Management of Solid Lesions of the Stomach

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Montefiore
Inspired Medicine

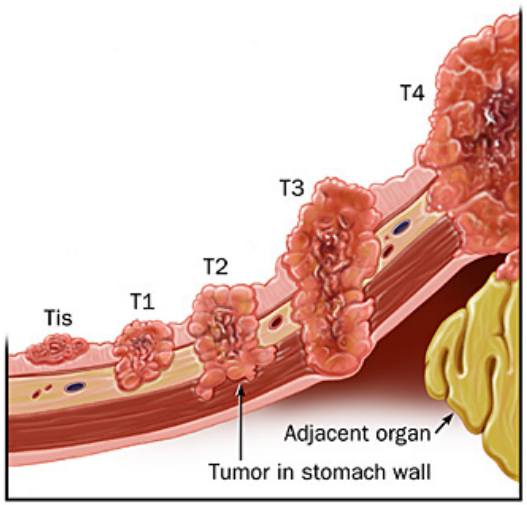
EINSTEIN
Albert Einstein College of Medicine

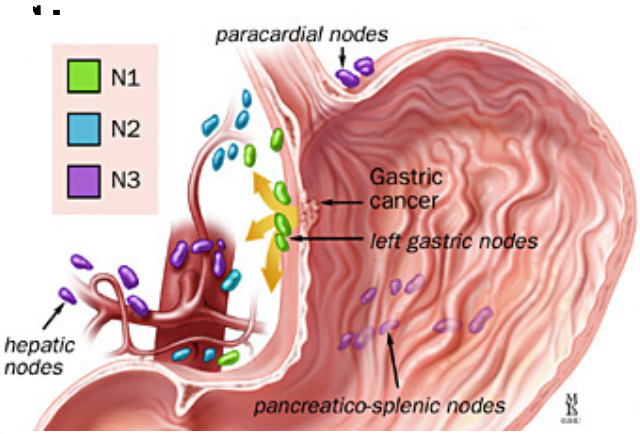
- No disclosures

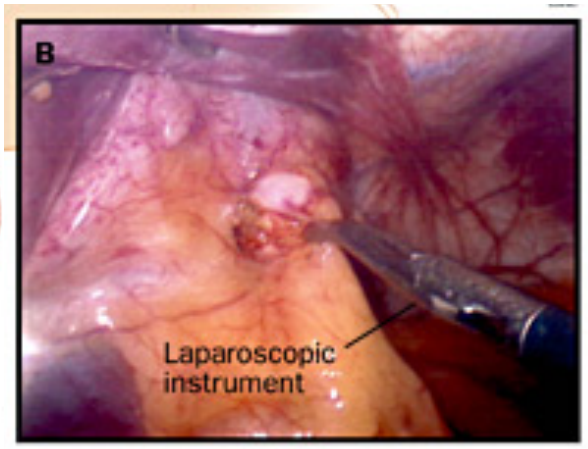
Stomach Tumors

	Considerations prior to resection	Surgical considerations
Carcinoma	Diagnostic laparoscopy Neoadj treatment	3-5cm Margins Lymph node dissection D1 or D2
Sarcoma	Determination of sarcoma type Need for resection if small GIST (<2cm) Neoadj tx if large GIST	No violation of pseudocapsule Negative Margins LND if suspicious nodes
Neuroendocrine	Determination of carcinoid type Surgery typically not indicated for type 1 or 2 Type 3 treated like carcinoma	Type 1 & 2 – endoscopic tx - if multiple and recurrent Type 1 – antrectomy Type 2 – excision of gastrinoma Type 3 – treat like carcinoma
Lymphoma	Primary treatment is non-surgical - Eradication of H. pylori - Chemotherapy - Radiation	Minimal role for surgery

Gastric Adenocarcinoma







Early disease → Surgery
≥T3 or N+ → Neoadjuvant therapy
M disease → Palliative therapy

Trials
Gastric: MAGIC
GEJx: CROSS

Johns Hopkins https://gi.jhsps.org/GDL_Disease.aspx?CurrentUDV=31&GDL_Cat_ID=551CDCA7-A3C1-49E5-B6A0-C19DE1F94871&GDL_Disease_ID=DB2F8EAC-4421-41DD-B04E-684AFEF2AD94

Cunningham et al. Periop ECF in gastric ca MAGIC trial.

