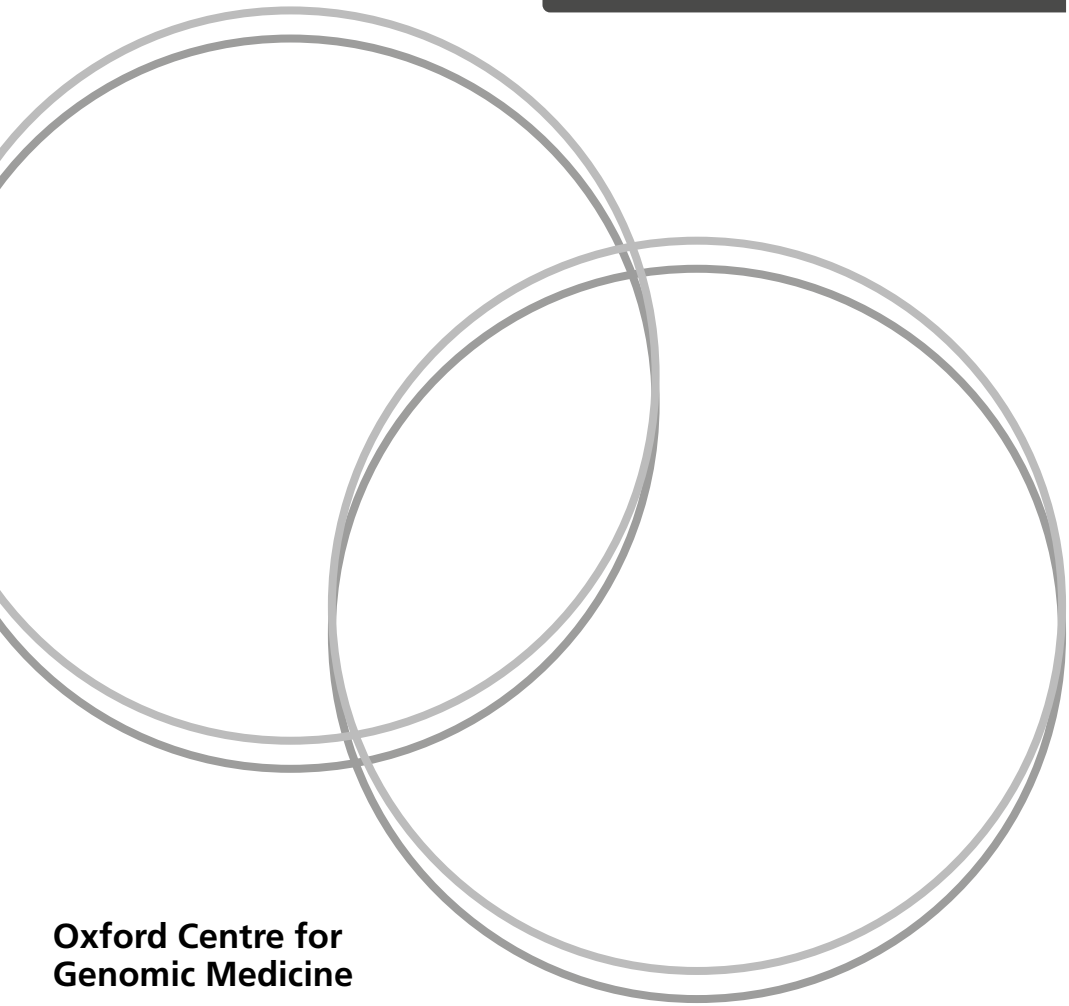
Oxford University Hospitals
NHS Foundation Trust

Breast Cancer in the Family

Information for women with a **moderately** increased risk of breast cancer



Oxford Centre for Genomic Medicine

Breast cancer in the family – what does this mean?

Breast cancer is the most common cancer affecting women in the UK. Many of us will either have a relative with breast cancer, or know someone who has had breast cancer. The great majority of breast cancers are not inherited. This leaflet aims to answer some of the questions you may have about your family history of breast cancer. You may have had breast cancer yourself. If you have, this leaflet may be relevant to your family members.

