Case Studies in Upper GI Surgery

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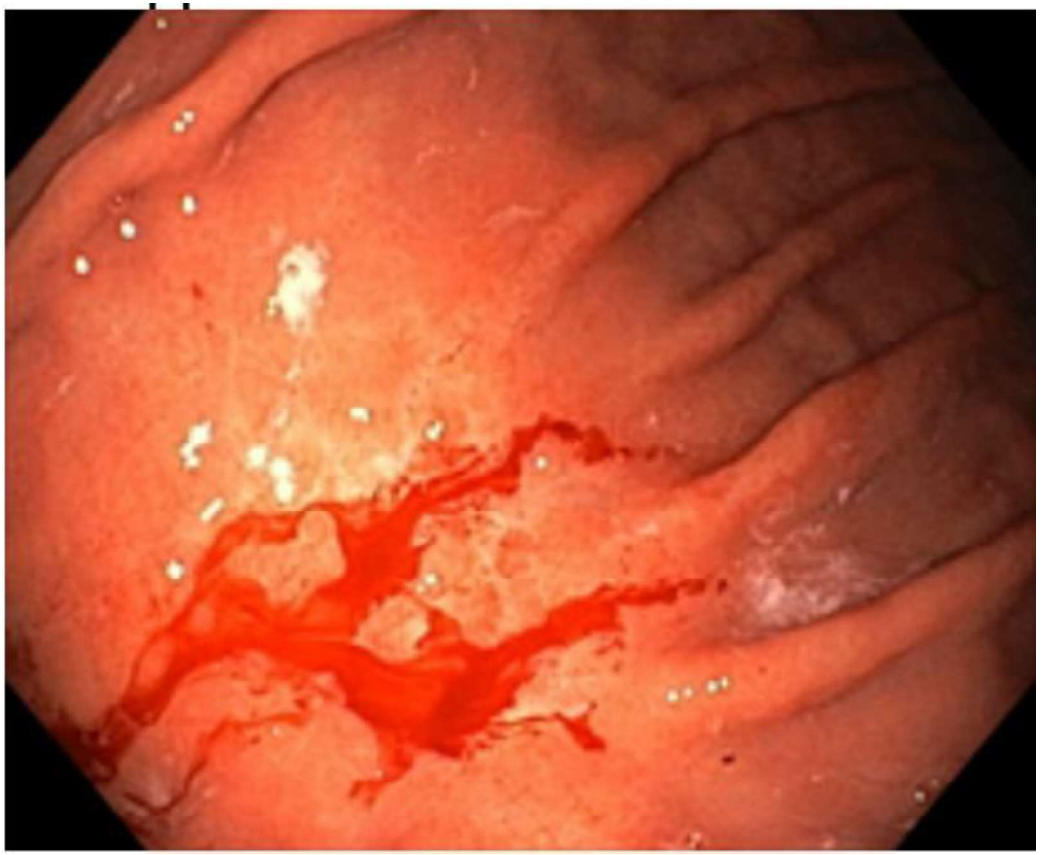
Best Care for Everyone

