GASTRIC CANCER

PREPARED BY

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Sem:-5

Group:-6

Gastric Carcinoma:

Etiological factors

Predisposing :

1. Pernicious anaemia & atrophic gastritis (achlorhydra)
2. Previous gastric resection
3. Chronic peptic ulcer (give rise to 1%)
4. Smoking.
5. Alcohol.

Environmental:

1. H.pylori infection Sero(+)patients have 6-9 folds risk
2. low socioeconomic Status
3. Nationality (JAPAN)
4. Diet (prevention)

Genetic:

1. Blood group A
2. HNPCC: Hereditary non-polyposis colon cancer.

Clinical Presentation

Most patients present with advanced stage..because there are no early specific signs and symptoms. Time lag between onset of disease and onset of symptoms.

Common clinical Presentation:

3A"s: 1.Anaemia(due to bleeding from tumour)

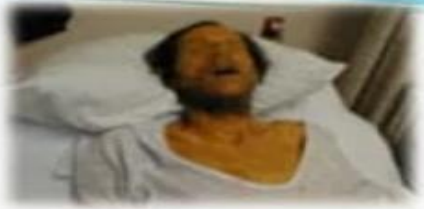
2.Asthenia(septic absorption from the tumour)

3.Anorexia

- Recent onset of early satiety, dyspepsia, epigastric discomfort,
- Specific symptoms depending on the site of tumour.
- Tumour in pyloric region may present with gastric outlet obstruction.
- Tumour in proximal region may present with dysphagia,hamaetemesis.
- From the body of stomach may present as only mass per abdomen(silent variety).

- Metastatic disease may present with- jaundice,ascites

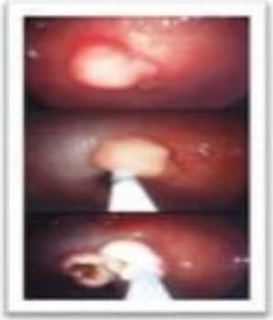
signs

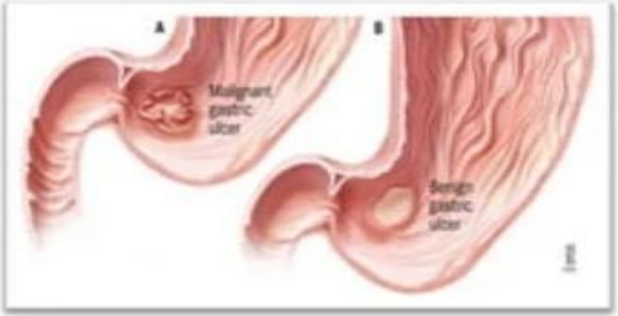


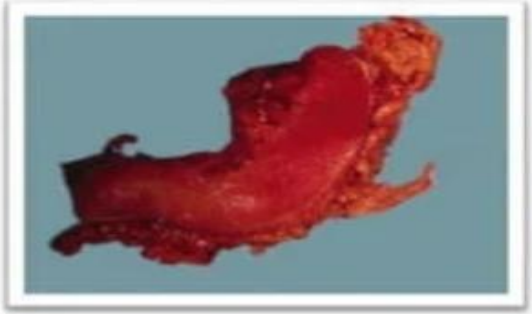
- Grossly Anemic,
- Cachexia,
- Epigastric mass, liver secondaries.
- Blumer shelf seondaries.
- Virchows node
- Sister mary joseph node
- Krukenberg tumor
- Irish node

Morphology:

- Polypoid
- Ulcerative
- Superficial spreading
- Infitrative [Linitis plastica, Leather bottle stomach)







Pathological classification.

Lauren Classification:

1. Intestinal Gastric ca.

It arises in areas of intestinal metaplasia to form polypoid tumors or ulcers.

