Why cancer survivors need to move more:
Building an Alberta exercise program

S. Nicole Culos-Reed, PhD, ACE Study Co-Lead; Tanya Williamson, BKin, CEP, Calgary ACE Coordinator; Christopher Sellar, PhD, ACE Project Coordinator; Margaret McNeely, PT/PhD, ACE Study Lead

Introduction

Improvement in cancer treatment is increasing the number of cancer survivors, with approximately 100,000 Albertans living with, or beyond, a diagnosis of cancer.1 This growing population highlights the long-term impact of cancer and its therapies on the body, mind and overall health of survivors. Within survivorship care, there is a need to focus on how to live in the aftermath of intensive therapy with an altered body and possible mental or emotional changes. We need to take action to improve both the life expectancy and quality of life of cancer survivors across Alberta.

Survivorship care and exercise

As the focus continues to grow on the “what happens after cancer treatment” questions, the role of lifestyle behaviours is becoming paramount. Lifestyle behaviours include such things as nutrition, sleep, stress-reduction and exercise, and they have been the focus of growing research.2 Within the cancer and exercise research specifically, there is consistent and supportive evidence of a positive impact on fitness, physical and psychosocial outcomes, quality of life, and in some cases, survival, for cancer survivors who engage in exercise during survivorship.2-6

Despite the known benefits of exercise, including the prevention of secondary cancers, less than one third of cancer survivors self-report that they are meeting the minimal public health guidelines for physical activity.2 This level is below the self-reported estimates of the general population (52%) and likely overestimates the true proportion of survivors who are physically active.7

Based on estimated cancer incidence rates in Alberta and self-reported physical activity rates among survivors, it is likely that over 70% of newly diagnosed cancer survivors in 2015 would have been classified as inactive prior to initiation of cancer treatment.

SUMMARY

Although research evidence has shown strong benefits from exercise for cancer survivors, exercise programming has not been part of the care provided to survivors in Alberta until recently.

This article highlights the Alberta Cancer Exercise (ACE) study, which aims to build a clinic-to-community model that ensures exercise becomes part of cancer survivorship care.
Despite the known benefits of exercise, including the prevention of secondary cancers, less than 1/3 of cancer survivors self-report that they are meeting the minimal public health guidelines for physical activity.\(^8\)

**Work to date**

Building upon the research, the next step involves knowledge translation — taking the evidence and implementing it into practice. Currently, there exists a gap between what the health system supports (i.e., healthy lifestyle behaviours) and what is delivered in the community (i.e., services). While cancer survivors are advised by healthcare professionals to engage in exercise, and guidelines for exercising in cancer survivorship exist,\(^9\) there is a lack of cancer-specific exercise programs and cancer-trained exercise specialists in Alberta outside of the research setting.\(^10\)

Our initial implementation work has included:

- the development of the Breast Cancer Survivors Engaging in Activity while Undergoing Treatment (BEAUTY) program offered in Calgary,\(^10\)
- the TrueNTH Lifestyle Management (LM) program\(^11\) for prostate cancer survivors available nationally,
- and most recently, the Alberta Cancer Exercise (ACE) pilot study (funded by the M.S.I. Foundation) and current ACE implementation study (funded by Alberta Innovates) being rolled out provincially.\(^12\)

While BEAUTY and TrueNTH LM were designed specifically for breast and prostate cancer survivors, respectively, both the ACE pilot and ACE implementation studies are for survivors with all types of cancers.

ACE is a 12-week free exercise program open to any cancer survivor who is within 3 years post-treatment. ACE is designed to be delivered in a community setting in a group-based format with exercise that is adapted and tailored to the needs of the participants, and it is led by trained fitness instructors. On the research side, ACE includes baseline, post-intervention and 2 follow-up (24 weeks and 1 year) assessments, plus an evaluation of physical fitness, cancer-related symptoms, and health-related quality of life outcomes. In addition, an economic analysis of the program (costs and savings) will be completed.

ACE programming began in January 2017, with the successful implementation of multiple sites in both Calgary and Edmonton. Key community partners in these initiatives include the City of Calgary Recreation, YMCA Calgary, YMCA Edmonton and Wellspring cancer centres (Calgary and Edmonton). To date, 199 Alberta cancer survivors have enrolled in ACE. The next ACE program sessions begin in the Fall 2017 in Calgary, Edmonton, Medicine Hat and Red Deer. Future plans include offering ACE resources (education and/or community-based programming) in Grande Prairie, Lethbridge and Fort McMurray.
Clinic-to-community model

Several key factors are essential in the development of a clinic-to-community model to facilitate a sustainable ACE program. First, education of the healthcare providers (HCPs) must occur. This ensures that there is a base knowledge of the role of exercise in cancer survivorship, which facilitates referral from the HCP to the exercise professional.

Second, an exercise professional must be available to proceed with referral, further screening, and triage to an appropriate ACE program. The ACE coordinators at the two sites facilitate this role as Certified Exercise Physiologists (CEPs), and they are working with community fitness professionals to build strong communication from the clinic to community personnel and settings.

Third, education of fitness professionals in the community is a requirement. Specifically, ACE fitness professionals must be trained on how to adapt exercise for cancer survivors. It is clear that while the guidelines provide the generalities of exercise in cancer survivorship, to be truly impactful, the professionals implementing programs must be able to further tailor and individualize programs to meet the unique needs of cancer survivors. These include factors beyond the exercise prescription per se, including physical concerns (e.g., tissue restrictions in movement due to surgery or symptoms of cancer-related fatigue), psychosocial factors (e.g., dealing with stress, anxiety or depression, enhancing mood and self-esteem), and practical concerns (e.g., how to address barriers to engaging in regular activity).

ACE utilizes Thrive Health Services online training (www.thrivehealthservices.com) plus provides additional in-person support for delivery of the ACE program. Finally, ACE requires building community partnerships with fitness facilities that can host the ACE program. This ensures that ACE can be offered in communities close to the survivors’ homes, reducing access barriers and facilitating longer term maintenance of an active lifestyle.

The aim of ACE is to build a clinic-to-community model that ensures exercise becomes part of cancer survivorship care. For participants, the goal of ACE is to support safe and effective exercise and provide the resources to enable continued exercise participation — at their ACE facility or wherever they choose — and thus, provide a means for participants to experience better quality of life in cancer survivorship.

For more information, contact ace@ucalgary.ca for information about Calgary and area programs, or frmace@ualberta.ca for information about Edmonton and area programs.
ABOUT THE AUTHORS

S. Nicole Culos-Reed, PhD, is the ACE Study Co-Lead and a Professor in the Faculty of Kinesiology at the University of Calgary.

Tanya Williamson, BKin, CEP, is a Certified Exercise Physiologist and the Calgary ACE Coordinator.

Christopher Sellar, PhD, is the ACE Project Coordinator.

Margaret McNeely, PT/PhD, is the ACE Study Lead and an Associate Professor in the Department of Physical Therapy, Faculty of Rehabilitation Medicine at the University of Alberta.

REFERENCES


