

# Palpitations and Co-Occurring Menopausal Symptoms in Women Prior to Breast Cancer Surgery

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**OBJECTIVES:** To determine the occurrence rate of palpitations in women prior to breast cancer surgery and evaluate for differences in demographic and clinical characteristics and menopausal symptoms in patients with and without palpitations.

**SAMPLE & SETTING:** Presurgery data on palpitations and menopausal symptoms from 398 patients who underwent breast cancer surgery were analyzed.

**METHODS & VARIABLES:** The Menopausal Symptoms Scale was used to evaluate the occurrence, severity, and distress of 46 symptoms, including palpitations. Parametric and nonparametric tests were used to evaluate for differences between patients with and without palpitations.

**RESULTS:** Women with palpitations had lower annual income, lower functional status, higher comorbidity burden, and higher rates of back pain than women without palpitations. Women with palpitations had twice the number of menopausal symptoms and had higher occurrence rates for 39 of the 45 menopausal symptoms. They reported significantly higher severity scores for difficulty concentrating, dizziness, swollen hands/feet, and wake during the night, and higher distress scores for anxiety, hot flashes, swollen hands/feet, and wake during the night.

**IMPLICATIONS FOR NURSING:** Clinicians should perform routine assessments of palpitations and make appropriate referrals to a cardiologist.

**KEYWORDS** breast cancer; palpitations; menopausal symptoms; breast-conserving surgery; mastectomy

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Breast cancer is the most common cancer in women (Siegel et al., 2021). Almost all patients with stages I, II, and III breast cancer and about half of patients with stage IV breast cancer will undergo surgery for breast cancer (DeSantis et al., 2019). Although menopausal symptoms are common in these patients and are associated with a lower quality of life (QOL) (Carpenter & Andrykowski, 1999; Carpenter et al., 2002; Gupta et al., 2006), most research has focused on vasomotor symptoms (e.g., hot flashes, night sweats). Emerging evidence suggests that palpitations are another common menopausal symptom (Carpenter & Andrykowski, 1999; Carpenter et al., 2002; Gupta et al., 2006). Palpitations may be experienced as missed, skipped, irregular, or exaggerated heartbeats or the sensation that one's heart is racing or pounding (Cho, 2006; Sievert & Obermeyer, 2012).

Understanding palpitations is important for several reasons. First, palpitations are reported by 42% and 54% of peri- and postmenopausal healthy women, respectively (Carpenter, Sheng, et al., 2021). Second, in healthy peri- and postmenopausal women, the occurrence of palpitations is associated with worse depressive symptoms and worse sleep disturbance, as well as higher levels of perceived stress and poorer QOL (Carpenter, Tisdale, et al., 2021). Third, patients with palpitations have higher rates of healthcare utilization and life-threatening arrhythmias. In the general population, regardless of gender, palpitations account for 16% of primary care visits and are the second leading reason for cardiologist visits (Raviele et al., 2011). Of note, palpitations that affect sleep and work (Thavendiranathan et al., 2009) and occur more frequently (Clementy et al., 2018) are more likely to be associated with serious, life-threatening arrhythmias.

Little is known about the occurrence, severity, and distress related to palpitations in women