

Fifty-one genes predict breast cancer survival

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It may be possible in the future to use a specimen from the tumour to determine which patients with breast cancer have a good chance of overcoming the disease, and which patients should be given more intensive treatments. Fifty-one genes may together provide information about the prognosis for an individual patient.

"We consider it to be a promising marker: it will maybe be possible to use it to determine which patients with breast cancer require particularly close surveillance. More research, however, will be required in order to confirm our results before analysis of the protein can be used in the clinic", says Elin Karlsson.

The research group has analysed specimens from a number of breast tumours, both from patients that died from the disease and from patients surviving at least 10 years from diagnosis. The levels of expression of 51 genes differed between the two groups. It should be possible to use the differences in order to classify the patients into one of two groups: a favourable prognosis group and a poor prognosis group.

Source: University of Gothenburg ([news](#) : [web](#))

"Many [breast cancer](#) patients are currently overtreated, while some are undertreated. If it was possible to identify patients with poor prognosis, it would be possible to use greater treatment resources on these patients. At the same time, patients with a favourable prognosis could avoid unnecessary treatment", says Elin Karlsson who successfully defended her thesis on June 5.

Comparing the amounts of the gene products of these 51 genes with data from a previous study has allowed the research team to show that the [genes](#) have the ability to predict survival also for the new material.

The research group has also studied the protein BTG2, and shown that it is involved at several levels in the tumours that were examined. The protein was present more often in specimens from patients who had survived at least 5 years after diagnosis than in patients who had died within 5 years from diagnosis. It has been previously determined that this protein is a tumour suppressor, but the study at the Sahlgrenska Academy is the first to indicate it as a prognostic marker.

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