Genetic Testing for People Affected by Breast Cancer

Information for patients

Why have I been offered a genetic test?

Around one in eight women and a small number of men will be diagnosed with breast cancer during their lives. Some of these are eligible for genetic testing.

Only a small number of those tested will have changes in their genetic makeup that has affected their risk of getting cancer. This information may help your doctor and you in making the best choices for your current and future treatments.

It is important for you to know that the test can also give you information about your risk of developing other cancers. The results might also provide information about your relatives' risk of developing cancer.

The test

The test is carried out on a blood or saliva sample and looks for changes in genes* known to be associated with breast cancer risk.

People who have specific changes in these genes have an increased risk of cancer- in particular breast cancer and sometimes other cancers.

Knowing about increased risk means that additional screening to detect the early signs of cancer may be available, or there may be other steps to reduce the risk.

If you are found to have a change in one of these genes, there is a chance that other people in the family might have the same gene change.

The results

Possible outcomes of genetic testing:

- **No gene change identified:** In most people the test will **not** find a gene change. This reduces the chance of a predisposing gene being responsible for your cancer.
- **"Pathogenic" or "Likely Pathogenic" (disease-causing) gene change identified**: This confirms an inherited risk and may help in making decisions about your treatment. It may also confirm that your risk of another cancer is increased.

  Because we share genes with our relatives, there is a chance they may have an increased risk of cancer too. It would be possible for them to have a genetic test.
- **"Variant that needs further assessment":** We all carry variations in our genetic code. The majority of these are **not** linked to disease. If testing identifies a variant which requires further assessment, this will be discussed with you.

What will happen next if I agree to testing?

If you decide to have the test, you will be asked to sign a consent form. A blood or saliva sample will be taken for the test.

How will I receive my result?

The genetic service will send you and your cancer team the result of the test by post. The result will usually take up to 9 weeks but may be sooner if for immediate clinical reasons your doctor requests this (not usually before 4 weeks).

If your test finds a change in one of the genes, the genetic clinic will offer an appointment soon afterwards. At the genetic clinic you will meet with a genetic clinician who will discuss your result with you and what it might mean for you and your relatives. There will be time to think about the best way forward for you and they can spend time answering any questions you might have. They will also provide you with information that you can share with relatives.

What if I want more information about having the test?

Having the test is optional. If you would like more information, please speak with your cancer clinician.

Also, you can phone the duty genetic counsellor direct, at the number on this leaflet, who will be happy to go through any questions you may have or arrange an appointment to see you.

If your genetic test does not find any genetic changes but you have a family history of cancer, it is still possible that your relatives may have an increased risk of developing cancer. If you think this applies to you, you could talk to your GP or hospital clinician.

A limitation of any genetic test is that just like much of medical science, we cannot yet know with certainty all the factors that influence health. Very occasionally the current understanding of a gene change or variant may change as more information becomes available.

**Current breast cancer panel: BRCA1, BRCA2, PALB2, PTEN, TP53, STK11, CHEK2, ATM.*

Contact details for Genetic Services

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