

Lymphatic system and axillary nodes

The lymphatic system runs throughout the body. It carries lymph (a clear fluid that contains immune cells) from tissues and organs to lymph nodes. **Lymph nodes** are small clumps of immune cells that act as filters for the lymphatic system. They also store white blood cells that help fight illness.

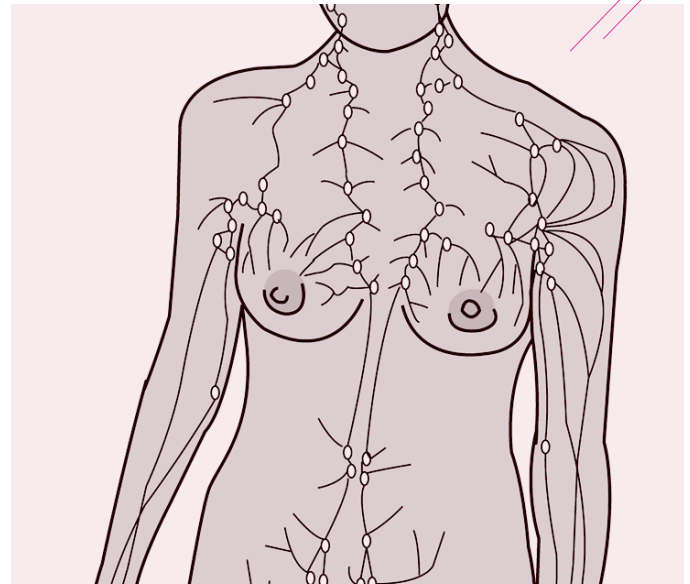
The lymph nodes in the underarm are called axillary lymph nodes. If breast cancer spreads, these nodes are the first place it's likely to go. During breast surgery, some axillary lymph nodes may be removed to see if they contain cancer.

The larger the tumor, the more likely the breast cancer has spread to the lymph nodes. This is called (lymph node-positive breast cancer).

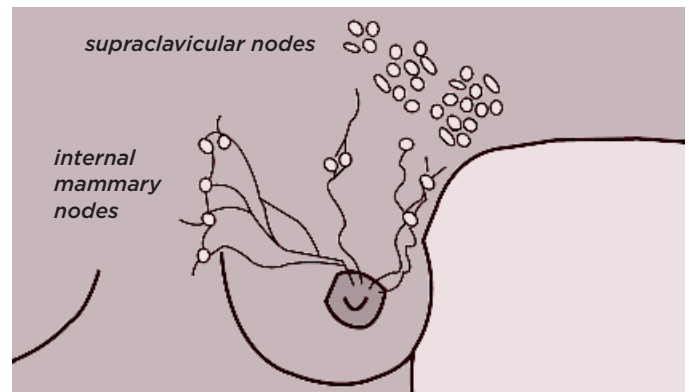
Sentinel node biopsy

To see if cancer has spread to the axillary lymph nodes, most people have a **sentinel node biopsy**. Before or during the procedure, a radioactive substance (called a tracer) and/or a blue dye is injected into the breast. The first axillary lymph nodes to absorb the tracer or dye are called the sentinel nodes. These are also the first lymph nodes where breast cancer is likely to spread.

The surgeon removes the sentinel nodes and sends them to the lab. When the surgeon removes the sentinel nodes, it doesn't mean there's cancer in the nodes. It means a pathologist (a special doctor who studies breast tissue) needs to check the nodes for cancer. If the nodes contain cancer, more lymph nodes may be removed. This is done through axillary dissection.



The lymphatic system runs through the body.



Lymph node levels and the internal mammary nodes.

Lymph node status

Lymph node status shows if the breast cancer has spread to the lymph nodes or not.



Lymph node-negative. This means no cancer is found in the sentinel nodes. It's unlikely other lymph nodes contain cancer. Surgery to remove more lymph nodes won't be needed.



Lymph node-positive. This means cancer is found in the sentinel nodes. More lymph nodes may be removed.

The lymph node status helps determine the breast cancer stage and guides treatment options. The chances of survival are better when breast cancer is lymph node-negative.

This fact sheet is intended to be a brief overview. For more information, visit komen.org or call Susan G. Komen's Breast Care Helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Friday, 9 a.m. to 10 p.m. ET or email at helpline@komen.org. Se habla español.

Resources

Susan G. Komen®

1-877 GO KOMEN
(1-877-465-6636)
komen.org

National Lymphedema Network

1-800-541-3259
lymphnet.org

Related online resources:

- [Breast Cancer Prognosis](#)
- [Breast Cancer Surgery](#)
- [Lymphedema](#)
- [Questions to Ask Your Doctor: Lymphedema](#)

Axillary dissection

The goals of [axillary dissection](#) are to check how many lymph nodes have cancer and to reduce the chances of cancer recurring (coming back) in the lymph nodes.

Axillary dissection removes more nodes and disrupts more of the normal tissue in the underarm area than a sentinel node biopsy. So, it's more likely to affect arm function and cause [lymphedema](#).

For this reason, sentinel node biopsy is the preferred method to check the axillary lymph nodes.

Lymphedema

When axillary lymph nodes are removed or are treated with radiation therapy, some of the lymph vessels can become blocked. This may keep lymph fluid from leaving the area. Lymphedema occurs when lymph fluid collects in the arm (or other areas such as the hand, fingers, chest/breast or back). It causes swelling (edema). The swelling may be so small it's barely seen or felt. Or it may be so great the arm grows very large. Even if the change is small, it can be distressing.

Lymphedema usually develops within 3 years of breast surgery or radiation therapy.

Since sentinel node biopsy is now the preferred way to remove lymph nodes, today, most people don't get lymphedema. And the cases that occur are less severe than in the past.

For more information on lymphedema, please read **Facts for Life: [Lymphedema](#)** or see **Questions to Ask Your Doctor about [Lymphedema](#)**.



Photo credit: Stanley G. Rockson, MD, Allan and Tina Neill Professor of Lymphatic Research and Medicine, Stanford School of Medicine

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