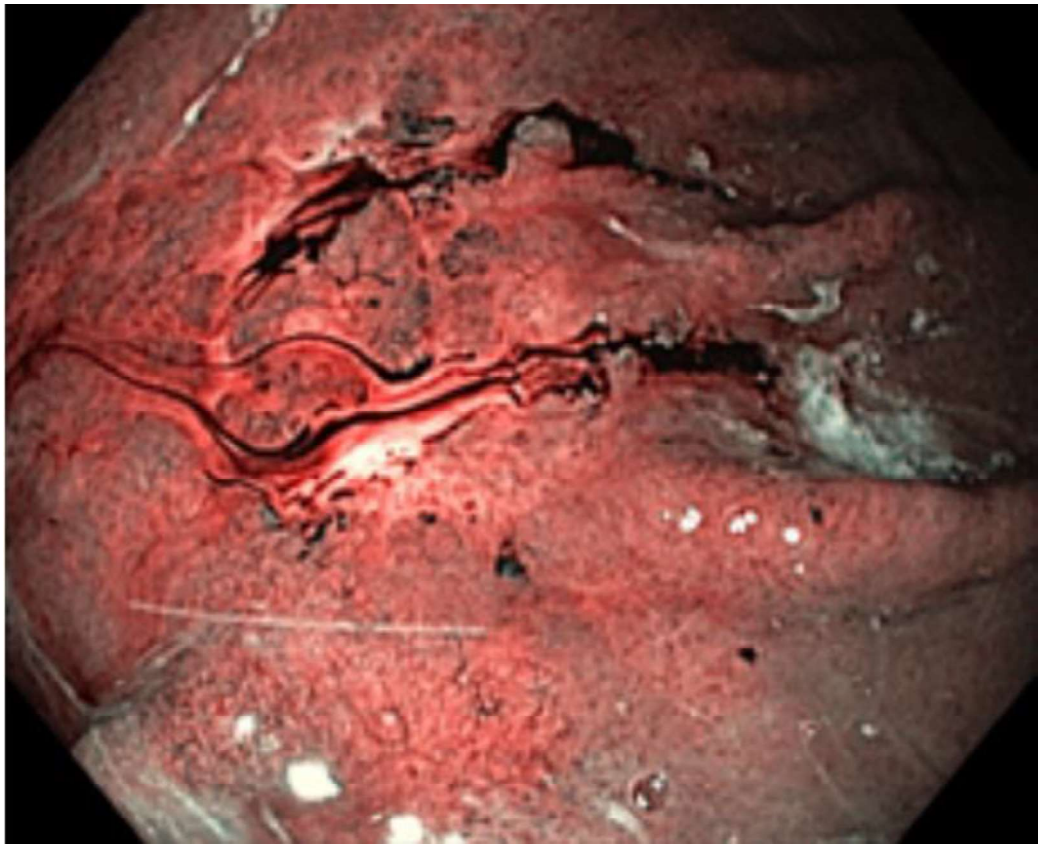
Gastric Adenocarcinoma

Gastric Cancer

Case Study 1

- 65y Korean woman
- Presented to GP with 1 month of RUQ discomfort
- Gastroscopy showed 2cm mid greater curve ulcer
- Biopsy showed diffuse type gastric adenocarcinoma





Gastric Cancer

Case Study 1

- CT - primary not clearly seen, mildly enlarged left gastric node
- Tumour is possibly “early” (T1a or T1b, non-muscle invasive) but due to diffuse type and possibly N1, MDM recommended chemo first

