Why Am I So Tired All the Time?
Understanding Cancer-Related Fatigue

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Definition: Cancer-related fatigue (CRF) is a “persistent, subjective sense of tiredness related to cancer or cancer treatment that interferes with usual functioning” (National Comprehensive Cancer Network [NCCN] & American Cancer Society [ACS], 2005). Unlike other fatigue, CRF is not relieved by sleep or rest.

CRF is a significant issue for cancer survivors. Its etiology is multifactorial; it may be related to the disease itself, the cancer treatment, concurrent systemic disorders such as anemia, malnutrition, or renal insufficiency. Sleep disturbances may play a role for those with CRF, as well as lack of exercise, chronic pain, and emotional distress. See Figure 1 for a list of factors that can contribute to fatigue.

CRF will become more important as cancer survivors live longer and cancer itself is viewed as a chronic rather than terminal disease. Despite its prevalence, CRF often is not discussed by healthcare providers and their patients, and undertreatment is common (Portenoy, 2000). Oncology nurses must be familiar with the symptoms of and treatment for CRF and should assess their patients consistently.

Symptoms
Cancer survivors define their fatigue in myriad ways. Some may describe a decrease in activity levels or a negative mood, whereas others may report muscle weakness or a loss of mental alertness (Nail, 2002). As such, CRF can be experienced physically, mentally, or emotionally (Visovsky & Schneider, 2003), and symptoms of CRF may include a general lack of energy, shortness of breath, cognitive dysfunction, heart palpitations, and depressed mood (Winningham & Barton-Burke, 2000). NCCN (2006a) suggested that the symptoms of CRF are subjective: Only patients can define the extent of their fatigue and how it affects their quality of life.

Assessment
When assessing patients for CRF, oncology nurses must ask about fatigue levels since the previous visit rather than the current fatigue, because levels can fluctuate throughout the day or between treatments. NCCN and ACS (2005) recommended a verbal screen: “Since your last visit, how would you rate your worst fatigue on a scale of 0–10?” If a patient reports a fatigue level of 4 or greater, a more in-depth assessment is necessary. Patients should be questioned about the onset and duration of fatigue, as well as any patterns of fatigue that they may have noticed. For example, is the fatigue worse at certain times of day? Is the fatigue cyclic, in response to cancer treatment?

Oncology nurses also should ask patients about the following potential contributors to fatigue:

- Pain
- Emotional distress
  - Depression
  - Anxiety
- Sleep disturbances
- Anemia
- Poor nutritional intake
- Decreased level of activity
- Muscle wasting
- Comorbidities
  - Infection
  - Cardiac dysfunction
  - Pulmonary dysfunction
  - Renal dysfunction
  - Hepatic dysfunction
  - Neurologic dysfunction
  - Hypothyroidism

Figure 1. Factors That Can Contribute to Fatigue
Note. Based on information from National Comprehensive Cancer Network & American Cancer Society, 2005.
about what improves or aggravates the fatigue, as well as to what extent it interferes with their overall function (see Figure 2).

Patients should be educated about CRF and given strategies for coping with it. Several assessment tools are available as well, including the Functional Assessment of Cancer General Scale, the Brief Fatigue Inventory, and the Linear Analog Scale Assessment (LASA). The Oncology Nursing Society (ONS) has adapted the LASA scale (which reflects fatigue in terms of words), a 0–10 scale, and cartoon figures (see Figure 3). This is an ideal tool for non-English-speaking patients and patients with lower reading levels. Because fatigue is a subjective experience, patients’ self reports should be the primary assessment finding. Patients with cancer should be evaluated for fatigue at regular intervals throughout their treatment trajectory, and assessment should be continued well after treatment ends because CRF can persist in disease-free cancer survivors (Mock, 2003).

**Diagnosis**

No diagnostic tests screen for CRF, but the following laboratory tests may be conducted to assess for the etiology of fatigue (NCCN, 2006a).

- Complete blood count
- Transferrin
- Total iron-binding capacity
- Ferritin
- Iron levels
- Folic acid
- B₁₂ level
- Thyroid function tests

**Treatment and Nursing Care**

Treatment for CRF includes nonpharmacologic and pharmacologic interventions. Oncology nurses can teach their patients about nonpharmacologic interventions such as exercise, which has been shown to reduce fatigue and improve quality of life in women with breast cancer, and the energy conservation techniques listed in Figure 4 (Nail, 2002). In fact, exercise is the only recommendation for practice in the ONS Putting Evidence Into Practice (PEP) card on fatigue (Mitchell, Beck, Hood, Moore, & Tanner, 2006). Interventions likely to be effective according to the ONS PEP card include screening and managing etiologic factors, energy conservation and activity management, education, optimizing sleep quality, relaxation, and massage and healing touch.

