Lymphatic Mapping with Sentinel Node Biopsy

This information explains your lymphatic mapping with sentinel node biopsy procedure at Memorial Sloan Kettering (MSK).

You might have this procedure if you have breast cancer or melanoma. It will help your doctor see if cancer cells have spread to your lymph nodes.

About Your Lymphatic System

Your lymphatic system has 2 main jobs:

- It helps fight infection.
- It helps drain fluid from areas of your body.

Your lymphatic system is made up of lymph nodes, lymphatic vessels, and lymphatic fluid (see Figures 1 and 2).

- **Lymph nodes** are small bean-shaped structures located along your lymphatic vessels. They filter your lymphatic fluid, taking out bacteria, viruses, cancer cells, and other waste products. A sentinel lymph node (often called a sentinel node) is the first lymph node that cancer cells might spread to.

- **Lymphatic vessels** are tiny tubes (like blood vessels) that carry lymphatic fluid to and from your lymph nodes.

Figure 1. Your lymphatic system in your breast
• **Lymphatic fluid** is the clear fluid that travels through your lymphatic system. It carries cells that help fight infections and other diseases.

![Lymphatic system diagram](image)

**Figure 2. Your lymphatic system in other areas of your body**

### Lymphatic Mapping

Lymphatic mapping is the first step in your sentinel node biopsy. It’s done to find the sentinel node. Lymphatic mapping can be done the day before or the day of your sentinel node biopsy.

Check your appointment reminder for where to go for your lymphatic mapping procedure.

**During your mapping procedure**

During your procedure, you will lie on a reclining chair for about 20 minutes. While you’re in the reclining chair, a doctor or nurse will inject a small amount of a radioactive liquid under your skin below the areola of your affected breast. You might feel stinging or burning during the injection.

After the injection, you will massage the area of the injection site for 10 minutes. This will help the radioactive liquid travel to the sentinel node(s). Then, a
technologist will measure the radioactivity in your breast, axilla (armpit), and thigh on your affected side to see how much of the liquid was absorbed. There are 2 ways they can do this:

- Your technologist might use a small handheld device called a Neoprobe.
- You might have a full-body imaging scan done using a larger machine that you lie down on.

Both ways work equally well. Your doctor or nurse will tell you what to expect.

**After your mapping procedure**

If you’re having your sentinel node biopsy the same day as your mapping procedure, you will be brought to the area where you’re having your biopsy.

If you’re not having your biopsy on the same day as your mapping procedure, you will go home after your mapping procedure.

**Breastfeeding**

Stop breastfeeding for 24 hours after your lymphatic mapping. You can keep pumping your milk, but don’t feed it to your baby. You can either throw the milk away or store it for 24 hours.

After 24 hours, you can start breastfeeding again, feed your stored milk to your baby, or both.

If you have any questions, speak with your nuclear medicine doctor.

**Sentinel Node Biopsy**

**Before your biopsy procedure**

A sentinel node biopsy is a surgical procedure. Many people have their sentinel node biopsy during their breast or melanoma surgery.

If you’re having your sentinel node biopsy as a separate surgery, read the resource *Getting Ready for Surgery* (www.mskcc.org/pe/getting_ready_surgery). It explains how to get ready for your biopsy. Your nurse will give you this resource during your appointment. You can also find it online.
During your biopsy procedure

You will get anesthesia (medication to make you sleep) before your procedure.

Once you’re asleep, your surgeon will inject a small amount of blue dye near the site of your cancer. This dye will travel through your lymphatic vessels to the sentinel node(s). It will stain your sentinel node(s) blue.

Next, your surgeon will use a Neoprobe (small handheld device) to measure the radioactivity from the liquid that was injected during your lymphatic mapping procedure. Once they find the area where your sentinel node(s) are, they will make an incision (surgical cut). They will look for the blue sentinel node(s) and remove them. They will send the node(s) to the Pathology Department to see if they contain cancer cells.

If the sentinel node(s) do contain cancer cells, you might need to have more lymph nodes removed. This is called an axillary lymph node dissection. Your surgeon will discuss this with you in more detail, if needed.

After your biopsy procedure

You might go home the same day as your biopsy, or you may need to stay in the hospital. This depends on how many other surgeries you had. Your doctor or nurse will tell you what to expect.

Read the resource Caring for Yourself After Your Sentinel Lymph Node Biopsy (www.mskcc.org/pe/caring_after_sentinel_node_biopsy) for information about what to expect after your procedure.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.