Reply to: "Virtual portal pressure from anatomic CT angiography"

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To the Editor:
We thank Qi et al. [1] for their interest in our study proposing a non-invasive computed tomography (CT)-based model predicting the level of hepatic venous pressure gradient (HVPG): HVPG score = 17.37–4.91 * log(Liver/Spleen ratio) + 3.8 [if presence of peri-hepatic ascites], entitled “Accurate computed tomography-based portal pressure assessment in patients with hepatocellular carcinoma” [2].

They suggest that the model has a poor diagnostic performance in patients with HVPG <10 mmHg. We acknowledge that our score (like any other) has the potential for improvement by integrating new variables, and that the differences between predicted and observed values can always be narrowed. However, the currently proposed model was developed to predict patients with HVPGs ≤ or >10 mmHg, and shows a specificity of 0.79, which implies that most patients with HVPG ≤10 are correctly identified. As a result, we suggest that the score is clinically relevant. Many centers offer liver resection to patients with HVPGs ≤10 mmHg, and suggest a potential transplantation in those beyond 10 mmHg [3].

Qi et al. also suggest that the model is mainly based on the presence of peri-hepatic ascites to discriminate patients with HVPG ≤ or >10 mmHg. As shown by the coefficients in the formula, the score is more driven by the liver/spleen volume ratio (coefficient 4.91) than by the presence of peri-hepatic ascites (coefficient 3.8). In patients without peri-hepatic ascites, the score shows a high accuracy in predicting HVPGs ≤ or >10 mmHg with an area under curve (AUC) of 0.868 (0.780–0.957), which is close to the AUC of 0.911 (0.847–0.975) reported in the whole patient cohort.

Overall, our model was developed and validated in two cohorts of patients. It is accurate in predicting the HVPGs ≤ or >10 mmHg, and can be a useful and simple added tool to manage patients with potential increased portal pressure.

Conflict of interest
The authors declared that they do not have anything to disclose regarding funding or conflict of interest with respect to this manuscript.

References

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On behalf of the authors of [2]