Reviewer's report

**Title:** Polymorphisms in metabolic genes, their combination and interaction with tobacco smoke and alcohol consumption and risk of gastric cancer: a case-control study in an Italian population

**Version:** 1 **Date:** 14 August 2007

**Reviewer:** José M. M Ladero

**Reviewer's report:**

**General:**
This is a well written and interesting article dealing with metabolic polymorphisms and the risk of gastric cancer, and with their possible interaction with environmental factors. As the authors recognize, the number of patients is not enough to obtain firm conclusions regarding less frequent mutated alleles of some studied genes, but the information provided by the study merits to be published.

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**Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)**

I find that several important references to previous work are lacking, as for example:


Roth et al. Cancer Causes Control 2004; 15: 1077-83. In this article an inverse relationship was found between CYP1A1*2A mutated allele and the risk for gastric cancer, and several GST were also studied with negative results.

Cai L et al. World J Gastroenterol 2001; 7: 792-5. Another article dealing with CYP2E1 C1/C2 polymorphism.

Gao C et al. Cancer Epidemiol Biomarkers Prev 2002; 11: 29-34. In this case the more relevant findings were on CYP2E1 Rsal polymorphism.

Ladero et al. Eur J Clin Pharmacol 2002; 58: 115-8: This work obtained conclusions somehow opposite to these of this article, and also in an European population.

Agudo A et al. Cancer Epidemiol Biomarkers Prev 2006; 15: 2427-34. This is the second part of the multigene study performed by this group.

On the other side, I think that the control group could be inadequate, as being composed of people suffering from non-neoplastic diseases, they could be
afflicted by diseases which risk may be related to some of the studied genotypes. Probably this is not very important, as the distribution of the studied polymorphisms in this control population seems to be very similar to that found in the general Italian population, but this question should be commented by the authors.

The gastrectomy procedures, were really curative or performed with a curative intention?

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests’