

# The Use of Nipple-Sparing Mastectomy in Patients With Breast Cancer

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Breast cancer is the most common cancer diagnosed in women. Nipple-sparing mastectomy (NSM) offers the opportunity to preserve the breast envelope and the nipple-areolar complex by removing only breast tissue and avoiding multiple surgical procedures for reconstruction. The objective of this article is to review the oncologic and surgical concerns with NSM, along with the appropriate selection of patients and potential postoperative complications. A review of the literature was conducted through MEDLINE®, PubMed, and Google Scholar, focusing on recent research. The findings revealed that although the oncologic safety of NSM continues to be debated, indications are strong that cancer recurrence rates are low and the aesthetic motivation is high for carefully screened patients. From those findings, considerations for patient education regarding risks and expectations are described. Nurses in a variety of cancer care settings can use this information to address the concerns of patients making decisions regarding surgical options and adjusting to postoperative body image expectations and changes.

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**B**reast cancer remains the most frequently diagnosed cancer among women. The American Cancer Society (2012) estimated that 226,870 women would be diagnosed with invasive breast cancer in 2012. Most women with breast cancer will have some form of surgery, which will involve a series of decisions. Surgical decisions may include a choice between lumpectomy, which was formerly considered “breast conserving,” and mastectomy, with or without reconstruction. Evidence exists of a reversal in the previously declining national mastectomy rates, with the frequency of mastectomy declining until 2005 and subsequently rising (Mahmood et al., 2012).

Increasingly, women who choose mastectomy also are choosing breast reconstruction, either at the time of mastectomy or later. In 2011, 96,277 breast reconstruction procedures were conducted, an increase of 3% over 2010 and an increase of 22% since 2000 (American Society of Plastic Surgeons, 2012). Gene testing for *BRCA* mutations also has contributed to increasing mastectomy rates, which, with acceptance of prophylactic mastectomies, often are performed with immediate reconstruction (Habermann et al., 2010).

In an evolution of the phrase “breast conserving,” skin-sparing mastectomy (SSM), or preservation of the natural skin

envelope, was introduced by Toth and Lappert (1991). The technique has enhanced aesthetic outcomes without compromise in oncologic safety (Yi et al., 2011). As SSM has become more widely used, interest has focused on the addition of nipple-sparing procedures to enhance breast conservation with additional aesthetic benefit.

Nipple-sparing mastectomy (NSM) preserves the breast envelope and the nipple-areolar complex (NAC) by removing only breast tissue and avoiding multiple surgical reconstruction procedures. Because cancer rarely originates in the NAC, NSM for prophylactic mastectomy has become widely regarded as safe, but for patients with cancer, acceptance has been slower because of concerns regarding oncologic safety (Spear et al., 2011). In Europe, NSM has been used more widely in the treatment of ductal carcinoma in situ and invasive cancers, but NSM has been adopted more slowly in the United States because of concerns that preserved tissue could be a source of cancer recurrence (Yueh et al., 2009).

The major concerns with NSM can be categorized as oncologic and surgical. The oncologic concerns include the risk of cancer recurrence related to the NAC. Surgical concerns relate to the viability of the NAC because of the possibility of necrosis.