Reviewer’s report

Title: Traditional Chinese Medicine Use Is Associated with Lower End-Stage Renal Disease and Mortality Rates among Patients with Diabetic Nephropathy: A Population-Based Cohort Study

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Reviewer: Jung-Der Wang

Reviewer's report:

Major problems: The fundamental problem of this manuscript is that it is neither a randomized control trial nor an observational study with a specific hypothesis to be tested. The current gold standard of providing evidence for the health benefit of a healthcare technology is through randomized trials. For a study conducting by analyzing real world data, it must test a specific hypothesis, say, what kind of specific herb and/or Chinese herbal product (CHP), instead of recruiting whoever currently use or use any CHP after diagnosis of diabetic nephropathy (DN). Without any of the above evidence, physicians receiving conventional medicine training, including myself, would not consider it is appropriate to make the following conclusion, "TCM (traditional Chinese medicine) treatments could be used as part of modern care system for DN patient". In addition, there are following two problems in study design that the authors have not successfully tackled:

1. There are two major outcomes in this study: mortality and ESRD (end-stage renal disease). To control of potential confounding by alternative causes, the authors had better match all major factors that are associated with these two outcomes, e.g., age, sex, hypertension, acute myocardial infarction, stroke, cancer, etc., followed by propensity score matched for minor risk factors. The current manuscript did not do it in this way and the Table 1 did not show a perfect match on major risk factors.

2. Results in Table 3 appears to be totally confounded by the following hypothesis: when the patients' kidney function deteriorated, they were more likely to be stopped taking additional CHP. Namely, the shorter the duration of usage of CHP, the poorer the actual condition of the patients because they would usually be advised to stop using it by nephrologists who were monitoring their kidney functions and other health conditions. The evidence of former user showed an increased hazard ratio corroborates my conjecture as above.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

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