Letter to the Editor

The efficiency of pathological response after preoperative transcatheter arterial chemoembolization for microvascular invasion and early tumor recurrence in hepatocellular carcinoma

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Comment on: Yang Y, Dang Z, Lu P, *et al.* Impact of pathological response after preoperative transcatheter arterial chemoembolization (TACE) on incidences of microvascular invasion and early tumor recurrence in hepatocellular carcinoma: a multicenter propensity score matching analysis. Hepatobiliary Surg Nutr 2022;11:386-99.

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It was with great interest that we read the document by Yang *et al.* entitled "*Impact of pathological response after preoperative transcatheter arterial chemoembolization (TACE) on incidences of microvascular invasion and early tumor recurrence in hepatocellular carcinoma: a multicenter propensity score matching analysis*" (1), which was published in the latest issue of *Hepatobiliary Surgery Nutrition*. The authors declared the extremely significant conclusion that the pathological response (PR) area after TACE is closely related to incidences of microvascular invasion (MVI) and early tumor recurrence in hepatocellular carcinoma (HCC). We highly appreciate the author's research results. When reading this literature carefully, nonetheless, we found some deficiencies.

Firstly, there are a series of obvious mistakes in PSM cohort (*Tab. 1*) after our careful review. We calculate the total number of patients is 692 not 602 in *Tab. 1*. Meanwhile, the total number of MVI patients is 260 and 282 in the group of patients receiving preoperative TACE, respectively. And then, the P value should be 0.226 instead of 0.238. At the same time, the authors select 1:1 not 1:4 in PSM and explain the reason that the sample size of patients without preoperation TACE in this study was twice of patients with preoperative TACE in the limitations of the article. But this isn't very convincing, we have some doubts about the 1:1 match method and the results. Therefore, we recommend the authors could have a better experimental design to confirm the results.

Secondly, we notice abundant logical errors in the article. The author described "Multivariable analysis indicated that presence of MVI (HR, 1.696; 95% CI: 1.508–2.009; P<0.001) was independently associated with early tumor recurrence in *Tab. 3*". However, after a careful reading of *Tab. 3*, we did not find relevant data to support this conclusion. Furthermore, we notice that anti-virus treatment was not an independent protective factor for early HCC recurrence through multivariable analysis in *Tab. 3* (HR, 1.058; 95% CI: 0.926–1.277; P=0.416). In contrast, the author explain that anti-virus treatment was an independent protective factor for early tumor recurrence (HR, 0.792; 95% CI: 0.611–0.978; P=0.035). So, we suggest the author should more accurately interpret the experimental results. Similarly, the authors described "while tumor PR <60% was an independent risk factor for early tumor recurrence (HR, 1.428; 95% CI: 1.095–1.929; P=0.009) (*Tab. 3*); and tumor PR between 60–90% had no impact on early tumor recurrence (HR, 1.095; 95% CI: 0.930–1.289; P=0.276) (*Tab. S7*)", which were not consistent with the results in the actual table and corrected by PR <60% (HR, 1.036; 95% CI: 0.869–1.119; P=0.812) and PR between 60–90% (HR, 1.095; 95% CI: 0.930–1.289; P=0.276).

Thirdly, we have some questions about this document. We deem that the results presented in *Figs. 2,3* need to be further verified by more experiments. The authors selected the two groups of patients who lacked PSM and existed significant clinical differences, which will significantly interfere with the results of the study, to compare the

tumor recurrence rate and overall survival rate. Therefore, we hope the author adds the experiments to compare the prognosis that these patients should be reevaluated in PSM, and obtain more accurate and reliable scientific conclusions. In addition, the authors described "Currently, there is still no consensus on technique, protocol or drug regimen used in TACE". So, we would like to know what is the viewpoint of evidence-based medicine for technique, protocol, or drug regimen in this TACE study.

Finally, we thank all authors for their excellent contributions to verifying the efficiency of PR after preoperative TACE on incidences of MVI and early HCC recurrence. In our opinion, scientific experimental results and better research design are still needed to further validate these results.

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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.

References

1. Yang Y, Dang Z, Lu P, et al. Impact of pathological response after preoperative transcatheter arterial chemoembolization (TACE) on incidences of microvascular invasion and early tumor recurrence in hepatocellular carcinoma: a multicenter propensity score matching analysis. Hepatobiliary Surg Nutr 2022;11:386-99.

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