



## Update on . . . Non-Small Cell Lung Cancer

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The focus of this column is to present topics of interest from non-nursing journals to Oncology Nursing Forum readers. The topic of this issue is non-small cell lung cancer.



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### Insurance Impacts Status of Early-Stage Non-Small Cell Lung Cancer Treatment

A study by Groth et al. (2013) identified the impact of insurance status on the delivery of definitive lobectomy for early-stage non-small cell lung cancer (NSCLC). One-fifth of an estimated 226,000 cases in 2012 presented with early-stage disease (Siegel, Naishadham, & Jemal, 2012). With appropriate therapy, five-year survival rates can exceed 65%, whereas, without prompt and aggressive intervention, five-year survival plummets to less than 5% (National Cancer Institute, 2010). Healthcare providers must offer access and optimal treatment to this patient population regardless of insurance status.

Many social disparities associated with NSCLC have been documented and include the impact of insurance status on quality of care; however, few if any studies address the direct effect of insurance status on surgical intervention (Groth et al., 2013). The hypothesis of the study by Groth et al. (2013) was that insurance status strongly influences the offer of surgical intervention for early-stage NSCLC. Data were collected from the California Cancer Registry, a state-wide, population-based cancer data set. Logistic regression models were used to assess the effect of insurance status (e.g., Medicare, Medicaid, no insurance, unknown, private) on clinical decisions to offer surgery in this setting. Patients aged 50–94 years with early-stage NSCLC were identified, and 10,854 patients met inclusion criteria. Concern for confounding led the authors to exclude patients with synchronous primary tumors and patients aged 95 years and older, as well as those who had a history of pneumonectomy, sleeve resection, local ablation, or chest wall resection. Patients with

Medicare (adjusted odds ratio [OR] = 0.87; 95% confidence interval [CI] [0.79, 0.95]), Medicaid (OR = 0.45; 95% CI [0.36, 0.57]), or no insurance (OR = 0.45; 95% CI [0.29, 0.7]) were significantly less likely to be offered lobectomy than privately insured counterparts even after adjusting for factors such as age, race, gender, and tumor specificity. In addition, Groth et al. (2013) found that older adult men, African American race, squamous cell carcinoma, and large tumor size were significant negative predictors for lobectomy.

The significance of this study is the large data set of patients examined. Lung cancer is a disease that does not commonly present early. If patients are diagnosed at the outset and are surgical candidates, the potential for achieving cure should not be withheld, regardless of insurance status. Oncology nurses must have an awareness of the global implications of lung cancer and the need to work with multiprofessional teams to advocate for equitable patient care and management.

Groth, S.S., Al-Refaie, W.B., Zhong, W., Vickers, S.M., Maddaus, M.A., D'Cunha, J., & Habermann, E.B. (2013). Effect of insurance status on the surgical treatment of early-stage non-small cell lung cancer. *Annals of Thoracic Surgery*, 95, 1221–1226. doi:10.1016/j.athoracsur.2012.10.079

National Cancer Institute. (2010). Surveillance, Epidemiology, and End Results (SEER) surveillance research program. Retrieved from <http://seer.cancer.gov>

Siegel, R., Naishadham, D., & Jemal, A. (2012). Cancer statistics, 2012. *CA: A Cancer Journal for Clinicians*, 62, 10–29. doi:10.3322/caac.20138

### Maintenance Chemotherapy May Prolong Clinical Stability

Maintenance chemotherapy has been used in the treatment of hematologic

malignancies in adult and pediatric patients with acute lymphocytic leukemia, follicular non-Hodgkin lymphoma, and multiple myeloma, with a positive effect on progression-free survival (PFS) and overall survival (OS) (Childhood ALL Collaborative Group, 1996). Maintenance therapy has not been as widely used with solid tumors but has demonstrated improvement in PFS in breast cancer, PFS and OS in advanced colorectal cancer (Giuliani, Da Vita, Colucci, & Pisconti, 2010), and an increase in PFS in advanced ovarian cancer (Burger et al., 2011).

Gerber and Schiller's (2013) study provides an in-depth discussion of the rationale for maintenance chemotherapy for advanced NSCLC. The goal of maintenance therapy is to maintain and prolong clinical stability on completion of a course of systemic induction therapy. Maintenance therapy is composed of two paradigms as identified by the authors of this review. The first is the continuation of a component of the induction regimen. In the setting of NSCLC, that would be the nonplatinum cytotoxic drug or a molecular-targeted agent. Switch therapy and sequential therapy are terms used in maintenance chemotherapy to indicate a non-cross-resistant agent that is prescribed and started immediately on completion of the first-line regimen. For NSCLC, switch maintenance with pemetrexed and erlotinib have demonstrated improved OS and have been approved by the U.S. Food and Drug Administration for the indication of NSCLC maintenance regimens in appropriate patients. Several predictors of the benefits of switch maintenance therapy exist, including the degree of response to first-line therapy, patient performance status, potential of receiving additional therapy at progression, tumor histology, and molecular makeup. Until 2000, small cell lung cancer, which is chemotherapy sensitive, has been the focus of maintenance chemotherapy. This model has been applied to locally advanced NSCLC to achieve goals of prolonged PFS and lengthened OS.

Gerber and Schiller (2013) conducted a review on the use of maintenance therapy in the clinical setting of NSCLC