

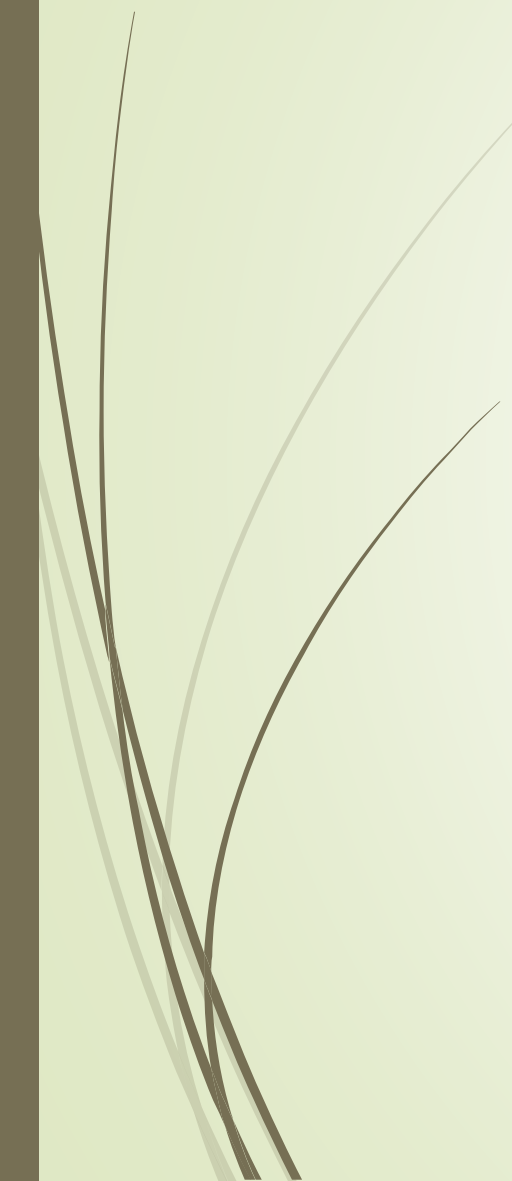
# **Radiology Diseases OF GI TRACT**



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**Consultant Radiologist**

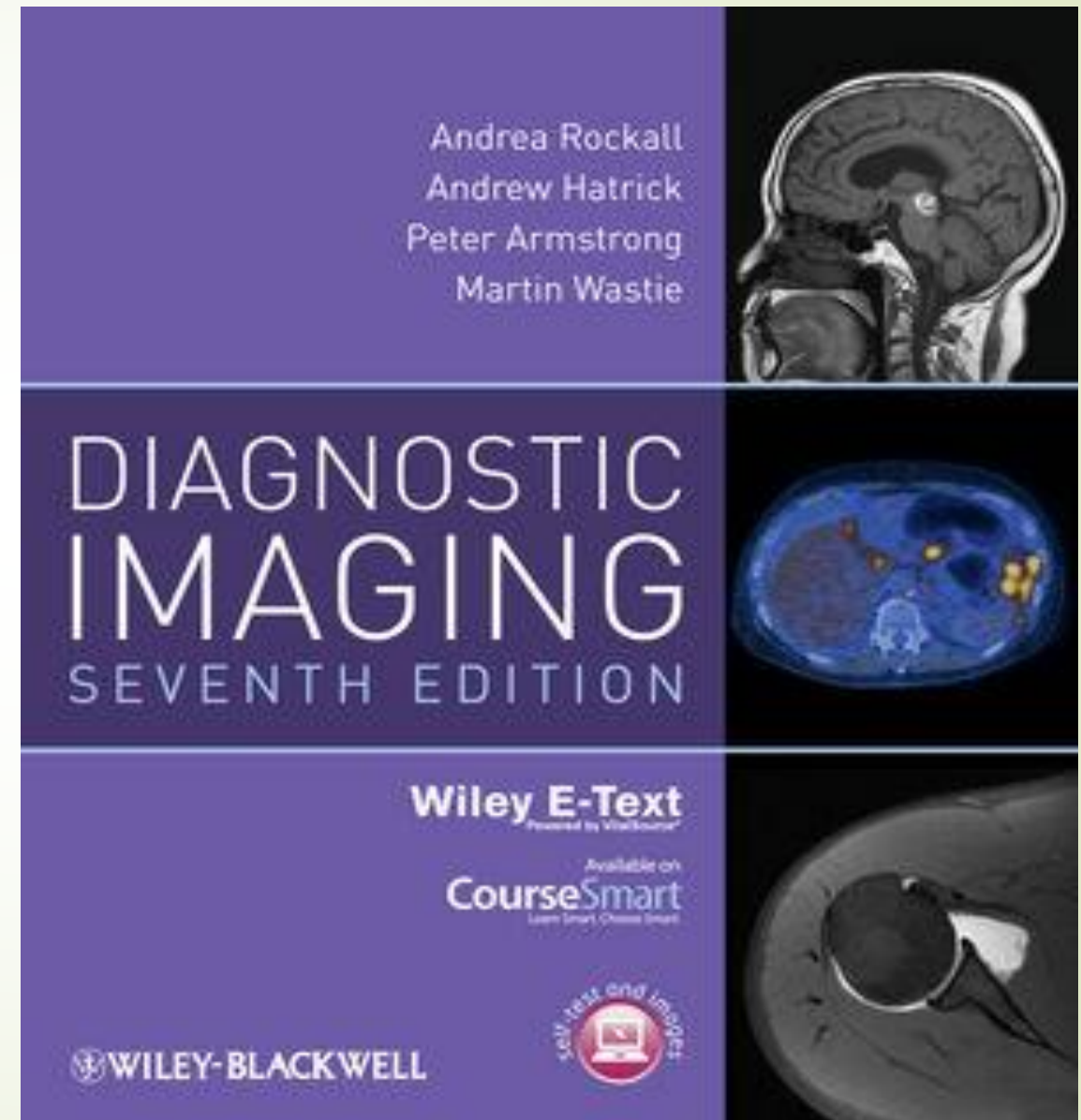


# Objectives:

- To know the common GIT pathologies presentation.
  - To understand step wise approach in requesting GIT radiology investigations.
  - To know common radiological pathologies in GIT.
- 

# Reference:

- Diagnostic imaging:
- Chapter 6





# Esophagus



# Esophagus

## Clinical signs and symptoms:

- ▶ Dysphagia.
- ▶ Odynophagia (Pain oropharynx).
- ▶ Chest pain (Regurgitations).
- ▶ Vomiting.
- ▶ Recurrent chest infection (TOF).
- ▶ Age is also important (some diseases are common in specific age)
- ▶ Constitution symptoms ( fever, sweating and weight loss)



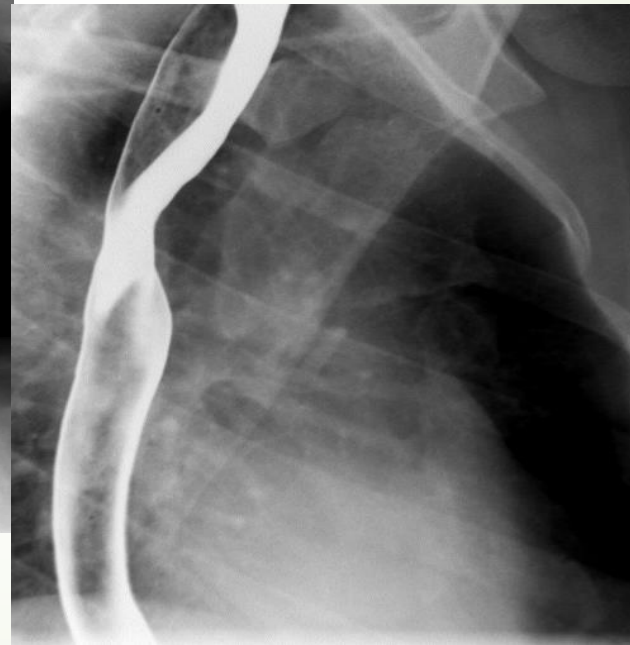
# Esophagus

## IMAGING MODALITIES:

- X-RAY.
- FLUOROSCOPY ( CONTRAST DYNAMIC STUDY– Barium Swallow).
- CT.
- MRI.
- ULTRASOUND.
- NUCLEAR MEDICINE.
- ANGIOGRAPHY.

# Esophagus

## Barium Swallow



Normal study- Double contrast

# Esophagus

## Barium Swallow

► Dysphagia.

