

■ CNE Article

# Development of an Evidence-Based Exercise and Education Cancer Recovery Program

Ruth E. Van Gerpen, RN, MS, APRN-CNS, AOCNS®, and Betsy J. Becker, PT, MPT, CLT-LANA



Photo courtesy of Bryan Medical Center.

Cancer-related fatigue is one of the most common and distressing side effects experienced by patients with cancer. Increased activity and exercise have been shown to significantly impact cancer-related fatigue and are beneficial during and after treatment. This article describes the development and implementation of a 12-week evidence-based exercise and education program for cancer survivors in a community medical center. Participants consistently reported significant improvements in fatigue, depression, sleep disturbances, pain, and quality of life. The improvements were independent of the type of cancer, extent of disease, or treatment status. Additional benefits described by participants were support, a sense of belonging, and being understood.

Ruth E. Van Gerpen, RN, MS, APRN-CNS, AOCNS®, is a clinical nurse specialist at Bryan Medical Center in Lincoln, NE, and Betsy J. Becker, PT, MPT, CLT-LANA, is an assistant professor in the Division of Physical Therapy Education at the University of Nebraska Medical Center in Omaha. The authors take full responsibility for the content of the article. The authors did not receive honoraria for this work. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the authors, planners, independent peer reviewers, or editorial staff. Van Gerpen can be reached at [ruth.vangerpen@bryanhealth.org](mailto:ruth.vangerpen@bryanhealth.org), with copy to editor at [CJONEditor@ons.org](mailto:CJONEditor@ons.org). (Submitted January 2013. Revision submitted March 2013. Accepted for publication April 7, 2013.)

Digital Object Identifier:10.1188/13.CJON.539-543

Cancer-related fatigue (CRF) is one of the most common and distressing side effects experienced by patients with cancer and is more severe and prevalent in patients receiving treatment (Sood & Moynihan, 2005). In patients with metastatic disease, the incidence of CRF exceeds 75% (National Comprehensive Cancer Network [NCCN], 2013). Cancer survivors report persistent fatigue for months and even years following completion of treatment. CRF seldom occurs in isolation; rather, it more often occurs with sleep disturbance, emotional distress such as depression or anxiety, and pain (NCCN, 2013).

## Background

Well-established evidence from randomized, controlled trials supports increased physical activity and exercise as an intervention to significantly impact CRF during and following cancer treatment (Cramp & Bryon-Daniel, 2012; Litterini & Jette, 2011; Stricker, Drake, Hoyer, & Mock, 2004). Of the nonpharmacologic interventions recommended by the NCCN (2013) and the Oncology Nursing Society Putting Evidence Into Practice resources (Mitchell & Beck, 2009), exercise has the strongest evidence for treating fatigue. Quality of life, sleep disturbances (Young-McCaughan et al., 2003), pain, and depressive symptoms also have been shown to improve with exercise (Visovsky & Dvorak, 2005). In addition, evidence suggests that psychosocial interventions that include education, stress

management, and support groups improve energy and reduce fatigue (Knobf, Musanti, & Dorward, 2007; Schwartz, 2007).

## Program Development

LifeSpring, an exercise and education program for individuals with cancer, was developed in 2007 to impact CRF. The brainchild of an oncology clinical nurse specialist (CNS) and director of health enhancement services, the program was created using the successful model from cardiac rehabilitation (American Association of Cardiovascular and Pulmonary Rehabilitation, 1999) and the increasing evidence in the oncology nursing and physical therapy literature on the impact of physical exercise on CRF. Led by a physical therapist, an interdisciplinary team of medical and radiation oncologists, general surgeons, nurses, and cancer survivors provided input into the structure, content, and format of the program. For additional insight, information on participant recruitment and retention, program design, education session topics, screening tools, and anecdotal reports of successes and failures from other cancer recovery programs were obtained through phone interviews with program leaders.

The program is provided at no cost to participants. Funding is provided by the medical center's foundation and covers the cost of t-shirts with the LifeSpring logo, resistance bands for home use for each participant, handout materials, snacks, and balloons to release at graduation. The therapist time for planning, preparation, and session facilitation is reimbursed by the foundation. Honoraria for several speakers (e.g., art therapist, women's health