Jonathan K. Ehrman, PhD, ACSM-CEP, FACSM
Editor-In-Chief, *J Clin Exerc Physiol*
Chair, Henry Ford Institutional Review Board
Associate Director, Preventive Cardiology
Edith and Benson Ford Heart & Vascular Institute
Henry Ford Medical Group, Detroit, MI

Inserting Clinical Exercise Physiology Into the Continuum of Cancer Care

The past decade has seen an explosion of evidence linking the performance of physical activity and purposeful exercise with the reduction of risk of several general type of cancer (e.g., breast, prostate, colon, endometrium, and possibly pancreatic cancer). Also, cardiorespiratory fitness (i.e., oxygen consumption or metabolic equivalents of task) has been repeatedly shown to have an inverse relationship to these types of cancer where high fitness is related to a risk reduction. And emerging data is suggesting that physical activity, along with other modifiable risk factors, may improve the risk of cancer recurrence and survival (1). This information has propelled the recommendation of physical activity and exercise into the continuum of cancer care for both those actively receiving treatment and those in the survivorship phase (1,2).

In general, oncology providers appear to be aware and supportive of the benefits of exercise along with proper nutrition and weight management in the long-term care of their patients. A 2019 survey of more than 900 providers throughout the world reported that more than 80% 'agreed' or 'strongly agreed' that they have a responsibility to recommend adequate physical activity as part of a patient's care regimen (3). This same report stated that more than 80% assess a patient's physical activity level both during active treatment and during visits after the completion of active treatment (i.e., survivorship phase). However, 90% either 'agreed' or 'strongly agreed' that they needed more knowledge and resources to address obesity and diet (and presumably exercise, although this was not specifically asked), and almost 70% stated that physical activity interventions should be performed by other clinical staff that have the relevant expertise in addressing patients' physical activity needs. However, the rate of referral described as 'always' or 'most of the time' to weight management programs or a registered dietician (or again, presumably to a clinical exercise program) was only 25% to 42%, respectively. Barriers to referral included poor reimbursement and a lack of resources available for referrals to occur.

Another recent paper reviewed the feasibility of embedding clinical exercise services within clinical oncology settings (4). They reported finding data within published studies from more than 30 programs (1 in Canada and the rest in Australia) and concluded that locations where patients are referred to and perform exercise in a program setting are both feasible and effective. However, like the previous described study, barriers exist including provider awareness, which affects program use. Without a consistent flow of referrals, programs have difficulty with sustainability due to a lack of resources.

I interpret these data as a call for those with training in clinical exercise physiology. Our profession is gaining traction, and a key to a continuance of this direction is to develop and provide clinical exercise expertise to both traditional populations (i.e., cardiac) and emerging diseased populations (i.e., oncology). Understanding the benefits of clinical exercise oncology programs as well as barriers affecting use and sustainability are important. But we also must continue to train and educate both rising and *seasoned* physiologists about specific populations with respect to how their disease or condition is affected by exercise, and how exercise training might require specific modifications. For instance, actively treated cancer patients may be affected by fatigue, anemia, disease progression, unwellness, and other disease-specific barriers. And we also need to continue to build the clinical exercise physiology literature with respect to specific populations. In cancer, I believe the tremendous increase in publications related to exercise physiology will continue and we are likely to see large, federally funded exercise training studies being conducted that will most certainly provide sorely needed information. In the meantime, we need to continue to make gains in the integration of clinical exercise services in the cancer care continuum. This process will be slow, but we need to keep moving forward because our patients deserve it.

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