

Dear Dr. Wang,

Thank you for your feedback on our manuscript entitled, "**Impact of recipient functional status on 1-year liver transplant outcomes.**" We have provided a point-by-point response to the reviewer comments.

Reviewer #1

This is a well done study, the results are not surprising and parallel findings of frailty in other patient populations (renal transplant etc.) The reason why the rate of graft failure being higher does not immediately seem obvious, perhaps further post-hoc analyses to look at causes of graft failure (non compliance with immunosuppressive regimen, clotting disorders, sepsis/infection etc.) would be enlightening.

We agree that further analyses on the causes of graft failure would be very interesting and welcome your recommendation to pursue this question in a subsequent research paper.

Reviewer #2

Minor suggestions – Separate analysis should be done on excluded cases, because it would reflect the real clinical benefit of this study in daily practice. Should be more clear with the real benefits of this study in clinical practice and describe better all exclusion criteria reasons. Analysis of groups (compare) with higher MELD score, acute liver failure, urgent transplant, hemodialysis and retransplant. Due to the association criteria of morbimortality can be use as a strong point to contraindicate the procedure in some populations and prioritizing the grafts for population that will have better survival. Needs clarification on inclusion and exclusion criteria. Needs improvements on comparison morbimortality risks.

We agree with these recommendations and have added the following language to the Materials and Methods section, under “Study Design and Sample,” as follows (in blue, below):

Exclusion criteria consisted of the following: 1) pediatric transplant (< 18 years), 2) multi-organ transplant, 3) UNOS Status 1 or acute liver failure, 4) ICU pre-transplant, or 4) subjects with missing data in any of the key variables of interest (variables with $\geq 5\%$ missing values were not used in this study). Pediatric and multi-organ transplants were excluded because the organ allocation systems for these patients are separate, and represent a distinct set of indications and disease courses, than the general U.S. liver transplant population. We excluded urgent (Status 1 or acute hepatic necrosis) and ICU-admitted patients. This was done because these are often patients who rapidly decline due to an inciting event (e.g., infection) and may, therefore, be categorized as being of poor functional status due

to the event as opposed to being "frail," which is conceptualized as a chronic process leading to depletion of physiologic reserve.

Table 2 and 3 - needs clarification p values of all variable and comparisons

Please refer to the footnotes listed under both table 2 and 3, follows: "All distributions varied significantly across categories of functional status ($p < 0.001$)"

Would be interesting to compare and match the donor data? Would they have influence?

We explored key donor variables, including those in the Donor Risk Index, when designing our statistical models. We kept all donor variables that were statistically significant in our final models.

Please make an audio record of your core tip. The accepted formats are: mp3 or wma.

We have added an audio record of the core tip to the submission.

We thank you for the opportunity to improve the manuscript with your and your reviewer's feedback and encourage the editorial team to reach out if there are any questions or more changes for us to make.

Sincerely,

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