

Different databases, differing statistics on racial disparities in immediate breast reconstruction after mastectomy

March 30 2017

Three major national databases include varying estimates of racial gaps in the use of immediate breast reconstruction (IBR) after mastectomy for breast cancer, reports a study in the March issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

All three databases report continued increases in the number of women benefiting from immediate [breast reconstruction](#)—but with varying disparities among racial/ethnic minority patients. "Since these large databases play an important role in making healthcare policy, it's important to appreciate the significant differences in racial and socioeconomic disparities in IBR," comments ASPS Member Surgeon Samuel J. Lin, MD, MBA, of Harvard Medical School.

Variation in Disparities in Breast Reconstruction after Mastectomy

Dr. Lin and colleagues, including lead author Parisa Kamali, MD, analyzed data on IBR after mastectomy from three sources: the Agency for Healthcare Research & Quality's Nationwide Inpatient Sample (NIS) database, the American College of Surgeons' National Surgical Quality Improvement Project (NSQIP), and the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program. The analysis included data on approximately 1.2 million patients from 2005

to 2012.

During that time, all three databases reported significant increases in IBR after mastectomy. For women with invasive [breast cancer](#), the percentage undergoing IBR increased from about 19 to 47 percent in the NIS, from 30 to 49 percent in the NSQIP, and from 12 to 25 percent in the SEER. Similar increases were seen among women with ductal carcinoma in situ (DCIS), a "pre-invasive" type of [breast](#) cancer.

Data from all three sources showed that white patients had the highest rate of IBR after mastectomy. In the NIS, the IBR rate was 35.7 percent in white women with [invasive breast cancer](#) versus 27.3 percent in black women, 30.8 percent in Hispanic women, and 30.5 percent in Asian women. In the NSQIP, the figures were generally similar: 43.1 percent, 30.7 percent, 40.3 percent, and 32.1 percent, respectively.

In contrast, the SEER data showed lower IBR rates in several categories: 20.6 percent in white women, 15.5 percent in black women, 12.9 percent in Hispanic women, and 14.0 percent in Asian women, respectively.

The disparities were similar among women with DCIS. The differences remained significant on subgroup analysis of data from California, where racial/ethnic disparities in IBR use ranged up to 50 percent.

While all three databases are viewed as representative of the US population, the researchers note some major variations between them. The NIS and NSQIP reflect practice patterns in nearly every state, while the SEER is limited to less than half of states. The SEER also lacks coverage of most of the major US cancer centers, including academic medical centers.

The study provides new insights amid continued concern over the lower rate of breast reconstruction among [women](#) of color. The ASPS played

an active role in securing the passage of the [Breast Cancer Patient Education Act of 2015](#), which sought to increase awareness of the availability of and insurance coverage for [breast reconstruction](#)—particularly among racial and ethnic minority patients.

"IBR utilization has increased significantly," Dr. Lin and coauthors write. "However, the extent of reporting of overall IBR rates and racial disparities differ significantly among databases." The authors believe that physicians, surgeons, and healthcare policy makers need to understand the strengths and weaknesses of the various databases in order to interpret the data.

"One [database](#) should not uniformly be utilized for clinical guidelines and policies," Dr. Lin and colleagues conclude. They add that the SEER "may not be universally generalizable to the entire US population."

More information: Parisa Kamali et al. Differences in the Reporting of Racial and Socioeconomic Disparities among Three Large National Databases for Breast Reconstruction, *Plastic and Reconstructive Surgery* (2017). [DOI: 10.1097/PRS.0000000000003207](https://doi.org/10.1097/PRS.0000000000003207)

Provided by Wolters Kluwer Health

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