

Factors Predicting Survival Outcomes in Pregnancy-Associated Breast Cancer; A Systematic Review and Meta-Analysis

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ABSTRACT

Pregnancy-associated breast cancer (PABC) is breast cancer that is diagnosed during gestation, post-partum, or any time during lactation. The present prognostic meta-analysis was executed to retrieve factors associated with survival outcomes among patients with PABC. The risk of death along with the risk of breast cancer recurrence was evaluated. The literature review was performed through twelve databases on 15th July 2024. All clinical studies included patients with PABC, and evaluated factors associated with survival outcomes were included. These studies have to implement the Cox regression model to calculate the hazard ratio (HR) for the time to relevant outcomes. The present meta-analysis included nine retrospective studies encompassing 9590 patients with PABC. The mortality risk was 14%, while the risk of breast cancer recurrence was 12.1%. Patients with Luminal B breast cancer was at 1.95 times higher risk of mortality. There was a statistically significant association ($P<0.001$) between clinical stage and overall survival with an HR of 3.74. There was a statistically significant association ($P<0.001$) between chemotherapy and overall survival (HR; 1.80, 95%CI; 1.50, 2.16). Patients with triple-negative breast cancer was 1.65 times at higher risk of poor survival outcomes. Patients with PABC were at a considerable risk of developing poor overall and disease-free survival outcomes. This risk was more pronounced among patients with luminal B breast cancer, patients with TNBC, patients with advanced tumor stage, and patients treated with chemotherapeutic agents.

Keywords: *Pregnancy, Breast Cancer, Prognosis, Survival*

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