this study, the term adjustment is used to denote the process of adaptation, as conceptualized by Roy (BBARNS, 1999; Roy, 1976) and will be measured using the Psychosocial Adjustment to Illness Scale (PAIS) (Derogatis & Derogatis, 1990).

As the United States becomes increasingly more culturally diverse, nurses are challenged to care for patients from different cultural backgrounds. Prostate cancer is more prevalent in Japanese American men than it is in Japanese men. The purpose of this descriptive study is to explore cultural differences in self-reporting of pain (using the Brief Pain Inventory), information seeking behavior (using a modified Krantz Health Opinion Survey), and adjustment (using the PAIS).

A pilot study (N = 20) is in progress in Honolulu. Information about cultural behavior was obtained from 11 consenting men with prostate cancer. Patients with recent (within six weeks) surgery or residual surgical pain and patients with untreated brain metastasis were excluded. Surveys are provided in English; therefore, only English-speaking patients are included in this study.

The purposes of the pilot study are to test the validity of the KHOS instrument when completed by patients with prostate cancer, as well as to gain experience with the research procedures in this diverse population.

After completion of the pilot study, the necessary changes will be made to the instruments and/or procedures prior to initiating the core study of 84 participants. Results of the core study will be analyzed by t-test comparisons between second generation Japanese American and third generation European American men, for each of the three variables. The results of this research may provide insight into how nurses can better care for patients with prostate cancer from diverse cultural backgrounds.

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HISPANIC PERSPECTIVES ABOUT BELIEFS AND REMEDIES FOR ACUTE PAIN.

Jeanette McNeill, DrPH, RN, AOCN®, ANP, and Gwen Sherwood, PhD, RN, University of Texas Health Science Center at Houston, School of Nursing, Houston, TX; Guadalupe Palos, DrPH, LMSW, RN, University of Texas M.D. Anderson Cancer Center, Houston, TX; and Patricia Starck, DSH, RN, University of Texas Health Science Center at Houston, School of Nursing, Houston, TX.

Problem/Study Objectives: Under-treatment of pain in hospitalized patients has been associated with increased length of stay and adverse outcomes; minority populations experience a higher likelihood of poor pain management. This project sought to describe the acute pain experience and develop and test a culturally sensitive pain outcome measure for Hispanics.

Framework: Bates' biocultural model of pain (1987) guided the study representing a melding of the physiologically-based gate-control theory with social learning and social comparison theories to more describe, more comprehensively, the pain experience.

Methods: Using a cross-sectional design, the Spanish tool, the Houston Pain Outcome Instrument (HPOI) was administered to 85 self-identified, postoperative Hispanic inpatients. The Brief Pain Inventory, a demographic form and chart audit of the analgesic regimen were also used to collect data.

Findings: The sample was predominantly Catholic and female, with a mean age of 43 years; one third were first-generation immigrants. Participants expected severe pain following surgery (8.7) and 80% relief from pain. Severe pain, and moderate to severe interference with mood, activity, and sleep were reported. Regarding their opinions about pain, participants indicated least agreement with a statement about losing respect of others when showing pain (1.8) and most agreement that "… pain medicine is the only thing that relieves pain" (7.1). Self-reported strategies for managing pain were analyzed for frequency and effectiveness. A range of 25% use of teas, massage, or warm compresses to > 85% for "pray for self" and "having others pray" was obtained. On a 0 to 10 (highly effective) scale, highest ratings were obtained for "having others pray" (9.3), lowest for "drinking teas" (6). High internal consistency, reliability, and convergent validity for the HPOI were demonstrated. One-third of the sample was under-managed for pain using the Pain Management Index to measure effectiveness.

Research Conclusions and Implications: Acute pain in Hispanic inpatients is under-managed and Hispanics believe that medications are important in relieving pain. Nonpharmacologic approaches are used with spiritual approaches indicated most frequently and most effectively. Further research to provide culturally appropriate assessment and promote more effective management in Hispanics is needed. (This study was funded as an AREA award from the National Institute of Nursing Research, R15 NRO4720-01.)

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OPIOID PRESCRIPTION FOR CANCER PAIN MANAGEMENT.

Hsien-Tzu Claire Chen, MS, Diana J. Wilkie, PhD, AOCN®, FAAN, and Hsiu-Ying Huang, PhD, AOCN®, University of Washington, Seattle, WA.

The purposes of this study were to describe the appropriateness of opioid prescriptions based on body weight and pain intensity, and to examine if there were gender differences in prescribed opioid dosages.

Conceptual Framework: McGuire's multidimensional approach model was used to investigate current pharmacological management.

Sample: 101 patients were analyzed in this study (45 lung cancer, 44 head and neck cancer, and 12 prostate cancer), including 80 males and 21 females. All subjects reported pain associated with cancer or cancer-related treatment on a categorical scale (from 0: none, to 5: excruciating pain). The mean age was 62 years (SD = 10). Mean body weight of males and females were 77.14 kg (SD = 16.73) and 61.0 kg (SD = 15.7), which were statistically different (t = 3.98, p < .01). Forty-one patients (41%) reported excruciating pain, the others reported horrible (23%), distressing (24%), and discomforting pain (13%).

Analysis: T-test, Chi-square test, and ANCOVA were used.

Findings: Compared to the AHCPR recommended opioid dosage for body weight, 75 patients (74%) were under-prescribed and 20 (205) were over-prescribed. Only six males out of 101 patients (6%) were taking appropriate doses. Most of the patients were under-prescribed in each pain intensity level. 28 patients (27.7%) with excruciating pain were taking insufficient opioid doses. After converting into morphine equivalent doses, no gender difference in opioid doses (F = .01, p > .05). Although we failed to find significant results in this study, the tendency was found that larger proportion of patients with excruciating pain were taking insufficient opioid doses.

Implication: Due to the different nature of each cancer diagnosis, more males were recruited; therefore not enough females were in the total sample and each group to reach sufficient statistical power. Some issues were identified in this study: (1) The AHCPR guideline only suggested starting opioid dosage based on body weight, whether the titrating dose needs to be based on body weight is still debated. (2) The commonly used equivalency conversion tables are based either on studies performed on patients who received low doses of opioid or on single-dose studies. The significance of body weight and opioid dosage requires further study to ensure better cancer pain management.

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CANCER-RELATED PAIN IN THE OUTPATIENT CLINIC.

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The prevalence of uncontrolled cancer-related pain in outpatient adult populations, despite claims that pain can be relieved in more than 90% of cases, is of significant concern. Research on pain control indicates that perceived control over pain is highly valued by patients and is linked to decreased levels of symptom distress and improved functional status. The purpose of this study was: (1) to investigate the degree to which outpatients with cancer-related pain believe their pain is controllable, (2) to determine the current level of pain control that these patients are experiencing, and (3) to investigate the relationship between pain and symptom distress, perception of control over pain, and functional status in this patient population. The Conceptual Model of Symptom Management served as the study's conceptual framework. An exploratory/descriptive, cross sectional design was the method used for this study. Adult patients (n = 247) 18 years and older, who were receiving treatment at a large urban cancer center and had experienced pain in the previous two weeks, were asked to complete the study questionnaires. Data analysis revealed that the majority of patients believed that their pain was controllable (89%). However, the mean worst pain score reported in the previous two weeks was 6.33 (range 1–10), indicating moderate to severe pain. Patients with higher pain severity, increased distress, decreased functional status, and more barriers to pain control were found to have a significantly lower perception of control over pain. Patients with higher perceived control over pain were also found to be significantly more knowledgeable regarding pain control. Findings support the relationship between perceived control over pain, decreased pain severity, symptom distress, and functional status. Decreased levels of pain may lead to increased perceived control over pain, decreased symptom distress, and improved functional status in patients with cancer. The Detroit Medical Center/Wayne State University College of Nursing Scholar Award funded this study.

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WHEN IS RELIEF FROM CANCER PAIN POOR, FAIR, OR GOOD? Christine Miaskowski, RN, PhD, Steven Paul, PhD, Claudia West, RN, MS, Marylin Dodd, RN, PhD, and Kathryn Lee, RN, PhD, University of California, San Francisco, San Francisco, CA.

Previous work by Cleeland and colleagues delineated different levels of cancer pain severity (mild = 1 to 4, moderate = 5 to 6, and severe = 7 to 10). However, no work has been done to determine if a similar approach could be used to delineate different levels of pain relief. Therefore, the purpose of this study was to determine if pain relief could be classified into three groupings (i.e., poor, fair, good) based on pain's level of interference with functioning. We hypothesized that clinically important differences in pain relief would be associated with large differences in self-reported interference with functioning. Six cut-points were tested using the technique of multivariate analysis of variance (MANOVA). The criteria used to determine the optimal boundaries was that a MANOVA among relief categories yielded the largest F ratio for the between category effect on the 7 interference items. Patients (n = 195) with pain from bone metastasis completed the pain interference scale from the Brief Pain Inventory and rated the amount of pain relief that they were experiencing from their current analgesic regimen using a 0% (no relief) to 100% (complete relief) numeric rating scale. The majority of the patients were female (70.7%) and Caucasian (83.3%) with a mean age of 59.4 years. Mean average and worst pain intensity scores were 4.2 and 6.7, respectively. The mean pain relief score was 66.2. The MANOVA indicated that the optimal set of cut-points among pain relief levels was 0% to 60% (poor), 70% to 80% (fair), and 90% to 100% (good). While this analysis is based on one homogeneous sample of patients with pain from bone metastasis, understanding cut-points for pain relief may be beneficial to clinicians in helping to establish differences in pain relief that correspond to clinically significant changes in patients' ability to perform various activities.

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AN INSTITUTIONAL EXPERIENCE WITH THE IMPLEMENTATION OF JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS PAIN STANDARDS. Jayne S. Waring, RN, BSN, OCN®, and Tracy K. Gosselin, RN, MSN, AOCN®, Duke University Health System, Durham, NC.

Purpose: To determine the effectiveness of implementing the Joint Commission for Accreditation of Healthcare Organizations (JCAHO) pain standards in a hospital based radiation oncology program.

Materials and Methods: Nurses working in the radiation oncology department underwent intense training related to the etiology, assessment, and management of various types of pain. Age specific tools were developed and incorporated into pain assessment tools with uniform language. Upon completion of the training, nurses received a resource notebook to utilize in the clinic. Modification of the existing radiation oncology nursing care plan was adapted to incorporate additional measurement criteria in the pain assessment category. Performance improvement (PI) monitors were developed and monitored monthly. Performance indicators monitored include: (1) Is there documentation that the patient was asked if they have pain? (2) If pain is present, is the pain scale documented? (3) Is the pain score documented? (4) Is there a provider note regarding pain if the score is > 4? Quarterly reports were sent to the PI office and aggregated. Unit specific data is shared with senior administration.

Results: The threshold for each indicator is 95%. After one year of data collection, we have achieved and maintained our targets for indicator 1 and 3.

Conclusion: Our strategies have been partially successful in achieving targets. Our plan is to develop individual report cards that can be provided to the physicians and their primary nurses in the radiation oncology clinic. This poster will review the age specific tools, documentation forms, unit specific data, and educational materials used.

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PAIN IN ADULT RECIPIENTS OF HEMATOPOIETIC STEM CELL TRANSPLANTATION IN KOREA. Hyung Suk Cho, RN, BSN, Jung Hye Lim, RN, MSN, Kwang Sung Kim, RN, MSN, Byung Eun Song, RN, MSN, Hyung Soon Kim, RN, BSN, and Su Jung Bang, RN, BSN, Sung Hee, Ahn, Seoul, South Korea.

Severe pain is a major problem of hematopoietic stem cell transplantation (HSCT) recipients. The major goal of this study with repeated measures is an understanding the pain of patients undergoing HSCT. The sample consisted of 110 adults receiving HSCT for hematologic neoplasia, malignant lymphoma, or non-Hodgkin's lymphoma at a Catholic HSCT center in Korea.

Pain location, morphine amount, and patient rating of pain on visual analog scale (VAS) were gathered daily from 7 days prior to HSCT to 3 weeks after HSCT. Questionnaire regarding previous pain experience, factors that alleviated pain, and current pain experience was also assessed.

The study showed that 75% of patients experienced moderate-grade, persistent pain (M = 6.64) that was multi-focally located. The major location of pain was the throat. 42% said that their pain was worse than expected one and 60% said they still had experienced pain since 3 weeks post-HSCT. Patients took pain medications, sleeping, warm bag, praying, and relaxation to relieve pain, and the relief of pain was reported in 53% of patients after those treatments.

From these results, we conclude that pain continues to be a clinical problem in this type of patient population. So further study is needed to investigate barriers to impede optimal pain management and there is a need to develop treatment strategies to deal with pain experienced by patients undergoing HSCT.

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GAINS ON PAIN. Alma Brana, RN, ADN, Wenonah Nelson, RN, MS, CLNC, Karen McCarver, RN, BSN, and Andrea Downey, RN, ADN, University of Texas M.D. Anderson Cancer Center Houston, TX.

Cancer patients often seek medical help because of intermittent or continuous unrelieved pain. However, studies have shown that pain is often undertreated, even among cancer patients. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) calls pain "the fifth vital sign" and asserts the right of every patient to be adequately assessed and treated for pain. In view of this, M.D. Anderson Cancer Center launched a pain-management collaborative effort to improve pain assessment and management for all patients. In response to the institution's efforts, staff of the Sarcoma Center at M.D. Anderson Cancer Center produced a two-part pain-assessment questionnaire that is filled out by each patient at each clinic visit. This questionnaire covers the description, intensity, location, and duration of the pain and alleviating and aggravating factors that may affect pain. It also asks whether the patient takes pain medications and uses alternative pain treatments. The bottom portion of the questionnaire, which is completed by the patients' registered nurse, assesses the level of pain acceptable to the patient, the effectiveness of the patients' current pain treatment and side effects of pain medication. Based on the patients' responses, interventions are implemented; these may include changes in pain medication, alternative treatments, or a pain-clinic consultation for severe unrelieved pain. As a result of these assessments and interventions, pain assessment and management at Sarcoma Center have improved. According to an institutional survey conducted by the M.D. Anderson Performance Improvement Department, the percentage of Sarcoma Center patients with work limitations related to pain decreased from 35% during September 1999 to March 2001 to 24% during September 2001 to December 31, 2001. Our study showed that a simple standardized questionnaire can improve pain assessment and management and thus reduce patients' work limitations.

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LONG-TERM USE OF VENLAFAXINE FOR HOT FLASHES. Debra Barton, RN, PhD, AOCN®, Heather VanDuker, Charles Loprinzi, MD, Paul Novotny, MS, and Jeff Sloan, PhD, Mayo Clinic, Rochester, MN.

Venlafaxine was one of the first novel antidepressants found to be effective in reducing hot flashes. A placebo-controlled, randomized, clinical trial established 75 mg of long acting venlafaxine as the optimally effective dose, reducing hot flashes by 60%. Side effects of this dose of venlafaxine included dry mouth, decreased appetite, and temporary nausea. A continuation study of 8 weeks followed this placebo-controlled trial. Results of the continuation study indicated that 75 mg per day continued to provide consistent reductions in hot flashes without new tolerability issues. Nurse phone call assessments were conducted with original participants who participated on the continuation portion of the study at 6 months, 1 year, and 2 years. The purpose of the follow-up was to describe long-term use of venlafaxine as a treatment for hot flashes. Results of the 6-month follow- up shows 61% of participants were still on venlafaxine. At one year, 52% remained on the drug, and at 2 years, 46% were still taking venlafaxine. The dose of venlafaxine being used varied; 16% were on 37.5 mg, 38% reported taking 75 mg, and 35% were taking 150 mg. The mean frequency of hot flashes experienced by these women was 4.6 at 6 months, 4.3 at one year, and 4.9 at 2 years. Hot flash scores (frequency x severity) were 9 at 6 months, 7.5 at one year, and 9.4 at 2 years. Long term toxicities that women reported and subjectively attributed to the venlafaxine included persistent nausea (N = 6), increased BP (N = 3), fatigue (N = 2), mild constipation (N = 1), decreased libido (N = 1), and increase in headaches (N = 1).

Clinical Implications: Many patients continue to manage their hot flashes successfully with venlafaxine for up to two years. For those patients, unwanted side effects are not a significant issue.

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KNOWLEDGE IS POWER: ASSESSMENT TOOLS THAT EMPOWER PATIENTS TO COMMUNICATE THEIR CHEMOTHERAPY-RELATED SYMPTOMS. Kristen Ambrosio, RN, BSN, OCN®, Johns Hopkins Hospital, Baltimore, MD.

A major focus for oncology nurses is assessment and management of symptoms related to cancer and its treatment. Complete assessments help ensure appropriate treatment of patients' side effects and make chemotherapy regimens manageable. Traditionally, it is the nurse who questions the patients and makes observations while completing their daily assessments. This can be a challenge, as patients often have difficulty accurately describing symptoms. They may not consider the symptom important or may be reluctant to express concerns, fearing that symptoms indicate a worsening condition. On a 16-bed hematology-oncology unit, one method to involve patients in their assessments using Side Effects Clipboards and Aware Pads (Amgen) is being explored. The Clipboards list symptoms such as anemia, neutropenia, mucositis, pain, depression, and alopecia. There are pullout tabs that define related terms and list ways to manage and/or prevent the symptoms. They provide valuable educational information on side effects for cancer patients receiving chemotherapy. The Pads, attached to the Clipboards, describe the symptoms, numerically grading them from 0–10. Patients use this scale to quantify their symptoms, record them, and communicate them to their nurses. Examples include bruising/bleeding, chills, mouth sores, numbness/tingling, changes in energy/sleeping pattern, and anxiety. In this way, symptom changes and acuity can be followed over time to evaluate the effectiveness of interventions and treatments. There is a Clipboard and Pad in every patient room and patients are instructed upon admission to record symptoms daily and share them with their nurses. The use of materials and the communication of symptoms between patients and nurses are monitored. Over time, expected benefits include timely, accurate, and quantifiable assessments, better resolution of symptoms, improved patient education, and increased participation in care.

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MYELOSUPPRESSION IN PATIENTS WITH NON-HODGKIN'S LYMPHOMA TREATED WITH IBRITUMOMAB TIUXETAN (ZEVALIN™) RADIOIMMUNOTHERAPY: STRATEGIES FOR NURSING MANAGEMENT. Mary Beth Riley, RN, MSN, AOCN®, Robert H. Lurie Comprehensive Cancer Center, Northwestern University, Chicago, IL.

Ibritumomab tiuxetan (Zevalin), a radiolabeled monoclonal antibody, was approved by the U.S. Food and Drug Administration in February 2002 for the treatment of patients with low-grade or follicular non-Hodgkin's lymphoma who have relapsed or refractory disease. Zevalin radioimmunotherapy (RIT) consists of the administration of a preinfusion of rituximab followed by an imaging dose of indium-111 Zevalin and, one week later, a second rituximab preinfusion followed by a therapeutic dose of yttrium-90 Zevalin. Treatment of patients with RIT presents challenges for oncology nurses, who play a key role in managing patient coordination, safety, and follow-up. Because Y-90 is a pure beta emitter and poses minimal risk of radiation exposure, Zevalin is routinely administered in an outpatient setting. Most nurses working in ambulatory infusion areas are familiar with the management of rituximab therapy; the majority of acute nonhematologic side effects observed with Zevalin RIT may be attributed to the rituximab portion of the therapy. The radiation component of the therapy with Y-90 Zevalin results in a delayed myelosuppression, which is the dose-limiting toxicity observed with RIT. In Zevalin clinical trials, the incidence and severity of myelosuppression correlated closely with the pretreatment extent of bone marrow involvement by lymphoma. Zevalin is therefore contraindicated in patients with => 25% lymphoma marrow involvement or other factors indicative of impaired bone marrow reserve. With Zevalin, blood count nadirs typically occur 7–9 weeks after treatment and last 3–4 weeks. In most patients, blood counts return to normal without intervention, but a percentage of patients may require growth factor support or transfusions. Since most patients will have previously received chemotherapy, they will need to be educated about the difference between the myelosuppression with Zevalin versus that with chemotherapy. As the primary point of continuity of care for these patients, oncology nurses need to develop procedures for effective post-treatment management. While blood counts should be monitored weekly for 12 weeks and toxicity checks should be performed on a regular basis, patients treated with Zevalin do not usually require regular weekly examinations. Strategies for nursing management of these patients will include the use of diaries, calendars, appointment systems, and electronic communication.

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NAIL CHANGES FOLLOWING INTRAVENOUS TAXOTERE®. Anita Whaley, MSN, OCN®, Susan Schneider, PhD, AOCN®, and Anthea Young, ASN, Duke University Medical Center, Durham, NC.

Thorough assessment and management of chemotherapy side effects is an important aspect of the oncology nursing role. Side effects can be distressing and are a major reason why patients discontinue or delay necessary treatments. A frequently prescribed treatment for breast and lung cancer involves the use of intravenous taxotere. One distressing side effect of taxotere treatment is nail changes. As many as 30% of patients report nail changes and 2.3% of patients experience severe nail changes following taxotere treatments. Common nail changes following taxotere therapy include discoloration, brittle nails, lines in the nail plate, softness, tenderness or pain in nail beds, slowed growth, and total nail loss.

The purpose of the quality improvement project was to document the incidence and type of nail changes experienced by patients receiving intravenous taxotere treatments. Nurses in the outpatient treatment center started a program that included completion of a nail evaluation checklist and photograph of finger and toenails at the onset of taxotere therapy. Patients were evaluated for nail changes throughout their treatment course. The incidence of nail changes in 50 patients treated at a comprehensive cancer center will be reported. Case presentations, including photographs of nail changes and patient statements regarding how these side effects influence their quality of life will be included. In addition, many patients have tried a variety of strategies to prevent or manage nail changes. These strategies will be discussed.

Findings from this quality improvement project can provide direction for a more comprehensive assessment of nail changes and can lead to research, which can test the effectiveness of nursing interventions to manage this symptom.

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SYMPTOMS EXPERIENCED BY MESOTHELIOMA PATIENTS: USE OF THE LUNG CANCER SYMPTOM SCALE TO ASSESS IMPACT ON QUALITY OF LIFE IN PATIENTS WITH MALIGNANT PLEURAL MESOTHELIOMA. Diane Paolilli, RN, MSN, OCN®, Leslie Tyson, MS, ANP-CS, and Lee Krug, MD, Memorial Sloan-Kettering Cancer Center, New York, NY.

Although much research has focused on understanding the symptoms of lung cancer, there has been little attention focused on understanding the symptoms of patients with malignant pleural mesothelioma (MPM). MPM is a rare, aggressive tumor that is associated with exposure to asbestos and SV40 virus. The incidence is rising steadily with 2,000–3,000 new cases diagnosed annually in the United States. Initial symptoms at presentation include dyspnea, cough and chest pain, fatigue, weight loss, and fever. The thoracic oncology service at this NCI-designated comprehensive cancer center sought an objective measure of presentation symptoms in this patient population. It was perceived that patients with MPM present with greater frequency and severity of symptoms than those patients with other thoracic malignancies. The Lung Cancer Symptom Scale (LCSS) was identified as a possible tool for measuring disease specific symptoms of MPM. The LCSS is a disease specific instrument that measures the physical and functional dimensions of quality of life (Hollen 1993). It has been found to be feasible, reliable, and valid in patients with non-small and small cell lung cancers and thought to be reasonable for use in this population of patients. As part of a phase II trial testing a new chemotherapy agent in patients with MPM, patients are given the LCSS prior to treatment with any chemotherapy and then monthly while on treatment. To date, 10 patients have been entered on the trial with a total accrual goal of 37 patients. This abstract will present an overview of MPM, our experience using the LCSS, and report the frequency and severity of symptoms seen in patients with MPM. As we present the symptom profile of MPM patients, we will describe the role of the oncology nurse providing symptom-focused interventions in a nursing care plan format.

