Reviewer reports:

(Reviewer 1): Thanks you for the revision of this paper. I was not the original reviewer though saw it before as an editor.

I think there is a bit of restructuring needed to get the full message of this paper clear. I do not think this needs any further analysis, just some editing. Unfortunately I think some of the issues have arisen due to the review process itself which is unfortunate. The authors response to the reviewer does show that the authors understand the issues with some of what has been added in.

There is however one key point from the reviewer that is not yet clear. Pre-diabetes is a catch-all term for a variety of biochemical diagnoses and it is equally valid to use HbA1c or OGTT. It is perhaps simplest to think of two distinct conditions - OGTT diagnosed pre-diabetes and HbA1c diagnosed prediabetes. HbA1c diagnosis is not just a short-cut for OGTT, it tests something biologically distinct. I therefore agree with the author comments that the ROC curves are not helpful and should be removed.
In the author response, the role of prospective data and prediction of future T2DM is eloquently described as being key. I think this clarity is missing from the paper itself and should be added.

Overall the paper needs to be simplified into looking at what the population diagnosed by HbA1c looks like, what the population diagnosed by OGTT looks like (and this should include the HOMA results which are currently in the discussion rather than results section. Also do you have data on dyslipidemia too? if so add it in if you can do so easily), and the overlap (or lack of overlap) between them. I do not think these changes would take long to do and it would be a far more useful paper.

Response To Reviewer

We have revised the manuscript according to the reviewer comments and made the following changes:

1) We have removed the ROC analysis including table 3 and figure 3 which presented the results of the ROC analysis.

2) We have added statements to the revised manuscript to emphasize the fact the OGTT and HbA1c criteria identify distinct population, and compare the metabolic profile of the population identified by each criteria

3) We have expanded table 4 to include full metabolic profile (including lipids and HOMA-IR) of patients diagnosed with prediabetes based upon HbA1c alone versus OGTT alone to emphasize the difference in metabolic profile of patients identified by the two diagnostic criteria.

4) We have added the following statement to the discussion to emphasize the difference between subjects identified by the two criteria, and to clarify the importance of longitudinal follow-up:

“We and others (9,10,23,25) previously have shown that OGTT criteria have more sensitivity and specificity in identifying subjects at increased future T2DM compared to HbA1c criteria. Because there was large discordance between the prevalence of prediabetes diagnosed with HbA1c versus OGTT criteria in the present study, and longitudinal data is unavailable in this population, we utilized diabetes prediction models (21) to identify subjects at increased risk of diabetes and compare the future risk of diabetes in subjects diagnosed with each set of criteria. Further, many previous intervention studies have demonstrated that subjects at high risk of diabetes manifest impaired beta cell function long before T2DM is evident (10,23), and the impairment in beta cell function was the strongest predictor of future T2DM risk. Because of lack of “gold standard” for identification of who is really at increased future T2DM risk, we
utilized the risk score, and impairment in beta cell function as “surrogates” to compare the actual diabetes risk in subjects diagnosed with prediabetes according to OGTT and HbA1c criteria. The results of the present study have demonstrated that the OGTT is a better tool to identify subjects with higher score of Stern model (Table 3) and lower beta cell function (table 4) than HbA1c. In other words, a subject with Hb1Ac<5.7% who has IFG/IGT manifest greater chance of having high score in Stern model for future T2DM and impaired beta cell function than subject who has NGT (according to OGTT) and HbA1c=6.0%.”

Editor Comments:

You should revise the following in the revision:

1. The List of authors is different from submission system to the main manuscript.

Dalia Kamal did the ROC analysis. Because the ROC analysis was removed from the manuscript , her name was removed from the authors list. Dr Mahmoud Zirie felt that he did not contribute to the manuscript. Therefore, we have removed his name from the authors and acknowledged the discussions with him in the acknowledgment.

2. Declaration headings should be as specified in the journal submission guidelines.

We have revised the Declaration Headings to be consistent with the guidelines

3. Clarify who is "M.Z" in AC

M.Z has been removed from the author contribution

4. State the role of funding body

The role of funding body has been added to the manuscript

5. Remove "Figure X" from all figures.

We have removed the numbering from the figures