

Physical Rehabilitation for Cancer Patients

Carolinas HealthCare System Levine Cancer Institute (LCI) Blue Ridge has maintained accreditation by the American College of Surgeons (ACS) Commission on Cancer (COC) for many years. Each calendar year, the Cancer Committee at LCI Blue Ridge develops and disseminates a report of patient or program outcomes to the public. This year the Cancer Committee has chosen to report on the outcomes of physical rehabilitation for cancer patients at LCI Blue Ridge.

Cancer rehabilitation is a growing area in oncology due to the continuous increase in the number of cancer survivors. Recent data from the National Cancer Institute indicates that as of January 2016, there are 15.5 million cancer survivors in the United States and their number is projected to increase to 20.3 million by 2026 and to 26.1 million by 2040. Currently 62% of cancer survivors in the United States are age 65 or older and it is estimated that this percentage will increase to 74% by 2040.

Advances in early detection and treatment the main reasons behind the recent increases in the number of cancer survivors. However, cancer treatment often results in short term and long term side effects such as, for example; fatigue, pain, lymphedema, nerve damage, or deconditioning. Around the time of the passage of the National Cancer Act in 1971, physical therapy and rehabilitation services were recognized to be an important part of care delivery to cancer patients.

Rehabilitation is a treatment or treatments designed to facilitate the process of recovery from injury, illness, or disease towards normal function and improvement in quality of life. Evidence based research has shown that physical therapy during and after cancer treatment can reduce some of the debilitating effects of cancer and its treatment. Cancer rehabilitation can improve physical strength and functional recovery, increase a patient's ability to care for themselves and improve the ability to manage symptoms of cancer and/or its treatment such as fatigue, pain, or sleep difficulty. Cancer rehabilitation remains an important but nationally underutilized medical service for cancer patients.

Levine Cancer Institute Blue Ridge recognizes that cancer rehabilitation is an important component of an individualized treatment plan for cancer patients and increased our utilization of that service in 2016, with the assistance of Oncology Rehab Partners, an outside consulting firm. Oncology Rehab Partners provided our cancer center with clinician and patient education and provided the tools needed to provide evidence based cancer rehabilitation and measurement of patient outcomes. Prior to implementing the educational program and process changes to facilitate referral to rehabilitation services approximately 3% of our cancer patients were referred for rehabilitation. After the above measures were put in place by the end of 2016 the utilization of rehabilitation services for cancer patients had increased to 7.8%.

Patient outcomes assessed by several metrics showed significant improvement. A Visual Analog Scale, a measurement instrument that measures a characteristic or attitude, was utilized to measure pain, fatigue and distress prior to initiating rehab and at discharge. The Functional Assessment of Chronic Illness Therapy (FACIT) measurement system is a collection of health related quality of life questionnaires which target the management of chronic illness and is appropriate for use in patients with any form of cancer. The table below summarizes our results:

Measurement	Before rehabilitation	After rehabilitation
Pain Visual Analog Scale	2.00	1.00 (lower is better)
Fatigue Visual Analog Scale	4.25	3.25 (lower is better)
Distress Visual Analog Scale	1.50	1.00 (lower is better)
FACIT – G Total Score	62.0	26.33 (higher is better)
FACIT – F	82.25	32.89 (higher is better)

Patient satisfaction with rehabilitation services was also measured scoring a composite score of 44.29 of a maximum possible score of 50.

Female cancer patients utilizing rehabilitation services outnumbered male cancer patients almost three to one. Breast cancer patients have an increased risk of lymphedema which is greatly improved with the use of rehabilitation services. The highest percentage of cancer patients utilizing rehabilitation services was between the ages of 66-69. Rehabilitation services were provided to cancer patients with varying tumor sites, including but not limited to; breast, lung, colorectal, brain, ovarian, and head and neck cancer.