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NURSING ROLE IN THE DELIVERY OF IBRITUMOMAB TIUXETAN (ZEVALIN™) RADIOIMMUNOTHERAPY: WHAT TO EXPECT. Valorie Dukat, RN, BSN, and Katherine Byar, RN, BSN, University of Nebraska Medical Center, Omaha, NE.

Zevalin (ibritumomab tiuxetan), the first commercially available radioimmunotherapy, consists of a murine monoclonal antibody and a linker chelator that attaches Indium 111 for imaging and Yttrium 90 for therapy. The Zevalin regimen consists of rituximab 250 mg/m2 followed by the imaging dose of In-111 Zevalin 5 mCi on day 1. Upon imaging confirmation of the expected biodistribution, treatment continues on day 7, 8, or 9 when rituximab 250 mg/m2 is again given, followed by the therapeutic dose of Y-90 Zevalin: 0.4 mCi/kg (0.3 mCi/kg in patients with platelet counts of 100,000–149,000/mL), to a maximum of 32 mCi. Patients with platelet counts < 100,000/ìL should not be treated. The first rituximab infusion is started at 50 mg/h and, if tolerated, escalated in 50 mg/h increments every 30 minutes, to a maximum 400 mg/h. Subsequent infusions may be initiated at 100 mg/h (if the initial infusion was well tolerated) and escalated in 100-mg/h increments every 30 minutes, to a maximum 400 mg/h, as tolerated. If an infusion reaction occurs, the infusion is slowed or interrupted and then continued at 50% of the pre-reaction rate after the symptoms have improved. The Y-90 Zevalin is administered by a physician or technologist licensed to handle radiopharmaceuticals, ideally within 4 hours of the second rituximab infusion. A 0.22 mm filter is placed between the infusion port and the 10 mL syringe containing the Zevalin, and the Zevalin is slowly infused through the infusion port over 10 minutes. Zevalin must not be combined with other IV solutions or medications or given as an IV bolus. When the injection is completed, the line is slowly flushed with at least 10 mL of 0.9% sodium chloride solution. Acute adverse events are related to the rituximab infusion and most are transient and respond to standard interventions. The most common reactions are fever, chills, rigors, urticaria, nausea, diarrhea, and arthralgias. Dyspnea, hypotension, and bronchospasm occur infrequently; patients may be premedicated with acetaminophen and diphenhydramine as a precaution. Zevalin handling precautions are universal precautions. Nurses are central to the safe and effective administration of radioimmunotherapy and should be familiar with the details of its administration.

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DOXIL®-RELATED PALMAR-PLANTAR ERYTHRODYSESTHESIA: NURSING CHALLENGE AND OPPORTUNITY. Gail Wilkes, RNC, MS, AOCN®, Boston Medical Center, Boston, MA.

Nurses are key in the identification, prevention, and management of palmar-plantar erythrodysesthesia or PPE, a potentially distressing side-effect of doxil and certain other chemotherapy agents. This is important for oncology nurses to know now, and to be prepared for, as Doxil, an agent with a remarkable and theoretically effective mechanism of action, becomes more widely used. The exciting kinetic feature is, through the steath liposomal technology, creation of a drug delivery system that takes advantage of the vascular leaks in tumors to preferentially deliver drug to the tumor site, together with an extended drug half-life of 54 hours. The medical literature and discussions at major oncology symposia are increasingly suggesting studies with doxil as a replacement for doxorubicin in standard therapies where cardiotoxicity may be a dose-limiting toxicity in potentially curative therapies such as Adriamycin-Cytoxan for breast cancer, or to reduce cost and complexity in therapies requiring continuous doxorubicin infusion, such as Vincristine-Adriamycin-Dexamethasone in the treatment of multiple myeloma. PPE, sometimes called "hand-foot syndrome" is characterized by erythema of the ventral surfaces of the hands and feet. With continued drug administration, this will progress to swelling, then pain, blister formation, and ultimately to cutaneous dry then moist desquamation of the palms of the hands and/or soles of the feet, or other areas of significant cutaneous pressure. Early clinical trials with doxil showed that dose and dosing interval were key factors, and that nurses, through patient education and close clinical assessment, played a crucial role in the early identification and prevention of progressive pain, loss of cutaneous integrity, and disability. In addition, once early PPE is identified, the nursing role in patient education, support, and symptom management is essential to effective patient self-care (or family care) and in most cases, patient's willingness to continue this therapy. This presentation will review: 1) the pathophysiology of PPE, 2) key issues in patient and family teaching in terms of prevention, early identification, notification of the nurse, and management strategies, and 3) nursing assessment and grading of PPE, evidence-based clinical management, anecdotal management strategies, and collaborative dose or dosing related implications.

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THALIDOMIDE: TOXICITY PROFILE AND NURSING IMPLICATIONS. Katie Marino, RN, BSN, OCN®, and Deborah Semple, RN, MSN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Thalidomide was originally developed in the 1960s as a sedative with anti-emetic effects. However, it was rapidly taken off the market when its teratogenic effects (babies being born without limbs) were discovered, and it was prohibited from use throughout the world. Today it is FDA approved for use with leprosy; however, it is becoming a common treatment for patients with multiple myeloma. At this NCI-designated comprehensive cancer center it is being evaluated as a putatively anti-angiogenic treatment for various types of solid tumors, including neuroendocrine tumors. For this patient population, the dosing starts at 200 mg daily and is escalated 200 mg every two weeks until there are any dose-limiting side effects.

Thalidomide has a well-documented toxicity profile, which includes sedation, constipation, peripheral neuropathy, and most significantly, teratogenic effects. Due to the potential for teratogenicity from thalidomide, patient education by the oncology nurse is an imperative part of prescribing this drug. Celgene, the manufacturer of thalidomide, has developed a program to ensure physician compliance in prescribing this drug as well as patient compliance in understanding the potential side effects of this medication. Thalidomide is only available in pill form; therefore, the shift of responsibility for dose and side effect monitoring moves from the provider to the patient. There is always the concern of compliancy by the patient taking an oral regimen as well as the patient's ability to swallow multiple pills a day and digest them.

As more physicians prescribe thalidomide, it is essential that oncology nurses recognize the potential side effects and provide thorough education to ensure optimal safety and compliance.

This presentation will provide a comprehensive look at the oncology nurse's role in patient education and symptom management of patients receiving thalidomide.

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EVALUATION OF ADVANCED PRACTICE NURSING MANAGEMENT AND INTERVENTION IN A COLLABORATIVE ONCOLOGY AND PALLIATIVE CARE CLINICAL TRIAL FOR A LUNG CANCER PATIENT POPULATION IN A COMPREHENSIVE CANCER CENTER AT AN ACADEMIC INSTITUTION. Gina DeGennaro, MSN, OCN®, University of Virginia Health System, Charlottesville, VA.

As an advanced practice oncology nurse liaison for palliative care at the University of Virginia Health System, it has been my observation that general oncology patients, as well as disease-specific oncology populations, are at higher than average risk for venous thromboembolism (VTE). After a literature review was completed, and clinical observations correlated with anecdotal reports from physicians, the decision was made to review medical records on an oncology patient population that reportedly experiences VTE most often. Retrospective medical record review was completed at our institution and supported the literature, suggesting that a significant number of patients evaluated with the diagnosis of lung cancer at the University of Virginia Cancer Center, had experienced clinically evident VTE. More extensive review was completed to assess potential for supportive interventions that might prevent this serious complication and allow patients opportunity for eligibility to participate in therapeutic clinical trials for lung cancer. With no standard guidelines available, the medical oncology lung and palliative care team decided to collaborate on a supportive care study that might benefit this patient population by reducing incidence of this serious and often fatal complication. The phase II trial was initiated and designed to evaluate thromboprophylactic efficacy of low-dose Coumadin in lung cancer patients during and after cancer treatment, including chemotherapy and radiotherapy. The study design examines quality-of-life issues and potential healthcare cost savings associated with prophylactic anticoagulation. The primary endpoint remains interest in significantly diminishing incidence of VTE in this patient population. As a co-investigator, and the healthcare professional primarily following these patients in the clinical setting, results of this study are expected to demonstrate the impact of the advanced practice oncology nursing role on the end result of care in the areas of clinical, psychosocial, and fiscal/organizational outcome. There is potential to impact care of this (often acutely ill) patient population, and perhaps suggest future supportive studies for other disease-specific oncology patient populations. The results might even allow for the opportunity to develop and publish care management guidelines at the time of diagnosis for this patient population.

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NURSING INTERVENTION PROTOCOL FOR PATIENTS WITH TERMINAL CANCER IN KOREA. Won Hee Lee, Registered Professional Nurse (U.S.A.), and Young Jin Kim, Registered Professional Nurse (U.S.A.), Teaching Assistant, Yonsei University College of Nursing, Seoul, Korea; and Mira Lee, Registered Professional Nurse, (U.S.A.), Research Assistant, Seoul, KR.

This is part of a larger study to develop a protocol for hospice service in Korea. In Korea, 60 hospice agencies are now providing various levels of service and there is a great need to develop standards of care for hospice patients.

Purpose: The objectives were 1) to identify nursing diagnosis, related factors, sign & #65286; symptoms, and interventions for patients with terminal cancer, 2) to compare Korean data with North American Nursing Diagnosis Association (NANDA) classification and to the Nursing Intervention Classification (NIC), and 3) to develop a nursing intervention protocol for patients with terminal cancer.

Design: This is a retrospective descriptive study and a methodological study.

Sample: Charts for 541 patients in a hospice agency affiliated with a university teaching hospital in Seoul.

Instrument: NANDA framework was used for data collection of nursing diagnosis, related factors, sign & #65286; symptoms. NIC was used for the nursing intervention protocol.

Analysis: 1) Descriptive statistics of frequencies and percentages were used. 2) Content analysis was done to analyze the charts of the 541 patients. 3) Fehring's method was used for internal content validity scoring by clinical experts.

Findings and Implications for Practice: The total incidence of nursing diagnosis was 2,113. Of these, 1,198 (56.7%) were confined to 6 nursing diagnoses. These 6 most frequent nursing diagnosis were pain, altered nutrition (less than body requirements), impairment of skin integrity, constipation, ineffective family coping, and spiritual distress. Other frequent diagnoses were ineffective breathing pattern, altered urinary elimination, anxiety, and impaired physical mobility.

Nursing interventions for the 6 major nursing diagnoses indicated that giving pain medications was the most frequent nursing intervention, followed by pain management and medication management.

Of the interventions in NIC, there were 113 suggested interventions related to these 6 major nursing diagnosis and 129 additional optional interventions. In this study, 27 newly detected nursing interventions for patients with cancer were also identified.

The developed nursing intervention protocol can be used for effective care of patients with terminal cancer, as a guide for standards of nursing care, as basic data for education of nurses or nursing students, and for the development of a computerized nursing process and documentation system.

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IMPROVING ONCOLOGY NURSES' ATTITUDES AND KNOWLEDGE OF PALLIATIVE CARE.

Polly Mazanec, MSN, ACNP, AOCN®, Hospice of the Western Reserve, Cleveland, OH; Susanne Vendlinski, MSN, CNS, OCN®, University Hospitals of Cleveland, Cleveland, OH; and Amy Petrenek, BSN, RN, Ursuline College, Pepper Pike, OH.

Patients with advanced cancer experience multiple complex symptoms at the end of life. Traditionally, nursing education has not adequately prepared nurses to manage these symptoms. The purpose of this project, which was funded by the Oncology Nursing Foundation, was to determine the impact of an educational intervention on nurses' attitudes toward and knowledge of palliative care and how that, in turn, affected their ability to manage end-of-life symptoms. Additionally, the timeliness and numbers of referrals to hospice were also evaluated. Educational content was guided by a framework of the essential nursing competencies for end-of-life care (AACN, 1997) and the End–of-Life Nursing Education Consortium (ELNEC) training program. The project used a convenience sample of 77 RNs from two in-patient divisions of a large midwestern comprehensive cancer center. The intervention consisted of an eight-month intensive nurse-nurse consultation with the oncology staff nurses and the palliative care advanced practice nurse. A palliative care seminar, covering pain and symptom management and communication skills, was presented. Nurses who indicated a desire to become "palliative care resource nurses" for their divisions participated in a two-day clinical experience with a large community-based hospice. Project methods included use of two written surveys from the City of Hope National Medical Center, "RN End-of-Life Knowledge Assessment" and "End-of-Life Attitudes Survey"; in-patient chart review of pain assessment documentation; and an analysis of the number of hospice referrals and the length of stay of these referrals, pre- and post-intervention. Data analysis is underway, consisting of descriptive statistics and comparisons (*t* tests) of the findings of the pre- and post-intervention knowledge and attitude surveys, hospice referral data, and frequency of pain assessment documentation. Qualitative analysis of nurse consultation notes is being done to identify common themes and further educational needs. Preliminary findings of themes include inadequate pain and symptom management, patient barriers to pain management, fears associated with hospice referral, and the challenges of integrating hospice/palliative care into an acute care oncology unit.

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UNDERGRADUATE NURSING EDUCATION IN END-OF-LIFE CARE: PARTICIPATION IN A PALLIATIVE CARE COMPANION PROGRAM.

Kristine Kwekkeboom, PhD, RN, University of Iowa College of Nursing, Iowa City, IA; Cheryl Vahl, RN, MSN, AOCN®, CHPN, University of Iowa Healthcare, Iowa City, IA; and Jo Eland, PhD, FNAP, RN, FAAN, University of Iowa College of Nursing, Iowa City, IA.

Lack of professional education has been identified as a barrier to providing quality palliative care at the end of life. Nursing textbooks provide limited content related to end-of-life nursing care despite the growing body of palliative care knowledge. Undergraduate nursing students commonly report feeling worried and unprepared to be involved with patients who are actively dying. At the same time, several patients receiving inpatient palliative care may be dying alone, without family or friends available to be at the bedside. In response, we have developed a palliative care companion program to enhance services available to patients and their families and to provide a unique educational opportunity for undergraduate nursing students.

Interested students sign up for a one-semester palliative care companion program and are offered independent study credit for the experience. The companions agree to visit patients on the palliative care service and attend to their physical, psychological, and emotional needs as a family member would. They do not provide nursing care such as medication administration or vital sign monitoring. Companions participate in four hours of orientation facilitated by an advanced practice nurse from the palliative care service and by two nursing faculty members with experience in oncology and pain management. Topics addressed include palliative care philosophy, societal attitudes toward death and dying, coping with terminal illness, common symptoms observed in dying patients, being present with a dying patient, the bereavement process, and roles of the palliative care companions. The companions are also invited to continuing education and community programs addressing end-of-life issues throughout the semester.

The companions voluntarily participate in a study measuring knowledge and attitudes toward palliative care along with a matched control group of undergraduate students who are of the same academic standing. Both groups of students complete the palliative care quiz for nurses, measures of attitudes about care at the end of life, and concerns about nursing dying patients at two time points, once at the beginning of the semester and again at the end of the semester. The program will be discussed with respect to changes in knowledge and attitudes observed during the first two full semesters.

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HOPES, CONCERNS, AND EXPECTATIONS OF POOR PEOPLE LIVING WITH CANCER ABOUT CARE AT THE END OF LIFE.

Anne Hughes, RN, MN, AOCN®, FAAN, Department of Public Health, San Francisco, CA.

Problem and Purpose: The recent literature documenting the problems of end-of-life (EOL) care in the United States has largely ignored the experiences of the vulnerable populations who live at the edges of society. Most of the literature related to socioeconomic status (SES) and cancer underscores the greater morbidity and mortality of poor people when compared with more affluent groups (Bradley et al. 2002, Marcella & Miller, 2001). Untangling (unconfounding) the effect of race and poverty on cancer-related morbidity and mortality is a challenge. No published research has been located that examines the perspectives of poor patients with cancer regarding EOL care; only one clinically based report has been located (Hughes, 2001). This pilot study will explore the experiences of the urban poor living with cancer about care at the end of life.

Framework: Interpretative phenomenology is the qualitative approach that will be used to uncover the meanings of living with a life-threatening illness when poor and living in an inner city.

Methods: Fifteen adults will be recruited from a medical oncology clinic in a public hospital that serves a poor, disenfranchised, and culturally diverse community in a western U.S. city. Each participant will be interviewed at least once for up to ninety minutes.

Data Analysis: Interviews will be audiotaped and transcribed verbatim. Open-ended questions and follow up probes will be used to elicit the narratives of the subjects. Interview narratives will be coded for themes.

Findings and Implications: The goal of this pilot study is to evaluate the feasibility of recruiting and interviewing members of vulnerable populations about a topic that is not usually spoken about, living while one's life is ending.

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ETHICS AT THE END OF LIFE: AUTONOMY AND CONTROL.

Debbie Volker, RN, PhD, AOCN®, University of Texas at Austin School of Nursing, Austin, TX.

Significance: The concept of personal control is central in Western bioethics. Control of one's life is closely connected with the concepts of choice and autonomy. Given society's emphasis on personal control, many people value the right to autonomous decision-making in issues involving health, disease, and dying.

Problem/Purpose: Little is known about the nature of what people wish to have control over in the context of end-of-life care, nor the ways healthcare professionals assist dying patients to gain desired control. The purpose of this study was to explore an ethical concern at the end of life: A search for autonomy and control in the face of a seemingly uncontrollable situation. A statewide, purposive sample of 8 oncology advanced practice nurses (APNs) and their patients with advanced cancer was used.

The first specific aim was to explore strategies APNs use to assist advanced cancer patients to achieve control and comfort at the end of life. Findings for this aim were previously reported. The focus of this report is on the second specific aim: To explore the nature of what patients with advanced cancer want regarding personal control and comfort at the end of life.

Framework: The study was based on Lewis' conceptual typology of control, which outlines 5 control responses to aversive events, stimuli, or stressors.

Methods: This naturalistic study was based on Denzin's method of interpretive interactionism. Participants include 8 advanced cancer patients referred by their APNs.

Data Analysis: Interviews are being analyzed using Denzin's interpretive process for thematic analysis. Research team members with expertise in qualitative research methods, hospice/palliative care, and bioethics will review transcripts and analytic decisions.

Findings and Implications: Final study results will be presented. Findings can be used to better understand patient preferences for autonomy and control, and improve clinical care within the end-of life trajectory.

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PROVIDING PALLIATIVE CARE TO THE UNDERSERVED: A CASE STUDY. Rose Anne Indelicato, RN, CS, MSN, ANP, OCN®, Pauline Lesage, MD, and Terry Altilio, ACSW, Beth Israel Medical Center, New York, NY.

Topic: Palliative care includes comprehensive physical, psychological, social, and spiritual support for patients and their caregivers. Providing palliative care to underserved populations (e.g., some minorities, the indigent) is a major challenge.

This presentation illustrates these complexities using the model of care developed by the Department of Pain Medicine and Palliative Care (DPMPC). This model incorporates the advanced practice nurse (APN) into an interdisciplinary team that attempts to address the challenges posed by underserved populations.

Rationale: The ONS position paper affirms that "APNs are essential to providing cost-effective, quality cancer care for diverse populations."

Interventions: We describe the DPMPC's approach to palliative care in underserved populations at a 710-bed hospital in lower Manhattan. A case presentation of a 35-year-old African American woman with metastatic breast cancer highlights the process used in identifying the need for palliative care; the interdisciplinary team activities, including the provision of appropriate medical care; the role of the APN in ongoing pain/symptom management and coordination of care in both the inpatient and outpatient setting; the assessment of the patient's/caregiver's psychological and social needs with a focus on cultural and religious beliefs; and health care planning, including health care proxy, advance directives, and DNR status. Our presentation will identify current struggles in providing palliative care to these populations with regard to access issues, financial reimbursement, and cultural concerns. Our efforts have provided some patients/caregivers the opportunity to develop therapeutic relationships with team members, which has led to less fragmentation of care, avoidance of emergency room visits, and improved physical, psychological, and spiritual care.

Interpretation/Discussion: Access to appropriate palliative care for underserved populations continues to be difficult. Including the APN in the interdisciplinary team affords these patients and their caregivers continuity and consistent quality care throughout the course of the disease.

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RETAINING NEW ONCOLOGY NURSES: A CHALLENGE FOR NURSING EDUCATION. Elizabeth Owens, RN, MS, Roswell Park Cancer Institute, Buffalo, NY; and Lynn Velasquez, RN, MS, Trocaire College, Buffalo, NY.

The challenge to prepare and retain competent oncology nurses becomes progressively more critical as the nursing shortage causes increased competition among hospitals and other places of employment. Extensive recruitment efforts must be made to attract registered nurses to this specialized field and then the challenge continues to retain them.

At the only upstate New York comprehensive center, the RN turnover rate for experienced registered nurses (greater than 1 year of experience) was 4% for the previous fiscal year. Comparatively, the turnover rate for registered nurses with less than 1 year of experience was 47%. This difference presented a challenge to nursing administration to explore opportunities that might directly affect the orientation of new nurses and the preparation of nursing preceptors. In order to address the issues, an assessment of current practice would provide crucial data.

In the fall of 2002, we initiated a process to interview registered nurses, hired within the previous year, and their preceptors. The interviews are confidential and are conducted by a consultant external to the department of nursing to allow for anonymity of the respondents. Participants were asked to identify the strengths and weaknesses of both the classroom and clinical orientation. Preceptors were asked to identify their perception of the classroom orientation, readiness of the orientees for the clinical component, and a self-assessment of their own preparation to precept new oncology nurses. An analysis of the responses will be done to formulate an action plan for implementation of any changes to the processes. This presentation will outline changes made to the current program as well as any subsequent results on turnover rate.

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AN INNOVATIVE STRATEGY FOR REGISTERED NURSE RETENTION: A SELF-CONTAINED UNIT WITH AN AVAILABILITY SYSTEM. Anna Scholms, RN, MSN, and Natasha Ramrump, RN, MSN, Memorial Sloan-Kettering Cancer Center, New York, NY.

The nursing shortage may reach crisis proportions in the next 10 years. Unless innovative strategies are implemented immediately, the delivery of healthcare, especially cancer care, will be compromised. A shortage of qualified nursing staff may place patients at high risk for increased morbidity and mortality. Patient care may suffer because the quality and quantity of time spent at the bedside is inadequate.

Nurses are the largest group of healthcare providers, but as their numbers shrink, the healthcare system could be left crippled.

Targeted strategies in recruitment and retention of qualified nurses are the only way to alleviate this potential crisis. One strategy that should be given serious consideration is the availability system.

A self-contained twelve-hour shift unit with an availability system functions with the staff controlling scheduling and staffing, thus increasing professionalism and communication while maximizing quality care. The availability system eliminates the need for floating to unfamiliar units. Nurses voluntarily sign up for an extra shift on a day that is convenient for them in order to provide staffing to cover sick calls or increased acuity on that particular day. This strategy may serve an important role in staff recruitment and retention because it empowers the staff with flexibility in scheduling and a sense of contol.

