

TEMPORAL ANALYSIS OF RADICAL MASTECTOMY PROCEDURES WITH AXILLARY LYMPHADENECTOMY AND SIMPLE MASTECTOMY IN ONCOLOGY IN THE NORTHERN REGION: 2020 TO 2024

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Introduction: Mastectomy is a surgical procedure for the treatment or prevention of breast cancer, involving the removal of breast tissue, skin, and the nipple-areola complex. It includes simple and radical modalities, with the radical type characterized by axillary lymph node dissection in cases of lymphatic involvement. **Objectives:** To analyze the temporal trend of simple and radical mastectomy procedures with axillary lymphadenectomy in the Northern Region of Brazil between 2020 and 2024. **Methods:** This is an epidemiological, descriptive, and quantitative study, using data from the Hospital Information System of the Brazilian Unified Health System (SIH-SUS), available on DATASUS. Procedures of simple and radical mastectomy with axillary lymphadenectomy in oncology were analyzed in the Northern Region from 2020 to 2024, considering year of hospitalization, average length of stay, and average hospitalization cost. **Results:** Between 2020 and 2024, there were 2,923 hospitalizations for mastectomies in the Northern Region, with 2,503 (85.6%) being radical procedures. The distribution was uneven, with concentrations in Amazonas (38.4%) and Pará (34.3%), while Amapá accounted for only 1.1%. For simple mastectomies, Amazonas (28.1%) and Tocantins (24.0%) led, whereas Roraima (4.0%) and Amapá (2.6%) had the lowest percentages. The average hospital stay for radical mastectomies was 3.0 days, ranging from 1.8 days in Roraima (40% below average) to 4.3 days in Pará (43% above average). For simple mastectomies, there was a 35.5% reduction from 3.1 days in 2020 to 2.0 days in 2024, with Tocantins at 1.2 days and Pará at 3.9 days. The average cost of hospitalization for radical mastectomy was R\$ 3,280.43, with Pará showing the highest cost (R\$ 3,748.15; 14.3% above average) and Amapá the lowest (R\$ 2,532.65; 22.8% below average). For simple mastectomies, the

average cost was R\$ 2,581.79, with Pará again having the highest cost (R\$ 3,183.00; 23.3% above average) and Acre (R\$ 2,076.59; 19.6% below) and Amapá (R\$ 2,116.58; 18% below) the lowest. **Conclusion:** The study showed a predominance of radical mastectomies in the Northern Region, suggesting high case severity and failures in early diagnosis. The concentration of procedures in Amazonas and Pará may reflect higher population density and the presence of referral centers, in addition to potential shortcomings in primary care and breast cancer screening. Conversely, Amapá and Roraima recorded low surgery numbers, indicating underreporting, patient migration, or limited access to oncological surgery and infrastructure. The average hospital stay of 3.0 days masked important variations, such as shorter stays in Roraima—possibly linked to early discharge protocols—and longer stays in Pará, suggesting greater case complexity. The 35.5% reduction in hospital stay for simple mastectomies suggests service optimization, although state disparities point to differences in structure and postoperative care. In terms of costs, radical mastectomies were more expensive, with Pará showing the highest values for both types, reflecting care complexity, infrastructure, and differences in hospital financing models.

Keywords: Mastectomy; Oncology; Breast Neoplasms.