Esophageal Stricture

### Benign Stricture

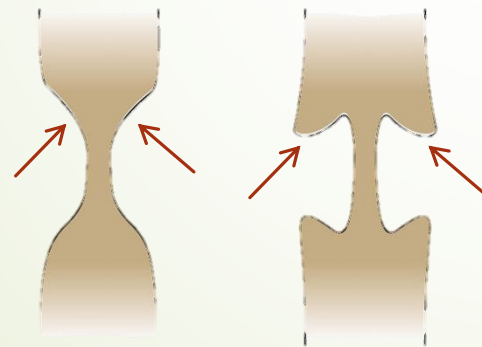
Corrosive Esophageal Stricture

Peptic Esophagitis Stricture

Achalasia

### Malignant Stricture

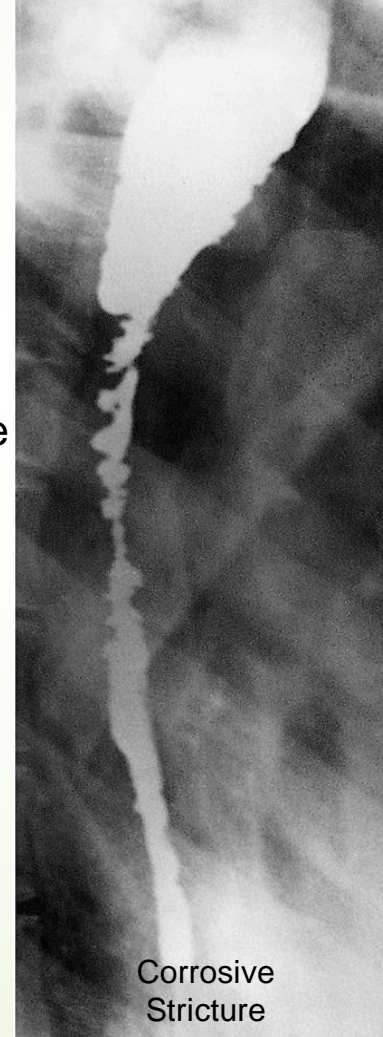
Esophageal Carcinoma Stricture



Esophageal Stricture

(a) Tapering ends- benign

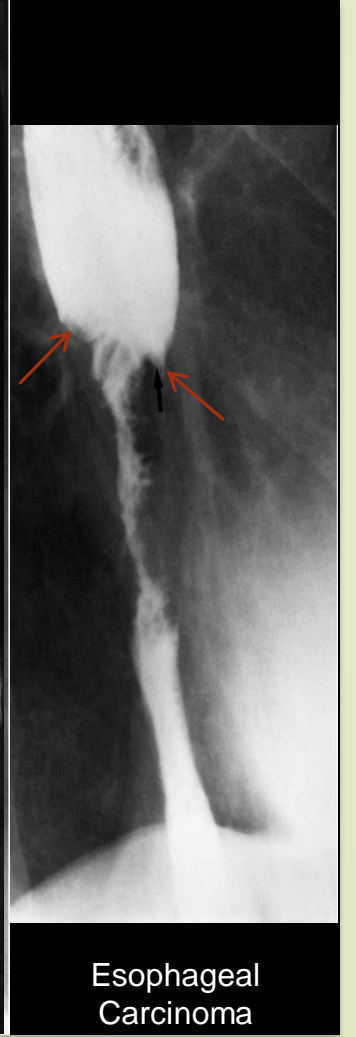
(b) Overhanging edges- shouldering-- malignant



Corrosive Stricture



Peptic Esophagitis



Esophageal Carcinoma

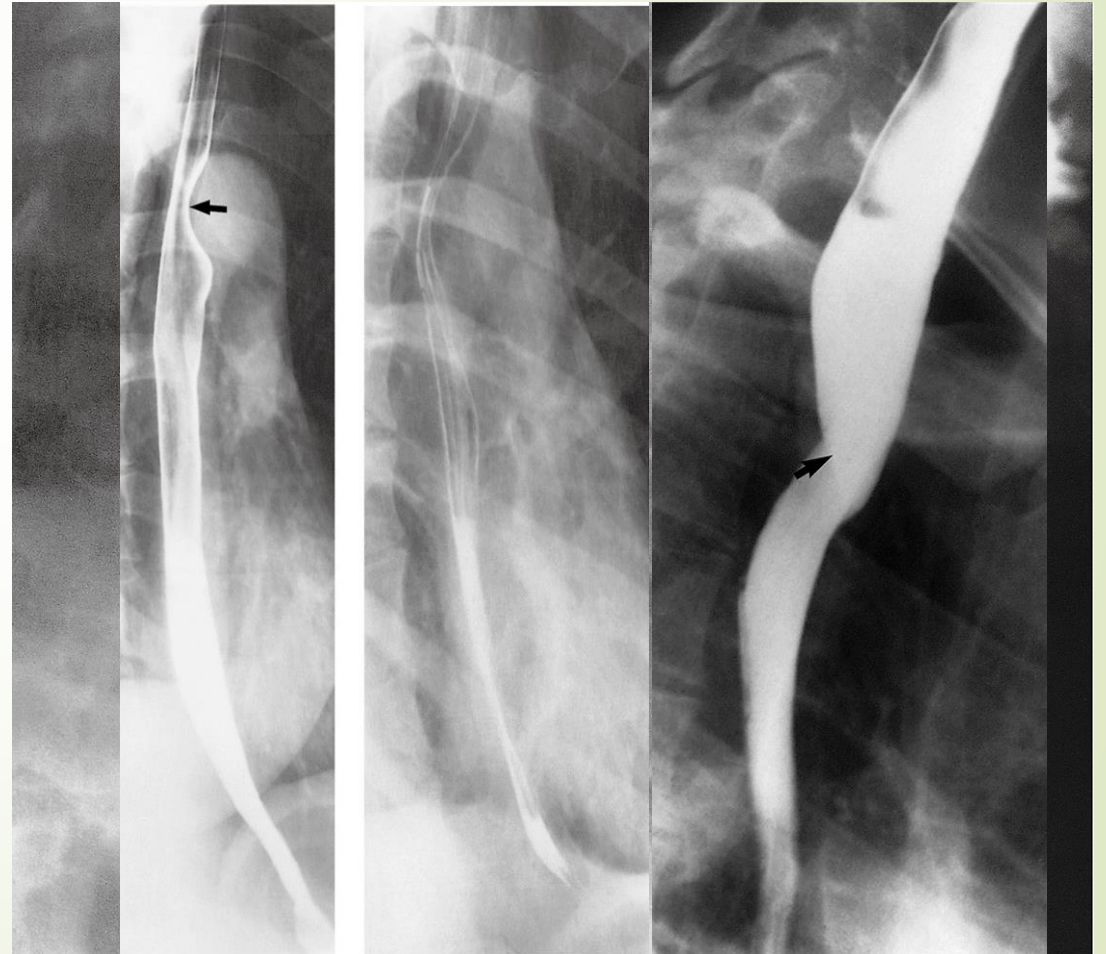


# Esophagus

## Barium Swallow

➤ Dysphagia.

Esophageal Web/Diverticulum





# Stomach



# Stomach

## Clinical signs and symptoms:

- ▶ Epigastric pain.
- ▶ Vomiting
- ▶ hematemesis.
- ▶ Age is also important (some diseases are common in specific age)
- ▶ Constitution symptoms ( fever, sweating and weight loss)



