

# Symptom Clusters and Quality of Life in Survivors of Lung Cancer

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**Purpose/Objectives:** To explore the prevalence and intensity of depression, fatigue, and pain in survivors of lung cancer; to examine the relationship of symptoms in a cluster; and to examine the relationship of the symptom cluster to quality of life (QOL).

**Design:** Secondary data analysis.

**Setting:** Online lung cancer support group.

**Sample:** 51 patients diagnosed with lung cancer.

**Methods:** Mailed survey with self-report of depression, fatigue, and pain measured by subscales of the Short-Form 36 Health Status Survey and QOL measured by the Fox Simple QOL Scale. Pearson's correlation and multiple regression analyses were used to examine the possible symptom cluster.

**Main Research Variables:** Depression, fatigue, pain, and QOL.

**Findings:** Depression, fatigue, and pain were found in a majority of survivors, with pain being the least common symptom. Fatigue was the most intense of the three symptoms. Two significantly correlated symptoms were depression and fatigue. The cluster explained 29% ( $p < 0.01$ ) of the variance in QOL in the lung cancer survivors.

**Conclusions:** The data provided preliminary support for the presence of a symptom cluster in patients with lung cancer consisting of depression and fatigue. The cluster had a negative relationship with QOL. Survivors of lung cancer have depression and fatigue that affect QOL.

**Implications for Nursing:** Healthcare providers must assess the potential for symptoms to cluster, adversely affecting key patient outcomes such as QOL. Through increased knowledge of symptom clusters, clinicians will be able to more effectively target the most distressing set of symptoms for intervention.

Patients with lung cancer experience a variety of distressing symptoms, many of which begin prior to diagnosis and continue throughout the course of the disease and its treatments, adversely affecting functional status and quality of life (QOL). Treatment-related symptoms may exacerbate disease-related symptoms and further contribute to poorer QOL outcomes well into survivorship. Subjective symptoms such as depression, fatigue, and pain are common among all patients with cancer, including those with lung cancer, but often are underdiagnosed by clinicians, particularly once patients complete active treatment. Patients with lung cancer may experience a disproportionate level of symptom burden from diagnosis until death as compared to patients with other types of cancer (Cooley, 2000; Gift, Jablonski, Stommel, & Given, 2004). Part of the symptom burden experienced by patients with lung cancer may be the result of the simultaneous occurrence of symptoms, also known as "clustering" of symptoms.

Although clinicians long have noted that symptoms in cancer may occur together, research related to the clustering of symptoms in lung cancer is a relatively new area of investigation.

## Key Points . . .

- ▶ Lung cancer survivors experience distressing symptoms that occur simultaneously.
- ▶ Symptoms that occur together may have a synergistic effect on each other and on key patient outcomes such as quality of life (QOL).
- ▶ Depression and fatigue were significantly related to each other in this study of lung cancer survivors.
- ▶ Depression and fatigue explain a significant amount of changes in QOL in lung cancer survivors and form a symptom cluster as defined by Kim, McGuire, Tulman, and Barsevick (2005).

Because individual symptoms of lung cancer are associated with decreases in QOL (Cella et al., 2005), assuming that clusters of symptoms might have an even greater effect on QOL is logical. Therefore, the purpose of this secondary data analysis was to explore possible symptom clusters in patients with lung cancer and their relationship to QOL. The specific aims were to explore the prevalence and intensity of subjective symptoms such as depression, fatigue, and pain in people surviving lung cancer; examine the relationship of simultaneously occurring or clustered symptoms with each other; and examine the relationship of the symptom cluster to QOL.

## Theoretical Perspectives on Symptom Clusters

The theory of unpleasant symptoms suggests that symptoms cluster together, reinforce each other, and, as a result, influence outcomes such as QOL (Lenz, Pugh, Milligan, Gift, & Suppe, 1997). A symptom is defined as a "subjective experience reflecting the biopsychosocial functioning, sensations, or cognition of an individual" (Dodd, Miaskowski, & Paul, 2001, p. 466). Symptoms are multidimensional and can include perceptions of prevalence, intensity, and distress (Lenz

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Digital Object Identifier: 10.1188/06.ONF.931-936