

Analyzing Regional Differences over a 15-Year Trend of One-Stage versus Two-Stage Breast Reconstruction in 941,191 Postmastectomy Patients

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Background: Implant-based reconstruction is the predominant form of breast reconstruction, with the two-stage tissue expander/implant approach being the most popular. Recently, the direct-to-implant, one-stage breast reconstruction procedure has gained momentum. In this study, national and regional trends across the United States for the two different types of implant-based reconstructions were evaluated. **Methods:** The Nationwide Inpatient Sample database was used to extrapolate data on type of mastectomy, implant-based reconstructive technique (one-stage or two-stage), and sociodemographic and hospital variables. Differences were assessed using the chi-square test, impact of variables on reconstructive method was analyzed using logistic regression, and trends were analyzed using the Cochran-Armitage test.

Results: Between 1998 and 2012, a total of 1,444,587 patients treated for breast cancer or at increased risk of breast cancer met the defined selection criteria. Of these, 194,377 patients underwent implant-based breast reconstruction (13.6 percent one-stage and 86.4 percent two-stage). In both, there was a significant increase in procedures performed over time ($p < 0.001$). The highest increase in both was seen in the Northeast region of the United States, and the lowest increase was seen in the South. When stratified into regions, analysis showed differences in socioeconomic and hospital characteristics within the different regions. **Conclusions:** There is an observed increase in the number of one-stage and two-stage breast reconstructions being performed. Sociodemographic and hospital factors of influence vary in the different regions of the United States. This study provides important information for clinicians and policy makers who seek to ensure equitable and appropriate access for patient to the different types of implant-based procedures. (*Plast. Reconstr. Surg.* 138: 1e, 2016.)

Breast cancer is the most common noncutaneous malignancy affecting women in the United States and the second leading cause of cancer mortality.¹ In 2015, an estimated 231,840 new cases of invasive breast cancer and 64,290 cases of in situ breast cancer are expected to be diagnosed in the United States alone.¹ Approximately 40 to 55 percent of these women opt for simple (total) mastectomy.² Given the

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