Gastric Cancer

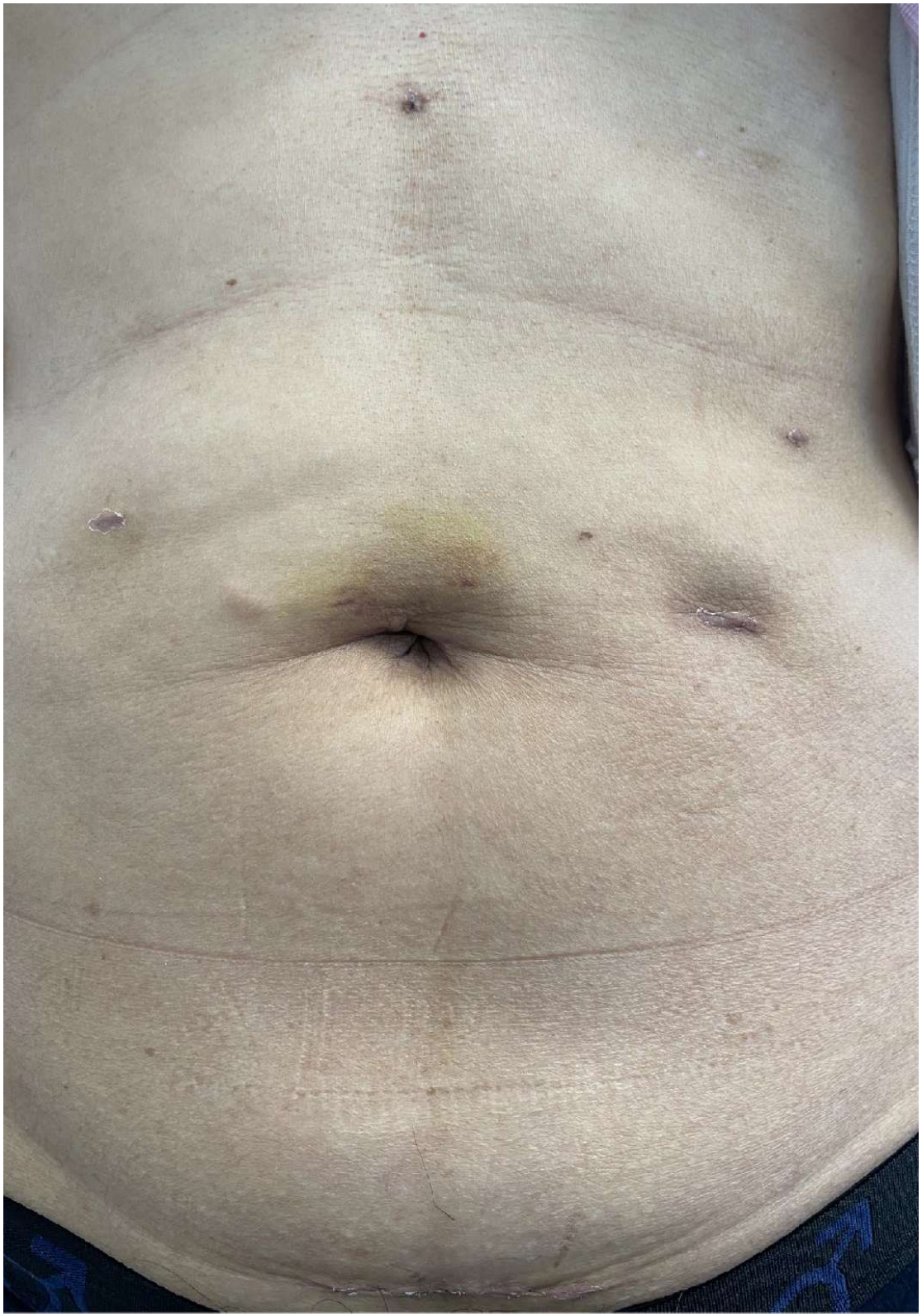
Case Study 1

- Chemotherapy in gastric adenocarcinoma
- NZ/Australia traditionally followed UK model of treatment
  - All “advanced” cancers on imaging - ie T3 and above, or N1, are considered for perioperative chemo
  - “MAGIC” protocol - 3 cycles of pre- and 3 cycles of post-op epirubicin, cisplatin, fluorouracil (ECF)
  - Shown to improve median survival by 12-18 months over surgery alone
- 2019 - German FLOT trial established FLOT as the new standard of care
  - 4 cycles of pre- and post-op fluorouracil, leucovorin, oxaliplatin, taxane
  - Improved median survival by 12 months over ECF
- Other countries eg USA, China, Koea, Japan follow other regimens

Gastric Cancer

Case Study 1

- 4 cycles (8 weeks) of FLOT
- Laparoscopic radical subtotal gastrectomy
- Uncomplicated recovery, discharged day 5
- Pathology: poorly differentiated diffuse type signet-ring adenocarcinoma, T1b N0 (0/22), R0.
- Enlarged node on CT did not contain cancer but was highly calcified, which may indicate tumour regression due to chemo
- Undergoing post-op FLOT



