

# Fatigue and Physical Activity in Older Patients With Cancer: A Six-Month Follow-Up Study

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**C**ancer is predominantly a disease affecting older patients. Forty-two percent of new cancer cases in Canada occur among patients aged 70 years or older; 27% occur in Canadian patients aged 60–69 years (Canadian Cancer Society/National Cancer Institute of Canada, 2008). Cancer-related fatigue (CRF) is a highly prevalent and distressing symptom that is associated with decreases in physical activity, functional status, and quality of life regardless of diagnosis, treatment, or prognosis (Dagnelie et al., 2007; de Jong, Candel, Schouten, Abu-Saad, & Courtens, 2006; Glaus, 1993; Loge, Abrahamsen, Ekeberg, & Kaasa, 2000; Mock et al., 1997; Nail & Jones, 1995; Stone, Richards, A'Hern, & Hardy, 2001). Physical activity has strong supporting evidence as a nonpharmacologic intervention for CRF (Dimeo, 2001; Galvao & Newton, 2005; Knols, Aaronson, Uebelhart, Fransen, & Aufdemkampe, 2005; Mitchell, Beck, Hood, Moore, & Tanner, 2007; National Comprehensive Cancer Network [NCCN], 2003; Penedo, Schneiderman, Dahn, & Gonzalez, 2004); however, the relationship between physical activity and CRF in older patients has not been reported in the literature.

NCCN (2003) defines CRF as “a persistent, subjective sense of tiredness related to cancer or cancer treatment that interferes with usual functioning” (p. 310). CRF is associated with all cancer treatment modalities (Irvine, Vincent, Bubela, Thompson, & Graydon, 1991; Irvine, Vincent, Graydon, Bubela, & Thompson, 1994; Jacobsen & Stein, 1999; Lawrence, Kupelnick, Miller, Devine, & Lau, 2004) and affects 70%–100% of patients receiving cancer treatment (Ahlberg, Ekman, Gaston-Johansson, & Mock, 2003). CRF often is not addressed because healthcare practitioners may not be aware of practice guidelines (Mock, 2001; Mock, McCorkle, & Krumm, 2003) and patients may not report their fatigue (Donovan & Ward, 2005; Stasi, Abriani, Beccaglia, Terzoli, & Amadori, 2003). Untreated CRF may result in a decrease or discontinuation of physical, recreational, and social activities; delays in treatment; dose limitation; discontinuation of therapy; or withdrawal from clinical

**Purpose/Objectives:** To determine the relationship between fatigue and physical activity in older patients with cancer.

**Design:** Targeted analysis using data from a prospective longitudinal study.

**Setting:** A cancer care facility in southeastern Ontario, Canada.

**Sample:** 440 patients, aged 65 years and older, seeking consultation for cancer treatment at a regional cancer clinic for lymphoma or leukemia or lung, breast, genitourinary, head or neck, gastrointestinal, or skin cancers.

**Methods:** Self-report questionnaires were mailed to consenting participants and completed at baseline and three and six months after consultation for cancer treatment.

**Main Research Variables:** Participants rated fatigue and physical activity and reported comorbidities and personal demographic characteristics. Clinical measures of disease and treatment factors were obtained through chart abstraction.

**Findings:** Fatigue was the most prevalent symptom reported. Higher fatigue was associated with lower physical activity levels. Physical activity level significantly predicted fatigue level, regardless of age.

**Conclusions:** Physical activity level is a modifiable factor significantly predicting cancer-related fatigue at three and six months following consultation for cancer treatment. The results suggest that physical activity may reduce fatigue in older patients with cancer.

**Implications for Nursing:** Physical activity interventions should be developed and tested in older patients with cancer.

cal trials (Camarillo, 1991; Ferrell, Grant, Dean, Funk, & Ly, 1996; Nail & Jones, 1995; Skalla & Rieger, 1995; Visovsky & Schneider, 2003; Whedon, Stearns, & Mills, 1995). Factors contributing to CRF in older patients include immobility, deconditioning, sleep disorders, poor nutrition, drugs affecting the central nervous system, organ system decline, and the presence of pain or other symptoms (Curtis, Krech, & Walsh, 1991; Duthie, 2004; Given, Given, Azzouz, Kozachik, & Stommel, 2001; Portenoy & Itri, 1999).