The previous nursing shortage, with 8 RN vacancies, led to the development of an availability system in this 42-bed inpatient hepatobiliary (HB) and gastrointestinal (GI) medical oncology unit. This vacancy prompted this improvement in the process of allocating RN's resources while meeting the patients' needs. The availability system was implemented at that time and remains in effect. Currently the nurse patient ratio is 6–7 patients per RN on days and 8–11 patients on nights.

This abstract will 1) identify the advantages of having a self-contained unit with an availability system, 2) explore the significance of this strategy given the challenge of staff retention in a high acuity oncology unit, 3) describe a proactive model for staffing, self-scheduling, resource utilization, and resource allocation, 4) describe the facilitation of optimal care delivery with highly qualified staff in our current economic climate.

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KEEPING YOUR BEST: STAFF RETENTION. Ji Soo Jacquelyn Jung, BSN, RN, Johns Hopkins Hospital, Baltimore, MD.

The nursing shortage and higher nursing turnover rate can result in difficulty maintaining morale and standards of patient care. It is imperative to have experienced, skilled nurses who know the institution's policies and procedures. This is the most effective way to assure safe, quality patient care. Nurses on busy inpatient units are increasingly stressed and deserve our best effort to provide an environment that contributes to nurse retention. About two years ago, our hematological malignancies unit experienced a high turnover rate. The staff identified areas that nurses believed were important to them. Two of these were professional growth and development and psychological and emotional nurturing. The clinical nurse specialist and senior nursing staff promoted professional development by offering educational sessions on the unit so that all nurses could attend. Dinner lectures were developed and staff was encouraged to attend. We supported attendance at local and national conferences, encouraged OCN® and CCRN certifications, and membership in professional organizations by assisting with scheduling or financial aid. We implemented a unit specific orientation program that supported new nurses through their steep learning curves. We sponsored events and activities to promote unity and camaraderie for the staff. We held welcome parties for new staff and posted banners. We celebrated special events such as birthdays, weddings, and baby showers. Occasionally, we spontaneously held a staff breakfast or lunch with everyone participating. We organized "happy hours" and bowling parties. We created an "Our Staff Family" board that showcased special occasions such as our unit's holiday party. The staff selected a design for a unit T-shirt identifying us as the "heme team"; we entered and placed in a competition for the best nursing team in a local nursing magazine. As a result of these and other efforts, we have a cohesive team that supports one another as we professionally grow and develop. Best of all, we have had a dramatic decline in our turnover rate and have nurses return after resigning and agency nurses asking to join our staff. These efforts are well worth the investment in relation to the orientation costs saved and the supportive unit environment.

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UTILIZING A RECOGNITION DINNER TO ASSESS RETENTION OF ONCOLOGY NURSES. Maureen Mullin, RN, BSN, OCN®, Anne Jadwin, RN, MSN, AOCN®, and Lisa Roman, RN, BSN, OCN®, Fox Chase Cancer Center, Philadelphia, PA.

In light of the current nursing shortage, retaining a core group of experienced oncology nurses is critical to quality patient care and positive outcomes. A proactive approach utilized by the nursing department of Fox Chase Cancer Center, was aimed at identifying the "nursing stars" and providing a structured opportunity for them to articulate the factors that attracted and retained them to the facility. The nursing career specialist, a member of the professional development and recognition committee and a member of the retention and recruitment committee designed and implemented a recognition dinner event that was supported by nursing administration theoretically, financially, and educationally. Consultants from nursing research provided guidance in formatting the event as a focus group to facilitate lively discussion in a controlled atmosphere.

The inpatient clinical nurse managers selected invitees based on outstanding performance as clinicians and team members. Nurses received personal invitations explaining the event and highlighting their individual stellar performance. An exceptional, local restaurant was selected for the dinner based on location, layout, and menu. A private room, festively decorated with balloons and party favors, was arranged with large tables to promote conversation.

The facilitators began the session by reinforcing basic ground rules for the discussion, followed by an introduction exercise to promote conversation among individuals that were previously unknown to each other. The format included open-ended questions regarding recruitment and retention that were timed to maintain the session at 45 minutes. A nursing department secretary was timekeeper and recorded pertinent information. Dinner and dessert were served upon completion of the focus group and a small gift was presented to each nurse.

A summary report to nursing administration reaffirmed the positive attributes of professional practice environment, collegial relationships, quality patient care, and a passion for oncology nursing. Feedback from exemplary staff provided continued support for proactive approaches to nursing recruitment and retention.

This forum for targeted staff input could be replicated and adapted for virtually any institution or oncology unit. Most importantly, a powerful message was heard—that nurses need to feel respected, supported, appreciated, and recognized for their contributions.

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A NOVEL CARE DELIVERY MODEL: UTILIZING A FLEXIBLE WORKWEEK TO IMPROVE NURSE RETENTION AND SATISFACTION. Colleen Lyons, RN, BSN, Memorial Sloan-Kettering Cancer Center, New York, NY.

The current nursing shortage, coupled with the challenge of recruiting and retaining skilled oncology nurses, makes maintaining staff satisfaction a priority for the nurse leader when developing staffing plans. An innovative ambulatory care model was designed to address these issues and simultaneously sustain high quality patient care. At this comprehensive cancer center, attending oncologists and registered nurses work collaboratively, providing care to a shared caseload of patients five days/week. The nurse is responsible for assuring continuity of care to patients across the continuum and for documenting the care provided. In 2001, the gastrointestinal (GI) medical oncology service had 22,322 ambulatory patient visits, an increase of approximately ten percent from the prior year. The increased volume and acuity lead to the following concerns: (1) an increase in nursing care hours and difficulty in complying with documentation standards, (2) inability to recruit and retain staff to the service, and (3) dissatisfaction of the nursing and physician staff with the current workload, nursing support, and coverage. In response to these concerns, the nurse leader proposed a flexible four-day workweek in the GI service. The new care delivery model involved partnering two nurses in a collaborative relationship with two physicians to ensure coverage and continuity of care using a four-day workweek. The model was presented to nursing and hospital administration to establish an implementation plan. The pilot commenced January 2002 and ended June 2002. It included 11 attending oncologists, 12 office practice nurses, and three research nurses. Three data points were used to evaluate the model pre- and post-implementation: nursing documentation, turnover rate, and satisfaction surveys completed by physicians, nurses, and patients. The evaluation demonstrated marked improvement in all areas. This new model was well received by the nursing division, administration, and physicians. This presentation will illustrate the process of the development, application, and evaluation of a plan that was piloted and adapted in a busy medical oncology ambulatory setting. Due to the success of this new care delivery model, future plans are to implement flexible scheduling options to the other services within our institution.

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FINDERS, KEEPERS: IMPROVING RECRUITMENT AND RETENTION: EFFORTS ON AN INPATIENT BLOOD AND MARROW TRANSPLANT UNIT. Patricia Johnston, RN, MHA, OCN®, Buenagracia de la Cruz, RN, Jaine Jewell, RN, OCN®, Roxy Blackburn, RN, OCN®, Carol Causton, RN, OCN®, and Lourine Davis, RN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Nursing's tight labor market within the global healthcare workforce shortage mandates institutional vigilance about recruitment and retention efforts. With crippling nurse vacancies across the nation, escalation in nurse turnover rates, and a widely anticipated increase in nurse retirement, retention issues have evolved in importance to rival cost and quality imperatives. Model long-term solutions to counter turnover are the focus of innovation. The inpatient blood & marrow transplant unit at our large comprehensive cancer center successfully reduced registered nurse turnover by nearly 10%. In collaboration with a shared-governance council structure, a unit-based task force developed strategies to address this issue. Staff nurses, nurse managers, assistant nurse managers, clinical nurse specialists, the clinical instructor, and clinical administrative director created mechanisms to minimize the three highest drivers of staff turnover: 1) strengthen new hire education and support, 2) reconfigure scheduling and workload intensity and address compensation, and 3) evaluate staff satisfaction with nurse manager performance. These interventions will be discussed in detail. Designing a successful recruitment and retention plan and sustaining these improvement efforts can facilitate change in staffing patterns, which support longevity in specialty clinical practice.

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SINK OR SWIM! RESCUE EFFORTS FOCUSED ON IMPROVING TEAMWORK, MORALE, AND CUSTOMER SERVICE THROUGH ADOPTING AN IMAGE OF NURSING SERIES. Susanne Brooks, RN, MS, and Kathleen Fedoronko, RN, BSN, OCN®, Detroit Medical Center, Detroit, MI.

After approximately one year of employment in the ambulatory clinic of a large Midwestern NCI-designated national cancer center, both the clinical nurse specialist and unit manager noted that there was a lack of communication and teamwork among staff. They also noted that nurses felt their role had limited impact and value on the patients they served. They collaborated on a program designed to increase teamwork, morale, communication, and self-awareness. Staff was assigned to groups based upon personality traits, witnessed behavioral interactions, and leadership skills.

There was a maximum of five employees per group. The Image of Nursing Series began as four initial sessions. Session l, Impact on Patient Care, used the video "The Art and Science of Caring: Our Commitment to our Patients," Oncology Nursing Society, 2001, to focus on how the nurse and ancillary staff positively impact patients and their families during their constrained appointment time. Session 2 used the video "It's a Dog's World" to focus on how verbal and nonverbal communication can be interpreted by others. Session 3, which focused on teamwork, involved having staff write how they perceived teamwork within the clinic on index cards. The cards were then randomly distributed throughout the individual groups. Discussion focused on the readers interpretation of the card and if the reader agreed with the written opinion. Session 4 was comprised of an activity using Styrofoam cups, rubber bands, and strings. The group had to stack the Styrofoam cups into a pyramid using only the string and rubber band to lift the cups. This activity promoted teamwork through practice and improvement of social skills. To date, major outcomes include improvement in teamwork, a friendlier atmosphere, and quicker response to patient needs. As a result of the positive feedback from staff, the clinical nurse specialist and unit manager continue to develop future sessions utilizing videos including the "Customer for Life Series," as well as role playing inappropriate interactions observed among staff. Press Ganey third quarter results are not yet available but the hope is the scores will reflect an increase in patient satisfaction with nursing care.

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GLUE: A STRATEGY TO IMPROVE NURSE RETENTION. Ann Saylors, RN, OCN®, and Rita Abeyta, RN, BSN, Vanderbilt-Ingram Cancer Center, Nashville, TN.

There has been much discussion on the recruitment and retention of nurses, particularly in the inpatient setting. However, retention is a primary concern in all nursing settings due to the intensity and expense of orientation necessary for positions, as well as the need to provide ongoing quality service. In a defined sub-specialty such as oncology research nursing, the need for retention is crucial because specialized training is necessary. In the years 1997 to 1999, the clinical trials office (CTO) of a national cancer institute comprehensive cancer center experienced an annual turnover of 20 percent with an average of 36 employees per year. Magnification of the need for retention becomes clear when focusing on the elements of quality documentation and safety, along with goals for accrual. With clinical trials being an integral piece of a comprehensive cancer center, the need for a stable, professionally focused nucleus of employees to conduct research is clearly evident. To attain this, the staff and management of the CTO developed a committee to address employee concerns and promote empowerment in an effort to improve retention. All areas of the CTO were represented: nursing, data management, IRB, computer support, and management. A committee spokesperson was established and goals were developed, as well as objectives and a mission statement. The acronym G.L.U.E, Greater Loyalty Utilizing Empowerment, was adopted. A manager was present at each meeting as an ex-officio member of the committee allowing group empowerment. Committee meetings were held bimonthly during lunchtime for one hour and the staff was updated at regularly scheduled staff meetings regarding G.L.U.E activities. Encouragement to communicate with committee members resulted in ideas felt to make retention a high priority. Implemented employee surge boosters included a variety of interventions from flex scheduling to ergonomic evaluation of workstations. The communication gap between management and staff was narrowed by a variety of G.L.U.E activities. Evaluation of G.L.U.E after one year finds the number of employees at 56 and turnover rate at 4 percent since program implementation. Empowerment through this approach does boost morale and aid in employee retention.

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ONCOLOGY STAFF NURSES TAKE CONTROL OF THEIR PSYCHOSOCIAL WELLNESS: THE "CIRCLE OF CARE" PROGRAM. Jacqueline Medland, RN, MS, and Maribeth Mielnicki, RN, BSN, OCN®, Northwestern Memorial Hospital, Chicago, IL.

Faced with inpatient oncology units where 6 out of 10 staff nurses leave within 24 months, the oncology leadership team of an urban comprehensive cancer program performed an assessment to identify key issues facing staff nurses. The assessment included staff interviews, patient focus groups, and individual interviews with physicians and other key interdisciplinary team members. Findings indicated that patient acuity was high, but staffing on the unit was adequate. Oncology nurses, however, were faced with an array of systems and process issues in addition to the emotional toll, hard, physical labor, and complex mental processes inherent in cancer care, with the most common issue cited as "work intensity." The mission of the leadership team was to break the cycle of turnover by creating an environment of support and development; one that retained our skilled, motivated, and intelligent care providers in and beyond the 24-month period. To develop and retain a more hardy and resilient staff, competency building needed to include skills related to their own psychosocial wellness. A pilot series of retreats, the first phase of a staff psychosocial wellness initiative called the Circle of Care Program, was delivered to over 150 members of the interdisciplinary patient care team. Survey data collected from 58 RN retreat participants revealed significant burnout and frustration, feelings of being "used up" at the end of the workday, and often facing the workday already feeling fatigued. Paradoxically, many characterized their work as worthwhile, even "exhilarating," and reported that they were positively impacting patient's lives. Addressing these diverse issues, the skill-building retreats included discussions of professional boundaries and loss, and featured instruction in positive coping strategies and constructive self-care behaviors, as well as introduction to the FISH philosophy, a management strategy designed to energize and improve commitment and morale in the workplace. Many short- and long-term retention strategies were devised as a result of participant feedback including annual retreats, regular bereavement sessions, rituals to help work through loss, etc. Underway is a follow-up study of the workforce relative to the issues of burnout, team effectiveness, and the resultant patient/family satisfaction.

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CULTURAL COMPETENCE: ARE YOU PREPARED FOR THE CHALLENGE? Roxanne Nematollahi, RN, BScN, MScN, ACNP, and Mahsan Nematollahi, RN, BScN, MScN (student), Princess Margaret Hospital, Toronto, Ontario, Canada.

Cultural competence is a critical skill needed by oncology nurses to provide quality cancer care to patients and families. Cultural competence is defined as the ability of individuals and systems to respond respectfully and effectively to people of all cultures, classes, races, ethnic backgrounds, and religions in a manner that recognizes, affirms, and values the cultural differences and similarities and protects and preserves the dignity of each. The cancer experience, in itself, is a significant event in their lives, with culture playing a major role in how patients and families respond to this experience. The importance of developing one's cultural competence is only reinforced, as the population we, as nurses, serve becomes more diverse. The demographics of Canada are constantly changing not only as a result of immigration, but also population increases among racial, ethnic, linguistic, and culturally diverse groups. The purpose of this presentation is to help oncology nurses understand key concepts and skills that are vital in providing culturally competent care to patients. Challenges faced by oncology nurses in clinical practice are shared, along with strategies to help nurses develop their cultural competence. Cultural competence is portrayed as a journey, rather than a destination; a process, rather than event; a state of "becoming," not "being."

Slides and video tapes depicting people from different cultures will be shared. Personal experiences that depict "cultural shock" will be used to emphasize the importance of knowing your patient's culture.

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ONCOLOGY NURSING ASSISTANT DEVELOPMENT PROGRAM: A PARTNERSHIP APPROACH TO ADDRESS HEALTHCARE CHALLENGES. Joan Wagner, MSN, CRNP, Linda Schiech, RN, MSN, AOCN®, and Deena Damsky Dell, RN, MSN, BC, AOCN®, Fox Chase Cancer Center, Philadelphia, PA.

The critical nursing shortage, as well as the aging of the nursing workforce, has had a tremendous impact on the delivery of nursing care nationally. To respond to this challenge, this NCI-designated comprehensive cancer center reframed its primary nursing model to partner with certified nursing assistants with oncology-specific skills. Goals of the nursing assistant development program were to expand utilization of nursing assistants throughout the institution, and to provide educational programs designed to ensure that nursing assistants have appropriate skills to function effectively as members of the oncology nursing team.

A team of three clinical nurse specialists developed a basic nursing assistant curriculum modeled from the Pennsylvania state certified long-term care nursing aide curriculum. All nursing assistants, including existing and newly hired staff, were required to attend the three-day education program. The curriculum reinforced basic skills related to patient care and incorporated oncology specific information such as symptom management and end-of-life care. A competency evaluation tool is utilized to assess basic competencies. Two part-time staff nurses functioned as clinical instructors, validating performance of skills and providing supplemental instruction.

The nursing assistant development program's goals have been expanded to identify a structure for continuing education, as well as the development of a three-step clinical ladder designed to encourage career advancement. Nursing assistants who meet the criteria for the 3rd clinical ladder level are required to be enrolled in a nursing school program and will be expected to demonstrate advanced technical skills, critical thinking abilities, and effective communication skills.

Development of nursing assistants has widespread implications for nursing practice. To ensure the success of the program, a series of concurrent classes are offered for RNs focusing on delegation techniques. A consultant specializing in team building and conflict management provides additional support. It is hoped that the outcomes will be improved utilization of the registered nurses' time and professional skills, enhancement of job satisfaction at all levels, and recruitment of qualified candidates for academic nursing programs. As the program continues to evolve, staff will be surveyed and outcomes will be measured and analyzed.

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SEXUALITY AND CANCER: HOW ONCOLOGY NURSES CAN ADDRESS IT BETTER. JoAnn Mick, RN, MSN, MBA, AOCN®, Mary Hughes, MS, RN, CNS, and Marlene Z. Cohen, RN, PhD, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Cancer can affect patients' sexuality either temporarily or permanently. Sexuality is not simply sexual function but an ever-changing experience in how one views one's body and one's self. Sexual dysfunction can affect an individual's sense of well-being and therefore affects quality of life. Barriers to discussing sexuality include cultural issues, discomfort about the topic, lack of educational preparation, a presumption that issues of survival override issues of sexuality, and an assumption that the elderly lose interest in sexuality. However, expressions of sexuality are an intimate form of communication that can relieve suffering. The information nurses give patients about cancer's effect on sexuality is often inaccurate or complete. Cancer threatens sexual functioning as well as body image (disfigurement, alopecia), infertility, fatigue, and pain. Sexual concerns may increase after treatment is complete and its side effects become apparent. A sexual assessment with each visit addresses sexual dysfunction. To deal effectively with patients' sexual issues, healthcare providers must know what to ask and how to ask it, and they must understand patients' expectations, premorbid lifestyles, attitudes towards sex and relationships, and relationships with current sexual partners. Screening for unexpressed anxiety, guilt, and anger is important. An environment that supports expression of concerns and fears provides a sense of confidence that feelings can be addressed. This poster will inform nurses on how to address sexuality and cancer BETTER. This acronym was created to help nurses conduct sexual assessments more effectively. BETTER stands for: BRING up the topic so patients know they can discuss sexuality and cancer. EXPLAIN that you are concerned with all aspects of patients' lives affected by cancer. TELL patients sexual dysfunction can happen and that you will find appropriate resources to address their concerns.

TIMING is important to address sexuality with each visit to let patients know they can ask for information at any time. EDUCATE patients about the side effects of their treatments and that side effects may be temporary, and RECORD your assessments and interventions in patients' medical records. Integrating information about sexuality into clinical practice can validate patients' experiences and enhance their quality of life.

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A MODEL FOR PROFESSIONAL DEVELOPMENT. Theresa Sinopoli, CNS, AOCN®, Patti Schaindlin, RN, MA, Barbara Hennessey, RN, MSN, AOCN®, Roberta Baron, MSN, AOCN®, and Stacie Corcoran, RN, MS, AOCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Encouraging nurses to grow professionally, and providing the manpower and resources to support this growth is a challenge for nursing leadership. At this NCI-designated cancer center, the professional development task force (PDTF) was created to provide direction, education, and support for nurses preparing abstracts/posters for presentation, professional speaking, writing for publication, and mentoring activities. In 1999, several members of the Ambulatory Advanced Practice Council (AAPC) took the initiative to coordinate an abstract preparation program for the division of nursing. These nurses conducted several workshops that provided written educational materials, a review of abstract/poster submission criteria, and a critique of abstracts previously presented. Informal discussion was encouraged to explore the potential author's plan and mentoring needs. To date, 130 nurses attended the workshops, and 112 have submitted abstracts. Based on the success of the abstract program, several of the advanced practice nurses (APNs) recognized a need to develop similar programs for other professional activities such as presentations and writing for publication. The abstract program provided a model for a more comprehensive program and the PDTF provided the structure.

The primary objectives of the task force were to identify a working structure of the task force, develop a policy for the support, review, and approval of professional activities, develop advanced practice nurses as mentors to increase the pool of mentors, and develop both staff and APNs in their professional activities. The PDTF is comprised of four work groups: Abstract/poster presentation, professional speaking, writing for publication, and mentoring. Two facilitators for each work group are responsible for developing a program appropriate to the professional activity. The PDTF provides oncology nurses with the tools for professional development. This presentation will define the structure, report our experience and outcomes, share content outlines, and provide a model for all oncology nurses.

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PUBLISH OR PERISH: NURSES WRITING FOR THE PROFESSION. Susan Bruce, RN, BSN, OCN®, Duke University Medical Center, Durham, NC.

The hallmark of a profession is formal publication. The knowledge that is shared through written communication is a powerful way to advance a profession. Nurses have knowledge and expertise in a variety of areas, some of which include clinical practice, education, research, and leadership. Nurses need to share with their peers so that the profession can grow and develop. There are many reasons why nurses should write and publish their work. Publication is a way to improve patient care, develop evidence-based practice, promote ones personal and professional growth and development, enhance opportunities for career advancement, attain national recognition within the nursing community, and to secure tenure in the academic setting. Professional publication is one avenue to nursing excellence. Yet, writing does not come naturally for most nurses. Most nurses were not prepared through their nursing curriculum for writing and publication. There are barriers that prevent nurses from the process of writing. The main barriers are not knowing where and how to begin, not having enough time, and not having enough confidence in your writing ability. Writing is a skill that can be learned, developed, and mastered. While writing is work that requires discipline and practice, it can be easier than the novice writer suspects. This poster will utilize a "how to" approach for the novice writer. It will cover basic principles of writing, as well as provide strategies to overcome the fear of writing and identify opportunities for the novice writer to begin contributing to his/her profession.

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COULD THIS BE LEPTOMENINGEAL METASTASIS? Katherine Picconi, RN, FNP, CS, OCN®, and Rose Ann Caruso, RN, BBA, AS, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Leptomeningeal metastasis (LMD) occurs in 3%–8% of all cancer patients, most commonly adenocarcinomas of the breast, lung, and melanoma, as well as, leukemia and lymphoma. Invasion of the cerebrospinal fluid by tumor cells allows access to all regions of the central nervous system (CNS). The diagnosis of LMD is a devastating neurological complication of cancer and is associated with major neurologic disabilities and a high mortality rate.

