Reviewer's report

Title: Independent and combined effects of environmental factors and CYP2C19 polymorphisms on the risk of esophageal squamous cell carcinoma in a Chinese population

Version: 1 Date: 14 December 2014

Reviewer: Hongliang Liu

Reviewer's report:

In the study, the authors investigated the main effects and integration effects of CYP2C19 gene polymorphisms and multiple environmental factors on the risk of esophageal squamous cell carcinoma (ESCC) in a Chinese Han population. The results are interesting; however, there are some concerns about study design and statistical analysis that should be addressed.

Major Compulsory Revisions

1. The usual definition for smoker is “Respondents who reported smoking at least 100 cigarettes in their lifetime”. However, the authors used their own definition which cannot correctly distinguishing smoker/nonsmoker and also make it difficult to compare their results with other studies. The authors should re-define smoker/nonsmoker with the usual definition and use it in the multivariate analysis. There are same problems for the definitions of alcohol and tea drinkers.

2. It is unclear why five factors were adjusted in the regression models in Table 2. Some of them are non-risk factors for ESCC, while some known risk factors (e.g. smoking status, tea drinking) were not adjusted in the analysis. In addition, some non-risk factors showed significant associations with ESCC risk in Table 1, but lack of reasonable explanations in the manuscript.

Minor Essential Revisions

1. Please provided the exact P-values in Table 1-4 instead of “<0.05” or “0.000”.

2. Too many groups for age variable in Table 1.

3. Table 3 should be re-organized to make it readable and source population should be noted for the data from dbSNP.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests.