

# A Symptom Cluster and Sentinel Symptom Experienced by Women With Lung Cancer

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**A**lthough numerous researchers have reported the symptoms and severity of symptoms experienced by individuals with lung cancer (Cooley, 2000; Hollen, Gralla, Kris, Eberly, & Cox, 1999; Hollen, Gralla, Kris, & Potanovich, 1993; Kuo, Chen, Chao, Tsai, & Perng, 2000; Lutz et al., 1997, 2001; Tishelman, Degner, & Mueller, 2000), few studies have examined the symptom experience of women with lung cancer. Meanwhile, lung cancer continues to be the leading cause of cancer death in women, and its incidence in women has increased in the United States since the mid-1960s (American Cancer Society, 2011). Symptom clusters associated with lung cancer have been studied minimally as well, although such clusters may increase distress and complicate interventions for relief. In addition, unrelieved symptoms are related to poorer patient outcomes (Miaskowski, Aouizerat, Dodd, & Cooper, 2007; Miaskowski, Dodd, & Lee, 2004). To provide optimal symptom management for women with lung cancer, their symptom experience, patterns, and associated factors must be studied to develop targeted symptom assessment and management strategies.

## Background

### Symptom Prevalence

Fatigue, cough, dyspnea, anorexia, pain, and insomnia were reported by patients with lung cancer as their most common symptoms, with remarkable consistency across studies (Cooley, 2000; Fox & Lyon, 2006; Hollen et al., 1993, 1999; Kuo et al., 2000; Lutz et al., 1997, 2001; Tishelman et al., 2000). In addition, emotional distress (Lobchuk & Kristjanson, 1997; Lobchuk, Kristjanson, Degner, Blood, & Sloan, 1997; Sarna, 1993; Sarna & Brecht, 1997; Tishelman et al., 2000) as well as nausea, vomiting, hair loss, dysphagia, and sore throat relative to chemotherapy and radiotherapy were reported in several studies cited in a review by Cooley (2000). Only

**Purpose/Objectives:** To determine the symptom experience and a sentinel symptom and to describe the relationship of participant characteristics with symptom clusters.

**Design:** Prospective, correlational study.

**Setting:** Clinical sites in five U.S. states.

**Sample:** 196 women six months to five years after non-small cell lung cancer diagnosis.

**Methods:** Symptoms were measured during the past day and past four weeks. Symptom clusters were described using a novel dummy coding approach.

**Main Research Variables:** Symptom occurrence and severity, demographic and clinical characteristics, health status factors, and meaning of illness.

**Findings:** About 98% of women experienced three or more symptoms in the past day. The most common symptoms reported by more than 80% of the women were fatigue, shortness of breath, anorexia, cough, and pain, with fatigue and shortness of breath rated as most severe. Sleep problems, concentration problems, and weight loss also were reported during the past four weeks. A five-symptom cluster including fatigue, shortness of breath, cough, pain, and anorexia was reported by 64% of women. Pain was identified as a sentinel symptom for that cluster.

**Conclusions:** Most women experienced at least three symptoms in the past day, and a five-symptom cluster occurred frequently and continued post-treatment.

**Implications for Nursing:** Women who participated in the study were, on average, two years postdiagnosis, but most experienced three or more symptoms well past treatment; therefore, vigilant ongoing clinical assessment of these women is essential. A co-occurring sentinel symptom used as a clinical indicator for the presence of a symptom cluster may be useful for clinical assessment.

two of the studies (Sarna, 1993; Sarna & Brecht, 1997) described the symptom experience of women with lung cancer. Most studies of lung cancer symptoms have focused on individuals with advanced disease who were receiving treatment or palliative care.