Reviewer’s report

Title: Quality Measure and Weight Loss Assessment in Patients with Type 2 Diabetes Mellitus Treated with Canagliflozin or Dipeptidyl Peptidase-4 Inhibitors

Version: 0 Date: 07 Jan 2017

Reviewer: Yoshifumi Saisho

Reviewer's report:

In this study, Wysham et al. conducted the quality measure and weight loss assessment in patients with T2DM treated with canagliflozin (CANA) or DPP-4 inhibitors. An electronic medical records database was used to assess quality measure achievement of HbA1c, BP and BW loss. Inverse probability of treatment weighting (IPTW) was used to adjust for observed baseline confounders between groups and Kaplan-Meier rates and Cox proportional hazard models were used to compare achievement of HbA1c<7%, HbA1c<8%, systolic BP<140 mmHg, diastolic BP<90 mmHg and BW loss>=5% among patients not meeting these respective targets at baseline. The study suggested that patients initiated on CANA were more likely to reach these targets than patients initiated on DPP-4 inhibitors.

This study reports the superiority of CANA in terms of quality measure of diabetes care in the real-world setting based on a large sample from the electronic medical records. The analysis was carefully done and the results were presented clearly. The findings expand our knowledge and are clinically important.

1. Having the small difference in achievement rate of HbA1c<7% between the groups (42.8% vs. 40.3%), one can assume that the absolute difference was only modest. The authors may comment on this point more clearly in discussion.

2. Why the number of CANA patients in IPTW analysis (n=13,793) was greater than that of total CANA patients included in this study (n=10702)? Please explain the reason of this.

3. Each target of quality measure was assessed separately. It will be of interest if the authors could compare the achievement rate of the combination of these targets, i.e., HbA1c, SBP, DBP and BW.

4. Majority of the study subjects was white. The results may not apply to the other ethnicities. The authors should mention this point as a limitation of the study.
Minor points;

1. In table 1, there are 5 races listed but there are 6 numbers presented. Please clarify this.

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 recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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