

Breast Cancer Prognosis: A Study on Mortality Indicators

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Abstract

Background: The prognosis of breast cancer patients is critical for tailored treatment options. While previous observational studies have identified various prognostic markers, a consensus in their clinical application is lacking. This single-center retrospective study aimed to validate the most frequent risk factors associated with increased mortality in breast cancer patients.

Methods: Our study spanned an 8-year interval (2014-2020) and included 213 female patients with stage IIA-IIIB breast cancer. Key variables such as age, disease stage, and type of treatment were analyzed in relation to one-year survival as the primary outcome measure.

Results: Elevated preoperative levels of tumor markers ACE and CA 15-3, larger tumor size, and advanced lymph nodal invasion were significantly associated with increased mortality. Immunohistochemistry indicated that the presence of Estrogen and Progesterone Receptors (ER and PR) were protective factors, whereas Human Epidermal Growth Factor Receptor 2 (HER2) was a negative prognostic indicator. Among molecular subtypes, Luminal A demonstrated protective effects, whereas HER2-positive and Triple-negative subtypes were identified as risk factors.

Conclusion: This study confirms the significant role of tumor size, lymph node stage, and specific molecular markers in predicting breast cancer mortality. These findings contribute to a nuanced understanding of disease prognosis and offer crucial insights for clinicians in managing treatment plans.

Key words: breast cancer, prognosis, mortality, tumor markers, lymph node stage, immunohistochemistry