

# Patterns of Symptoms Following Surgery for Esophageal Cancer

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**S**ymptom management in oncology nursing includes the multiple symptoms that patients face following diagnosis and treatment. Research on these groups of symptoms is a priority for oncology nurses, and the evaluation of symptom patterns and clusters in oncology is emerging as a focus of study (Barsevick, 2007; Doorenbos et al., 2008). Surgical outcomes traditionally have been evaluated by objective measures such as morbidity, mortality, and complication rates, but subjective measures, such as symptoms and quality of life, are important clinical outcomes of interest and can serve as additional measures of patient outcome. Patients diagnosed with esophageal cancer experience prolonged and severe symptoms because of their disease and the effects of multimodality treatment (Donohoe, McGillicuddy, & Reynolds, 2011). Nursing research on symptoms in patients with esophageal cancer is limited and a need exists to identify and understand the pattern of symptoms patients experience before, during, and after surgical treatment.

## Background and Significance

An estimated 17,460 new cases of esophageal cancer were diagnosed in the United States in 2012, with an estimated 15,070 deaths (Siegel, Naishadham, & Jemal, 2012). Esophageal cancer is the eighth most common cancer worldwide, ranking sixth among all cancers in mortality (Ferlay et al., 2010). A combination of chemotherapy, radiation, and surgery has been recommended for treatment (Urschel, Vasan, & Blewett, 2002); this multimodality treatment can offer an improved chance for a cure but is associated with persistent symptoms and a significant negative impact on lifestyle and quality of life (Sweed, Schiech, Barsevick, Babb, & Goldberg, 2002).

Symptom research has focused on single symptoms such as pain or fatigue (Dodd, Miaskowski, & Lee, 2004; Miaskowski, Dodd, & Lee, 2004), but more recent ef-

**Purpose/Objective:** To explore patterns of symptoms before and after surgery for cancer of the esophagus.

**Design:** Longitudinal, descriptive study.

**Setting:** An urban comprehensive cancer center in the northeastern United States.

**Sample:** 218 patients with cancer of the esophagus undergoing esophagectomy.

**Methods:** Symptoms were assessed by self-report before surgery, at the first postoperative visit, and at 6 and 12 months postsurgery.

**Main Research Variables:** Symptoms and demographic and clinical variables, including stage, treatment, gender, and comorbidities.

**Findings:** Patients with esophageal cancer reported numerous symptoms before and after esophagectomy. Several patterns of symptoms were identified. General cancer symptoms (e.g., pain, cough, shortness of breath, weight loss) were reported as worse after surgery but recovered to baseline by one year. A second pattern of esophageal-specific symptoms (feeling full too quickly, feeling bloated, nausea, and diarrhea) worsened after surgery and did not recover to baseline by one year. Reflux was the only symptom that did not worsen after surgery but did worsen significantly during the first year of recovery.

**Conclusions:** Patients with esophageal cancer experienced multiple prolonged symptoms following surgical treatment for their disease. General cancer symptoms resolved by one year post-treatment, whereas esophageal-specific symptoms worsened after surgery and did not recover to baseline.

**Implications for Nursing:** Identification of symptom patterns preoperatively and during recovery can assist nurses in developing intervention protocols to minimize long-term complications for patients with esophageal cancer.

**Knowledge Translation:** Patients with esophageal cancer are at risk for multiple prolonged symptoms following surgery. Symptom assessment should occur often after surgery and include a broad range of symptoms.

forts have focused on groups of symptoms that occur together and are related to each other (Kim, McGuire, Tulman, & Barsevick, 2005). These groups of symptoms, termed *symptom clusters*, have been defined as groups