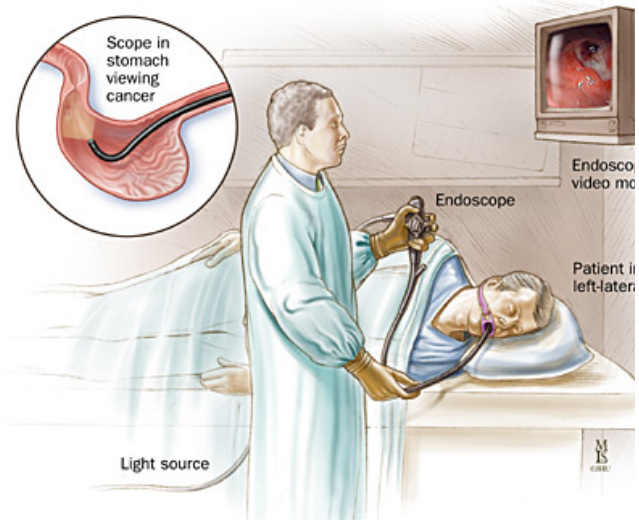
Van Hagen et al., Neoadj Carboplatin, paclitaxel and XRT, CROSS trial.

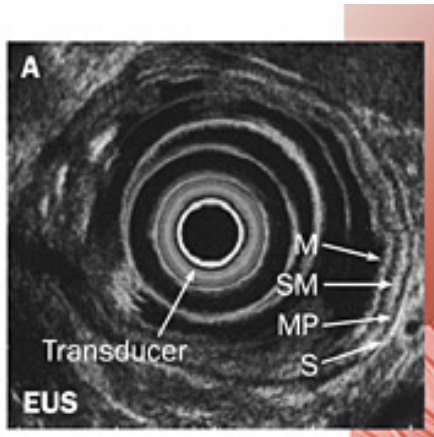
Gastric Adenocarcinoma

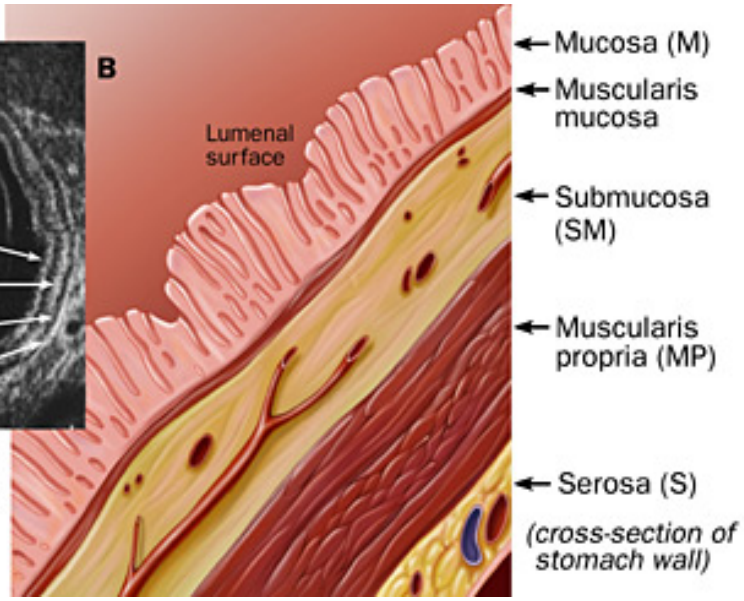
- Tests for diagnosis
  - EGD and biopsy
- Tests for staging
  - T & N staging
    - ***Endoscopic Ultrasound (EUS)*****
  - Stage 4 disease
    - CT chest/abdomen/pelvis
    - ***Laparoscopic Evaluation and Peritoneal cytology*****

