Symptom Clusters in Patients With Gynecologic Cancer Receiving Chemotherapy

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OBJECTIVES: To describe ratings of symptom occurrence, severity, and distress for 38 symptoms and to identify and compare the number and types of symptom clusters identified using these ratings. Although patients with gynecologic cancer experience multiple co-occurring symptoms, little is known about how these symptoms cluster together.

SAMPLE & SETTING: Eligible patients (N = 232) had gynecologic cancer and were receiving chemotherapy.

METHODS & VARIABLES: Symptoms were assessed using the Memorial Symptom Assessment Scale. Symptom clusters were identified through exploratory factor analysis. Geomin-rotated factor loadings with absolute values of 0.3 or greater were considered meaningful. Factor solutions (i.e., symptom clusters) were assessed for simple structure and clinical relevance.

RESULTS: Lack of energy, hair loss, and "I don't look like myself" were the most common, severe, and distressing symptoms. Hormonal, respiratory, and weight change clusters were identified across all three dimensions.

IMPLICATIONS FOR NURSING: Research that explores how symptom clusters change over time and their underlying mechanisms is warranted.

KEYWORDS symptoms; symptom clusters; ovarian neoplasms; uterine neoplasms; chemotherapy
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More than 113,000 individuals in the United States are diagnosed with gynecologic cancer each year (Siegel et al., 2020). These patients experience a high burden from physical and psychological symptoms that is most acute during active treatment (Lefkowits et al., 2014). Chemotherapy is a mainstay of treatment for most patients with ovarian, fallopian tube, or primary peritoneal carcinoma; locally advanced cervical carcinoma; and recurrent, metastatic, or high-risk uterine carcinoma (Armstrong et al., 2019; Koh et al., 2018, 2019). Patients who receive chemotherapy experience an average of 10 co-occurring symptoms, and these co-occurring symptoms are associated with decreases in quality of life (Esther Kim et al., 2009). Nevertheless, most symptom management research in patients with gynecologic cancer has focused on the assessment and management of individual symptoms (del Carmen & Rice, 2017; Kim et al., 2015; Landrum et al., 2015; Wang & Woodruff, 2015).

Symptom clusters are comprised of multiple co-occurring symptoms that are related to each other (Miaskowski et al., 2017). Symptoms that are part of a symptom cluster may share common underlying mechanisms and may respond to a single treatment (Miaskowski et al., 2017). Identification of symptom clusters in patients with gynecologic cancer receiving chemotherapy may inform the development of novel interventions to improve multiple co-occurring symptoms. Although it is known that a patient's symptom experience is shaped not only by a symptom's occurrence but also by its severity and associated distress, it is unclear which dimension of the symptom experience should be used to identify symptom clusters de novo (Miaskowski et al., 2017).

Of the following five studies of symptom clusters in patients with gynecologic cancer, all identified symptom clusters using a single dimension of the