



National Cancer Control Programme
An Clár Náisiúnta Rialaithe Ailse
King's Inns House, 200 Parnell St. Dublin 1.
Tel: +353 1 828 7100
e-mail: oncologydrugs@cancercontrol.ie
www.hse.ie/cancer

BRCA Test for PARP inhibitor treatment in Patients with Breast Cancer

Patient Information Leaflet

NCCP-COM-076 ©National Cancer Control Programme
March 2021



3. When test results are unclear

If the results of the BRCA test is inconclusive (unclear), this means that a change in the BRCA genes was identified. This change is called a 'variant of uncertain significance - VUS' another name for this is a 'variant of unknown significance'. Your doctor will talk to you about other treatment options for your cancer. Your doctor will recommend that you speak to a specialist in genetics who can discuss this VUS with you and will offer to refer you to Cancer Genetics Services.

About this leaflet

This leaflet tells you about a test, called a BRCA test, that can tell if your breast cancer may benefit from treatment with a drug called a PARP inhibitor.

Specifically, this leaflet tells you:

- what BRCA genes are
- what the BRCA test involves and what its results mean for you and your blood relatives

What are BRCA genes?

These are genes that fix damaged cells in your body. Genes are pieces of DNA (hereditary material) that dictate how your body works. BRCA genes refer to BRCA1 and BRCA2.

What is a BRCA mutation (variant)?

A BRCA mutation happens when a BRCA gene has an error. This error is called a mutation. If a BRCA gene has a mutation, this means it can't fix damaged cells. These damaged cells then accumulate and can lead to cancer.

Why is my doctor asking me to have a BRCA test and considering PARP as a treatment?

Your doctor asked you to have a BRCA test as its results can tell them if you would benefit from treatment with a drug called a PARP inhibitor.

PARP is a type of protein that promotes the repair and growth of cancer cells. A PARP inhibitor aims to stop the growth of, or kill tumour (cancer) cells.

In some instances it is now possible to treat patients with breast cancer based on the genetic characteristics of their tumour. Targeted therapies like PARP inhibitors stop or kill tumour cells.

If you have a BRCA mutation and your doctor knows this, this can help both of you to make decisions about how best to treat your cancer.

All tests are carried out to the highest international standards. Remember: no test is 100% accurate.

What does a germline BRCA test involve?

A germline BRCA is an inherited mutation. If you and your doctor decide that a germline BRCA mutation test is right for you, your doctor will take a small blood sample and send it to a laboratory. You will be asked to sign a consent form saying that:

- you agree to have the test
- the test has been discussed with you
- you understand why the test is being done

Your doctor will share the results with you as soon as they are available, typically within 8 weeks of this test.

What do the test results mean?

There are three possible test results.

1. No germline BRCA mutation found
2. A germline BRCA mutation is found
3. Unclear test results/variant of unknown significance identified

We list what each of these results could mean for you and their implications, if any, for your blood relatives.

1. When no germline BRCA mutation is found

If your test results find no germline BRCA mutation, your doctor will talk with you about other treatment options for your cancer.

If you have a strong family history of cancer, your doctor may still refer you to Cancer Genetics Services. Other genes can increase your risk of cancer, and this service works to prevent and detect cancer early. It can also help with decision-making about treatments for cancer if appropriate.

2. When a germline BRCA mutation is found

If your test results finds a germline BRCA mutation, your breast cancer may benefit from treatment with a drug called a PARP inhibitor.

The germline BRCA test is looking for mutations that can be inherited. If you have a germline BRCA gene mutation, this is likely to have health implications for you and your biological (blood) male and female relatives. Your doctor will recommend that you speak to a specialist in genetics who can discuss this with you and will offer to refer you to Cancer Genetics Services.

Implications for you: You are at a higher risk of developing other cancers, particularly ovarian cancer, but also melanoma (skin cancer), pancreatic and other BRCA-related cancers. Under Irish law, your genetic test results cannot be used by companies for insurance, pension, mortgage or employment purposes.

Implications for blood relatives: As germline BRCA mutations are inherited, there are implications for biological (blood) male and female relatives who may also have the BRCA mutation. That is why we ask you to consider sharing your test result with your biological (blood) relatives, both male and female, as they may also have inherited it.