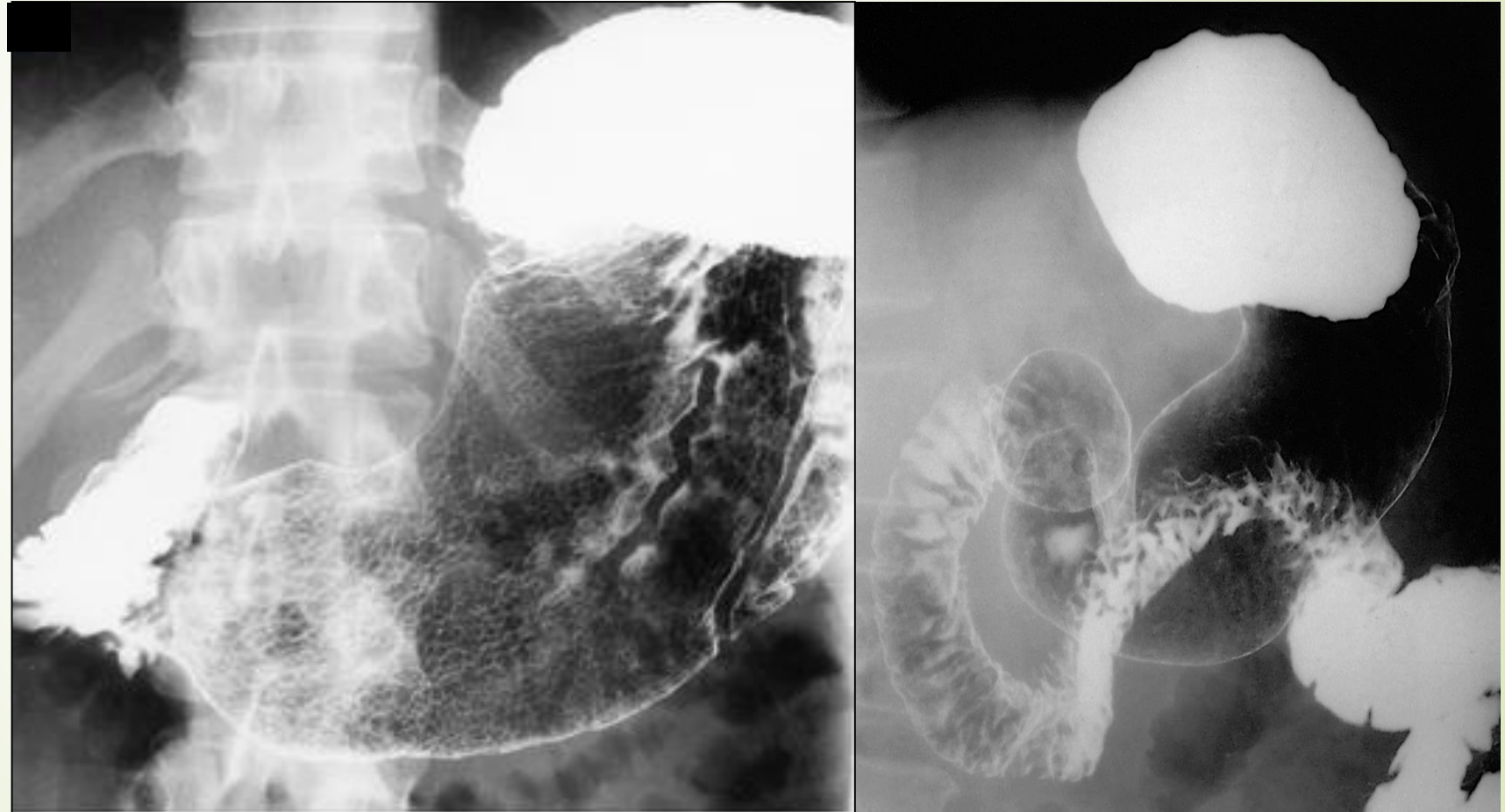
# Stomach

## IMAGING MODALITIES:

- X-RAY.
- FLUOROSCOPY (Barium Meal).
- CT.
- MRI.
- ULTRASOUND.
- NUCLEAR MEDICINE.
- ANGIOGRAPHY.

# Stomach

## Barium Meal

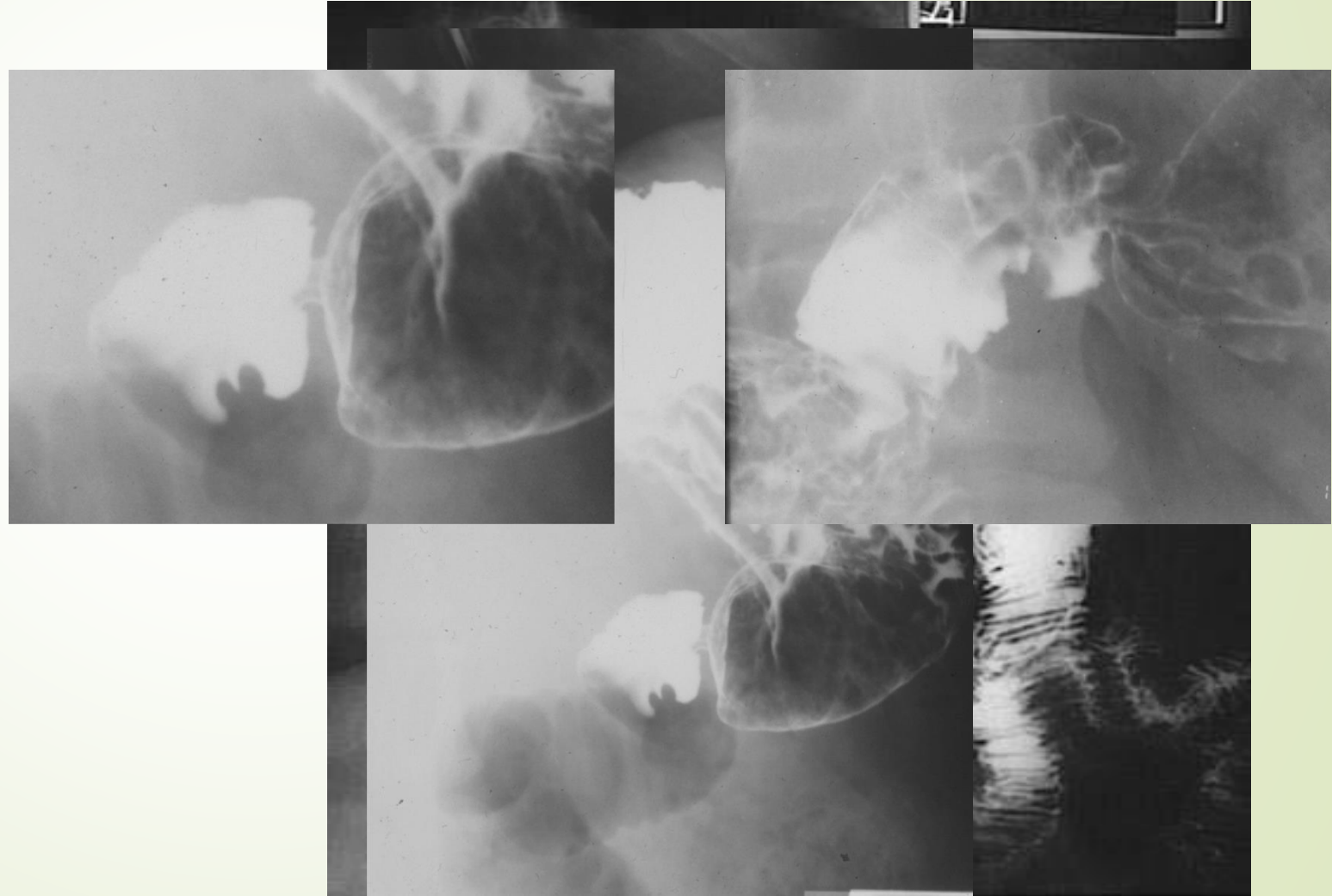


Normal study- Double contrast

# Stomach

## Barium Meal

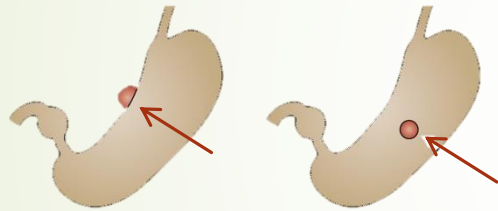
Epigastric Pain  
Peptic Ulcer Disease  
Duodenal Ulcer



