

CLINICAL LYMPHEDEMA RESEARCH STUDIES IN CANADA



A Randomized Trial of Decongestive Lymphatic Therapy for Lymphedema in Women with Breast Cancer (The Delta Study)
Ontario Clinical Oncology Group

This study evaluates the efficacy, safety and impact on quality of life of Decongestive Lymphatic Therapy (DLT) in breast cancer patients with lymphedema. Effectiveness will be assessed through volume of edema reduction, reduction of symptoms and infections, and improvement in arm function. One hundred women with a minimum 10% arm volume difference and no previous experience with DLT or compression are randomised to receive standard education and care (control group) or four weeks of DLT then compressive garments, or compression garments alone (treatment group). Patients are recruited at nine centres across Canada and followed for 12 months.

UNIVERSITY OF SASKATCHEWAN
Long term disability after breast cancer: expanding an empirical foundation for education, prevention and rehabilitation Thomas Maclean R, Hack T, Kwan W, Miedema B, Tilley A, Towers A

This prospective multi-site cohort study (sample size 745) follows breast cancer patients for 5 years. The purpose is to understand the impact of arm morbidity after breast cancer.

Our original study, Charting the course of arm morbidity after breast cancer: A prospective, longitudinal follow up (Phase I; 2005-2008) addressed 3 forms of arm morbidity affecting the upper quadrant: lymphedema, pain, and limited ROM. We found that 76% of our participants (n=719) experienced arm morbidity in some form (i.e. pain, ROM restrictions, lymphedema) at 6-12 mos. post-surgery. Twelve months later (i.e., 18-24 mos. post-surgery), 62% (n=476) experienced arm morbidity

Phase II (2009-2014) will examine women's experiences of arm morbidity using an interdisciplinary, mixed-methods approach and will address research questions related to etiology, impact and disability. We will collect data from chart reviews, annual clinical assessments, administration of questionnaires, and qualitative interviews. Aspects of arm morbidity require a long study period before the natural history and psychosocial impact can be fully documented and analyzed. The results will aid policy makers in the development of multidisciplinary rehabilitation programs to address problems in a holistic fashion and in a timely manner.



L y m p h e d e m a Reduction System Pilot study
Chittam L (Alberta Aids to Daily Living and University of Alberta)

Specialized garments are provided to community-based clients whose lymphedema cannot be managed with regular compression garments funded through Alberta Aids to Daily Living. These garments are intended to decrease clients' needs for home care, hospital services and physiotherapy intervention.



Effect of acute exercise on arm volume in breast cancer survivors: a pilot study. (manuscript in review)
McNeely ML, Campbell KL, Courmeya KS, Mackey JR (University of Alberta)

This pilot study assesses the effect of an acute bout of exercise on upper limb volume and symptoms of tension and heaviness in breast cancer survivors to guide a subsequent larger study.



Lymphedema in women with breast cancer: characteristics of patients screened for a randomized trial.

Dayes IS, Levine MN, Julian JA, Pritchard KI, D'Souza DP, Kligman L, Reise D, Wiernikowski JA, Bonilla L, Wheilan T.J. Breast Cancer Res Treat. 2008 Jul;110(2):337-42. Epub 2007 Sep 13.

Accrual rates for a randomized trial of decongestive therapy in breast cancer patients with lymphedema were lower than anticipated. All breast cancer patients at two lymphedema clinics in regional cancer centres were screened for eligibility. Circumferential arm measurements were taken and volumes calculated. A total of 408 patients were screened. Median arm volume excess was 239 ml (9.5%). Only 28.3% of patients had a minimum 10% excess volume. Of these, a significant number were excluded because of active malignancy or previous decongestive therapy.

Fewer patients than expected presented with moderate to severe lymphedema. The natural history of lymphedema in breast cancer patients is potentially changing. Some patients may be presenting with sensory changes suggestive of lymphedema but due to other causes, such as nerve disruption following axillary dissection.



The Volumetric And Clinical Benefits Of Using Compression Garments Versus Compression Bandaging in Complex Lymphedema Treatment
Rayson D, Deveaux A, King, M, White H. QELI Health Sciences Centre, Nova Scotia Cancer Centre

This pilot study compares two types of compression used in Complex Lymphedema Therapy (CLT) to treat arm lymphedema in breast cancer patients. Women three months post treatment, with 10-40 % volume difference between arms, presence of pain, heaviness or functional impairment will be eligible.

Participants will be randomly assigned. For two weeks, each group will receive CLT protocol (skin care, manual lymph drainage massage, exercise, and compression) with group one receiving bandaging and group two compression garments. At week three both groups will wear a compression garment and carry out an exercise program daily. An independent examiner, blinded to the therapy administered, will perform outcome measurements at the end of week one, week two, and at three months.



Patient Acceptance of a Modified Two Layer Short Stretch Compression System
Sterling W, Keast DH (Lawson Health Research Institute)

A prospective case series assessed patient acceptance of a new 2 layer compression system for treating venous leg ulcers. Nine wound clinic out-patients, previously intolerant of compression therapy, were enrolled. Eight participants wore the new compression system without significant pain or discomfort. One patient dropped out unable to tolerate the new system. Because the remaining eight were able to tolerate high compression, all ulcers closed within the 12 week study period with a mean time to closure of 7.8 weeks consistent with other studies using high compression therapy. The compression system was very easy to apply and was consistently applied in the homecare setting.



Effect of airplane travel on women following surgery for breast cancer. (manuscript submitted for publication)
Kilbreath SL, Ward LC, Lane K, McNeely ML, Dylke E, Refshauge KM, McKenzie D, Peddle C, Battersby KJ

This study assessed the impact of airplane travel on swelling of 'at risk' arms of women treated for breast cancer. Women from Canada (n=60) and from within Australia (n=12) attending a dragon boat regatta in Queensland, Australia were recruited and measured prior to air travel and on arrival in Queensland.