

# Management of Cancer-Related Fatigue

**Andrea M. Barsevick, PhD, RN, AOCN<sup>®</sup>, Tracey Newhall, RN, BS, OCN<sup>®</sup>,  
and Susan Brown, RN, OCN<sup>®</sup>, CCRP**

Guidelines for the management of cancer-related fatigue (CRF) emphasize evidence-based strategies for reducing this common symptom in patients with cancer. Exercise has the largest body of data supporting its benefits in reducing CRF. Patient education and counseling also are considered integral to effective CRF management. Additional interventions can be pharmacologic or nonpharmacologic, although a combination of approaches may be employed. Several factors known to be associated with CRF may be particularly amenable to treatment.

**G**uidelines for the management of cancer-related fatigue (CRF) are available from both the National Comprehensive Cancer Network (NCCN) (Mock et al., 2007) and Oncology Nursing Society (ONS) (Mitchell & Friese, 2007). Current NCCN recommendations describe four categories of consensus regarding evidence for CRF management, whereas ONS guidelines use five categories of evidence for approaches to symptom management (Mock et al.; Mitchell & Friese) (see Table 1). This article will focus primarily on ONS guidelines for CRF management, although NCCN guidelines may be referred to when appropriate.

The clinical status of a patient with cancer (i.e., receiving active treatment, participating in long-term follow-up, or nearing end of life) will influence CRF management strategies. As described by Piper et al. (2008) in an article beginning on page 37 in this supplement, the initial fatigue evaluation is used to identify whether pain, emotional distress, anemia, insomnia, deconditioning, nutritional issues, or comorbidities are present. These factors, if present, will guide the management of moderate or severe CRF (Mock et al., 2007). The current ONS fatigue guidelines rate screening for and managing etiologic factors as strategies likely to be effective in fatigue management (Mitchell, Beck, Hood, Moore, & Tanner, 2007). Additional interventions can be pharmacologic or nonpharmacologic; in many cases, a combination of approaches is employed.

## Nonpharmacologic Interventions for Cancer-Related Fatigue

### Exercise

Strong evidence supports the benefits of exercise for CRF management. Numerous randomized, controlled clinical trials have evaluated exercise during and after treatment in patients with various malignancies; and the data have been the subject of several comprehensive meta-analyses and review articles (Courneya & Friedenreich, 1999; Galvao & Newton, 2005;

### At a Glance

- ◆ Evidence supports the benefits of exercise for patients with cancer-related fatigue.
- ◆ Education and counseling are essential in helping patients cope with cancer-related fatigue.
- ◆ Effective management of factors such as pain, insomnia, and distress also can reduce cancer-related fatigue.

Knols, Aaronson, Uebelhart, Fransen, & Aufdemkampe, 2005; NCCN, 2007; Schmitz et al., 2005; Stevinson, Lawlor, & Fox, 2004; Stricker, Drake, Hoyer, & Mock, 2004).

Exercise can effectively reduce CRF in various settings. During palliative care, for example, low-intensity exercise matched to patients' comfort levels was associated with improved quality of life (Oldervoll, Kaasa, Knobel, & Loge, 2003; Porock, Kristjanson, Tinnelly, Duke, & Blight, 2000). For patients receiving marrow or stem cell transplantations, positive studies have been conducted using aerobic interval training with appropriate monitoring (Dimeo, 2001). During chemotherapy and radiation therapy, home-based exercise programs have proven beneficial (Mock et al., 1994, 1997). Strength-resistance exercise has been used effectively in men with prostate cancer undergoing androgen-deprivation therapy (Segal et al., 2003; Stevinson et al., 2004).

Carefully considering which types of exercise may be beneficial is important. The current NCCN recommendation is to

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Andrea M. Barsevick, PhD, RN, AOCN<sup>®</sup>, is a director of nursing research, Tracey Newhall, RN, BS, OCN<sup>®</sup>, is a research nurse, and Susan Brown, RN, OCN<sup>®</sup>, CCRP, is a research nurse, all at Fox Chase Cancer Center in Philadelphia, PA. No financial relationships to disclose. (Submitted January 2008. Accepted for publication May 1, 2008.)

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