

Study links arm/hand swelling to number of lymph nodes removed during breast cancer surgery

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In older breast cancer survivors, the number of lymph nodes removed during surgery and the presence of cancer in the lymph nodes were the two factors most directly linked to the development of lymphedema, swelling of the arm and hand, according to a study from the Medical College of Wisconsin's Center for Patient Care and Outcomes Research in Milwaukee, Wisconsin.

"Lymphedema causes physical discomfort and disability, as well as a cosmetic deformity which can lead to anxiety, depression and [emotional distress](#) that can affect a woman's activities of daily living and quality of life," says lead author Tina Yen, M.D., M.S., a Medical College of Wisconsin surgical oncologist who practices at Froedtert Hospital, a major hospital affiliate. "For these reasons, lymphedema is probably the most feared complication among [breast cancer](#) survivors. A better understanding of its risk factors is needed to help improve outcomes."

The study appears online, in advance of publication in the April issue of *Annals of Surgical Oncology*. It is significant because there are few large, population-based studies on this topic looking at long-term outcomes from more than one institution, and much of the existing literature was written 20-30 years ago, when more extensive surgeries to the breast and armpit (axilla) were performed and use of radiation therapy to the armpit was more common.

The researchers conducted three phone surveys between 2005 and 2007 among 1,338 community-dwelling women, ages 65-89 years, who were identified by Medicare claims as having undergone initial breast cancer [surgery](#) in 2003. These 1,338 women were treated by 707 surgeons. Four years after surgery, 14 percent self-reported having lymphedema.

Women who developed lymphedema were more likely to have more extensive disease, have undergone more extensive surgery and received chemotherapy. However, after controlling for a woman's age, tumor size, type of surgery, other therapies and surgeon volume, the removal of more than five [lymph nodes](#) and the presence of cancer in the lymph nodes were the only two factors that predicted a risk for lymphedema. Most importantly, the number of lymph nodes removed is more predictive of the risk for lymphedema rather than the type of axillary surgery performed (sentinel lymph node biopsy versus axillary node dissection).

If no lymph nodes were removed, the risk for lymphedema was 4.7 percent. Removal of up to five lymph nodes did not increase the risk of lymphedema, when compared to the removal of no lymph nodes. However, the removal of between six and 15 lymph nodes increased that risk five-fold, and removal of 16 or more lymph nodes increased the risk of developing lymphedema by more than ten-fold. Given these findings, all women undergoing any axillary surgery should still be counseled on their risk for lymphedema, although this risk may be minimal for women who have fewer than five lymph nodes removed.

Source: Medical College of Wisconsin ([news](#) : [web](#))

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