

Implementation of an oncology exercise and wellness rehabilitation program to enhance survivorship: the Beaumont Health System experience

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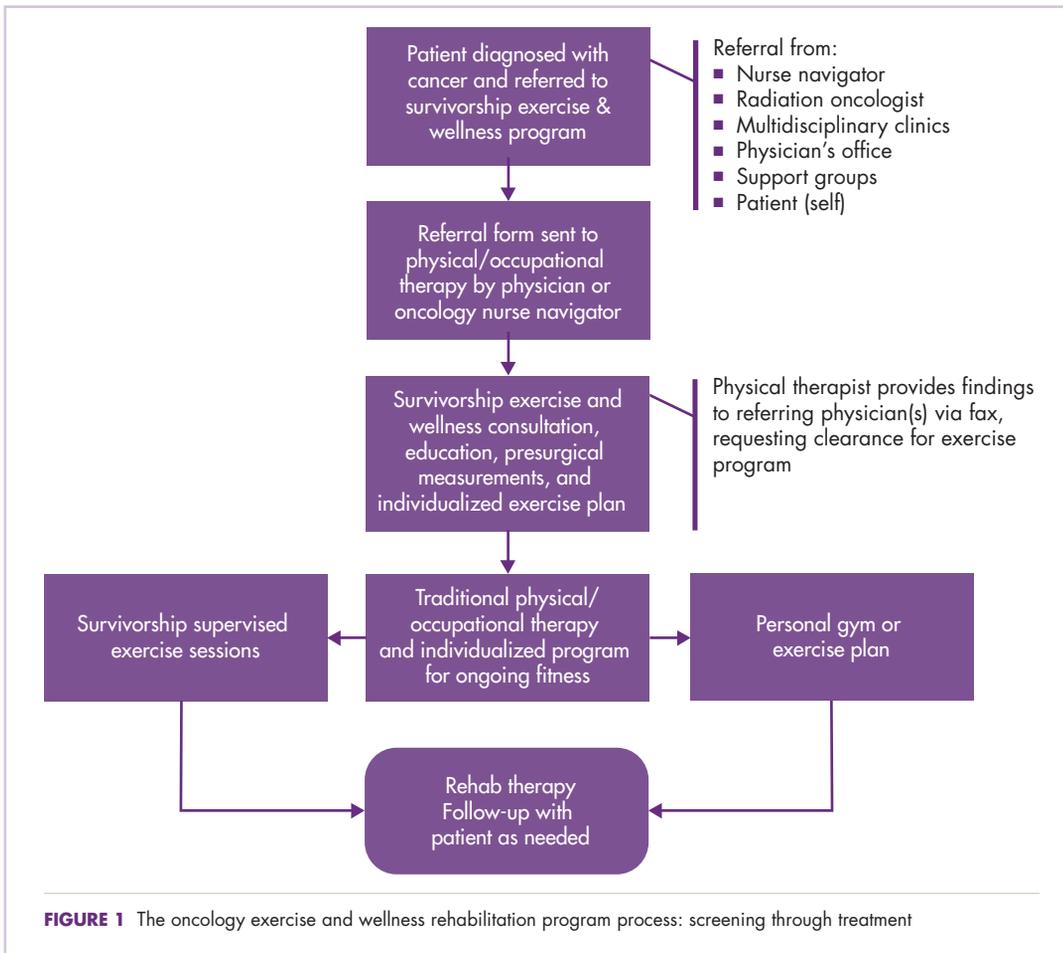
We developed a multidisciplinary approach to oncology rehabilitation by setting up a physical therapy screening program in a dedicated multidisciplinary clinic to improve survivorship care in the community oncology setting. In June 2011, an oncology rehabilitation program was launched as part of the overall survivorship program to provide patients with an introduction to cancer services, consultation with multiple clinicians, education about their diagnoses, and recommendation for rehabilitation services during or after treatment. The consultation was in conjunction with specialists at the multidisciplinary clinics that were already established within the organization. A dedicated and trained oncology physical therapist participated in the comprehensive multidisciplinary discussion. From the beginning of the program in June 2011 until December 2012, 288 patients (231 women and 57 men) entered the oncology exercise and wellness rehabilitation program. The establishment of the program improved the quality of care for cancer patients as demonstrated by the number of patients screened before treatment recommendations. The program also served the need for continued health and wellness for those in survivorship.

In 2012, there were more than 13.7 million cancer survivors in the United States.¹ Integrated survivorship education and care is essential as the national data show consistent growth in the number of cancer survivors, with the expected growth to nearly 18 million survivors by 2022. When a patient receives a diagnosis of cancer, primary cancer care focuses on treatment planning rather than the proactive integration of interventions to mitigate deconditioning side effects associated with chemotherapy and radiation therapy. Prospective planning for early physical therapy assessment and an individualized exercise regimen into a single initial treatment plan at the time of diagnosis is needed to limit postoperative complications, improve patient function and quality of life, increase quality of care, and thus reduce the costs of treatment through improved patient outcomes and reduced readmission rates.

