LNR PREDICTS RECTAL CANCER SURVIVAL

Metastatic lymph nodes are associated with an adverse prognosis in patients with rectal cancer, and examination of lymph nodes after surgery is vital for deciding which patients require adjuvant chemotherapy. However, many patients with rectal cancer receive preoperative radiotherapy, which reduces the number of lymph nodes available for examination. The ratio of metastatic to examined lymph nodes has already been shown to have prognostic value in colon cancer. Now, a French study suggests that the metastatic lymph node ratio (LNR) is a powerful predictor of survival in patients with rectal cancer, even when the number of nodes available for examination is small.

The research involved 307 patients who underwent rectal surgery for adenocarcinoma. After 3 years, overall survival was 82% and disease-free survival was 67%. Factors found to have an adverse effect on survival were neural invasion, tumor differentiation, rectal circumferential margin and LNR. The presence of metastatic lymph nodes was not itself an independent predictor of survival.

When patients were grouped by LNR, overall and disease-free survival decreased as LNR increased. For patients with LNR between 0.01 and 0.07, overall survival was not significantly different from patients with no metastatic lymph nodes. However, for patients with LNR between 0.07 and 0.2, survival was 71%, and decreased to 66% in patients with LNR >0.2. Importantly, for those patients who had fewer than the recommended 12 lymph nodes examined, LNR was the only independent predictor of survival.

The researchers suggest that LNR is a better predictor of survival than the presence or absence of metastatic nodes in patients with rectal cancer, and might also be a more useful guide to the need for postoperative chemotherapy.

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Original article Peschard, F. *et al.* The ratio of metastatic to examined lymph nodes is a powerful independent prognostic factor in rectal cancer. *Ann. Surg.* **248**, 1067–1073 (2008).