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Title: Gd-EOB-DTPA based MRI for predicting liver response to portal vein embolization

Author Name: Janio Szklaruk

Re: Reply to Reviewers

Dear Yuan Qi,

Thank you very much for your email regarding the above manuscript submitted for publication in World Journal of Radiology. We appreciate the comments. Below is an itemized list of the comments on the.

Comment to Authors:

The authors evaluated the response to PVE (based on kGR calculations) and the degree of hepatic function (based on the enhancement of the liver with Gd-EOB-DTPA). Their hypothesis is that the degree of enhancement of the liver following the intravenous administration of Gd-EOB-DTPA at the hepatobiliary phase will correlate and predict the kinetic growth rate of the liver following portal vein embolization. They demonstrated that although Gd-EOB-DTPA has increasingly shown to be a very powerful tool for the evaluation of liver disease, the enhancement of this agent during the hepatobiliary phase does not predict the degree of liver hypertrophy following PVE.

Response:

Thank you for reviewing our manuscript and comments.

Comments to Authors:

The critical deficit of this study is the absence of descriptions for PVE procedure. Authors should clarify the segments undergone PVE, i.e. right portal vein, right portal vein with P4 branches, left portal vein with anterior branch... Usually, PVE for colorectal liver mets is performed for the right portal vein with or without the embolization of P4s. In this sense, the kGR should be evaluated for S2, S3 and S1. I do not

think authors correctly understand the surgical strategy of PVE to secure the postoperative liver dysfunction.

Response:

Thank you for reviewing our manuscript and comments. We added a reference that describes the PVE procedure: **Reference 5**. The PVE procedure was not a controlled procedure in this project. The PVE was performed as clinically indicated and the decision on the technical details was outside the protocol design. The interventional radiologists and surgical team decided which segments to embolized. In our study population, all PVEs happened to have been performed on the right liver.

The kGR calculations that were used in the manuscript were based on published data. This is based on the calculation of functional liver reserve (FLR) and growth over time period. The study design submitted to the IRB did not include validating the proposed segmental (S1, S2 and S3) calculations of kGR. This may be interesting and we may explore this proposal with our surgical and interventional radiologists' colleagues.