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Two years post-COVID-19: evaluating the impact on Brazil's breast cancer early detection program

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Objective: This study aimed to evaluate the impact of the COVID-19 pandemic on mammographic screening in Brazil over a 9-year span (2015–2023), focusing on BI-RADS[®] results, breast cancer diagnosis rates, and staging. **Methodology:** This ecological observational study used retrospective data from Brazil's mammographic screening database, DATASUS – SISCAN, covering females aged 50–69 years. We analyzed the number of mammograms, BI-RADS[®] results, and cancer staging, using a chi-square test to assess the variation from expected frequencies, with an alpha level of 0.05 for statistical significance. **Results:** From 2015 to 2023, 23,851,371 mammograms were performed, with 542,889 (2.3%) diagnostic and 23,308,482 (97.7%) screening. Of these, 15,000,628 met the inclusion criteria. In 2020, mammograms decreased by 39.6%, followed by a 12.6% drop in 2021. There was a slight increase in 2022 and a significant rise of 17.9% in 2023, though not reaching the anticipated 2,750,000 annual screenings. There was a notable increase in BI-RADS[®] 4 and 5 post-pandemic, suggesting a shift in staging patterns. Early-stage diagnoses were higher than expected pre-pandemic, while later-stage diagnoses (III and IV) increased post-pandemic, indicating potential delays in detection. **Conclusion:** The study revealed significant shifts in mammographic screening and breast cancer diagnosis over 9 years. There was a marked decrease during the pandemic with a subsequent rebound. The increase in BI-RADS[®] categories 4 and 5 and the shift to later-stage diagnoses post-pandemic underscore the pandemic's impact on the timeliness and stage of breast cancer detection in Brazil.

Keywords: breast cancer; screening; pandemic; COVID-19; mammographic.