

# Keep Moving: Patients With Myeloma Talk About Exercise and Fatigue

Sharon K. Coon, PhD, RN, AOCN<sup>®</sup>, and Elizabeth Ann Coleman, PhD, RNP, AOCN<sup>®</sup>

**Purpose/Objectives:** To learn about the feelings, beliefs, and experiences of patients with multiple myeloma implementing an exercise program in the context of an aggressive tandem peripheral stem cell transplant protocol.

**Research Approach:** Qualitative naturalistic (constructionist).

**Setting:** International referral center for the treatment of multiple myeloma.

**Participants:** Purposive nonprobability sample of 12 men and 9 women with multiple myeloma aged 38–70 enrolled in the exercise arm of a randomized trial of epoetin alfa with or without exercise as an intervention to decrease cancer-related fatigue.

**Methodologic Approach:** Verbatim transcripts of tape-recorded, in-depth interviews analyzed for thematic content using content analysis and constant comparison.

**Findings:** Themes included (a) belief systems, which encompassed participants' beliefs about exercise and epoetin alfa, philosophy, and self-concept, (b) social context, which included life before cancer, social environment, and social system congruence, and (c) intersection between belief systems and social context, which were participants' experience appraisals. All participants believed that exercise could be helpful and would recommend exercise to other patients with cancer in a similar situation. Most believed that lack of activity contributed to decreased energy.

**Main Research Variable:** Patients' experience of implementing exercise in the context of treatment for multiple myeloma.

**Conclusions:** Complex interactions between participants' beliefs and social context and experience appraisal influenced their ability to adhere to an exercise program during aggressive treatment for multiple myeloma.

**Interpretation:** Through careful assessment, clinicians can capitalize on belief and social systems that support adherence to exercise as an intervention to ameliorate fatigue for patients with cancer who are undergoing prolonged aggressive treatment.

## Key Points . . .

- ▶ Patients with multiple myeloma can safely carry out a home-based exercise program aimed at reducing cancer-related fatigue.
- ▶ Commitment to keeping their promise to exercise helped participants to continue their exercise program during times when they were not feeling well.
- ▶ Encouragement from family and healthcare professionals facilitates adherence to an exercise program.
- ▶ Many participants avoided taking time off from exercise because they had experienced dramatic declines in their strength and stamina after interruptions to their exercise program. However, most patients needed to reduce the exercise intensity or take time off from exercise immediately following chemotherapy.

the outlook for a disease that until recently was considered incurable. However, the aggressive phase of the treatment lasts nearly a year, and maintenance therapy, which includes interferon  $\alpha$ , continues for another year. All patients undergoing such an aggressive treatment protocol can expect to experience cancer-related fatigue (CRF); therefore, early intervention and management are important in maintaining patients' functional status and quality of life.

## Cancer-Related Fatigue

Fatigue is widely regarded as one of the most pervasive and distressing consequences of cancer and cancer treatment. CRF can affect virtually all aspects of patients' lives (Curt, 2000). For patients undergoing bone marrow or stem cell transplants for hematologic malignancies, studies suggest that

**M**ultiple myeloma is a B cell malignancy of the plasma cells of the immune system. Approximately 45,000 Americans are living with the disease (Multiple Myeloma Research Foundation, 2002) and 15,270 are expected to be diagnosed in 2004 (American Cancer Society, 2004). In multiple myeloma, aberrant plasma cells make large numbers of monoclonal antibodies that crowd out normal immune and blood-forming cells in the bone marrow, leading to frequent infections and anemia. These abnormal antibodies also cause increased osteoclastic activity in the bone that leads to the most common presenting symptoms of bone pain and fractures (Lokhorst, 2002).

Patients with multiple myeloma undergoing conventional treatment have a median survival of less than three years (Barlogie et al., 1997). Tandem autologous peripheral blood stem cell transplantation (PBSCT) significantly improves the chance for partial or complete remissions and longer survival with the possibility that some patients may be considered cured (Tricot et al., 2002). This is a remarkable advance in

*Sharon K. Coon, PhD, RN, AOCN<sup>®</sup>, is a clinical assistant professor in the College of Nursing and Arkansas Cancer Research Center, and Elizabeth Ann Coleman, PhD, RNP, AOCN<sup>®</sup>, is a professor in the College of Nursing and College of Medicine, both at the University of Arkansas for Medical Sciences in Little Rock. Funding from an American Nurses Foundation; Ada Sue Hinshaw, RN, Scholar Award; American Cancer Society Doctoral Scholarship in Cancer Nursing; and Cornelia Beck Gerontology Research Award supported this study. The Arkansas Cancer Research Center at the University of Arkansas for Medical Sciences contributed partial salary support. (Submitted June 2003. Accepted for publication October 1, 2003.) (Mention of specific products and opinions related to those products do not indicate or imply endorsement by the Oncology Nursing Forum or the Oncology Nursing Society.)*

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