Ovarian Cancer Symptom Clusters: Use of the NIH Symptom Science Model for Precision in Symptom Recognition and Management

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BACKGROUND: In the United States, ovarian cancer remains the deadliest gynecologic cancer because most women are diagnosed with advanced disease. Although early-stage ovarian tumors are considered asymptomatic, women experience symptoms throughout disease.

OBJECTIVES: This review identifies ovarian cancer symptom clusters and explores the applicability of the National Institutes of Health Symptom Science Model (NIH-SSM) for prompt symptom recognition and clinical intervention.

METHODS: A focused CINAHL® and PubMed® database search was conducted for studies published from January 2000 to May 2022 using combinations of key terms.

FINDINGS: The NIH-SSM can guide the delivery of precision-focused interventions that address racial disparities and foster equity in symptom-focused care. Enhanced understanding of symptom biology can support clinical oncology nurses in ambulatory and inpatient settings.

AN ESTIMATED 20,000 WOMEN WILL BE DIAGNOSED with ovarian cancer and about 13,000 women will die of the disease in the United States in 2022 (Siegel et al., 2022). Four out of five women are diagnosed with advanced disease, which is attributed to the failure to identify ovarian tumors at an early stage because of a lack of adequate screening methods (Howlader et al., 2019; Torre et al., 2018). Although early-stage ovarian cancer is generally considered an asymptomatic disease and thus termed "a silent killer," women can experience symptoms prior to diagnosis (Bankhead et al., 2005; Jayde et al., 2009; Koldjeski et al., 2003; Lurie et al., 2010). However, in clinic settings, communication of symptoms and discrepancies in the description of symptoms between patients and clinicians present challenges to facilitating prompt diagnostic intervention. For example, women report not notifying their clinician of symptoms because of a lack of knowledge, intermittent occurrence, perceived degree of seriousness, and the assumption that symptoms are part of the normal aging process (Olsen et al., 2007; Williams et al., 2019).

Following diagnosis, women with ovarian cancer often undergo surgery and a series of chemotherapy regimens that result in additional symptoms. Ovarian tumors have an approximately 80% recurrence rate that can intensify symptom burden when women undergo additional cycles of treatment. Therefore, innovation in ovarian cancer symptom management approaches could help clinical oncology nurses distinguish women at risk, precisely screen for symptoms, develop effective preventive therapies, and improve overall treatment outcomes to optimize quality of life (QOL). In addition, multifactorial ovarian cancer disparities remain prevalent throughout various aspects of this disease. Symptom-related racial disparities are well described in cancer care and associated with poor treatment outcomes in underrepresented populations (Bulls et al., 2021; Samuel et al., 2018; Umaretiya et al., 2021). In-depth examination of racial differences in symptom burden in patients with ovarian cancer can facilitate improved precision in symptom-focused care among diverse populations of women. The purpose of this review is to (a) describe the symptoms that are associated with ovarian cancer throughout the course of disease and (b) explore