A patient's clinical presentation is usually the first clue that the primary tumor has invaded the CNS. The presentation of LMD may be a mixed and confusing picture depending upon the area or areas of the neuroaxis involved. Signs and symptoms (S/S) are divided into the three anatomical regions of the CNS: cerebral, cranial nerves, and spinal cord. It is not unusual for a portion of each region to be affected making the S/S varied and multiple. Subtle S/S include headache, nausea and vomiting, change in vision, and difficulty walking. Not so subtle S/S include confusion, seizures, loss of vision, and cauda equina symptoms.

Oncology nurses see patients in a variety of settings during the course of cancer diagnosis and treatment. Early identification and diagnosis of LMD is key to immediate treatment, prolonged survival, and quality of life. Patients with good performance status, minimal neurological dysfunction, and a low tumor burden are most likely to respond favorably to treatment. Rarely are patients diagnosed with LMD as a presenting symptom, LMD is most commonly a sign of recurrence.

At this NCI-designated cancer center, patients are seen in a variety of inpatient and outpatient settings and call the center to report new physical and emotional changes. Often, patients and caregivers confide and report to nurses symptoms and/or situations they have not reported to their physicians. Therefore, the nurse in any setting may be the first professional to be informed of S/S of LMD. This presentation will provide oncology nurses with an overview of LMD, define subtle and not so subtle S/S, and emphasize skills for assessment of high-risk individuals to optimize early identification of LMD.

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LEVEL OF KNOWLEDGE AND COMPLIANCE WITH WORK PRACTICE GUIDELINES FOR PERSONNEL DEALING WITH CYTOTOXIC DRUGS: COMPARISON BY CLINICAL NURSE'S JOB CAREER AND WORK SITES. Yeon Hee Kim, RN, MSN, and Jin Sun Choi, RN, Asan Medical Center, Seoul, Korea; Myung-hee Jun, RN, PhD, Daejon University, Daejon, Korea; and Sunghwa Gong, RN, Asan Medical Center, Seoul, Korea.

Without use of adequate personal protection, nursing staffs are at risk of drug exposure. In Korea, government legally has not yet issued guidelines for use of personal protection by those handling antineoplastics. So each hospital developed their work practice guidelines based on the literatures and American OSHA guidelines. We investigated the level of knowledge and compliance with guidelines for safe handling of cytotoxic drugs by the nurses' job careers and work sites. 255 nurses working at two university hospitals, located at Seoul, Korea, were asked to fill out questionnaire. Tools for this study were developed by investigators based on the guidelines issued by OSHA and Oncology Nursing Society in America.

As a result, nurses working at oncology wards show higher level of knowledge and compliance compared with nurses working at non-oncology wards. Differences in the level of knowledge between two groups were statistically significant, but differences in the level of compliance were not significant. And the level of knowledge and compliance were significantly increased according to nurses' job career, but when nurses' job career is more than 10 years, those levels were declined.

Among all subjects, 83% has ever experienced exposure to cytotoxic drugs one more times. 69.5% among all subjects was exposed to antineoplastic drugs via skin contact. Nurses reported that they have experienced exposure to drug most frequently when they removed antineoplastic drugs from the patients. The most frequent reason that nurses did not adhere to guidelines is that they did not have protective equipment.

We suggest that nurses handling antineoplastic drugs have potential risk of exposure to these drug's toxic effects. An education program be provided to novice nurses intensively and be reinforced when nurse's career is over 10 years. Nowadays, cancer patients can be found at any ward regardless of disease type. Not only nurses working at oncology wards but also working at non-oncology wards must be educated about the adherence to recommended guideline for safe handling with cytotoxic drugs when engaging in drug handling activities and pay careful attention to technique both drug handling and in removing drugs from patients.

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EMPOWERING PATIENTS: ADVANCES IN TECHNOLOGY PROVIDE INNOVATIVE APPROACH TO MANAGING MALIGNANT PLEURAL EFFUSION. Jennifer H. Mangum, RN, and Linda Edwards Hood, RN, MSN, AOCN®, Duke University Health System, Durham, NC.

Malignant pleural effusion is present in 50 percent of patients at the initial diagnosis of cancer. Advanced cases of breast cancer, lung cancer, and lymphoma represent 75 percent of total incidence. Symptoms of malignant pleural effusion are often painful and frustrating for patients at a time when they need quality interaction with loved ones. Historically, the treatment options such as long-term chest tube thoracostomy with eventual pleurodesis, with or without sclerosis, often proved more painful than the initial symptoms they palliate, with a recurrence rate of 97 percent within 30 days after initial thoracentesis alone. Shifting to a patient-centered approach is now possible with the development of a soft, fenestrated silicone catheter with a one-way valve and polyester cuff. Chronic pleural drainage can be managed in the home or outpatient setting and is simple to perform. Increased patient satisfaction with therapy, a decreased inpatient LOS, and empowerment to comfortably manage symptoms of end-stage disease are demonstrated benefits. While this technology can be used in the inpatient setting, and nurses are easily trained in drainage technique, the goal is to have the patient go home. Cost savings can be measured in decreased inpatient LOS and equipment charges and decreased readmission rates. The patient's support team includes medical and surgical oncologists, CNSs, nurse clinicians, patient resource managers, and bedside nursing staff, who educate and follow patient progress. The collaborative approach promotes well-rounded treatment and a multi-pronged support system for the patient's transition to the outpatient setting. Case presentation to include clinical presentation and typical volumes, pitfalls to success, patient condition over time, technology, implantation technique and clinical management, patient education, and cost analysis.

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POSITRON EMISSION TOMOGRAPHY: A NEW TREND IN ONCOLOGIC IMAGING.

Yocheved Kaplitt, RN, BSN, and Barbara G. Hennessey, RN, MSN, AOCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

Nurses are encountering more patients who are undergoing PET (positron emission tomography) imaging due to the increased utility in the oncology setting. Therefore, the oncology nurse needs to know the basic concepts, unique features, and relevance to particular cancer diagnoses in order to provide optimal teaching and support to patients undergoing this procedure. PET is a nuclear technique by which metabolic processes in healthy and malignant cells can be visualized and measured using short-lived radionuclides. The basis for PET imaging differs from MRI and CT scanning which detect disease processes based on alterations in structure or anatomy. Since biochemical alterations will precede structural changes that may indicate active or progressive disease, PET scanning provides an additional dimension to further characterize disease. Other factors that have contributed to the acceptance of PET scanning are increased accessibility of machine and radionuclides, better reimbursement from third party payers, and more data to validate the specificity and sensitivity for certain cancers. Historically, PET has been used for the detection of cardiac and neurologic conditions. Most recently, however, there has been increasing evidence of the usefulness of PET imaging in the oncology setting. In specific diagnoses, PET has been found to be a useful tool for making differential diagnoses, staging preoperatively, differentiating scar tissue from residual disease, demonstrating suspected recurrence, and measuring response to treatment. Future trends in PET imaging are based on the development of diagnostic and therapeutic tracers as well as combining imaging modalities. This presentation will review the rationale, indication, and application of PET imaging in the oncology setting, describe the specific nursing education plan, including the avoidance of any substances that could falsely alter metabolic activity, and share written education materials developed.

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DESPERATELY SEEKING SUSAN OR ANY OTHER ONCOLOGY NURSE TO BECOME OCN® CERTIFIED (A.K.A. GOT OCN®?).

Debra Stillwell, RN, OCN®, Providence Holy Cross Medical Center, Mission Hills, CA.

Nationwide, the rate at which oncology nurses are seeking OCN® certification is on the decline. As the oncology nurse clinician/educator at a multi-hospital facility, a look around showed minimal OCN® certification for bedside RNs. The radiation oncology departments have 3/8 RNs currently OCN® certified, one is the nurse manager. The inpatient oncology units have 6/69 RNs with certification, only 2 are bedside RNs. Encouraging staff to seek out certification first involved investigating what changes needed to be implemented.

Results from an anonymous survey concluded: no time to study (76%), no monetary incentive (53%), no recognition as a specialty unit (51%), test seen as difficult (48%), cost for test upfront (20%), and no pressure to take test from management (8%).

The format that evolved was an OCN® study group that combined weekly installments of coursework and quizzes based on the test blueprint in a self-study format over a 9-month period. That combined with four 8-hour classes to review problem areas and questions from practice tests drew an initial interest of 16 participants. When deadlines occurred, 11 participants enrolled to take the test in September 2002. The cancer committee agreed to find funding for the test costs for the participants once they passed, negotiation is in place to provide the money upfront. Management was supportive in arranging time off for the classes and the test. As for monetary incentive, hourly or yearly bonuses, or paid time off is currently being discussed, as is recognition as a specialty unit for staffing ratios and floating considerations. Marketing has promised a media blitz in the local community as well as in-house about the certification, and a celebration party for all.

A positive outcome from the test will encourage more staff members to become OCN® certified, creating an environment that will provide a level of expertise and quality of care to the oncology patients and their families. The pride and professional growth that the certification gives back to the nurses will foster leadership and contentment, which is crucial in this time of nursing shortages.

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SYNTHESIS OF RESEARCH EVIDENCE: COLLABORATION AMONG PRACTITIONERS, EDUCATORS, AND RESEARCHERS.

Mary Cunningham, MS, RN, AOCN®, Ellis Fischel Cancer Center, Columbia, MO.

Significance: Nursing practice based upon science optimizes predictable positive outcomes for patient care.

Problem/Purpose: Too often, research findings are not put into practice. Clinicians lack the time and expertise to review research (Rutledge et al., 1998) while researchers and educators do not have a primary role in implementing findings. This project involves developing "triads" of 2 advanced practice nurses, an educator, and a researcher who work together to produce a knowledge synthesis on a clinically relevant topic. Little is known about the process of producing knowledge syntheses in nursing.

Framework: An evidence-based practice (EBP) framework (www.ons.org/ebp) is being used to develop knowledge syntheses.

Methods: Following a 2001 retreat for advanced practice nurses (APNs), 6 APNs and one researcher developed a strategic plan for production of 3 knowledge syntheses (topics: effectiveness of nebulized morphine to treat dyspnea in patients with chronic conditions, exercise interventions for cancer-related fatigue, assessment of sleep disturbance in cancer patients). A triad was formed for each topic: 2 APNs, one nurse educator who works with advanced practice nurses, one nurse researcher with expertise in the content area. Communication among triad members and across triads is done via conference calls and email. As the triads go through the EBP process to develop their syntheses, each member is tracking steps taken and time spent on the process.

Evaluation: Process data from the tracking of the EBP process across groups will give information about the utility and time needed to complete each step, and will identify additional steps being used. Insights will be sought related to topic selection, methods used by each group, and usefulness of the EBP framework.

Findings/Implications: Knowledge of the utility of the EBP framework and the triad method in producing syntheses is important for nurses. The syntheses produced should enhance translation of research findings into practice.

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A COMPETENCY-BASED ORIENTATION FOR ADVANCED PRACTICE NURSES.

Lois Almadrones, RN, MS, CFNP, MPA, Christine Liebertz, RN, CS, MSN, AOCN®, Teresa Sinopoli, RN, MS, AOCN®, Barbara Hennessey, RN, MSN, AOCN®, Nancy Houlihan, RN, MSN, AOCN®, and Kathy Hydzik, RN, MSN, Memorial Sloan-Kettering Cancer Center, New York, NY.

Successful role development, job satisfaction, and retention of APNs (nurse practitioner-NP/clinical nurse specialist-CNS) must begin with a sound orientation. Although APNs assist with orientation of new staff, how are they oriented to their role and by whom are they oriented? Often, the APN assumes this role upon completion of an advanced degree without formal orientation to the unique role as clinical expert, educator, consultant, and researcher. The ambulatory APN council at this NCI-designated cancer center identified the need to develop a more structured orientation to the APN role and a task force was formed. A literature search identified articles related to the APN role but little on their orientation. DiMauro's (1989) competency-based CNS orientation model was adapted and job descriptions and ONS performance standards guided the development of the competencies. The NP and CNS roles required different clinical competencies, but had similar education and research competencies. Other issues addressed were: 1) the feasibility of completing the APN and the hospital's general orientation within the human resources mandated three months, 2) prioritizing the three-month competencies, 3) the logistics of having the APN facilitator work in another ambulatory area of the center, 4) the unique needs of the orientee depending on her APN experience at entry level to the role, 5) training APN facilitators, and 6) ensuring compliance with administrative policies. Ambulatory nurse leaders, educators, and the APN council were consulted periodically and apprised of progress. The complexity of the APN role warranted that many competencies could not be achieved in three months so they became goals to be completed before the first year's annual performance appraisal. Evaluation of this orientation process includes structured interviews with the nurse educator, nurse leader, orientee, and APN facilitator at completion of the orientation, and review of the competencies to assure completeness. This presentation will review the APN competencies, the process, and evaluation results. This competency-based orientation model is useful for APNs in other oncology settings.

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USE OF VACUUM-ASSISTED WOUND CLOSURE SYSTEM IN AN ONCOLOGY SETTING.

Lucia Scarpino, MS, RN, CWOCN, Roswell Park Cancer Institute, Buffalo, NY.

Managing wounds in an oncology setting can be a challenge for the healthcare professional. Conventional dressing changes can be time consuming for nursing personnel as well as physically and psychologically unpleasant for the patient. An alternative is the use of negative pressure wound therapy. Vacuum-assisted wound closure (V.A.C.) was developed at Wake Forest University in Winston-Salem and approved by the FDA in 1995 for use in the treatment of stage III and IV pressure ulcers, diabetic ulcers, surgical, chronic, or trauma wounds, and pre- and post-flaps and grafts.

V.A.C. therapy promotes wound healing by creating a moist wound environment. Applying V.A.C. therapy to the wound reduces interstitial edema and bacterial colonization, promotes circulation to the wound bed thus increasing the rate of granulation tissue formation and epithelial migration. This presentation will include the following: A description of the V.A.C. process; Appropriate clinical application; A case study of a patient admitted to Roswell Park Cancer Institute with an extensive abdominal wall infection and vesicocutaneous fistula. Patient progress and outcomes will be presented.

The use of this system reduces nursing time and discomfort and confinement for the patient. Portable V.A.C. devices are available when patients are discharged home allowing mobility thereby enhancing quality of life for the oncology patient and decreasing their length of stay in the hospital.

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HYPOVITAMINOSIS D: IMPLICATIONS FOR ONCOLOGY PATIENTS RECEIVING BISPHOSPHONATE THERAPY.

Jennifer Tenhover, MSN, RN, BC, AOCN®, Massachusetts General Hospital, Boston, MA.

Purpose: The purpose of this project was to increase the awareness of the MGH Cancer Center nursing staff to the importance of assessing hypovitaminosis D and hypocalcemia risk factors in the cancer patient receiving bisphosphonate therapy.

Background: Bone metastases are a common cause of morbidity for patients with cancer. Increasingly, bisphosphonates are being used to reduce these skeletal complications. Hypovitaminosis D is a critical adverse combination with bisphosphonate infusions, as it may lead to profound symptomatic hypocalcemia. Recently, three MGH cancer patients received bisphosphonate infusions and subsequently required inpatient care for calcium and vitamin D repletion. The critical nature of this condition dictates that outpatient oncology nurses have an important role in preventing complications.

Intervention: An MGH endocrinologist provided an in-service for the ambulatory cancer infusion nursing staff including review of three cases; review of calcium/vitamin D metabolism; and review pertinent literature. Secondly, a review of the literature is identifying assessment tools for hypovitaminosis D and hypocalcemia risk factors. This literature review will also provide the foundations for a study that will create a standard of care for patients receiving initial bisphosphonate therapy.

Interpretation: A literature review noted a few documented case reports of hypovitaminosis D and symptomatic hypocalcemia following bisphosphonate therapy. The PDR indicates an incidence of less than 1% of grade 3 or 4 hypocalcemia following Pamidronate or Zometa. Despite the low reported incidence, hypocalcemia can be a life-threatening condition that can be complicated by hypovitaminosis D. There are no studies reporting the coincidence of Vitamin D deficiency and hypocalcemia following bisphosphonate therapy. There are also no published guidelines for monitoring Vitamin D, calcium, and risk factors for these patients.

Discussion: As bisphosphonates are increasingly used in cancer patients for the management of bone metastases, oncology nurses need to be aware of the potential for life-threatening hypocalcemia and the added risk that hypovitaminosis D concurs. Oncology nurses are responsible for educating patients about hypocalcemia. Finally, standard guidelines need to be established for patients initiating bisphosphonate therapy.

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IMPLEMENTATION OF A POCKET REFERENCE TOOL FOR REGISTERED NURSES INEXPERIENCED IN THE CARE OF COMPLEX ONCOLOGY PATIENTS IN THE HOSPITAL SETTING.

Mary Hausz, RN, Regina Miles, RN, BSN, Patricia Kneebone, RN, BSN, Rhonda Prebeck, RN, MSN, AOCN®, and Christine Dunham, RN, Clarian Health Partners, Indianapolis, IN.

Problem: Agency nurses, float pool nurses, and nurses in orientation have indicated that they do not feel knowledgeable about the complex care of oncology patients and their medications. This population includes hematology, oncology, and autologous bone marrow transplant patients.

Purpose: Create a reference tool to increase the knowledge base regarding care of oncology patients and their medications.

Significance and Justification: Nurses not experienced in the care of oncology patients can feel overwhelmed caring for the complex oncology population and administering their medications.

Practice Innovation/Change: Implementation of Pocket Reference available to all float pool nurses, agency nurses, and nurses in orientation.

Method: A Pocket Reference was developed after a pre-survey of agency nurses, float pool nurses, and nurses in orientation determined they all had high anxiety levels and little or no knowledge of the oncology population and their medications.

Evaluations: A pre- and post-survey using a Likert scale is being used. Six months after implementation of the pocket reference, nurses who completed the pre-survey will be asked to complete the post-survey. If results indicate that the pocket reference increased the knowledge base and comfort level of agency nurses, float pool nurses, and nurses in orientation, the tool will continue to be utilized and re-evaluated every year.

Goals: Having a pocket reference available for agency nurses, float pool nurses, and nurses in orientation will decrease their anxiety level while at the same time broaden their knowledge of the oncology population and their medications.

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PREPARING NURSES IN BIOMEDICAL RESEARCH.

Sharon Mavroukakis, MS, RN, Georgie Cusack, MS, RN, and Miranda Raggio, RN, MA, National Cancer Institute, Bethesda, MD.

The role of the oncology nurse in biomedical research is complex and multifaceted. The research nurse serves as the coordinator between the nurse at the bedside, multiple hospital departments impacted by the research, the patient, and the principal investigator, to assure protocol integrity, quality data management, and excellent patient care. Mastery of this complex role requires expertise in all components of the research process. To equip new research nurses at the National Cancer Institute (NCI) with this requisite expertise, the members of the education committee developed a program entitled "Fundamentals in Clinical Trials." The goals of the program are to establish a knowledge base regarding the role of members in the research team, and the life cycle of a protocol to include the principal investigator, sponsor, associate investigator, research nurse, and data manager; and to implement new practices when developing protocols, collecting, managing, and analyzing data, conducting data audits, and reporting clinical trial data. The content is presented over two and a half days using local and regional experts in the field as speakers. A three-level evaluation program has been instituted to provide ongoing quality improvement for the program. Participants evaluate the speakers and the program. Knowledge acquisition is evaluated with a pre-post test design, and an outcome evaluation has been developed for participants to self assess application of the content into their research nurse practice. The outcome evaluation consists of participants establishing practice goals during the program. They are contacted three months after completion of the program to evaluate their progress in meeting their goals. This poster will present the program development process, the curriculum of the program, and the results of evaluations, including the findings of the outcome evaluation. The development of an educational program for the oncology research nurse at the NCI has helped to improve patient outcomes, establish standards based on good clinical practice guidelines, expand the expertise of the oncology research nurse, and provide a foundation for clinical research excellence.

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THE MASSACHUSETTS GENERAL HOSPITAL CANCER NURSING FELLOWSHIP: INTRODUCING CANCER CARE TO THE NEXT GENERATION OF NURSES.

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Baccalaureate level nursing curriculum has limited cancer nursing content, which diminishes the attractiveness of the oncology specialty to new graduate nurses. The Massachusetts General Hospital (MGH) nursing leadership team developed and implemented a program that creates an opportunity for nursing students to observe and practice with expert nurse clinicians in the MGH cancer center. The MGH cancer nursing fellowship is a ten-week, paid, precepted clinical experience, designed to enhance interest in and commitment to oncology nursing as a substantive area of practice.

The undergraduate fellowship has been developed to afford nursing students between their junior and senior year an opportunity to experience oncology nursing, and to participate in the multiple nursing roles within this nursing specialty. These opportunities provide fellows with both inpatient and outpatient experiences in an arena rich with clinical experts. The fellowship is specifically intended to engage undergraduate nursing students in a way that recognizes their level of current clinical skills and strengths and that builds, in a protected way, on those strengths. This program promotes oncology nursing as a diverse and multifaceted professional subspecialty. Fellows and preceptors collaboratively manage encounters with patients and families that assist the fellow to build a body of personal oncology nursing experience.

Fellows have opportunities to develop collegial relationships with oncology nurses, who represent all levels of nursing from clinical nurse to advanced practitioner. Within the variety of experiences available at MGH, each fellow is able to select an area of primary interest. This creates an opportunity to witness the unique contributions of each member of the interdisciplinary care team with an integrated approach to cancer care. These clinical experiences are intended to energize and inform the fellows' future nursing practice.

This presentation will provide a detailed description of the project, principle components/curriculum, and evaluation plan. The fellowship program is a key intervention to recruit the next generation of oncology nurses. Future plans include expanding fellowship opportunities to faculty members, in order to build clinical expertise that can be transferred into the undergraduate curriculum.

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ARE YOU READY TO PRACTICE? Myra Woolery-Antill, MN, RN, Ellen Carroll, BSN, RN, and Elizabeth Fenn, BSN, RN, National Institutes of Health, Bethesda, MD.

Developing an orientation and practice revalidation program is challenging and exciting. New employees need a comprehensive orientation program that makes them feel confident in providing care to patients with a wide variety of disease processes and complex needs. While it is important to standardize an orientation program for new nurses, the program must be flexible enough to provide opportunities for experienced nurses to build on their existing knowledge and skill base. After completion of an orientation program, staff evaluations alone may not be adequate to assess current competency levels. Therefore, an annual revalidation program with a focus on education and staff development is vital to maintain practice standards within the clinical setting. The purpose of this project was to update the current orientation program and to create a practice revalidation program. An orientation manual is used to guide the preceptors and preceptees through the orientation process. Pediatric program of care competencies are completed during orientation. From this list, specific competencies were chosen for annual revalidation. The annual revalidation program is completed after staff answer a written questionnaire showing knowledge, demonstrate selected skills, and participate in a peer discussion that demonstrates critical thinking skills related to unit specific case scenarios. Demonstration of clinical competence is an ongoing process. With changing technology and treatment regimens, clinical nurses will continually have the opportunity to enhance their skills and knowledge. Developing a detailed orientation program and practice-based revalidation program in the clinical setting promotes excellence in clinical skills and clinical care.