2. Diffuse Gastric ca.

It infiltrates deeply in the stomach without forming obvious mass lesions but spreads widely in the gastric wall "Linitis Plastica"& it has much more worse prognosis

Gastric cancer can be devided into:

- **Early:**
- Limited to mucosa & submucosa with or without LN (T1, any N)
- >> curable with 5 years survival rate in 90%.(japanese classification)
- **Late:**
- It involves the Muscularis.
- It has 4 types(Bormann's classification). Type III & IV are incurable.

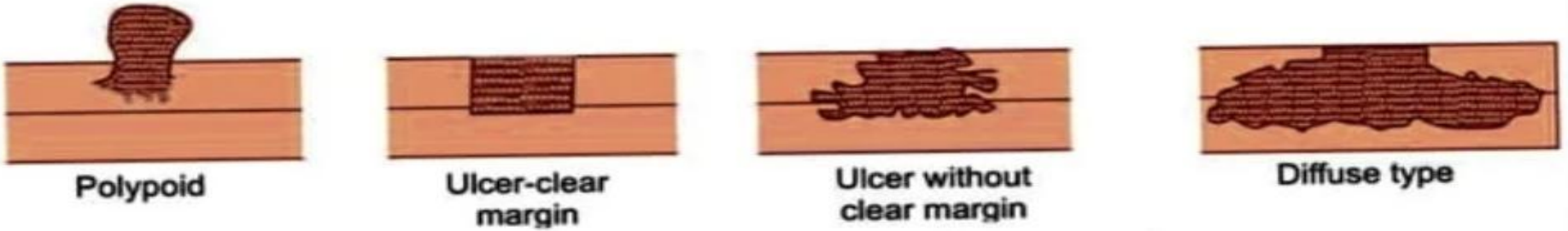


Fig. 20.71: Borrmann's classification of the advanced gastric cancer.

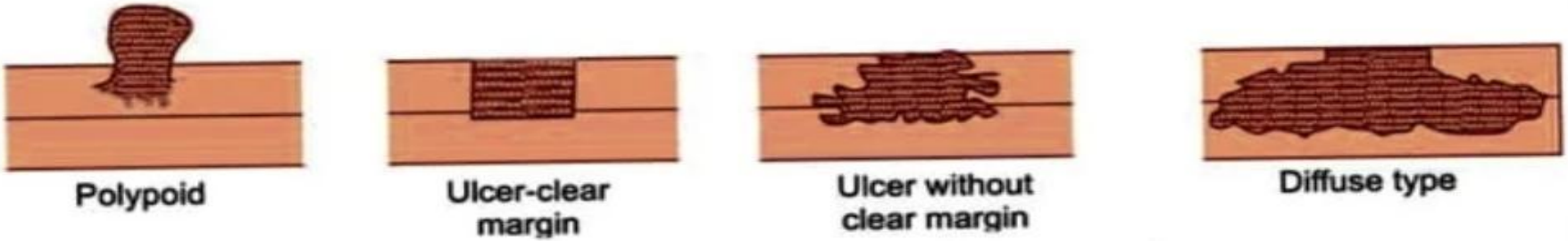


Fig. 20.71: Borrmann's classification of the advanced gastric cancer.

Spread of Gastric Cancer

Direct Spread

Tumor penetrates the muscularis, serosa & Adjacent organs (Pancreas,colon &liver)

Lymphatic spread

What is important here is Virchow's node (Trosier's sign)

Blood-borne metastasis

Usually with extensive Disease where liver 1st Involved then lung & Bone

Transperitoneal spread

This is common Anywhere in peritoneal cavity (Ascitis)
Krukenberg tumor (ovaries)
Sister Joseph nodule (umbilicus)

Staging of gastric cancer

- T1 lamina propria & submucosa
- T2 muscularis & subserosa
- T3 serosa
- T4 Adjacent organs
- No no lymph node
- N1 Epigastric node
- N2 main arterial trunk
- Mo No distal metastasis
- M1 distal metastasis

