

The manuscript presents the study results of the role of lncRNA cancer susceptibility 20 (CASC20) in the progression of gastric cancer. Using cell cultures, the authors showed that CASC20 induces an epithelial-mesenchymal transition in gastric cancer cell culture by regulating MEMO1 expression through competitive endogenous binding to miR-143-5p. It was found that high CASC20 expression correlated with high risk of lymphatic metastases and poor prognosis in patients with gastric cancer. Suppression of CASC20 have been resulted to decreased proliferation, migration, and invasion of gastric cancer cells that open up new therapeutic approaches to the treatment of gastric cancer.

The manuscript is written in a literate, understandable language. Research methods are modern, adequate to the set tasks, described in detail and reproducible. Information search made it possible not only to explain the mechanisms of CASC20 action, but also to optimize ongoing research by identifying the key goals of CASC20 (miR-143-5p, MEMO1). The results of the study are interesting both from the point of view of understanding the mechanisms of progression of gastric cancer and from a practical point of view, since their use in clinical practice will improve the assessment of the prognosis of the disease and individualize the treatment.

Thanks for your kind review.

However, in my opinion, there are several technical inaccuracies in the manuscript that should be corrected.

#### 1. Introduction.

I think that the final sentences in the Introduction should be carried over to the Results. Namely, "We found that the CASC20 lncRNA is highly expressed in GC and closely related to lymph node metastasis and poor prognosis of GC patients. Through in vitro and in vivo experiments, we found that CASC20 promotes the proliferation, migration and invasion of GC cells. Mechanistic studies revealed that CASC20 "sponges" miR-143-5p and promotes EMT by regulating MEMO1. This function of CASC20 plays an important role in the metastasis of GC. "

Response: Thanks for your review.

#### 2. Statistical analysis

It is not entirely clear how legitimate the use of "Two-tailed Student's t-test for detection of differences between two groups." The authors should clarify the methods for determining of the distribution nature of indicators in the compared group.

Response: In our study, for measurement data, the difference between two or more groups was calculated using the Student's t-test or one-way ANOVA analysis.

#### 3. The abbreviations should be carefully checked again. For example, the authors continue to use both the abbreviation GC and the term "gastric cancer" as here: "ARTICLE HIGHLIGHTS Research background

Long non-coding RNAs have been indicated to play critical roles in gastric cancer tumorigenesis and progression. However, their roles in gastric cancer remain to be further elucidated. "

Response: Thanks for your review. We made some changes following your advice.

#### 4. In table 1, it is desirable to present not only the absolute number of cases, but also the percentage.

Response: Thank you very much. We have made corresponding modifications in the Table 1.

**Table 1. The correlation between CASC20 expression and the clinicopathological factors of 50 gastric patients.**

Characteristics	Number of Cases	CASC20 expression		P value
		High (n=26)	Low(n=24)	
Gender				0.382
Male	23	14(28%)	9(18%)	
Female	27	12(24%)	15(30%)	
Age				0.546
≤55	22	13(26%)	9(18%)	
>55	28	13(26%)	15(30%)	
TNM stage				0.262
I+II	24	10(20%)	14(28%)	
III	26	16(32%)	10(20%)	
Lymphatic metastasis				0.011*
Positive	25	18(36%)	7(14%)	
Negative	25	8(16%)	17(34%)	
Differentiation				0.073
Moderate/Well	30	12(24%)	18(36%)	
Poor	20	14(28%)	6(12%)	

\*P<0.05 was considered significant.