

## Effectiveness of an eHealth self-management support program for persistent pain after breast cancer treatment: a study protocol

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**Background:** Persistent pain following breast cancer treatment is a prevalent problem and poses significant challenges for patients' quality of life. The current state-of-the art advocates for a biopsychosocial rehabilitation approach integrating pain science education with self-regulation techniques to promote an active lifestyle. However, accessibility and costs remain barriers to effective pain self-management support. An eHealth self-management support program presents a promising solution, providing a multidimensional support model. The aim of this study is to investigate the effectiveness of an eHealth self-management support program for pain-related disability in breast cancer survivors with persistent pain.

**Methods:** Through a 3-arm multicentric RCT, a total of 270 breast cancer survivors with persistent pain will be randomized into three groups: an eHealth intervention group, a face-to-face group in a physical therapy setting and a usual care group. Primary outcome is self-reported pain-related disability (Pain Disability Index) 6 months after baseline. In addition, pain, physical, emotional and socio-economical functioning will be evaluated as secondary outcomes up to 12 months after baseline.

**Results:** The study aims to establish the superiority of the eHealth self-management support program over the usual care intervention and non-inferiority compared to the face-to-face program for persistent pain-related disability after breast cancer treatment.

**Conclusion:** The findings of this study could hold significant implications for improving the management of persistent pain after breast cancer treatment. By using eHealth technology, the program addresses key barriers, including accessibility, cost, and patient engagement. Furthermore, this program allows for tailored interventions that cater to the diverse biopsychosocial needs of patients. Successful implementation of the eHealth program could be the solution in pain management in this population.