How common is breast cancer?

About 55,000 women are diagnosed with breast cancer in the UK each year. Women have about 1 chance in 8 (12%) of developing breast cancer during their lifetime. More than 80% of women who get breast cancer are over 50 years of age. The chances of surviving breast cancer have greatly improved. 78% of women are alive more than 10 years after their breast cancer treatment. Survival improves if the cancer is diagnosed at an early stage.

How often is breast cancer inherited?

Very few women (about 5%) have breast cancer because of an inherited tendency. Most breast cancers occur due to chance and are not inherited.

What type of family history suggests an inherited tendency to develop breast cancer?

It is unusual to have an inherited tendency to develop breast cancer. It generally only occurs in families where:

- Either several close relatives developed breast cancer
- or, individuals had breast cancer at younger ages than is usual
- or, some relatives had breast cancer and others had ovarian cancer
- or, someone had both breast and ovarian cancer.

In families like this there may be an altered gene which means people are more likely to develop breast cancer.

Is the cancer in my family inherited?

When we assess your family history we look at the number of relatives who had cancers and the ages at which they happened. Cancers occurring at older ages are less likely to be inherited. The types of cancer are also important because only some cancers are related to each other. Many cancers, such as lung cancer and cervical cancer are usually due to environmental rather than genetic effects.

From the information you provided, the cancers in your family are unlikely to be caused by a known inherited form of breast cancer. It is more likely that the cancers developed because of environmental factors combined with other genes. This may be because there have only been one or two related cancers in your family, or because they have occurred at older ages, or because they only affected more distant relatives.

Is my risk of breast cancer increased?

The history of cancer in your family means some relatives may have a moderately increased chance of developing breast cancer. A moderately increased risk means your chance of developing breast cancer is a little higher than women in the general population. It is still much more likely you will never develop breast cancer. Having a moderate risk of developing breast cancer means a lifetime risk which is above 1 in 6 (approximately 17%) but less than 1 in 3 (30%).

Should I be having any extra screening?

If you have a moderately increased chance of breast cancer you may be offered extra breast screening. Usually this involves having mammograms every 12 months between the ages of 40 and 50.

After this, you would be offered mammograms every 3 years until the age of 70. These are arranged by the NHS National Breast Screening Programme. Screening is offered in order to pick up cancers as early as possible. This enables earlier treatment which increases the prospects for a good outcome.

What are mammograms?

Mammograms are carried out at your local breast care clinic or screening unit. A small dose of X-rays is used to examine each breast, just like having a chest X-ray. Having too many X-rays is potentially harmful because it may increase the risk of cancer. Where the family history indicates an increased risk of cancer, the benefits of regular mammograms will outweigh the risks.

Mammography may also detect other changes in the breast which are completely harmless. Occasionally this can result in someone being recalled for further tests such as a biopsy. Most often these turn out to be normal but it may cause some anxiety.

Mammograms do not always pick up breast cancers. This is particularly so in younger women because their breast tissue is often more dense than in older women. Research is underway to determine if mammography before the age of 40 is beneficial in families at increased risk, but this is not currently recommended.

What breast symptoms should I be aware of?

In most women, breast cancer is first noticed as a painless lump in the breast. Other signs may include:

- A change in the size or shape of a breast
- Dimpling of the skin of the breast
- A thickening in the breast tissue
- A nipple becoming inverted (turned in)
- A lump or thickening behind the nipple
- A rash (like eczema) affecting the nipple
- A bloodstained discharge from the nipple (this is unusual)
- A swelling or lump in the armpit

Pain in the breast is usually not a symptom of breast cancer. In fact, many healthy women find that their breasts feel lumpy and tender before their period. Some types of benign (not cancerous) breast lumps can be painful. Often there are no outward signs of breast cancer that you can see or feel.

Even if you do have one or more of these signs, it still doesn't mean you have breast cancer. Most breast lumps turn out to be benign.

However, it's important that you tell your doctor immediately if you experience any worrying symptoms.