INVESTIGATIONS

- Full blood count
- LFT,RFT,
- Stool examination for occult blood,
- CXR.
- Serum tumor markers (CA 72-4,CEA,CA19-9)

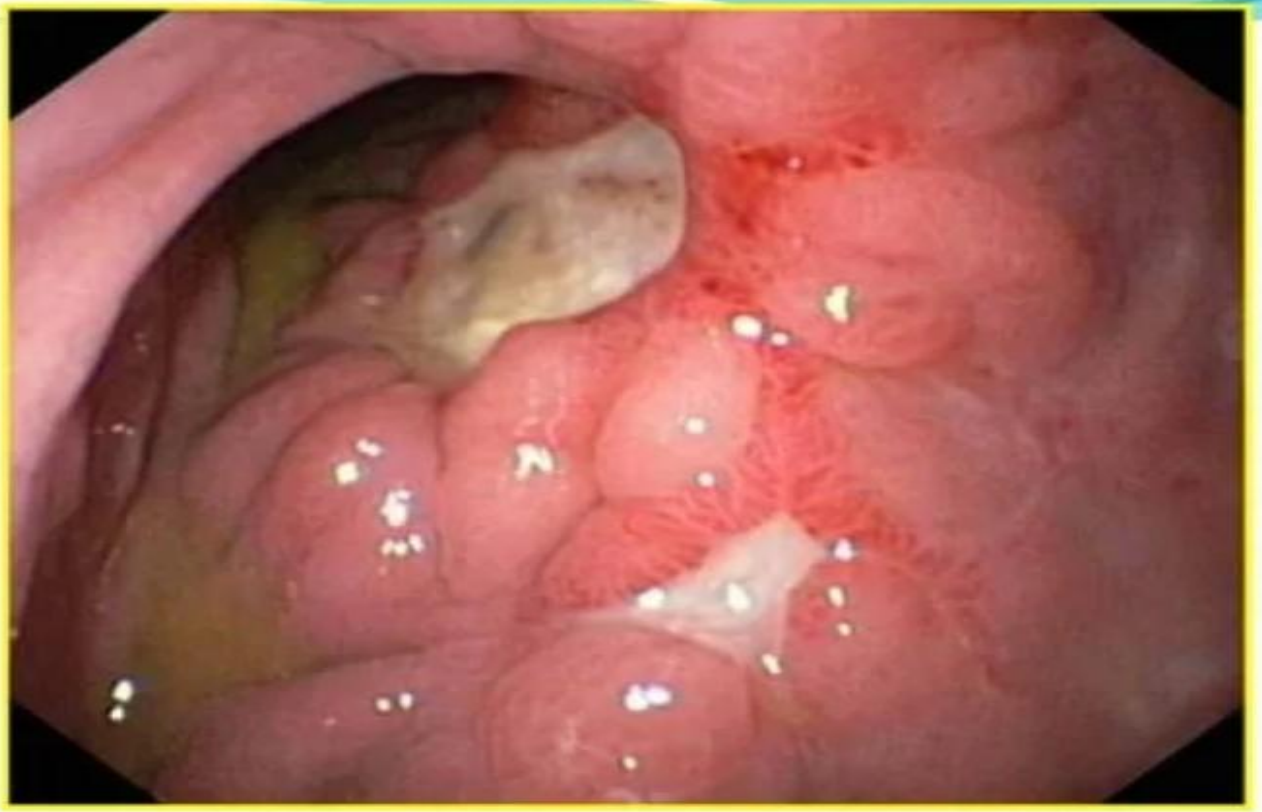
Specific:

- UGI endoscopy with biopsy,
- CT, MRI & US
- Laparoscopy

Upper gastro intestinal endoscopy.

Diagnostic accuracy is 98%
if upto 7 biopsies is taken.

