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931 – Racial and regional disparities in access to post-mastectomy breast reconstruction in Brazil

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Introduction: Breast reconstruction after mastectomy is legally guaranteed within Brazil's public health system (SUS), yet access remains limited and uneven. Although previous Brazilian studies have described national trends, formal comparisons across geographic and racial groups remain scarce.

Methods: A retrospective observational study was conducted using SIH-SUS/DATASUS data on female patients hospitalized with ICD-10 C50 between January 2014 and December 2024. Procedures were grouped into mastectomy and breast reconstruction categories and stratified by hospital macro-region, year, and race (White, Black, Brown, and Other). The primary outcome was the reconstruction-to-mastectomy ratio (RMR), defined as the number of breast reconstructions divided by the number of mastectomies within the same stratum. Descriptive analyses were performed for procedure counts and temporal trends, and one-way ANOVA was used to compare mean RMR across regions and racial groups.

Results: Between 2014 and 2024, 172,297 mastectomies and 36,301 breast reconstructions were recorded within the SUS, corresponding to an overall RMR of 0.21. The Northeast had the highest RMR (0.246), whereas the North had both the lowest reconstruction volume and the lowest RMR (0.065). The Southeast accounted for the highest surgical volume (86,060 mastectomies; 19,825 reconstructions), with an RMR of 0.230. Although RMR increased over time in all macro-regions, differences in mean regional RMR were not statistically significant, suggesting that large differences in surgical volume can coexist with similar proportional patterns. In contrast, mean RMR differed significantly across racial groups ($p < 0.001$), with lower reconstruction ratios among Brown patients and especially in the heterogeneous "Other" category, which includes hospitalizations with missing race data.

Conclusions: Access to post-mastectomy breast reconstruction in Brazil remains insufficient despite legal guarantees. The low national RMR and the racial disparities highlight a substantial gap between policy and real-world delivery of reconstructive care within the SUS. Improving race data completeness is essential for more accurate equity analyses.

Ethics: Public data.

Keywords: mammoplasties; breast reconstruction; mastectomy.