Letter to the Editor

Is perioperative lymphocyte-to-monocyte ratio changes plus CA199 has high value in predicting the prognosis of patients with gastric cancer?

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We read with great interest the recently published study by Zhu and colleagues entitled "Perioperative lymphocyte-to-monocyte ratio changes plus CA199 in predicting the prognosis of patients with gastric cancer" (1). Researchers investigated the relevance of preoperative carbohydrate antigen 199 (CA199) and lymphocyte-to-monocyte ratio changes (ΔLMR) for predicting postoperative survival and develop a nomogram to predict the overall survival rate. However, from the viewpoint of data interpretation and extrapolation, nomogram design and statistical analysis seem inappropriate to answer that question.

To begin with, there are some flaws in the nomogram. First, the variables in the nomogram should be independent prognostic factors after multivariate analysis in the training set, independent prognostic factors from the validation set should not be included. In this study, the authors claimed that T, TNM stage, CA199, and ΔLMR are the independent prognostic factors for gastric cancer (GC) in the training set and cancer embolus is the independent prognostic factor in the validation set. However, the authors included five factors (including cancer embolus) to construct a nomogram to predict the 3- and 5-year OS of patients with GC in the training set. Moreover, there are some ambiguities in the nomogram, such as the TNM sage and T. In the nomogram, the TNM stage is labeled as 0, 1, 2, while the actual situation should be labeled as TNM I, TNM II and TNM III. In addition, T stages are labeled 3, 2, 1, 0, which we believe should be labeled T1, T2, T3, and T4.

Secondly, according to Balachandran's suggestion (2), clinical usefulness is the last component of evaluating nomogram performance. It evaluates whether the results generated by nomograms are beneficial to patients. Decision curve analysis (DCA) was applied to nomograms to estimate clinical usefulness by quantifying net benefits at different threshold probabilities (3). This study didn't show the DCA of the nomogram for the survival prediction of patients with GC. We recommend the authors add DCA of the nomogram to make the article more convincing.

Finally, as the author said, this study did not compare CA199 with other tumor markers like CEA, CA72-4 due to the two included hospitals did not regularly test GC patients for CEA and CA72-4. A previous study showed that the positive rates were 21.1% for CEA, 27.8% for CA19-9, and 30.0% for CA72-4 (4). We expect that the authors can include CEA and CA72-4 to explore their relationship with the prognosis of GC and establish relevant prediction models.

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Footnote

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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