To meet the changing standards for cancer care, the Beaumont Cancer Institute (BCI) collaborat-

ed with multiple clinical specialties in the development of an oncology exercise and wellness rehabilitation program to enhance cancer survivorship and to improve the quality of life for patients. The introduction of this program complemented the existing survivorship services at the institute that include the resource centers, dietary classes, social work services, and support groups. The need to facilitate the change in clinical practice has stemmed from a number of reports on post treatment cancer care. The 2006 Institute of Medicine report, *From Cancer Patient to Cancer Survivor: Lost in Transition*, has played a key role in accelerating research and clinical efforts to understand and improve the quality of care and long-term outcomes for a growing population of cancer survivors, including the development of models of care to meet their needs.² The National Comprehensive Cancer Network and American Society of Clinical Oncology have led efforts in conjunction with the National Cancer Institute to develop specific survivorship care plans for each

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measurements. This delay in care usually led to extra treatment visits for the patient to restore mobility. From 2008 to 2010, there were 81,100 visits, and 55 patients referred to physical therapy for lymphedema. This new program represents a shift in how institutions care for patients who are diagnosed with cancer and it departs from the traditional care paradigm of engaging the patients after impairment or disability occurs.¹⁰ The services focus on sustaining wellness and are coordinated through a continuum of care managed by an oncology nurse navigator. Consultations with physical therapists before the disruption of functionality empower the patient by educating them about their diagnosis and treatment course and how to prevent disability. If functionality is not hampered, then im-

disease state and to incorporate them into the treatment guidelines.^{3,4} The American College of Surgeons Commission on Cancer has made it mandatory for its accredited institutions to have survivorship care plans in place for every patient by 2015.⁵ These recommendations and changes prompted the evolution of the BCI program to meet the recommendations of these bodies and to better manage cancer patients after treatment.

The goal of the Beaumont Oncology Exercise and Wellness Rehabilitation Program is to empower patients to maintain their own health and commitment to healing through an individualized program that is proactively developed by health care professionals at the time of a patient's diagnosis. In recognizing that it is more difficult to restore functionality after a musculoskeletal impairment or disability such as lymphedema occurs, health care professionals from multiple disciplines are consulted to provide critical education and services to patients earlier than the traditional model of care promotes.⁶⁻⁹ Before starting the program at Beaumont in 2011, patients were referred to physical therapy only when a physician or patient noticed the presence of lymphedema after treatment. There was no prescreening assessment to determine the baseline

improvement in overall performance status through exercise and nutrition consultations in the survivorship programs helps channel the positive energy of the patients and curbs depression or anxiety about cancer recurrence. This complements the treatment plan defined by the patient's physician, bringing together patients and health care providers to promote optimal outcomes before, during, and after cancer treatments. Engaging the physical therapist at the time of diagnosis and cancer treatment is beneficial and empowers the patient to take control of their health and wellness. In addition, patients in our exercise and wellness program have a direct contact person to work with in the physical therapy department on an ongoing basis if they choose to do so.

These efforts required the engagement of multiple departments, all with their own clinical and operational priorities, to reach a consensus about how to provide quality care to our patients. Clinical and organizational champions promoted the development of mutually beneficial relationships across the disciplines, recognizing the potential impact that such collaboration could have on the lives of the patients we serve. Consideration and close consultation among the survivorship program team evaluates cancer

FIGURE 1 The oncology exercise and wellness rehabilitation program process: screening through treatment

pathology and staging, cancer treatment modalities, evolution of common side effects, timing of education and interventions, prevention activities, varying intensity of interventions, research and emerging evidence-based practice, and a progressive rehabilitation plan of care and diet across the continuum of care.¹¹

The team

Patients were referred to the multidisciplinary clinic (MDC) by primary care physicians, surgeons, medical and radiation oncologists, and through self referral. The space for the MDC was located in the Beaumont Cancer Institute, which houses medical and radiation oncology offices and a dedicated cancer resource center to allow patients further education on their specific disease. Each MDC is coordinated by a center of excellence medical director (oncologist) and a dedicated oncology nurse navigator. The service was also offered in the acute care setting where the physical therapist specializing in oncology joined the multidisciplinary rounds on the inpatient unit. Patients who would benefit from outpatient services continued their treatment in the survivorship program, however the inpatient population was not included in this analysis.

Oncologists

The oncologists who were managing the patients care through the MDC process included the medical, surgical, and radiation oncologists. All 3 specialties were present when cases were discussed with the patient and their families. Recommendations for complimentary services were given by the group including traditional physical therapy, dietary, integrative medicine, and clinical trials.

