Lymph Node Removal

Lymph is a substance made naturally in the body. It is a clear fluid that travels through the body to cleanse it. The lymph travels through filters called **lymph nodes.** Lymph nodes trap unwanted substances, like cancer cells and viruses, and try to get rid of them from the body.

A woman's lymph nodes might be involved in her breast cancer. "**Node-positive**" means cancer cells are present in the lymph nodes. "**Node-negative**" means cancer cells are not present in the lymph nodes. Knowing whether or not cancer is in the lymph nodes will help your doctor decide how aggressive your treatment needs to be.

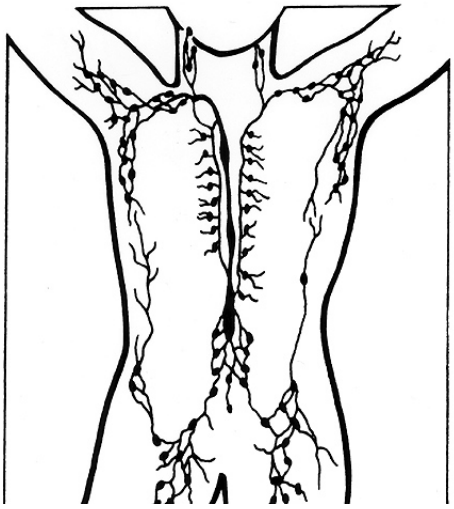


Image: National Cancer Institute

The job of the lymph nodes is to filter out "bad guys" like cancer cells. So, nodes are a logical place to look for cancer cells that have escaped the original tumor and are trying to go elsewhere in the body. Cancer found in the lymph nodes is removed so that it can't grow further in the lymph node area or spread to other places in the body.

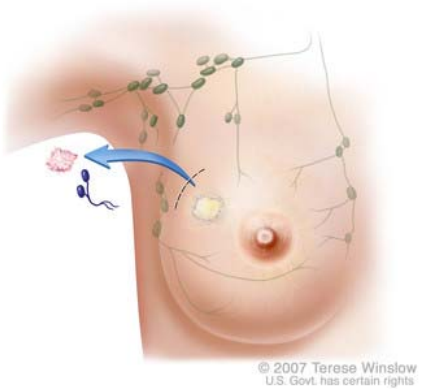
A **lymph node biopsy** is an operation to take out a sample of the lymph nodes to see if cancer is there. Lymph nodes are removed from the underarm area next to the breast. A doctor checks the lymph nodes under a microscope to see if they have cancer cells in them. The more lymph nodes that have cancer cells, the more threatening the cancer may be.

Your doctor can usually get enough information by removing ten lymph nodes. Your surgeon will also remove any nodes that feel cancerous. How many lymph nodes are removed depends on your body as well as the surgeon's skills. Every woman has a different number of lymph nodes under her arm—some naturally may only have five nodes and others may have over thirty.

Lymphedema is swelling of the arm on the side of the breast affected by cancer. Lymphedema happens in only 5–10% of cases. The risk is higher (25%) for women who have more lymph nodes removed and radiation to the lymph node areas after surgery and chemotherapy. The 25% risk level for lymphedema also applies to women who had an old-fashioned radical mastectomy - the removal of nearly all of the lymph nodes surrounding the breast, in addition to removal of the breast and underlying muscles.

Removing lymph nodes does not fight cancer cells that already spread to other parts of the body or cells that leave the breast through the bloodstream. For these reasons, other treatment is important and helpful to kill any cancer cells that already escaped to other parts of the body.

Sentinel Lymph Node Removal



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Sentinel lymph node surgery removes just a few lymph nodes. This is now the common, standard procedure. Sentinel node biopsy is a good option for women with early-stage breast cancer who have a low to medium risk of lymph node involvement. However, the sentinel lymph node procedure is not appropriate for women whose lymph nodes are abnormal or known to be involved with the cancer.

The dictionary defines "sentinel" as a guard, watchdog, or protector. Likewise, the sentinel lymph node is the first node "standing guard" for your breast. In sentinel lymph node removal, the surgeon looks for the very first lymph node that filters fluid draining away from the area of the breast that contains the breast cancer. If cancer cells are breaking away from the tumor and traveling away from your breast through lymph, the sentinel lymph node is more likely than other lymph nodes to contain cancer.

The idea behind sentinel node removal is this: Instead of removing ten or more lymph nodes and analyzing all of them to look for cancer, remove only the few nodes that are most likely to have cancer. If this node does not have cancer, chances are the other nodes do not. In reality, the surgeon usually removes a cluster of two or three nodes—the sentinel node and those closest to it.

In women who have relatively small breast cancers (no more than two centimeters) and who have lymph nodes that don't feel abnormal before surgery, removal of just one or a few underarm nodes can accurately tell the status of cancer in the lymph nodes. Studies have shown that after almost five years, women who had just the sentinel node removed were as likely to be alive and free of cancer as women who had more lymph nodes removed.