

# GASTRIC CANCER

*PREPARED BY*

*B.lakshmi prasad*

*T.phanindra*

*S.krishnamachary*

*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**

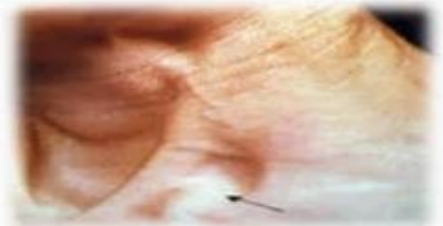
- Recent onset of early satiety, dyspepsia, epigastric discomfort,
- Specific symptoms depending on the site of tumour.
- Tumour in pyloric region may present with gastric outlet obstruction.
- Tumour in proximal region may present with dysphagia, haematemesis.
- From the body of stomach may present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

- Metastatic disease may present with-  
jaundice,ascites

# signs



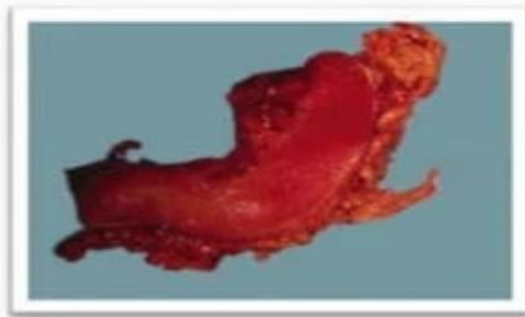
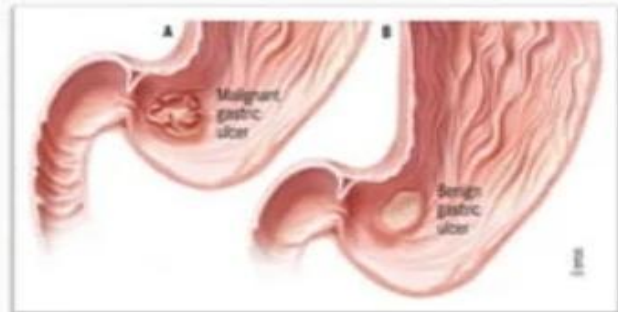
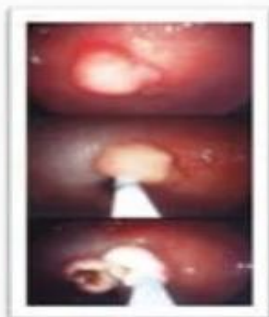
- Grossly Anemic,
- Cachexia,
- Epigastric mass, liver secondaries.
- Blumer shelf seondaries.
- Virchows node
- Sister mary joseph node
- Krukenberg tumor
- Irish node





# Morphology:

- Polypoid
- Ulcerative
- Superficial spreading
- Infiltrative [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 divided into:

### ➤ Early:

- Limited to mucosa & submucosa with or without LN (T<sub>1</sub>, 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.



**Polypoid**



**Ulcer-clear margin**



**Ulcer without clear margin**



**Diffuse type**

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



**Polypoid**



**Ulcer-clear  
margin**



**Ulcer without  
clear margin**



**Diffuse type**

**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)

### Blood-borne metastasis

Usually with extensive Disease where liver 1<sup>st</sup> Involved then lung & Bone

### Lymphatic spread

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

### Transperitoneal spread

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

## Staging of gastric cancer

**T<sub>1</sub> lamina propria & submucosa** ●

**T<sub>2</sub> muscularis & subserosa** ●

**T<sub>3</sub> serosa** ●

**T<sub>4</sub> Adjacent organs** ●

**No lymph node** ●

**N<sub>1</sub> Epigastric node** ●

**N<sub>2</sub> main arterial trunk** ●

**M<sub>0</sub> No distal metastasis** ●

**M<sub>1</sub> 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 (linitis plastica)- difficult to be detected.
  - Accuracy 50-95% it depends on gross appearance, size , location & no. of biopsies

