

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 27013

Title: Comparison of MR Spectroscopy, proton density fat fraction and Histological analysis in the quantification of liver steatosis in children and adolescents

Reviewer's code: 03494088

Reviewer's country: United States

Science editor: Yuan Qi

Date sent for review: 2016-05-05 11:38

Date reviewed: 2016-05-06 05:53

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

The authors investigated 90+ obese individuals with MRI markers of hepatic steatosis, namely MRS (the gold-standard) with multi-echo acquisition (PDFF). The study is well done. The methods need to be clarified, and the conclusions better justified by analyses/results. In a general sense, novelty of this approach should be justified (there have been other studies of two-point Dixon techniques in the liver to assess steatosis vs. MRS). Also, spelling and grammar should be extensively reviewed again. Specific comments: 1. Was the referral pattern to the liver clinic in this study routine for all obese individuals, or was there referral bias (physician pre-selection)? Please specify. 2. The spectroscopy methods are well described. Where were SAT and VAT obtained? (What lumbar level?) Were repeated studies done on the same subjects to assess reliability (ICC) in the same scan? Were studies of heterogeneity across the liver assessed for MRS versus PDFF? 3. What is the advantage of using a multi-echo sequence versus a two-point Dixon sequence in the liver? (Henninger et al. Eur Radiol 2015; 25: 1356-65). The authors should justify this point. 4. Was breath holding employed for MRS? 5. What ROC optimal criterion was used to determine the ROC optimal cut point for diagnosis of

NASH? The statistical methods requires more elaboration. 6. PDFF seems less well correlated with histology relative to MRS. Please explain more clearly what "correlation, concordance coefficient and accuracy" represent (in more colloquial terms for the reader). Why might this be? Does this impact the use of PDFF (arguably a much easier, widely accessible technique than STEAM MRS sequences). In the discussion, the authors suggest that "our data demonstrated optimal correlation between histology, with a faint concordance"-- this sentence does not make sense, and does not seem supported by the correlation data presented in Results. Please verify, reword, and confirm. 7. The Discussion needs to be much more focused. Having performed these imaging analyses before, I am convinced that PDFF is easier (in fact some platforms, e.g., Siemens, have a WIP sequence that uses multi-echo acquisitions to calculate fat% in the liver in a single breath hold). However, the discussion needs to focus on how these results are novel or contributory nature - the last sentence of the limitations ("histology reveals...molecule") appears quite important, and needs to be expanded. What in the authors' opinion is the optimal measure of hepatic steatosis? 8. Please simplify table 1 dramatically. The groups should be listed next to each other. 9. With regard to Figure 4, was there bias with one technique versus other? Would include Bland-Altman plots here.

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Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 27013

Title: Comparison of MR Spectroscopy, proton density fat fraction and Histological analysis in the quantification of liver steatosis in children and adolescents

Reviewer's code: 03317258

Reviewer's country: China

Science editor: Yuan Qi

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
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		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

It suggest that the author make some revisions.