BRÖSTCANCER FÖRBUNDET

Forskningsrapport

Huvudsökande:
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Frågeställning:
Vi har utvecklat en metod från utlandet för att testa kognitiv förmåga via en datorbaserad test som görs hemma och vi använder testet i olika forskningsstudier med bl.a. bröstcancerpatienter.

Tre frågor till Renske:

Hur kan resultatet av er forskning hjälpa patienterna, rent konkret?
Minnessvårigheter och andra kognitiva problem besvärar många bröstcanceröverlevare. Genom att mäta förändringar i kognitiv funktion, båda genom testning med det datorbaserade testet och patientrapporterade symtom, kommer vi att få ett bättre förståelse för omfattningen av kognitiva problem hos bröstcanceröverlevare.

Vi hoppas att identifiera faktorer som bidrar till kognitiva problem efter bröstcancerbehandling, för att kunna utveckla metoder för att förebygga eller lindra det här problem, såsom fysiskt aktivitet.

Hur viktigt har stödet från Bröstcancerförbundet varit för er forskning?
Med stödet från Bröstcancerförbundet har vi kunnat översätta en neuropsykologisk test för forskningsändamål till svenska och har fått möjlighet att studera kognitiva effekter hos kvinnor behandlade för bröstcancer inom ramen för OptiTrain studien, samt lagt basen till en utökad studie som syftar till att bygga en databas med referensmaterial från individer utan cancerdiagnos. Vi har även initierat andra studier med samma test, som utvärderar kognitiva effekter hos patienter behandlade för bröstcancer med neo-adjuvant behandling (Neo-ACT studien), samt för tyreoideacancer (Cogni-Thyr studien).

Vad vill du hälsa alla Bröstcancerförbundets givare?
Vårt team (Maria Wiklander, Yvonne Wengström och Karin Lind) vill tacka alla givare så varmt för möjligheten att kunna forska om det här ämnet som dagligen påverkar livskvaliteten och måendet av kvinnor som har behandlats för bröstcancer. Stort tack!

Renskes sammanfattning finns att läsa på efterföljande sidor för dig som vill läsa mer.

Översikt aktiviteter inom projektet 'Kan fysiskt aktivitet skydda mot kognitiva problem hos bröstcanceröverlevare?'

Table: overview of activities performed related to cognition project.

	Hypothesis / purpose	Material & methods	Time plan	Preliminary results
Amsterdam Cognition Scan (ACS) translation	A Swedish version of an online tool for self-administered neuropychological testing enables performing clinical studies on neuropsychological disturbances in cancer patients	Dutch original version of ACS was translated to Swedish trough focus groups, lay-panel discussions and frequent intercollegial consultation between the research groups	2018-2019	The Swedish version of the ACS is now used in several clinical studies
OptiTrain	Neuropsychological disturbances in breast cancer survivors might be ameliorated by physical exercise	5-year follow-up assessment of the OptiTrain cohort was invited to perform a cross-sectional assessment of the ACS in addition to HRQoL questionnaires and self-reported symptoms	2018-2020 5-year follow-up visits performed. 2021/2022 data analysis. Currently manuscript writing.	64 patients consented and performed ACS. No apparent differences between exercise and control groups in neuropsychological performance.
Reference sample	Collection of reference material on neuropsychological functioning in non-cancer affected individuals will increase the interpretation and understanding of our studies in cancer patient cohorts and will facilitate future studies with the same instrument.	A random sample from Swedish person registry (Statens personadressregister, SPAR) is obtained with criteria for age and for both genders. Potential participants are invited by mail to participate and perform the ACS + questions on demographics twice with a six-week interval.	First sample invited Winter 2021/2022, second sample invited Winter 2022/2023 with ongoing data collection	First sample N= 131 participants, second sample up to now over 1,000 respondents which have completed ACS once in N= 572 and twice in N=122

OptiTrain 5-year follow-up

The OptiTrain study (NCT02522260; PI professor Yvonne Wengström) is a randomized controlled trial evaluating effects of physical activity during adjuvant chemotherapy after breast cancer surgery. The primary endpoint of the study was fatigue assessed by the Pipers fatigue scale, and there was a statistically significant beneficial effect in the group who was assigned to the exercise intervention. During 2018-2020, all included patients have been invited for a 5-year follow-up visit; all participants who came to the follow-up visit and where without disease relapse were asked for informed consent to participate in the cognitive sub-study. This study was approved by the Ethical Review Authority (Dnr 2018/446-32/2). In total 64 patients consented to participate and completed the ACS. Preliminary results of this cross-sectional assessment of the ACS do not reveal relevant differences in neuropsychological performance between the patients who initially were included in the intervention or control arms of the OptiTrain trial. We are currently preparing a manuscript that is expected to be ready for submission to a peer-reviewed journal Spring/Summer 2023.

Reference sample
We have concomitantly initiated a study in a random sample of control subjects. This study is approved by the Ethical Review Authority (Dnr 2020-02247, 2021-04374). The primary aim of this study is to obtain normative data on the Swedish version of the ACS, and to use these data as control to compare the findings on the ACS from the participants in the OptiTrain study. For this purpose, we are approaching persons from a random sample that is extracted from the Swedish person registry (Statens personadressregister, SPAR).
All potential participants are sent a pre-notification postcard informing them that they will be approached by mail for participation in this project and giving a short explanation of the project. Ten days after sending the postcard, a participant invitation letter will be sent by mail to all potential participants. We chose this two-stage invitation as it has shown to increase the rate of participation rate in these types of studies.
All participants are asked to perform the ACS twice with a six-week interval. In this way, we will be able to investigate test-retest variability in the Swedish version of the ACS, as was previously done for the Dutch version of the test. Participants are asked to fill out some questions about comorbidities, and in this way, we can exclude persons with a history of cancer, neurologic or severe psychiatric diagnoses in the analyses.
We are aiming for a sample of 700 participants with evaluable data in this study, to have a representative comparison with the participants in the 5-year follow-up assessment in the OptiTrain and Cogni-Train cohorts. A first round with invitations to 2,000 women was sent out in 2020; 131 participants consented and performed the ACS at least once, 51 of these did the test twice.

Due to these lower-than-expected numbers as well as the fact that we have added a patient cohort with both men and women (Cogni-Thyr), a second extraction from SPAR was done Autumn 2022. In this new sample, we sent out invitations to 12,000 persons (4,500 women and 7,500 men) from 18 years old and above and data collection is currently ongoing. As of now, N= 572 have completed the ACS once and N= 122 have done so twice with a six-week interval in order to evaluate test-retest variability.

Activities performed with support from Swedish Breast Cancer Society

With the support, we have been able to pay the fees for submission of study protocol and amendments to the Ethical Review Authority and the sending of the first batch of invitation postcards and letters for the reference sample (‘övriga driftkostnader’). Moreover, we were able to pay for Maria Wiklander’s salary in order for her to work with the projects about 20% throughout the year (‘Personalkostnader’). A summary of the expenses is showed in the screen shot below.

Maria Wiklander was awarded a grant from the Swedish Breast Cancer Society year 2022 to further work on the data collection in the reference sample.