## IF YOU SEE ULCER ASK YOURSELF ... BENIGN OR MALIGNANT?

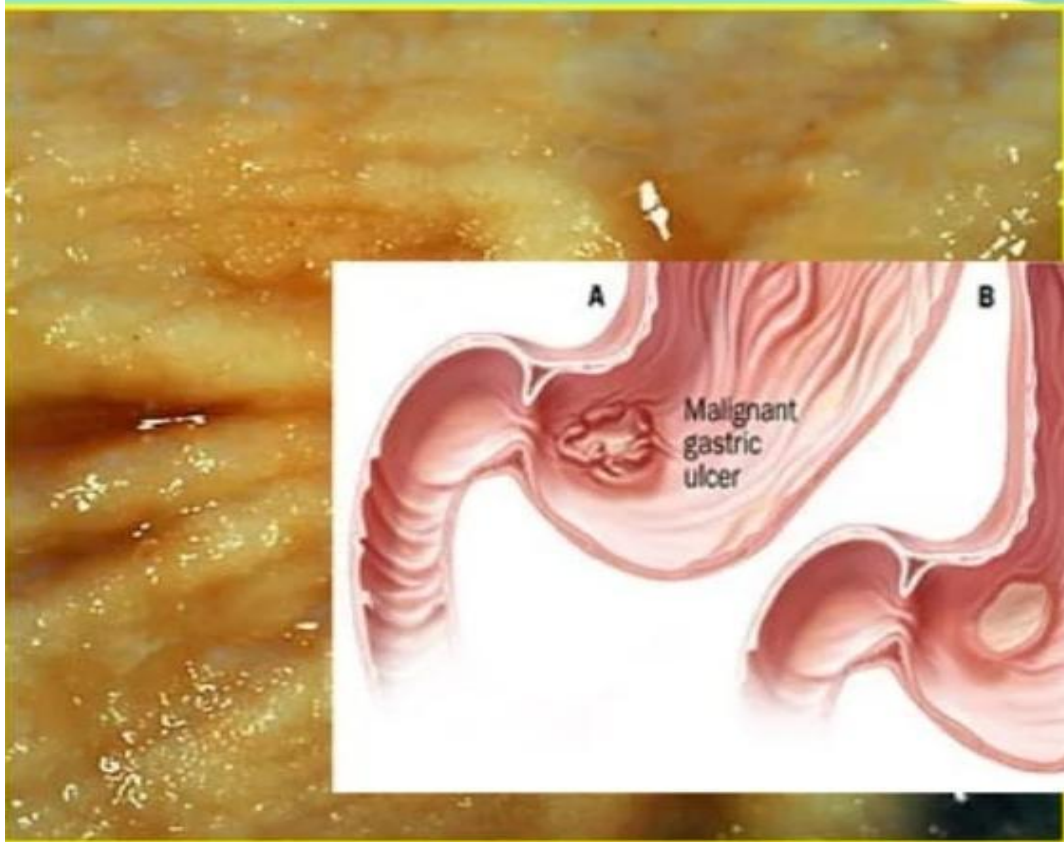
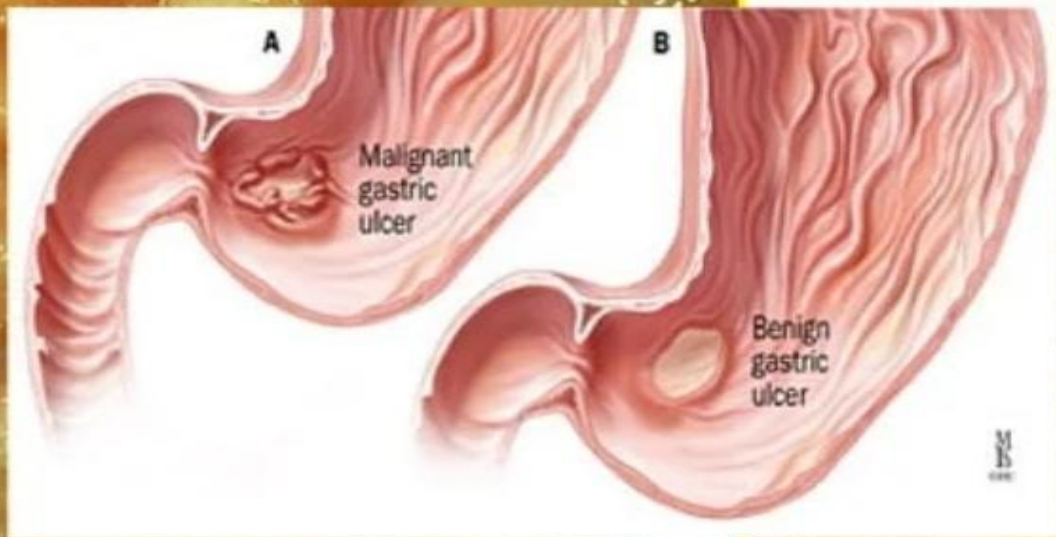
### ➤ BENIGN