Gastric Cancer

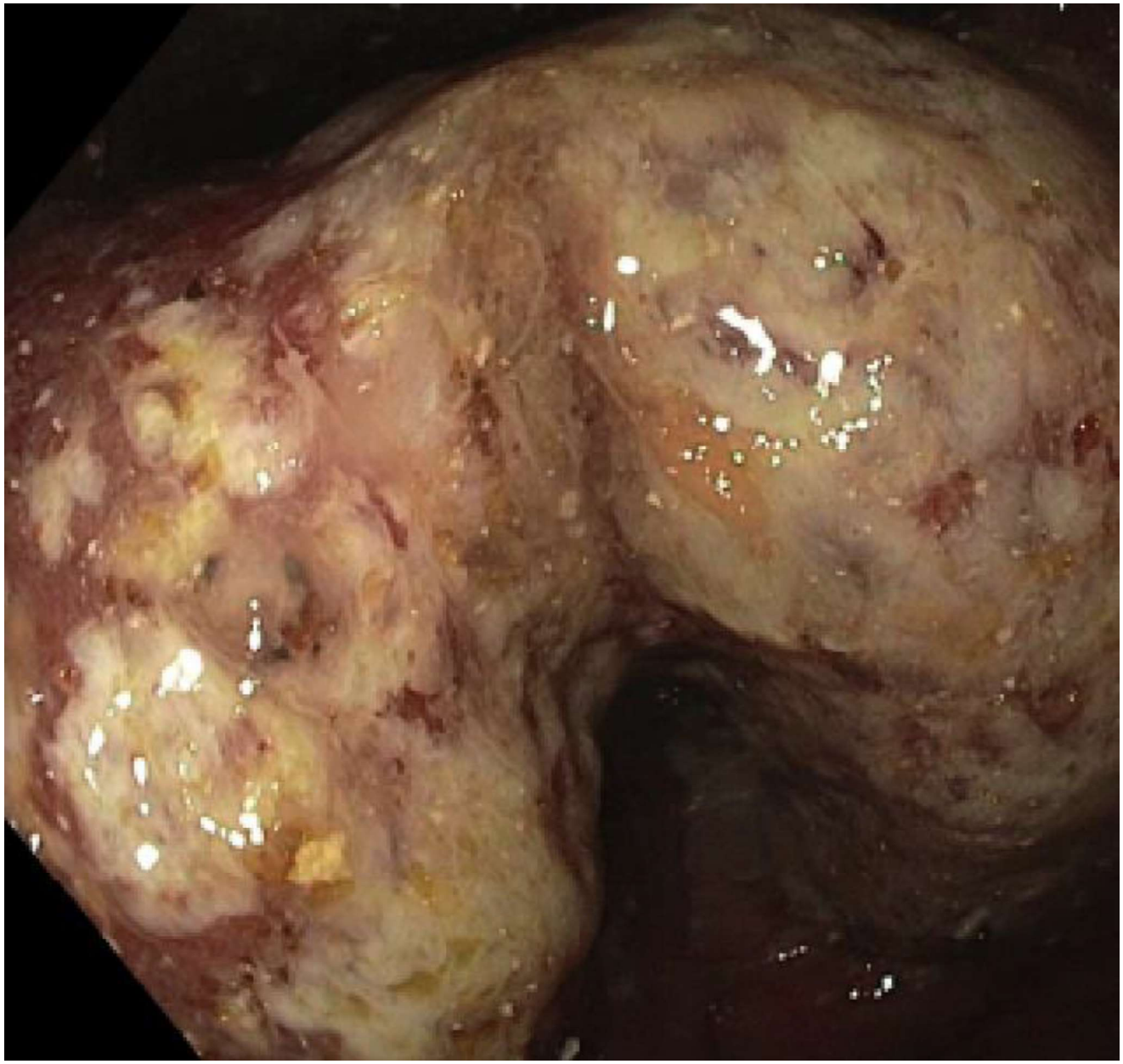
Case Study 1

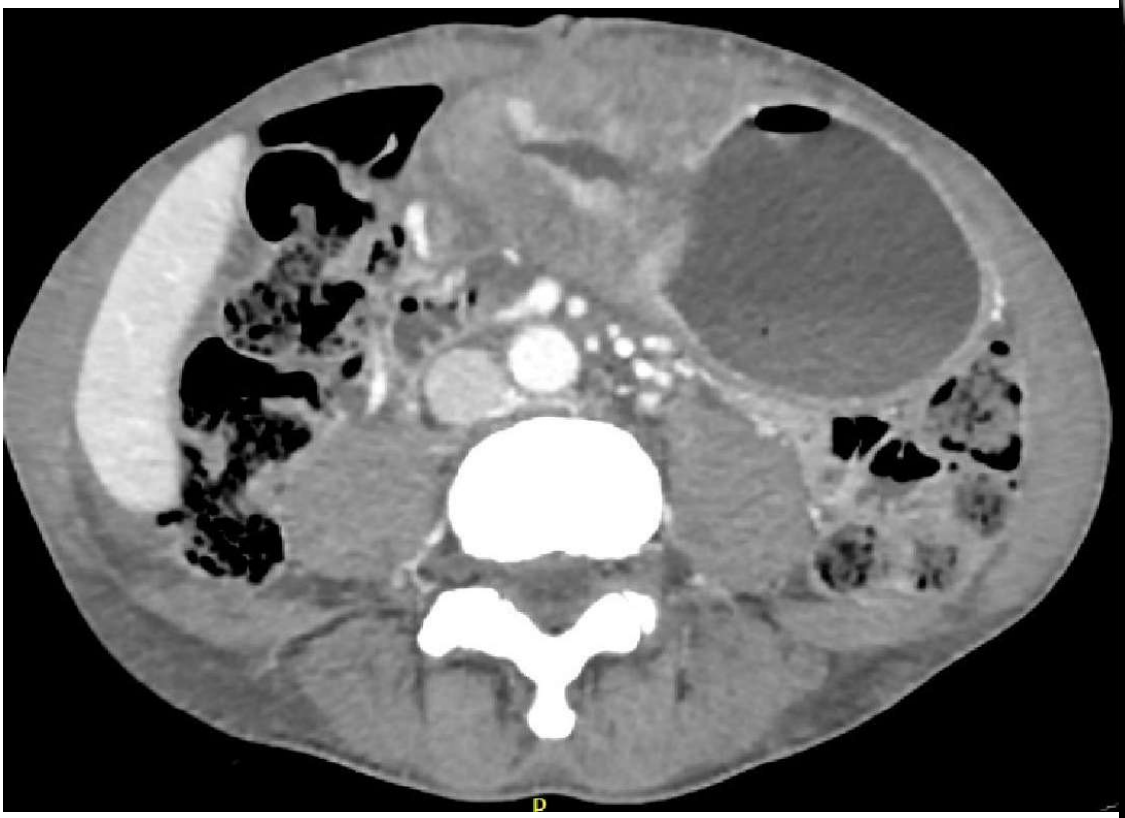
- Take home message
  - This patient had a potentially aggressive, poor prognostic tumour, but was picked up early (?by chance)
  - In some countries eg Japan and Korea with a high incidence of gastric cancer, screening programs can be justified
  - Laparoscopic resection is suitable for some patients

