



# Development of the PERI-Gastric (PERitoneal Recurrence Index) and PERI-Gram (Peritoneal Recurrence Index NomoGRAM) for predicting the risk of metachronous peritoneal carcinomatosis after gastrectomy with curative intent for gastric cancer: a methodology issue

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With interest, we have read the article by Annamaria Agnes et al. on a metachronous peritoneal carcinomatosis after gastrectomy with curative intent for gastric cancer in the Gastric Cancer [1]. The authors utilized nomograms as prediction models for quantifying the risk of peritoneal recurrence, and the PERI-Gastric 1 yield a mean AUC of 0.775 (0.721–0.830) & the PERI-Gastric 2 yield a mean AUC of 0.749 (0.693–0.805), exhibiting good predictive performance.

However, we would like to figure out several potential limitations. First, in Data collection part, the authors did not figure out specific follow-up periods with the beginning time and the ending time, resulting in an incomplete description of this study according to the Transparent Reporting of a Multivariable Prediction Model for Individual Prognosis or Diagnosis (TRIPOD) guideline [2].

Additionally, the handling methods of the missing data represented as not available, unknown and so on from Table 1 should be figured out, especially there were more than 50% missing data existed in the variable of Cytology,

and the difference of basic characteristics between complete data set and non-complete data set should be noted for potential attrition bias. Moreover, cox models or logit model with a fixed time like 5 year recurrence rather than recurrence in any time in follow-up time are recommended in recurrence free survival estimations since the information of disease-free survival (DFS), progression-free survival (PFS) and overall survival (OS) was collected or calculated [3]. It should be noted that the cox model is a better time-dependent model for measuring the effect of SRC related variables rather than logit models with binary outcomes without time information.

In conclusion, we suggested the revision in terms of aforementioned potential limitations.

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## Declarations

**Conflict of interest** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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