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Does the Indication for Breast Surgery Impact Surgical Outcomes? A Contemporary Analysis of the ACS-NSQIP Database

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Background. There is limited data about whether perioperative outcomes differ based on the indication for breast surgery. Herein we aim to assess if breast surgery for prophylaxis, compared to that for malignancy, impacts surgical outcomes.

Methods. All women who underwent simple or subcutaneous mastectomy were identified from the 2007-2012 ACS-NSQIP database. Patients were identified by their ICD-9 codes and categorized into two groups. Group 1 consisted of patients diagnosed with breast cancer or carcinoma in situ; group 2 consisted of patients diagnosed with a genetic predisposition to malignant neoplasm of the breast (i.e., BRCA mutation). Demographic and preoperative variables were compared between groups and outcome variables. Outcome variables were analyzed using age- and operative time-adjusted logistic regression models.

Results. 30,803 patients were identified. Group 1 consisted of 30,644 (99.5%) patients diagnosed with malignancy; group 2 consisted of 159 (0.5%) who underwent prophylactic surgery. In univariate analyses, those undergoing prophylactic surgery were significantly younger ($p < 0.01$). There were no other preoperative differences between groups. When adjusted, the prophylactic group demonstrated a greater risk of DVT ($p = 0.03$). There were no differences in mortality, superficial/deep/organ space infections, UTI, wound dehiscence, or MI.

Conclusion. In this analysis of a national cohort of breast surgery patients, those undergoing prophylactic surgery due to a genetic predisposition had a greater risk of perioperative DVT, compared to those who underwent surgery for a diagnosis of malignancy. This data may allow for improved perioperative management of patients to prevent DVT development and their devastating consequences.

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