## How might I be affected by the test results?

Genomic testing can give you more information about your personal risk for breast cancer. In some cases you may be told you have an increased risk for breast cancer.  You may also be advised to have regular screening tests for breast cancer.

It is important to remember that everyone reacts differently to risk information. You may feel worried or upset about your breast cancer risk. You may also feel empowered or relieved to be able to take some control of your heath and share the information. A genetics professional can help you explore how this result may affect you.

## How might my family be affected by my test results?

Sometimes, the process of having a genetic assessment can bring families closer together. Sometimes it can lead to differences in opinion. Your test result may affect the way breast cancer risk is viewed in your family.

A genetic counsellor can help you decide whether this information would be useful to share with other family members, and how best to do this.

## Will genomic testing affect my insurance?

In Australia, your decision to receive your genomic testing result will not affect your health insurance, or life insurance included in your superannuation.

Your results will not affect any additional life insurance or income protection you already have through a private company. You will only have to tell your insurance company of your test results if you take out a new policy or change your existing policy.

## What if my family wants to have genomic testing?

At this time, genomic testing for breast cancer risk is only available through research. This is because this is a new technology, and more research is needed before it can be offered in family cancer clinics.

Results from genomic testing are only available to some participants from the “Common Genetic Variants and Familial Breast Cancer” study. It is possible that in the future genomic testing may be available more widely at family cancer clinics.

## What if I have any questions?

If you have any questions please contact the research assistant for this study on:
**03 8556 4992.**

UNSW AUSTRALIA

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# Genomic testing and your chances of developing breast cancer

## Who is this pamphlet for?

This pamphlet is for women who have been invited to receive the results of their **research genomic testing** to assess their breast cancer risk. The genomic testing was done as part of a research study called: “Common Genetic Variants and Familial Breast Cancer”.

This pamphlet may help you to learn more about genomic testing and breast cancer risk.

Genomic testing provides women:

- Who have been diagnosed with breast cancer, with information about the risk of a second, new breast cancer
- Who have not been diagnosed with breast cancer, with information about their breast cancer risk

## DNA changes and breast cancer risk

Our DNA contains all the instructions our bodies need to grow and function. It is normal to have changes in our DNA. Otherwise we would all be identical.

But in some cases, changes in our DNA can cause health problems.

Some DNA changes can make a gene faulty. Just one fault can stop the gene from working and cause health problems. For example:

- Inheriting a single fault in either of the genes called *BRCA1* or *BRCA2* will greatly increase a woman’s risk of breast and ovarian cancer.
- It is rare to have inherited a fault in the *BRCA1* or *BRCA2* genes.

Other DNA changes are minor and do not stop a gene from working. By itself, each minor change only has a small impact on our health. A health problem can occur when a number of minor changes are combined. For example:

- Inheriting a large number of minor DNA changes can increase a woman’s breast cancer risk.
- Unlike rare gene faults, minor DNA changes are common.

These are called “**common risk variants**”.

## Genomic testing

It is now possible to test for multiple DNA changes at once. This is called **genomic testing**.

Genomic testing looks at the number of “common risk variants” that a woman has in her DNA. The results can help to assess a women’s risk for **breast cancer**.

**The common risk variants in this study are not related to the chance of developing ovarian cancer.**

## What if I want to receive my genomic testing results?

To receive your test result you will have to **take part in the new study titled**: “Psychosocial aspects of genomic testing for breast cancer risk”. This is because at this time, genomic testing for breast cancer risk is only available through research.

If you choose to receive your test results, you will have to attend a family cancer clinic. There you will see a health professional with specialist training in genetics (a genetic counsellor or doctor with training in genetics).

You will receive support to help you understand the benefits and limitations of this test. This includes implications for you, your health and your family.

Any genetic counselling you receive will be free of charge.