- Round to oval punched out lesion with straight walls & flat smooth base
- Smooth margins with normal surrounding mucosa
- Mostly on lesser curvature
- Majority < 2cm
- Normal adjoining rugal folds that extend to the margins of the base

### ➤ MALIGNANT

- Irregular outline with necrotic or hemorrhagic base
- Irregular & raised margins
- Anywhere
- Any size
- Prominent & edematous rugal folds that usually do not extend to the margins







✓ 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 parenteral 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

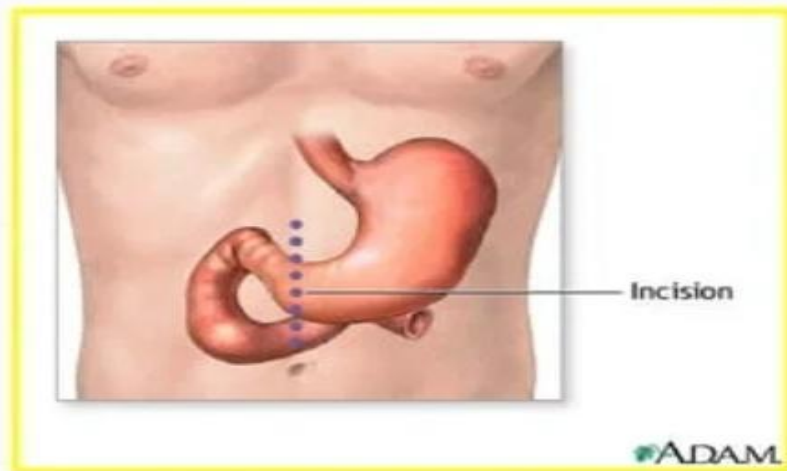
50% in Japan

Table 18.6 Examples of stages of gastric cancer and their prognosis

Stage	5-yr survival (%)
T <sub>1</sub> N <sub>0</sub> M <sub>0</sub>	95+
T <sub>1</sub> N <sub>1</sub> M <sub>0</sub>	70-80
T <sub>2</sub> N <sub>1</sub> M <sub>0</sub>	45-50
T <sub>3</sub> N <sub>2</sub> M <sub>0</sub>	15-25
M <sub>1</sub>	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 survival.

