Reviewer’s report

Title: Statins and risk of gastric cancer in diabetes patients

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Reviewer: Xilin Yang

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Comments to authors:

First, this study aims to address a topical issue, with a relative large database (thus having enough power for testing statin usage and the risk of gastric cancer in patients with diabetes), so deserving publication. However, non-collection of clinical factors such as A1c, LDL cholesterol, HDL cholesterol and triglyceride, etc., makes it impossible to consider some potential biases such as prevalent user bias and drug use indication bias.

A recent review of the methodologies on addressing drug effects on cancer in diabetes in non-clinical trial setting has illustrated their impacts on the results in cohort studies (Diabetes Obes Metab. 2012 Jul;14(7):579-85). In the case of use of a nested case control study without important clinical factors, it is uncertain whether statin use indication and prevalent statin use have introduced substantial bias.

The drug use in this study may be defined as any periods before diagnosis of gastric cancer and therefore any periods after the diagnosis was classified as non use of statins. This definition of use of statins requests that gastric cancer could not happen. In other words, longer duration of use of statins itself was related with less chance of being diagnosed with gastric cancer. Thus, testing the duration-effect relationship may not mean more than the overall effect of statin use on the risk of gastric cancer.

Confronted with these uncertainties, I wonder whether the authors can validate the “exact case control study” using statins and their effect on cardiovascular disease or coronary artery disease as called for in the review article (Diabetes Obes Metab. 2012 Jul;14(7):579-85), say, publishing the validation data in the manuscript or as an appendix?

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
No conflict of interest.