Gastric Adenocarcinoma

- T & N staging
  - EUS: Depth of invasion & presence of LN
  - 80% accuracy





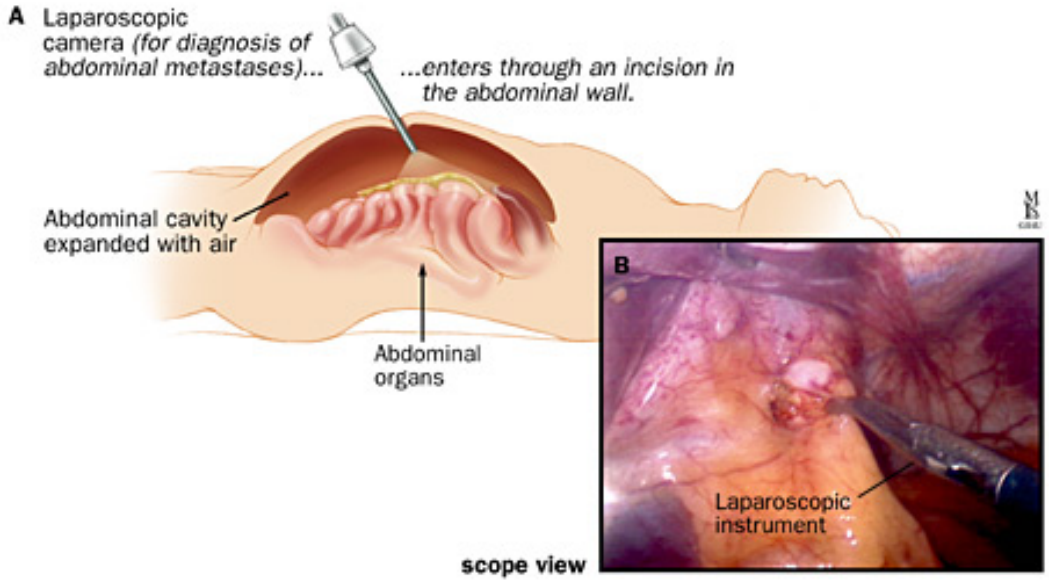


National Comprehensive Cancer Network®

NCCN Guidelines
Gastric Cancer

Gastric Adenocarcinoma

- Laparoscopic Evaluation and Peritoneal cytology



Up to 1/3 of patients considered resectable after imaging work up will have disease!

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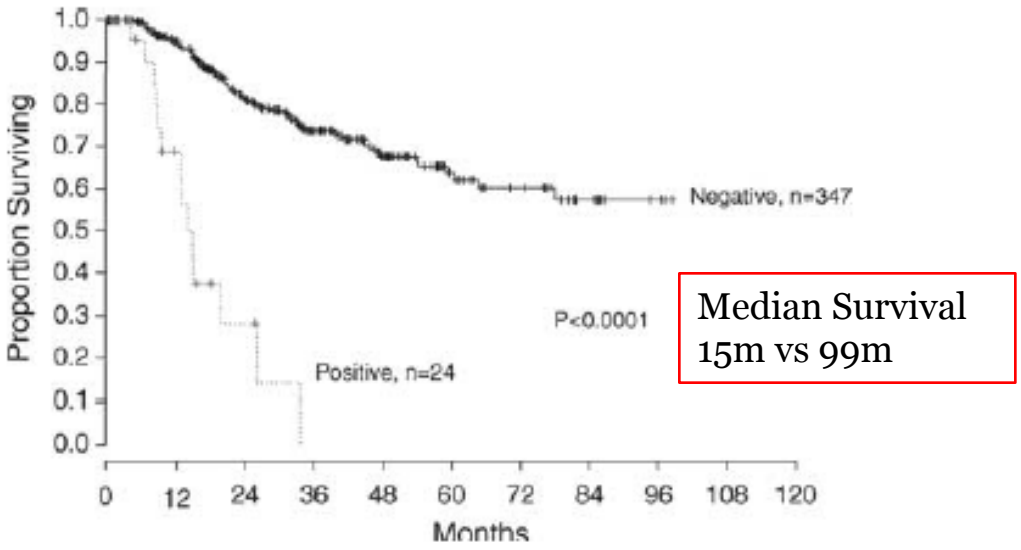
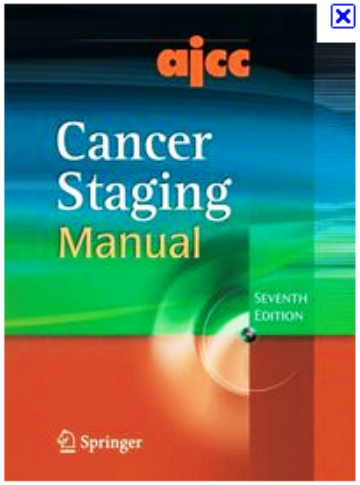
Gastric Adenocarcinoma

