

Dear Editor,

*Thank you for the evaluation of our manuscript entitled “**Improving the prognosis before and after liver transplantation: is muscle a game changer?**”.*

We have been able to respond to all the reviewers' comments.

The new version of the manuscript highlights the changes made to the text: additions are written in red and deletions are crossed out.

We have also modified the tables as instructed and provided the image in powerpoint format.

Finally, we took the opportunity of this review to present some pharmacological treatments under evaluation.

Sincerely,

Nicolas Lanthier, corresponding author

Alexis Goffaux, first author

On behalf of all authors

Point-by-point response to the reviewers

Reviewer 1:

I congratulate the authors on a well written and thoroughly researched contribution on an important topic. Body composition disturbances, their evaluation and their impact can still be considered an emerging area of interest in all areas of medicine. The data presented offers a broad overview of muscle depletion in liver transplantation and is interesting to the reader not yet familiar with the basic concepts. I only have some reservations about the format of the manuscript. I feel a proper systematic review article adhering to PRISMA would do the topic more justice.

Answer:

Thank you for your comment and remarks. Concerning the format, Nicolas Lanthier was invited by the WJG to write a minireview. Although we agree that it also would be very interesting to do a systematic review, that wasn't the purpose in this case. A systematic review article would be quite appropriate for one aspect of the subject (e.g. sarcopenia in patients awaiting transplantation). We therefore took advantage of this invitation to cover all aspects (diagnostic, clinical, research points to be developed, etc.).

Reviewer 2:

This is an interesting and important paper given the increased understanding of the value of frailty in liver transplantation. The authors may wish to expand the discussion on the issue of frailty, as well as report specific measures/programs taken by liver transplant centers to improve on that.

Answer:

Thank you for the positive feedback.

Concerning the issue of frailty, we now mentioned it in the text at the point 4. We explain that frailty in cirrhotic patients increased the risk of mortality. We also explain that frail patients who receive a LT have acute risk of postoperative morbidity, stay longer at the hospital and have an increased risk of acute cellular rejection. We add in the text (with new references) that cirrhotic patients are more inclined to suffer of acute kidney injuries and unplanned hospitalization mainly due to infections.

Concerning the management of frail patients in liver transplant centers, we add that patients with cirrhosis must receive an intensive program to preserve muscle mass and function. Do that so, patients in transplant centers are followed by dietician and physical therapist. It's really important that patients on waiting list for liver transplantation are supported by a pluri-disciplinary team. However, we emphasise that the current measures are general and

that studies are underway to define specific strategies through the identification of patients at risk based on objective criteria.