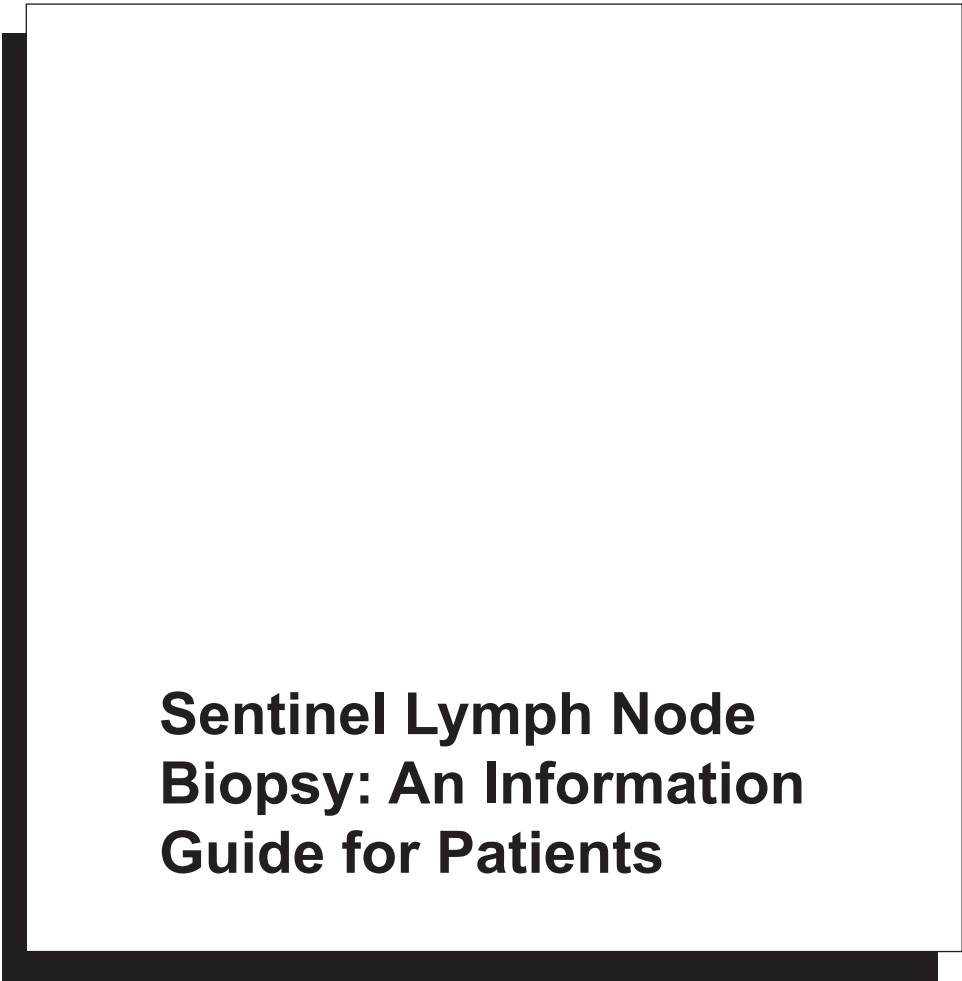




GUIDE



Sentinel Lymph Node Biopsy: An Information Guide for Patients



The Ottawa | L'Hôpital
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Disclaimer

This is general information developed by The Ottawa Hospital. It is not intended to replace the advice of a qualified healthcare provider. Please consult your own personal physician who will be able to determine the appropriateness of the information for your specific situation.

P699 (08/07)

Printed at The Ottawa Hospital

Lymph Nodes in Breast Cancer

One of the first places breast cancer may spread to is the **lymph nodes** under the arm. Lymph nodes are part of the **immune system** that helps fight infection. They are found throughout the body, mainly in the neck, armpits and groins. A clear fluid called **lymph** flows through the nodes throughout the body.

Sometimes cancer cells break away from the tumour and travel away from the breast through the **lymph system**. It is important to have an assessment of the lymph nodes under the arm (**axilla**) to help your doctors decide what type of treatment you may need AFTER your surgery. A removal of the nodes under the arm is called **axillary lymph node biopsy or dissection**. About 15-30% of women with breast cancer will have cancer cells in their lymph nodes.

What is a Sentinel Lymph Node Biopsy?

Knowing whether you have cancer cells in your lymph nodes or not will help your doctors decide what kind of treatment you may need AFTER your operation for breast cancer. If the sentinel lymph node is cancer free, the rest of the lymph nodes will most likely be cancer free as well.

