

Sentinel Lymph Node Biopsy in Breast Cancer: Scientific Rationale and Patient Care

Eric Zack, RN, MSN, OCN®

Purpose/Objectives: To describe the history of sentinel lymph node biopsy (SLNB), review the current scientific literature comparing the benefits and shortcomings of SLNB with traditional axillary lymph node dissection, and describe the nursing role that should be employed when instructing patients who are considering SLNB.

Data Sources: Journal articles, published research data, and clinical experience.

Data Synthesis: Traditional axillary lymph node dissection has the potential to cause serious complications such as lymphedema, scarring, numbness, pain, and psychological distress. Given that approximately 70% of women with early-stage breast cancer will have no evidence of regional lymph node involvement at the time of surgery, determining who is likely to have negative nodes will spare women these potential complications. SLNB can significantly minimize the morbidity associated with axillary lymph node dissection while providing accurate diagnostic and prognostic information.

Conclusion: SLNB has been well documented in the scientific literature from multiple phase III clinical trials as an accurate, safe, and fiscally conservative alternative to traditional axillary lymph node dissection for women who present with early-stage breast cancer. Furthermore, future results from multicenter, randomized clinical trials now under way ultimately will determine the role for SLNB in the years to come.

Implications for Nursing Practice: Nurses in the outpatient setting can help to minimize the anxiety and fear that patients have when they are considering SLNB versus the more traditional axillary lymph node dissection. Oncology nurses also serve as resources to other nurses, healthcare professionals, and the public as more information is learned concerning the role of SLNB in early-stage breast cancer.

Key Points . . .

- Reductions in the size and stage of breast tumors at diagnosis have been significantly affected by improved mammographic technology.
- Women no longer are accepting the common morbidity caused by axillary lymph node dissection and are seeking effective alternative diagnostic approaches when appropriate.
- Sentinel lymph node biopsies are performed in large, metropolitan medical and teaching institutions, with the primary goal of comparing this surgical procedure with axillary lymph node dissection in relation to diagnostic and prognostic accuracy, associated morbidity, and overall costs.
- Oncology nurses play an instrumental role in discussing the indications, contraindications, benefits, and shortcomings of sentinel lymph node biopsy; educating women about the pre-, intra-, and postoperative procedures and sensations; and assisting in counseling women and their families when necessary.

Objectives for CE Enrollees

- On completion of this CE, the participant will be able to
1. Describe the role of sentinel lymph node biopsy (SLNB) in breast cancer.
 2. Describe the differences between SLNB and axillary lymph node dissection.
 3. Describe nursing implications for patients receiving SLNB.

Early diagnosis of breast cancer has become increasingly possible because of advances in mammography. Early diagnosis results in greater probability for cure as the disease typically is confined within the breast (American Cancer Society, 2000). Axillary lymph node dissection has been the predominant method for detection of regional extension of breast carcinoma. The presence of positive axillary lymph nodes and certain tumor characteristics, such as the size, number, and location, remain important independent prognosticators for women with breast cancer. Recent research suggests that more than 70% of women with stage I breast

cancer will have no evidence of axillary lymph node metastases (Cady, 1997). In these cases, physicians have questioned using axillary lymph node dissection because of complications associated with long-term morbidity. Serious

Eric Zack, RN, MSN, OCN®, is a staff and charge nurse at Rush-Presbyterian-St. Luke's Medical Center in Chicago, IL, and a graduate nursing student completing a post-MSN ACNP certification at Rush University. (Submitted October 2000. Accepted for publication January 18, 2001.)