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1155 – The evolution of the mortality rate from malignant breast neoplasm in Brazil over the last five years (2020–2024)

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Introduction: Malignant breast neoplasm is a major public health challenge, ranking as the most frequently diagnosed cancer among women in Brazil, excluding non-melanoma skin cancer. It also remains the leading cause of female cancer-related mortality. Screening is vital for early diagnosis and is predominantly performed via mammography, the only imaging method consistently proven to reduce disease-specific mortality. Although recent epidemiological data suggest a downward trend, absolute numbers remain significant. Therefore, this study aims to analyze the evolution of breast cancer mortality rates in Brazil over the last five years (2020–2024).

Methods: A retrospective cross-sectional cohort study was conducted using data from the Brazilian Hospital Information System (SIH/SUS), provided by the Department of Informatics of the Unified Health System (DATASUS). Nationwide breast cancer mortality rates were collected from 2020 to 2024. The temporal trend analysis was performed using Pearson's correlation coefficient, and the statistical significance was assessed via Student's t-test. The significance level was set at 5% ($p < 0.05$). Statistical analyses were executed using the PSPP software.

Results: The Brazilian breast cancer mortality rate showed a continuous decline throughout the evaluated period, decreasing from 8.62 in 2020 to 7.16 in 2024. Statistical analysis revealed a robust, highly significant inverse correlation between the years analyzed and breast cancer mortality rate ($r = -0.994$; $p = 0.0015$), confirming a solid downward trend. The greatest absolute decline occurred in the most recent interval, between 2023 and 2024, with a reduction of 0.50 points in the national mortality rate.

Conclusions: The analyzed data demonstrate a statistically significant downward trend in breast cancer mortality in Brazil from 2020 to 2024. This favorable epidemiological shift is likely associated with advancements in early diagnosis, greater adherence to mammographic screening, improved targeted therapies, and better access to specialized treatment. To sustain this decline, it remains essential to continuously expand national prevention strategies and comprehensive oncological care.

Ethics: Public data.

Keywords: mortality; breast cancer; healthcare disparities.