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"RESEARCH TO PRACTICE": A PRACTICAL PROGRAM TO ENHANCE THE USE OF EVIDENCE-BASED PRACTICE AT THE UNIT LEVEL. Elizabeth Cooke, RN, MN, ANP, Robin Gemmill, RN, MSN, CS, Sharon Steingass, RN, BSN, MSN, Cynthia Idell, RN, BA, MSN, Tami Borneman, RN, BSN, MSN, and Grace Dean, RN, PhD, City of Hope National Medical Center, Duarte, CA.

Significance: The shift to using evidence-based practice (EBP) to guide clinical decision-making meets major obstacles when applied at the unit level. Barriers include lack of an organized approach, access to literature, inexperience with synthesizing evidence, and time. Nevertheless, nursing needs to critique clinical practices in the light of available clinical information based on research and guidelines.

Purpose: A one-hour rotating monthly program of case presentation and analysis was developed to assist clinical nurses intranslating research and ongoing knowledge into clinical practice. The goals were to augment unit-based literature access, boost motivation for clinical excellence, increase morale and retention of staff, expand the knowledge-base to include research beyond the institution, reinforce a cycle of collegiality, improve visibility of nurse researchers to staff, increase collaboration among advanced practice nurses (APNs) within the institution, and identify new areas of research.

Theoretical Framework: The City of Hope Quality of Life Model (QOL) was used to guide patient assessment, APN presentations, and discussion with clinical staff.

Methods: A case study approach was chosen. Steps included: 1) Selection of a challenging case by staff using QOL domains to identify problems, 2) Literature search by APNs, 3) Pre-assessment of staff confidence with identified problems, 4) Case presentation by staff RN, 5) APN presentations, 6) Group discussion and application of findings, and 7) Post assessment of knowledge, confidence, and satisfaction. APN debriefings held immediately following each program evaluated attendance, problems, discussion, QOL domain ranking, and pre-post knowledge scores. Incentives for staff included 1 hour CEU and refreshments.

Results: Attendance averaged 12 with 3 departments attending often from various disciplines, and 47% participation in the discussion. The psychosocial quality-of-life domains dominated (63%), and discussion averaged a score of 3, (with 0 = slow and 5 = lively). There was a one-point increase (scale of 1 to 5) that measured change in confidence in knowledge before and after the program.

Implications: The case study approach with APNs can be used for application of EBP on the unit. Future plans include measurement of clinical outcomes at the individual unit level to evaluate adoption of recommended EBP changes.

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THE DEVELOPMENT OF SKILL SETS, COMPETENCIES, AND EDUCATIONAL PROGRAMMING TO PROMOTE GOOD CLINICAL PRACTICE FOR RESEARCH NURSES IN CLINICAL TRIALS. Dianne Reeves, RN, MSN, National Cancer Institute, Bethesda, MD; and Georgie Cusack, MS, RN, National Institutes of Health, Bethesda, MD.

The role of the research nurse in clinical trials is essential in ensuring adherence to principles of good clinical practice. Research nurses at the National Cancer Institute in Bethesda, MD, recognized their pivotal role in research, and the need for formal integration of research concepts with successive levels of mastery and clinical competencies. In 1996, the research nurse position description (PD) was reviewed and upgraded to reflect three distinct levels of practice: novice, intermediate, and advanced. Skill sets were abstracted from each PD creating a single skill inventory, clearly delineating the characteristics of high performance. The inventory provides a basis to develop educational programs and outcome measures, to support administrative program decisions, and to help staff focus their career and educational objectives. The Research Nurse Skill Inventory Matrix displays performance expectations for the research nurse to clearly review expectations at various levels, and identify cognitive and clinical learning activities necessary to bridge the gap. Advancing from novice level participation, through intermediate level program direction, and expert level mentorship and program creation, the nurse is encouraged to become skilled in self-identification of learning needs and areas of mastery. A formal educational program, based on the identification of distinct levels of competency, Fundamentals of Clinical Trials, was designed for the novice research nurse. Offering ANCC-accredited continuing education credits, the program has been presented annually since 1999 by the Research Nurse Education Committee in the Center for Cancer Research at the National Cancer Institute. Well-attended yearly, the program is now open to clinical research professionals nationwide whose institutions are partners with NCI. Future program expansion includes plans to place content modules on an electronic website, and provision of a more advanced program for the intermediate level research nurse. The modular approach is also being used as we finalize our research nurse orientation program. The creation of distinct levels of competence, a skills inventory set, and the development and implementation of this education program has allowed us to clearly delineate performance expectations for the research nurse in order to provide the most comprehensive management of patients enrolled in clinical trials.

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INTEGRATION OF THE PEDIATRIC PATIENT POPULATION INTO A PREDOMINANTLY ADULT BLOOD AND MARROW TRANSPLANT PROGRAM. Rose Kumpf, RN, and Lisa Notaro, RN, BSN, Roswell Park Cancer Institute, Buffalo, NY.

In response to community need, it was necessary to expand our blood and marrow transplant program's scope of services to include the pediatric population. The challenge was to integrate the pediatric population with the adolescent and adult population and ensure that the complex care required by each patient was consistently delivered in an age and developmentally appropriate manner. This poster will present the necessary steps that were necessary to make this program a success.

This poster will present the adaptations necessary to ensure a smooth integration of the pediatric population. Topics addressed include the environment, specific pediatric nursing care practices, policy and procedure changes, the collaborative model established between the bone marrow transplant and pediatric units nursing staff members, the professional education programs provided for the entire healthcare team, and the hospital/school cooperative developed to meet each child's educational goals.

The changes that were made were done with the idea of promoting the safest, well balanced, and nurturing environment with the least number of interruptions in everyday life, so that upon discharge, the pediatric patient and family will eventually be able to return to normal life with minimal disruptions.

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IDENTIFYING SYMPTOMS THAT CLUSTER IN WOMEN WITH OVARIAN CANCER. Beverly Buhr, MS, RN, Klaren Pe-Romashko, MS, Sandra Ward, PhD, RN, FAAN, Heidi Donovan, MS, RN, Doctoral Candidate, Stephanie Gilbertson-White, RN, BS, and Kathleen Murphy-Ende, RN, PhD, University of Wisconsin School of Nursing, Madison, WI.

Background: Identifying symptoms that co-occur (cluster) has been established as a top priority by NIH and ONS. This is an important area of research for women with ovarian cancer because they tend to experience multiple concurrent symptoms. The purpose of this secondary analysis was to identify commonly co-occurring symptoms (symptoms that cluster) in a sample of women (n = 258) with active ovarian cancer.

Method: Data are from a larger mailed survey study (N = 723) of cognitive representations of symptoms among members of the National Ovarian Cancer Coalition. The M.D. Anderson symptom inventory, modified and pre-tested for ovarian cancer, was used to assess symptom severity and occurrence. Participants rated the severity of each of 22 symptoms during the past week on a scale of 0 (did not have the symptom) to 10 (as bad as I can imagine). They were then asked to identify the 3 symptoms they noticed most.

Results: Women reported a mean (SD) of 12.05 (4.75) concurrent symptoms. Fatigue, bowel disturbance, sleep disturbance, and memory problems were the most frequently reported symptoms and had the highest mean severity scores. However, when women were asked to identify the three symptoms they "noticed most" in the past week, fatigue and bowel disturbance remained the most frequently cited symptoms followed by pain, numbness/tingling, and sleep disturbance. Memory problems were infrequently cited. In order to identify patterns of co-occurring symptoms, each of the frequently occurring symptoms were considered, in turn, as the "primary symptom." Then, given the occurrence of that symptom, the likelihoods that other symptoms also occurred were determined. Fatigue, bowel disturbance, sleep disturbance, and memory problems behaved as a cluster. That is, given the presence of any one of those 4 symptoms, each one of the other symptoms also occurred in at least 75% of women.

Conclusions and Implications: Knowing that fatigue, bowel disturbance, sleep disturbance, and memory problems tend to co-occur at high frequencies in women with ovarian cancer could help nurses assess symptoms and guide patient education in symptom management. Implications for future research will also be discussed.

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PERCEPTIONS OF THE CAREGIVING EXPERIENCE AND QUALITY OF LIFE OF MEXICAN/MEXICAN AMERICAN CAREGIVERS PROVIDING CARE TO ADULTS WITH ADVANCED CANCER. Gloria Juarez, RN, PhDc, and Betty Ferrell, PhD, City of Hope National Medical Center, Duarte, CA.

Hispanic family members embark on the care-giving journey from the perspective of Hispanic cultural values. These values and beliefs in family solidarity motivate them to provide the best care for their family member who has been diagnosed with cancer. However, these same values and potential language barriers often contribute to miscommunications in the healthcare delivery arena. Thus, Hispanic caregivers must face many culturally based issues in addition to the usual obstacles encountered by patients and families as they cope with the cancer experience. The purpose of this study was to describe the care-giving experience, cultural beliefs and practices, and perceptions of quality of life of Mexican/Mexican American family caregivers providing care to adults with advanced cancer. The sample included twenty Mexican/Mexican American family caregivers recruited from a cancer center in the western United States. An ethnographic approach was to gain insight into the care-giving experience and QOL of Mexican/Mexican American caregivers. A demographic instrument and an acculturation scale were also administered. The researcher seeks to understand the cultural perspective of the caregivers using participant observation recorded in written notes and tape-recorded interviews. Qualitative content analysis was used to analyze the data obtained from the interviews. Statements reflecting the care-giving experience and quality of life were then evaluated. The participants were consulted for validation of the final description of their experiences and perceptions. Descriptive statistics were used to analyze quantitative data. The results suggests that cultural background, family beliefs and support, religion, and language contribute significantly to the care-giving experience and the meaning of quality of life of Mexican/Mexican-American caregivers. Specific needs were also identified such as Spanish educational literature, more competent Spanish interpreters, and caregiver education. Knowledge of the influence of culture on the meaning of QOL and the care-giving experience can enhance and expand the current knowledge base in nursing and ultimately lead to the construction and testing of nursing interventions with larger samples that will enable nurses to improve the QOL of Hispanic caregivers and patients.

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DEPRESSIVE SYMPTOMS IN A SAMPLE OF WOMEN PARTICIPATING IN AN OVARIAN CANCER EARLY DETECTION PROGRAM. Jennifer O'Rourke, RN, MS, NP, Northwestern Memorial Hospital National Ovarian Cancer Early Detection Program, Chicago, IL; Lisa Sharp, PhD, and Nina Uziel-Miller, PhD, Northwestern University Medical School, Chicago, IL; and Cheryl O'Toole, MSW, Northwestern University, Chicago, IL.

Several studies have explored the psychological impact of genetic counseling or testing in women with family histories of breast or ovarian cancer. The most common constructs measured include cancer-related worry, cancer-related distress, state anxiety and trait anxiety, along with perceived risk. Results have most frequently shown that worry, distress, and state anxiety are high prior to counseling or testing regardless of risk level. Less is known about depressive symptoms associated with the process of genetic counseling and testing. The goal of this study was to assess symptoms of depression in women participating in an ovarian cancer early detection program.

Study participants included 368 women, 83% return patients and 18% new patients. Women ranged in age from 23 to 81 (mean = 47), were predominantly Caucasian, married, and of middle socioeconomic status. The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was utilized to assess depressive symptomatology prior to their clinic visit. A sub-sample of 82 women completed a second CES-D 1 month following the visit.

Overall scores on the measure prior to the visit demonstrated low levels of depression (mean = 9.1; SD = 9.3). However, 20% (72/368) of the sample demonstrated clinically significant elevations on the CES-D prior to the visit. A paired samples t- test of the CES-D scores on the sub-sample of 82 failed to reach significance, although depression scores did decrease following the visit. Prior to the visit, 16% reported clinically significant depression symptoms. One month later, 8% had dropped below the critical value.

These results suggest as many as 1 in 5 women may experience situational depressive symptoms associated with an ovarian screening visit. While the symptoms spontaneously resolve for most women after the health threat has passed, a few experience continued symptoms. These are likely to be a mix of women with depressive disorders and/or women in need of additional medical work-up for suspicious findings. Increased efforts should be made to assess for depressive symptomatology among these patients and more integrated services should be provided to address these women's psychological as well as medical health care needs.

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CAUSAL ATTRIBUTIONS OF WOMEN WITH OVARIAN CANCER. Heidi Donovan, MS, RN, Doctoral Candidate, University of Wisconsin School of Nursing, Madison, WI; and Sandra Ward, PhD, RN, FAAN, and Mary Blattner, Student, University of Wisconsin, Madison, WI.

Background: Approximately 24,000 women are diagnosed with ovarian cancer each year. In 5%–10% of cases, there is a clear hereditary cause associated with a BRCA1 or BRCA2 mutation. For the remainder, no cause can be determined. Studies have shown that individuals identify causal attributions for their health problems even in the absence of scientific explanation. The purpose of this secondary analysis is to describe the causal attributions of women with ovarian cancer and to determine the association between causal attributions and quality of life.

Methods: 723 members of the National Ovarian Cancer Coalition with a diagnosis of ovarian cancer completed the illness perception questionnaire (IPQ), a valid and reliable instrument that assesses illness beliefs. This reports focuses on the causal attribution subscale of the IPQ, which includes 18 potential causes of illness. Subjects are asked to indicate on a scale of 0 (strongly disagree) to 4 (strongly agree) how much they believe each was a cause of ovarian cancer. In addition, individuals rank the three most important factors they believe caused their cancer.

Results: Women were most likely to believe that stress or worry, pollution in the environment, and hereditary factors were causes of their cancer, with mean (SD) scores of 2.22 (1.365), 2.11 (1.190), and 2.00 (1.47), respectively. These three factors were also most commonly cited as the most important factors causing women's ovarian cancer (n = 270, 182, 280, respectively). However, these commonly cited factors were not associated with quality-of-life outcomes. In contrast, less common causal attributions such as "my emotional state" (r = -.22), "my mental attitude" (r = -.19), and "my personality" (r = -.16) were significantly associated ($p < .01$) with lower quality-of-life scores as measured by the Life Satisfaction Questionnaire.

Conclusions and Implications: Some women have attributions for their cancer that are associated with lower quality of life. Some of these attributions may reflect women blaming themselves for the development of their cancer. Nurses can play a role in educating patients on the known risk factors for ovarian cancer and the lack of scientific evidence to support a link between emotions, personality, and the development of cancer.

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FACTORS THAT INFLUENCE QUALITY OF LIFE, HOPE, AND SYMPTOM DISTRESS IN BREAST AND COLORECTAL CANCER PATIENTS. Jean Boucher, PhD, RN, CS, ANP, ACNP, University of Massachusetts Graduate School of Nursing, Worcester, MA.

Nursing interventions that improve patient care for cancer patients and guide delivery of healthcare services are important to maximize positive patient outcomes. Hope is significant to cancer patients in their struggle to find meaning and deal with the impact of their disease and treatment within their lives. Chemotherapy treatment for breast and colorectal cancer patients involves management of symptom distress having a major impact on cancer patients' physiological and psychological well-being. As a result, hope and symptom distress both influence quality-of-life outcomes in cancer patients.

A pilot study is currently being implemented to identify pertinent information regarding hope, symptom distress, and quality of life in breast and colorectal cancer patients undergoing chemotherapy treatment. The purpose of this study is to conduct a qualitative needs assessment of patient and provider experiences and perceptions. The overall aim of this study is to describe specific factors that influence breast and colorectal cancer patients' ability to cope by using self-management behaviors during chemotherapy treatment.

Breast and colorectal cancer patients will participate in key informant interviews to include twenty patients at four set points of time during chemotherapy treatment. A focus group of 8–10 oncology nurses providing care to these patients will also be interviewed.

Identification of themes regarding potential nursing strategies related to symptom distress and hope, that influence quality of life and impact heath outcomes, will be used for the design and feasibility of target interventions. Such strategies will then be tested as a nursing intervention in a future larger study with these patients.

Transcribed interviews will be analyzed for content based on qualitative analysis methods. Instruments regarding quality of life, hope, and symptom distress with proven reliability will also be test piloted with key informants to measure these study variables for feasibility and acceptability with this patient population.

The goal is to complete this study including identifying themes and findings from the qualitative analysis and instrument measurement for presentation by Spring 2003.

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WHAT IT TAKES TO MAKE COOPERATIVE CARE WORK. June Eilers, PhD, APRN, BC, and Beth Kimpson, RN, BSN, Nebraska Health System, Omaha, NE; Judith Heermann, PhD, RN, Nebraska Health System and University of Nebraska College of Nursing, Omaha, NE; Margaret Wilson, PhD, RN, University of Nebraska College of Nursing, Omaha, NE; and Sue Knutson, RN, BSN, Nebraska Health System, Omaha, NE.

Significance: Responsibility for significant aspects of cancer care has shifted to lay caregivers. Cooperative care (CC) is an example of an alternative acute care model being utilized. CC is based on a partnership between a patient/lay caregiver dyad and healthcare professionals. Lay caregivers deliver direct care, but nurses in such settings remain responsible for outcomes of care. Preparation of the patient/caregiver dyad to assume care responsibility is a key nursing intervention. Patients and caregivers cannot be permitted to experience the consequences of inadequate or inappropriate care giving. Thus, identification of independent nursing activities, which aim to improve outcomes, is critical to nursing's ability to evaluate interventions designed to educate/prepare the lay caregivers.

Purpose: To articulate the nature of independent nursing activities in CC. The aim was to describe the activities and how nurses determine lay care partner's need for assistance.

Framework: The nursing process. Nursing is defined as having two types of functions: independent and interdependent activities.

This study focuses on the independent activities.

Method: Qualitative study. Audiotaped focus groups were conducted with the 9 CC nurses as expert informants.

Data Analysis: Focus group transcripts were reviewed for accuracy and analyzed by the research team using Spradleys domain analysis technique. Qualitative research strategies, including searching for negative evidence, maintaining an audit trail, and member checks insured rigor of the analysis.

Findings: Among the independent activities identified were teaching, reinforcing, coaching, directing, supporting, translating medical information, and reassuring. Themes revealed nurses learned to make CC work by using a phased approach based on the clinical progression of the patient/caregiver dyad. They practice an integrated process of recognition of triggers and initiation of concomitant activities aimed at building the dyad's sense of confidence.

Implications: Articulation and quantification of independent nursing activities are critical to nursing in the clinical setting. An instrument to measure independent nursing activities in CC is being developed in the program of research that includes this study.

The instrument will aid nursing in communicating CC nursing to others and facilitate the evaluation of research-based interventions.

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INCREASING TESTICULAR SELF-EXAMINATION IN ACTIVE DUTY SOLDIERS: AN INTERVENTION STUDY. Carlton Brown, RN, MSN, AOCN®, Walter Reed Army Medical Center, Washington, DC.

Introduction: Critical for military mission readiness, health maintenance includes not only prevention, but also early detection of disease. Eighty percent of active duty (AD) male soldiers fall within the highest age risk category for testicular cancer (TC), a potentially fatal disease. TC is the most common malignancy in males between the ages of 18 to 35. With early detection, TC is highly curable. However, a Department of Defense survey revealed that only 33% of AD males practiced monthly testicular self-exam (TSE). The devastating consequences of late stage treatment makes TSE a potentially life-saving practice.

Purpose/Aims: The purpose of this study was to determine which of two educational interventions, based on the Health Belief Model, is the most effective in increasing soldiers' self-reported practice of monthly TSE. This study aims to: 1) Assess the knowledge of and beliefs about TC and TSE, 2) Identify the proportion of soldiers who practice monthly TSE, 3) Evaluate the impact of printed versus peer-taught video educational materials on knowledge of and beliefs about TC and TSE and monthly TSE performance, and 4) Determine which intervention is most effective in increasing monthly TSE performance.

Design: This study is a quasi-experimental, three-group comparison, pre-test/post-test design.

Sample: The sample consisted of AD soldiers assigned to one of three military units (150 soldiers in each). Each group will be randomly assigned one of the following interventions: 1) TC/TSE written pamphlet and shower card, 2) 12-minute peer-taught video featuring TC soldier/survivors and shower card, and 3) 12-minute sports injury prevention lecture (control group; no TC/TSE content).

Methods: A survey, based on Blesch's (1986) TC/TSE Health Belief Questionnaire (HBQ), will measure TC/TSE knowledge and self-care practices pre- and three months post-intervention.

Data Analysis: Descriptive and inferential statistics will be used. A 3 X 2 Chi Square analysis with planned comparisons will identify which intervention is the most effective. Repeated measures ANOVA with post hocs will assess differences between pre- and post-test subscales of the TC/TSE HBQ for all three groups.

Findings: Final analysis will be completed in late September 2002.

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PSYCHOMETRIC PROPERTIES OF THE ITALIAN VERSION OF THE BRIEF FATIGUE INVENTORY. Carol Bell, RN, BSN, and Lucia Del Mastro, MD, Istituto Nazionale per la Ricerca sul Cancro, Genoa, Italy; Marchetti Monia, MD, Laboratorio Infomatica Medica, IRCCS Policlinico S. Matteo, Pavia, Italy; Jane Bryce, RN, BSN, MSN, Department of Surgical Oncology, Naples, Italy; and Massimo Costantini, MD, Unit of Clinical Epidemiology and Trials, National Cancer Institute, Genoa, Italy.

Although fatigue occurs in nearly 60%–80% of cancer patients, a simple standard tool does not exist in Italian to measure it. Currently available instruments measuring fatigue may be time consuming and overly complex for patients. The Brief Fatigue Inventory (BFI) (Mendoza et al.), a 9-item self-administered questionnaire developed for rapid assessment of fatigue, was translated from English into Italian using the standard forward-backward procedure.

The psychometric properties of the Italian BFI were evaluated in a study enrolling a series of adult hospitalized and ambulatory care cancer patients from 3 Italian medical institutions: The National Cancer Institutes of Genoa and Naples and the S. Matteo Polyclinic of Pavia. The BFI was proposed to the patients together with the Medical Outcome Study Quality of Life Short Form (SF 36). Research staff collected patient information including disease status and treatment.

The study enrolled 163 patients (82 outpatients, 63 in ambulatory chemotherapy centers, and 18 inpatients). The Italian BFI was shown to be internally stable: factor analysis identified a single underlying construct among the nine items, explaining 74% of the variability in the data. Cronbach's coefficient alpha for these items was 0.96. Concurrent validity was established by showing good correlations with the fatigue subscale of the SF 36 ($r = -0.71$), higher than with the other subscales of the SF 36 (r ranged between –0.49 and –0.61). Discriminate validity was examined by comparing mean BFI scores among patients with different performance status (ECOG 0, 1, and 2–4). The BFI mean scores significantly ($p < 0.001$) increased as ECOG increased (mean + SD for ECOG 0 = 2.7 + 2.6; for ECOG 2–4 = 6.0 + 2.8).

We plan to include other patients from a fourth institution to allow a complete evaluation of the psychometric properties of the Italian BFI. These preliminary data support the Italian BFI as a reliable and valid instrument for rapid assessment of fatigue among Italian-speaking cancer patients. This study could be useful in cross cultural and international studies evaluating cancer-related fatigue and interventions designed to reduce its burden.

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THE DERMATOLOGY LIFE QUALITY INDEX: A USEFUL MEASURE FOR INDIVIDUALS WITH RADIATION SKIN REACTIONS IN SCOTTISH CANCER CENTRES.