- Laparoscopic Evaluation and Peritoneal cytology



Median Survival
15m vs 99m

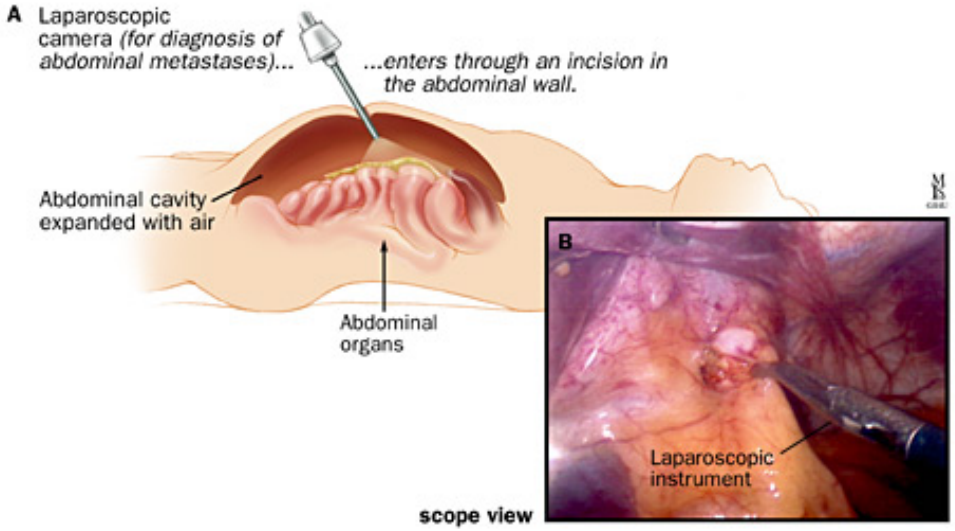


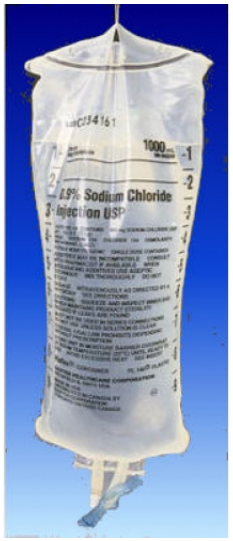
Positive Peritoneal cytology is classified as M1

Bentrem D. et al., Value of Peritoneal Cytology for Gastric Cancer. Ann Surg Onc 2005
AJCC 7th Ed

Gastric Adenocarcinoma

- Laparoscopic Evaluation and Peritoneal cytology
  1. Examine peritoneal cavity for gross metastatic disease *without* disturbing organs
  2. Peritoneal washings: 3-4 quadrants, 30-50cc saline, gentle shake, suction fluid and send.
  3. Examine tumor and biopsy suspicious lesions



