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Overall survival analysis of women with breast cancer: a 27-year historical cohort

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Objective: The objective of this study was to analyze the overall survival and prognostic factors of women with breast cancer in the city of Goiânia, based on a 27-year historical cohort. **Methodology:** This is a retrospective cohort study of overall survival carried out from 1988 to 2015. Data were collected from the Population-Based Cancer Registry of Goiânia, Goiás, Brazil. Survival curves were performed using the Kaplan-Meier method and the log-rank test. Multiple Cox regression analysis was also used. The significance level adopted was 5% ($p < 0.05$). The research was approved by the Ethics Committee. **Results:** Among the 7395 women included in the study, there was a predominance of the age group of 50–69 years (45.4%), localized disease (62.4%), and pure luminal phenotype (50.1%). The median survival was 122 months, and the overall survival at 5 and 10 years was 83.1% and 65.5%, respectively. Regarding race/color, white women had a longer survival rate compared with black women (average of 120 vs. 110 months). In the Cox regression analysis, the following factors were associated with reduced overall survival: age greater than 70 years (HR 1.33; $p < 0.001$), histological grade III (HR 1.21; $p = 0.042$), recipient of negative estrogen (HR 1.26; $p = 0.010$), negative progesterone receptor (HR 1.47; $p = 0.041$), triple-negative tumor phenotype (HR 2.36; $p = 0.008$), and regional disease extension (HR 1.73; $p = 0.023$) or metastatic (HR 2.67; $p = 0.012$). **Conclusion:** In the period analyzed, the overall survival of women with breast cancer was 83.1% in 5 years and 65.5% in 10 years. Several clinical, biological, and tumor factors influenced the prognosis in this population.

Keywords: breast cancer; women's health; survival analysis; epidemiology.