

## Marital status as an independent prognostic factor in vulvar basal cell carcinoma: Insights from SEER

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Vulvar basal cell carcinoma (BCC) is a rare malignancy, accounting for less than 1% of all BCCs. Few studies have examined prognostic or demographic factors, including marital status, in this population. Using the Surveillance, Epidemiology, and End Results (SEER) database (2000–2022), we evaluated epidemiology and prognostic factors in vulvar BCC with a focus on marital status. A total of 1,855 patients were identified using ICD-O-3 histology and topography codes. Group comparisons were performed with Kruskal-Wallis and chi-square tests, followed by survival analyses. Poorer survival was associated with age >70 (HR: 2.72; 95% CI: 1.33–5.65;  $p = 0.006$ ), unmarried status (HR: 3.81; 95% CI: 1.79–8.12;  $p = 0.001$ ), and advanced cancer stage (HR: 13.17; 95% CI: 6.06–28.62;  $p < 0.001$ ). Of the cohort, 705 patients were married and 721 were unmarried; married patients were younger than unmarried patients (mean age 67.8 vs 78.1,  $p < 0.001$ ). Tumor characteristics, demographics, and treatment regimens were similar between groups. After addressing missing marital status and tumor stage data, 5-year disease-specific survival (DSS) was higher in married patients than unmarried patients (99.48% vs 96.90%,  $p < 0.001$ ), and overall survival (OS) was also improved (log-rank  $p < 0.001$ ). Multivariate COX modeling, adjusting for age, race, tumor stage, income, and surgical treatment, confirmed that married status was associated with a more favorable prognosis. The Fine-Gray model further identified marriage as an independent favorable prognostic factor for survival. These results mirror findings in other cancers, demonstrating that marital status significantly impacts outcomes, with unmarried patients exhibiting reduced OS and DSS. The findings suggest that social support associated with marriage may play a critical role in treatment adherence and overall prognosis.

### Biography

Katherine G. Holder, Mayo Clinic, USA, is a clinical researcher specializing in gynecologic oncology and population-based cancer outcomes. Her work focuses on leveraging large datasets, including SEER, to identify prognostic factors that enhance patient counseling and personalized treatment strategies.

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