# Stomach

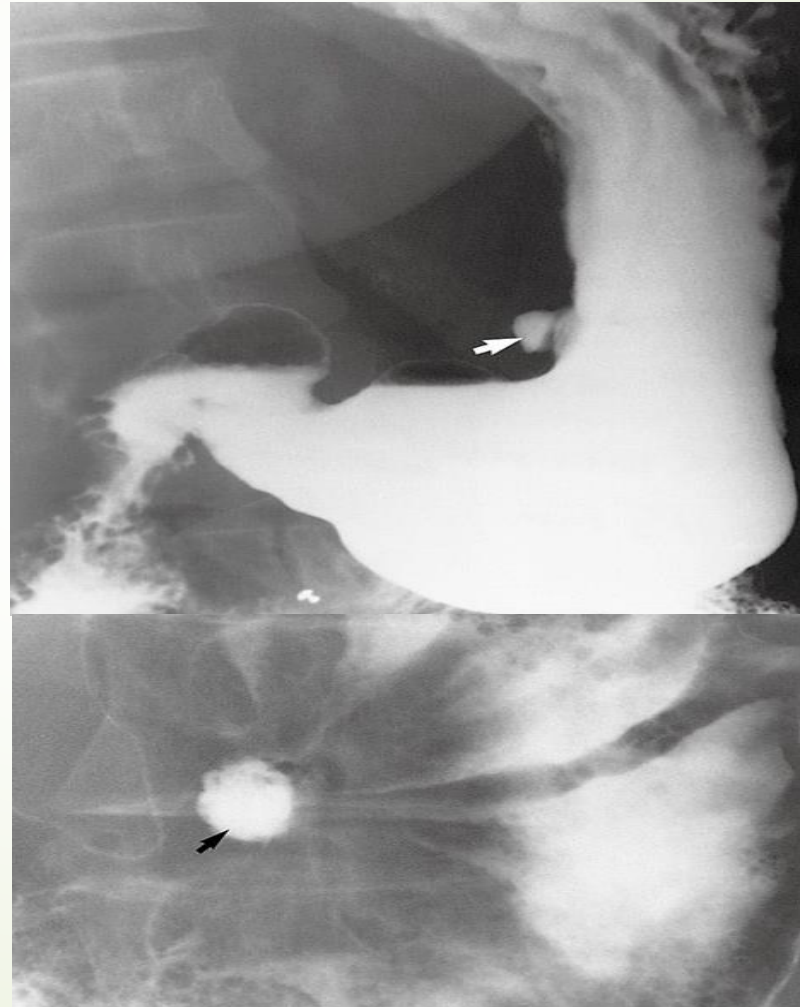
Epigastric Pain

Gastric Ulcer



Ulceration. (a) In profile the ulcer is seen as an outward projection (arrow). (b) *En face* the ulcer appears rounded (arrow).

## Barium Meal



# Stomach

Epigastric Pain

## Barium Meal



Gastric Carcinoma

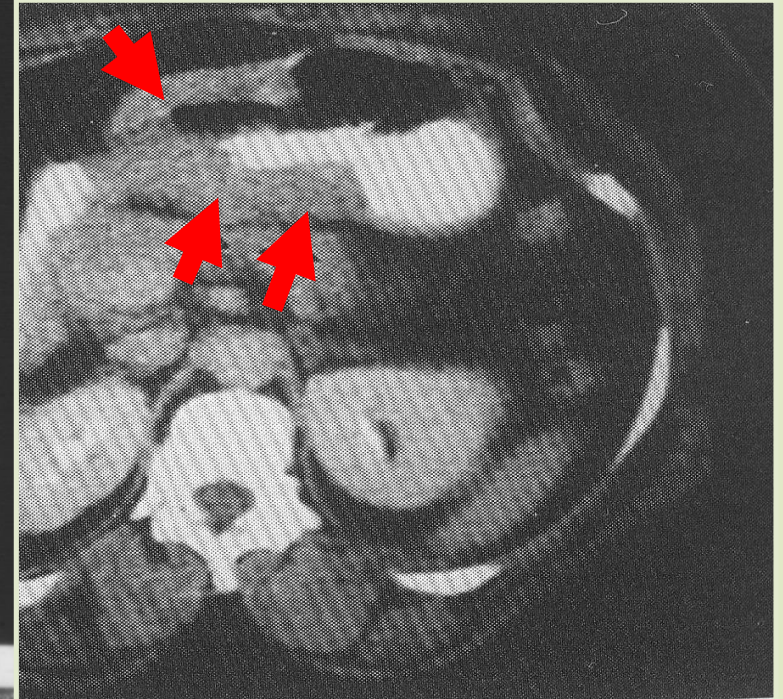
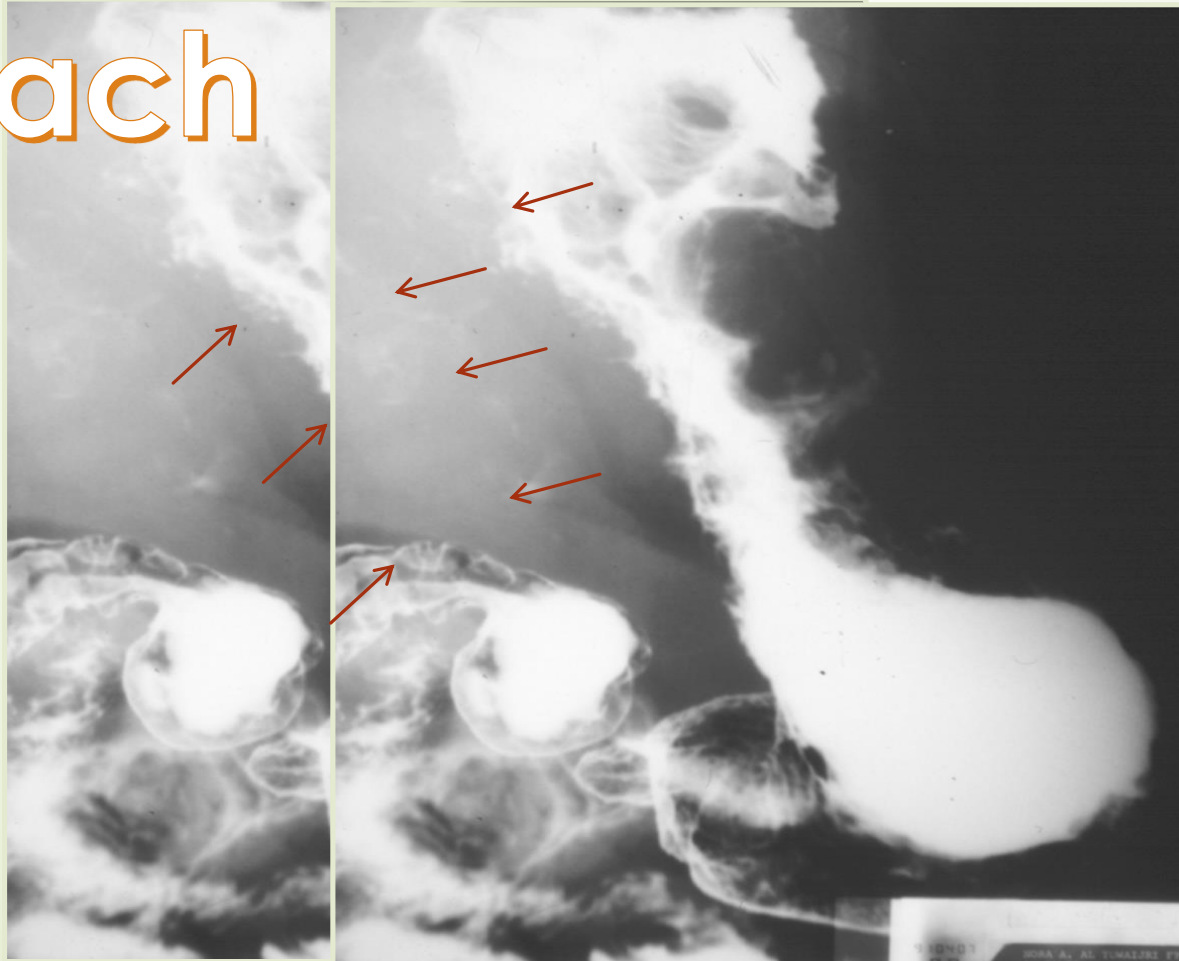




