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Analysis of the impact of mammogram coverage on breast cancer mortality

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Introduction: In Brazil, breast cancer is the most prevalent type and the leading cause of cancer-related death among women. Early detection plays a crucial role in improving cure rates, with mammography being the most effective method for screening. This is because mammography can detect malignant tumors in their early, often asymptomatic stages, allowing for timely treatment initiation and, consequently, a better prognosis. **Objective:** This study aimed to evaluate the impact of mammography coverage in Brazil on breast cancer mortality. **Methods:** A retrospective, cross-sectional quantitative study was conducted using data from the Hospital Information System of the Unified Health System (SIH-SUS) and the Outpatient Information System (SIA-SUS). Variables analyzed included "mortality" due to malignant breast neoplasms (ICD C50) and "mammograms" from 2013 to 2023. For spatial analysis, data were classified according to Brazil's macro-regions. **Results:** Between 2013 and 2023, the number of mammograms performed in the SUS increased from 3.1 million to 4.6 million, peaking in 2019 (5.2 million). In 2020, it dropped to 3.6 million, then resumed its upward trend. The Southeast led in 2022 (2.1 million), followed by the South (1 million) and the Northeast (974 thousand). Breast cancer deaths rose from 15,074 (2013) to 18,139 (2022), with the Southeast consistently reporting the highest numbers (8,259 in 2022). The South showed more stable mortality rates despite high screening coverage. **Conclusion:** It is evident that the breast cancer mortality rate continued to rise from 2013 to 2023, despite the increase in screening tests during this period. This scenario suggests that although mammography is a fundamental tool for early disease detection, its expansion alone has not been sufficient to reduce mortality. Therefore, the findings highlight the urgent need to strengthen public policies related to early diagnosis, as well as effective medical treatment, to reduce the high mortality rate.

Keywords: breast cancer; mammography; mortality.