

Novel methods for improved breast cancer survival

February 22 2011

This, together with other research within the Breast Cancer Initiative, as the project is called, has been awarded SEK 25 million from the Swedish innovation agency Vinnova. The project is part of the interdisciplinary cancer centre Create Health, where immunologists, tumour biologists, nanotechnologists, bioinformaticians and cancer researchers work together.

"This campaign means that our research can benefit patients earlier", comments Carl Borrebaeck, Professor of Immunotechnology at Lund University and programme director for Create Health.

He and his colleagues aim to significantly shorten the waiting times for test results and information about continued treatment. The idea is to build a diagnostic clinic next to the operating theatre. The tumour can then be analysed while the patient is still on the operating table and the surgeon, oncologist and pathologist can together make a diagnosis and decide on the right treatment.

The research is based on a unique technique developed by the researchers in Lund. By analysing patterns of [biomarkers](#), or [protein molecules](#), in the blood, it is possible to obtain information about what type of cancer the patient has and what the prognosis is.

"We also map the tumour cells' genome. Using this map, we can find out how responses to different types of treatment may relate to specific genes. This knowledge could be of great help in selecting the right

treatment", says Carl Borrebaeck.

The Create Health group is also in the process of developing a [breast cancer](#) index. Blood and tissue samples from patients with breast tumours are analysed on both protein and gene level and a unique 'fingerprint' of each tumour is obtained.

"Our aim is to analyse all the tumours in southern Sweden. This collection of samples also improves the collaboration between clinicians and researchers, as well as the chances to be able to quickly implement our research results in a clinical setting", emphasises Carsten Rose, Professor of Oncology and head of division at Skåne University Hospital.

When it comes to the work on early identification of which patients are at risk of metastasis, the research has come a long way and has now entered its final stage.

"Currently, all women receive the same harsh treatment. However, with our technique it is possible to select which patients actually need it, and therefore also which only need a significantly milder treatment. The improved prognosis can reduce side-effects and unnecessary suffering for the patient, as well as saving a lot of money", says Carsten Rose.

The [Breast Cancer](#) Initiative is part of Create Health, which comprises projects run by professors Åke Borg (oncology), Peter James (proteomics), Carl Borrebaeck (cancer immunology) and Carsten Rose (oncology).

Provided by Lund University

Citation: Novel methods for improved breast cancer survival (2011, February 22) retrieved 27

April 2024 from <https://medicalxpress.com/news/2011-02-methods-breast-cancer-survival.html>

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