

## Letter to the Editor

### Comment on “Predictive Postoperative Inflammatory Response Indicators of Infectious Complications Following Gastrectomy for Gastric Cancer”

Satoru Morita, Koji Okabayashi, Yuko Kitagawa  
Department of Surgery, Keio University School of Medicine, Tokyo,  
Japan

#### *To the Editor:*

In the important original article by Nishiguchi et al<sup>1</sup>, “Predictive Postoperative Inflammatory Response Indicators of Infectious Complications Following Gastrectomy for Gastric Cancer” (*J Nippon Med Sch* 2024; 91: 37–47), the authors evaluated postoperative inflammatory response indicators (PIRI)—C-reactive protein (CRP), white blood cell (WBC) count, and body temperature (BT)—as predictors of infectious complications (PIC) after gastrectomy. They concluded that elevated CRP ( $\geq 14.8$  mg/dL), WBC ( $\geq 116.0 \times 10^2/\mu\text{L}$ ), and BT ( $\geq 37.4^\circ\text{C}$ ) on postoperative day (POD) 3, together with age  $\geq 77$  years and smoking history, were independent risk factors for PIC. This work is timely and clinically relevant, as it highlights practical indicators that are already available in routine perioperative management.

The study is valuable for its reasonable sample size and the inclusion of a second cohort to confirm reproducibility. The focus on routinely measured parameters enhances its clinical utility, since CRP, WBC, and BT are inexpensive, widely available, and immediately applicable in practice. Moreover, as elderly patients account for a growing proportion of gastric cancer cases, this focus enhances the clinical significance of the findings.

The reported CRP cut-off value of 14.8 mg/dL on POD3 is slightly lower than those in previous studies, which have typically ranged between 16 and 22 mg/dL<sup>2,3</sup>. The authors reasonably attribute this difference to the older age and higher proportion of advanced-stage patients in their cohort. This highlights the important point that inflammatory thresholds may be population-specific. Rather than questioning the validity of the result, this finding encourages further research to determine whether institution- or population-adjusted thresholds can optimize predictive accuracy in different clinical settings.

While CRP, WBC, and BT are accessible and practical indicators, the absence of other established biomarkers such as procalcitonin or presepsin is worth consideration. These markers have shown high specificity for bacterial infection and could potentially complement CRP to refine prediction. The choice to focus on simple and routine measures is understandable, but integrating novel biomarkers in future studies may help reduce false positives and improve early clinical decision-making.

An especially interesting aspect of the study is the observation that elderly patients with PIC had lower CRP levels compared with younger patients. The authors suggest that age-related attenuation of cytokine production and hepatic synthesis may underlie this finding. This raises an important clinical consideration: uniform thresholds may underestimate risk in elderly patients. In practice, age-adjusted cut-offs or composite indices may provide more accurate risk assessment, and prospective studies exploring this direction would be of great value.

From a clinical standpoint, the recommendation that any PIRI elevation on POD3 should prompt additional imaging or treatment is understandable, but should be balanced against the risks of over-testing or unnecessary interventions. CRP appears to be the most robust single marker, whereas WBC and BT demonstrated lower specificity. A more integrated risk model that incorporates host factors such as comorbidities, ASA-PS, and nutritional status alongside PIRI may better balance sensitivity and specificity, minimizing both delayed diagnoses and unnecessary procedures.

Another important area for future exploration is the relationship between PIRI and long-term oncological outcomes. It is well established that postoperative complications can negatively influence survival in gastric cancer<sup>4</sup>. If elevated PIRI on POD3 were also shown to correlate with recurrence-free or overall survival, these markers could play a dual role—both in early detection of postoperative morbidity and as prognostic indicators. This would significantly expand their utility and provide additional justification for their incorporation into perioperative protocols. In this context, lessons may be drawn from recent advances in molecular monitoring. For

Correspondence to Satoru Morita, [satoru@keio.jp](mailto:satoru@keio.jp)  
[https://doi.org/10.1272/jnms.JNMS.2026\\_93-304](https://doi.org/10.1272/jnms.JNMS.2026_93-304)

Copyright © 2026 The Medical Association of Nippon Medical School. This is an open access article under the CC BY-NC-ND 4.0 license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

example, the use of circulating tumor DNA (ctDNA) to track minimal residual disease after colorectal cancer surgery has provided a powerful tool for linking perioperative events with long-term oncological trajectories<sup>5</sup>. Similarly, integrating PIRI with oncological biomarkers may yield a more comprehensive understanding of how early postoperative inflammation influences both short-term recovery and long-term outcomes.

In summary, Nishiguchi et al. have presented a clinically meaningful and practical study that highlights the predictive value of simple inflammatory indicators after gastrectomy. Their work adds important knowledge to perioperative management in gastric cancer surgery. While future multicenter validation, integration of additional biomarkers, and consideration of age-specific thresholds would further strengthen the evidence, this study already offers practical guidance for frontline surgeons. We congratulate the authors for their valuable contribution and hope that ongoing research will continue to refine risk stratification and improve patient outcomes.

**Funding:** None.

**Conflict of Interest:** The authors have no conflicts of interest to

declare.

**Declaration of Generative AI and AI-Assisted Technologies in the Writing Process:** The authors used generative AI technologies for language editing and grammar checking during the writing process. The final content was reviewed and approved by all authors.

### References

1. Nishiguchi R, Katsube T, Shimakawa T, et al. Predictive postoperative inflammatory response indicators of infectious complications following gastrectomy for gastric cancer. *J Nippon Med Sch.* 2024;91 (1):37-47.
2. Shishido Y, Fujitani K, Yamamoto K, Hirao M, Tsujinaka T, Sekimoto M. C-reactive protein on postoperative day 3 as a predictor of infectious complications following gastric cancer resection. *Gastric Cancer.* 2016;19 (1):293-301.
3. Kim EY, Yim HW, Park CH, Song KY. C-reactive protein can be an early predictor of postoperative complications after gastrectomy for gastric cancer. *Surg Endosc.* 2017;31 (1): 445-54.
4. Tokunaga M, Kurokawa Y, Machida R, et al. Impact of postoperative complications on survival outcomes in patients with gastric cancer: exploratory analysis of a randomized controlled JCOG1001 trial. *Gastric Cancer.* 2021;24 (1):214-23.
5. Reinert T, Henriksen TV, Christensen E, et al. Analysis of plasma cell-free DNA by ultradeep sequencing in patients with stages I to III colorectal cancer. *JAMA Oncol.* 2019;5 (8):1124-31.