Author’s response to reviews

Title: The XRCC 1 DNA Repair Gene Modifies the Environmental Risk of Stomach Cancer: A hospital-based matched case-control study

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RESPONSES TO REVIEWERS COMMENTS

Editor Comments:

The authors assessed an association between XRCC 1 DNA Repair Gene and gastric cancer. In introduction section, the authors mentioned that the XRCC1 Gene is one of the risks of gastric cancer. However, the significance which the authors ascribe it in the Thai population is unclear. Are there any studies which reported that the XRCC1 Gene has greater or lesser impact of gastric cancer in Asian people? Although the major cause of gastric cancer is Helicobacter pylori infection why was this factors excluded from this analysis in spite of the inclusion of most common lifestyle factors? If the authors did not confirm the infection status of the subjects they should clearly mention the reason. Discussion regarding inconsistent results of this study is insufficient. Two reviewers also suggested several problems to be revised. Until the authors consider these comments and revised appropriately, we cannot decide whether or not this manuscript is acceptable.

Response

We agree and have changed line 91 ‘in the Thai population’ to changed to ‘in a population in Northeastern Thailand.

To the best of our knowledge there is no evidence that Asians react differently, but Asian and Western lifestyles can be very different in many ways, and the gene-environment interaction is therefore an important matter to consider.

For H.pylori, we have added this sentence in the line 133-135. “The H.pylori infection status of the subjects was not investigated at the time of enrollment over 10 years ago, and the serum samples taken at the time of enrollment were no longer suitable for H.pylori antibody testing at the time of the present study.”
Reviewer reports:

Shizuka Sasazuki (Reviewer 1):

This study investigates the association between XRCC1 DNA repair gene, environmental factors and stomach cancer risk. The setting is a hospital based case-control study, with relative small sample sizes. In general, the manuscript is well written and I have only minor points:

Reviewer’s comment.

Page 4 line 83-85: Background

The papers referred (No. 18-20) seems to be old. Could you find more recent published data?

Response

We have changed and updated references (No. 18-23).

Reviewer’s comment.

Page 5 line 109- : Materials and Methods

The Reviewer understand that due to the relative small number of study subjects, the setting for cut-off point of exposure are limited. However, it is questionable whether it is reasonable to include those who smoked tobacco at least once in a year as a smoker. In addition, validity of salt and oil consumption in epidemiological study is generally low. Is the FFQ semi-quantitative or not? If the amount is not considered, that will be another limitation.
Response

Thank you for your comments.

Our definition of a smoker was incorrectly worded. Smokers were those who reported that they had smoked at least one cigarette per day for at least six months prior to diagnosis. We apologise for this serious mistake and have corrected line 112-113.

Ya-Wen Wang (Reviewer 2):

Putthanachote et al conducted a hospital-based matched case-control study and found the Arg/Arg homozygote polymorphism of the XRCC1 gene was associated with an increased risk of stomach cancer in the Thai population.

Reviewer’s comment.

1. Numerous studies have investigated the association between XRCC1 gene polymorphism and risk of stomach cancer. The novelty of the current study is limited.

Response

We have responded to the first reviewer for this similar comment (above). In addition our study is novel in the sense that there have been no previous studies of the gene-environment interaction in Thailand (as mentioned in the introduction).
Reviewer’s comment.

2. Please use the most updated cancer statistics, for example GLOBOCAN 2012.

Response

We have updated in line 72 and reference 1 line 280-282.

Reviewer’s comment.

3. The references style should be revised.

Response

Done

Reviewer’s comment.

4. The language should be further improved, for example, "theXRCC1 gene" throughout the paper, "at -20 C°", etc.

Response We agree and have changed line numbers 51, 64, 123, 174, 220.
Reviewer’s comment.

5. If "Cancer was most commonly in stage IV", the words "advanced stomach cancer" may be included in the title.

Response

We agree and have changed the title in line 2.

Reviewer’s comment.

6. The Results section should be rearranged: the results may be divided into more than one part.

Response

We agree and have changed page 7 line 151, 160-161 and page 8 line 173-174

Reviewer’s comment.

7. Two much typo errors in the Tables.

Response

We have corrected the 4 Tables.
Reviewer’s comment.

8. Two much unneeded Authors' information.

Response

We have shortened the information.