Epigastric Pain

# Stomach

## Barium Meal



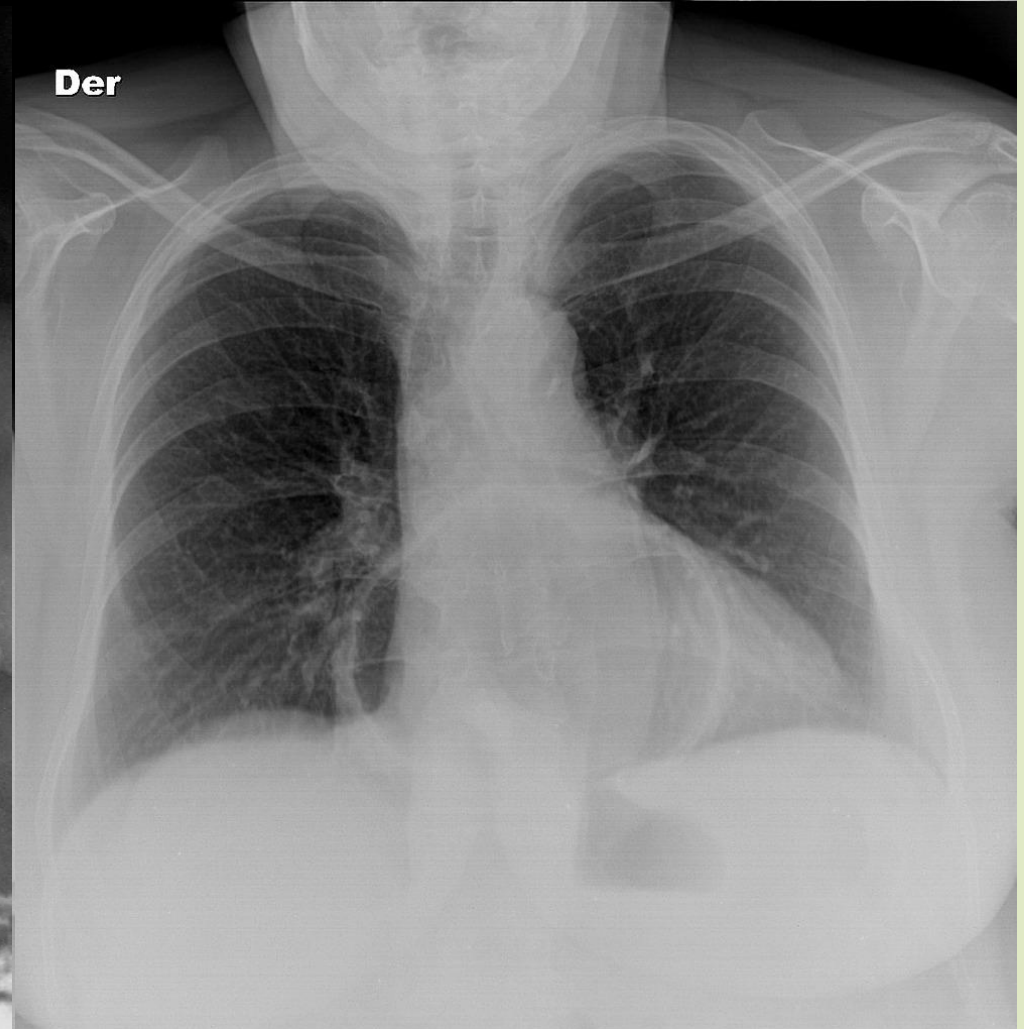
Gastric Lymphoma



Epigastric Pain

# Barium Meal

# Stomach



Sliding hiatal hernia



# Small bowels



# Small bowels

## Clinical signs and symptoms:

- ▶ Malabsorption.
- ▶ Vomiting.
- ▶ Diarrhea.
- ▶ Age is also important (some diseases are common in specific age)
- ▶ Constitution symptoms ( fever, sweating and weight loss)



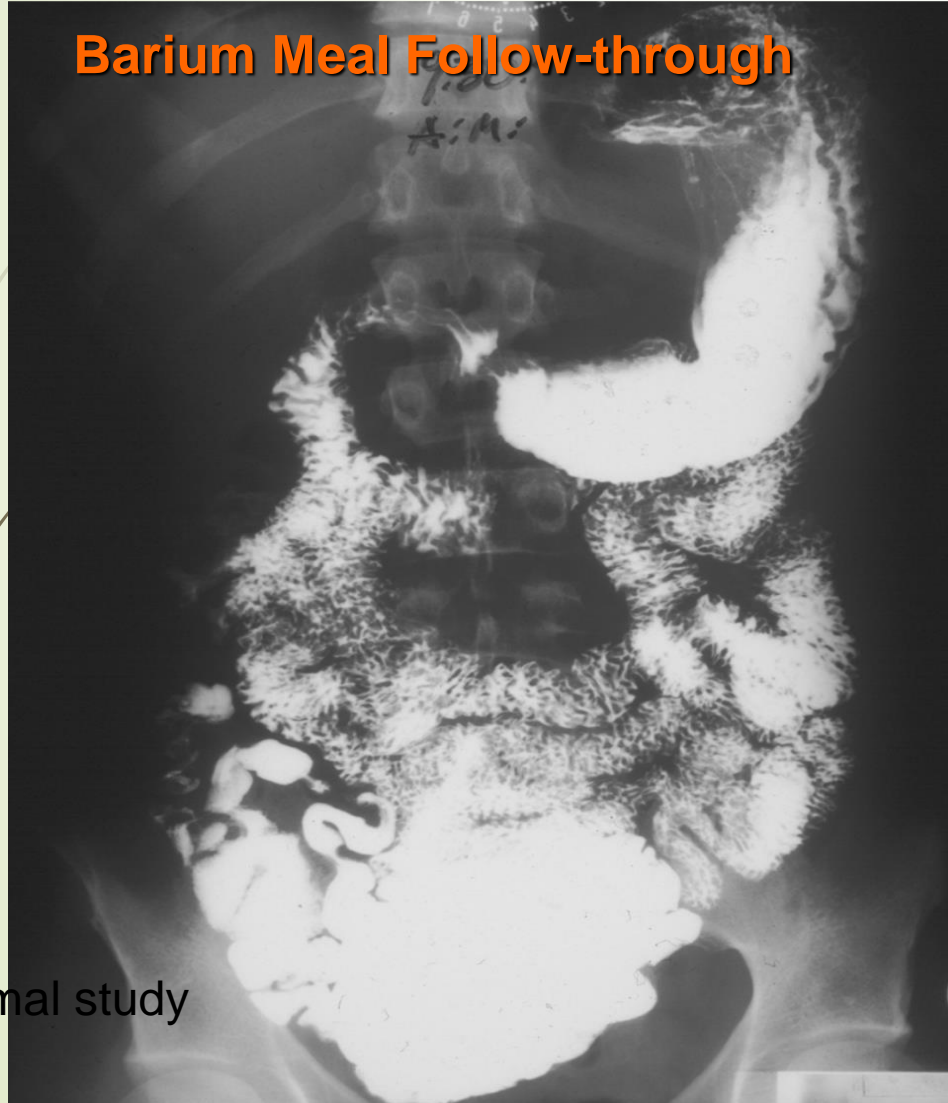
# Small bowels

## IMAGING MODALITIES:

- X-RAY.
- FLUOROSCOPY (Barium follow through/Small bowel enema).
- CT.
- MRI.
- ULTRASOUND.
- NUCLEAR MEDICINE.
- ANGIOGRAPHY.

# Small bowels

Barium Meal Follow-through



Small Bowel enema

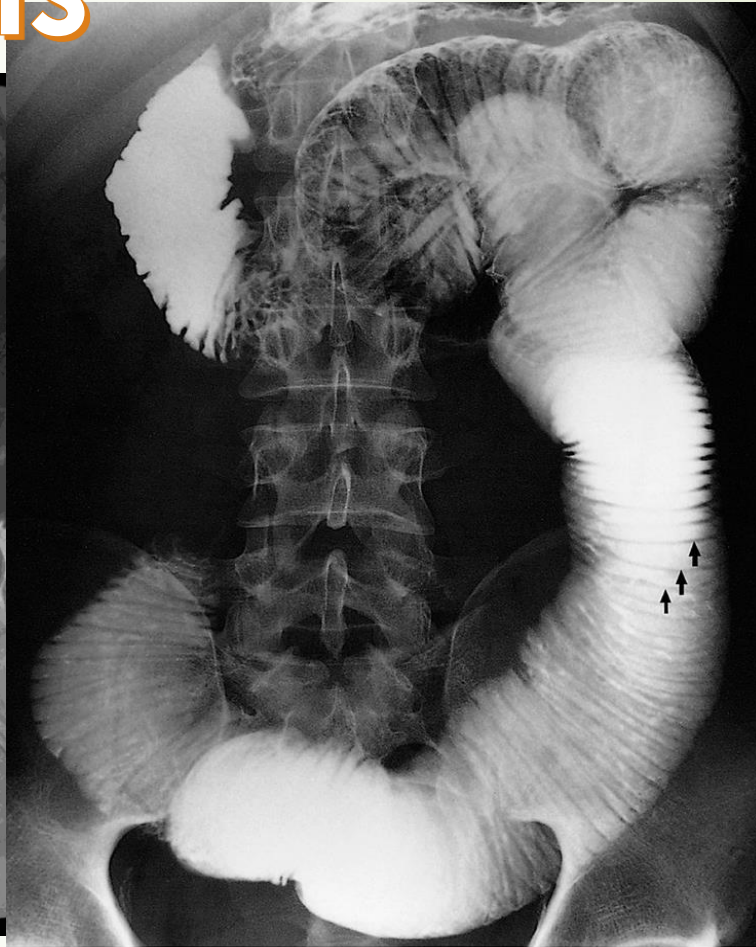
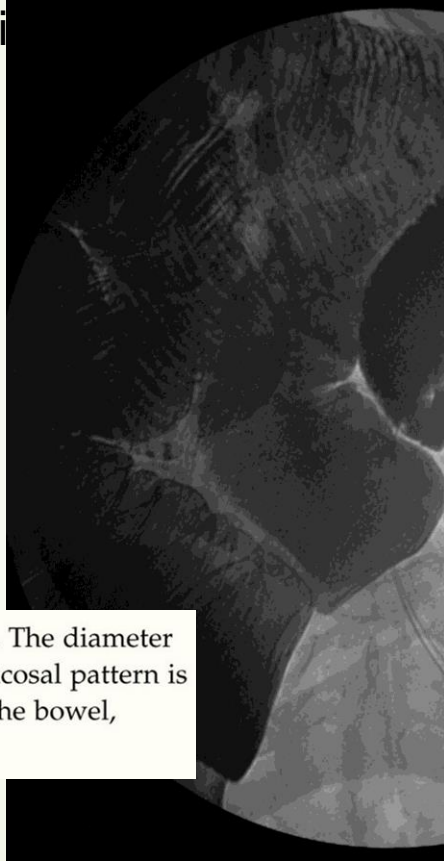


