

Weight Gain and Quality of Life in Women Treated With Adjuvant Chemotherapy for Early-Stage Breast Cancer

Jennifer A. McInnes, RN, MSN, C-NP, and M. Tish Knobf, RN, PhD, FAAN

Purpose/Objectives: To document weight gain in women treated with adjuvant chemotherapy for early-stage breast cancer and to examine the relationship of weight gain and perceived quality of life (QOL).

Design: Descriptive, correlational study.

Setting: Data collected in three settings: an ambulatory oncology service of a university teaching hospital, a private oncology office, and a university-affiliated health clinic, all located in southern New England.

Sample: Women with stage I or II breast cancer with primary treatment of simple or modified mastectomy or breast-conserving surgery with radiotherapy scheduled to receive adjuvant chemotherapy.

Methods: Weight data collected through retrospective chart review. QOL data collected prospectively using the Linear Analog Self Assessment Symptom Distress Scale for Breast Cancer and the Functional Assessment of Cancer Therapy for Breast Cancer Scale.

Main Research Variables: QOL and weight gain of five pounds or more.

Findings: One year after treatment began, 62.5% of the study participants experienced weight gain ($\bar{X} = 10.44$ lb), with a range of 5–27 pounds. After two and three years, 68% and 40%, respectively, maintained a clinically significant weight gain. A greater weight gain occurred over time in premenopausal women. No correlation between overall QOL and weight gain existed, but selected items were significantly positively correlated with weight gain.

Conclusions: This study documented a significant weight gain in women treated with adjuvant chemotherapy for early-stage breast cancer. A large percentage of those women maintained this weight gain. Women premenopausal at diagnosis had a greater tendency to gain weight. Although weight gain was not correlated with overall QOL, it was distressing for these women.

Implications for Nursing Practice: Nurses can incorporate the possibility of weight gain into the plan of care for women with breast cancer. Nurses should include this information in education about side effects of treatment and in the ongoing nursing assessment of patients with breast cancer.

Key Points . . .

- Because of advances in diagnosis and treatment, a growing population of women is surviving breast cancer in this country. The quality of this survival is becoming an increasingly critical issue.
- Weight gain, a recognized problem associated with treatment for breast cancer, can have a negative impact on quality of life and overall health.
- Research-based interventions need to be developed to address the issue of weight gain in the breast cancer population.
- Nurses are in the ideal position to incorporate patient education about weight gain and interventions aimed at minimizing this side effect into individualized plans of care, therefore contributing to an improved quality of life for survivors of breast cancer.

developing breast cancer and the rate of increased survival, assessing the quality of survival and developing techniques to restore optimal functioning have become critical issues (Cella & Cherin, 1988; Holmes & Dickerson, 1987; King et al., 1997; Kornblith et al., 1993; Mock et al., 1997; Payne, 1992; Wyatt & Friedman, 1996; Wyatt, Kurtz, & Liken, 1993).

The primary treatment for early-stage breast cancer is modified radical mastectomy or breast conservation surgery with radiotherapy. Adjuvant chemotherapy includes the use of cytotoxic agents or hormone therapy and has become standard treatment for node-positive patients (Hortobagyi & Buzdar, 1995). Systemic adjuvant chemotherapy is aimed at eradicating occult micrometastatic disease and has been shown to decrease mortality in this population. However, this treatment modality is associated with significant side effects.

Sitzia and Huggins (1998) reported alopecia, fatigue, weight gain, difficulty sleeping, and night sweats as high incidence side effects associated with cyclophosphamide,

The American Cancer Society estimates that 192,000 women will be diagnosed with breast cancer in 2001 (Greenlee, Hill-Harmon, Murray, & Thun, 2001). Although breast cancer is estimated to account for 31% of new cancer diagnoses in 2001, it will account for only 15% of female cancer deaths (Greenlee et al.). Therefore, more women are living with breast cancer. With one out of eight American women

Jennifer A. McInnes, RN, MSN, C-NP, is a clinical nurse in hematology oncology at the Beth Israel Deaconess Medical Center in Boston, MA, and M. Tish Knobf, RN, PhD, FAAN, is an American Cancer Society professor of oncology nursing and an associate professor in the School of Nursing at Yale University in New Haven, CT. (Submitted May 2000. Accepted for publication December 5, 2000.)