Letter to the Editor

Insights and recommendations for enhancing the prognostic nomogram in elderly patients with stage II–III colorectal cancer

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Comment on: Zhang H, Wang R, Yu T, *et al.* A prognostic nomogram integrating carcinoembryonic antigen levels for predicting overall survival in elderly patients with stage II-III colorectal cancer. J Gastrointest Oncol 2024;15:164-78.

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Zhang *et al.* explored independent risk factors that affect the overall survival of elderly patients with stage II–III colorectal cancer (CRC), and constructed a nomogram for predicting patient survival (1). The study used a large cohort of patients from the Surveillance, Epidemiology, and End Results (SEER) database, allowing for a robust statistical analysis of multiple prognostic factors. By integrating pretreatment carcinoembryonic antigen (CEA) levels, the study constructed a novel nomogram that performs better than the traditional tumor-node-metastasis (TNM) staging system in predicting survival for elderly CRC patients. The nomogram provides clinicians with a useful tool to accurately assess patient prognosis and identify high-risk patients for more aggressive treatment strategies. Despite its scientific relevance, the study faces certain challenges and constraints which necessitate a more thorough assessment and analysis.

Firstly, there is a limitation in terms of data source. The study solely relies on data retrieved from the SEER database, which, despite its comprehensiveness, may not accurately depict the worldwide demographics or encompass regional disparities in the prognosis and treatment of colorectal cancer.

Secondly, this study faces a significant limitation due to the absence of external validation for the prognostic nomogram. Without employing an independent dataset for confirmation, the generalizability of the study's conclusions is constrained. This omission raises concerns about the model's potential applicability across different cohorts. External validation is imperative in assessing the model's broader reliability and effectiveness (2,3).

Thirdly, although the prognostic model incorporates CEA levels as predictive factors, it may still be influenced by various other factors, such as the patient's underlying health status, comorbidities, and treatment regimens. These factors may not be fully considered in the model, thereby affecting the accuracy of predictions. Moreover, the analysis does not account for histological subtypes of colorectal cancer, which have been shown to vary in prognosis (4).

Additionally, the proportion of patients receiving chemotherapy in the study is relatively low, indicating that potential benefits of chemotherapy in this population may be underrepresented. Future studies should explore the role of chemotherapy, particularly in elderly patients, to determine optimal treatment strategies.

Looking forward, there are several opportunities for improvement and further research. Multi-center studies with larger patient cohorts would strengthen the predictive value of the nomogram and allow for external validation. The inclusion of additional factors, such as histological subtype and treatment response, could enhance the accuracy of prognostication. Moreover, prospective studies are needed to evaluate the impact of implementing the nomogram in clinical practice and its ability to guide treatment decisions that ultimately improve patient outcomes.

In conclusion, while the current nomogram represents a valuable contribution to the field, there are opportunities to build upon the work through further research and validation to enhance its clinical applicability and impact.

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