# Small bowels

Abdominal Pain & Distension  
Small Bowel enema

Small Bowel Obstruction  
Adhesion

Dilatation from small bowel obstruction. The diameter of the bowel is greatly increased. The feathery mucosal pattern is lost and the folds appear as thin lines traversing the bowel, known as valvulae conniventes (arrows).

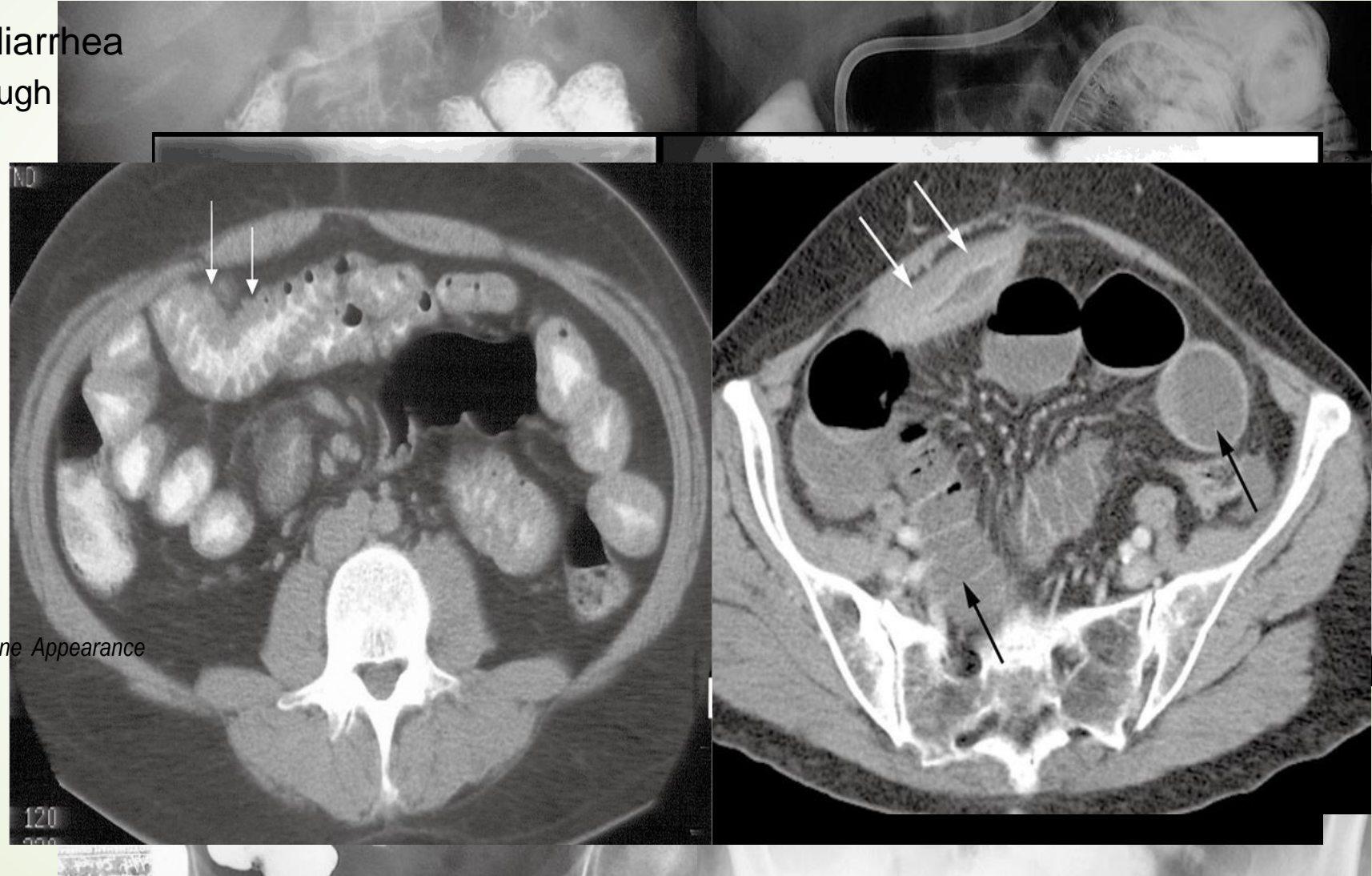


# Small bowels

Abdominal Pain & weight loss and diarrhea  
Small Bowel enema/ follow through

Small Bowel Inflammatory process  
Crohn's disease

*FINDINGS:*  
*Lumen narrowing & multiple stenotic segments (skip lesion)*  
*Deep Ulceration with mucosal edema in between → Cobblestone Appearance*  
*Bowel loop separation (fibrofatty proliferation)*



