



Hybrid Effectiveness- Implementation Study



Land Acknowledgement

We acknowledge that we are on traditional territories of the many First Nations, Métis, and Inuit in Alberta whose footsteps have marked these lands for centuries.

We are grateful to work, live and learn on the traditional territory of Treaty 6, 7, 8.

Declaration

I have no financial, proprietary or non-financial interests to disclose that are relevant to the content of this presentation.

Today's Talk



- ◆ Alberta Cancer Exercise (ACE) Study
- ◆ EXCEL Project: Julianna Dreger



Cancer & Exercise Guidelines: American College of Sports Medicine



Exercise is safe and feasible during treatment

- Improves physical functioning, fatigue and QOL
- Avoid inactivity and return to normal daily activities as soon as possible following diagnosis



After treatment, exercise is essential for recovery and fitness

- Improves some physical side-effects, and growing evidence for others
- Enhances overall well-being and QOL



Individualization and tailoring are necessary

- Fitness levels, biological sex, age, disease status – cancer type
- Social support
- Access to resources/programs, exercise preferences, consideration of barriers

About ACE?

A 5-year study funded through Alberta Innovates and the Alberta Cancer Foundation.

Evaluating the benefit from, and implementation of, an Alberta wide exercise program for individuals with cancer:

- Clinic-to-community model of care
- **Patient-centered** and evidence-informed program

◆ *Enrolment for this phase was completed fall 2021*

The ACE Research Team



Margaret McNeely, PT, PhD
Lead & Principal
Investigator North



Nicole Culos-Reed, PhD
Co-Lead & Principal
Investigator: South



Chris Sellar, PhD
Project Coordinator –
North: Red Deer,
Edmonton & Grande
Prairie



**Tanya Williamson, BKin,
CEP**
Research Coordinator –
South: Calgary &
Lethbridge

Key Oversight Activities



CLINIC: Screening & Referral

- Screening cancer survivors for safety
- Triage to appropriate programming
- Tailored to needs
- Hub-based CEP support



COMMUNITY: Delivery & Implementation

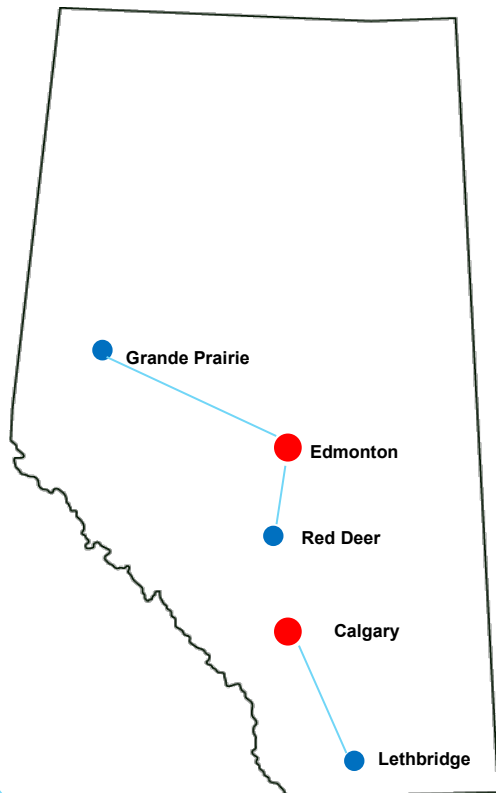
- Online
- Close to survivor's home
- **Supported programming**
- Address barriers and facilitators



Professional Training

- Provide cancer specific training to community-based exercise specialists
- Increased network
- Increase HCP knowledge

Where is ACE happening?



SPRING 2022 Session Started in April

In-person: Edmonton (5 sites), Red Deer (1 site), Calgary (6 sites) and Lethbridge (1 site)

Virtual: Grande Prairie, Edmonton, Red Deer, and Calgary - open to individuals from any site in the province

Day-time and evening classes offered!

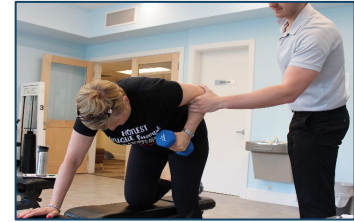
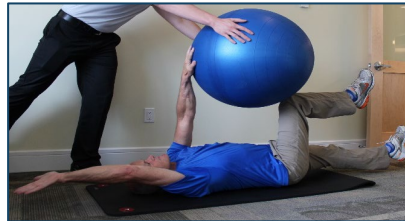


What does the ACE exercise program involve?

Group Circuit classes



Group personal training



Virtual group training

12-week no-cost program: twice a week for one hour



Fee-for-Service
Maintenance
Programming

Who can take part in ACE?

- Individuals with any type or stage of cancer
- On surveillance, prehab, on-treatment, and within 3 years of completing treatment
- Be able to participate in low to moderate intensity exercise
- 18+ years of age
- Able to consent in English

Approvals: high risk cancers, metastatic disease, high symptom burden, comorbid disease

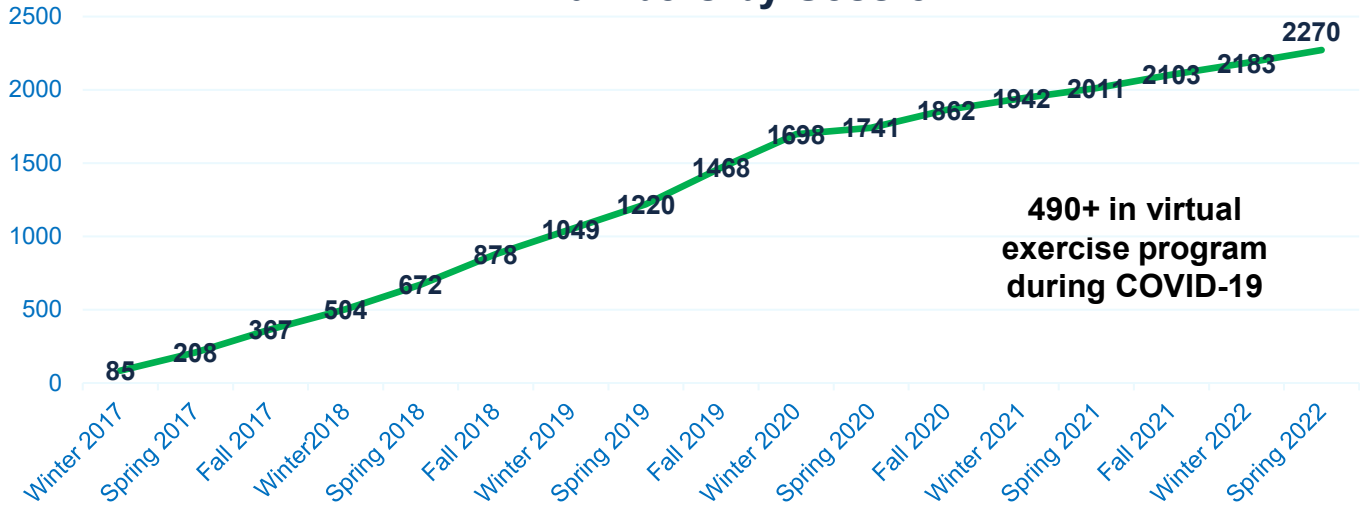
Not appropriate for community: unable to ambulate or transfer independently, cognitive issues, seizures

Why ACE?

“I found the location to be “safe and non intimidating”. I also appreciated the customized workout/ alternatives for my specific cancer condition”

