

Researchers found breast cancer survival gene

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(PhysOrg.com) -- QIMR researchers, as part of an international collaboration, have found that a gene that is most commonly associated with skin pigmentation, hair and eye colour may influence a patient's chances of surviving cancer.

The study found that a variant in the OCA2 gene is associated with increased survival in breast cancer patients.

According to QIMR's Professor Georgia Chenevix-Trench, "The variant of the gene is only a single change in the [genetic sequence](#), but seems to have quite an impact.

"Our research focused on a specific type of breast cancer, oestrogen receptor negative breast cancer.

"Among these patients, those with the rare variation had a predicted survival rate of 83% at 10 years, compared to the common variant, which we found had a predicted 60% survival after 10 years."

This kind of fundamental research is vital to understanding cancer and providing effective cancer treatments.

"Traditional ways of predicting survival and treatment response in cancer patients are not always successful or accurate. Our research aims to find new factors that can account for patients who have a better or worse outcome than expected.

“Understanding these factors may lead to better prediction of survival and hopefully, improved treatment options for individuals.

This study analysed 3,700 breast cancer patients for this specific change in the OCA2 genetic sequence.

“This is a very powerful study due to the large number of patients and genetic variants evaluated,” said Professor Chenevix-Trench.

“It is curious that the gene that is also responsible for blue eye colour seems to influence outcome for breast cancer patients.

However, Professor Chenevix-Trench warned that this research does not show a link between eye colour and cancer survival.

“The genetic variant that is linked to cancer survival is not the same as the variant that affects pigmentation. There is no evidence that women with particular skin, hair or eye colouring have a different outcome from breast cancer.”

The research was led by Dr Paul Pharoah from the University of Cambridge and completed in collaboration with [Breast Cancer Association Consortium](#) researchers from Europe and the USA.

The findings have been published in the *Journal of the National Cancer Institute* and the paper is currently [available online](#).

Provided by Queensland Institute of Medical Research

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