Author’s response to reviews

Title: Performance of HbA1c versus Oral Glucose Tolerance Test (OGTT) as a screening tool to diagnose dysglycemic status in high-risk Thai patients

Authors:

YOTSAPON THEWJITCHAROEN (kamijoa@hotmail.com)
Amia Elizabeth Jones (jones.amia@gmail.com)
Siriwan Butadej (siriwanbutadej@gmail.com)
Soontaree Nakasatien (soontareenaka@gmail.com)
Phawinpon Chotwanvirat (phawinpon@dietitian.in.th)
Ekgaluck Wanothayaroj (ekgaluck@yahoo.com)
Sirinate Krittiyawong (sirinate_k@yahoo.com)
Tinapa Himathongkam (thimathongkam@gmail.com)
Thep Himathongkam (thepjudy@gmail.com)

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Author’s response to reviews:

Performance of HbA1c versus Oral Glucose Tolerance Test (OGTT) as a screening tool to diagnose dysglycemic status in high-risk Thai patients

Thank you very much for your valuable comments and suggestions to improve the quality of this manuscript. To the best of our knowledge, our study is the first study to evaluate the performance of HbA1c when compared with OGTT in high-risk Thai patients. The results of our study should generate interests from readers all over the world and policymakers to encourage the use of OGTT in screening dysglycemic status which has become a global epidemic. We appreciated the time and efforts of the editorial team/reviewers in helping us improve the manuscript. Please see point by point the answers in this letter and all edits have been highlighted red color in the main manuscript.

Editor Comments:

1) Please remove the figure titles embedded within the figures and re-upload the corrected versions. All figure titles/legends should be placed at the end of the main manuscript, after the References, and not
within any of the figure files. Please upload each Figure and Table individually, as separate files.

Response: We edited as suggested.

2) Please include the email addresses of all authors on the title page.

Response: We edited as suggested.

3) We note that the order of first and surnames on the manuscript and submission system are not the same for all authors, please correct.

Response: We edited as suggested.

4) Include the heading Abstract at the start of this section.

Response: We edited as suggested.

5) In the Abstract, change the heading “Materials and Methods” to “Methods” and ensure that the abstract in the manuscript and the submission system (Editorial Manager) are the same.

Response: We edited as suggested.

6) Please include the heading “Conclusions”.

Response: We edited as suggested.

7) Please include the heading “Declarations” at the start of this section, after the list of abbreviations. In addition, please reorder your Declarations section to match what is outlined in our Submission Guidelines and include all sections (https://bmcendocrdisord.biomedcentral.com/submission-guidelines/preparing-your-manuscript/research-article#declarations).

Response: We edited as suggested.

8) As there are authors with the same initials, please differentiate them to make it clear that the initials refer to separate authors.

Response: We edited as suggested in red highlights.

9) Please note that listed author contributions of WE, KS and HT (unclear which HT, see point 8) does not automatically qualify them for authorship. Contributing to the discussion of results is not sufficient to qualify for authorship.

Response: We edited as suggested.

Reviewer reports: JoizaLins Camargo (Reviewer 1)

1) The manuscript should follow the STARD statement (http://www.stard-statement.org/) for properly
reporting this type of study. A STARD checklist must accompany the manuscript submission. The text should be revised and standardized for terms and definitions that must be used in the text according to STARD.

Response: We edited the objectives of this manuscript to focus on diagnostic accuracy of HbA1c using OGTT as the reference standard and to examine the optimal HbA1c cut-off in predicting diabetes from OGTT. All revised texts have been highlighted in red and Figure 1 was adapted to comply with the STARD diagram format. Figure 5 which used a scatter-plot to display correlation between HbA1c and OGTT had been deleted to align with the main objective of this study. STARD format was applied and the checklist has been attached along with the revised manuscript.

2) The Introduction and Discussion are too long and should be revised.
Response: We revised the manuscript to be more concise as suggested.

3) After follow the STARD, the methods and results sections should be revised.
Response: We edited as suggested and revised the sequence of Figures in the results section.

Reviewer reports: Laura Gray (Reviewer 2)

1) The methods state "we reviewed a population sample...." I think the word population should be removed. This is a very bias sample of high risk patients attending hospital - so it's not a population based study. This is the major limitation of the study and this should be added to the discussion.

Response: We edited as suggested and added this limitation clearly in our discussion part (Page 17, line 350-352).

2) The Thai diabetes risk score is not mentioned in the methods.
Response: We edited as suggested (Page 7, line 135-138).

3) Correlation should never been used to assess agreement - this is fundamentally wrong. See https://www.ncbi.nlm.nih.gov/pubmed/2868172 Figure 5 should be replaced with a Bland Altman plot and this analysis needs changing.

Response: We revised the manuscript as suggested in red highlights. Figure 5 was removed because Bland Altman plot needed to be used with 2 tests with continuous data in the same unit. Our study compared between 2-hour plasma glucose (mg/dL) and HbA1c (%NGSP) which Figure 3 and 4 were the main results from this diagnostic accuracy study. We also followed the STARD format and enclosed the checklist with this revised manuscript.

4) On page 11 you state "The correlations of the two tests……." ROC plots do not assess correlation. Please amend.

Response: We edited as suggested (Page 12, line 242-245).

5) I'm not sure what the p value for the kappa tells us, both are highly significant but one kappa is deemed to show fair agreement and the other none. Also 95% CI should be added to the kappa values.
Response: P-values were reported from SPSS program to interpreting Kappa values. We added 95% CI of Kappa values as suggested (Page 12-13, line 247-252).

6) Add 95% confidence intervals to all sensitivities and specificities.

Response: We edited as suggested (Page 12).

7) Figures 4 a and b are the wrong way around.

Response: We corrected Figure 4 as suggested.