Sheila MacBride, MN, BSc, RGN, NDN, Onc Ce, Edinburgh Cancer Centre, Scotland, United Kingdom.

Purpose: The impact of radiation skin reactions on quality of life is poorly researched, yet such reactions appear to cause much distress for individuals undergoing radical radiotherapy.

The aim of this study is to ascertain the impact of radiation skin reactions on quality of life for individuals with cancer. The study also tested the DLQI for its utility and sensitivity with individuals in this care setting.

The DLQI was developed by Finlay & Khan (1994) as a simple practical questionnaire for routine clinical use in individuals with skin diseases. The 10-item questionnaire measures quality of life in six sub-categories: symptoms and feelings, daily activities, leisure, work/school, personal relationships, and treatment. Development and reliability testing included individuals with a wide variety of non-malignant chronic skin conditions and a small number with basal cell carcinoma.

Method: This research is part of a randomized, controlled clinical trial—the Radiation Oncology Skin Evaluation Study, funded by the Chief Scientists Office within the Scottish Executive for two years ending October 2002. 360 individuals, from two Scottish Cancer Centers, undergoing radical radiotherapy to the breast, head & neck, and anorectal regions have been recruited. The study compares the effectiveness of two initial treatments versus no treatment in reducing frequency and severity of erythematous reactions. For those who develop a moist desquamation, two wound-dressing products will be compared with the outcome measure "time to healing." Measures employed include the EORTC/RTOG scale, erythema meter, the DLQI, a weekly diary card designed to assess distress, and a record of additional financial costs.

The DLQI was administered at baseline, then at weekly intervals throughout radiotherapy and for two weeks after, unless moist desquamation was identified where it would continue to be administered weekly until skin healing was complete.

Results: Interim analysis suggests that data quality is good, and that the study is of adequate size to detect statistically significant differences between the treatments. Final results will be presented, demonstrating the performance of the DLQI in comparison with other measures used in the study. The results from this study will provide information about the extent of the problem for individuals. In addition, the study will test the sensitivity of a measure, which may have direct clinical applicability.

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MINI MENTAL STATUS EXAMINATION SCORES AS ELIGIBILITY CRITERIA FOR PATIENTS WITH PRIMARY BRAIN TUMORS ENTERING CLINICAL TRIALS.

Pendleton Powers, RN, BSN, OCN®, Johns Hopkins University, Baltimore, MD.

A standard eligibility criteria for patients entering clinical trial is that patients must be able to give informed consent. Obtaining informed consent is a process that depends on the patient's ability to understand the proposed trial, its potential risks, benefits, and requirements, as well as alternative treatment options. This process is more difficult if the patient is cognitively impaired.

New Approaches to Brain Tumor Therapy (NABTT) CNS Consortium conducts phase I/II clinical trials for patients with CNS malignancies. Even though it is not a formal eligibility criterion, Mini Mental Status Exam (MMSE) scores are obtained on all patients entering NABTT trials. This is a reliable standardized tool used to measure mental status that has been studied as a predictor of comprehension in other settings. The MMSE scores of 504 patients with brain tumors entering NABTT trials were retrospectively reviewed. Although 83% of the patients had scores that were > 25 out of a possible 30, 6.5% of patients had scores that were less than 18, which is usually considered indicative of severe cognitive impairment. A subsequent retrospective review of the eligibility criteria for the 79 brain tumor protocols listed on the NCI website revealed that none of these protocols required MMSE or any other quantitative measure of mental status to be enrolled in a research study. The presence of a low MMSE score indicates a potential area of concern for the patient's ability to give informed consent. The addition of an objective measurement of patient's mental capacity would help ensure that appropriate patients are being entered into clinical trials. NABTT will include a MMSE of > 15 as an additional eligibility criterion for patients to join a protocol. The score of 15, rather than 18, was selected because of the motor deficits that prevent some patients from performing all parts of the exam. It is believed that this will provide an additional measure of the patient's ability to give informed consent. Use of the MMSE as eligibility criteria for clinical trials is generalizable to other studies and an asset in assuring patient knowledge and understanding of treatment.

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COMPREHENSIVE SCREENING AND MANAGEMENT OF DISTRESS.

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Physical, emotional, social, or spiritual distress can adversely affect one's quality of life, immune response, and well-being.

Distress often goes unrecognized, and therefore untreated, in patients with cancer. The barriers to rapid identification and referral for intervention by the appropriate discipline are multifactorial. Recommendations have been made that individual institutions create multidisciplinary teams to develop methods for rapidly identifying distress, and algorithms that will trigger referral for the appropriate intervention. The purposes of this performance improvement study were to evaluate the ease of use of a distress screening and triage tool; evaluate the level and common causes of distress experienced by patients with cancer, and to evaluate current resource utilization and explore gaps in services. The concept "distress" as introduced by Dr. Jimmie Holland and adopted by the National Comprehensive Cancer Network in the Distress Management Guidelines 2001 served as the framework for this study. A two-phase performance improvement pilot was conducted over a period of two months in an inpatient and outpatient oncology setting. A voluntary questionnaire was administered to 56 patients evaluating their current level of distress and cause of distress. Results showed that 42% of patients experienced significant distress. The most prevalent causes of distress were related to fatigue, pain, anxiety, financial concerns, lack of spiritual direction, and/or lack of social support. The findings support the need for continued education regarding the recognition and management of distress, as well as effective symptom management strategies to ease patient/family distress. Further research is needed to explore symptom clusters which cause distress, effective interventional strategies for lessening or eliminating distressing symptoms, and outcomes/quality-of-life analysis regarding the efficacy of effective multidisciplinary symptom management on a cancer patient's life experience.

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THE CHALLENGE OF DEFINING THE COMPLEX ROLE OF THE CLINICAL RESEARCH NURSE.

Anthony Delacruz, RN, OCN®, BSN, MS, MBA, Colleen Lyons, RN, BSN, Tracy Curley, RN, OCN®, Diane DeSantis, RN, OCN®, and Ann Culkin, RN, OCN®, Memorial Sloan-Kettering Cancer Center, New York, NY.

The role of the clinical research nurse (CRN) is evolving and becoming more complex as novel strategies for treatment and new therapies emerge. Therefore, it is crucial to define the specific responsibilities for nurses working in these roles. As a result of an ongoing collaboration among CRNs at this NCI-designated comprehensive cancer center, a need was identified to standardize and update the job description of the CRN to ensure that the diversity and complexity of their role was properly reflected.

CRNs are assigned to disease management teams that focus on specific cancer sites. Representative CRNs from disease management teams, in collaboration with nursing administration, reviewed the current job descriptions and conducted a review of the literature. It was discovered that the job descriptions were outdated and did not accurately reflect the role of the CRN that has evolved through the years. The literature review provided limited information and supported the need to proceed. Brainstorming sessions identifying and categorizing current practices led to the recognition of six key responsibilities, 1) patient accrual, 2) patient care, 3) patient education, 4) coordination of care, 5) data management and maintenance of records, and 6) clinical and administrative leadership. Clear, specific, and measurable performance expectations for each responsibility were developed. These expectations describe the tasks, skills, and competencies needed by nurses in these roles. Setting expectations provides a framework for evaluating performance and enhances communication. A draft document was circulated to all CRNs and to the nursing leadership at the institution. Feedback was incorporated into the final document. Use of this job description will facilitate the orientation of new CRNs, define the competencies needed by CRNs, and enable CRNs to have a clear understanding of expected behaviors and enable management to provide meaningful feedback to improve overall job performance.

The collaboration of clinical experts and nursing leadership has led to a job description that has been enthusiastically accepted by CRNs at this institution. This presentation will detail the collaborative process that was followed, describe both the responsibilities and performance expectations, and discuss the implications for CRNs and administrators in other practice settings.

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A CROSS-CULTURAL SURVEY (ONCOLOGY NURSING SOCIETY, EUROPEAN ONCOLOGY NURSING SOCIETY, AND MULTINATIONAL ASSOCIATION OF

SUPPORTIVE CARE IN CANCER): PERCEPTION OF WORKLOAD, TIME CONSTRAINTS, AND IMPLICATIONS FOR OPTIMIZING ANTIEMETIC TREATMENT. Judith Johnson, MPH, PhD, RN, FAN, HealthQuest, Minneapolis, MN; Sussanne Borjeson, RN, Institute of Medicine, Linköping, Sweden; and Cindy Rittenberg, MSN, RN, Rittenberg Oncology Consulting, New Orleans, LA.

A convenience sample of 390 oncology nurses, attending 2002 meetings of ONS (n = 240), EONS (n = 60), and MASCC (n = 90), were invited to complete a 10-question survey. The purpose of the survey was to query nurses about their workload and time constraints (particularly given the current global nurse shortage), and gauge their views of antiemetic therapy. Nurses worked 38 hours or more per week with the majority of their work spent on basic patient care/counseling (mean = 44.1%) followed by paperwork (mean = 28%) and administering medications (mean = 20%). All reported needing to spend 45–60 minutes counseling a patient, when in reality they were spending an average of 30 minutes. Other tasks they were unable to perform due to time pressures included paperwork and training. Differences were noted in time nurses spent preparing and administering medication. All reported taking longer to prepare a 15-minute infusion than a 30-second injection (EONS 9.1, ONS 7.7, and MASCC 6.7 minutes longer), and longer still to prepare a 30-minute infusion (EONS 12.3, ONS 8, and MASCC 6.2 minutes longer). For all surveyed nurses, use of medications that have quick and simple administration regimens could save valuable nursing time. Previous studies (Morrow, 1998; Osoba, 1997) have reported that chemotherapy- or radiotherapy-induced nausea and vomiting (N/V) significantly impact patients' quality of life (QoL) and future treatment compliance. Using a 7-point Likert scale (1 = no impact, 7 = impacts very badly), the majority of nurses ranked N/V at points 5–7 in affecting patients' QoL, at 3–4 (EONS group), and 4–6 (ONS/MASCC groups) for impact on compliance with future treatment. The nurses also rated four factors affecting successful antiemetic therapy. Lack of 24-hour control was ranked number 1, followed by side effects of antiemetics, drug interactions, and dosing regimen. Overall, 24-hour control is an important factor in that administering additional rescue doses adds to nurse time and workload as does unexpected and unnecessary adverse events. Administration of antiemetics with good 24-hour control, good safety, and tolerability, and a straightforward dosing regimen could help conserve patients' QoL, improve their compliance to treatment, and also decrease nurses' workload and save them time.

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PILOT TEST OF A SLEEP INTERVENTION FOR CAREGIVERS OF PEOPLE WITH CANCER. Patricia Carter, PhD, RN, CNS, University of Texas at Austin, School of Nursing, Austin, TX.

Problem/Purpose: Caregivers report levels of depression that impact daily functioning, quality of life, and ability to continue care giving. Depression is a normal response to a family member's diagnosis with cancer; however, other factors amenable to intervention may severely exacerbate depressive symptoms. This pilot study explored the feasibility of a behavioral intervention to improve sleep quality and decrease depressive symptoms in caregivers of persons with advanced stage cancer.

Framework: Care giving is a complex bio-psycho-social process whose outcomes are dependent upon individuals' perceptions of their experience as well as appraisal of their ability to meet the demands presented by care giving. This study used the stress and coping framework of Lazarus and Folkman (1984).

Methods: An experimental repeated measures design was used. Recruitment occurred at outpatient oncology centers. Data was collected in caregivers' homes. Inclusion criteria were > 18 years of age, co-residing with a cancer patient receiving treatment, fluent in English, and freely consenting. Caregivers were excluded if they were diagnosed with sleep and/or psychological disorders. Following consent, caregivers were randomized to waitlist control and intervention groups. Sleep (PSQI) and depression (CESD) measures were taken at weeks 1, 3, & 5. All caregivers wore the Actigraph for 72 hours at weeks 1, 3, & 5. The intervention was given at weeks 2 and 4. Twelve caregivers have completed the study (target sample = 30).

Findings/Implications: Participants were 50% female, 75% Caucasian, and 25% African American, with a mean age of 50 years; primarily spouses (67%), others were adult children (8%) and partners (17%). While sleep and depression improved across groups, the intervention group showed significant improvement over the waitlist controls (PSQI $p < 0.04$ & CESD $p < 0.05$). Caregivers reported that the intervention procedures were easily followed and helpful. These preliminary data suggest the feasibility of the sleep intervention and of the measurement methods chosen.

Implications for Practice: Oncology nurses provide support, education, and resource information to patients and families. This research provides preliminary information about the feasibility of a sleep intervention that, in the future, may be used by oncology nurses to promote physical and emotional health in their caregiver population.

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NONRESPONSE BIAS: AN ANALYSIS OF DATA FROM A STUDY OF THE ECONOMIC CONSEQUENCES OF CANCER SURVIVORSHIP. Margaret Davitt, MSN, CRNP, and Rosemary Polomano, PhD, RN, FAAN, Penn State Milton S. Hershey Medical Center, Hershey, PA; and Pamela Short, PhD, College of Human Health and Development, Penn State University, University Park, PA.

Non-participation bias, referred to as non-response bias or non-response error, involves recruitment of samples with preferential selection of subjects that can potentially jeopardize the interpretation of results from survey research because samples do not adequately reflect the population. In a multisite study of cancer survivors, "The Economic Consequences of Cancer Survival" (PI - Short, 1998), non-participation bias is analyzed to elucidate the characteristics of non-responders. One thousand eligible subjects (cancer diagnosis 1 to 5 years prior, < stage IV for solid tumors, age 25 to 60 years) were identified through tumor registries from 4 sites, contacted by mail to participate, and interviewed by phone, if consented, to determine the impact of cancer on economic state. We tested the hypotheses that variations in responder characteristics (N = 318; response rate 29%) for age, gender, marital status, type and stage of cancer, and ability to acknowledge a prior diagnosis of cancer were not statistically different from those declining participation (N = 777). No differences were found between age groups of responders and non-responders, except for a higher percentage of non-responders were age 55–62 years (Chi-square, $p < 0.05$). Using student t-tests for independent samples, statistical equivalence was established between male responders (36.5%) and non-responders (41.1%), and female responders (63.5%) and non-responders (58.8%). An analysis of gender by marital status showed a higher (Chi-square, $p < 0.05$) percentage of unmarried males (10.3%) did not participate compared to unmarried males who participated (6.3%). For women with breast cancer, greater numbers participated than those who did not. Of those with unknown cancer staging, a higher percentage ($p < 0.05$) was in the non-responder group (6.1%) compared to responders (3.1%). Chi-square analysis identified overall statistically significant difference in participation ($p < 0.01$). Based on the results, disparities in sample characteristics between survey responders and non-responders were evident. Persons of older age, 55–2 years, were more likely to decline participation, which may reflect a lower level of interest and perceived importance of economic-related issues. Investigators must identify barriers to survey participation and risks for non-participation. Strategies can be employed to optimize participation of eligible participants and statistical adjustments can be performed to control for non-participation bias.

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INFORMATIONAL NEEDS OF KOREAN PATIENTS RECEIVING CHEMOTHERAPY. Eun-Hyun Lee, PhD, RN, and Jin-Hyuk Choi, MD, PhD, Ajou University, Suwon, Korea.

In a threatening situation, people need information to better understand what is happening and to formulate realistic expectations about the situation. Cancer and its treatments are usually perceived for patients as a threatening situation. However, it has been rarely studied what kinds of information Korean patients with cancer want. Thus, the purpose of this study was to assess the informational needs of Korean patients receiving chemotherapy.

A cross-sectional, descriptive design was used to assess the information needs. Participates were recruited from a university hospital in South Korea. The sample consisted of 125 Korean patients receiving chemotherapy for stomach, lung, or breast cancer. To assess the information needs, the Information Needs Scale for Korean Patients Undergoing Chemotherapy (INS-C) was used. The instrument consists of six domains. Each item has 5-point Likert scale from 1 (do not want to know) to 5 (want to know very much). From a factor analysis, six domains were derived significantly: Side effect and investigative test (9 items), spread of disease (4 items), financial cost (2 items), treatment (7 items), activity and diet (6 items), and interrelationship and support (5 items). The Cronbach's alpha of the total INS-C was .95, and the alphas of the domain ranged from .77 to .91. The INS-C was distributed to the patients who wished to participate, and completed at a small room while waiting for the administration of chemotherapy. Data were analyzed using SPSS. The highest mean score of the domains was spread disease (M = 4.06, SD = .79), followed by treatment (M = 3.99, SD = .69), side effect and investigative test (M = 3.94, SD = .64), activity and diet (M = 3.85, SD = .71), financial cost (M = 3.83, SD = .87), and interrelationship and support (M = 3.28, SD = .77). Age was negatively correlated with the domain of the spread of disease (r = -.18). The mean score of the financial cost was significantly higher in the patient group with metastasized cancer than those with non-metastasized cancer (t = 2.26, p = .026). There were no differences in total and domain scores between marital status, education, income, and type of cancer.

The results revealed that Korean cancer patients had high informational needs over all domains. Younger patients with cancer had greater need for information than older women. Patients with metastasized cancer had greater need for the information on financial cost for their treatment than with non-metastasized cancer. Healthcare providers should give information related to cancer and its treatment considering of the age and metastasis of patients.

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THE LONGITUDINAL EFFECTS OF CANCER TREATMENT ON SEXUALITY IN INDIVIDUALS WITH LUNG CANCER.

Judith Shell, RN, PhD, AOCN®, Osceola Cancer Center, Kissimmee, FL.

All cancers have potential to diminish sexual functioning. The purpose of this study was to examine changes in sexual functioning during treatment (chemotherapy only; chemotherapy and radiation therapy) for lung cancer. The extent to which age, gender, social support, and mood status affects sexual function was also identified.

Bronfenbrenner's ecosystemic model and Masters, Johnson, and Kolodny's vector model of sexual desire served as the study's conceptual frameworks. Sexual functioning of lung cancer patients in the two treatment groups was measured pre-treatment, at 2 months, and 4 months. Fifty-nine of 84 eligible patients, primarily from an outpatient cancer center in the south, participated in this longitudinal survey study. Sexual functioning was measured by the Derogatis Interview for Sexual Function, Self-Report (DISF, SR), social support by the Social Provisions Scale, and mood status by the Derogatis Affects Balance Scale. The Bonferroni technique, based on student's t statistic analyzed changes in sexual function, social support, and mood status within the two groups between three points in time. Results indicated that sexual function decreased after treatment, particularly between time one and two (mean decrease, 4.35 points); this was not significant at $p = 0.05$ jointly. Between time one and two, there was a significant decrease ($p = .004$) in mood status. There was no significant change in perception of social support over the four months. Independent samples t test analyzed change in sexual function between the two groups and no significant change was realized. Pearson chi-square indicated correlation between the two treatments and cancer type (small cell; non small cell lung cancer) ($p = 0.001$). Multiple linear regression models analyzed the DISFR, SR raw score and each predictor variable (treatment, age, gender, social support, mood status). Age significantly affected sexual function at all three test points ($p = .000$, $p = .000$, $p = .030$, respectively). Gender at time one, and mood at time one and two significantly affected sexual function ($p = 0.05$). Social support did not significantly affect sexual function overall, however, it did significantly affect mood status ($p = 0.05$).

Findings revealed that patients' sexual function did worsen with treatment, and a decrease was also related to age, gender, and mood status.

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STABILITY AND VALIDITY OF THE PRIORITIES INDEX.

Geraldine Padilla, PhD, University of California, San Francisco, San Francisco, CA; Cynthia Chernecky, RN, PhD, Medical College of Georgia, Augusta, GA; Mary Cooley, RN, PhD, CRNP, Harvard School of Dental Medicine, Boston, MA; Linda Sarna, RN, DNSc, FAAN, and Leda Danao, RN, PhD, University of California, Los Angeles, Los Angeles, CA; and Jean Brown, RN, PhD, FAAN, University of Buffalo, State University of New York, Buffalo, NY.

Background: A key mediator in patient accommodation to life threatening illness is response shift—a change in internal standards, values, or conceptualizations to maintain/improve quality of life (QOL). Few measures of response shift exist other than the recall-based "then test."

Purpose: To test stability and validity of the priorities index (PI), a potential response shift measure was developed for this study and operationalized as a change in comparative values of QOL indicators.

Design and Methods: A multi-site study described the disease experience of 230 women with lung cancer. The 7-item PI measures perceived ability to control pain, fatigue, and difficulty breathing; good appetite; purpose in life; meaningful family/friends relationships; and ability to care for oneself. Patients rank items from most (1), to least (7) important. Reliability is based on PI stability (baseline - 3 months); validity is based on relationships with the quality of life scale-cancer, dyspnea index, and meaning of illness scales.

Results: On average, women were 65, high school graduates, with moderate incomes, and Caucasian (16% African American/"other"). Average time since diagnosis was 2 years, over 85% had no recurrence or metastasis. PI item stability was supported by findings from repeated measures covariance controlling the effects of demographic and disease factors. PI item rankings at baseline and 3 months were: caring for oneself 2.2, 2.3; meaningful relationships 2.6, 2.7; purpose in life 3.3, 3.1; able to control breathing 4.7, 4.5; fatigue 5.0, 4.9; pain 5.1, 5.0; and appetite 5.6, 5.7. Significant correlations between PI item rankings and like items on the QOL-CA and dyspnea scales supported criterion-related concurrent validity for meaningful relationships, control over breathing, fatigue, pain, and appetite. Wilcoxon signed rank tests supported contrasting groups construct validity for groupings based on comorbidity (0 versus > 1 comorbidities) and meaning of illness (positive versus negative). Both groupings yielded significantly different distributions of ranks.

Conclusion: Caring for oneself was the highest ranked PI QOL indicator. Controlling demographic and disease factors, the measure yielded stable rankings; and differentiated between groups expected to show different patterns of priorities. Next, the PI should be tested when a response shift is expected.

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APPLIED RESEARCH TRAINING SEMINAR: A MENTORING PROGRAM FOR NURSES.

Terry Throckmorton, PhD, RN, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Developing and implementing a research protocol (study) can be a very daunting first time experience. Nurses working in direct patient care, either as clinicians or research nurses, often identify excellent research topics, but lack the expertise to write a formal study. Assisting them to develop their ideas into research studies and to use the results to change practice is more easily accomplished in a structured mentoring program.

Several years ago, the applied research training seminar was developed. Ten nurses each developed and implemented a protocol.

Example topics were pressure ulcer development in the OR, caregiver needs, and use of admission acuity scores to predict outcome in the ICU. The course has been successfully taught three times since then and is currently in progress.

Classes are designed to provide structure, information, and guidance in the development of independent research protocols, taking them from defining a topic to completing and presenting the research. University faculty and in-house doctoral prepared staff teach the classes and serve as mentors throughout the process. A biostatistical consultant is added to each study as a collaborator.

Participation in the program addresses the research criteria in the institutional professional development model. The course is also approved for continuing education credit.

The goals of the program are to develop clinical nurse researchers, increase the number of nursing research protocols through a monitored experience, and to begin to initiate grant requests to fund the research. This year, there are ten nurses enrolled. These students have selected topics, obtained approvals from immediate supervisors, and identified potential funding sources.

The purpose of this presentation is to describe the applied research training seminar, the principles underlying its success, adjustments that have been made to accommodate changes in the environment and the student, and the studies that have been completed. It will also include an overview of the content and the structure provided for processing the protocols through the approval process.

