

The Impact of Bilateral Mastectomy On Reconstructive Rate and Method In the United States: A Population Based Analysis

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Background: The number of bilateral mastectomies is increasing in the US due to rising use of contralateral prophylactic mastectomy.¹⁻⁴ National rates of bilateral prophylactic mastectomies have not been measured. The influence of changing mastectomy patterns on reconstructive rate and method are unknown. The aim of the current study is: 1) measure trends in the type of mastectomy performed, 2) analyze reconstruction rates and techniques used for the different mastectomy types, 3) evaluate the sociodemographic/hospital characteristics of patients who choose CPM versus UM.

Methods: Analysis of mastectomies from 1998-2008 was performed using the Nationwide Inpatient Sample (NIS) database, the largest registry of US hospital discharges. Ablative procedures were classified based on ICD-9 diagnosis/procedure codes as either: 1) Unilateral mastectomy (UM), 2) Contralateral prophylactic mastectomies (CPM) and 3) Bilateral prophylactic mastectomies (BPM). Rates were adjusted depending upon the analysis. Lumpectomies were excluded. Longitudinal trends were analyzed with Poisson regression and expressed as incidence rate ratio (IRR). Sociodemographic variables were evaluated using a multivariable analysis.

Results: Information on 178,603 mastectomies was analyzed; 86.9% were UM, 12% CPM and 1.1% BPM. UM decreased 2% per year while both CPM and BPM increased significantly by 18% and 12% per year ($p < 0.01$) [Figure 1]. CPM is the only group that significantly increased reconstruction rates throughout the study period ($p < 0.01$) [Figure 2]. Implant use increased for each mastectomy type, but were significantly higher for BPM and CPM than UM. Independent predictors for CPM were: patients younger than 39 years old, Caucasian and Hispanic race, private insurance carriers, treated in teaching hospitals, and from the South and Midwest.

Conclusion: The increasing trend towards bilateral mastectomies within the United States, particularly in patients with unilateral cancer. These changing oncology trends have contributed to both higher reconstruction rates and greater use of implant based techniques.

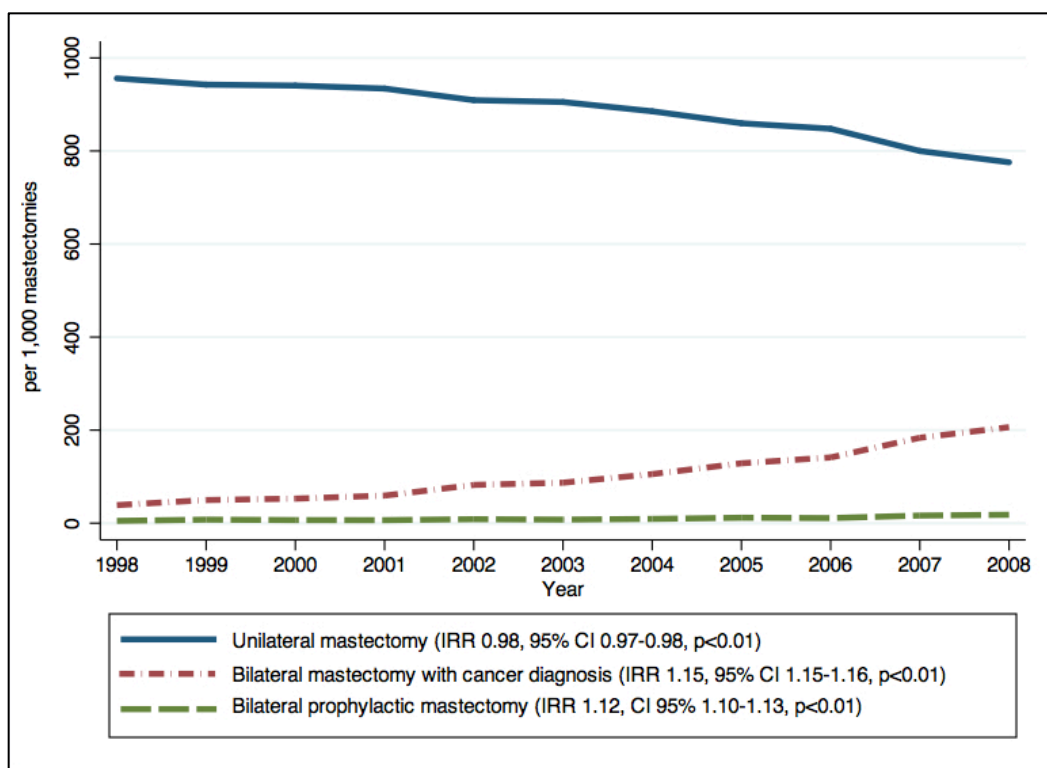


Figure 1. Mastectomy rates in the U.S. 1998-2008.

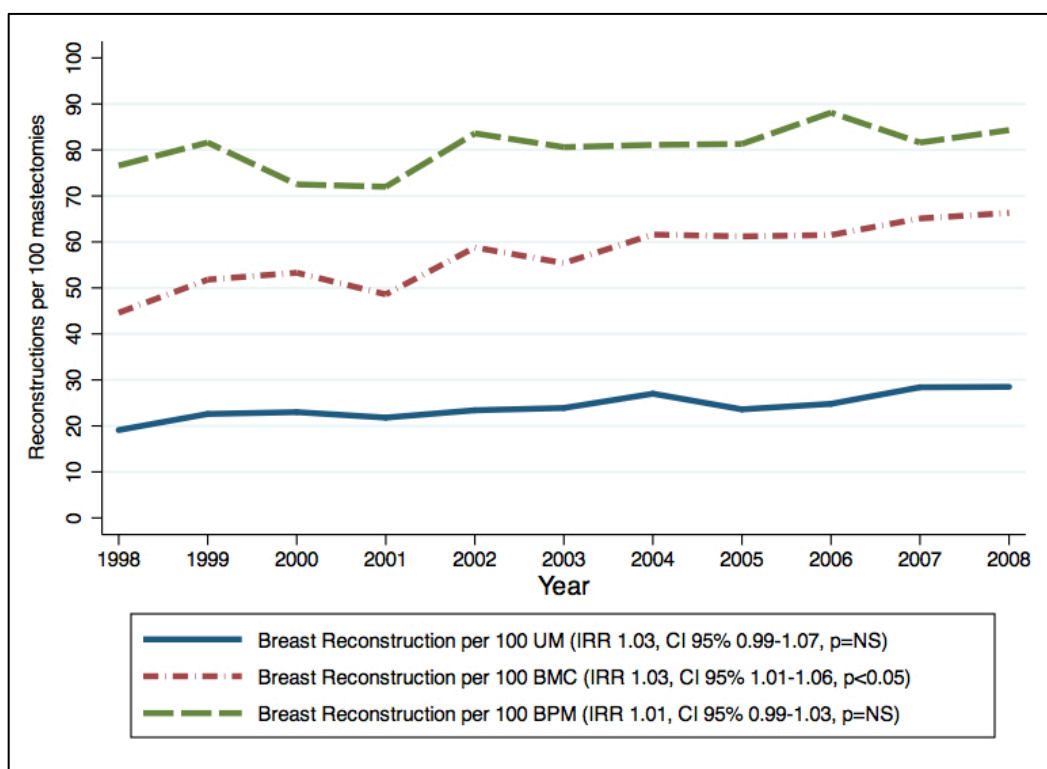


Figure 2. Breast reconstruction adjusted by type of mastectomy in the U.S 1998-2008.

References

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