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968 – Younger women with breast cancer present with more aggressive disease but similar early survival: real-world data from a Brazilian public referral center

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Background: Breast cancer in younger women is often associated with more aggressive tumor biology, but real-world data across age groups remain limited, particularly in middle-income settings. This study evaluated clinicopathological features, treatment patterns, and outcomes according to age at diagnosis in women treated at a Brazilian public referral center.

Methods: A retrospective observational cohort study was conducted including women with invasive breast cancer who underwent surgical treatment at Hospital do Servidor Público Estadual “Francisco Morato de Oliveira,” São Paulo, Brazil, between 2020 and 2024. The study was approved by the Research Ethics Committee via Plataforma Brasil (CAAE 87347725.8.0000.5463). Clinicopathological, molecular, therapeutic, and oncologic variables were compared across age groups. Statistical analysis included descriptive methods, comparative tests, Kaplan–Meier curves, and multivariable models.

Results: Among 1,665 women included, 54 were aged ≤ 40 years, 276 were aged 41–50 years, and 1,335 were aged 51–69 years. Younger women presented a more aggressive disease profile, with higher Ki-67 values (33.3% vs. 29.9% vs. 23.6%; $p=0.017$), a higher prevalence of triple-negative tumors (33.3% vs. 9.8% vs. 8.8%; $p<0.001$), more T4c tumors (11.1% vs. 1.0% vs. 1.6%; $p=0.0017$), and greater N2 nodal involvement (27.8% vs. 6.5% vs. 9.0%; $p=0.006$). Neoadjuvant chemotherapy was also more frequently used in this group (61.1% vs. 37.0% vs. 28.3%). Despite these unfavorable features, no significant differences were observed in overall survival (86.88% vs. 93.57% vs. 87.62%; $p=0.321$) or disease-free survival (86.88% vs. 93.67% vs. 87.61%; $p=0.320$). In multivariable analysis, neoadjuvant endocrine therapy and radiotherapy were associated with better outcomes, whereas axillary lymph node dissection, positive axillary sampling, and T2/T4 tumors were associated with worse prognosis.

Conclusions: Younger women with breast cancer showed a higher-risk clinicopathological profile, but not worse survival. Treatment intensification and limited follow-up may explain this dissociation. Longer follow-up is needed to clarify the prognostic impact of age at diagnosis.

Ethics: Research Ethics Committee Approval (CAAE 87347725.8.0000.5463).

Keywords: breast neoplasms; young adult; prognosis; Ki-67 antigen; triple negative.