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CORRESPONDENCE

Is Stereotactic Body Radiotherapy Better Than Radiofrequency Ablation for the Treatment of Hepatocellular Carcinoma?

TO THE EDITOR: Wahl et al[1] performed a retrospective, single-institution pilot study to compare radiofrequency ablation (RFA) with stereotactic body radiotherapy (SBRT) in patients with inoperable and nonmetastatic hepatocellular carcinoma (HCC). The authors showed comparable overall survival (OS) between RFA and SBRT. In addition, the rate of freedom from local progression for tumors measuring ≥ 2 cm was better with SBRT than with RFA in the patients with HCC. These findings support the use of SBRT in patients with HCC. However, we have two concerns regarding the treatment of patients with HCC in their study.

The assessment of the treatment response in patients with HCC has remained an issue for decades. Optimal criteria for the evaluation of the treatment response are those that can be used as a surrogate assessment of survival. In patients with HCC, considering the ablative effect of tumor-directed treatments, such as RFA, transcatheter arterial chemoembolization, and radiotherapy, which can lead to tumor necrosis rather than tumor shrinkage, criteria based solely on dimensional measurements may not appropriately reflect the true treatment response. The European Association for the Study of the Liver (EASL) guidelines[2] and the modified Response Evaluation Criteria in Solid Tumors (mRECIST)[3] take into account tumor necrosis, in contrast to the WHO criteria and the original RECIST criteria, which do not consider tumor necrosis. Several studies have reported that radiologic responses evaluated using the EASL guidelines and mRECIST criteria have good concordance and that the responses have a good correlation with survival.[4-6] Price et al[7] compared imaging tools for HCC evaluation after SBRT, and these authors supported the use of the EASL guidelines. In the study by Wahl et al,[1] the original RECIST criteria were used for treatment evaluation. We believe that the data with respect to local progression may have been distorted as a result of the use of the original RECIST criteria. We suggest that the EASL guidelines or mRECIST criteria should be used, because these may be more suitable for clinical application than the original RECIST criteria.

In the study by Wahl et al,[1] the proportion of patients receiving liver transplantation was higher in the RFA cohort than in the SBRT cohort. Was liver transplantation performed before RFA or SBRT? If not, subsequent liver transplantation can simultaneously cure both cancer and underlying liver diseases in patients with HCC, with 5-year OS rates > 70% and low recurrence rates in selected patients.[8] Considering the substantial impact of liver transplantation on survival, OS estimation should be performed with caution. In the study by Wahl et al,[1] the OS may have been overestimated, especially in the RFA cohort. We suggest that patients with subsequent liver transplantation should be censored from the day when the procedure was performed for survival estimation.

With accurate perception of normal liver radiation tolerance and the advancement of radiation technology, SBRT has emerged as a good treatment option for unresectable, locally advanced, or recurrent HCC.[9,10] Wahl et al[1] clarified the size dependency in HCC treatment and strengthened the usefulness of SBRT. However, previous findings were based on a nonrandomized study design. Therefore, current criteria and national guidelines do not consider SBRT as the primary strategy. To confirm the benefits of SBRT and provide evidence for its use as a primary strategy for HCC treatment, effort should be directed at prospective, multi-institutional randomized trials in the future.

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

Disclosures provided by the authors are available with this article at www.jco.org.

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