



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 14804

Title: Low contrast medium and radiation dose for hepatic CT perfusion of rabbit VX2 tumor

Reviewer's code: 00053888

Reviewer's country: United Kingdom

Science editor: Ya-Juan Ma

Date sent for review: 2014-10-28 10:10

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	PubMed Search:	<input type="checkbox"/> [Y] Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> [Y] Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> [] High priority for publication
<input type="checkbox"/> [Y] 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 type="checkbox"/> [Y] No	<input type="checkbox"/> [] Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> [Y] No	

COMMENTS TO AUTHORS

This is an interesting study of a low radiation and low IV contrast dose for liver imaging by CT scan. This is an important study and if it could be repeated in human subjects would improve the safety of CT scanning for patients and allow the technique to be used in patients who would otherwise be contraindicated because of potential toxicity. This study was carried out in a tumour model in rabbits. The material and methods section of the paper seems too long for a journal of gastroenterology and the authors describe the animal model in some depth as well as the scanning protocol. If this were a journal of experimental models the former would be acceptable but if this were a radiology journal then the latter would be more appropriate. I suspect that a simple reference to the animal model would suffice in this instance. The manuscript manages to extract an awful lot of data from 11 subjects and this is reflected in both an over long results section and too many figures and tables. Figures 3 and 4 tend to over complicate matters and for a gastroenterology audience are superfluous. Figures 1,5 & 6 are much more gastroenterology orientated while I suspect the others are of more interest to a radiology readership. The recognition by the authors of the limitations of their study is to



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be applauded. In conclusion this is a well conducted and performed study but I believe that it is still looking forward to finding the correct home for publication.



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 14804

Title: Low contrast medium and radiation dose for hepatic CT perfusion of rabbit VX2 tumor

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	PubMed 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 checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

Author evaluate the feasibility of low radiation dose and low concentration contrast medium with iterative reconstruction on a 256-slice CT for hepatic VX2 tumor in rabbits. Author conclude perfusion CT with low tube potential and low concentration contrast agent can dramatically decrease radiation dose and image noise with similar conspicuity of tumor compared to conventional tube potential with conventional concentration contrast medium and does not significantly influence perfusion parameters for liver VX2 tumor in rabbits. This is very interesting paper. But I ask some questions. 1. Please explain the detail histological finding of Fig 5. For example, how about hepatic sinusoidal capillary? What kinds of histological parameters do VEGF and CD 31 reflect? According to your paper, hepatic arterial flow in the region of viable tumor was increased., moreover, hepatic sinusoidal capillaries was compressive and obstructive. Please explain me the above histological findings in Fig 5. 2. In Table 1,HAP in tumor is much higher compared to normal liver, HPP in tumor is slightly lower compared to normal liver. There is no difference between normal liver and tumor in HPP. Please explain the difference between normal liver and tumor in perfusion parameters from the



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histological findings in Fig5. 3. In Table 2,the CT values for normal liver parenchyma in arterial and portal venous phase with protocols B and C were significantly different from those obtained with protocol A. But, there was no significant among protocols A,B and C for the same parameters of tumor in arterial and portal venous phases. Please explain the difference between normal liver and tumor in arterial and portal phase. 4. Author write the proposed protocol has a potential for clinical use in evaluating hepatic tumor angiogenesis and the response of anti-angiogenesis therapy. Please tell me what kinds of option do you have for hepatic tumor.