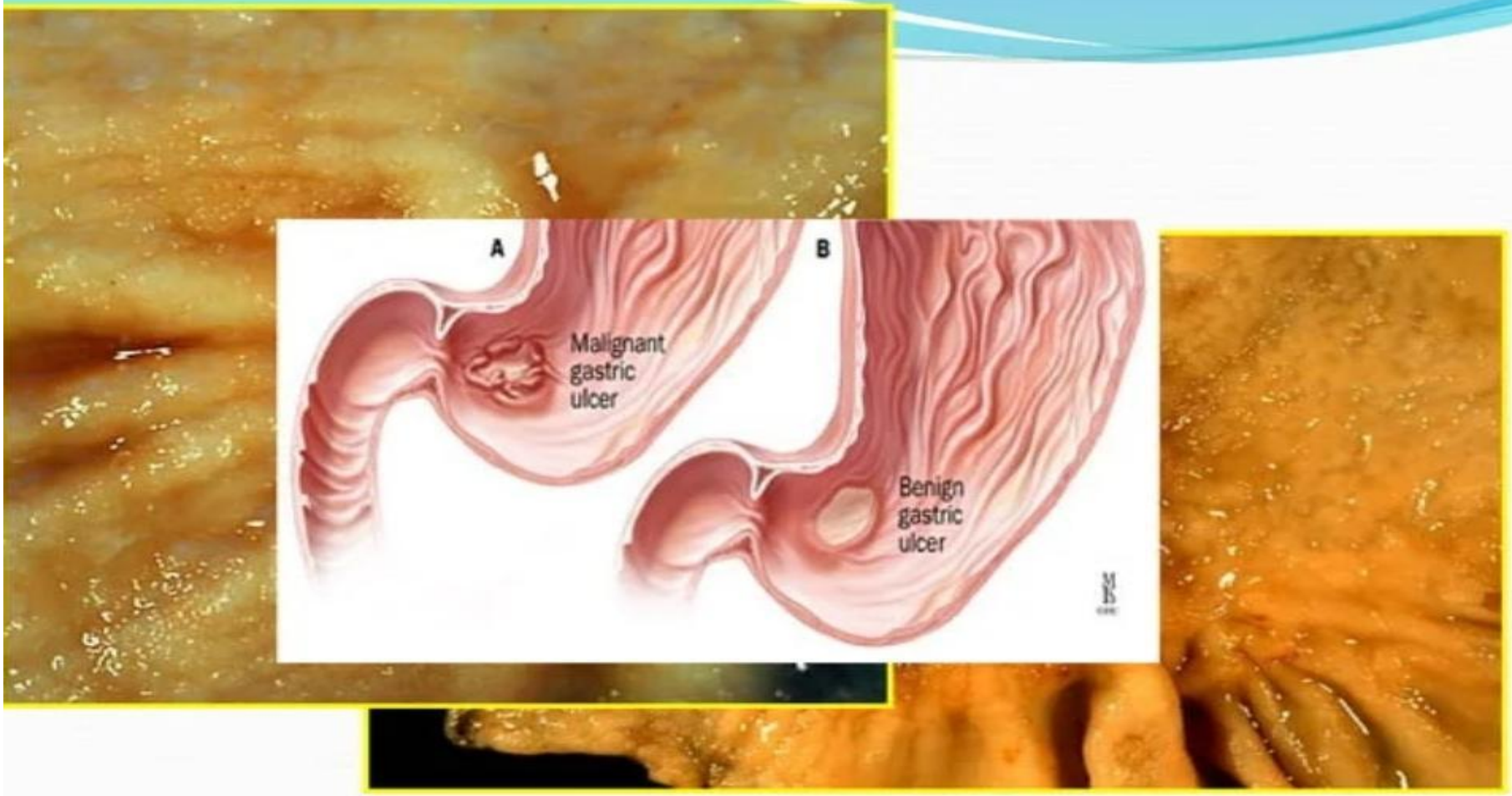
Diagnostic study of Choice



- You may see an ulcer (25%), polypoid mass (25%), superficial spreading (10%), or infiltrative (linnitis plastica)- difficult to be detected.
- Accuracy 50-95% it depends on gross appearance, size , location & no. of biopsies

IF YOU SEE ULCER ASK UR SELF ...
BENIGN OR MALIGNANT?

