Reply to “How should we define the no. 3b lesser curvature lymph node?”

Hisashi Shinohara^{1,2} · Shusuke Haruta² · Hisahiro Hosogi³ · Yu Ohkura² ·
Nao Kobayashi² · Aya Mizuno² · Ryosuke Okamura³ · Masaki Ueno² ·
Yoshiharu Sakai³ · Harushi Udagawa²

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To the Editors

We thank Yamashita et al. for responding to our recently published article, in which we showed that the rate of metastasis and the therapeutic index of no. 3b lymph nodes (LNs) were extremely low when the distal tumor border ended in the upper third of the stomach, suggesting that proximal gastrectomy with the exclusion of no. 3b lymphadenectomy could be an indication for treating most advanced gastric cancers localized to the upper third of the stomach [1].

Yamashita et al. have concerns regarding the definition of the border between nos. 3a and 3b [2]. In 2011, the Japanese Gastric Cancer Association (JGCA) redefined the no. 3 station by separating it into no. 3a [along the left gastric artery (LGA)] and no. 3b [along the right gastric artery (RGA)] substations [3]. However, as Yamashita et al. pointed out, the border between 3a and 3b is sometimes vague due to anastomosis of the branches of the LGA and the RGA. The LGA usually divides into two branches, an anterior branch distributing to the anterior surface and a posterior branch distributing to the posterior surface of the stomach. In most cases, the posterior branch anastomoses

with the RGA, which gives branches to the distal part of the lesser curvature [4]. Indeed, this anastomosis was observed in 88 of the 90 (97.8%) cases in our series. In the same way that the right gastric vein and the left gastric vein form the coronary vein, the RGA and the posterior branch of the LGA form the coronary artery along the lesser curvature.

Nevertheless, it is not practical to further subclassify no. 3a into an “anterior” no. 3a and a “posterior” no. 3a, and it is not possible to accurately distinguish no. 3b from “posterior” no. 3a. Furthermore, as Yamashita et al. mentioned, it is rarely feasible to identify a solely “posterior” no. 3b. Therefore, we assumed that the boundary line between nos. 3a and 3b was along the anterior terminal branch of the LGA. Unfortunately, in the current edition of the Japanese classification of gastric cancer, a figure illustrating the locations of LN stations did not show the most common variant of the vascular anatomy of the lesser curvature [3]. We propose a revision of that figure.

Finally, Yamashita et al. suggest that the cross-section of the tumor comprising the different parts of the stomach (i.e., anterior or posterior wall, depending on the dominant area of invasion) may influence the indication for proximal gastrectomy, due to differences in lymphatic flow between the anterior and posterior surfaces of the lesser curvature. In our series, 2 of the 4 no. 3b-positive tumors had the distal border located in the lesser curvature, and the others were involved circumferentially, whereas no tumors were predominantly located in the anterior or posterior walls [1]. Thus, we cannot clearly elucidate on this matter. However, considering that the lymphatics along the RGA may provide only a minor lymphatic stream from the lesser curvature of the lower stomach [1], a cross-section of the tumor may not be able to provide additional perspectives to consider when performing proximal gastrectomy.

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✉ Hisashi Shinohara
shinohara@hyo-med.ac.jp

¹ Department of Surgery, Hyogo College of Medicine, 1-1 Mukogawa-cho, Nishinomiya, Hyogo 663-8501, Japan

² Department of Gastroenterological Surgery, Toranomon Hospital, Tokyo, Japan

³ Department of Surgery, Kyoto University Graduate School of Medicine, Kyoto, Japan

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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