Category 3: Potentially high risk

> Follow the recommendations for Category 2.

> In addition, it may be recommended that you consider being referred to a family cancer clinic to discuss:

- Your personal risk in more detail
- The option of the family being tested for genetic faults if it is appropriate in your situation
- The possible increased risk of ovarian cancer in some families
- Other options for screening and risk reduction

What is a family cancer clinic?

If you feel you may be at high risk of developing breast cancer, you can talk to your doctor about referral to a family cancer clinic. There you will see a genetic counsellor, family cancer nurse, or specialist doctor trained in genetics. They will take a detailed family history to define your risk and discuss your options with you. They may arrange genetic testing and may discuss ways to reduce your risk of breast cancer. Family cancer clinics also investigate family history of other cancers such as bowel cancer.

What is genetic testing?

There are several genes which may contain inherited faults linked to the development of breast cancer and ovarian cancer. You may have heard of these; they are called BRCA1 and BRCA2. Faults (mutations) in these genes can be detected using a blood test. Usually, a sample of blood is first taken from a woman in the family who has developed breast cancer or ovarian cancer. The DNA is "searched" for a gene fault. If a gene fault is detected, then other family members can be tested to see if they carry the same fault.
This testing is recommended in circumstances where there is a strong family history of breast cancer and/or ovarian cancer. The testing is only done under the supervision of a specialised clinic. There are pros and cons to genetic testing, and these will be discussed with you at a family cancer clinic.

I have had breast cancer—what does this mean for my daughter?

Many women who have had breast cancer are concerned about the risk that this diagnosis carries for their daughters. You can estimate your daughter's risk of breast cancer using the information in this brochure to determine her risk category. She may be above the average risk if you were diagnosed with breast cancer before the age of 50, or if a number of your relatives have developed breast or ovarian cancer.

Your daughter should speak to her doctor in more detail about her individual risk. It is possible that mammograms every year rather than every two years will be recommended. She may need to start having mammograms at an age younger than 40-50, depending on how old you were when your breast cancer was diagnosed. Starting regular breast x-rays 5-10 years before your age at diagnosis is a useful rule of thumb. Finally, if the family history is stronger, the doctor may suggest a referral to a family cancer clinic.

Contact numbers

Westmead Breast Cancer Institute	8890 6728
Westmead Hospital Familial Cancer Service	8890 6947
Cancer Council Cancer Helpline	13 11 20
BreastScreen Australia	13 20 50
NSW Genetics Education Program	9926 7324

If you are in a country area, the services above will help you find your closest family cancer clinic.

For health professionals

FRA-BOC (Familial Risk Assessment – Breast and Ovarian Cancer) is an on-line tool designed to help health professionals provide advice to families. It is available free through the Cancer Australia website. FRA-BOC provides an estimation of the risk of developing breast or ovarian cancer, based on family history (for women unaffected by cancer) and it identifies women who should be referred to a family cancer clinic for further assessment and advice.
http://canceraustralia.nbocc.org.au/fraboc/

Useful contacts/websites

Cancer Australia	canceraustralia.gov.au
Cancer Council	cancer.org.au
Cancer Council Helpline	13 11 20
Breast Cancer Network Australia (BCNA)	1800 500 258 bcna.org.au

Supporting People with Breast Cancer Today and Every Day

- Providing screening, diagnosis, treatment and care by expert teams
- With world-class research, education and innovation
- Engaging the help of our community and supporters
- To shine a Ray of Hope

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Family History of Breast Cancer

Westmead Breast Cancer Institute

Family History of Breast Cancer

Breast cancer is a common disease. In Australian women, the lifetime risk of developing breast cancer is 1 in 8 (before the age of 85). Many women have someone in their family who has had breast cancer; this can happen by chance, as the disease is so common.

Most women (more than 90%) will not develop breast cancer, even if they have a close relative who has had breast cancer.

Rarely, breast cancer can be caused by a fault in a gene that can be passed through families from one generation to the next. These faults can be inherited from either the mother's side or the father's side of the family. Less than 5% of all breast cancer cases are related to an inherited genetic fault. This means that in more than 95% of breast cancer cases, the disease occurs by chance rather than because of a genetic fault in the family.

Ovarian cancer and cancer of the fallopian tube (which joins the ovary to the womb) sometimes has an association with breast cancer. Some of the same genetic faults that make a person more likely to develop breast cancer may also make a person more likely to develop ovarian cancer.

Genetic counselling and testing through a family cancer clinic may help families who suspect that they have an inherited gene fault.

What features of family history are important?

When assessing your risk of breast cancer, you must look separately at the history of breast cancer on your mother's side and your father's side of the family.