In **sentinel lymph node biopsy or dissection** the surgeon removes the node that is the first one to receive lymph drainage from the breast. The idea is that it will be the one most likely to contain cancer if cancer cells have spread. There may be more than one sentinel node. If a sentinel node is removed, examined by a **pathologist** and found to be healthy, the chance of finding cancer in the remaining nodes is small. This procedure spares many women from having an axillary lymph node dissection where many more nodes are removed and provides comparable information for staging the cancer.

What are the benefits of a Sentinel Lymph Node Biopsy?

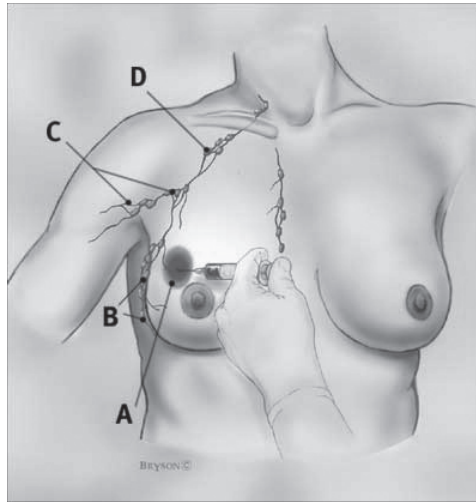
The sentinel lymph node biopsy decreases the risk of problems such as arm numbness, difficulty with moving your shoulder or swelling in the arm (**lymphedema**) when compared to the standard axillary dissection. Your doctor can further discuss these potential adverse effects and benefits with you.

When is it appropriate to have a sentinel lymph node biopsy?

A sentinel lymph node biopsy is a technique for staging the axilla. It is an alternative to axillary dissection for women with operable breast cancers and whose lymph nodes are not abnormal by physical examination or investigation before surgery. Also, you may NOT be a good candidate if you have had any prior surgery or treatment that could have changed the normal flow of lymph from the breast.

How is it done?

To identify the sentinel lymph node or nodes two “**tracers**” are used. These tracers are injected into the breast and then flow through the lymph channels into the underarm (axilla). The first tracer contains a small amount of radioactive material that is injected the day before or the day of surgery. The amount of radiation is much less than a regular x-ray. The surgeon then uses a hand-held Geiger counter to locate the sentinel lymph node(s) during the operation. The second tracer used is a blue dye, which is injected during the operation. The surgeon observes where the dye travels and identifies the blue stained lymph nodes.



A - Injection of Blue Dye into Breast
B, C and D - Lymph Nodes

How do I prepare for my operation?

The day before or the morning of your surgery you will need to go to the Nuclear Medicine Department located at _____ . You will be brought into an imaging room and will lie on an examination table. The technologist will clean an area of the affected breast. The technologist or nuclear medicine specialist will use a small needle to put the radioactive material in your breast. It usually takes a short time for the injection to be done and you may feel some burning at the injection site. This feeling will pass after a few minutes. Fifteen to thirty minutes later the technologist will take several images of your breast and underarm area. He or she will place a small black mark on your skin with a marker. This indicates the location of the lymph node. After the procedure, you are free to return home if your surgery is the next day.

What happens on the day of my operation?

On the day of your operation you will be given medication through a needle in your arm (intravenous) to make you fall asleep. The surgeon will inject some blue dye into your breast. This helps the surgeon see the sentinel lymph node(s). The surgeon will use the hand held Geiger counter to help locate the sentinel lymph node(s). An incision will be made and the lymph nodes removed. If the surgeon is UNABLE to find the sentinel node(s), the standard axillary lymph node dissection will be done. If that is the case, the surgeon will remove about 10 lymph nodes from under your arm.

What do I do after my operation?

You will be going home the same day of your operation. Instructions will be given to you about the care of your incision. All operations have the risk of infection and bleeding but it is a relatively small one. Your urine and feces may be coloured blue for 24-48 hours afterwards. The dye leaves your body through the kidneys. It may also cause the breast to change colour where injected. Your breast will return to its normal colour over time.

Glossary

Axilla

Underarm or armpit

Axillary Lymph Node Dissection

A surgical procedure to remove lymph nodes from under the arm

Biopsy

A small sample piece of tissue is taken from the body and tested for changes such as cancer. A pathologist usually looks at the tissue under a microscope.

Lymph

A clear fluid that travels throughout the body by way of the lymphatic vessels.

Lymph nodes

Part of the immune system that helps fight infection

Lymphedema

Swelling of the arm due to lymph collecting after surgery and/or radiation.

Nuclear medicine specialist

A doctor that specializes in the use of imaging techniques (e.g. X rays, MRI, CT)

Pathologist

A doctor that specializes in identifying microscopic abnormalities in cells and tissue

Radioactive

Material that gives off radiation

Sentinel lymph node

The 'guard' lymph node to which cancer may first spread

Surgeon

A doctor that specializes in operating on people

March 27, 2007