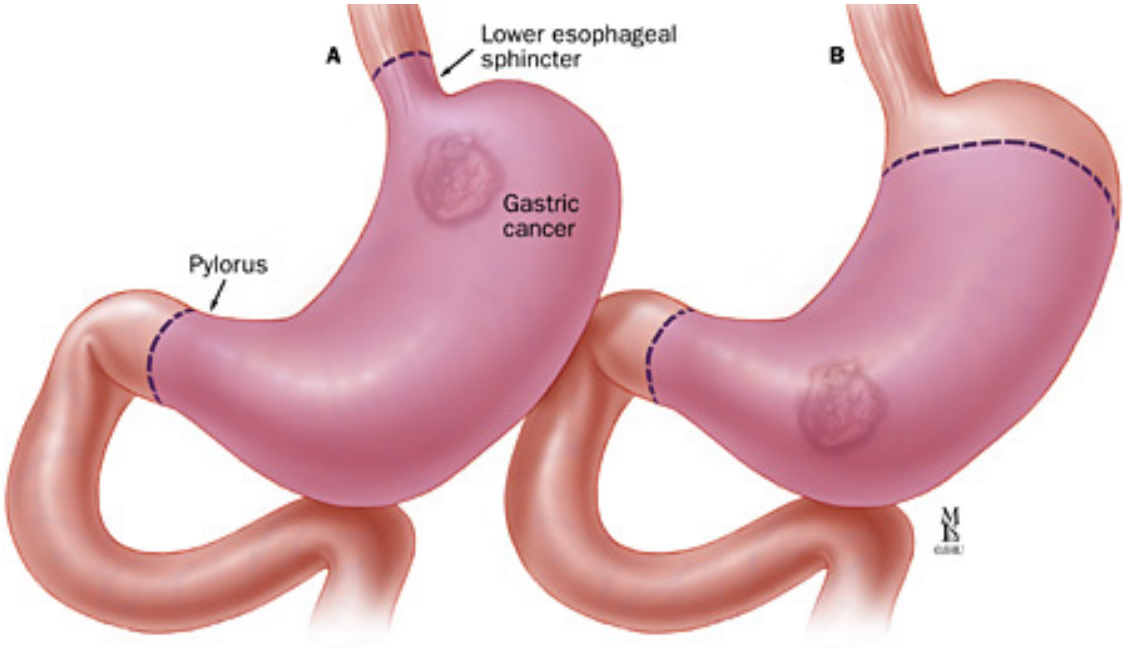


Gastric Adenocarcinoma

- Oncologic resection in gastric cancer
  - 3-5cm gross negative margins
  - Lymph node clearance of draining nodes

Gastric Adenocarcinoma Oncologic Resection - Margin

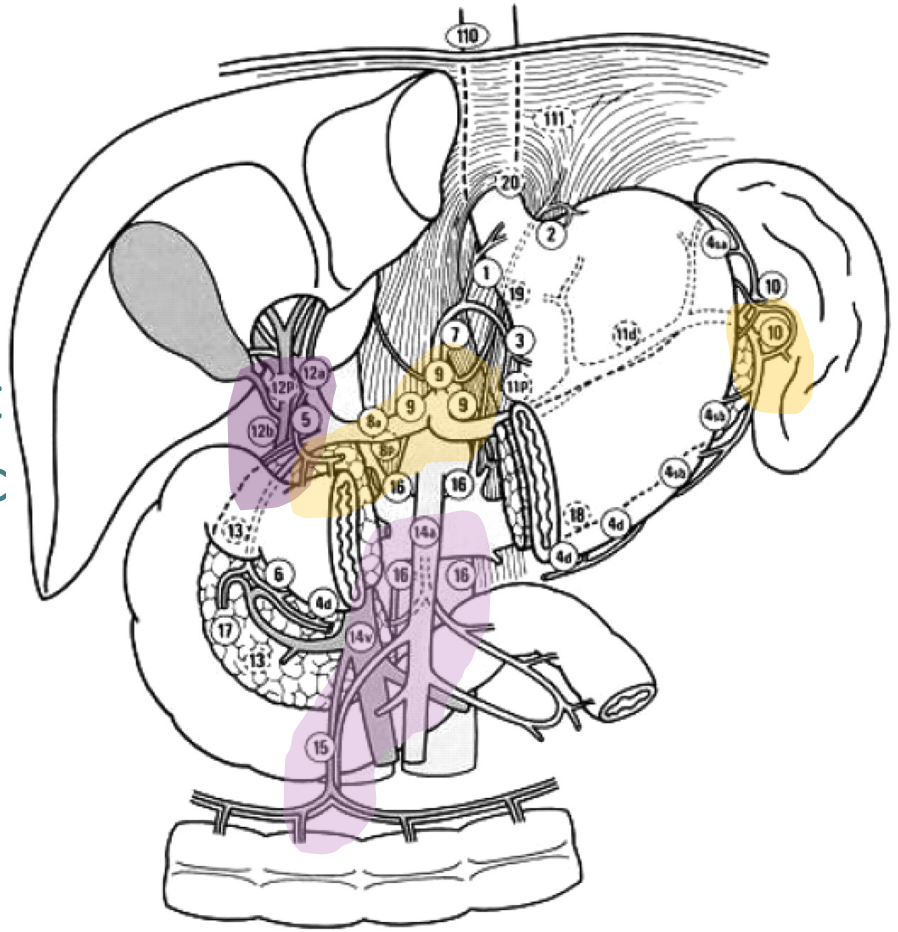
- 3-5cm gross negative margins
  - Distal cancers (body, antrum) –> subtotal gastrectomy
  - Proximal cancers (fundus) –> total gastrectomy



http://www.hopkinsmedicine.org/healthlibrary/GetImage.aspx?ImageId=290498

Gastric Adenocarcinoma Oncologic Resection – Lymph Nodes

- Extent of lymph node dissection
  - D1: Perigastric nodes
  - D2: Common hepatic, left gastric, celiac, and splenic arteries
  - D3: portahepatis and stations adjacent to aorta



Japanese Classification of gastric regional lymphnode stations http://jjco.oxfordjournals.org/content/37/6/429.full