Good sleep hygiene and adequate rest can help to reduce fatigue, but many patients experience insomnia or hypersomnia (NCCN & ACS, 2005). Those conditions can be treated nonpharmacologically with consistent naps and bedtimes, avoiding caffeine and stimulating activity before bedtime, and avoiding long or late-afternoon naps (Berger et al., 2002). Oncology nurses can encourage restorative activities to reduce fatigue as well, allowing patients to clear their minds and focus on something in nature, such as watching birds, a sunset, or a fire in a fireplace (Cimprich, 1993).

**Energy-Conservation Techniques for Patients With Cancer**

- Plan and organize your work ahead of time.
- Schedule breaks to rest.
- Pace yourself moderately.
- Practice proper body mechanics.
- Limit work that requires reaching over your head.
- Avoid work that increases muscle tension (e.g., isometric exercise).
- Avoid prolonged exposure to extremes of temperature (e.g., long, hot baths; cold weather).
- Prioritize your activities—do what is truly important.
- Delegate, delegate, delegate.

**Nutrition**

- Meet your basic calorie needs.
- Eat a diet high in protein.
- Drink plenty of liquids (at least eight cups per day).
- Take a vitamin supplement.
- Consult a dietitian.

**Exercise**

- Speak with your healthcare provider before starting an exercise program.
- Start slowly, and try to exercise at least three times weekly.
- If you are stiff, sore, or exhausted, you are doing too much—exercise with moderation.
- Try swimming, brisk walking, indoor stationary cycling, or low-impact aerobics.

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**Figure 2. Questions to Ask Your Patients About Cancer-Related Fatigue**

*Note.* Based on information from National Comprehensive Cancer Network & American Cancer Society, 2005.

**Figure 3. Oncology Nursing Society Fatigue Scale**

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**Figure 4. Nonpharmacologic Interventions for Cancer-Related Fatigue**

*Note.* Based on information from CancerSymptoms.org, n.d.; Haines, 2005.
Pharmacologic interventions also can be used to treat CRF. If fatigue is caused by anemia, erythropoietin can increase hemoglobin levels and decrease transfusions (Schwartzberg et al., 2004; Waltzman et al., 2005). Increased hemoglobin levels are associated with increased energy and activity levels and overall quality of life (Littlewood, Bajetta, Nortier, Vercammen, & Rapoport, 2001). Epoetin alfa and darbepoetin alfa are approved by the U.S. Food and Drug Administration for chemotherapy-induced anemia (NCCN, 2006b).

Antidepressants are appropriate when patients suffer from depression. Depression is common in patients with cancer and must be assessed by oncology nurses (Madden, 2006). Hypnotics can be helpful for patients who experience insomnia, and psychostimulants such as methylphenidate have been used in patients with advanced cancer (Bruera et al., 2003).

Oncology nurses should educate patients and their families about CRF. CancerSymptoms.org is an award-winning resource from ONS that is available to patients with cancer and oncology nurses. It offers tips on managing CRF, as well as techniques for energy conservation, delegation, and communication with caregivers and healthcare providers. Oncology nurses also can teach their patients to self-monitor their fatigue levels and to report significant changes to their physicians.

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References

Call for Institutes and Open Sessions: 2007 IOL
The Institutes of Learning (IOL) Team invites Oncology Nursing Society (ONS) members to submit ideas for institutes or open sessions to be offered at the 2007 IOL held from November 9–11, 2007, in Chicago, IL. The IOL Team will make decisions regarding institutes, content, and speakers at its January 2007 meeting.

An institute provides three or six hours of intense training on a cutting-edge topic of interest, and the 90-minute open sessions focus on a variety of clinical and current healthcare issues.

Requirements: name of institute or open session, rationale, brief content outline, and identification of potential speakers
Deadline: Submit an idea for an institute or open session online at www.ons.org/ccCentral by December 12, 2006.

Selection of topics, content, and speakers is the sole responsibility of the IOL Team. Decisions of the IOL Team regarding content are based on identified ONS member learning needs.