Gastric Cancer

Case Study 2

- 66y Chinese man with few months of lethargy and shortness of breath on exertion, weight loss
- Presented to ED after a collapse. Hb 39, palpable epigastric mass
- Endoscopy showed antral cancer, biopsy confirmed adenocarcinoma
- CT showed bulky tumour, no distant mets





Gastric Cancer

Case Study 2

- Due to bleeding, proceeded to surgery without chemo
- Open radical subtotal gastrectomy (3 weeks from presentation)
- Uncomplicated recovery, discharged on day 6
- Pathology: mod differentiated mucinous adenocarcinoma, T4N3 (18/24 nodes positive), R0, BRAF wild-type, MMR proficient, HER2 negative
- Saw oncologist 2 weeks post-op offered CAPOX adjuvant chemo
- Patient declined - observation only

Gastric Cancer

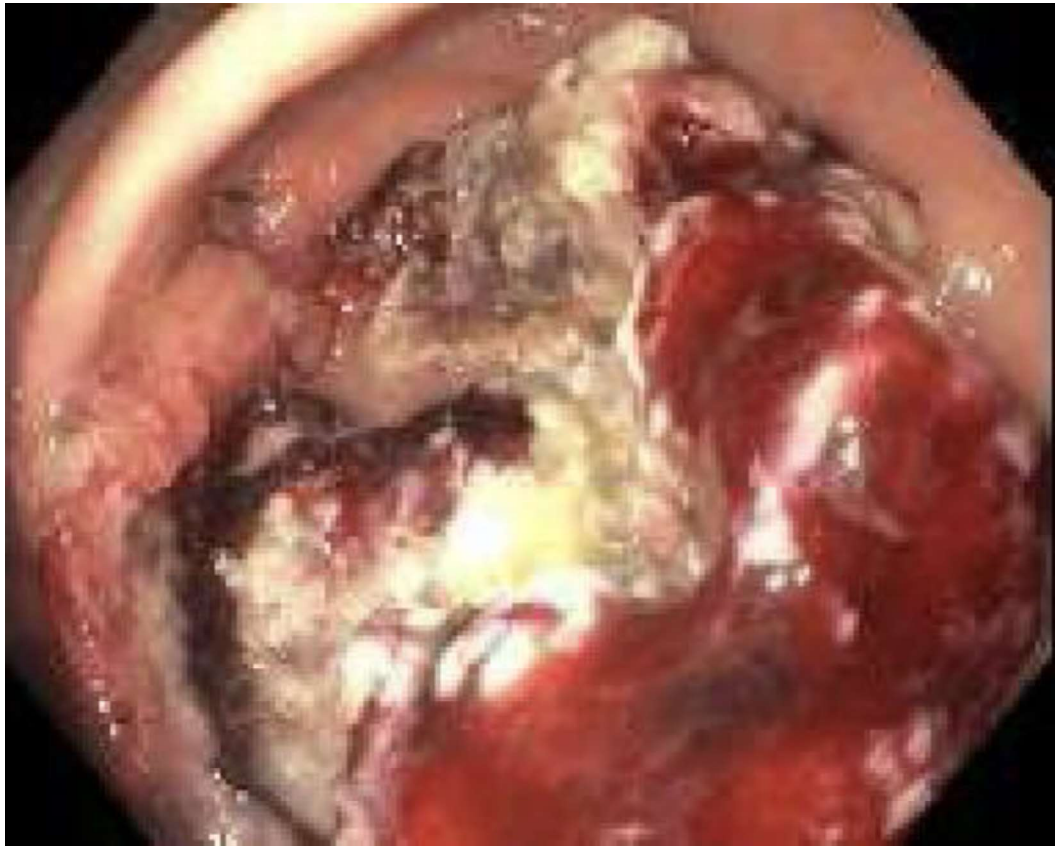
Case Study 2

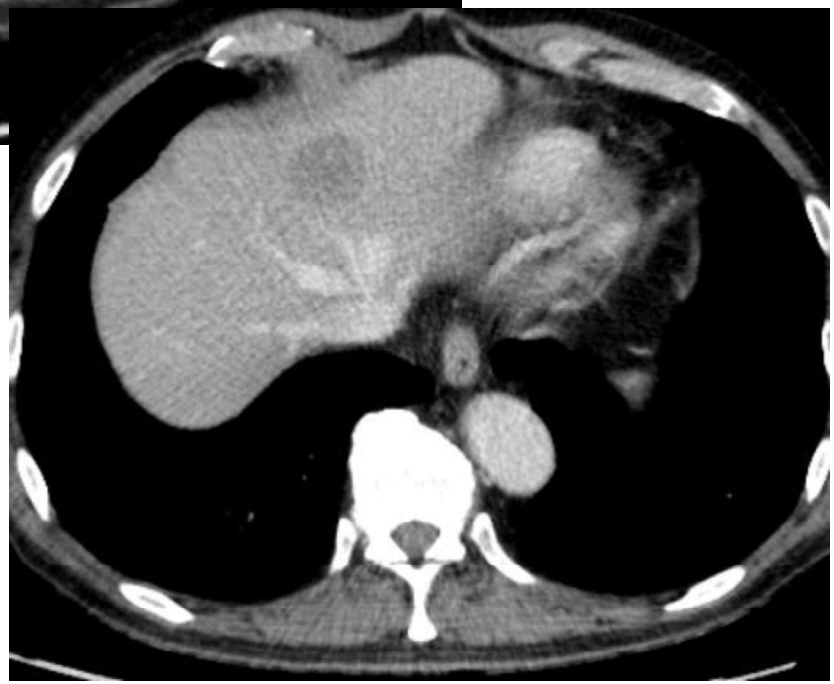
- Take home points
  - Bleeding is often the reason that an advanced gastric cancer is treated with surgery up front without chemo
  - Risk of nodal disease increase with depth of invasion
  - Based on the oncological model of gastric cancer being a locoregional disease for a long period, a high nodal harvest ($\geq$15 nodes) is recommended for staging and possibly therapeutic purposes
