



# Cancer Gene Testing

Genetic Technologies

## Knowledge of your cancer risk can also help your family

If a gene change is identified in one family member, then other family members can be tested to see if they too carry this gene change, allowing them to clarify their own risk of cancer. In such cases, family members who are shown not to carry the identified gene change can be reassured that their risk of developing cancer may be no higher than that of the general population.

## How is testing initiated?

All requests for genetic testing must be made through a medical practitioner. Test results are confidential and will only be issued to your doctor, who will facilitate pre- and post-test counselling, interpretation of results and advise on medical management. Testing may also be arranged through your local genetics service – contact Genetic Technologies for details.

### Disclaimer

This brochure provides general information about genetic testing. It does not provide specific advice. Recommendation for testing should be initiated by your doctor.

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The Royal College of Pathologists of Australia

ACCREDITED FOR COMPLIANCE WITH ISO/IEC 15189



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## You, Your Genes and Cancer Risk

Genes are the instructions that tell our bodies how to grow and develop. A change in a gene (sometimes called a mutation), can alter the instruction the gene sends to the body. Such gene changes can significantly increase the risk of developing certain types of cancer.

In addition, a gene change can cause cancers to develop at a younger age than usual (early-onset cancer). Because a gene change can be passed on from parent to child, it may also increase the risk of cancer in the family.

## Do you have a genetic risk for developing cancer?

Have you, or any of your family members, been diagnosed with:

- breast cancer before age 50?
- ovarian cancer at any age?
- two separate breast cancers?
- breast cancer and are of Ashkenazi Jewish ancestry?
- bowel cancer before age 60, or uterine cancer (cancer of the womb) before age 50?

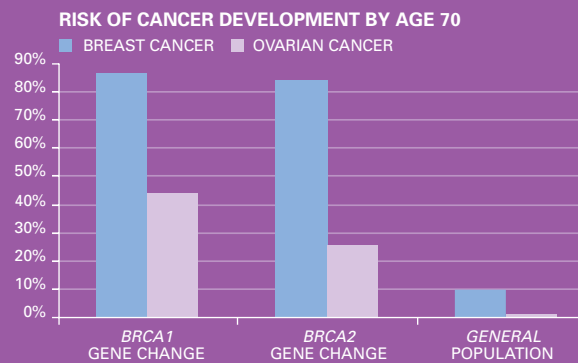
Have any of your male relatives been diagnosed with breast cancer?

If you have answered 'yes' to any of these questions, discuss your risk with your doctor or your local genetics service – for details of a service near you contact Genetic Technologies.

## Changes in the 'BRCA' genes and the risk of breast and ovarian cancer

Having a change in either of the genes known as BRCA1 and BRCA2 can significantly increase your risk of both breast and ovarian cancer. Changes in these two genes may also result in these cancers developing at a younger age than usual e.g. before age 50.

By the age of 70, about 1 in 10 women develop breast cancer. However, in women with a change in the BRCA1 or BRCA2 gene, this risk can be as high as 87%. Changes in either of these genes can also increase the risk of ovarian cancer to as high as 44%.



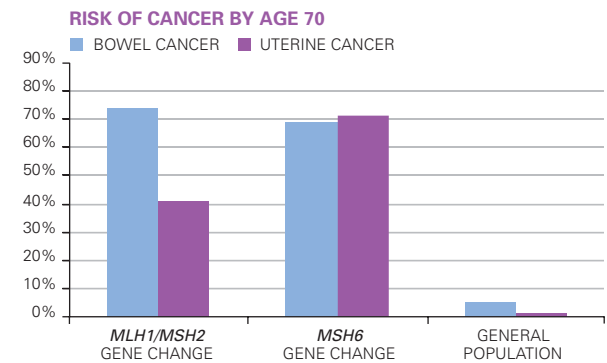
## Gene changes and the risk of bowel and uterine cancer

Having a change in one of the genes known as MLH1, MSH2 or MSH6, can increase a person's risk of developing bowel cancer by age 70 to as high as 74%.

In addition, for women carrying a change in one of these genes, the risk of uterine cancer may be as high as 71%.



Changes in these genes are also associated with bowel and uterine cancer occurring at significantly younger ages than usual (on average 25 years earlier than the general population).



## What happens if you are found to be at increased risk of developing cancer?

Your doctor can help. Proactive management of 'at risk' individuals can improve their outcome.

Management strategies aimed at prevention and early detection of cancer can reduce your risk of developing certain types of cancer by up to 95%. These strategies may include:

- Close surveillance
- Preventative drug treatments
- Preventative surgery