Your risk of developing breast cancer may be higher than that of the average woman if your family history includes several close relatives on one side of the family with either breast cancer or ovarian cancer.

In addition, families with an inherited gene fault tend to have:

> Women diagnosed with breast cancer at a young age (often before the age of 40)

> Women who develop cancer in both their breasts

> Women who develop ovarian cancer

> Women who develop both breast and ovarian cancer

> Men who develop breast cancer as well as women

> Ashkenazi Jewish ancestry

What is your risk?

In a group of 100 Australian women:

> 95 women are at an average risk (population risk) of developing breast cancer.

> Only four women are at a moderately increased risk of developing breast cancer.

> Only one woman is at a potentially high risk of developing breast cancer based on her family history.

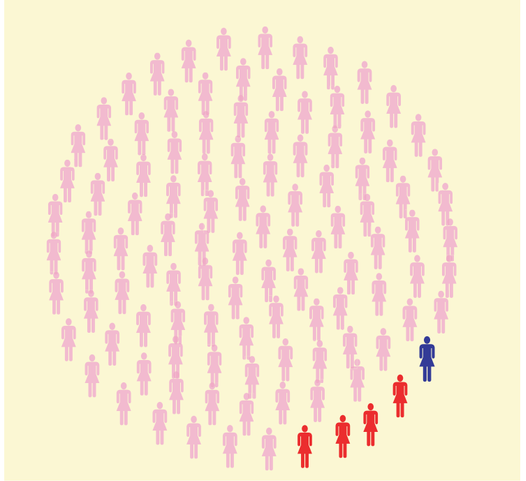
Remember,

> Nobody has a 0% risk of developing breast cancer, and

> Nobody has a 100% risk of developing breast cancer

Risk Categories

You can estimate your risk of developing breast cancer by looking at your family history in detail. You will fit into one of the three risk categories discussed in this brochure. First-degree relatives are parents, brothers, sisters and children. Second-degree relatives are aunts, uncles, nieces, nephews and grandparents.



Category 1: At or slightly above average risk

95% of women are in this group.

Women in this group have:

> No family history of breast cancer, or

> Family history of breast cancer occurring in:

- One first-degree relative at age 50 or older, or
- One second-degree relative at any age, or
- Two first or second-degree relatives over the age of 50, on different sides of the family, or
- Two second-degree relatives on the same side of the family, both with breast cancer at age 50 or older

The risk of developing breast cancer in this group is the same or only slightly higher than the average woman in the general population.

90% of women in this group will not develop breast cancer.

Category 2: Moderately increased risk

Less than 4% of women are in this group.

Women in this group have a family history of breast cancer occurring in:

> One first-degree relative before the age of 50, or

> Two first-degree relatives on the same side of the family, or

> Two second-degree relatives on the same side of the family with at least one diagnosed under the age of 50

The risk of developing breast cancer in this group is moderately increased compared to that of the general population.

Category 3: Potentially high risk

Less than 1% of women are in this group.

Women in this group have a family history of breast cancer or ovarian cancer occurring in:

> Two first- or second-degree relatives on the same side of the family, plus

> One or more of the following features:

- Additional relatives with breast cancer or ovarian cancer
- A relative with both breast and ovarian cancer
- Breast cancer diagnosed before the age of 40
- Breast cancer affecting both breasts
- Ashkenazi Jewish ancestry
- Breast cancer in a male relative
- A relative who has tested positive for a high-risk gene mutation e.g. a mutation in genes such as BRCA1 or BRCA2

The risk of developing breast cancer in this group is potentially higher than that of the general population.

How do I monitor my breasts if I have a family history?

The following recommendations apply to all women with or without a family history of breast cancer:

> Be "breast aware"— this means examining your own breasts often enough to be familiar with how they normally feel. This will increase your chances of detecting a change. See the *'Breast Health'* brochure for more information.

> See a doctor promptly with any breast changes.

> Have a breast examination performed by a doctor every year.

> Begin having screening mammograms every two years from the age of 40-50.

The recommendations for extra monitoring depend on the risk category you are in.

Category 1: At or slightly above average risk

> Monitor your breasts as outlined in the previous paragraph.

Category 2: Moderately increased risk

> Follow the recommendations for Category 1, above.

> In addition, it may be recommended that you:

- Start having screening mammograms at the age of 40, or 5-10 years younger than the age the youngest relative was at the time of her breast cancer diagnosis
- Have your screening mammograms every year rather than every two years
- Consider the use of medication, such as tamoxifen or raloxifene, to reduce risk of developing breast cancer. This requires careful assessment of risk and benefits in the individual case by an experienced medical professional.

You may like to consider the option of being referred to a family cancer clinic to discuss your personal risk and recommendations in more detail.