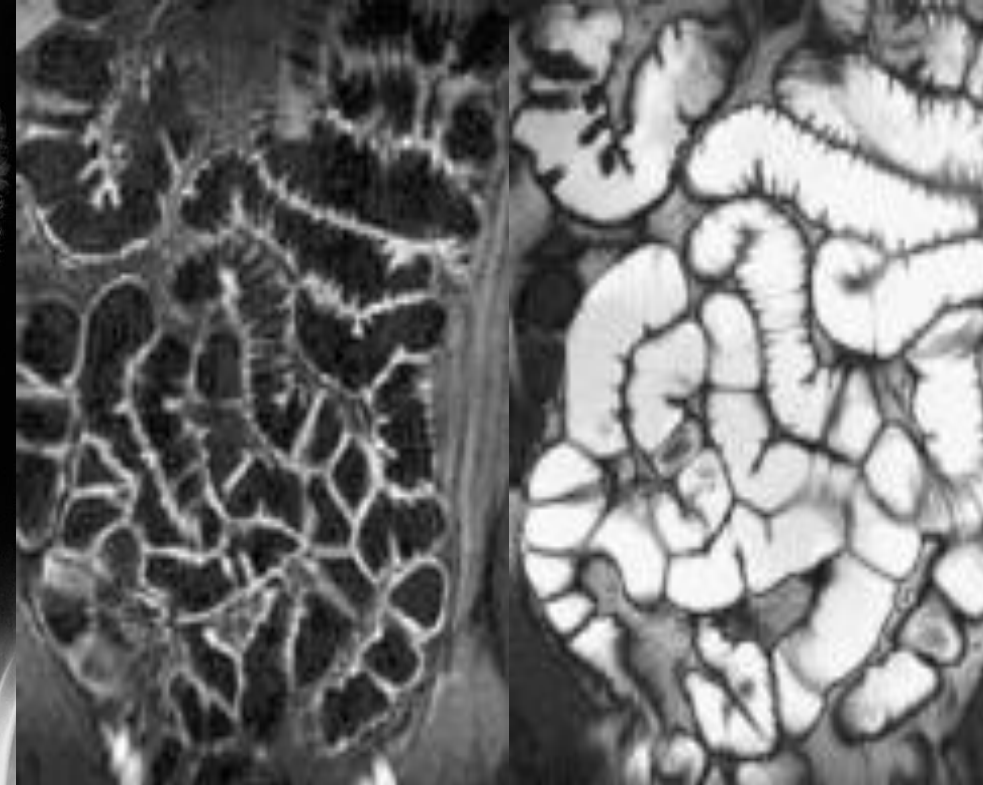


# Small bowels

Abdominal Pain & weight loss and diarrhea  
SB enema / MR Enterography



Small Bowel Enema



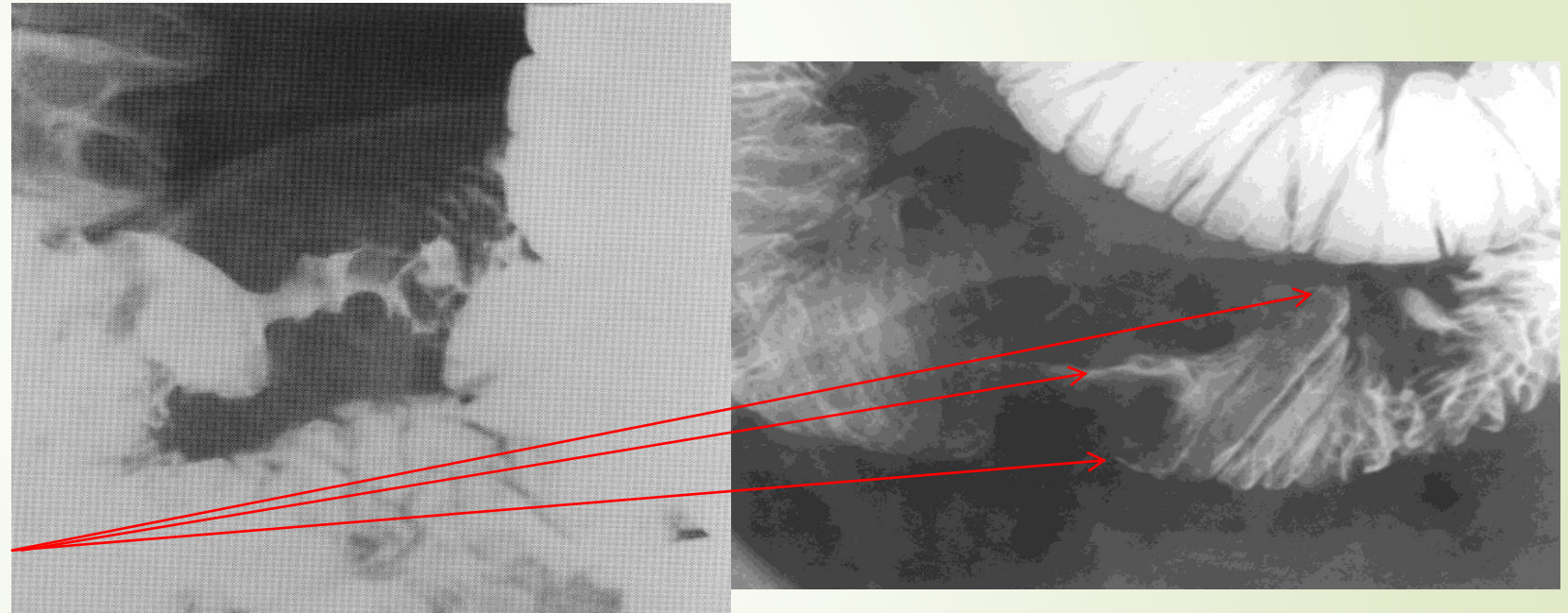
MR Enterography

Small Bowel Inflammatory process  
Crohn's disease

# Small bowels

GI Bleeding & weight loss  
SB enema

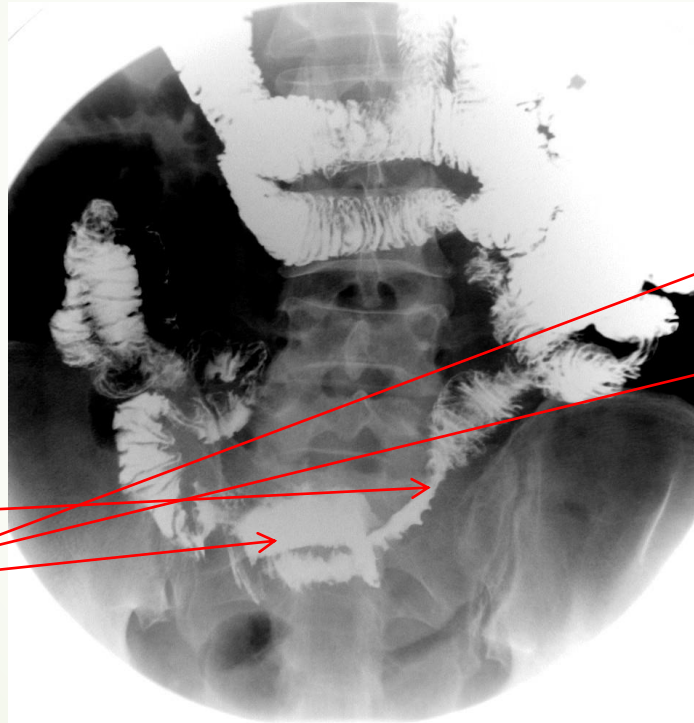
*FINDINGS:  
Lumen narrowing irregular with ulceration & shouldering margins*



Small Bowel Carcinoma

# Small bowels

GI Bleeding & weight loss  
SB enema



*FINDINGS:*

*Lumen narrowing irregular*

*Mural wall thickening & bowel separation*

*Aneurysmal dilatation*

Small Bowel Lymphoma



# Large bowels



# Large bowels

## Clinical signs and symptoms:

- ▶ Abdominal pain.
- ▶ Diarrhea.
- ▶ Hematochezia.
- ▶ Vomiting.
- ▶ Anal pain and discharge.
- ▶ Age is also important (some diseases are common in specific age)
- ▶ Constitution symptoms ( fever, sweating and weight loss)



# Large bowels

## IMAGING MODALITIES:

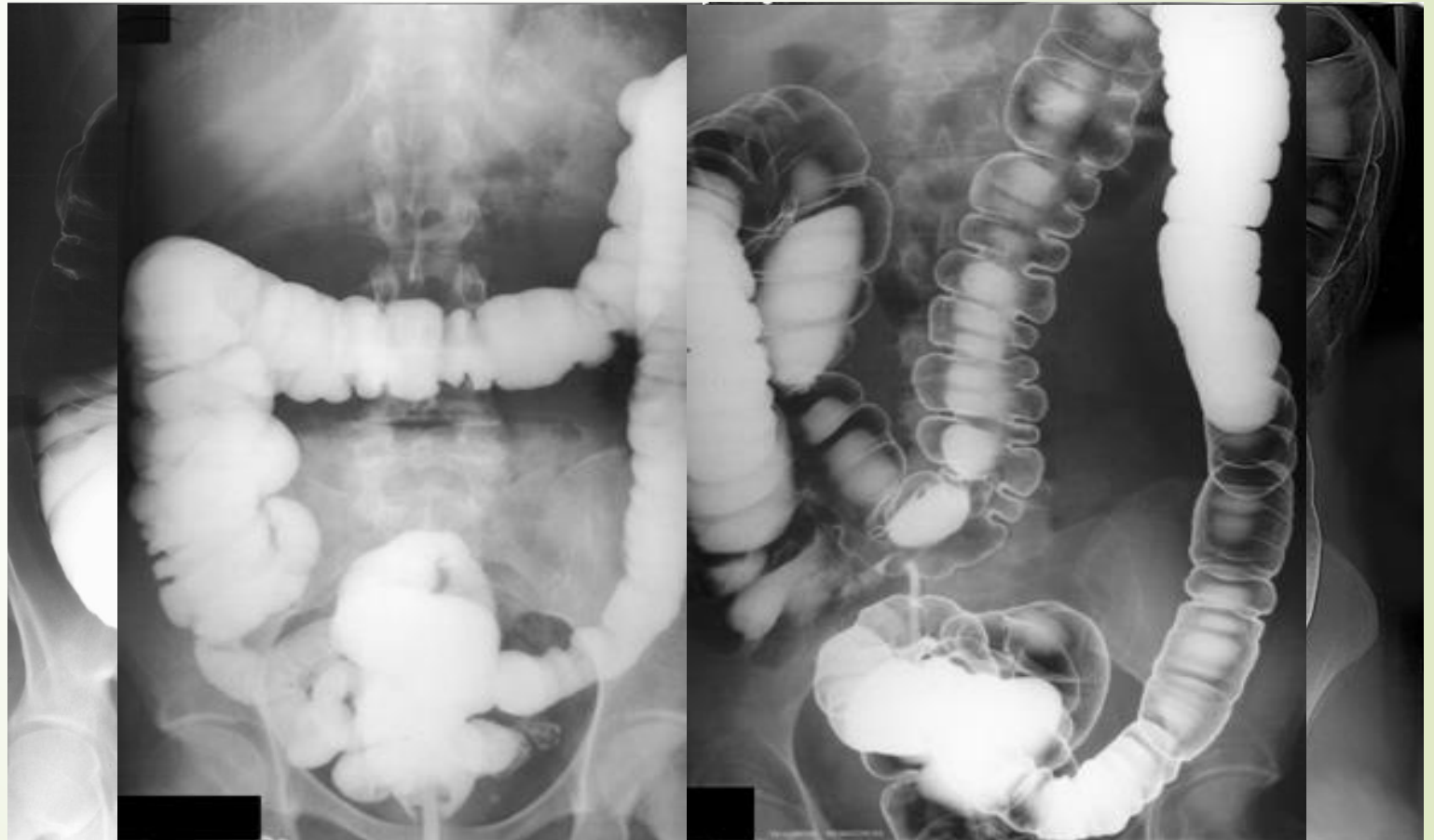
- ▶ X-RAY.
- ▶ FLUOROSCOPY (Barium enema).
- ▶ CT.
- ▶ MRI.
- ▶ ULTRASOUND.
- ▶ NUCLEAR MEDICINE.
- ▶ ANGIOGRAPHY.