  - “D2 radical gastrectomy”

Gastric Cancer

Case Study 3

- 69y Chinese man
- Few months of reflux and fatigue. GP found anaemia Hb 80
- Gastroscopy showed an obstructing antral gastric adenocarcinoma
- CT showed bulky tumour and 2 liver mets





Gastric Cancer

Case Study 3

- Metastatic gastric cancer
- “Incurable”
- No role for resection except for complications
- Started FOLFOX
- Still eating but may require stenting in the future

Gastric Cancer

Case Study 3

- Obstruction
  - Endoscopic stenting
  - Surgical bypass (lap/open)
  - EUS AXIOS gastrojejunostomy
- Bleeding
  - Radiotherarpy
  - Surgical resection
- Perforation
  - Resection

Gastric Cancer

Case Study 3

- Palliative chemotherapy
  - FOLFOX/FOLFIRI: fortnightly cycles
    - portacath
    - 4hr infusion day 1
    - 48hrs of infusion pump at home
  - Common side effects
    - Nausea/vomiting/diarrhoea
    - Hand-foot syndrome
    - Peripheral neuropathy
    - Marrow suppression and neutropenia
- Investigational (generally not funded in NZ) agents
  - Herceptin for HER2 positive cancer
  - Immunotherapy with PD-1 checkpoint inhibitor (pembrolizumab/Keytruda) for PD-1 ligand positive tumours (MSH-H / dMMR)

