Lymph node status (Core)

The Union for International Cancer Control[1]/American Joint Committee on Cancer[2] 8th edition Staging Manuals and National Comprehensive Cancer Network (NCCN) guidelines[3] recommend excision of a minimum of 15-16 lymph nodes in order to reliably stage the tumour, but efforts should be made to submit as many lymph nodes as possible for histological examination. A study on oesophagogastric adenocarcinoma showed that preoperative chemoradiation, but not chemotherapy, reduced the total lymph node count after total gastrectomy.[4] Fat clearance of resection specimens may increase lymph node yield and result in nodal upstaging.[5]

D1 lymph node resections include the removal of the perigastric lymph nodes while D2 resections include the removal of perigastric lymph nodes and the lymph nodes along the left gastric, common hepatic and splenic arteries, and the coeliac axis (Figure 4).

In Asian countries, D2 dissection yields superior outcomes compared with D1 dissection, however, the results from other countries are conflicting.[6-8] The Dutch D1D2 randomized clinical trial has recently demonstrated that D2 lymphadenectomy is associated with lower locoregional recurrence and reduced gastric cancer related death rates compared with D1 surgery after long-term follow-up.[9-11] Gastrectomy with D2 dissection has become more commonly used for advanced gastric cancer in Western countries.

Regional lymph nodes for gastric cancer include the perigastric lymph nodes along the greater curvature and lesser curvature, right and left paracardial lymph nodes, suprapyloric and infrapyloric lymph nodes, and lymph nodes along the left gastric artery, coeliac artery, common hepatic artery, hepatoduodenal vessels, splenic artery and splenic hilum (Figure 4).[2] Reporting of the lymph node status by regional lymph node groups (stations) offers no significant prognostic information; thus, all regional nodes can be reported together.

Tumour deposits, defined as discrete tumour nodules within the lymphatic drainage of the primary carcinoma without identifiable lymph node tissue or identifiable vascular or neural tissue, are considered regional lymph node metastases.[2] Tumour deposits may be an independent predictor of prognosis in patients with gastric cancer.[12]

Lymph nodes containing isolated tumour cells, defined as single tumour cells or small clusters of cells ≤0.2 millimetres (mm) in greatest diameter, without stromal reaction, are classified as pN0 in gastric cancer.[2] There is no micro-metastasis (N1mi) category in staging gastric cancer.[2] Lymph nodes containing clusters of cells >0.2 mm are considered positive. In pretreated gastric cancers, positive lymph nodes are defined as having at least one focus of residual tumour cells in the lymph nodes regardless of size.[13] Lymph nodes with acellular mucin pool or fibrotic lymph nodes with no viable tumour are considered negative.[13]

Involvement of non-regional lymph nodes is considered (y)pM1 and as such should be reported under 'Histologically confirmed distant metastases'. Non-regional lymph nodes include the retropancreatic, pancreaticoduodenal peripancreatic, superior mesenteric, middle colic, para-aortic and retroperitoneal nodes.[13]

The presence of lymph node metastasis is one of the strongest prognostic indicators in gastric cancer.[14]

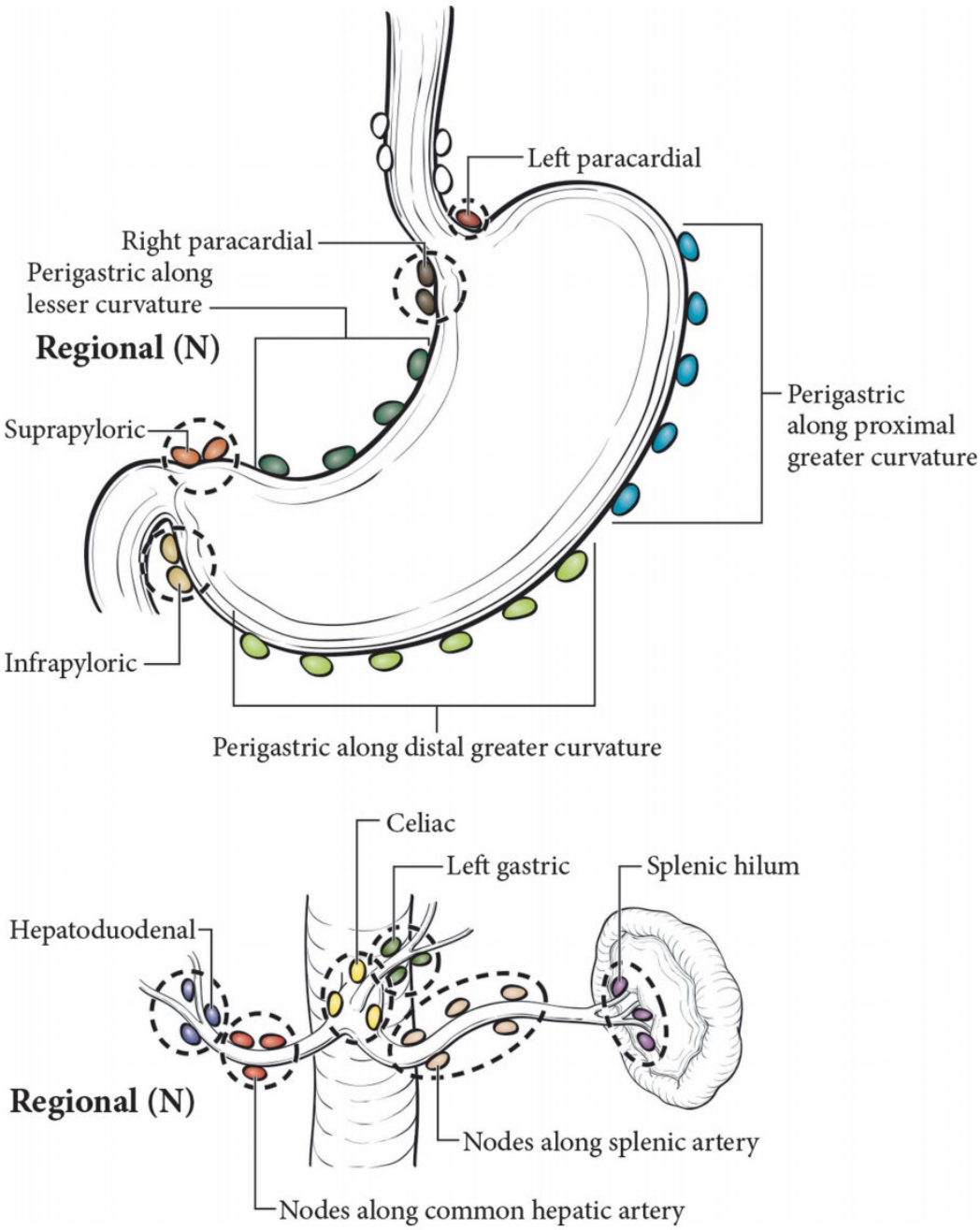

Figure 4: Regional lymph nodes of the stomach. Used with permission of the American College of Surgeons, Chicago, Illinois. The original source for this information is the American Joint Committee on Cancer Staging Manual, Eighth Edition (2016) published by Springer Science+Business Media.[2]

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