Physical therapists

The MDC visit included a visit with the certified oncology physical therapist within the clinic. The oncologist would recommend evaluation for the patients that were eligible for therapy; however, not every patient chose to be evaluated. The physical therapists performed their evaluation and provided a recommendation to the patient. These therapists are dedicated to the oncology-patient population and are involved from initial evaluation through the management of treatment and survivorship. Patients have given our program positive feedback on this continuity of care with their own designated physical therapist.

Dieticians

Patients could receive dietary support from a certified oncology dietician if they so requested. The dietician is available not only during the MDC visit, but also during the inpatient and outpatient stages. Although the dieticians report through the institution's Department of Nutritional Services, they are active members of the cancer program. Survivors can also attend nutritional courses at the institu-

tion that are hosted by the hospital chef and oncology dietician. These courses include healthy eating options, product evaluation, and live cooking demonstrations.

Research nurse and referral to clinical trials

An oncology certified research nurse is present at every MDC conference that is held and provides recommendations for potential clinical trials for which the patient may be eligible. The Beaumont Cancer Institute is part of the National Cancer Institute's Community Clinical Oncology Program and has a number of open protocols that evaluate the role of survivorship in the care of the oncology patient.

Clinic process

The MDC provided a forum for patients to be evaluated not only by the medical specialist but also by an array of ancillary team members including a nutritionist, social worker, cancer geneticist, integrative medicine physician, physical and occupational therapist, speech and language specialist, and financial service administrator. Each patient was evaluated by their medical leader and nurse navigator to determine what additional services they would need for their care. In cases where patients needed either traditional physical, occupational, or speech therapy, a therapist specialized in oncology would be available to evaluate the patient for range of motion, strength and functional deficits. When the consultation was completed, there were 4 options each patient was presented regarding their condition:

- A prescription for traditional physical therapy;
- Referral to the Beaumont exercise and wellness program;
- Patient sent to either their personal gym of choice or independent home program with an exercise plan; or
- Active surveillance.

Each plan was in conjunction with the treatment plan that was discussed at the MDC. To make sure that the patient had the correct level of care and exceptional experience, a pathway was designed to easily navigate each patient to the appropriate care site for their treatment (Figure). Patients who needed traditional physical therapy were referred to one of the Beaumont outpatient clinical sites. For patients who chose to enroll into the survivorship exercise and wellness program, this was either covered by their insurance or they paid a nominal fee to have a specific program designed for them by a physical therapist and supervision of their exercise program by a physical therapy assistant. This provides survivors the opportunity to exercise in a clinical setting with other survivors not open to the general public. The remaining patients had care plans specifically designed for them and opted to go to a location of their choice.

Since the inception of the program at the Beaumont Troy hospital in June 2011 through December 2012, the multidisciplinary team consulted with 288 patients (231

TABLE 1 Patient characteristics

Characteristic	Number (%)
Total no. of patients	288
No. of patients screened	259
Age, y	
Median	60
< 20	2 (0.7)
20-39	13 (4.5)
40-59	129 (44.8)
60-79	132 (45.8)
≥ 80	12 (4.2)
Gender	
Male	57 (19.8)
Female	231 (80.2)
Diagnosis	
Breast	199 (69.1)
Colorectal	8 (2.8)
Gastrointestinal	1 (0.3)
Genitourinary	30 (10.4)
Gynecology	1 (0.3)
Head and neck	14 (4.9)
Leukemia	3 (1.0)
Melanoma	2 (0.7)
Myeloma	3 (1.0)
Other	27 (9.4)
Treatment	
Traditional PT/OT	133 (51.4)
Exercise and wellness	69 (26.6)
Customized plan	57 (22.0)

PT/OT, physical therapy/occupational therapy

women and 57 men) with a median age of 60 years. All the patients were automatically referred to the oncology trained therapist during their MDC visit or referred directly by the referring provider. The primary diagnosis of this patient group was breast cancer (69.1%) however it included several other cancer types including colorectal, head and neck, leukemia and other (Table). These results are similar to other prospective surveillance programs where breast cancer is the primary diagnosis or only disease focused area for rehabilitation. This program allowed the opportunity for all patients who experienced a MDC visit this service.

The therapist screened 259 patients during the initial consultation, which represented 89.9% of the total number of patients who were referred to the program. The remaining 29 patients from the original group refused evaluation. From this group, 133 patients were found to have an impairment requiring a formal physical therapy intervention. Of these patients, 40 (30.1%) had direct physician referrals to the physical therapist for evaluation and therapy before treatment. For those patients who did not qualify for a traditional physical therapy intervention, recommendations were given for other methods for continued exercise to improve overall health. Individual care plans were developed for 126 patients by the physical therapist to meet

their needs for continued exercise after treatment. A total of 69 (26.6%) patients received a formal recommendation to enroll into the exercise and wellness program at the hospital. These patients had formal supervision in the hospital based facility and were monitored for any issues. Those 57 patients (22.0%) who chose to continue their program at their gym of choice or at home, followed up with their referring provider; and if an issue arose, were referred back to the physical medicine department for evaluation.

