

Format for ANSWERING REVIEWERS

August 17th, 2023

Dear Editors,



On behalf of all the authors, I would like to thank you for your consideration of this paper. In the revised manuscript you will find the changes that we made in response to the Reviewers. In this response, we also indicated how we have dealt with the Reviewers' comments.

Please find enclosed the edited manuscript in Word format with highlighted changes.

Name of Journal: *World Journal of Gastroenterology*

Manuscript Type: REVIEW

Manuscript ID.: 87207

Liver metastases: the role of magnetic resonance imaging

Cesare Maino, Federica Vernuccio, Roberto Cannella, Francesco Cortese, Paolo Niccolò Franco, Clara Gaetani, Valentina Giannini, Riccardo Inchingolo, Davide Ippolito, Giulia Nicoletti, Giulia Pilato, Davide Tore, Riccardo Faletti and Marco Gatti

The manuscript has been improved according to the suggestions of reviewer and Editorial Office's Comments:

Reviewer #1:

There is a place in the atypical appearance of liver metastases, for example fat-containing liver metastases; the article mentioned that fat in liver metastases can be divided into three conditions, but the authors only wrote two kinds here, ① the macroscopic fat in liposarcoma ② the focal intracellular fat of kidney cancer, did not say the third kind.

Authors' reply: Thank you for the consideration of this paper and for your comment. The changes have been done accordingly, by adding the third condition. We apologize for the inconsistency.

Reviewer #2:

This review primarily focuses on the magnetic resonance imaging (MRI) features of liver metastases, aiming to summarize the common imaging characteristics of this condition with a special emphasis on both typical and atypical appearances. This review is a well-written article. The article systematically presents a comprehensive analysis of the role of magnetic resonance imaging (MRI) in detecting and characterizing liver metastases. The authors exhibit a clear understanding of the subject matter, and their synthesis of existing literature is both thorough and insightful. The review demonstrates a meticulous selection of relevant studies and effectively highlights key advancements in MRI techniques for liver metastasis assessment. The article's structure is coherent, with a well-organized presentation of different aspects. Overall, this MRI review on liver metastases exhibits a commendable level of academic rigor, well-structured content, and insightful analysis, thus contributing to the current body of knowledge in the field.

Authors' reply: Thank you for the consideration of this paper and for your comment.

Limitations of the Study and its Findings: Lack of focus on emerging MRI technologies or techniques that might impact the field. Such as readout-segmented echo-planar imaging in diffusion-weighted imaging (Xie S, Masokano IB, Liu W, Long X, Li G, Pei Y, Li W. Comparing the clinical utility of single-shot echo-planar imaging and readout-segmented echo-planar imaging in diffusion-weighted imaging of the liver at 3 tesla. *Eur J Radiol.* 2021 Feb;135:109472. doi: 10.1016/j.ejrad.2020.109472. Epub 2020 Dec 10. PMID: 33370640.).

Authors' reply: Thank you for your comments. Considering that the main aim of our study was to describe and report the most common imaging findings of liver metastases, we decided to focus our attention especially on the conventional radiological features. We appreciate your insightful comment, and we added more details regarding this aspect in the dedicated section. We also add the suggested reference regarding DWI acquisition.

Minor problem: Please reviewed the formatting of the references, such as Ref. [5] .

Authors' reply: Thank you for raising this issue. We corrected the formatting of reference #5.

Future Directions of the Topic: Investigating the integration of artificial intelligence or machine

learning in improving MRI-based diagnosis of liver metastases. Exploring the potential of functional MRI techniques in assessing treatment response and prognosis.

Authors' reply: Thank you for raising these issues. We added some specific sentences in the EOB-MRI and in the conclusion section, accordingly.

Unresolved Questions/Issues: The optimal imaging protocol for differentiating various types of liver metastases. How to enhance the sensitivity and specificity of MRI in detecting small or subtle metastatic lesions.

Authors' reply: Thanks for arising these issues. We aimed to focus our study on the classical radiological findings of liver metastases. In this setting we reported the state of the art of MR imaging techniques, including the protocol recommended by international societies. However, nowadays, for the best of our knowledge, no specific studies were developed to determine better protocols to differentiate all liver metastases. On these bases, by using all sequences reported in figure 2, endorsed by ESGAR and ESR, each radiologist should be able to differentiate all types of liver metastases. On the other hand, one of the most important problems in clinical practice is to characterize small metastatic lesions. For these reasons, we specifically created the paragraph named "TSTC", to enhance the clinical responsibility in case of small liver lesions when a patient with known primary tumor undergoes liver MR.

Questions for Future Research by the Authors: Can the identified MRI features serve as prognostic indicators for different types of liver metastases?

Authors' reply: Thanks for arising this issue. Unfortunately, when the literature research was performed, only few robust studies were published regarding the usefulness of MR as a prognostic tool in patients with liver metastases. Further larger and prospective studies should be focused on these aspects. To increase the robustness of the text, a short comment was reported in the conclusion, accordingly.

Potential Impact on Basic Science and Clinical Practice: Basic Science: The review may prompt researchers to delve deeper into understanding the underlying biological mechanisms behind the observed MRI features of liver metastases. Clinical Practice: The review could lead to refined clinical practice for the use of MRI in liver metastasis assessment, potentially enhancing accuracy

and patient outcomes.

Authors' reply: Thank you for your comments.

Science editor:

The manuscript has been peer-reviewed, and it's ready for the first decision.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

Authors' reply: Thank you for your comments.

Company editor-in-chief:

I have reviewed the Peer-Review Report, the full text of the manuscript, the relevant ethics documents, and the English Language Certificate, all of which have met the basic publishing requirements of the World Journal of Gastroenterology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2023. If an author of a submission is re-using a figure or figures published elsewhere, or that is copyrighted, the author must provide documentation that the previous publisher or copyright holder has given permission for the figure to be re-published; and correctly indicating the reference source and copyrights. For example, "Figure 1 Histopathological examination by hematoxylin-eosin staining (200 ×). A: Control group; B: Model group; C: Pioglitazone hydrochloride group; D: Chinese herbal medicine group. Citation: Yang JM, Sun Y, Wang M, Zhang XL, Zhang SJ, Gao YS, Chen L, Wu MY, Zhou L, Zhou YM, Wang Y, Zheng FJ, Li YH. Regulatory effect of a Chinese herbal medicine formula on non-alcoholic fatty liver disease. World J Gastroenterol 2019; 25(34): 5105-5119. Copyright ©The Author(s) 2019. Published by Baishideng Publishing Group Inc[6]". And please cite the reference

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Authors' reply: Thank you for the consideration of this paper and for your comment. The changes have been done.

Finally, we wish to thank the Editors and the Reviewer for their comments that helped us to increase the value of our paper.

Sincerely yours,

Marco Gatti, MD

Assistant Professor, Doctor,

Department of Surgical Sciences, University of Turin,

Via Genova 3, Turin 10126, Italy

marcogatti17@gmail.com