

# Health-Related Quality-of-Life Outcomes: A Reflexology Trial With Patients With Advanced-Stage Breast Cancer

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**W**omen with advanced-stage breast cancer represent 38% of all women diagnosed with breast cancer each year, and they experience the burden of unmanaged symptoms resulting from the disease and its treatment (Grabsch et al., 2006; National Cancer Institute, 2011). Unmanaged symptoms lead to reduced health-related quality of life (HRQOL) (Cella et al., 2007; McMillan & Small, 2002). Although conventional medicine provides standard symptom care (primarily through pharmaceutical means), more than 80% of women with breast cancer turn to complementary and alternative medicine (CAM) for symptom management (Boon, Olatunde, & Zick, 2007). Among CAM therapies, reflexology is one specific choice reported by women with breast cancer (Lengacher et al., 2006).

Symptom management is critical during chemotherapy treatment, and women often experiment with CAM therapies without adequate basis for their safety and efficacy (Deyo, 2001; Weiger et al., 2002). This research is the first large-scale study to evaluate reflexology for safety and efficacy in relation to HRQOL outcomes for women with advanced-stage breast cancer undergoing chemotherapy and/or hormonal therapy. Safety outcomes included adherence to protocol and self-reported adverse events. Efficacy outcomes were physical functioning and emotional and physical symptom severity.

## Literature Review

Although the current state of the science is not based on numerous large-scale trials, findings suggest the potential benefit of reflexology as supportive care for physical and emotional symptoms among patients with cancer. A systematic review by Ernst (2009) included the following three cancer studies, which used reflexology. In Stephenson, Weinrich, and Tavakoli

**Purpose/Objectives:** To evaluate the safety and efficacy of reflexology, a complementary therapy that applies pressure to specific areas of the feet.

**Design:** Longitudinal, randomized clinical trial.

**Setting:** Thirteen community-based medical oncology clinics across the midwestern United States.

**Sample:** A convenience sample of 385 predominantly Caucasian women with advanced-stage breast cancer receiving chemotherapy and/or hormonal therapy.

**Methods:** Following the baseline interview, women were randomized into three primary groups: reflexology (n = 95), lay foot manipulation (LFM) (n = 95), or conventional care (n = 96). Two preliminary reflexology (n = 51) and LFM (n = 48) test groups were used to establish the protocols. Participants were interviewed again postintervention at study weeks 5 and 11.

**Main Research Variables:** Breast cancer–specific health-related quality of life (HRQOL), physical functioning, and symptoms.

**Findings:** No adverse events were reported. A longitudinal comparison revealed significant improvements in physical functioning for the reflexology group compared to the control group ( $p = 0.04$ ). Severity of dyspnea was reduced in the reflexology group compared to the control group ( $p < 0.01$ ) and the LFM group ( $p = 0.02$ ). No differences were found on breast cancer–specific HRQOL, depressive symptomatology, state anxiety, pain, and nausea.

**Conclusions:** Reflexology may be added to existing evidence-based supportive care to improve HRQOL for patients with advanced-stage breast cancer during chemotherapy and/or hormonal therapy.

**Implications for Nursing:** Reflexology can be recommended for safety and usefulness in relieving dyspnea and enhancing functional status among women with advanced-stage breast cancer.

(2000), use of reflexology significantly decreased anxiety in patients with breast and lung cancer. In Hodgson (2000), patients with cancer receiving palliative care demonstrated significant improvement