Author’s response to reviews

Title: Lungs exposed to 1 hour warm ischemia without heparin before harvesting. Candidates to be transplanted?

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Respond to the reviewers

We thank the reviewer for taking the time to reviewing this manuscript, we are very grateful for the reviewers suggestions, which we have found very constructive. We have carefully considered the reviewers comments and have tried to follow the reviewer’s advice and suggestions as closely as possible.

Reviewer: Karthikeyan Santhanakrishnan

Minor essential revisions

1. Abstract conclusions has be rephrased according to the reviewer suggestion.

2. The reviewer would like us to add the range along with the mean for pulmonary gas functions and pulmonary vascular resistance. The statistical method used in the manuscript is based on Kruskal–Wallis one-way analysis of variance and the figures and the distribution of error is expresses as mean, and the standard error on the mean (SEM) based on professional statistical advisement by statistics Mathias Grahn, Klagshamn, Sweden. We hope that the reviewer accept that the figures in the manuscript are expressed as mean and SEM instead of mean and rage.

3. The reviewer points out a statement in page 14- contradicting between lines. We agree and we have changes it into the following text: Our results demonstrate a difference in blood gases when evaluating at FiO2 1.0 between the standardized HBD lungs pre-treated with heparin according to clinical protocol and the no heparinized DCD lungs. The DCD group showed lower values on PaO2 at FiO2 1.0 compared to the HBD group. Still, the PaO2 values
of the DCD lungs fully meet the standard criteria for the acceptance for lung transplantation according to international guidelines

Reviewer 2) Korah Oommen

Discretionary revisions

1. The reviewer points out: In Calculation and Statistics section: "in pair differences between the three groups were tested"-- did you mean two groups? Answer: yes we do mean two groups. The text has been changed in the manuscript.

2. The reviewer points out: "Before the perfusion was started, the pulmonary artery was 'prolonged' by a segment of aorta.--due you mean "extended / elongated? Answer: We have changed prolonged into extended.

3. As the reviewer points out we did not use Steen Solution in the present study. However, the mix of perfusion solutions used in the study is very similar to Steen solution that will provide a similar oncotic effect on the lungs and thereby reduce oedema. Steen solution was invented by Professor Stig Steen, our present clinical Professor. Our research group mainly Dr Richard Ingemansson and Perfusionist Leif Pierre worked closely with Professor Steen when the optimal solution for the EVLP process was invented and the product that came out was Steen solution. Steen solution is very expensive, and it is less expensive to mix a similar perfusion solution as in the present study. Other clinics with similar knowledge as in our research group prefer a “self-made mix” as perfusion solutions as for example Dr Dirk Van Raemdonck, Leuven, Belgium (http://www.kuleuven.be/wieiswie/en/person/00015853) [1].

4. A possible hypothesis is that the significant higher flow rate (PAF) in the DCD lungs shortened the warming phase in the EVLP procedure. This sentence has been added to the manuscript.