

## ARTICLES

# Eighteen Sensations After Breast Cancer Surgery: A Two-Year Comparison of Sentinel Lymph Node Biopsy and Axillary Lymph Node Dissection

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**Purpose/Objectives:** To evaluate the prevalence, severity, and level of distress of 18 sensations at baseline (3–15 days) and 24 months after breast cancer surgery and to compare sensations after sentinel lymph node biopsy (SLNB) with those after SLNB plus immediate or delayed axillary lymph node dissection (ALND).

**Design:** Prospective, descriptive.

**Setting:** Evelyn H. Lauder Ambulatory Breast Center at Memorial Sloan-Kettering Cancer Center in New York, NY.

**Sample:** 294 women with breast cancer; 214 had undergone breast conserving therapy, and 80 had undergone total mastectomy; 197 had had SLNB, and 97 had had SLNB and ALND.

**Methods:** Patients completed the Breast Sensation Assessment Scale® (BSAS®) at baseline and 3, 6, 12, and 24 months after surgery.

**Main Research Variables:** Prevalence, severity, and level of distress of sensations in patients who had undergone breast cancer surgery.

**Findings:** Sensations were less prevalent, severe, and distressing in patients undergoing SLNB than those undergoing ALND. This difference appeared to be limited to those undergoing breast conserving therapy. Most sensations after SLNB and ALND, even if prevalent, were not very severe or distressing. Some sensations persisted as long as two years. These included tenderness after SLNB and numbness after ALND. Patients often reported phantom sensations after total mastectomy.

**Conclusions:** Overall, prevalence, severity, and level of distress were lower after SLNB compared to ALND, but some morbidity existed after SLNB. Certain sensations remained prevalent in both groups for as long as 24 months.

**Implications for Nursing:** Nurses can use information from this study to provide more accurate education and support to patients.

### Key Points . . .

- Overall, prevalence, severity, and level of distress of sensations are lower after sentinel lymph node biopsy (SLNB) compared to axillary lymph node dissection (ALND), but some morbidity exists after SLNB.
- The majority of sensations after SLNB and ALND, even if prevalent, are not very severe or distressing.
- Some sensations persist up to two years.

patient's disease stage and treatment plan. Because injury or resection of specific nerves and lymphatic pathways in the operative field often occurs with ALND, this procedure is associated with considerable morbidity. Several studies have documented long-term morbidity, including numbness, pain, arm swelling, and decreased arm mobility (Kuehn et al., 2000; Warmuth et al., 1998). In eligible patients, sentinel lymph node biopsy (SLNB) has become an attractive alternative to ALND to stage the disease and is becoming the standard of care at many institutions. SLNB is the resection of the first lymph node or nodes (more than one sentinel node may exist) in the lymphatic basin that receives lymph flow from a primary tumor (Hill et al., 1999). Disruption of the axillary nerves and lymphatics is believed to be less with SLNB than with ALND. Therefore, postoperative sensations are expected to be less extensive and severe than those seen in patients after ALND. This hypothesis must be tested to ensure that patients have accurate information.

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Patients with breast cancer frequently experience postoperative sensations in and around the axilla, breast, and chest wall of the affected side after breast cancer surgery. These sensations, at times, can be severe and distressing to patients, who often are experiencing general emotional upheaval. If not adequately prepared prior to surgery, patients can interpret postoperative sensations as an indication that something is wrong. This, in turn, adds uncertainty and anxiety to an already stressful event. Healthcare professionals should learn about these sensations and how they affect patients to provide adequate pre- and postoperative education and support.

Axillary lymph node dissection (ALND) traditionally has been the standard surgical procedure performed to determine a