A biopsy is a procedure which removes cells or tissue from the tumour to provide more information. The specimen is sent to the laboratory where a pathologist looks at the tissue under a microscope and determines whether or not the lesion is a cancer.

The pathologist prepares a report of the findings, including the diagnosis, and sends it to your surgeon or oncologist. The pathology report(s) helps to determine your treatment plan. The report is written in medical language but understanding the basic parts of the report can help you to be better informed about your diagnosis.

There are many different types of breast cancer and each woman’s experience may be different so it is important to gather as much information as possible from your specialist team, to help you make informed decisions about your own treatment plan.
Biopsy results

Your breast imaging and examination may have already provided quite a lot of information about the breast cancer but the biopsy provides very specific information which is needed to plan treatment.

Fine needle aspiration biopsy (FNA)
This removes cells from the tumour. The cells are examined under a microscope and the cytology report will confirm whether they are malignant (cancerous) or benign (not cancerous). The test is not able to indicate the type of cancer or whether it is in-situ (pre-invasive) or invasive. A core biopsy is often undertaken to provide this type of information.

Core biopsy
This removes several small samples of tissue from the tumour and provides a more detailed description of the tissue including the type and grade of a cancer.

Excision biopsy
Occasionally these biopsies may not provide a firm diagnosis or it may not be possible to accurately target the area of concern. In that case the suspicious area may be surgically removed for identification. This is known as excision biopsy.

“it is a good idea to ask for a copy of your pathology report to refer to later, especially if you have questions about your treatment plan or wish to seek a second opinion.”

The pathology report from your biopsy may contain the following information:

1 The type of breast cancer

This may be in-situ or invasive.
Ductal carcinoma in-situ means that the cancer cells are still confined within the breast ducts. This is usually referred to as DCIS and is a pre-invasive condition.
Invasive/infiltrating cancer means that the cancer cells have spread out of the breast ducts into surrounding breast tissue. If invasive, the cancer will be further classified e.g. ductal carcinoma, lobular carcinoma or one of the less common “special types”, depending on its appearance under the microscope. Over 90% of breast cancers are ductal.

Invasive breast cancer
Cancer cells have spread from the milk ducts into the surrounding tissue.

Ductal carcinoma in situ
Cancer cells are contained within the milk ducts.

2 The grade of the tumour

Usually expressed as Grade 1, Grade 2 or Grade 3.
This indicates how abnormal the tumour appears under the microscope, as compared to normal breast tissue. It can also indicate how quickly the tumour cells are dividing.
Grade 1 (low grade) – The cancer cells still look similar to normal breast cells and grow quite slowly. May also be described as well-differentiated.

Grade 2 (intermediate grade) – The cancer cells look more abnormal and grow slightly faster. May also be described as moderately differentiated.

Grade 3 (high grade) – The cancer cells no longer look like the original breast cells and tend to grow quickly. May also be described as poorly differentiated.

Note: The grade is not the same as the stage of the cancer. The stage indicates whether the cancer is confined to the breast or has moved to the lymph nodes or to another part of the body. The stage cannot be fully assessed until the cancer has been removed and examined under a microscope and the lymph node status is known. Sometimes other investigations such as a CT or a bone scan may be required to complete the staging but this is not always necessary.

3 Hormone receptor status

Breast cancer cells may contain receptors for oestrogen and/or progesterone. Receptors enable your body’s female hormones to enter the cancer cells and help them to grow. The receptor status is usually described as ER and PR positive or negative.

If the cancer is hormone receptor positive, hormone-blocking therapy may be recommended as part of the treatment plan to reduce the risk of the cancer recurring in the future.

Cancers which don’t have the receptors (ER, PR negative) do not respond to the hormone-blocking therapy and other treatment may be recommended.

Approximately 75% of breast cancers are hormone receptor positive.

4 HER2 status

Approximately 20% of breast cancers over-produce the HER2 protein which acts as a growth-regulator. These are described as HER2 positive cancers.

When the HER2 cells are over-produced, this causes the cancer cells to rapidly divide and grow and may require specifically targeted therapy e.g. with Herceptin, a biological agent.

The HER2 status is reported as Negative (0 or 1+) or Positive (3+). Sometimes the result is Equivocal (2+) or uncertain and this requires further testing by a method known as FISH.

An informative booklet “Learning all about HER2-positive Early Breast Cancer” is produced by Roche Products [NZ] Ltd and may be available from your breast nurse or the New Zealand Breast Cancer Foundation. You can also download it from www.myjourney.co.nz

Approximately 20% of breast cancers are negative for all three receptors: ER, PR and HER2.

These are known as triple negative cancers and do not respond to hormone-blocking therapy nor to Herceptin. The mainstay of treatment in these cases is chemotherapy.

Not all core biopsy reports contain these receptor results. Some laboratories prefer to perform these tests on the specimen which is removed at surgery.

www.nzbcf.org.nz
Breast cancer treatment

Treatment for breast cancer consists of surgery to remove the tumour, and may also involve chemotherapy, radiotherapy, hormone-blocking therapy or targeted biological treatment such as Herceptin.

Your specialist team will use the information gained from your imaging and biopsy results to make a treatment plan for you. Following surgery, a final histology report will be issued, containing all of the information needed to plan any subsequent treatment. It is a good idea to ask for a copy of your pathology report to refer to later, especially if you have any questions about your treatment plan or wish to seek a second opinion.

Read or watch the stories of other New Zealand women diagnosed with breast cancer at www.nzbcf.org.nz/breastcancer/personalstories

Questions to ask your doctor

- Can I have a copy of the pathology report and can you explain it to me?
- Can I bring a support person in so you can explain my results to them?
- What do my receptor results mean for me?
- Can you write down what you have told me so that I can read it again later?
- Who can I call if I have questions when I get home?
- What are my next steps?

FIND OUT MORE!
Further information on testing for breast cancer is provided at www.nzbcf.org.nz/breastcancer/testsdiagnosis
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