

## Background

An interdisciplinary cancer rehabilitation approach including physiotherapy and exercise is recommended to assist individuals with breast cancer in achieving the best possible physical, psychosocial and vocational outcomes.<sup>1</sup>

The Alberta Cancer Exercise (ACE) program has implemented exercise programming for over 1000 individuals with breast cancer.

Gap 1: Individuals with breast cancer in the ACE program have largely taken part following completion of their cancer treatments.

Gap 2: Upon entry into ACE, approximately 26% of participants with breast cancer present with shoulder impairment on the side of their surgery, an issue not specifically addressed by ACE's general exercise program.

Gap 3: Participants enrolled in ACE have indicated a preference for exercise programs that incorporate breast cancer-specific therapies and flexible programming including home-based options.

The Healthy Eating, Active Living, Mindful Energy (HEAL-ME) Application: A web-based research application offering the opportunity to provide an interdisciplinary eHealth solution to support accessible, patient-centred, high-quality physiotherapy and exercise programming to individuals with breast cancer

## Objectives

We sought to investigate the feasibility and acceptability of (1) an integrated physiotherapy and exercise intervention for individuals with breast cancer undergoing or in the recovery phase after chemotherapy and (2) a hybrid delivery approach (in-person and virtual) supported by an eHealth application

## Methods

A multi-methods methods design was used involving:

- A 10-week hybrid delivery program involving supervised in-person and self-directed exercise supported by the HEAL-Me application (N=32).
- Participants were randomized to either (1) an integrated physiotherapy and ACE exercise intervention or (2) to an ACE intervention alone
- Recruitment, completion rate, and exercise adherence as feasibility outcomes
- Focus groups and survey to evaluate acceptability

## Results

### Feasibility: Adherence & Completion

Group	Adherence in-person	Adherence independent (app)	Overall adherence	Study completion
Exercise (n=15)	89.3%	75.3%	82.3%	87%
Combined Exercise and Physiotherapy (n=17)	88.8%	84.7%	86.8%	100%

Group	Active shoulder abduction ROM	Six-minute walk test	Leg press change	Sit-to-Stand
Exercise	-2.9 degrees	51.5 m	36.3 lbs	3.75 repetitions
Combined Exercise and Physiotherapy	+5.0 degrees	36.6 m	32.5 lbs	2.4 repetitions

### Acceptability

- Hybrid delivery was convenient for participants
- Less motivation to complete home-based online sessions
- Strong preference for the added physiotherapy component

## Conclusions

A combined physiotherapy and exercise intervention was feasible and acceptable to individuals with breast cancer. A hybrid delivery approach may enhance access to exercise-based rehabilitation services.

## References

1. Sotirova MB, Apr; McCaughan EM, Ramsey L, Flanagan C, Kerr DP, O'Connor SR, Blackburn NE, Wilson IM. Acceptability of online exercise-based interventions after breast cancer surgery: systematic review and narrative synthesis. J Cancer Surviv. 2021 15(2):281-310. doi: 10.1007/s11764-020-00931-6. Epub 2020 Sep 15. PMID: 32930924; PMCID: PMC7966228.