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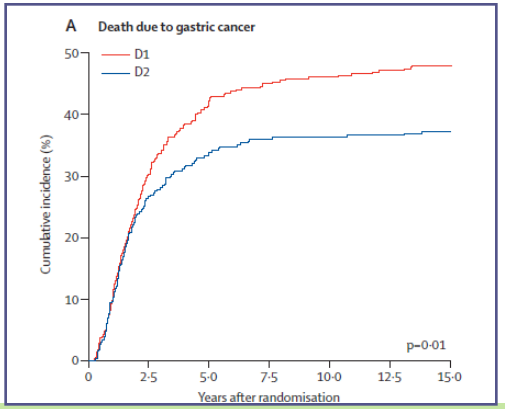

D1 vs D2 dissection

- RCT, Dutch Trial
- Initial report – no diff
- 15 year follow-up
  - D2: Gastric cancer related deaths (37% vs 48%), less local and regional recurrence
  - Morbidity with splenectomy

Songun L, et al., 15 year follow up of the Dutch Trial. Lancet Oncol 2010

Gastric Adenocarcinoma Oncologic Resection – Lymph Nodes

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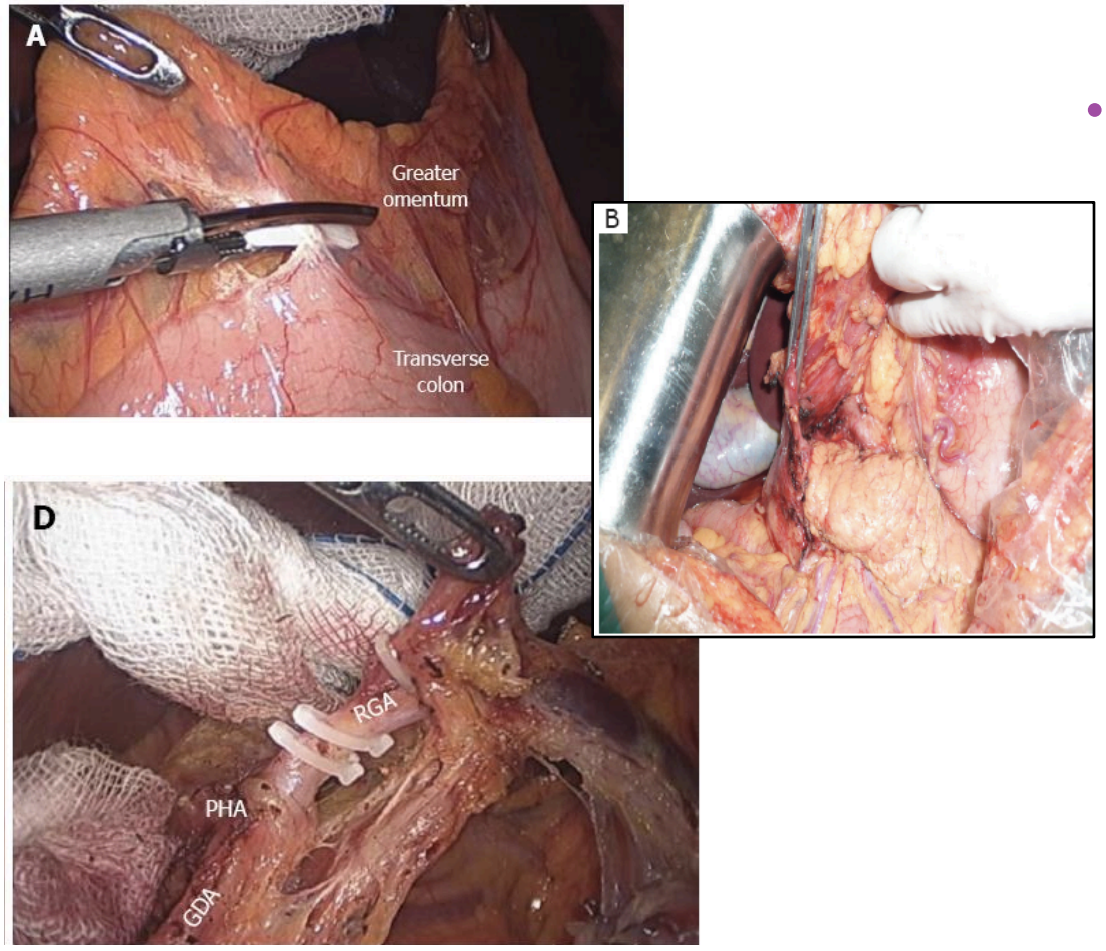
NCCN National Comprehensive Cancer Network®

