

20<sup>th</sup> January 2017

Dear World Journal of Transplantation,

Thank you for your comments, extension and accepting our manuscript for publication:

**Manuscript NO.: 31479**

Title: Developing a Donation after Cardiac Death Risk Index (DCD-RI) for Adult and Pediatric Liver Transplantation

The following is a point by point response to the reviewers' comments and summary of the amendments made according to the steps outlined by the journal.

While the manuscript is under revision, please liaise with Miss Shirin Elizabeth Khorsandi but when the manuscript is published Professor Nigel Heaton will become the corresponding author.

Yours Sincerely,

Miss Shirin Elizabeth Khorsandi

**STEP 1**

**Reviewer's code: 00504591**

1. Can you cite the reference describing risk index after liver transplantation using DCD grafts? If yes, please cite them and make a discussion. If no, emphasize the new points of the present analysis in the discussion section.

In the discussion we have already mentioned a reference (see ref 41) of the only other group that has tried to calculate a risk index for the use of DCD grafts. We have expanded our discussion of this paper as suggested.

2. (P7, the second paragraph) Please show the indication of the biopsy of the donor. Some donors are rejected only on the macroscopic observation?

In the methodology it is stated "a fresh frozen trucut liver biopsy would be taken to assess degree of steatosis or to exclude donor pathology." If the donor liver is severely steatotic on visual inspection it would be discarded, this has now been stated in the methods.

3. (P8, the second paragraph) Is  $p=0.3$  correct? 4. (Table 3) What are 3/12, 6/12, 12/12, 60/12? Please explain.

To allow for the exploratory modeling with Cox regression the forward selection was set at the significance level of  $p=0.3$ . We have amended Table 3, the column header says month and only a number is used, rather than the short hand of 3/12.

**Reviewer's code: 00504665**

1. The surgical details in the manuscript can be shortened as there is nothing unusual about the surgical procedures.

Regarding the surgical details of DCD procurement, we would like to retain, unless the reviewer feels strongly. As one of the regular questions regarding on how good results are achieved in DCD liver transplantation can be answered by paying close attention to how the organ is retrieved in the first place.

**Reviewer's code: 00054255**

1. One of reviewer concerns or interest is that initially how authors grouped each disease to low, standard and high DCD risk groups in the Table 1 and figure 1.

In the methods it is stated that the primary indication for liver transplant was divided into the 3 groups of high, standard and low risk according to how their Kaplan-Meier survival curves grouped together. This is how the data is generated for Table 1 and Figure 1.

**STEP 2**

In the revised manuscript we have updated the requirements for the Title, Running Title, Authorship, Abstract, Keywords, Core Tip, Academic Rules and Norms, Tables and Illustrations, Comments and References according to the guidelines. The figures have been attached as word documents to allow for editing.

**STEP 3.**

The scientific research process report answering the following questions:

1 What did this study explore?

The study explored the utility of a donor recipient stratification risk predictive model that was used to calculate a DCD risk index (DCD-RI) score in order to rationalize the risk of using a given DCD liver in a selected recipient.

2 How did the authors perform all experiments?

A retrospective analysis of prospectively collected data from a single institute transplant database.

3 How did the authors process all experimental data?

Statistical analysis and modeling was performed.

4 How did the authors deal with the pre-study hypothesis?

Literature and clinical review of DCD liver transplant practice.

5 What are the novel findings of this study?

The DCD Risk Index (DCD-RI) score that was developed was able to predict graft loss and DCD-RI class predicted graft survival.

**Step 4.**

Audio file has been attached

**Step 5.**

We have performed a Google Scholar search for the present manuscript title, and attached a screenshot image of the results.

**Step 6.**

All appropriate files have been attached.

**Step 7.**

Not applicable

**Step 8.**

Not applicable

**Step 9.**

The Copyright Assignment form has been signed by all available authors. Due to annual leave and international commitments I have not been able to get the signatures of Professor O'Grady and Professor Rela. Both of these Professors have approved the manuscript when it was under internal institutional review. When I have returned from leave and the Professors have returned from their international travels. I will resend the copyright form with their signatures again. I am aiming to do this in the week of 30<sup>th</sup> Jan 2017.