

# Prospective Assessment of Fatigue and Health Status in Greek Patients With Breast Cancer Undergoing Adjuvant Radiotherapy

Maria Lavdaniti, RN, MSc, PhD, Elisabeth Patiraki, RN, PhD, Urania Dafni, PhD, Maria Katapodi, RN, MSc, PhD, Elizabeth Papathanasoglou, RN, MSc, PhD, and Anastasia Sotiropoulou, MD, PhD

**Purpose/Objectives:** To describe fatigue in women with breast cancer undergoing radiotherapy and to explore the impact of fatigue on their health status.

**Design:** Prospective, descriptive, repeated measures.

**Setting:** A major oncology center, Saint Savvas Cancer Hospital, in Athens, Greece.

**Sample:** Consecutive sample of 106 women (mean age =  $55 \pm 12$ ), with histologically confirmed diagnosis for stage I or II breast cancer who were receiving adjuvant radiotherapy for approximately six weeks.

**Methods:** Data were collected with the Revised Piper Fatigue Scale (PFS) and the Short Form-36 (SF-36) Health Survey Scale in the first two days of radiotherapy ( $T_0$ ), during the third week ( $T_1$ ), and during the last week of treatment ( $T_2$ ).

**Main Research Variables:** Fatigue, health status.

**Findings:** Across-subjects analysis revealed that fatigue increased during radiotherapy in patients with breast cancer regardless of stage, type of surgery, or whether they received chemotherapy ( $p < 0.05$ ). Between-subject analysis revealed that no differences existed in the PFS between different groups (chemotherapy versus no chemotherapy, breast conservation versus mastectomy, stage I versus stage II) at each measurement point. A negative correlation was found between the subscales of the PFS and all of the subscales of the SF-36.

**Conclusions:** Fatigue intensity increased significantly during the course of radiotherapy, and patients experienced a significant deterioration in their overall health status.

**Implications for Nursing:** Findings contribute to the growing body of evidence regarding fatigue and its impact on health status in Greek patients with breast cancer and provide insights for effective nursing assessment, patient education, and symptom management.

## Key Points . . .

- ▶ Radiotherapy is an independent factor that increases fatigue in patients with breast cancer receiving adjuvant treatment.
- ▶ Radiotherapy-induced fatigue significantly compromises the overall health status of patients with breast cancer.
- ▶ Fatigue in patients with cancer is a universal phenomenon, and research can focus on identifying patterns of treatment-related fatigue.
- ▶ Similar to nurses in other countries, Greek nurses should assess fatigue and implement appropriate interventions to help patients with symptom management.

More than 200,000 women will be diagnosed with breast cancer in 2006 in the United States, and although advances in diagnosis and treatment have reduced mortality rates, the disease remains the second leading cause of cancer deaths among women (American Cancer Society, 2006). In Greece, approximately 1,500 women are newly diagnosed with breast cancer every year, and an estimated 28% of annual female mortality is attributed to cancer, with breast cancer being one of the primary causes (Tountas, 2001).

Treatment protocols used in Greek patients with breast cancer are similar to those used in the United States. Radiotherapy is

Fatigue is the most prevalent symptom in patients with cancer (Graydon, Bubela, Irvine, & Vincent, 1995; Mock, 2003; Winningham et al., 1994), affecting 70%–95% of patients receiving chemotherapy, radiation therapy, or biotherapy (Jacobsen et al., 1999; Mock). It remains a disruptive symptom in 17%–40% of disease-free cancer survivors (Bower et al., 2000; Broeckel, Jacobsen, Horton, Balducci, & Lyman, 1998; Mock) and affects 85%–100% of patients in palliative care (Mock). Fatigue interferes with usual functioning and can disturb mood, concentration, perception, capacity to work, compliance with medical treatment, and the ability to perform usual daily activities (Irvine, Vincent, Graydon, Bubela, & Thompson, 1994; Mock).

*Maria Lavdaniti, RN, MSc, PhD, is an oncology nurse specialist at Agioi Anargiroi Cancer Hospital in Athens, Greece; Elisabeth Patiraki, RN, PhD, is an assistant professor, and Urania Dafni, PhD, is an associate professor of statistics, both in the Faculty of Nursing at National and Kapodistrian University of Athens; Maria Katapodi, RN, MSc, PhD, is an assistant professor in the School of Nursing at the University of Michigan in Ann Arbor; Elizabeth Papathanasoglou, RN, MSc, PhD, is an assistant professor in the Faculty of Nursing at National and Kapodistrian University of Athens; and Anastasia Sotiropoulou, MD, PhD, is the director of the Second Radiotherapy Department at Saint Savvas Cancer Hospital in Athens. (Submitted May 2005. Accepted for publication May 30, 2005.)*

Digital Object Identifier: 10.1188/06.ONF.603-610