Reviewer’s report

Title: Establishment of serum YKL-40 and SCCA combination for the diagnosis of patients with esophageal squamous cell carcinoma

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Reviewer: Wei Guo

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The present study “Establishment of serum YKL-40 and SCCA combination for the diagnosis of patients with esophageal squamous cell carcinoma” investigated the levels of YKL-40 in ESCC tumor cells and evaluated the diagnostic performance of serum YKL-40 in ESCC diagnosis compared with the traditional ESCC tumor markers CEA, CYFRA21-1 and SCCA. They conclude that serum YKL-40 may be a potential biomarker for ESCC. Serum YKL-40 in combination with SCCA significantly increases the sensitivity of detecting ESCC. However, I would like to raise the following major points which should be considered in revising their manuscript:

1. As shown in the Methods, the ESCC cell lines Eca-109, Kyse30, Kyse140, Kyse180, Kyse510 and Kyse520 was used to detect YKL-40 expression. However, Figure 1A showed mRNA expression of YKL-40 in Eca-109, Kyse30, Kyse140, Kyse180 and Kyse520, Figure 1B demonstrated ELISA results in Eca-109, Kyse180, Kyse510 cell lines. Why different cell lines were used in the two experiments. Application of the same cell line will make the results more convincing.

2. mRNA expression of YKL-40 in Eca-109 cell line is low, however, protein level of YKL-40 in Eca-109 cell line is relatively high. Please explain the results.

3. Do the 20 patients with tissue samples were included in the patients with serum? Please describe in detail the tissue specimen collection. Do normal esophageal epithelial tissues come from the corresponding normal tissues? Tissue samples were too few and suggest increase the number of patients with tissue specimens.

4. Real-time PCR should be Real-time RT-PCR. Please describe in detail the specimens in which were detected mRNA expression.

5. The manuscript should be revised by a native English speaker to eliminate the grammar mistake.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests.