Letter to the Editor

Prediction of early recurrence in patients with colorectal liver metastases

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We have carefully reviewed the article published in *Journal of Gastrointestinal Oncology* by Deng *et al.* The authors have successfully developed and validated a predictive model for early recurrence in patients with colorectal liver metastases (CRLM) who underwent colorectal cancer (CRC) resection along with simultaneous liver metastasis resection, using the minimum P value approach (1). We appreciate the authors for their significant contributions to the field of CRLM treatment and prognosis, but we would like to offer a few points that merit further consideration and discussion.

Firstly, we noticed that the training cohort of this study comprised 323 CRLM patients who received treatment over an extended period of approximately 12 years between December 2008 and August 2020, during which the clinical treatment plan for CRC and CRLM patients has undergone significant changes. Recent advancements in surgical techniques (2), as well as progress in pharmaceutical interventions and the extensive development of multidisciplinary team (MDT) treatment strategies, have significantly elevated the standard of clinical care for CRLM. Particularly noteworthy are the new decision-making systems for curative resection (3) and the gradual substitution of conventional laparotomy with laparoscopic CRLM simultaneous resection (4). To mitigate potential bias in model validation due to variations in the time span, it is advised to divide the training group into different subsets based on the chronological order of treatment received. This approach would be more advantageous in demonstrating the predictive value of the model.

Secondly, it is widely acknowledged that neoadjuvant chemotherapy (NACT) is a highly versatile approach for tumor treatment, with significant implications in the domain of CRLM. NACT plays an important and irreplaceable role in tumor reduction, obtaining surgical indications, and improving prognosis in the field of CRLM (5). However, response rates to NACT vary considerably among patients (6). Those who exhibit favorable responses to NACT often experience better prognostic outcomes compared to those with inadequate responses. We have noticed that the authors incorporated indicators of NACT in the baseline characteristics of CRLM patients within the training cohort of the predictive model. However, relying solely on the indicator feature of whether NACT was received for comparison purposes is a rather rudimentary approach and possesses certain limitations. Therefore, we suggest augmenting the baseline characteristics of the training dataset with information regarding the response effectiveness to NACT, and incorporating it into the training cohort to enhance the credibility and accuracy of the model.

Thirdly, molecular biomarkers of CRC possess significant prognostic value. For the treatment of CRLM, the vast majority of them requires examining their molecular characteristics, such as microsatellite instability (MSI) status

[MSI-high (MSI-H)], Kirsten rat sarcoma viral oncogene homologue/neuroblastoma RAS viral oncogene homolog (KRAS/NRAS), v-raf murine sarcoma virus oncogene homologs (BRAF) and human epidermal growth factor receptor 2 (HER-2), etc. For instance, MSI has been proven to be of great value in the efficacy and prognosis prediction of CRCs (7). We believe that integrating molecular biology testing along with pathological features and tumor scores in the model research may further enhance its accuracy and prediction capabilities.

Finally, we would like to emphasize the significant role of the Clinical Risk Score (CRS) (8) as a widely embraced scoring system for CRLM. Over the years since its introduction, CRS has gained widespread acceptance among clinicians due to its proven utility. Notably, CRS can not only guide the determination of surgical indications for CRLM patients but also exhibits enhanced predictive capabilities concerning patient prognosis (9). In addition, classic CRLM scoring systems such as tumor, node, and metastasis (TNM) staging and Nordlinger Scoring have also been reported to have prognostic value. To demonstrate the superiority of the proposed predictive model (10), we propose showcasing its comparison with other classic CRLM prognostic scoring systems in terms of accuracy, discrimination, and clinical benefits.

In conclusion, we express our high appreciation for the authors' essential and promising study, in which they have developed successfully an effective model for predicting early recurrence in patients with CRLM. However, we believe that the research could be further enhanced and made more comprehensive by considering the points mentioned above. These considerations would likely strengthen the study's overall impact and contribute to a deeper understanding of the predictive capabilities of the model.

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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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