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1157 – The root of inequality: the regional systemic disruption in access to screening mammography in Brazil

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Introduction: The inequity in clinical staging of breast cancer in the Unified Health System (SUS) raises questions regarding the primary efficiency of screening. Structural barriers and the COVID-19 pandemic critically impacted the prevention network. The objective of this study was to analyze the evolution of screening mammography volume in the country and correlate the per capita exam supply with each geographic macroregion.

Methods: A retrospective ecological study using data from the Cancer Information System (SISCAN/DATASUS) between 2019 and 2024. The procedure “Bilateral Mammography” was analyzed, strictly filtered by the clinical indication of “Screening”. The absolute volume of exams (n=17,423,029) was cross-referenced with population data from the IBGE Census (2022) to calculate annual exams per 100,000 inhabitants. The pandemic’s impact on system productivity and distributive inequities were also evaluated (Chi-square test).

Results: A severe regional asymmetry in preventive exam supply was identified ($p < 0.0001$). The South region stood out with the highest coverage, performing 2,111 screening mammograms per 100,000 inhabitants annually. In drastic contrast, the North region performed only 737 exams per 100,000 inhabitants (representing nearly one third of the volume of screening mammograms observed in the South), followed by the Central-West (1,185). Historically, it was observed that the COVID-19 pandemic caused a systemic disruption in the preventive system: the country suffered a 39.3% drop in screenings in 2020, resulting in an absolute deficit of 1,173,409 unperformed exams compared to 2019.

Conclusion: The high rates of late-stage diagnosis in Brazil are a direct reflection of the systemic failures in screening coverage. The extreme deficit in the supply of preventive mammograms in the North and Central-West regions suggests the failure of decentralized policies. Furthermore, the abrupt decline of exams in 2020 left a chronic deficit that can increase advanced-stage diagnosis rates.

Ethics: Public data,

Keywords: breast cancer; mammography; diagnostic screening programs.