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Nipple-sparing mastectomy as a risk-reducing strategy in high-risk patients

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Objective: This study aimed to evaluate indications, complication rates, and unfavorable events in 106 patients undergoing risk-reducing nipple-sparing mastectomy (NSM) with immediate reconstruction over 20 years. **Methods:** A retrospective review was conducted of medical records and updated patient follow-ups during routine appointments. Patients who underwent risk-reducing NSM from 2004 to 2024 were included. **Results:** The patients' mean age was 42.8 years, with 74.5% under 50. The main indication for risk-reducing NSM was the presence of a genetic mutation (61.3%), predominantly BRCA (52%), followed by a family history of breast cancer (38.6%). All patients received silicone implant-based reconstruction. There was one (1%) incidental diagnosis of invasive ductal carcinoma and three (2.8%) ductal carcinomas in situ. Among 212 risk-reducing NSM, complication rates were low, with partial nipple necrosis, infection, and seroma needing drainage, each occurring in approximately 1% of cases. With a mean follow-up of 52 months, only one (1%) patient developed breast cancer. **Conclusion:** These findings highlight the safety and effectiveness of NSM as a risk-reducing strategy, supporting its role in precision surgical oncology for high-risk patients.

Keywords: subcutaneous mastectomy; postoperative complications; breast neoplasms.