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## Lymphedema Incidence and Intervention After Endometrial Cancer: Protocol for a Randomized Controlled Trial

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**Background:** Our research shows that symptoms of lower-extremity lymphedema are commonly reported in women who have undergone surgery for endometrial cancer. Although previous trials have demonstrated beneficial effects of exercise training on lymphedema among women with breast cancer, the feasibility and efficacy to treat lower-extremity lymphedema in women with gynecological cancer remains unclear. Therefore, we aim to investigate the validity of self-reported lymphedema and the effects of exercise in women with endometrial cancer.

**Patients and Methods:** The current study is based on the cross-sectional SENSOR study, which comprises >1000 women who have undergone surgery for endometrial cancer:

First, we aim to validate the Lower Extremity Lymphedema Screening Questionnaire (LELSQ), by inviting women with self-reported lymphedema from the SENSOR study to undergo clinical and objective assessments of lymphedema. Objectively evaluation of lower-extremity lymphedema will be measured by circumferential measurements at predefined anatomical landmarks and perform bioelectric impedance analysis (BIS).

Second, we will invite 80 women with objectively confirmed lower-extremity lymphedema to participate in a randomized controlled trial comparing the effects of adding twice-weekly combined aerobic and resistance training and daily home-based exercises to promote lower-limb circulation to standard care (exercise group), with standard care alone (control group) for 20 weeks. The primary outcome will be the change in lymphedema volume, measured with BIS before and after the intervention. Secondary outcomes include lymphedema symptoms, quality of life, and physical fitness (cardiorespiratory fitness and muscle strength).

**Implications for Exercise Oncology:** Our research could identify LELSQ cutoff values that help detect women with early-onset lymphedema symptoms in clinical settings and guide future exercise recommendations for patients with lower-extremity lymphedema.

### Keywords

Lymphedema; Endometrial Cancer; Exercise; Quality of Life

### Conflict of Interest & Ethical Approval

yes

### Abstract submitters declaration

yes

**Author:** NILSEN, Tormod (The Norwegian School of Sport Sciences, Norway)

**Co-authors:** Dr JOHANSEN, Sara Hassing (The Norwegian School of Sport Sciences); Dr THORSEN, Lene (Oslo University Hospital, Norway); Prof. STAFF, Anne Cathrine (Oslo University Hospital/ University of Oslo, Norway); Prof. BURGER, Emily (University of Oslo, Norway); Dr WANGEN, Knut Reidar (University of Oslo, Norway); Dr TRENT, Pernulle Bjerre (Oslo University Hospital, Norway); Dr ERIKSSON, Ane Gerda Zahl (Oslo University Hospital, Norway)

**Presenter:** NILSEN, Tormod (The Norwegian School of Sport Sciences, Norway)

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