Reviewer's report

Title: A functional polymorphism in the DNA methyltransferase 3A promoter modifies the susceptibility in gastric cancer but not in esophageal carcinoma

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Reviewer: Regine Schneider-Stock

Reviewer's report:

In their interesting paper the authors correlate a polymorphisms in the promoter region of the de novo methyltransferase DNMT3a with susceptibility risk for gastric cancer and esophageal cancer.

They show that the AA-variant has functional consequence using a luciferase reporter assay. Here the AA variant is associated with a higher promoter activity. They investigated a patient cohort of more than 800 patients and healthy controls. This study is convincingly showing that the AA homozygous genetotype has a higher risk of development of a gastric cancer. Interestingly, this association did not exist in esophageal cancer.

The methods and statistical tests are well described, the discussion and conclusion are balanced and are adequately supported by the data. The title and the abstract cover the major findings.

minor revision comments:

The English language has to be improved throughout the paper as an example in the abstract: line 9: promote is promoter, line 12: the distribution were is was, line 13: the association were is was ...

Which journal?: Not appropriate for BMC Medicine: an article of only archival interest, but might be suited to BMC Gastroenterology

What next?: Offer publication in BMC Gastroenterology after minor essential revisions

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

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

Declaration of competing interests:

I declare that I have no competing interests’