Marsden Regimen

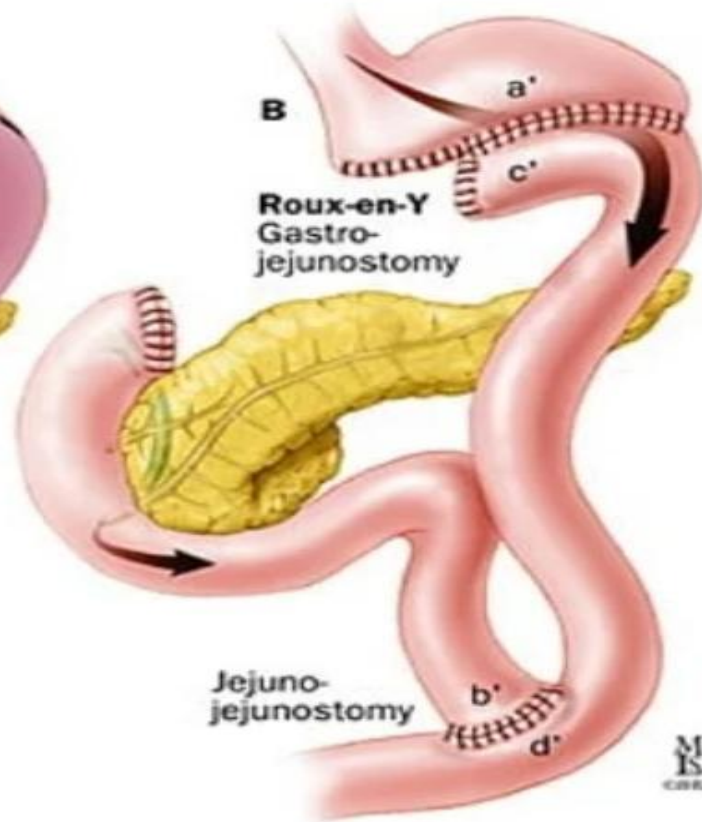
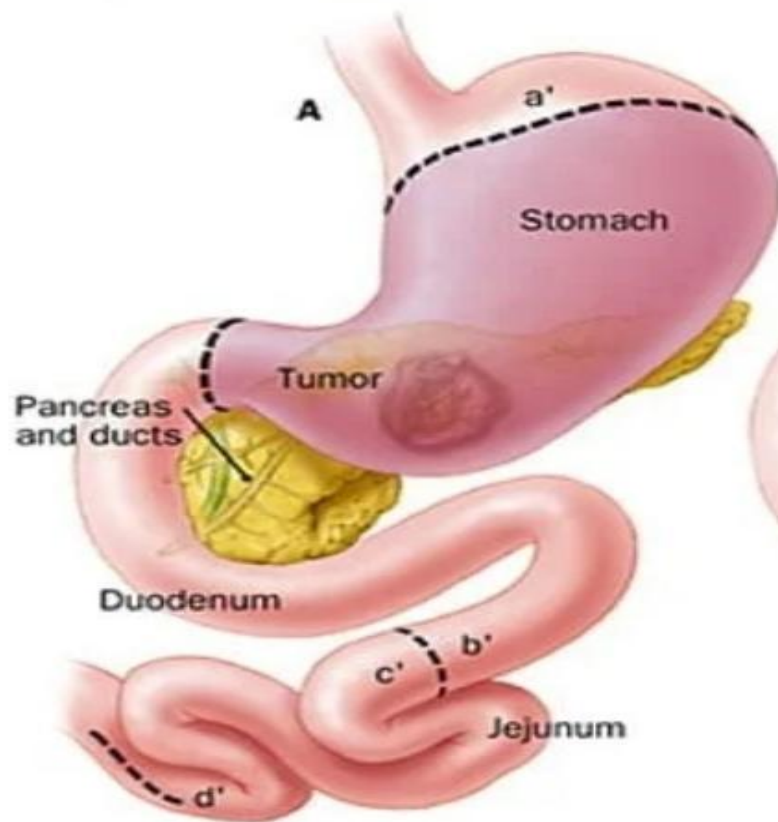
Epirubicin, cisplatin & 5-fluorouracil (3 wks)

6 cycles

Response rate : 40% .

## 3. Radiotherapy:

**Postoperative-radiotherapy:** may decrease the recurrence.



***Thank you***