Reviewer's report

Title: Serum pepsinogen levels are valuable markers for the diagnosis of gastric diseases in Chinese

Version: 1 Date: 9 October 2013

Reviewer: Marcis Leja

Reviewer's report:

The manuscript entitled „Serum pepsinogen levels are valuable markers for the diagnosis of gastric diseases in Chinese” by Xiao-Mei Zhang and colleagues addresses the role of pepsinogen detection for gastric disease in this particular population.

The topic is actual, and the major value of the work lies in demonstrating differences in the lesion detection rates with different cut-off values.

The objectives are clearly defined, the methods are acceptable, and the obtained data are sound. The obtained results are clearly reported. Further remarks are addressing few of the issues in suggestions. The authors refer to 20 references that are in general chosen adequately; however more references, in particular in respect to the differences in the pepsinogen detection method would be desired. The writing is acceptable.

However the major draw-back is the relatively small number of patients included to the study – the results obtained in 248 patients (different gastric disease, including 82 gastric cancer cases) and 34 healthy controls can be hardly generizable to a wider population.

Few Major Compulsory Revisions should be considered:

1. Please give description on how chronic atrophic gastritis was diagnosed, i.e. whether biopsies according to updated Sydney system have been obtained in all the cases?

2. In the Discussion part, the authors are mentioning different cut-off values for pepsinogens in Japan and Europe, however do not mention that different test-systems are generally used in one and the other parts of the world for most of the studies referring to the above tests (ELISA in Europe and latex agglutination in Japan). The potential discrepancy between the results obtained by the above methods has to be discussed (Miki K. and Fujishiro, M. Dig. Endosc., 2009).

3. The presented data do not allow making conclusions on the value of pepsinogens in predicting gastric tumors, and these conclusions have to be reformulated.

4. The title of the Table 2 is misleading since does not explain the column “non-GC group”. i.e. how could be the accuracy for gastric cancer detection be estimated in the group without any cancer?
In addition, the Discretionary Revisions include the following:

5. The test-type used should be mentioned also in the abstract

6. Additional references have to be added to the Background (e.g. when 5-year survival is discussed)

7. The suggested cut-off (6.0 for Pg I/II) substantially differs from the cut-off values suggested in the previous studies. This should be discussed, also by separating data originating from Asia and Europe.

8. The relation of Pg results to H.pylori in the studied groups should be desirably discussed; at least the prevalence of the infection in the groups should be demonstrated.

The minor essential revisions include:

9. An error is present with showing the temperature identification in the paragraph entitled “Determination of serum PG levels” (-20°C).

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

**Quality of written English**: Acceptable

**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