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DEVELOPING A PROFESSIONAL ABSTRACT: A TEAM APPROACH.

Mamie Gatlin, Carrie Micheletti, Venice McDougle, and Terry Throckmorton, RN, PhD, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Many nurses would like to submit abstracts to professional associations for presentations but either feel overwhelmed by or lack the skills or resources to complete the process. The whole process of producing a well-written abstract, submitting that abstract, and then developing the subsequent poster and/or presentation requires the use of many resources. Nurses can form a team by identifying and/or finding resources either within or outside their institution to increase their chances of having an abstract accepted for presentation. Our institution is consistently on a mission to educate our nurses about the importance of using the resources available for writing, submitting, and presenting abstracts. To achieve this goal, we encouraged the nurses to write and submit abstracts as part of their professional development.

We designed an in-house program specifically to support the nurses with such resources as editorial, graphical, and statistical assistance; mentorship from other nurses who previously submitted abstracts; and informational sessions to identify other helpful resources available within the institution. In addition, an administrative team was formed to type their abstracts and submit them online, create charts and/or graphs, search the Internet for copyright-free graphics, and provide funding and travel assistance. In our presentation, we will provide a detailed description of our program and the role of our administrative support team and, more importantly, a format by which any nurse at any institution can develop a support team to utilize all resources available for optimal success. Over the last 3 years, the number of abstracts accepted for poster and podium presentation has increased by 40%, and our nurses have achieved personal and professional growth. We believe that by using our team approach, any nurse can become confident and skilled enough to submit a good abstract and make an informative presentation or poster.

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NEW NURSING STRATEGY TO IMPROVE PATIENT UNDERSTANDING OF INFORMED CONSENT FOR PHASE I CLINICAL TRIALS. Vilma Lopez, RN, MSN, OCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Research nurses need to take an active role in preparing patients for the informed consent process before it starts. The main roles of nurses during the consent process are those of patient educator and patient advocate. Nurses need to ensure that patients are adequately informed while keeping in mind their psychosocial issues at this difficult time. Patients' learning will allow them to make an informed decision. A large number of cancer patients participate in phase I trials which, because of uncertainty and risks, are more ethically challenging. Even though the informed consent process must follow federal guidelines and the institution's own regulatory procedures, patients still may not understand the document before they sign it. A recent study found that trial participants were not able to describe involvement of nurses during the consent process. We therefore designed a preparatory interview between the research nurse and the patient. Currently, nurses assess learning needs, allow time to read the consent form, and answer general questions about the protocol. The nurses will use the NCI list of questions to ask (2001) as a guide for reviewing the protocol. The number of patients who bring a list of questions to their subsequent interview with the investigator and their recognition of nurses' involvement in the consent process will measure the success of this intervention. Assessment of learning needs will dictate the way the consent process is individualized to the patient. We anticipate that patients will increase their understanding of the trial by preparing their own questions. By the end of the interview with the nurse, patients should be confident about their ability to ask relevant questions and their right to expect answers. Knowledge of the consent and the trial will transform patients into active participants and may decrease their anxiety. This educational process will enhance the teaching and advocacy roles of the nurse. Research nurses, in different settings, need to continuously review different approaches for patient education. We suggest collaborative nursing studies at other sites conducting phase I trials to determine efficacy of this intervention.

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RESPONSE TO ANTIOXIDANT SUPPLEMENTS DURING RADIOTHERAPY. Jean Brown, PhD, RN, FAAN, Peter Horvath, PhD, FACN, C, D/N, and Renee Melton, MS, RD, University of Buffalo, State University of New York, Buffalo, NY.

Use of antioxidant supplements by patients during radiotherapy (RT) is controversial. Opponents of antioxidants argue that they interfere with treatment by repairing cells the treatment is trying to destroy, whereas proponents argue beneficial net effects in that normal cells are repaired more quickly, minimizing side effects and maximizing recovery. The purpose of this study was to compare nutrition-related symptoms, weight change, tumor response, and quality of life in patients receiving RT who used antioxidant supplements with those who did not. A biopsychosocial framework grounded in the laws of energy balance conceptualized cancer-related weight change, its predictors, and its physiological, functional, social, and psychological outcomes. Using a prospective correlational design, data were collected over 10–12 weeks at the beginning, end, and 4–6 weeks after RT from 8 clinical sites. The convenience sample included 55 patients with non-small cell lung cancer; 65% were stages IIIB and IV. The mean age was 67.4 years (SD = 10.7), 38% were female, and 93% were White. The lung cancer symptom scale and the Rand Health Survey 1.0 were used to measure symptoms and quality of life. Both instruments have well-established reliability and validity. Weights were measured according to established methods using a standardized protocol, and tumor response was obtained from the post-RT medical records. Descriptive statistics, t-tests, and chi-square were used. 34.5% were taking antioxidant supplements during RT. The symptoms of anorexia and dysphagia were consistently less severe among those taking antioxidants across all measurement time points. In contrast, fatigue was greater in the antioxidant users at baseline and post-RT but less at the end of treatment. Weight change over time was less in the antioxidant users. 55.6% of antioxidant users had partial or complete tumor response versus 35.6% of non-users. Quality-of-life scores were higher for antioxidant users at baseline, but lower at end of treatment and post-RT. None of the differences was statistically significant indicating that the use of antioxidants during RT may have little or no effect on study outcomes. The major limitation was self-selection bias, and a randomized clinical trial is needed to eliminate this problem. (Funded by the ONS Foundation.)

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THE DEVELOPMENT AND TESTING OF THE ROLE-RELATED MEANING SCALE FOR STAFF IN PEDIATRIC ONCOLOGY. Brenda Steen, RN, Xin Tong, MPH, Associate Biostatistician, Elizabeth Burghen, MBA, MSN, Pamela Hinds, PhD, RN, CS, and Deo Kumar Srivastava, PhD, Associate Member, St. Jude Children's Research Hospital, Memphis, TN.

Nurses frequently choose a professional role and remain in it for reasons related to role meaning. When nurses experience role-related meaning, they report higher job satisfaction and lower intent to leave a position. Interventions to foster nurse's role-related meaning and methods to measure this form of meaning are needed in pediatric oncology. The study framework was the modified stress-response sequence model. The design was a two-phase instrumentation study; Phase 1 was item generation, content validation, and initial field testing, the latter involving 23 nurses in two cancer centers. Phase 2 was instrument and testing involving 89 nurses in one pediatric research center. The main research variables were role-related meaning, group cohesion, organizational commitment, work satisfaction, and intent to leave.

Findings: Phase 1: A ceiling effect in item ratings and three overlapping items were noted, which resulted in a revision of the RRMS. Phase 2: Cronbach's alpha for the total role-related meaning scale was 0.83; four of the five hypothesized relationships with the RRMS and other study variables were supported at the significance level of 0.04 and higher. These findings allow us to conclude that the RRMS is internally consistent and has content validity and beginning construct validity. Next, the ability of the RRMS to adequately measure change in meaning as the result of interventions designed to increase role-related meaning needs to be assessed in a future study.

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PEDIATRIC END-OF-LIFE NURSING EDUCATION. Margarita Perez Machovec, RN, BSN, Betty Ferrell, PhD, FAAN, and Rose Virani, RNC, MHA, OCN®, City of Hope National Medical Center, Duarte, CA.

In summer 2002, the Institute of Medicine released their report on pediatric palliative care titled "When Children Die: Improving Palliative and End-of-Life Care for Children and Their Families." This report called for improved professional education to address the care of children at the end of life and their families. There are approximately 400,000 children living every day in the United States with a chronic, life-threatening condition. Although there have been major medical advances in the treatment of these conditions, approximately 53,000 children die annually. The End-of-Life Nursing Education Consortium (ELNEC), a Robert Wood Johnson Foundation funded project, is a national educational curriculum to prepare nurses in EOL care. A version for pediatric end-of-life nursing education was adapted from the ELNEC curriculum to provide current education and extensive knowledge for nurses related to end-of-life care of children. The ELNEC investigators developed this curriculum with extensive input from 20 pediatric palliative care experts. The pediatric ELNEC curriculum focuses on nine core end-of-life areas: nursing care at EOL; pain management; symptom management; ethical/legal issues; cultural considerations; communication; grief, loss, and bereavement; preparation and care for the time of death; and achieving quality care at the EOL. This pilot curriculum was disseminated to 20 pediatric palliative care providers and educators in June 2002. Revisions and recommendations were made to the curriculum based on participant input. The revised curriculum focuses on ten end-of-life areas: introduction to pediatric palliative nursing, special considerations in pediatric palliative care, communication, ethics, culture, pain, symptoms, care at the time of death, grief, and achieving quality care at the end of life. The curriculum will be presented in a national training program in August 2003. This presentation will discuss educational strategies and key content for palliative care in pediatrics. With the dissemination of this national training, nurses can receive the special skills to provide care to children and their families at the end of life.

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LEADING WITH COMPASSION: THE EXPERIENCE OF STUDENTS AND TEACHERS CARING FOR ONCOLOGY PATIENTS. Sharon Eifried, PhD, RN, Towson University, Towson, MD.

The purpose of this poster is to share an interpretive phenomenological study that examines student-teacher dyads as they enter into a clinical experience that involves caring for patients who are hospitalized with cancer. Students are asked, "What is it like to care for suffering oncology patients?" and their teachers are asked, "What is it like to care for these students?" The results of the inquiry are grounded in the text of conversations and written narratives of the research participants. The interpretation reveals students' feelings of helplessness and a spiritual caring for oncology patients who are suffering. Teachers speak of "gut reactions" that are driven by compassion, but this study found that teachers usually do not tap into this knowledge that is founded in a spiritual way of knowing. This is a way of knowing that springs from compassion and spiritual heritage, and calls teachers and students to accept their own reality and that of others. The results of this study call teachers to design a pedagogy of compassion. The challenge is for teachers to foster a sense of compassion by partnering with students as they care for oncology patients. Spiritual knowing encourages the strengthening of bonds between teachers, students, and their patients. In the past, this was a forbidden way of caring; for the present and the future, it is a necessary way of caring. When learning to care for suffering oncology patients, students open themselves to situations that expose their vulnerability, and ways of knowing that assist them to understand an ineffable way of being. Leading with compassion is sometimes the only way of being that enables students to understand the inexplicable while caring for cancer patients and their families. This knowledge is applicable to the well-being of students, teachers, and oncology patients. What happens during the educational experience does make a difference in the care that oncology patients receive now and in the future.

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AFRICAN AMERICAN WOMEN COPING WITH BREAST CANCER: A QUALITATIVE ANALYSIS.

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Problem and Purpose: Breast cancer has been described as a physically and emotionally challenging disease for women and their family members. Coping strategies have been proven vital to the adaptation of breast cancer. Coping strategies utilized by African American women with breast cancer have not been systematically studied in the literature. Nurses must be aware of coping strategies utilized by African American women to promote culturally sensitive and culturally relevant health care. The purpose of this study was to determine how African American women cope with breast cancer.

Theoretical/Scientific Framework: The study was guided by the Roy Adaptation Model (1999). The Roy Adaptation Model (1999) described individuals as adaptive systems that were capable of responding to their changing environment through coping processes.

Methods: A descriptive/qualitative design was utilized to conduct this study. Sixty-six African American women within the southeastern United States participated in focus group interviews. The mean age of participants was 50.2 years old. Qualitative data were collected by tape-recorded interviews utilizing a semi-structured interview guide. A demographic data sheet was utilized to obtain information such as age, marital status, and length of diagnosis.

Data Analysis: Data were analyzed by content analysis and frequency distributions.

Findings and Implications: Coping strategies described by African American women included prayer, developing a positive attitude, avoiding negative people, having a will to live, and the use of social support from family, friends, and support groups. Many of the participants reported that they sought support groups that were geared toward African American women with breast cancer because some traditional support groups were not sensitive to their needs and concerns. There were participants that described their experience with breast cancer as a test of their faith and relationship with God. These findings supported the need for nurses to assess coping strategies utilized by African American women with breast cancer and develop culturally sensitive interventions to meet their needs and concerns. Future research is needed to determine the significance between coping strategies and spirituality among African American women with breast cancer.

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IMPACT OF AN INPATIENT ONCOLOGY NURSE PRACTITIONER ON SELECTED OUTCOMES IN AN ACADEMIC MEDICAL CENTER.

Joan Agretelis, PhD, RN, Jerry Younger, MD, Nancy Schaeffer, MSN, RN, Jacqueline Somerville, MS, RN, Jill Nelson, MSN, RN, and Carol Ghiloni, MSN, RN, Massachusetts General Hospital, Boston, MA.

As treatment of cancer evolves, most of patient treatment and symptom management has transitioned to the outpatient setting. Patients are admitted to the hospital largely with disease- or treatment-related complications or failures, acutely ill and requiring intense focus and intervention. These admissions are often an emotional crisis for the entire family unit. Disease-centered multidisciplinary teams were having difficulty balancing inpatient and outpatient volume while efficiently attending to the number of patients in their care.

In the spring of 2001, as part of a hospital-wide clinical performance management (CPM) process, the departments of oncology, medicine, and nursing piloted a new model of care delivery that involved the addition of inpatient nurse practitioners (NP) to the multidisciplinary team. The nurse practitioner was charged with creating a new clinical system for coordinating patient care across the continuum or episode of care. The inpatient oncology NP was expected to enhance the clinical team in the following ways: decrease length of stay (LOS), and transition back or to the next venue of care (i.e., managing transitions back to active treatment or to palliative care in the outpatient setting); improve patient/family and staff satisfaction; facilitate communication among the oncology team, including consulting services and other departments within or outside the institution; expedite documentation. The inpatient oncology NP was hired and began orientation in November of 2001. Overall, the project has received favorable reviews from patients and staff. This presentation will describe the administrative and practice aspects of the program, and provide insight into the project planning process. Outcome measures from the first year of the project will be presented. These measures include readmission rates, mortality rates, and LOS statistics with case mix index from the hospital database compared to the quarter prior to implementation, and professional satisfaction surveys.

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RE-EVALUATING A PATIENT SAFETY PROGRAM IN AN ONCOLOGY NURSING SETTING.

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Keeping a patient safe and free from falls in the hospital setting is an ongoing challenge for nurses and the healthcare team. Therefore, fall prevention is a major component of our institution's oncology patient safety program. In the literature, the majority of studies address falls in persons over the age of 70. Our patient population with cancer is younger, 35 to 60 years old, and has other factors involved; the disease process itself, medications, weakness and fatigue, to name a few. We decided to first define our patient population's risk factors and then develop a program that would decrease falls within the younger, oncology population. Our plan included identifying patients at risk, revising our policy, enhancing assessment and reassessment methods, providing new visual alerts for patients at risk, and upgrading staff, patient, and family education programs. These changes were piloted on 8 inpatient units for one month. No falls were reported during this time frame. After the successful pilot, over 1,500 healthcare workers received training to the revised patient safety plan. The program was then implemented house-wide. It was thought that these changes would continue to eliminate falls. However, outcome metrics, utilizing institutional incident reports, indicated otherwise. Data analysis revealed no house-wide culture change occurred. The number of inpatient falls/1,000 hospital days remained the same as before the pilot. The nursing staff on 3 leukemia units then decided to utilize a simple quality improvement tool, the "OOPS Monitor" (opportunity for outstanding patient safety) to gather data. This data revealed multi-factorial root causes underlying modest policy compliance. These results were shared with the nursing staff through focus groups where additional data was collected. The staff identified several issues related to non-use of the program elements. Each of the 3 units was asked to develop an action plan in response to the data. These action plans resulted in the implementation of a multidisciplinary fall prevention consult team whose goal is to monitor compliance and keep safety awareness at a maximum level. Monthly monitoring will continue with timely feedback to unit staff members and the institution.

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THE BUCK STOPS HERE: ONLINE ACTUAL AND NEAR-MISS MEDICATION ERROR REPORTING.

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The importance of actual and near miss medication error reporting cannot be over emphasized. The majority of errors in health care are related to systems problems not individuals. Historically, errors have been under-reported secondary to a punitive healthcare environment, time consuming paperwork, and a lack of appropriate follow up once errors are identified.

Nurses are in a key position to recognize and report actual and potential medication errors. An inherent nursing trait is a compelling desire to identify and fix problems. This innate ability often results in patched systems problems and subsequent avoidance of many medication errors. The current medication safety recommendations from Joint Commission on Accreditation of Healthcare Organizations and the Institute for Safe Medication Practices suggest avoiding system patches. Instead, through identification of all actual and near misses, an investigation is conducted to determine how and why the event occurred. A comprehensive proactive review of other potential systems problems must be performed to avoid related errors. This sort of "process review" study will result in a greater "correct" of systems, ultimately averting additional errors.

The use of an on-line medication error reporting system at this NCI-designated comprehensive cancer center has been an important tool for increasing actual and near miss reporting. This on-line system generates the content for the "process review" study. This reporting system is quick, easy to use, and has significantly increased error reporting in our center. The on-line form instantly sends an email notification to the nurse manager who must assess and respond to the incident within 96 hours. Based on the origin of the incident, prescribing, dispensing, or administering, the on-line report is then forwarded to the appropriate department head. Performance improvement committee chairs at the hospital and departmental levels are notified. All errors are discussed in a non-punitive manner at the multidisciplinary oncology performance improvement committee and an immediate plan for future error prevention is identified. The on-line reporting system enables compilation of data to analyze error rates and trends. This presentation will discuss the importance of reporting medication errors, barriers to reporting, and highlight this unique on-line medication reporting technology.

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ADDRESSING THE "MISSING PIECES" IN ACUTE MYELOID LEUKEMIA INDUCTION THERAPY.

Sue Nickoson, RN, BSN, OCN®, Pat Berning, RN, OCN®, and Sharon Hafertepe, RN, MSN, CNRN, TriHealth Good Samaritan Hospital, Cincinnati, OH.

This project was directed to the patients entering into our multi site non-transplant setting with varied practices in the management of AML. The volume of patients admitted for initial diagnosis and treatment is thirty to forty cases per year. An enthusiastic and collaborative team composed of nursing, physicians, nutrition, infection control, pharmacy, social services, pastoral care, and quality improvement reviewed the literature and current approaches. Because of multiple physicians and novice nursing caregivers, standardization was critical to improve the care of AML patients.

The patients admitted with the new diagnosis of acute myeloid leukemia have undergone a length of stay of at least 10 days to several weeks and have frequently developed infectious sequelae related to the course of chemotherapy administered. This process improvement initiative is targeted at implementing a plan of care to reduce or eliminate complications related to low platelet counts, reducing the infection rate, and improving quality of life. The strategy included the development of a clinical pathway and admission order set that incorporates a proactive approach to preventing infectious processes and, if they do develop, early interventions to minimize complications. Considerable emphasis is built on education of the patient and family to take an active role in their care. Key components in the pathway process include a temperature protocol, correlating platelet levels with placement of lines, and prophylactic antibiotic use. Depression was addressed by utilizing psychosocial support and medication therapy. Adjunct hormonal therapy was included for the appropriate female population.

Outcome measures include monitoring of the central line site (the most common site of infection in this population), infection rates, length of stay, and patient education. Physician championship and participation was key to the implementation of this protocol. Feedback was solicited from staff oncologists and their suggestions were incorporated into protocol development. The pathway provides comprehensive guidelines for the newer nurses in the care planning process. This collaborative effort has facilitated more effective lines of communication within members of the multidisciplinary team. This successful approach will be utilized again, as additional protocols are developed to address consolidation and recurrence in the AML patient.

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PERFORMANCE IMPROVEMENT: EVALUATING AN EDUCATIONAL TOOL TO ENHANCE PATIENT OUTCOMES.

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Patients with head and neck cancer often present with locally advanced disease at the time of diagnosis. Treatment plans include aggressive radiation therapy often with concurrent chemotherapy. This therapy causes significant toxicity due to normal tissue damage. In addition, these patients are often at a socio-economic disadvantage, which poses a variety of challenges to the medical team. The challenge for the radiation oncology nurse is to teach these vulnerable patients how to manage multiple side effects effectively. Success can mean increased quality of life for the patient and increased adherence to the prescribed course of therapy.

A performance improvement project was initiated and a dedicated teaching sheet was developed for mouth care (brushing, flossing, use of mouthwash) before, during, and after radiation therapy. It incorporated behavioral changes to deal with pain due to increasing mucositis and xerostomia. Other topics included diet changes and pain management. In order to evaluate outcomes from the project, a post-treatment survey that assessed oral care behavioral changes made during treatment was developed. A total of 38 patients who had a diagnosis of primary cancer of the oral cavity, oropharynx, hypopharynx, and larynx, with stage II, III, or IV disease completed the survey. Treatment schemas were all expected to cause significant normal tissue damage, and included radiation, either QD or BID, with or without concurrent chemotherapy. Over a 14-month period, half of the patients received teaching through the traditional methods (verbal during weekly treatment check). The other half received the teaching sheet at the beginning of their treatment, in addition to the traditional teaching. All patients answered the survey at the conclusion of radiation treatments.

The results of this performance improvement project suggests that the addition of a dedicated mouth care teaching sheet increased compliance with brushing by 15%, as well as overall improvement in pain management by 26.5%. These findings support the use of an educational tool to assist the oncology nurse in managing treatment-related side effects.

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COMMITMENT TO QUALITY PATIENT CARE.

Cynthia Umstead, RN, MSN, OCN®, Barbara Poniatowski, MS, RN-C, AOCN®, and Susan Temple, RN, MSN, ETN, AOCN®, GlaxoSmithKline Pharmaceuticals, Philadelphia, PA.

Healthcare cutbacks and cost constraints coupled with the nursing shortage may adversely impact the quality of patient care. Nursing education departments in many hospitals and large clinics have been slashed, limiting inpatient and outpatient educational offerings. In 2001, the merged company GlaxoSmithKline (GSK) expanded the commitment to quality cancer care by creating 16 oncology nurse educator (ONE) positions. The ONE functions as an educator, consultant, expert nurse clinician, and nurse researcher. As nurse educators, these nurses provided quality education programs that sometimes have nursing contact hours or continuing medical education hours. The continuing education programs are related to disease states, symptom management, communication skills, and chemotherapy administration (most are ONS chemotherapy trainers). Creation of continuing education programs is based upon the mutual needs of GSK, the nurse clients, and their employers. The GSK training and development department utilizes the expertise of the ONEs to educate and develop the knowledge base of the oncology account managers. The ONEs are able to illustrate patient case studies to reinforce the patient focused training that is received by the account managers. The ONEs also supply patient education material and can participate in selected local and regional advocacy/support groups. Each of the ONEs maintains her professional affiliations and participation in the local ONS chapters and many serve on national ONS committees. Other professional affiliations and participation include Society of Gynecologic Nurse Oncologists, American Society of Pain Management, American Nurses' Association, and Sigma Theta Tau. Involvement in academic nursing education is also encouraged and several ONEs are adjunct faculty at colleges and universities in their territories. Nursing research and evidenced-based nursing interventions are an integral part of expanding oncology nursing knowledge and standards. As nurse researchers, the ONEs are developing oncology nursing research agendas supporting evidence-based practice. As the GSK ONEs complete their first year with the company, it is evident through ONE productivity and scheduling demands that the customer (the nurse) appreciates the company's commitment.

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FACT ACCREDITATION: A MULTIDISCIPLINARY MODEL FOR PREPARATION FOR THE ACCREDITATION PROCESS.

Lisa Notaro, RN, BSN, Carol Keesler, RN, and Rose Kumpf, RN, Roswell Park Cancer Institute, Buffalo, NY.

The Foundation for the Accreditation of Cellular Therapy (FACT) is a non-profit corporation developed in 1994 by the International Society for Cellular Therapy (ISCT) and the American Society of Blood and Marrow Transplantation (ASBMT) for the purpose of self-assessment and accreditation in the field of hematopoietic cell therapy.

This presentation will outline the preparations implemented at a comprehensive cancer center for the initial FACT accreditation appraisal process. The information will include the following: The benefits of FACT accreditation; The organization and structure of the blood and marrow transplant multidisciplinary team that served as the accreditation steering committee; The justification for the decision not to engage the assistance of outside consultants; An accreditation readiness self-assessment and gap analysis conducted, and the subsequent action plan with time frames; The preparation process for the submission of the FACT accreditation application and on-site survey; and Procedures implemented to ensure continuing readiness between surveys. The survey took place in March 2002, with notification of accreditation several months later. As of May 2002, 107 transplant centers have been accredited, with 94 centers in various stages of the accreditation process. The content of this presentation is applicable to nurses in blood and marrow transplant programs that are considering applying for FACT accreditation or who are engaged in maintaining accreditation.

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GETTING TO THE ROOT OF CHEMOTHERAPY ERRORS: USING A ROOT CAUSE ANALYSIS APPROACH TO CHEMOTHERAPEUTIC MEDICATION ORDERING.

Patricia Berning, RN, OCN®, and Sharon Hafertepe, RN, MSN, CNRN, TriHealth Good Samaritan Hospital, Cincinnati, OH.

The need to increase the safety of ordering, preparation, and administration of chemotherapeutic agents led to a cross-functional team using a root cause analysis approach to identify the issues and begin developing a system approach to change. This multi-site organization had varied practices related to the ordering and administration of chemotherapeutic agents. An extensive review of the literature revealed essential elements needed to ensure the safe ordering and administration of these high-risk therapies.

The initial focus was to standardize the documentation by developing a required chemotherapy order sheet. Flow charting of four inpatient and out patient areas was completed and opportunities to reduce variation in practices were identified. Multiple methods of ordering were being used, including verbal orders.

The root cause analysis identified key areas for improvement: Development of a standardized order sheet, the use of standardized protocols between sites, more effective utilization of the existing computer system, education of staff to empower them to be a part of the ordering process, development of a competency program for nursing and pharmacy, and the improvement of communication with the registration and scheduling departments to improve the flow of patients.

Additional components of the action plan developed included consideration of most opportune times for chemo administration relating to staffing needs, access to the library for continuing updates in chemotherapy made available monthly on line, and acceptance of no verbal orders. A summarization of these critical changes was supported by the development of a corporate policy.

Resistance to change, despite literature support for standardization and documentation of best practices, was one of the major barriers identified. These barriers emphasized the importance of 1:1 communication with each physician and the section/departments. Much resistance initially gave way to pride in accomplishing the changes. Clinical quality indicators have been refined to meet the needs of the service line. Continuing review of the data and changes using the PDCA approach have been built into the service line reporting. This approach to safe administration has been a template for other patient safety initiatives in the organization.

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THE COMPREHENSIVE CANCER CENTER CONSORTIUM FOR QUALITY IMPROVEMENT'S PATIENT SATISFACTION INITIATIVE. Ellen Zupa, RN, MS, Roswell Park Cancer Institute, Buffalo, NY; Sherry Preston, RN, BS, CPHQ, University of Texas M.D. Anderson Cancer Center, Houston, TX; and Dana Jenkins, BS, MS, Roswell Park Cancer Institute, Buffalo, NY.

Introduction: Institutions and programs committed to advancing care by performance improvement initiatives often look outside their walls for benchmark data and best practice methods. As specialty facilities, cancer centers face specific challenges in identification of comparable peers. In response to this need, the quality administrators from multiple comprehensive cancer centers, with support and input from clinical leaders, have established the Comprehensive Cancer Center Consortium for Quality Improvement (C4QI). The goal is to participate in common initiatives that provide the opportunity for comparisons among the member institutions. The shared data is utilized to improve patient care and outcomes for the individual institutions as well as the collective group.

Methods: A written, inpatient satisfaction survey was administered by Press, Ganey Associates, Inc., February 15, 2002 through May 15, 2002. The eleven institutions of the C4QI participated. The survey evaluated interactions throughout the patient's continuum of care.

Results: Facility blinded scores compared to both C4QI collective scores as well as the Press, Ganey national database. Sharing of "best practices" will be presented at the semi-annual meeting in October 2002.

Conclusions: While patients' perception of service has not yet been linked to clinical outcomes, the focus on service is imperative for many reasons, not the least of which is healthcare consumers' increasing role in evaluating provider performance. The partnership among these cancer centers is a unique and effective forum to share knowledge and continued development of comparative methods to improve the care provided by each member facility. This collaborative model has applicability to a range of cancer care settings and programs.

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INCORPORATING KEY VALUES AND JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS FUNCTIONS INTO ONCOLOGY QUALITY IMPROVEMENT. Hope Evans, RN, Deborah Dillard, RN, Marie Horton, RN, and Suzanne Carroll, RN, MS, OCN, AOCN®, Wake Forest University Baptist Medical Center, Winston-Salem, NC.

The key values of our medical center that direct oncology care are compassion, integrity, innovation, and excellence. These values serve to guide our mission, which is clinical, research, education, or community focused.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) outlines eleven functions that hospitals and healthcare organizations should integrate into the care they provide. These functions include: Patient rights, assessment of patients, education, continuum of care, leadership, improving organizational performance, management of environment of care, management of human resources, management of information, surveillance prevention, and control of infection. These functions include standards that healthcare organizations should follow to ensure JCAHO compliance. Accreditation by JCAHO demonstrates a commitment to the public that a healthcare organization continuously makes efforts to improve the care and services it provides.

At our cancer center, quality improvement efforts are unit based and are reported to the quality council of our shared governance practice model. Recently, our oncology units revised our quality improvement report format to include our key values and JCAHO functions. Oncology representatives to the quality council complete assigned and unit specific monitors and then complete a clinical quality improvement report. The report includes the focus of evaluation, JCAHO function, mission statement focus, and key value addressed. The report also includes the identified need or problem, the goal for improvement, an action plan, and result evaluation. By including key values and JCAHO functions, oncology nurses are educated about JCAHO standards and reminded of our ongoing mission and commitment to quality care. Incorporating JCAHO standards into ongoing quality improvement activities has facilitated the JCAHO accreditation process by demystifying the anxiety often associated with JCAHO. By addressing JCAHO functions through monthly quality improvement, compliance becomes the normal practice, not just a periodic event.

The purpose of this poster presentation is to present the new clinical quality improvement report format implemented on our oncology units. Specific examples of monitors from our bone marrow transplant, leukemia, and solid tumor services will be shared. The JCAHO functions and how they fit into quality improvement activities will also be described.

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EVALUATION OF THE ROLE OF QUALITY IMPROVEMENT IN PROFESSIONAL DEVELOPMENT. Marlene Zichi Cohen, RN, PhD, and JoAnn Mick, RN, MSN, MBA, AOCN®, University of Texas M.D. Anderson Cancer Center, Houston, TX.

Quality improvement requires reviewing current practice to assess whether the nursing care is the "best practice," based on scientific evidence. The professional-development process encourages nurses to use inquiry to evaluate systems and processes used to deliver patient care. Through professional development, nurses increase their knowledge and powers of persuasion and adaptation and progress from being doers of tasks to knowledgeable workers and therefore valuable resources. The purpose of our project was to evaluate how participation in QI contributed to nurses' professional development, and how nurse managers can support nurses. It is important for nurse managers to support nurses in their efforts to collect and analyze data and to then recommend changes to improve the quality of patient care. On our oncology, surgical, urology, and orthopedic units, each nurse is responsible for completing and submitting a quality improvement project each year in the Plan-Do-Check-Act (PDCA) written format. In 2001, each of the 26 nurses on this unit completed a project. All projects were displayed in the department so the information could be shared and nurses could be recognized for their ingenuity and creativity. Several projects were successfully implemented, and four were submitted and two accepted and presented at the 2002 ONS Congress. The nurse manager set the following goals to support this process: Mentoring nurses about improving patient outcomes, increasing nurses' knowledge of the PDCA process, improving the nurses' presentation and computer skills, and helping each nurse make a professional contribution with evidence-based practice. In this poster we will report the results of a survey of the nurses who completed quality-improvement projects to assess the progress made toward achieving these goals. The responses to the survey provided information that helped the nurse manager better support professional development. The quality-improvement process provides the opportunity to evaluate nursing practice, make recommendations for change, and ensure that defined thresholds of practice are met and maintained. Professional development enables nurses to contribute to improvements in patient care and outcomes of care within an organization. It also enables nurses to share their ideas with other nursing professionals through abstract and article submissions to the ONS.

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COLLABORATIVE APPROACH TO CASE MANAGEMENT. Mona Kasper, RN, MS, AOCN®, Jean Lydon, RN, MS, AOCN®, and Jean Andejeski, RN, MS, AOCN®, Elmhurst Memorial Hospital, Elmhurst, IL.

At our institution a new case management team model was initiated to improve the quality of patient care while providing cost effective management. The goals of this model are to improve the patient's experience, facilitate the patient's progress along the continuum of care, decrease costs of care, and increase patient/physician satisfaction. Prior to implementation of this new model, extensive training provided the team members with the tools needed to meet the goals. Didactic educational sessions included the utilization review process (insurance phone calls, criteria for intensity of service and severity of illness, length of stay for DRGs, denials, physician referrals, and quality reviews), discharge planning process (criteria for home health RN and other ancillary services, hospice, nursing home transfers, and original placements, and available community services), and clinical disease management. The members of our team include two clinical nurse specialists, one medical social worker, one utilization reviewer, one home health liaison, and the program manager. On a daily basis, the team meets to assign new cases, discuss complex cases, and confer with each other to meet the patient's needs. Additionally, the team discusses the plan of care with physicians and acts as a liaison between physicians and other caregivers. Measurable outcomes of this model include avoidable days, length of stay by unit, cost per case, denials, and readmission rates by unit. This poster presentation will address our experience in implementing this model of care (barriers encountered, measurable outcome data, patient experiences, and achievement of goals). The involvement of the clinical nurse specialist on this team has been integral in providing the team with the knowledge of clinical disease management. Thus, improving the plan and coordination of care for patients along the continuum.

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THE DEVELOPMENT OF A VIRTUAL WORK GROUP OF THE ONCOLOGY NURSING SCOIETY CLINICAL TRIALS NURSES SPECIAL INTEREST GROUP: KEYS TO PRODUCTIVITY.

Heidi Ehrenberger, PhD, RN, AOCN®, University of Tennessee, Knoxville, TN; Kristi Ward, RN, BSN, OCN®, Eli Lilly and Company, Indianapolis, IN; Janet Zimmerman, MS, RN, PharmaNet, Inc., Princeton, NJ; Linda Lillington, DNSc, RN, Harbor-UCLA Research and Education Institute, Torrance, CA; Monica Bacon, RN, NCIC Clinical Trials Group, Kingston, Ontario, CA; and Kathy Burks, MSN, RN, Johns Hopkins University, Baltimore, MD.

The mission of the ONS Clinical Trial Nurses (CTN) Special Interest Group (SIG), established in 1990, is to promote excellence in oncology clinical trials nursing and quality care in cancer clinical trials. SIGs are a formal structure within the ONS, which facilitate national networking of ONS members in an identified subspecialty or interest area. SIG activities are structured and coordinated to ultimately advance the mission of the ONS. Major strategic goals of the CTN SIG are to assure the nurse's role in cancer clinical trials and achieve quality care in cancer clinical trials. When forming groups of SIG members to accomplish specific tasks, these groups are referred to as Work Groups rather than ONS Project Teams/Advisory Panels or national task forces. While a SIG can apply for project funding and is given organizational support by the ONS membership and leadership team, challenges can exist for a SIG Work Group. In October 2000, a virtual Work Group of the CTN SIG was formed to begin the development of an instrument to assess the role and responsibilities of the clinical research nurse. The efforts of the Work Group proceeded through several developmental stages and culminated in the receipt of a small research grant award from the ONS Foundation in February of 2002. Challenges we experienced along the way included working across time zones, the inability to meet face-to-face as a collective group, and the volunteer nature of all of our members. Ten key areas that SIG members can address to ensure the productivity of their Work Group are: 1) setting goals, 2) identifying roles and responsibilities, 3) interdependence, 4) leadership, 5) communication and feedback, 6) discussion, decision making, and planning, 7) implementation and evaluation, 8) identifying norms and respecting individual differences, 9) agreeing on a structure, and 10) cooperation and conflict management. The success of the Work Group approach to improving cancer care is vital to the ONS. Our experience demonstrates that a virtual Work Group can successfully develop and implement a project aimed at transforming cancer care.

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USING TECHNOLOGY TO IMPROVE CLINICAL PRACTICE.

Anita Reedy, RN, MSN, Johns Hopkins Hospital, Baltimore, MD.

Morning rounds are routinely conducted on our hematologic oncology unit and are the time during the day when the team of nurses, doctors, social workers, and pharmacists gather to discuss each patient's condition and plan of care. We examined the way we conducted rounds and how this impacted clinical practice. We noted that as patients were discussed, members of the team left rounds to gather information from computers located around the unit. While the information was necessary to clinical decision-making, gathering it fragmented and slowed rounds. We also noted that while plans of care were discussed, orders to initiate these plans were not written until later in the day. This affected nursing practice by delaying implementation of the plan and pushing many activities to the evening when there were fewer nurses. Issues such as discharge planning were not routinely discussed. To address the availability of information, we initiated the use of a radio frequency laptop that is attached to a turntable on the chart rack and accompanies the team during rounds. We access information such as vital signs, weights, radiologic and lab results, and progress notes via the computer that enables the team to make comprehensive, timely plans of care. A rounds template is used to ensure that information such as discharge planning and pain management is discussed. We incorporated a "working rounds" format so that as plans are discussed, orders are written and tests are scheduled so the plan is promptly implemented. This moves the workload to earlier in the day. Physicians and nurses were taught how to use the rounds template, working rounds format, and laptop computer. We audited rounds and re-educated staff based on audit results. Discharge planning discussions have increased and there are plans to measure whether patients are being discharged earlier as a result. Staff has expressed satisfaction with the laptop, template, and working rounds format. Together they assure accessible, comprehensive information, efficient decision making, and timely writing of orders and scheduling of tests. This helps nurses effectively plan their work and reduces time spent contacting physicians for orders.

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COLORADO CANCER RESOURCE GUIDE ONLINE PROJECT.

Joni Dunn, MN, AOCN®, CNS, Colorado University Hospital, Denver, CO.

Our taskforce wanted to share the elements of our grassroots efforts that lead to the creation of a cancer resource web site for the state of Colorado. It is our hope by doing so, other professionals will be encouraged to develop web resources specific to their states. Our taskforce would like to promote the development of informational Internet web sites that are state specific as well as national resources for cancer patients and their families and the professionals caring for them.

More and more patients are turning to the Internet to gain information about cancer treatment options and other cancer support resources. The phenomenal amount of information on the Internet often makes this web navigation difficult. Patients may end up spending hours just trying to locate information about cancer, its treatment, and support resources.

The goal of the taskforce was to developed an ongoing web site specific for Colorado cancer patients and their families where they could locate not only national but more specific local current information about cancer (adult and pediatric), its treatments, and supportive services.

The presentation will discuss the initial steps taken in initiating this project. The details of method and content for each step will be presented. During each stage of our process, deadlines were agreed upon and taskforce member responsibilities were defined. The first step was defining the knowledge and experience the taskforce members would need. The process for eliciting task force membership took place. After taskforce membership was established, a plan for obtaining a web site, designing and defining content, and method of data entry for the site was outlined. A budget was created and potential funding sources were identified and contacted. As the site was nearing operation, a strategy was established for disseminating information about the existence and purpose of the site to patients, families, and healthcare professionals. A policy was agreed upon for dealing with the site's ongoing monitoring and maintenance. Finally, a method and timetable to be used in evaluating the effectiveness of the site was created.

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USING PLAIN LANGUAGE AND INFORMATION MAPPING TO COMMUNICATE HEALTH INFORMATION ONLINE.

Sharon Quint-Kasner, RN, MS, and Diana Blais, MA, National Cancer Institute, Bethesda, MD.

Adults in the U.S. are increasingly seeking health information on the Internet. Oncology nurses need to be familiar with strategies to design and evaluate patient education materials produced for an online audience. In the 1980s, the National Cancer Institute (NCI) began developing disease-specific, evidence-based documents for persons with cancer to help them understand their disease, the staging process, and treatment options. Recently, these online documents, called patient cancer information summaries, were internally reviewed. The reviewers noted the documents were not written in easy-to-understand language and information could not be easily found. A team of writers and medical experts collaborated to make the patient cancer information summaries more consumer-oriented, using the concepts of plain language and information mapping to guide the redesign. (Plain language is clear writing that effectively communicates with its intended audience and ensures the audience can both find and understand the information. Information mapping is a technique for analyzing, organizing, and presenting information online in a purpose-focused, audience-oriented manner.) The team designed a template with a new writing style and format that guided the development of several pilot patient summaries. Web usability testing was accomplished by asking laypersons to perform scenario tasks on the patient summaries. These tasks were created to test ease of learning, efficiency in gathering information, and recall of information from the online documents. Based on the testing results and research-based Web design and usability guidelines, the template was revised and has been used successfully in the redesign of more than 20 patient summaries on a variety of cancer types. The patient summaries can be found at www.cancer.gov/cancerinfo/pdq. As oncology nurses participate in the content development and design of Web-based patient teaching materials, it is essential they incorporate the concepts of plain language and information mapping. Web usability testing must also be performed to assure the health information is easy-to-use and understandable for patients who are making healthcare decisions.

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BAR CODE READER INTRODUCED AT GEORGETOWN UNIVERSITY HOSPITAL.

Judith Westcott, RN, OCN®, Georgetown University Hospital, Washington, DC.

As a result of a successful test among a limited number of Georgetown University Hospital (GUH) nurses using an electronic hand-held bar code reader to identify patients and their blood products, the project is now to be expanded. Its scope will be to evaluate the attitudes and proficiency of a greater number of nurses/transfusionists implementing this new patient safety system.

The hypothesis is that all nurses who are qualified by GUH to administer a blood transfusion by the hospital's standard visual identification of patients and blood products together with a second nurse as a double-check, will be 1) willing, and 2) skillful in performing the standard visual checks, but will now use the bar code reader as the second double-check. This will ultimately lead to a new procedure whereby a single nurse would be able to safely identify a patient and blood product primarily by the "visual" standard, and secondarily by double-checking with the bar code reader.

In early September 2002, the number of personnel utilizing the bar code system will expand to include the nurses of the bone marrow transplant/hematology unit on 2 Bles and the medical oncology/GYN oncology unit on 3 Bles. These two units were chosen because of their high volume of patients needing blood transfusions and the considerable experience of the staff in administering them. The purpose of enlarging the test group is to identify any obstacles to expanding the use of the bar code reader to a larger group of nurses on general hospital units.

With the initial test of this system on the infusion service, Georgetown University Hospital is the first hospital in the United States to approve a standard operating procedure permitting the routine use of a bar code reader for patient-blood product identification.

Based on the early results, the system demonstrated a great potential for improving patient safety.

A noteworthy element of this study is that the attitudes, opinions, and preferences of nurses are being aggressively solicited before a policy is instituted which will affect their daily routines and patient care concerns.

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DEFINING THE CHARACTERISTICS OF YOUR PATIENT CARE AREA: USING TECHNOLOGY TO CREATE A UNIT PROFILE AND TO SIMPLIFY DATA COLLECTION AND ANALYSIS.

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Data collection and statistical analysis are imperative to developing evidenced-based practice and communicating workload needs to colleagues and administrators. Traditional workload assessments are quantitative, and often focus on acuity, complexity, and intensity measures, falling short of describing the actual workload of the nurse in a particular patient care area. A particular patient care area's profile can only be inferred from the data. Qualitative descriptors with frequency measures create a more tangible vision of the diversity of the work done by the nurse for a particular patient population. Oncology nursing environments are rich with quantitative and qualitative data, which creates vast opportunities for nursing research.

Traditionally, data collection has been labor intensive, costly, and often requires manual data collection and input into a statistical program for analysis. By utilizing a program called Pendragon, and a PDA (personal digital assistant) such as a Palm Pilot, this NCI-designated comprehensive cancer center conveniently collected timely and accurate descriptive workload data during regular patient care routines like morning rounds. After development of the customized Pendragon, data collection form data were then easily moved directly into Microsoft Access by placing the hand held device on its cradle and performing a hotsync (download). The descriptive data collected assisted the nurse manager in supporting staffing patterns, staff mix, and FTE requirements. In addition, the unit-based clinical nurse specialist utilized information obtained to define educational needs for patients and staff in order to assist in program development and staff orientation.

This poster will showcase how an inpatient oncology unit utilized technology for data collection to assist in creating a "unit profile" which characterizes the diversity of the nursing care environment. Specific workload measures studied will be presented.

The ease of data collection form development, actual data collection, editing or adding to the data, and analysis of the data will be highlighted. By using an efficient, mobile database technology, data collection can be simplified, less threatening, and supportive of oncology nursing research.

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DEVELOPMENT OF A COMPUTERIZED ONCOLOGY NURSING DOCUMENTATION PATHWAY: COLLABORATION YIELDS RESULTS.

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The work of oncology nurses involves a great deal of documentation. Inadequate documentation may result in compromised patient care and potential liability. While acknowledging the importance of charting, our outpatient nurses reported, via a survey, that documentation was a significant source of frustration (> 50%). The director of clinic operations appointed a group to devise a system of documentation to enhance nurses' charting. The purpose of the group was to develop a computerized system of charting that reflected nursing care provided, was easy to complete, and supported charges generated. The group was comprised of seven nurses (clinical experts) and two system analysts. After reviewing available options for documentation, the decision was made to build a nursing section within PowerNote, the documentation component of Cerner (our hospital's information system). It was essential that the pathways reflect the entire spectrum of oncology patients seen at our facility. The group decided to use the functional assessment categories already utilized in their hand written notes as a framework for computer documentation. Their rationale was that use of a familiar taxonomy would ease the transition to the new documentation system. For the next 7 months, the nurses developed pathways specific to their clinical expertise and solicited help from nurses outside the committee to develop portions relevant to their patient populations. In addition to designing the pathways, time was spent evaluating different hardware options. Three different devices were pilot tested by nurses to determine which would be most suitable. Laptop computers were selected as the most-user-friendly devices. The system has been implemented in one clinic area with plans to implement fully over four months. The outcome of the group's work was development of a comprehensive tool for documenting nursing care of the oncology patient in the outpatient setting. The tool simplifies documentation of interventions and accurately reflects the care provided. The opportunity to easily document on the computer yields patient care information that is available real time to anyone who needs access. Close collaboration between clinical staff and information technology experts has yielded an approach to oncology nursing documentation not widely available.

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