Reviewer’s report

Title: The potential value of serum pepsinogen for the diagnosis of atrophic gastritis among the health check-up populations in China: a diagnostic clinical research

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Reviewer: Irene Coati

Reviewer's report:

The aim of the article is interesting but its topic is too wide to evaluate realistic the conclusions.

The following points are the main revisions.

- The cut-off of PGI and PGR always show low specificity and low positive predictive value; these values suggest that false positive cases are too many high. And these results seems to be better only for severe atrophy.

- The authors say the serum pepsinogen could be useful to find severe gastric atrophy, dividing Hp-positive and Hp-negative group.

But, it is necessary to underline the small number of cases of this category is absolutely not sufficient to obtain significant conclusions.

The article has a good number of cases from the asymptomatic health population. And the number of discovered severe gastric atrophy (n.13; 1.3%) is quite realistic, since this lesion is often symptomatic.

Until now and with these present results, this article shows the serum pepsinogen is not a good and reliable marker to detect atrophy gastritis, because of its statistic analysis.

The authors could extend and screen their health-population, in order the enforce their results, especially in severe atrophy. But it is important to underline that severe atrophy- or gastric atrophy generally- is often symptomatic, so the study could become very expensive and without results.

This article proves one more time the endoscopy and biopsy are the gold standard to "screen", to diagnose and to follow-up, and the serum pespinogen is an useful but not unique marker to screen gastric atrophy.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

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I am able to assess the statistics

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Acceptable

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