

Prof Maurizio Salvadori
Editor in chief
World Journal of Transplantation

31 January 2017

Dear Prof Salvadori

RE: ESPS Manuscript NO: 31479 Developing a Donation after Cardiac Death Risk Index (DCD-RI) for Adult and Pediatric Liver Transplantation

Please find enclosed a statistical critique of the above manuscript. I have referenced your statistical review points below with the appropriate comments. I have not given a general review of the manuscript which I assume is in hand outside the statistical aspect. My comments are italicised.

(1) Statistical methods are adequately and appropriately described when they are used to verify the results;

In order to meet this criteria the following is required

- a. Justify the use of forward selection multivariate regression*
- b. Justify the use of a selection p value of 0.3 as 0.15 or 0.2 is more commonly used to avoid type 2 errors or address suppressor effects*

(2) Whether the statistical techniques are suitable or correct;

a. Overall the techniques are appropriate if justifications are given. Cox regression is more appropriate than logistic regression for this long-term study. Using a ROC curve however is not likely to be helpful if Cox regression is used as the outcome is being met at different times over a prolonged period. For short term outcomes eg 1 month mortality then logistic regression and ROC curve analysis is more appropriate.

b. On that the authors should give a p value for the ROC curve comparison they perform.

(3) Only homogeneous data can be averaged. Standard deviations are preferred to standard errors. The number of observations and subjects (n) is given. Losses in observations, such as drop-outs from the study, are reported;

a. The only measure of central tendency reported for continuous data is the mean. An assessment of normality should stated and the +/- defined as SD or other, or median(IQR) used as a replacement.

(4) Values, such as ED50, LD50 and IC50, have the 95% confidence limits calculated and have been compared by weighted probit modeling (using the functions described by Bliss and Finney); and

a. This is not relevant to this manuscript.

(5) The word “significantly” is replaced by its synonyms (if it indicates extent) or the P value (if it indicates statistical significance). Statistical data should be expressed as mean \pm SD or mean \pm SE. Common statistical expressions contains t-test is expressed as t; F-test is expressed as F; chi-square test is expressed as χ^2 ; relative coefficient is expressed as r; degree of freedom is expressed as ; number of samples is expressed as n; and probability is expressed as P.

a. one replacement of significantly is required on page 14 final paragraph.

b. see above regarding reporting of means

Yours sincerely

A handwritten signature in black ink, appearing to read 'Mark McPhail', is written over a light green rectangular background.

DR MARK MCPHAIL PhD MRCP FFICM