

# Clinicopathological and immunohistochemical studies of lymph node metastasis in submucosal gastric carcinoma

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**Abstract :** We investigated both the clinicopathological and immunohistochemical findings regarding the risk factors of lymph node invasion in patients with gastric carcinomas, which invaded the submucosa (SM). In total, 213 cases of gastric carcinoma, 92 cases of positive lymph node metastasis and 121 cases of negative lymph node metastasis were selected as the materials for our study. One hundred and twenty-seven (127) of these cases were well differentiated adenocarcinomas (WDA). Any cases with multiple lesions were excluded from this study. In an analysis of the clinicopathological findings, several factors were found to be significant based on observations of positive and negative lymph node metastasis in cases with SM and WDA. These factors included the site of the lesion, the diameter, the depth of invasion, and both the degrees of lymphatic and blood vessel permeation. In addition, tumor cell sprouting was found to be a risk factor in the cases with WDA. In an analysis of the immunohistochemical findings, several factors were found to be significant based on observations of cases with positive and negative lymph node metastasis. These factors included the positive CD44 and Ki-67 labeling index (LI) in the SM group, and positive findings for CD44, MUC1, human gastric mucin (HGM) and Ki-67LI in the WDA group. Based on the findings of a multivariate analysis, only lymphatic permeation was shown to be an independent factor for the risk of lymph node invasion in cases with SM. On the other hand, lymphatic permeation and positive findings for CD44 were found to be significant factors in cases with WDA. We thus concluded that the presence of lymphatic permeation and a positive finding for CD44 may therefore be a predictive factor for lymph node metastasis.

**Key words :** Submucosal gastric cancer, Lymph node metastasis, Immunohistochemical study