

BRCA1 and BRCA2 gene testing

Information sheet for patients with cancer

In most people, cancer occurs by chance. In a minority of people with ovarian cancer (about 15%) or breast cancer (about 3%), cancer occurs because they have a mutation in the BRCA1 or BRCA2 gene.

BRCA1 and BRCA2 mutations result in increased risks of breast and ovarian cancer. They occur more frequently in women who have both breast and ovarian cancer, those with particular types of cancer, and if there is a strong family history of breast and/or ovarian cancer.

It is important to identify if a cancer is due to a BRCA1 or BRCA2 mutation, because it provides you and your doctors with information that can help treat your cancer and to reduce your risk of future cancer. It can also provide information for relatives about their risks of cancer.

Why am I being offered this test?

You are being offered a test to look for mutations in BRCA1 and BRCA2 because of your cancer diagnosis.

What are the benefits?

Knowing whether or not you carry a mutation in BRCA1 or BRCA2 gives the cancer team more information about your cancer. This can help decisions about the treatments they recommend for you, for example, which chemotherapy drugs or surgery would be most suitable. It will also give better information about your risk of developing cancer in the future.

Does having the test have implications for my family?

In most people, the test will be normal and we will not find a gene mutation. This would be reassuring for relatives, as it would indicate that your cancer was unlikely to be due to hereditary factors that would put them at very high risk of cancer. If your test shows you have a gene mutation, it is possible that some relatives also have the mutation. Relatives would be able to discuss this with a specialist geneticist and have a test if they chose to.

What will happen if no mutation in BRCA1 or BRCA2 is found?

This is the most likely outcome, as most women with cancer do not have a mutation in BRCA1 or BRCA2. This would be reassuring in suggesting you are unlikely to be at high risk of developing another, new cancer in the future. The cancer team will be able to use this information in their management decisions. Very occasionally mutations in other genes can be involved in causing breast or ovarian cancer. Also new discoveries are being made all the time. If a new gene test



becomes available in the future, the genetics team may be able to do the test using the sample you have already provided and would send the result to you and the cancer team. If your doctors think other genetic factors might be involved in your cancer, they can ask the genetics clinic to send you an appointment to evaluate this, if you have not already had an appointment with genetics.

What will happen if a BRCA1 or BRCA2 mutation is found?

Your cancer team will use the information in their management decisions. The genetics team will send you an appointment to discuss the results and address any questions you have. They will also discuss what the test result means for your future risk of cancer, your options for future screening and measures to reduce these risks. They will evaluate your family history and can provide information for the appropriate family members, should they wish to consider testing to see if they have inherited the mutation. Any relatives can be referred to a Genetics Unit, either at The Royal Marsden or more locally to them, to discuss this further.

Do I have to have the test?

No, having this test is optional. Your decision will not affect the standard of care you receive from the hospital or doctor, which will be based on the available information.

What if I am not sure that I want to have the test?

We would recommend that you have further discussions with a specialist member of the genetics team.

What will happen next if I say yes?

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

How will I receive the results of the test?

The genetics team will send you and your cancer team the results of the test by post. The results may take up to six weeks, but will usually be within four weeks.

Will my information be confidential?

All data collected about you will be held under the provisions of the 1998 Data Protection Act and stored in secure files. The only people who will know your identity are staff at The Royal Marsden and a few trained staff reporting the results, who are bound by a professional duty to protect your privacy.

Contact details

If you have any questions, please contact The Royal Marsden Cancer Genetics Unit

Tel: 0208 661 3375

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