BENIGN	MALIGNANT
Round to oval punched out lesion with straight walls & flat smooth base	Irregular outline with necrotic or hemorrhagic base
Smooth margins with normal surrounding mucosa	Irregular & raised margins
Mostly on lesser curvature	Anywhere
Majority<2cm	Any size
Normal adjoining rugal folds that extend to the margins of the base	Prominent & edematous rural folds that usually do not extend to the margins


A
B
Malignant
gastric
ulcer
Benign
gastric
ulcer

✓ **CT,MRI & US:**

Help in assessment of wall thickness, metastases (peritoneum ,liver & LNs)

✓ **Laparoscopy:**

Detection of peritoneal metastases

Management

- Surgery
- Chemotherapy
- Radiotherapy

Treatment

Initial treatment:

1. Improve nutrition if needed by parentral or enteral feeding.
2. Correct fluid &electrolyte & anemia if they are present.

Preoperative Care

Preoperative Staging is important because we don't want to subject the patient to radical surgery that can't help him.

PROGNOSTIC FEATURES

2 important factors influencing survival in resectable gastric cancer:

- depth of cancer invasion
- presence or absence of regional LN involvement

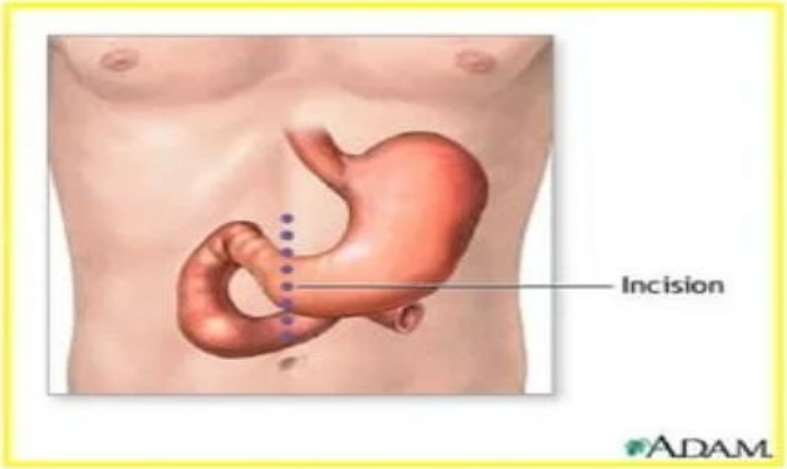
- 5yrs survival rate:
  - 10% in USA
  - 50% in Japan

Table 18.6 Examples of stages of gastric cancer and their prognosis

Stage	5-yr survival (%)
$T_1N_0M_0$	95+
$T_1N_1M_0$	70–80
$T_2N_1M_0$	45–50
$T_3N_2M_0$	15–25
M_1	0–10

Procedure of radical gastrectomy

- incision



POSTOPERATIVE ORDERS

- Admit to PACU
- Detailed nutritional advise (small frequent meals)

Post-Operative Complications

1. Leakage from duodenal stump.

2. Secondary hemorrhage.

3. Nutritional deficiency in long term.

2.Chemotherapy:

Responds well, but there is no effect on servival.

