

Clinical Significance of the Metastatic Lymph-Node Ratio in Rectal Cancer

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This study investigated the prognostic significance of the metastatic lymph-node ratio (LNR) in patients with rectal cancer. Since Berger et al. [1] reported that the ratio of metastatic to examined lymph nodes in stage III colon cancer was associated with survival, the LNR has been considered to provide a prediction of the prognosis. Patients with stage IIIB and IIIC colorectal cancer with 13 or more negative nodes were also demonstrated to show a better prognosis [2]. In addition, as an inadequate number of harvested lymph nodes can result in stage migration, the LNR has come to be recognized as a potentially more accurate prognostic factor. Furthermore, node positive cancer with a high LNR may be related to aggressive features of tumor biology.

Although some studies including Korean patients have reported the prognostic significance of the LNR in patient with isolated rectal cancer [3-6], the results were not well described. For the clinical significance of LNR, a sufficient number of harvested or examined lymph nodes should be considered. Especially, many factors, including preoperative chemoradiation, may affect on that number in patients with rectal cancer. Although this study excluded patients who underwent neoadjuvant treatment, three studies assessed the prognostic value of the LNR in patient with rectal cancer who underwent preoperative treatment [7-9].

Various cutoff points of the LNR for statistically different survivals have been reported in many articles. However, in this study, the authors used initially 0.23 as the cutoff value, but no significant difference. Consequently, authors suggested 0.15 as a new

cutoff point to obtain significance [10]. However, this approach has a limitation, the lack of a consensus on an appropriate cutoff value, which could results in a manipulation of the cutoff value without validation.

The LNR was proposed to be superior to the absolute number of metastatic lymph node for prognostic differentiation in stage III colorectal cancer [11-13]. However, many studies on the LNR were designed retrospectively and involved a relatively small number of patients. If the LNR is to have excellent prognostic value, a systematical evaluation involving a large-scale study is needed to establish a more reliable cutoff value of the LNR. In addition, in patients with colorectal cancer, the cutoff point for the LNR could vary with the tumor location and/or the treatment option. For example, the cutoff values for the LNR could be different between right colon cancer and rectal cancer or between rectal cancer with neoadjuvant therapy and without therapy. Thus, establishing an appropriate cutoff LNR value for a specific disease state may be reasonable.

In conclusion, the LNR may a good candidate for an independent prognostic factor in patients with colorectal cancer, but further comprehensive studies are warranted to determine its optimal values for specific states of the disease.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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