Impact of Patient and Operative Factors on 30-day Revisits Following Outpatient Mastectomy
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ABSTRACT

Background
Improvements in perioperative care and communication have increasingly shifted breast cancer surgery into the outpatient setting. Despite this trend, most women who undergo mastectomy are still admitted as inpatients, and little data exists characterizing outcomes following outpatient mastectomy. We sought to analyze patient and operative factors associated with 30-day revisits following outpatient mastectomy in women with breast cancer.

Methods
We used the Healthcare Cost and Utilization Project State Ambulatory Surgery Database and State Inpatient Database from 2006-2013 to create a cohort of women aged 18 and older who underwent outpatient mastectomy for invasive breast cancer, breast cancer in situ, or history of breast cancer.

Descriptive statistics and logistic regression were used to analyze associations between clinical factors, defined by ICD-9-CM and CPT codes and the Elixhauser comorbidity classification, and 30-day revisits.

Results
Of 3,944 women with outpatient mastectomy, 694 (18%) had an inpatient or outpatient encounter within 30 days postoperatively. Mean age was 56.8 ± 13.3 years. Ninety-four percent (650/694) had undergone unilateral mastectomy, with the majority either simple (344, 53%) or modified radical mastectomy (295, 45%). The most frequent complications requiring revisit were surgical site infection (64, 9%), hematoma (40, 6%), and seroma (23, 3%), and the majority of revisits were ambulatory surgery or observation stays (434, 63%). Multivariable logistic regression demonstrated significantly increased odds of 30-day revisit with any reconstruction (OR 1.25, 95% CI 1.05-1.5), diabetes (OR 1.64, 95% CI 1.21-2.1), and regional disease (OR 1.64, 95% CI 1.22-2.18). No significant differences were found in odds of 30-day revisit for race, unicentric vs. bilateral procedures, or other comorbidities.

Conclusions
All-cause revisits within 30 days following outpatient mastectomy are infrequently related to surgical complications. Women undergoing outpatient mastectomy were younger with relatively few comorbidities. Analysis of outpatient interventions and unscheduled visits may provide additional information regarding management trends for complications after mastectomy.

INTRODUCTION

• Nearly 3 million women in the United States have a history of breast cancer, and annual US incidence of breast cancer is likely to exceed 250,000 women in 2013.
• Up to 40% of patients may undergo mastectomy for the primary treatment of breast cancer.
• Postoperative inpatient admission following mastectomy remains a common practice, but improvements in perioperative care have increased shift to the outpatient setting.
• Slight increased risk of rehospitalization within 30 days following outpatient mastectomy is likely.
• Postoperative inpatient admission following mastectomy remains a common practice, but improvements in perioperative care have increasingly shifted mastectomy to the outpatient setting.
• Redimensions costly and possibly preventable.
• Substantially increased cost of readmission involving a postoperative complication.
• Unknown frequency of outpatient vs. inpatient encounters following outpatient mastectomy.
• Lack of data regarding outpatient management of postoperative complications.

Study Aim
To investigate the impact of patient demographics and operative factors on 30-day revisits following outpatient mastectomy for breast cancer.

METHODOLOGIES

Data Source
• Healthcare Cost and Utilization Project (HCUP) administrative data
• State Ambulatory Surgery Database (SASD), State Inpatient Database (SID)
• New York, 2006-2013

Study Design
• Retrospective cohort

Patient Population
• Women age 18 years and older
• Diagnosis: breast cancer, breast carcinoma in situ, history of breast cancer
• Main procedure: mastectomy – unilateral or bilateral [19180, 19182, 19200, 19220, 19240, 19303-7]
• Outpatient procedure status

Data Identification
• Index procedure: Current Procedural Terminology (CPT) codes
• Revisits: CPT and International Classification of Diseases (ICD-9) codes
• Elixhauser comorbidity classification

Statistical Analysis
• Descriptive statistics, multivariable logistic regression

RESULTS

STUDY POPULATION CHARACTERISTICS

Outpatient mastectomy procedures: 3,944 patients
Mean Age: 56.8 ± 13.3 years
30-Day Revisits: 694 patients

<table>
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<tr>
<th>Variable</th>
<th>30-day Revisit (N = 694 [17.6%])</th>
<th>No 30-day Revisit (N = 3250 [82.4%])</th>
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CONCLUSIONS

• All-cause revisits within 30 days following outpatient mastectomy are infrequently related to surgical complications.
• Women undergoing outpatient mastectomy are young with relatively few comorbidities.
• Significantly increased odds of 30-day revisit with any reconstruction, history of diabetes, or regional disease.
• Further assessment of outpatient interventions and unplanned visits may provide additional data regarding management trends for complications after mastectomy.
• Limitations: code definitions and individual coder-specific assignment, potential undercoding of diagnoses.

ACKNOWLEDGMENTS

This work was supported by the National Cancer Institute of the National Institutes of Health (NCI/NIH) under Award Number R01 CA129374 through the American Society of Clinical Oncology/NCI Award Program in support of the Washington University Cancer Institute. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NCI or the NIH.

REFERENCES