Reviewer's report

Title: Metabolic risk factors for esophageal squamous cell carcinoma and adenocarcinoma. A prospective study of 580 000 subjects within the Me-Can project.

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Reviewer: Weimin Ye

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This large cohort study explores the associations between obesity, other metabolic risk factors and the risk of esophageal adenocarcinoma and squamous cell carcinoma. The findings confirmed previous observation that high body mass index increases the risk for esophageal adenocarcinoma, but decreases the risk for esophageal squamous cell carcinoma. In general, this is a well-conducted study and the results are clearly presented.

- Discretionary Revisions

The finding between hypertension and esophageal squamous cell carcinoma is intriguing. The authors did not explain this association enough in the Discussion. Confounding might be one explanation. Smoking and alcohol drinking are main risk factors for squamous cell carcinoma in Western population, but in the regression model, only smoking was adjusted. Another explanation might be due to central obesity. In a recent report from EPIC cohort, when controlled for BMI, waist circumference and waist-hip-ratio were positively with esophageal squamous cell carcinoma (Steffen, A et al, CEBP, 2009). If the authors have data (or in the subset of cohort) on waist and/or hip circumference, it would be worthwhile to additionally adjust these variables.

- Minor Essential Revisions

1. Page 6, ‘End-point assessment’. It is difficult to understand the first 2 sentences. It would be better to rephrase the sentences.

2. Statistical analysis. The authors should describe how those covariates were selected in the final model. Further, did the authors check the proportional hazards assumption?

3. Discussion, page 13. The authors argued that misclassification between esophageal squamous cell carcinoma and adenocarcinoma is unlikely. That is true. But the potential misclassification between esophageal adenocarcinoma and cardia cancer can not be ignored.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests: 
I declare that I have no competing interests