



Reply to the letter by Junjie Jiang et al. regarding our manuscript “Association between triglyceride-glucose index and gastric carcinogenesis: a health checkup cohort study”

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We thank Junjie Jiang et al. for their interest in our manuscript titled “Association between triglyceride-glucose index and gastric carcinogenesis: a health checkup cohort study” [1]. The responses to their inquiries are provided below:

Regarding the exclusion for patients with glucose-lowering agents or those diagnosed with diabetes mellitus (DM), like in a previous study on triglyceride-glucose (TyG) index [2], we excluded patients with current prescription for any triglyceride (TG)-lowering medications and an elevated TG level (≥ 400 mg/dL) to rule out primary hypertriglyceridemia. In this previous study, patients with glucose-lowering agents or those diagnosed with DM were not excluded. Our study also included these patients, because if we excluded them, the number of enrolled patients would have become too small, especially those with gastric cancer, to perform statistical analysis. Moreover, both the TyG index and gastric carcinogenesis are interlinked with metabolic syndrome. Insulin resistance, which has a major pathogenic role in the development of metabolic syndrome, is the main mechanism of DM. Therefore, we included DM patients and adjusted DM as confounding factors in the multivariate analysis. The TyG index was an independent predictive factor for gastric carcinogenesis after adjusting for DM in the multivariate analysis.

Regarding age and TyG index, advanced age was significantly associated with gastric precancerous conditions and cancer in the univariate analysis. To perform multivariate

analysis, we selected statistically significant ($P < 0.05$) “categorical” variables in the univariate analysis.

The term “aging process” was used in the Discussion section because the TyG index of both the cancer group and the control group increased between the baseline and follow-up tests. The mean time interval between the baseline and follow-up tests was 55.5 ± 43.0 months and 53.0 ± 35.8 months in the cancer group and control group, respectively. During this time interval, TG and glucose levels as determinants of the TyG index increased as a result of the aging process. Advanced age as an independent predictive factor needs to be validated in future studies.

Finally, regarding the term “adenoma,” we replaced this term with “dysplasia” in Fig. 1 in accordance with the 2019 World Health Organization (WHO) classification [3].

Declarations

Conflict of interest No conflict of interest or financial ties to disclose.

Ethical approval This study protocol was approved by the Institutional Review Board of Gangnam Severance Hospital and was carried out in accordance with the 1964 Declaration of Helsinki and its later version.

Informed consent Informed consent was not required, as this study was a retrospective analysis of existing administrative and clinical data.

References

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