



PRIME

# Breaststroke Swimming after Breast Cancer Treatment/Surgery as a Means of Treatment for Seroma, Lymphedema & Chronic Arm & Chest Pain

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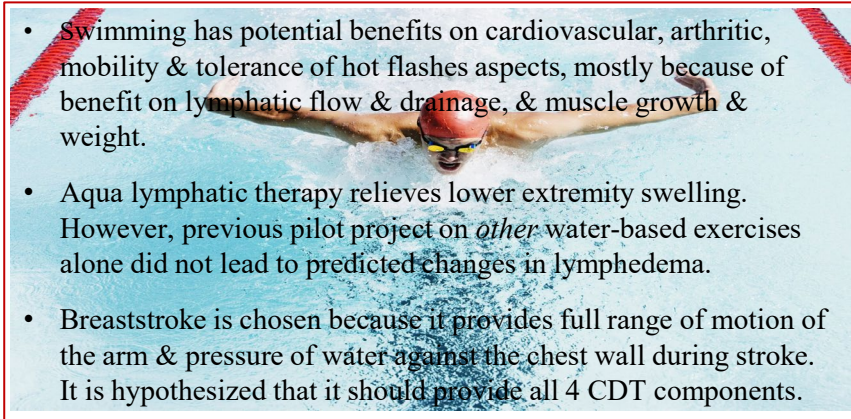


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## BACKGROUND

- Lymphedema & seroma, in ~1/3<sup>rd</sup> of breast cancer survivors, is a main source of suffering & morbidity due to its chronic, progressive & incurable nature.
- 30-60 % of women with breast cancer will experience some form of arm morbidity 6 months-3 years after breast cancer.
- Arm morbidity beyond 3 years is ~ 50 %.
- Pain, most common impairment, affects 16-73 % of breast cancer survivors.
- Currently, treatment for seroma & lymphedema is drainage, massage & use of compression dressings, but it can be ineffective, costly & short-lasting.
- A small, single-arm study evaluating use of Complete Decongestive Therapy (CDT) on breast cancer lymphedema had impact on pain reduction & the need for pain medication.

## RATIONALE for SWIMMING

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- Swimming has potential benefits on cardiovascular, arthritic, mobility & tolerance of hot flashes aspects, mostly because of benefit on lymphatic flow & drainage, & muscle growth & weight.
  - Aqua lymphatic therapy relieves lower extremity swelling. However, previous pilot project on *other* water-based exercises alone did not lead to predicted changes in lymphedema.
  - Breaststroke is chosen because it provides full range of motion of the arm & pressure of water against the chest wall during stroke. It is hypothesized that it should provide all 4 CDT components.

## OBJECTIVES

To investigate whether adding breaststroke swimming in post breast-cancer patients on top of the current standard of care:

- 1) can significantly reduce pain & increase shoulder range of motion (ROM) in the affected side arm,
- 2) reduce arm and chest wall pain on the affected side.

## METHODOLOGY

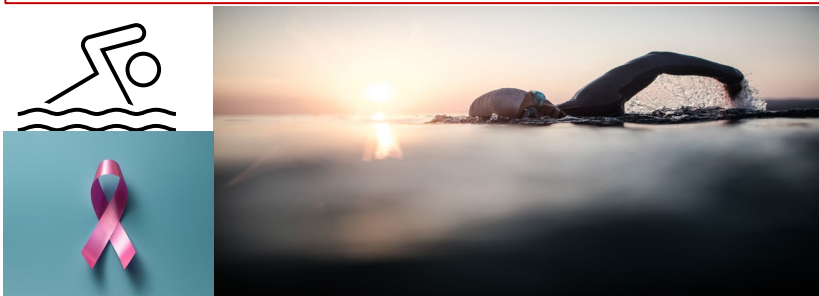
- Single-center randomized, two-arm pilot study.
- 128 ≥ 18 y. o. female at birth, treated for breast cancer in the last 3 years & still having pain & swelling will be randomized at a 1:1 ratio into swimming vs. control arm groups.
- Swimming: 8 weeks, 3 times/week, 30 minutes minimum.
- Control: patients receiving standard of care, may or not include swimming.

## PREDICTED OUTCOMES

- Assessment of pain using a validated visual analog scale.
- Assessment of post-mastectomy & post-surgical pain syndrome using a questionnaire asking about pain medication & pain related visits to health provider/physiotherapist.
- Quality of Life measured using Short-Form 36.
- Shoulder Range of Motion measured using a goniometer.

## REFERENCES

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