# Large bowels

## Barium Enema

Single contrast

Double contrast



Normal study

# Large bowels

## Barium Enema/CT

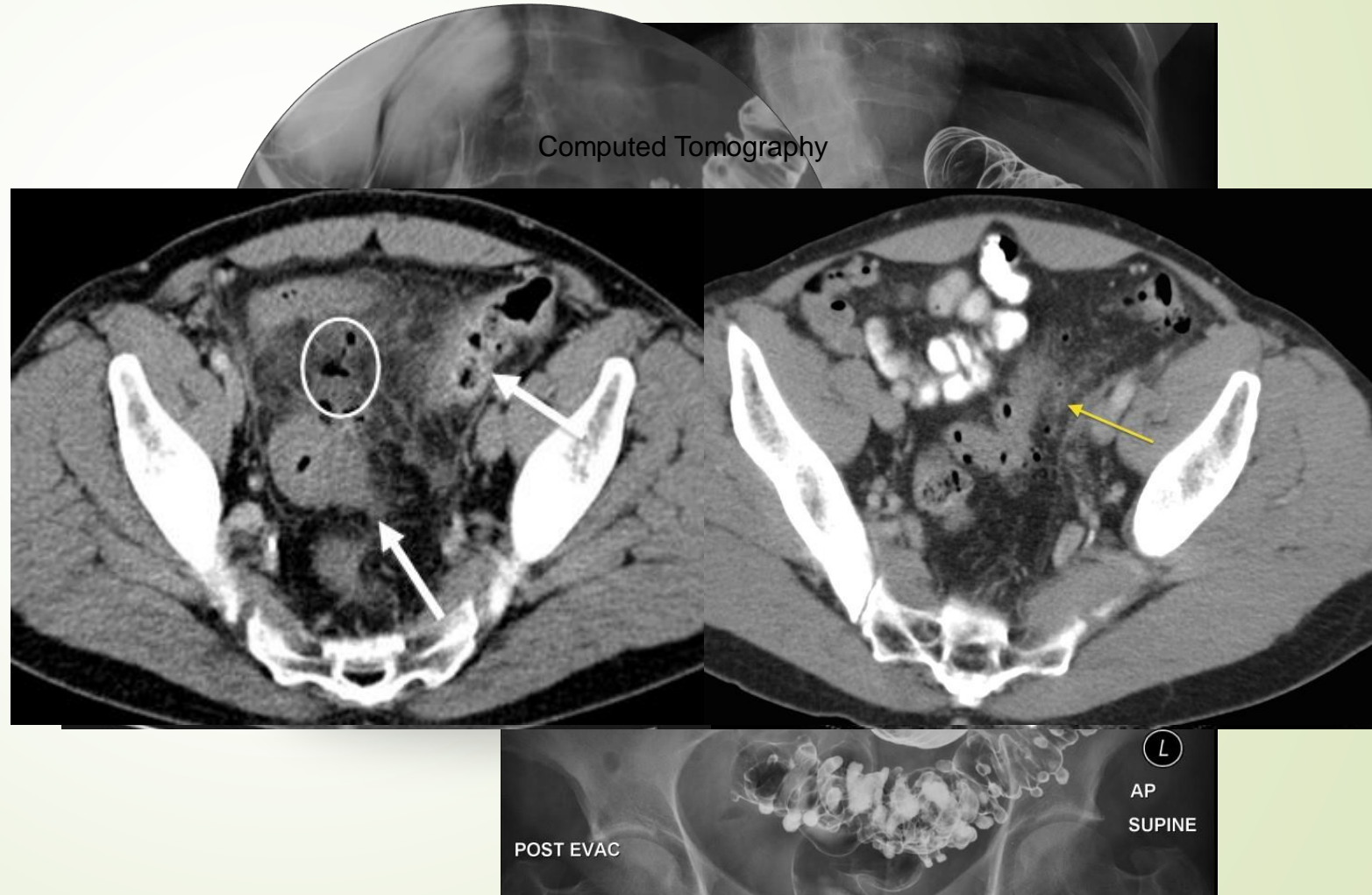
Abdominal Pain  
Barium Enema

Colonic Diverticulosis

Colonic Diverticulitis → Inflammation

Double contrast

Computed Tomography





# Large bowels

## Barium Enema/CT

Abdominal Pain & lower GI bleeding  
B enema

Colonic Polyp

Colonic Polyposis



# Large bowels

## Barium Enema/CT

Abdominal Pain & Diarrhea

B enema

Colonic Ulceration → Inflammation

Single & Double contrast Enema



# Large bowels

## Barium Enema/CT

Abdominal Pain & lower GI bleeding

Barium Enema

Colonic Stricture → Colonic Cancer



Double contrast Enema



# Large bowels

## Barium Enema/CT

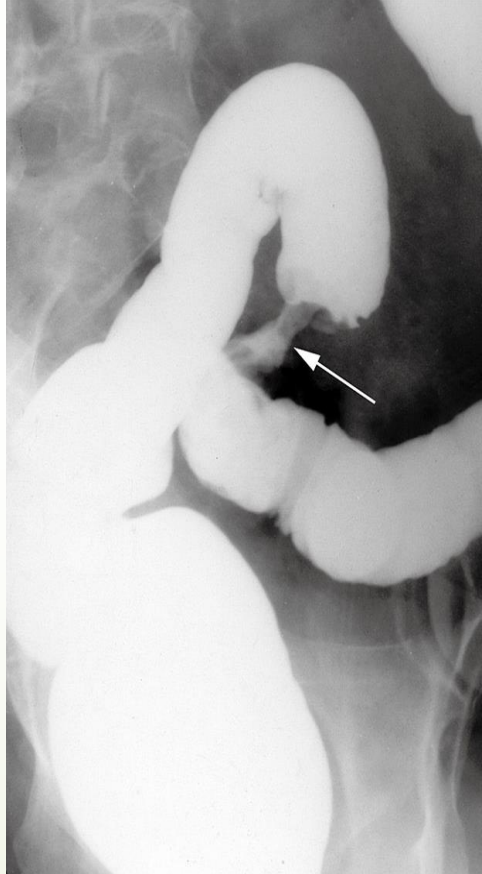
Abdominal Pain & lower GI bleeding

Barium Enema



Colonic Stricture → Colonic Cancer

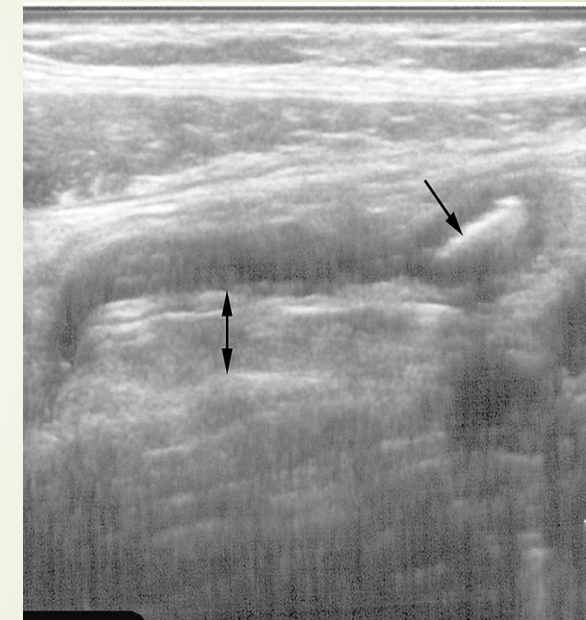
Double contrast Enema



# Large bowels

## Abdomen CT / Ultrasound

RIF pain – Acute Abdomen



Acute appendicitis







THE END

THANK YOU