

Less can be more when removing lymph nodes during breast cancer surgery

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A conservative approach to removing lymph nodes is associated with less harm for breast cancer patients and often yields the same results as more radical procedures, researchers at UT Southwestern Medical Center have found.

In the Oct. 2 edition of the *Journal of the American Medical Association*, lead author Dr. Roshni Rao, associate professor of surgery at UT Southwestern, and other investigators from the Harold C. Simmons Cancer Center reviewed studies on patient outcomes of women who had received various forms of surgical treatment, ranging from removal of one lymph node to prevent the spread of [breast cancer](#) to removing the entire network of lymph nodes spanning the armpits.

Until recently, clinical practice guidelines advised complete axillary node dissection – removal of all 20-30 axillary nodes – if a woman's sentinel [node biopsy](#) was positive. The sentinel node is generally the first node to which cancer cells will spread from a primary tumor. A positive [sentinel lymph node biopsy](#) indicates the tumor has metastasized and can be used to determine the stage of the cancer. Axillary lymph nodes are distributed at the edge of the chest muscles and into the armpits and lower neck.

For women with no suspicious axillary nodes who undergo breast-conserving therapy, there is little evidence of benefit in doing a complete axillary node dissection compared with [sentinel node biopsy](#) alone, the reviewers reported. Breast conserving therapy is defined as partial

mastectomy followed by whole breast radiation.

"In the past, axillary nodal status was a critical factor considered in therapy decisions," said Dr. Rao, a breast cancer surgeon. "With the validation of [sentinel lymph node](#) biopsy, the same staging information can be obtained with less morbidity and risk to the patient. And now that decisions regarding chemotherapy are often guided by molecular tumor profiling in an era of personalized medicine, there are other avenues to explore beyond aggressive surgeries."

To assess the effect of the guidelines, Dr. Rao and her colleagues reviewed the risks and benefits of sentinel node biopsy as compared with complete axillary node dissection in previous published research. They also compared these procedures with nonsurgical interventions (i.e., additional radiation) in women with breast cancer who do not have palpable [lymph nodes](#) or ultrasound evidence that their cancer has spread to the axillary nodes.

They also reviewed the rate of recurrence of axillary node metastases, mortality, morbidity, and complications associated with each intervention, using online medical databases. In all, more than 1,000 results were examined from 17 studies to write the *JAMA* review.

Avoiding axillary surgery if possible is important, Dr. Rao said, because it can cause shoulder and arm symptoms including lymphedema, severe pain or numbness, and reduced range of motion, and it generally involves longer stays in the hospital, as opposed to sentinel node surgery.

Provided by UT Southwestern Medical Center

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