Reviewer's report

Title: Stem cells and beta cell replacement therapy: a prospective health technology assessment study

Version: 1 Date: 06 Oct 2017

Reviewer: Kednapa Thavorn

Reviewer's report:

The manuscript was well-written; however, the authors should clarify few points in the methods and results sections before accepting this manuscript for publication.

Major comments

1. In the methods section (Page 4, Line 80-81), the authors indicated that they presumed equal effectiveness with current technology islet transplantation except for the immunosuppression drawbacks. How may this assumption affect the chance that a new transplant option for beta cell replacement being cost-effective?

2. In the methods section (Page 5, Line 105), please specify (or provide as an appendix) which model parameters were updated from the previous pre-existing model of unstable type 1 diabetes?

3. In the methods section (Page 5, Line 108-109), please justify why the parameters for rates, costs and disutility of initial complications were lowered by 40%? Does this variation affect the cost-effectiveness findings?

4. In the methods section (Page 6, Line 129), please clarify what the authors mean by a relative standard deviation of 10%? Was it referred to SD as a percentage of the mean?

5. As this model is probabilistic, how many iterations were used in the probabilistic analyses? Please specify.

6. In the results section (Page 8, Line 195-196), the authors indicated that "…currently this technology could be cost-effective at a WTP threshold of $100,000 per QALY". Does this sentence refer to the study base case? Please report the incremental cost-effectiveness ratio.
7. Were the results shown in Table 4 and 5 probabilistic OR deterministic? If possible, please include 95% CIs of the ICER estimates.

8. In the results section (Page 11, Line 215 - 218), the authors briefly described the results of the value of information analysis. It would be great to expand the descriptions and help readers to interpret the EVPI values. Why are the EVPI values matter? What does the peak mean?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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