Letter to the Editor

Platelet lymphocyte ratio and sarcopenia were associated with survival after hepatocellular carcinoma undergoing curative resection

Xuping Feng[#], Qingbo Feng[#], Jiaxin Li

Department of Liver Surgery & Liver Transplantation, State Key Laboratory of Biotherapy and Cancer Center, West China Hospital, Sichuan University and Collaborative Innovation Center of Biotherapy, Chengdu, China

[#]These authors contributed equally to this work.

Correspondence to: Jiaxin Li. Department of Liver Surgery & Liver Transplantation, State Key Laboratory of Biotherapy and Cancer Center, West China Hospital, Sichuan University and Collaborative Innovation Center of Biotherapy, Chengdu, China. Email: 407723080@qq.com.

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We read with great interest the recently published study written by Kim and colleagues entitled "Sarcopenia with systemic inflammation can predict survival in patients with hepatocellular carcinoma undergoing curative resection" (1), which was published in the *Journal of Gastrointestinal Oncology*. The authors showed that sarcopenia and a high platelet lymphocyte ratio (PLR) were both significantly associated with poor OS. While we applaud the encouraging findings, some issues need to be addressed.

To begin with, after a careful review, we noticed that the authors appeared to have made some typographic mistakes in the article. *Tab. 1* was listed to show the main characteristics of the patients in the sarcopenia (n=74) and non-sarcopenia (n=86) groups in this article. In fact, the number of the non-sarcopenia group is 85 not 86. Meanwhile, there is an obvious typographic error in *Tab. 1*, in which the Child-Pugh score with B of the sarcopenia group is 4 but not 1. What's more, in the results section of survival analysis, the authors claimed that histology grades 3–4 (HR: 2.56, 95% CI: 1.043–2.631, P=0.033) were significantly associated with poor RFS. But in *Tab. 2*, the HR of histology grade 3–4 is 2.656. Moreover, as shown in *Tab. 3*, sarcopenia (HR: 0.026, 95% CI: 1.092–4.142, P=0.026). The HR of sarcopenia is 2.127 in *Tab. 3*.

Second, we think the title of this article "Sarcopenia with systemic inflammation can predict survival in patients with hepatocellular carcinoma undergoing curative resection" can be ambiguous. There are many representative blood markers of systemic inflammation including neutrophil-lymphocyte ratio, lymphocyte-to-monocyte ratio, and platelet lymphocyte ratio (2). The authors chose PLR to represent systemic inflammation and the readers may think that systemic inflammation is significantly associated with cancer survival, while actually, the authors intended to demonstrate the PLR. A better description may be "Sarcopenia with elevated platelet lymphocyte ratio can predict survival in patients with hepatocellular carcinoma after curative resection". We suggest the title shall be transformed to reduce misinterpretation.

Third, we noticed that the BMI is significantly difference between sarcopenia and non-sarcopenia groups. The author chose the cut-off values for skeletal muscle index (SMI) defined as 52.4 cm^2/m^2 for men and 38.5 cm^2/m^2 for women (3). We recommend the authors to choose optimal stratification to select BMI and sex-specific cutoffs for SMI to define sarcopenia according to Feliciano *et al.*'s study (4). For BMI <30, these were less than 52.4 cm^2/m^2 for men and less than 38.5 cm^2/m^2 for women, while for BMI ≥30, these were less than 54 cm^2/m^2 for men and less than 47 cm^2/m^2 for women (4).

Finally, the cut-off value for PLR was established to be >132 with an area under the curve of 0.647 using time-

dependent ROC curve analyses based on the peak, and cut-off points for OS rates were not presented. We suggest that the investigators provide the ROC curve in supplementary materials. What's more, the survival curve will be clearer if it is expressed in different colors in *Figs. 3*,*4*.

We acknowledge the authors for their contribution in supplying us with a study to examine the predicted value of a combination of PLR and sarcopenia survival for patients with hepatocellular carcinoma. In our opinion, furthermore well-designed studies with a large sample size are still needed to further validate these findings.

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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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