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Many Women Do Not Undergo Breast Reconstruction After Mastectomy

- Less than a quarter of women are undergoing postmastectomy breast reconstruction.
- Patients' insurance status impacts the likelihood of undergoing reconstruction.
- Rates of reconstruction are increasing but still remain low, even among young women.

SAN ANTONIO — Despite the benefits, only a small minority of women, regardless of age, are opting for immediate reconstructive breast surgery after undergoing mastectomy for treatment of breast cancer, according to data presented at the 2011 CTRC-AACR San Antonio Breast Cancer Symposium, held Dec. 6-10, 2011.

Research has shown that immediate breast reconstruction after mastectomy improves psychological well-being and quality of life and provides women with improved body image and self-esteem compared with delaying the procedure.

However, data from this study, presented by Dawn Hershman, M.D., associate professor of medicine and epidemiology at Columbia University Medical Center in New York, indicate that only about one third of women undergo the procedure.

Hershman and colleagues identified 106,988 women with breast cancer who underwent mastectomy between 2000 and 2010. They identified these women using insurance codes and then examined data on the frequency of reconstruction by a number of factors including age, race, number of procedures performed in the hospital and type of insurance.

Of the women examined, 22.6 percent underwent immediate reconstruction. Although overall rates of reconstruction have increased since 2000, the greatest increases were seen among women with commercial insurance — from 25.3 percent to 54.6 percent — and

among women aged younger than 50 years — from 29 percent to 60 percent. Among women aged 50 years or younger who also had commercial insurance, 67.5 percent underwent immediate breast reconstruction. Overall, women with commercial insurance had more than a threefold higher likelihood of undergoing immediate reconstruction compared with women without health insurance.

"We were surprised to see that although the use of immediate postmastectomy reconstruction has increased, the rates still remain low, with 41.8 percent of women aged younger than 50 years and less than 20 percent of women aged older than 50 years receiving reconstruction during this time frame," Hershman said.

Researchers found that patients were more likely to undergo immediate reconstruction if their surgeon did more mastectomies or they were in a hospital where more mastectomies were performed.

"This is something that could be modified by training and patient education," Hershman said.

Other factors associated with a decreased likelihood for undergoing mastectomy were increasing age, black race, rural hospital location, nonteaching hospital or having other medical illnesses.

Women who underwent immediate breast reconstruction postmastectomy did have a longer hospital stay, but in-hospital complication rates were similar between women who had reconstruction and those who did not.

"Our study shows that there are factors that can be modified to increase the likelihood that women undergo postmastectomy reconstruction," Hershman said. "Public policy should ensure that access to reconstructive surgery is available to all women regardless of insurance status."

In the future, Hershman and colleagues plan to explore other factors that may be associated with immediate reconstruction to better target interventions to appropriate institutions.

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The mission of the CTRC-AACR San Antonio Breast Cancer Symposium is to produce a unique and comprehensive scientific meeting that encompasses the full spectrum of breast cancer research, facilitating the rapid translation of new knowledge into better care for patients with breast cancer. The Cancer Therapy & Research Center (CTRC) at The University of Texas Health Science Center at San Antonio, the American Association for Cancer Research (AACR) and Baylor College of Medicine are joint sponsors of the San Antonio Breast Cancer Symposium. This collaboration utilizes the clinical strengths of the CTRC and Baylor and the AACR's scientific prestige in basic, translational and clinical cancer research to expedite the delivery of the latest scientific advances to the clinic. The 34th annual symposium is expected to draw nearly 8,000 participants from more than 90 countries.

Presenter: Dawn Hershman, M.D.

Abstract Number: S6-3

Title: Influence of Hospital Factors, Physician Factors and Type of Health Insurance on Receipt of Immediate Postmastectomy Reconstruction in Young Women with Breast Cancer.

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Objective: For women with breast cancer who choose mastectomy, breast reconstruction is known to offer a cosmetic and psychological advantage. Despite this, only a minority of patients undergo post mastectomy reconstruction. Little is known about factors that influence reconstruction in younger women who undergo mastectomy. We evaluated the association of demographic, hospital, physician and insurance factors with receipt of immediate breast reconstruction.

Methods: We used the Perspective database to identify women who underwent a mastectomy for breast cancer from 2000-2010. Perspective is a voluntary, fee-supported database that samples more than 500 acute-care hospitals throughout the United States that contribute data on inpatient hospital admissions. ICD-9 procedure codes were used to identify women who underwent reconstruction at the time of mastectomy. Differences in reconstruction rates over time were examined by age, race, and type of insurance (commercial, Medicaid, Medicare and self-pay). Logistic regression analysis was used to determine factors predictive of immediate breast reconstruction after mastectomy. Additional analyses were done on the population of younger women (<50 years of age).

Results: We identified 106,988 women with breast cancer who underwent mastectomy, and of these, 24,150 (22.6%) underwent immediate reconstruction. From 2000 to 2010,, reconstruction rates increased from 15% to 33.3%, increasing the most for women with commercial insurance (25.3% to 54.6%) and women under the age of 50 (29% to 60%); for women under the age of 50 with commercial insurance the rate in 2010 was 67.5%. Multivariable analysis found that reconstruction was significantly less likely with increasing age, black race (OR=0.66), rural hospital location (OR=0.48), non-teaching hospital (OR=0.82) and >2 co-morbid conditions (OR=0.72). Odds of reconstruction increased with commercial (OR=3.0) and public (OR=1.6) insurance (compared to self-pay), bilateral mastectomies (OR=2.5), being single (OR=1.09) and increased hospital volume (OR=1.94). No association was found with breast surgeon volume. Similar associations were seen in the subgroup of women <50 years of age. Prolonged length of stay was greater for women undergoing reconstruction (29.2% vs. 18.5%, $p<0.0001$); however, in-hospital complication rates were similar at 5.6% and 5.3%, respectively.

Conclusions: Despite its benefits, less than one-third of all women, and half of women under the age of 50, received post mastectomy reconstruction in 2010. Insurance status was one of the largest predictors of immediate reconstruction, and its influence has increased over time. Public policy should ensure that access to reconstructive surgery is available to all women, regardless of insurance type.