

### **Answer to reviewers**

**Reviewer #1:**

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The study aims to evaluate the prognostic value of sarcopenia in patients with hepatocellular carcinoma treated by trans-arterial (chemo)-embolization. The topic is interesting and of great significance in clinic. The structure is clear and the language is easy to understand. However, there are still some problems to be solved and revised. Figure 2 and figure 4 are blurred and need to pay attention to the case of the language in the legend of figure 2.

**Answer: We thank the reviewer #1 for his/her comments. Issues mentioned were addressed.**

**Reviewer #2:**

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Overall the article is well written and addresses an interesting and actual topic. I have a few suggestions/remarks: - the "p" of p-values should be written in italics lowercase letter; authors should keep this consistent throughout the manuscript. - Introduction: when referring to the BCLC staging system, please cite the 2022 edition (doi: 10.1016/j.jhep.2021.11.018). - Introduction: when referring to TACE/TAE treatments, please also add a line and citation on DSM-TACE (doi: 10.3390/cancers13205122). Discussion: "However, as sarcopenia has also been associated with poorer survival outcomes in patients under systemic therapies (8)". Please change "(8)" to "[8]". -

**Answer: We thank the reviewer #2 for his/her comments. Issues mentioned were addressed. Regarding the article on DSM-TACE (doi: 10.3390/cancers13205122), although it is of great interest, details on different TACE techniques do not correspond to the topic of our article. Besides, DSM-TACE is not a well validated option such as DEB-TACE or lipiodol TACE. For these reasons, we would prefer not to add this reference.**

**Reviewer #3:**

**Scientific Quality: Grade C (Good)**

**Language Quality: Grade B (Minor language polishing)**

**Conclusion: Minor revision**

Specific Comments to Authors: This paper proposes a view that sarcopenia is a radiological biomarker of poor prognosis in patients with HCC treated by TACE or TAE. Through a retrospective multicentric cohort study, it shown that sarcopenia is associated with a higher rate of tumor progression and shorter survival. The work of this paper is practical and logical. It can raise the awareness of doctors to notice sarcopenia in patients treated by TACE or

TAE. However, there are some problems to be further improved as well. The information that patients have ever accepted nutritional support and/or physical activity before or after TACE or TAE are not collected which may affect the accuracy of the results. And it would be better if there is a diseases forecasting model which can figure out the character of HCC patients who may easier develop into sarcopenia after treated by TACE or TAE, which is quite meaningful in clinical practice.

**Answer: We thank the reviewer #3 for his/her comments. As this work is retrospective, and nutritional support and physical activity informations were not well collected in patients files, these data are missing. However, in this population, there are no standard concerning nutritional and physical readaptation strategies and this article aims to rise the question of the importance of such supports that should be studied in further dedicated trials. We totally agree on the need of diseases forecasting model.**