

Sentinel lymph node biopsy



Lymph nodes and breast cancer

Lymph nodes are a part of the immune system and help you fight infection. They are found throughout the body, especially in the neck, armpits and groin. A clear fluid (lymph) flows through the lymph nodes to the rest of the body.

In the case of breast cancer, the lymph nodes under the arm can be affected by cancer cells. Therefore, it is important to assess the lymph nodes under your arm in order to determine the stage of cancer. Between 15% and 30% of women with breast cancer also have cancer cells in the lymph nodes.

By determining whether or not there are cancer cells in your lymph nodes, your physician can better determine the type of treatment you may need after your surgery. If the sentinel lymph node does not contain cancer cells, the other lymph nodes likely do not either.

Sentinel lymph node biopsy

A sentinel lymph node biopsy is a surgical procedure to collect a sample of the node in order to determine the stage of cancer.

During the biopsy, the surgeon removes the first lymph node that receives the lymph from the breast. If the tests confirm that cancer is not present in the removed lymph node, the chance of finding cancer in the other lymph nodes is small.

This biopsy allows many women to avoid dissection of the lymph nodes under the arm (surgery to remove many more lymph nodes) in order to determine the stage of cancer.

Benefits of the biopsy

This biopsy reduces the risk of problems after the surgery, such as numbness under the arm, difficulty moving your shoulder or swelling in the arm (lymphedema). You can discuss the benefits and side effects with your physician.

When should the biopsy be done?

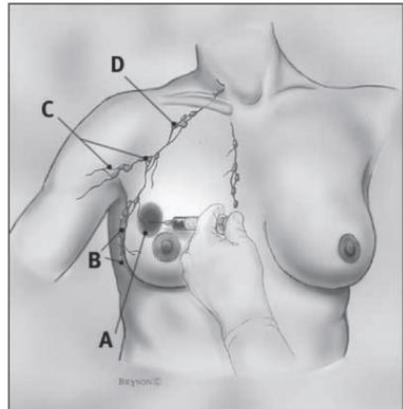
The biopsy serves to determine if the cancer has spread to the armpits. It is an alternative to dissection, when it is possible to surgically remove the tumour and when the lymph nodes appear normal on palpation prior to surgery.

How is the biopsy done?

To find the sentinel lymph node(s), two fluids are used, called “tracers.” They are injected into the breast and their progression from the lymphatic canals to the armpit is observed.

The first fluid is injected the day before or the day of your surgery. It contains a small quantity of radiation, smaller than the quantity used in a regular X-ray. During your surgery, your surgeon uses a device called a “Geiger counter” to find the sentinel lymph node(s).

The second fluid is a blue dye that is injected during the surgery. The surgeon observes the trajectory of the dye in order to locate the lymph nodes, which turn blue.



A - Injection of blue dye into the breast
B, C et D – Lymph nodes

Before your surgery

You will receive an automated call up to three business days prior to your appointment to confirm the date and time you must come to the hospital.

At your appointment, the staff will take you to an imaging room and ask you to lie on the examining table. A technician will clean your breast, then use a small needle to inject the fluid into your breast. You may feel a slight burning sensation at the injection site. This sensation will go away after a few minutes. Fifteen to 30 minutes later, the technician will take several images of your breast and armpit, and will make a small mark on your skin to indicate the location of the lymph node.

If your surgery is scheduled for the next day, you can go home. If your surgery is the same day, you will be taken to the Operating Room and the next steps will be explained to you.

During your surgery

During your surgery, medication will be injected into your arm to put you to sleep. The surgeon will then inject a blue dye into your breast to better see the sentinel lymph nodes. The Geiger counter will then be used to locate the sentinel lymph nodes and an incision will be made in order to remove them. If the surgeon is unable to locate a sentinel node, the standard axillary lymph nodes (about 10 lymph nodes under your arm) will be removed.

After your surgery

You can go home on the day of your surgery. Someone will explain to you how to care for the incision. As is the case for all surgeries, there is a risk of infection and bleeding, but the risk is low. Your urine and stools may be bluish for 24 to 48 hours. The dye will be eliminated through your kidneys. Your breast may also change colour at the injection site, but it will resume a normal colour with time.

Glossary

Axillary lymph node dissection

Surgery that consists of removing lymph nodes in the armpit area.

Biopsy

A technique in which a small tissue sample is collected in order to detect cancer cells. A pathologist usually analyzes the sample with a microscope.

Lymph

A clear fluid that flows through the lymphatic vessels throughout the body.

Lymph nodes

Part of the immune system that helps to fight infection.

Lymphedema

Swelling of the arm as a result of surgery or the injection of a radioactive fluid.

Pathologist

A physician who uses a microscope to identify abnormalities in cells and tissue.

Radioactive fluid

A fluid that emits radiation.

Sentinel lymph node

The first lymph node where cancer cells can multiply.

Surgeon

A physician who specializes in surgery.

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