Resectable tumors---continued

- **Gastric resection should include the regional lymphatics-- perigastric lymph nodes (D1) and those along the named vessels of the celiac axis (D2), with a goal of examining at least 15 or greater lymph nodes[6,7,8]**

NCCN Guidelines. Gastric Cancer. 2012

D1 LN dissection
Omentum, R gastroepiploic & R gastric a LNs

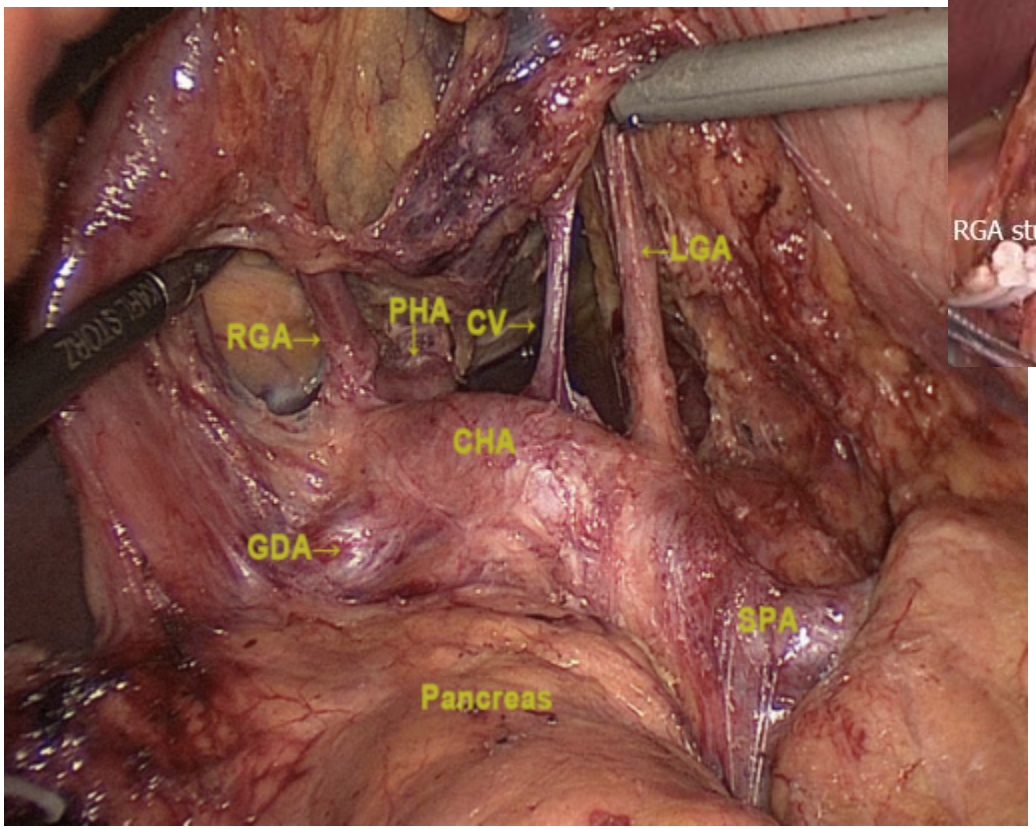


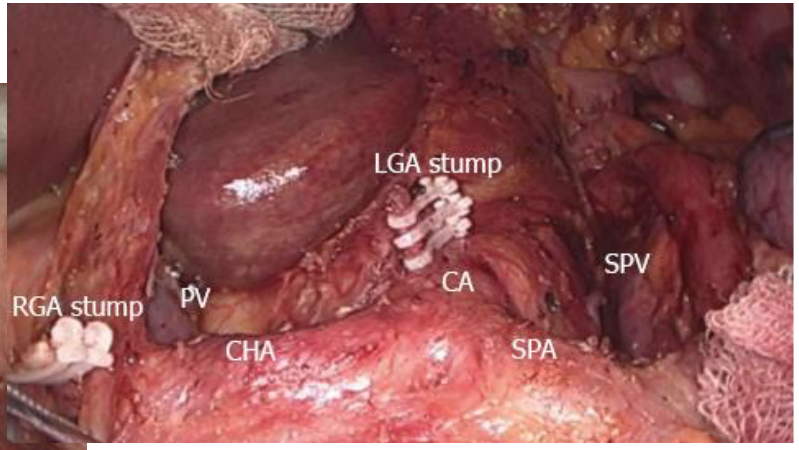
- D1 – removal of involved stomach including greater and lesser omentum, and surrounding lymph nodes (R gastric and R gastroepipolic)

