Reviewer's report

Title: Gene expression analysis of a Helicobacter pylori-infected and high-salt diet-treated mouse gastric tumor model: Identification of CD177 as a novel prognostic factor in patients with gastric cancer

Version: 1 Date: 1 October 2012

Reviewer: Matteo Fassan

Reviewer’s report:

Gastric cancer still remains one of the most prominent cause of cancer-related mortality worldwide. Helicobacter pylori (Hp) is considered the main etiological determinant of both gastric precancerous lesions and intestinal-type (so called epidemic) gastric adenocarcinoma. In this study, Dr. Toyoda and colleagues identified CD177 as a novel biomarker in a HP-based murine model of gastric adenocarcinoma. The Authors used appropriated methods of analysis that yielded some interesting results. However, I have some concerns that the authors should address:

• References should be up-dated and commented within the "Conclusions" section. Some examples: 1) Gonda TA et al. (Folic Acid Increases Global DNA Methylation and Reduces Inflammation to Prevent Helicobacter-Associated Gastric Cancer in Mice. Gastroenterology 2012;142: 681-683) found CD177 as dysregulated in a similar murine model; 2) Suh YS, et al. (The combined expression of metaplasia biomarkers predicts the prognosis of gastric cancer. Ann Surg Oncol. 2012;19:1240-9) for muc13 and gastric cancer.

• The three selected markers (CD177, muc17 and reg3g) should be tested by qRT-PCR/IHC also in the adenomatous lesions to test if they are early dysregulated in the carcinogenetic cascade.

• Instead of pooling the different RNAs (and for groups with different sample sizes), it would be better to have analyzed (at least) three samples per group. Please, add some comments and add an image of the microarray findings.

• 606 weeks is an unusual follow-up interval for advanced gastric adenocarcinoma patients. Please, add median values.

• English should be improved.

Level of interest: An article of importance in its field

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