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1002 – Overall survival according to molecular subtypes and clinical staging in invasive breast carcinoma patients: Kaplan-Meier analysis in a hospital cohort

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Introduction: Overall survival analysis according to molecular subtypes and clinical staging is essential for predicting prognostic outcomes in breast cancer. The Kaplan-Meier method estimates the survival function in cohorts with variable follow-up.

Objective: To estimate and compare overall survival of patients with invasive breast carcinoma according to clinical staging and main molecular subtypes in a private hospital cohort from Central-West Brazil.

Methods: A retrospective cohort study was conducted among 97 patients with confirmed invasive breast carcinoma. Kaplan-Meier curves were constructed and compared by the log-rank test, stratified by staging (I–II vs. III–IV), triple-negative subtype, hormone receptor status (HR+ vs. HR–), and HER2 status. The mean estimated follow-up was 3.9 years.

Results: Six deaths (6.2%) and 9 recurrences (9.3%) were recorded. Advanced staging (III–IV; n=10) was associated with significantly worse survival vs. early staging (n=87): death rate 50.0% vs. 1.1% (log-rank $p=2.22 \times 10^{-10}$). Triple-negative subtype (n=15) showed worse survival vs. non-triple-negative (n=82): 26.7% vs. 2.4% deaths (log-rank $p=6.32 \times 10^{-4}$). Hormone receptor negativity identified a higher-risk subgroup: 22.7% vs. 1.3% deaths (log-rank $p=6.27 \times 10^{-4}$). HER2 status showed no significant difference between groups (log-rank $p=0.983$).

Conclusion: Advanced staging, triple-negative subtype, and hormone receptor negativity were associated with worse overall survival. HER2 status did not impact survival differently, possibly reflecting the use of anti-HER2 therapies at the institution. These findings reinforce the importance of molecular stratification and early diagnosis in breast oncology.

Ethics: Research Ethics Committee Approval (CAAE 76523123.1.0000.5083).

Keywords: breast neoplasms; survival analysis; Kaplan-Meier analysis; prognosis.