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The updated BCLC staging system needs further refinement: A surgeon's perspective

To the Editor:

We read with great interest the recent update to the Barcelona Clinic Liver Cancer (BCLC) staging system,¹ which needed updating based on the remarkable high-level evidence on hepatocellular carcinoma (HCC) management that has been generated in recent years. The main updated contents included updating the recommended first- and second-line systemic drugs for advanced stage HCC (BCLC stage C), and refining intermediate stage HCC (BCLC stage B).¹ To our knowledge, it is the fifth “major” update since the BCLC staging system was first introduced in 1999 by 3 well-known hepatologists.² We, hepatic surgeons, appreciate the continuous efforts to improve the BCLC staging system, but we believe that this updated BCLC staging system is still not entirely satisfactory, and we have the following comments:

First, the role that performance status (PS), as defined by the Eastern Cooperative Oncology Group (ECOG), plays in HCC staging and treatment recommendations has not been revised in any updated edition of the BCLC staging system.³ Specifically, the BCLC staging still considers patients with a PS score of 1–2 to be at an advanced-stage of HCC and that this PS score contraindicates hepatic resection. However, in real-world clinical practice, PS, especially PS 1, is often not used as an absolute contraindication to HCC resection.⁴ Furthermore, even some patients with PS 3–4, such as selected patients with ruptured HCC and hemorrhagic shock, can have favorable long-term survival after emergency or staged HCC resection.⁵ As assessment of PS for patients with HCC is subjective, and it is often difficult to decide whether the patients' symptoms at diagnosis of HCC are caused by the tumors or the underlying chronic liver diseases,³ we agree with the recent comment made by Marrero JA *et al.*, “the PS for BCLC stages 0, A, and B has been changed to 0–1 to better reflect clinical practice, given the significant overlap that exists between PS 0 and PS 1 and the potential bias of patient-reported and physician-reported PS.”⁶ Therefore, we suggest

that the latest updated version of the BCLC staging system should be adjusted to reflect this.

Second, although the BCLC constitutors tried very hard to take into consideration every possible situation, some patients with HCC have complicated clinical presentations. For example, the BCLC staging system considers portal vein invasion to be representative of an advanced HCC stage, but it never mentions biliary invasion⁷ or hepatic vein invasion,⁸ both of which are specific but not uncommon presentations of HCC. Previous studies showed that the prognosis of patients with biliary invasion or hepatic vein invasion is as poor as in those with portal vein invasion despite treatment. We wonder whether biliary invasion and hepatic vein invasion should also be included into the BCLC staging system. In our opinion, these special but not unusual presentations of HCC should be supplemented to fill up these blind spots in the updated BCLC staging system. As HCC invades into bile ducts to form a bile duct tumor thrombus, obstructive jaundice becomes a significant clinical manifestation of HCC, as such, neither Child-Pugh grade nor ALBI score are suitable for assessing a patients' liver function. Management of these patients requires methods to relieve jaundice such as percutaneous transhepatic cholangial drainage, and/or surgical resection with concomitant thrombectomy or hepaticojejunostomy.⁷

Admittedly, controversies exist among hepatologists, physicians and surgeons, as well as between clinicians in the East and the West regarding HCC management. However, as a Chinese proverb goes, “seeking common ground while reserving differences”, we, hepatic surgeons, sincerely hope that hepatologists and physicians can listen to the voices of hepatic surgeons and attach more importance to the evidence obtained from real-world clinical practice, as the common goal of all clinicians is to maximize survival benefit for patients with HCC.^{9,10} By so doing, the upgraded version of the BCLC staging system can win support from surgeons all around the world. We hope to further discuss this with our peers and colleagues around the world, with the aim of making the BCLC staging system more applicable to clinical practice in the future.

Keywords: Hepatocellular carcinoma; Barcelona Clinic Liver Cancer Staging System; Surgery; Performance status; Bile duct tumor thrombus.

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Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jhep.2022.01.002>.

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Reply to: “Correspondence on the <BCLC strategy for prognosis prediction and treatment recommendation: The 2022 update>”

To the Editor:

We appreciate the interest garnered by the BCLC 2022 model update. The new version has incorporated the evidence-based novelties generated in recent years, while also adding a section devoted to clinical decision making at the time of first evaluation and during a patient's clinical evolution. No clinical practice guideline or recommendation review will ever have enough granularity to firmly recommend the most beneficial approach for an individual patient.

The comments by Hallemeier *et al.*¹ call for the incorporation of radiation therapy into the recommendations based on

scientific society guidelines and a series of published studies. Current data are encouraging and indicate that radiation has activity. However, the degree of evidence of survival benefit is not high and the recommendation could just be conditional. This justified the current BCLC model, but at the same time we already stated at the right part of the figure that other alternative sequences of treatment may be considered but that they are not proven. In this setting, SBRT could be considered and in the text we stated that “Stereotactic body radiation bears antitumoral activity but further prospective studies are needed to define its role”. This is fully concordant with the strong support of Hallemeier *et al.* for further prospective randomized controlled trials of radiation therapy.

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