Can I have a gene test for inherited breast cancer?

It is unusual to find a strong hereditary cause for breast cancer in a family, even if there are several cancers. There are two main genes, called BRCA1 and BRCA2 that cause most hereditary breast and ovarian cancer. Individuals who have a change in one of these genes often develop breast cancer at a young age and sometimes other cancers too. Genetic testing for hereditary breast cancer is generally not useful unless there is a strong family history including cancers at young ages.

Research is underway to find out more about other breast cancer genes which cause a moderately increased risk for developing breast cancer. We might suggest storing a blood sample from an affected relative so that genetic testing may be offered in the future when we know more about these other genes. We may also invite you to consider taking part in research studies looking for other breast cancer genes. However, there is no obligation participate.

What should I do if someone else develops cancer?

This may not affect your risk of developing cancer. However, it would be important for you check with us in case it alters our advice.

How do hormones or environmental factors affect my chances of breast cancer?

Our knowledge of the causes of breast cancer has greatly improved. Unfortunately we still do not understand all of the environmental factors that affect the chances of developing breast cancer. We do know that certain hormonal factors are important because they may increase the risk of breast cancer.

They are:

- Starting your periods early (under 12 years of age)
- Having a late first pregnancy (over 30 years)
- Having no children
- Having a late menopause

There is evidence that breast feeding for 12 months reduces the risk of breast cancer. For some hormonal factors women have little or no control over.

Research has shown that taking the Combined Oral Contraceptive Pill has a small effect on the risk of breast cancer. There is a slightly increased risk while taking the pill but the added risk will fade within 5-10 years of coming off the pill.

There are some concerns about Hormone Replacement Therapy (HRT) and breast cancer. If taken for more than 5 years after a natural menopause, HRT which contains oestrogen plus other hormones, does increase the risk of breast cancer a small amount. The longer HRT is taken, the greater the increase in risk. Again, the added risk will decrease once HRT is stopped. For women who take HRT before their natural menopause, perhaps because they had their ovaries removed, there does not seem to be an increased risk. However, they should stop their HRT soon after the age of 50 to stop their risk of breast cancer increasing.

Using HRT to manage menopausal symptoms is a very personal decision. You will need to talk about this with your gynaecologist or GP.

Can I do anything else to reduce my risk?

Some lifestyle factors can increase or reduce the risk of breast cancer. Maintaining your weight within normal limits is helpful as evidence indicates that obesity does increase the breast cancer risk significantly, particularly after the menopause. Drinking more than 2 units of alcohol a day increases your breast cancer risk. Smoking also increase the risk of breast cancer a small amount.

There is good evidence that women who take at least 30 minutes of moderate exercise 5 times a week can reduce their risk of developing breast cancer. A balanced diet including plenty of fruit and vegetables is also recommended.

What about my relatives?

Some of your relatives may also benefit from extra breast screening. They can contact us to discuss this or ask their GP to refer them to their local genetics centre. Should you wish, we would be able to share the information we have with their own genetics centre.

If you remain healthy and cancer-free it is unlikely that your children's risk of breast cancer will be increased. However, they may wish to look into this around the age of 35 to find out more about their risk.

Useful websites for further information:

Website: **http://www.macmillan.org.uk**

Website: **http://www.breastcancercare.org.uk/**

If you need more advice please contact:

Oxford Cancer Genetics

Oxford Centre for Genomic Medicine
ACE building (Room 33G16)
Nuffield Orthopaedic Centre
Oxford University Hospitals NHS Foundation Trust
Windmill Road
Headington
Oxford OX3 7HE

Tel: **01865 226 034**

Email: **orh-tr.churchill-clinicalgenetics@nhs.net**

Website: **http://www.ouh.nhs.uk/clinical-genetics**

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

This leaflet is based, with permission, on a leaflet produced by the West Midlands Regional Genetic Service.

November 2022
Review: November 2025
Oxford University Hospitals NHS Foundation Trust
www.ouh.nhs.uk/information

Leaflet reference number: OMI 66553