Gastric Cancer

Case Study 3

- For patients with “not early” gastric cancer with no overt distant metastatic disease, consider staging laparoscopy and washings. Threshold varies among experts from T2 to T3
- Laparoscopy may detect peritoneal mets in an additional 20-30% patients
- In 10% patients without peritoneal carcinomatosis, positive washings will upstage them to M1 and prevent a futile gastrectomy.
- Patients with low volume peritoneal disease (including washings cytology-only positive) may be suitable for HIPEC and gastrectomy/peritonectomy in a trial setting in some academic centres

Gastric Cancer

Case Study 3

- Take home messages
  - Metastatic gastric cancer is considered incurable. Resection does not seem to provide any survival benefit.
  - Most common sites of mets are liver, peritoneum, and retroperitoneal nodes
  - Look for occult mets with laparoscopy and washings
- Most common palliative treatment are chemo and stenting

Gastric Cancer Case Study

Surgery

- Extent
  - Subtotal gastrectomy for mid stomach to distal cancer
  - Total gastrectomy for proximal cancer
    - Poorer functional outcomes due to lack of stomach - more satiety, weight loss, dumping
  - Ivor Lewis for gastroesophageal junction tumours - overlaps with esophageal cancers
- Lymphadenectomy
  - Most experts recommend “D2” lymphadenectomy to remove nodes around retroperitoneal vessels
    - More extensive dissection and technically challenging, increased morbidity
    - Better staging
    - Better survival? - a bit controversial but generally accepted now

Gastric Cancer Case Study

Early Gastric Cancer

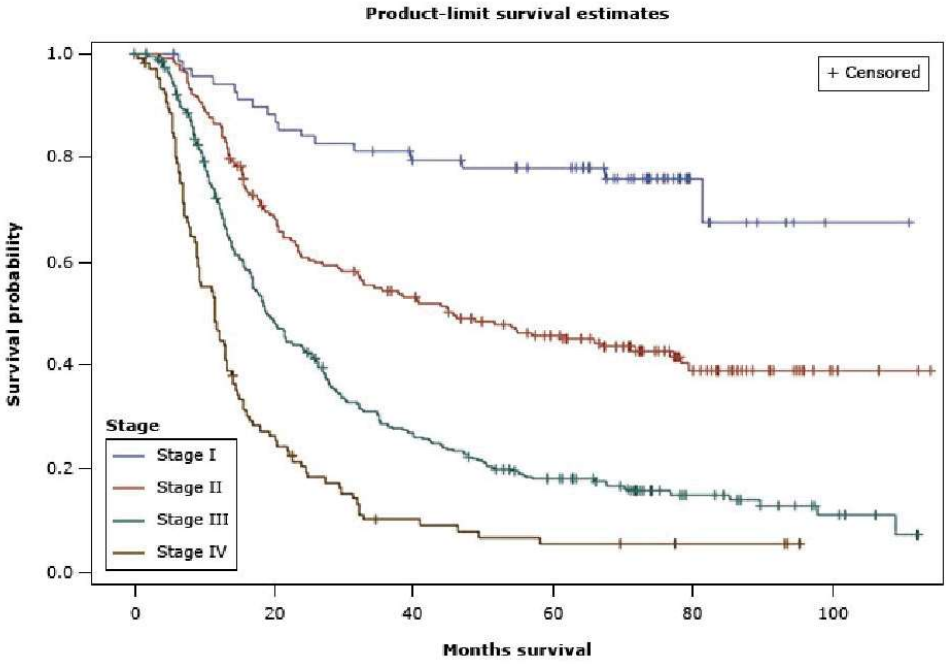
- T1a (not into submucosa) have low risk of nodal metastases
- Can be considered for endoscopic submucosal dissection (ESD)

Gastric Cancer Case Study

Outcome

- 5 year overall survival around 50%
- Patient 1 (T1b N0) - 5yOS 80%
- Patient 2 (T4N3) - 5yOS 15%
- Patient 3 (T4NxM1) - 5yOS 5%

A



B

Posttreatment stage group	Patients (n)	1-year survival (%)	3-year survival (%)	5-year survival (%)	Median survival (months)
I	70	94.3	81.4	76.5	117.8
II	195	86.7	54.8	46.3	46.0
III	301	71.7	28.8	18.3	19.2
IV	117	46.7	10.2	5.7	11.6