Abstract

Objective To identify the contribution of individual factors, including psychosocial measures, on breast cancer prognosis to guide efforts to improve treatment compliances, quality of life and outcomes for women diagnosed with breast cancer.

Methods This study used data from a population-based longitudinal study involving women diagnosed with invasive breast cancer (n = 3,326, response rate = 71%) in Queensland, Australia, from March 2010 to June 2013, and followed up to December 2020. Self-reported individual factors such as social support, supportive care needs and quality of life were included in flexible parametric survival models to identify which factors were associated with survival outcomes. Model fit was assessed using D and R2D statistics.

Results Unmet physical and daily living needs, social support, age, stage at diagnosis, tumour grade, clinical subtype and mode of detection explained 39% of survival variability (R^2_D 0.39; 95% confidence interval (CI): 0.33 - 0.44), with a Harrell's C statistic of 0.84 (95% CI 0.81 - 0.86.). Unmet physical and daily living needs and social support were identified as the key individual factors that predicts breast cancer survival, explaining 3% of survival variability (R^2_D 0.39 vs 0.36). There was some evidence to suggest that when compared to women (55 years old, screen-detected, stage 1, low grade, luminal A) who had less unmet physical needs and adequate social support (five-year survival: 96.6%, 95% CI: 92%-99%), those who had more unmet physical needs and limited social support had poorer breast cancer-specifical survival (five-year survival: 86.8%, 95% CI: 72%-95%).

Conclusion The study found that unmet physical and daily living needs and social support, play a modest role in influencing breast cancer outcomes. The findings enhance the current literature regarding the impact of individual factors on breast cancer survival and suggest that integrating psychosocial support and interventions alongside medical treatment may help to further improve the survival outcomes for women diagnosed with breast cancer.