Striving to improve patient-reported outcomes for cancer survivors as the war wages on

For all intents and purposes, the war on cancer has waged on for over four decades. During this time, a cure has not been found, but scientific advancements have uncovered and made many remarkable breakthroughs in the areas of cancer detection and treatment. So remarkable in fact that the diagnosis of cancer for many is no longer a death sentence, but rather a chronic illness. Today, there is an estimated 13.8 million cancer survivors in the United States alone [1].

The ever-growing population of cancer survivors has swiftly gained the attention of clinicians and researchers alike. To keep up with the evolution of cancer, the field of cancer survivorship has emerged to meet the needs of patients across the cancer disease trajectory. The creation of this sub-specialty has highlighted the critical needs of survivors not only at diagnosis and treatment, but also well after. Thus, a natural transition in focus has occurred from predominantly curative to a broader scope, which includes the long-term physiological, psychological and psychosocial complications of the disease and treatment [2]. With this transition, a strong foundation of knowledge has been laid for the growth and development of the domain of cancer survivorship. However, this progress has also confirmed just how much work still needs to be done to better understand and manage the unique dimensions and challenges experienced by cancer survivors [2, 3].

As with any chronic disease, cancer survivors have diverse and individual health care needs that span the entire disease trajectory from diagnosis to post-treatment [2]. The continued needs for these patients emerge as a result of long-term sequelae of cancer and its treatment, and may include large organ toxic effects, chronic pain and/or fatigue, as well as psychosocial issues, such as post-traumatic stress disorder, distress, anxiety and/or depression [4, 5]. For example, current evidence suggests that even cancer survivors with a high performance status (KPS >70) have significantly decreased cardiopulmonary capacity [6].

These cardiopulmonary impairments are a result of anticancer treatment and secondary effects from the treatment [6]. Thus, health care providers are challenged to manage both the acute and chronic sequelae that burden cancer survivors, while at the same time limiting as many additional side-effects as possible for their patients.

Given the challenges highlighted above, one potential intervention increasingly being examined as a method to manage, both the physiological and psychological consequences for cancer survivors, is physical activity. The known benefits of physical activity in the general population include: improved organ function, psychological well-being [7], increased energy and more restful sleep [8].

Even more pertinent to oncology clinicians is the growing body of research that also supports such benefits of physical activity in cancer survivors. Specifically, a meta-analysis of physical activity trials in cancer survivors supports the significant beneficial effects of physical activity on upper and lower body strength [9]. Additional findings suggest that prescribed physical activity has shown moderate improvements in the areas of physical activity level, aerobic fitness, overall quality-of-life, fatigue, as well as more general symptoms and side-effects [9, 10].
While the benefits of physical activity are known, there are currently a pandemic of individuals who live a sedentary lifestyle [11]. Changing long-term established habits such as incorporating physical activity into a regular schedule is difficult. This is especially true for cancer survivors who are often left deconditioned after treatment and may not see the relevancy or benefit of physical activity [12]. However, the diagnosis of cancer is considered a ‘teachable moment’ and thus an opportune time to begin promoting lifestyle changes that may improve long-term health and quality of life [13]. Additionally, findings examining the needs of cancer survivors report that survivors desire more information regarding physical activity [14].

In this issue of Annals of Oncology, Midtgaard, et al. report the findings of a randomized, controlled, clinical trial that examines the efficacy of a 12-month exercise-based rehabilitation program for cancer survivors who are post-treatment [15]. This study is novel in that it applies a randomized design testing the effects of both a counseling component as well as an exercise-based intervention on improvements to cardiopulmonary fitness. The counseling component, which was developed from previously tested work, is designed to assist the study participant in achieving behavior modification’s necessary to sustain long-term lifestyle habits. Another advantage of this study is that it followed participants for 12 months, providing valuable data over the length of the study.

Results from the Midtgaard et al. study confirm the findings from previous studies that upper body strength is improved with the addition of physical activity in cancer survivors. Promising results supporting statistical improvements in cardiopulmonary fitness also surfaced. These are findings that add to a body of knowledge that is still developing in the cancer survivor population. Results from this study that are more likely to be observed and appreciated by the participants themselves are the improvements to psychological (depression) and mental health. Such improvements may provide the added incentive for participants to continue with the efforts to make physical activity a regular aspect of their daily routine.

A limitation of the study by Midtgaard et al. is that the vast majority of participants included patients with breast cancer. Current physical activity research has been conducted predominantly with patients diagnosed with breast cancer. Future studies examining other cancer diagnosis and specifically those examining survivors who have the greatest need are necessary [9].

In this day and age, writing a prescription for physical exercise may be seen as a curse or a blessing. While, the advantages of confidently prescribing physical activity have the potential to contribute to changes in health care practice, placing the patient in the seat of a co-pilot in managing and maintaining their health status. In order to safely prescribe physical activity to our patients, more information is necessary. Further investigation that specifically reports adverse events, the dosage of exercise, as well as extending periods of study follow-up and congruent outcome measures are necessary, so clinicians can better discern the benefits versus the risks of physical activity for their patients [9, 10, 16].

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disclosure
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