The initiation of the Beaumont Oncology Exercise and Wellness Rehabilitation Program has been met with overwhelming support and satisfaction from the clinical staff and community. The initial barrier for the program was getting enough physical therapists certified in oncology and working with the physicians to understand the benefit of exercise and wellness in the management of their cancer patients. This was done through a number of presentations across different medical disciplines and at tumor boards. With those efforts and patient satisfaction for the service, physicians became more comfortable in changing practice patterns to benefit their patients. Patient satisfaction has been high as evidenced by responses to surveys at the end of the multidisciplinary process. From the returned surveys, 97% of the respondents rated the experience a 4-5 on a scale of 1-5, with 5 being the highest and 1 the lowest.

Since the medical staff has become fully supported in the intervention of physical therapy into cancer care, this program has been adopted across the health care system as a standard of care not only in the outpatient environment but also through the continuum of care in the inpatient environment as well. The cancer patients also have appreciated the opportunity to be more proactive in their health and wellness throughout the cancer care process. Out of the 133 patients who were referred to physical therapy, 53 of them decided to continue their care through the exercise and wellness program at the hospital. The transition of these patients from traditional therapy to survivorship was seamless due to the fact that both programs occupied the same space. These survivors continue to find value in coming to the institution for their post treatment care.

Impact to survivors

Given the increasing number of patients with cancer and overall improvement in the clinical management and outcomes of patients, it is important that health care providers address the physical impairment and improve functionality during active treatment and once it is completed. Our program provides a forum for the assessment and treatment prospective for patients needing traditional physical therapy or willing to enroll in an exercise and wellness program. The establishment of this program allowed the cancer team the ability to enhance the survivorship model that was currently in place at the institution. The feedback that the BCI has received from the initial consultation to the post treat-

ment program has been overwhelmingly positive. Patients are starting to refer their friends and family to the BCI for their care due to the comprehensive nature of these services. The care team will continue to find ways to incorporate these types of initiatives into the overall survivorship care plan for each of our patients moving forward. These programs empower patients to take charge of their health and optimize their physical and emotional well-being.

References

1. American Cancer Society. Cancer Treatment and Survivorship Facts & Figures 2012-2013. Atlanta: American Cancer Society; 2012. <http://www.cancer.org/acs/groups/content/@epidemiology-surveillance/documents/document/acspc-033876.pdf>. February 12, 2013. Accessed February 12, 2013.
2. Hewitt M, Greenfield S, Stovall E, eds. *From Cancer Patient to Cancer Survivor: Lost in Transition*. Washington, DC: The National Academies Press; 2006.
3. National Comprehensive Cancer Network. Clinical Practice Guidelines in Oncology. http://www.nccn.org/professionals/physician_gls/f_guidelines.asp#survivorship. Accessed March 20, 2013.
4. American Society of Clinical Oncology. ASCO Treatment Summaries. <http://www.cancer.net/survivorship/asco-cancer-treatment-summaries>. Accessed February 11, 2013.
5. American College of Surgeons Commission on Cancer. Cancer Program Standards 2012: Ensuring Patient Centered Care. <http://www.facs.org/cancer/coc/programstandards2012.pdf>. February 11, 2013.
6. Stout N, Pfalzer L, Springer B, et al. Breast cancer-related lymphedema: comparing direct costs of a prospective surveillance model and a traditional care model of care. *Phys Ther*. 2012;92:152-163.
7. McNeely M, Binkley J, Pusic A, Campbell KL, Gabram S, Soballe PW. A prospective model of care for breast cancer rehabilitation: postoperative and postreconstructive issues. *Cancer*. 2012;118(8 Suppl):2226-2236.
8. Gerber LH, Stout NL, Schmitz KH, Stricker CT. Integrating a prospective surveillance model for rehabilitation into breast cancer survivorship care. *Cancer*. 2012;118(8 Suppl):2201-2206.
9. Cheville AL, Troxel AB, Basford JR, Kornblith AB. Prevalence and treatment patterns of physical impairments in patients with metastatic breast cancer. *J Clin Oncol*. 2008;26:2621-2629.
10. Oeffinger KC, McCabe MS. Models for delivering survivorship care. *J Clin Oncol*. 2006;24:5117-5124.
11. Chubak J, Tuzzio L, Hsu C, et al. Providing care for cancer survivors in integrated health care delivery systems: practices, challenges, and research opportunities. *J Oncol Pract*. 2012;8:184-189.