Enrollment

ACE Numbers by Session

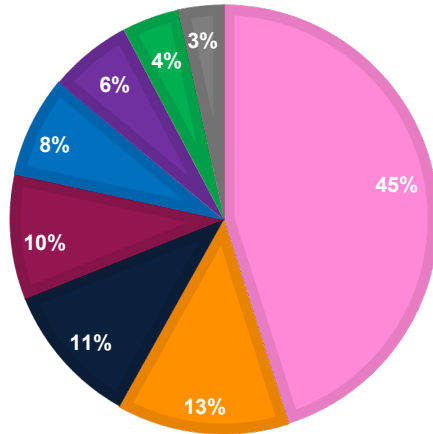


**490+ in virtual
exercise program
during COVID-19**

**Less than 1/3 of normal recruitment during pandemic
Per patient cost ~ 40% higher for virtual**

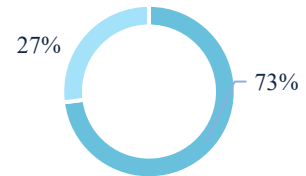
ACE participants

- Breast
- Hematologic
- Genitourinary
- Digestive
- Other
- HNC
- Neurological
- Lung



Biological Sex	Females	Males
2017-20	70%	30%
COVID-19	80%	20%

Stage of Cancer



- Early Stage
- Advanced

AGE	Mean Age	Median Age	Age Range
2017-20	57.8 years	59 years	18-91 years
COVID-19	55.8 years	56 years	18-87 years

ACE Results

(first 1000 participants)



Quality of Life EQ-5D-5L VAS	Baseline	12-week	Change
	67.5	72.8	5.3



Sit-to-Stand (Reps/ 30s)	Baseline	12-week	Change
	15.3	18.3	3 reps



6 Minute Walk	Baseline	12-week	Change
	551m	587m	36 m



1 RM leg strength	Baseline	12-week	Change
	167.5	213.5	46 lbs

One-year Physical Activity Follow-up Data

Non-metastatic cohort (N = 872 at one-year)		
Physical Activity Category (number/ percent)	Baseline	One-Year
Sedentary (no moderate or strenuous physical activity)	350 (40%)	217 (25%)
Insufficiently Active (1-149 mins of physical activity/ week)	310 (36%)	322 (37%)
Active (150+ mins of physical activity/ week)	212 (24%)	333 (38%)
Total Number	872 (100%)	872 (100%)

**Statistically significant: $p < 0.001$*

Economic Evaluation of ACE: Threshold Analysis

Program Cost per Person *	\$587 (95% CI: 532 – 681)
Threshold: Minimum QALY required to be Cost-Effective	0.012 (95% CI: 0.011 – 0.014)
Expected QALY improvement (published evidence)	0.022 (95% CI: -0.06 – 0.12)
Probability ACE is Cost-Effective **	59%
AHS rates; CI = Confidence Interval; *2021 Canadian Dollars; **Applying same conditions of previous literature	

**** Includes: administration, screening, baseline fitness assessment, 12-week exercise program, post-programming fitness testing + 24-week and 1-year follow-ups***

ACEResults

“This program has encouraged me to keep active. My fatigue level has decreased during the course of the program. This has allowed me to pursue my other interests which is much appreciated. The support of the instructors has been wonderful.”

Summary

ACE Works!

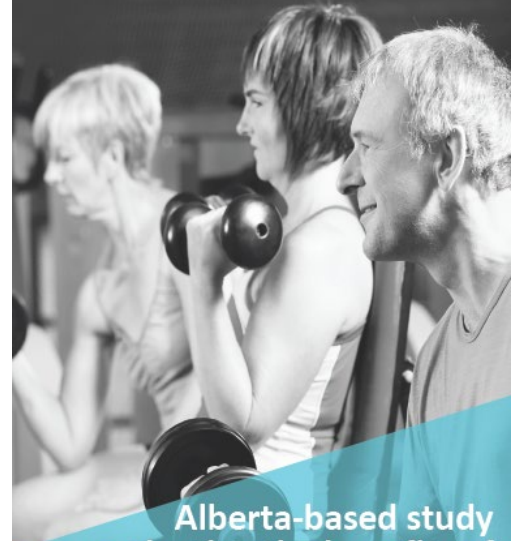
- High demand for program
- Benefits individuals with cancer across stages

Enroll in ACE: online/ call

www.albertacancerexercise.com

North: 780-492-6007

South: 403-210-8482



Alberta-based study
evaluating the benefits of
exercise for cancer survivors

Funding for this study provided by:



Our ACE Partners

ALBERTA CANCER EXERCISE

