

Forgoing Lymph Node Removal Doesn't Raise Risk of Breast Cancer Recurrence

Skipping axillary dissection did not have a detrimental effect on recurrence-free survival, but it did lead to less lymphedema.

February 5, 2024 By [Liz Highleyman](#)

Women who avoid or have less extensive lymph node removal along with surgery for early [breast cancer](#) are not at higher risk for cancer recurrence or death, according to findings presented at the [San Antonio Breast Cancer Symposium](#) (SABCS 2023). However, as expected, those who had fewer lymph nodes removed were less likely to develop lymphedema.

The usual treatment for early-stage breast cancer is surgery to remove either the tumor (breast-conserving surgery, or lumpectomy) or the whole breast (mastectomy). Patients may also receive neoadjuvant medications before surgery or adjuvant medications afterward. As part of the procedure, so-called sentinel lymph nodes around the armpit—the first ones the cancer would spread to—are tested to see whether they contain malignant cells. Women with detectable cancer in their lymph nodes have traditionally undergone axillary lymph node dissection, or removal. But more extensive surgery can lead to worse side effects, including [lymphedema](#), the buildup of fluid in the arms that can occur when the flow of lymph is disrupted.

30-Study Meta-Analysis

To assess the effect of axillary lymph node dissection on breast cancer outcomes, Gurdeep Mannu, PhD, of the University of Oxford, and colleagues with the Early Breast Cancer Trialists' Collaborative Group performed a meta-analysis of 30 randomized trials with a total of more than 20,000 participants. The trials compared axillary surgery versus no such surgery, more versus less extensive lymph node removal, or axillary surgery versus radiation therapy. The studies were divided into those conducted before and after the advent of sentinel lymph node biopsy in the 1990s.

Over a median 10 years of follow-up, rates of local/regional cancer recurrence in the breast or nearby sites did not differ significantly between women who had more extensive axillary surgery and those who had fewer lymph nodes removed. This was also the case for recurrence at distant sites, death from breast cancer and all-cause mortality. These results held for women with both node-negative and node-positive disease. But adverse effects did differ: Women who underwent more extensive axillary lymph node dissection were more than twice as likely to develop

lymphedema.

Looking next at axillary surgery versus radiation in five relevant trials, the study authors found no significant differences in terms of local/regional recurrence, distant recurrence, breast cancer mortality or all-cause mortality. Here, too, women who underwent axillary lymph node dissection were almost twice as likely to develop lymphedema compared with those who received radiation.

SENOMAC Trial

Randomized controlled trials are considered the gold standard for medical evidence. In the SENOMAC trial ([NCT02240472](#)), Jana de Boniface, MD, PhD, of the Karolinska Institute in Stockholm, and colleagues enrolled more than 2,500 people in five countries who had primary breast cancer with up to two positive sentinel lymph nodes. The median age was 61 years. About a third had lymph node extension, or cancer that had broken through the surrounding node capsule.

The participants underwent breast-conserving surgery (64%) or mastectomy (36%). Nearly 90% then received nodal radiation therapy and adjuvant hormone therapy. In addition, they were randomly assigned to undergo completion axillary lymph node dissection or not.

After a median four years of follow-up, recurrence-free survival rates were similar in the two groups: 89% of those who underwent axillary lymph node dissection and 90% of those who did not were still alive without cancer recurrence. Overall survival data are not yet mature.

Skipping axillary dissection was noninferior for women older and younger than 65, those with lobular and non-lobular tumors, those with different estrogen receptor and HER2 status, those with one or two positive sentinel nodes, those who underwent mastectomy or lumpectomy, those with larger tumors and those with lymph node extension. [As previously reported](#), omitting axillary dissection led to better patient-reported outcomes, including less lymphedema.

The researchers concluded that people with one or two positive sentinel lymph nodes can safely avoid axillary dissection and instead receive only radiation therapy. Next, they will explore whether nodal radiation can also be omitted in the T-REX trial.

Discussing the study findings, Andrea Barrio, MD, of Memorial Sloan Kettering Cancer Center in New York City, said that lymph node dissection is still indicated for people with positive sentinel lymph nodes who don't receive radiation therapy, but only one or the other is needed.

Another study presented at the conference found that people with initially positive lymph nodes that become negative after neoadjuvant chemotherapy [can safely skip regional nodal radiation](#). All these studies reflect a trend toward reducing the intensity of treatment in an effort to avoid side effects and improve quality of life.

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