Marsden Regimen

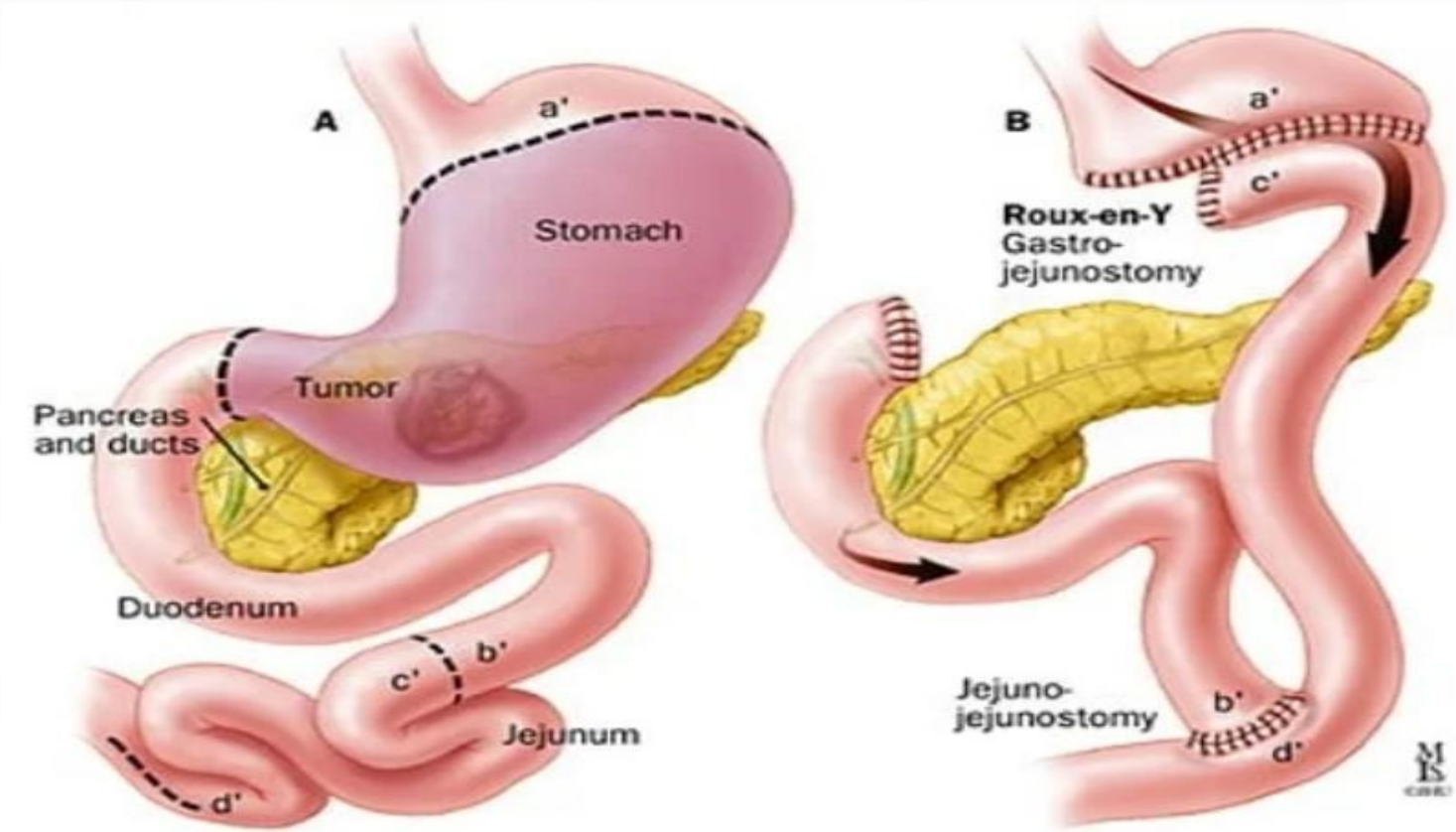
Epirubicin, cisplatin &5-flurouracil (3 wks)

6 cycles

Response rate : 40% .

3. Radiotherapy:

Postperative-radiotherpy: may decrease the recurrence.


A
a'
Stomach
Tumor
Pancreas
and ducts
Duodenum
b'
c'
Jejunum
d'
B
a'
c'
Roux-en-Y
Gastro-
jejunostomy
Jejuno-
jejunostomy
b'
d'

Thank you