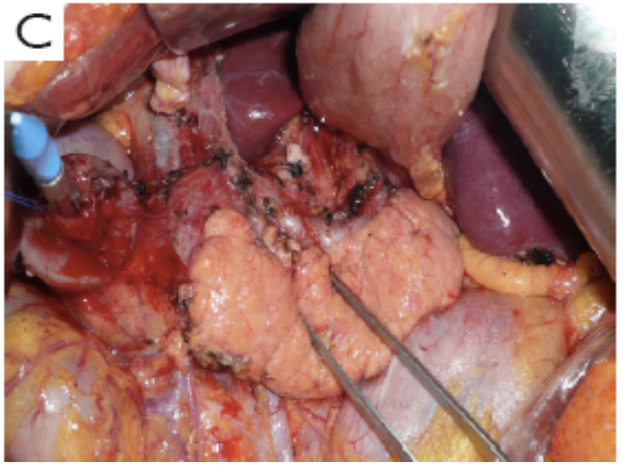
Son T, World J Gastroenterol 2016
Song HB. Transl Gastrointest Cancer 2013

D2 LN dissection

Proper and common hepatic, splenic and L gastric a lymph nodes







http://www.keyword-suggestions.com/c3BsZW5pYyBhcnRlcnkgZGlzc2VjdGlvbg/

Son T, World J Gastroenterol 2016

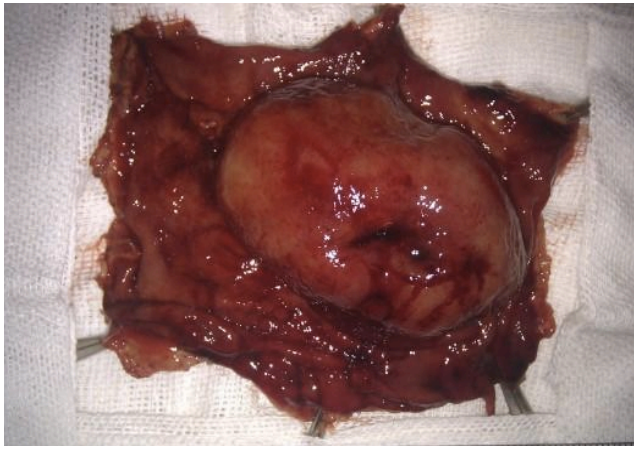
Song HB. Transl Gastrointest Cancer 2013

Sarcoma
Treatment and Oncologic Resection

- Staging work up – Abd/pelvis CT, add chest if high risk
- Biopsy – by endoscopy, not percutaneous (risk of hemorrhage and intraperitoneal dissemination)
- Surgery is mainstay of treatment

Sarcoma resection principles

- Preservation of pseudocapsule, avoidance of tumor spillage
- Margins: negative
- Lymph nodes: no need for prophylactic LND. LND should be done if pathologically enlarged LNs are encountered.



GIST

- Less than 2cm – can observe with surveillance if without high risk features
  - High risk features by EUS (NCCN 2.2016)
    - Irregular borders
    - Cystic spaces
    - Ulceration
    - Echogenic foci
    - Heterogeneity
- Very large GISTs – neoadjuvant Gleevec can be considered

- Post-operative pathologic review to determine need for adjuvant Gleevec

NCCN guidelines 2.2016 Soft Tissue Sarcoma

Stomach Tumors

	Considerations prior to resection	Surgical considerations
Carcinoma	Diagnostic laparoscopy Neoadj treatment	3-5cm Margins Lymph node dissection D1 or D2
Sarcoma	Determination of sarcoma type Need for resection if small GIST (<2cm) Neoadj tx if large GIST	No violation of pseudocapsule Negative Margins LND if suspicious nodes
Neuroendocrine	Determination of carcinoid type Surgery typically not indicated for type 1 or 2 Type 3 treated like carcinoma	Type 1 & 2 – endoscopic tx - if multiple and recurrent Type 1 – antrectomy Type 2 – excision of gastrinoma Type 3 – treat like carcinoma
Lymphoma	Primary treatment is non-surgical - Eradication of H. pylori - Chemotherapy - Radiation	Minimal role for surgery