


Radiology Diseases OF GI TRACT



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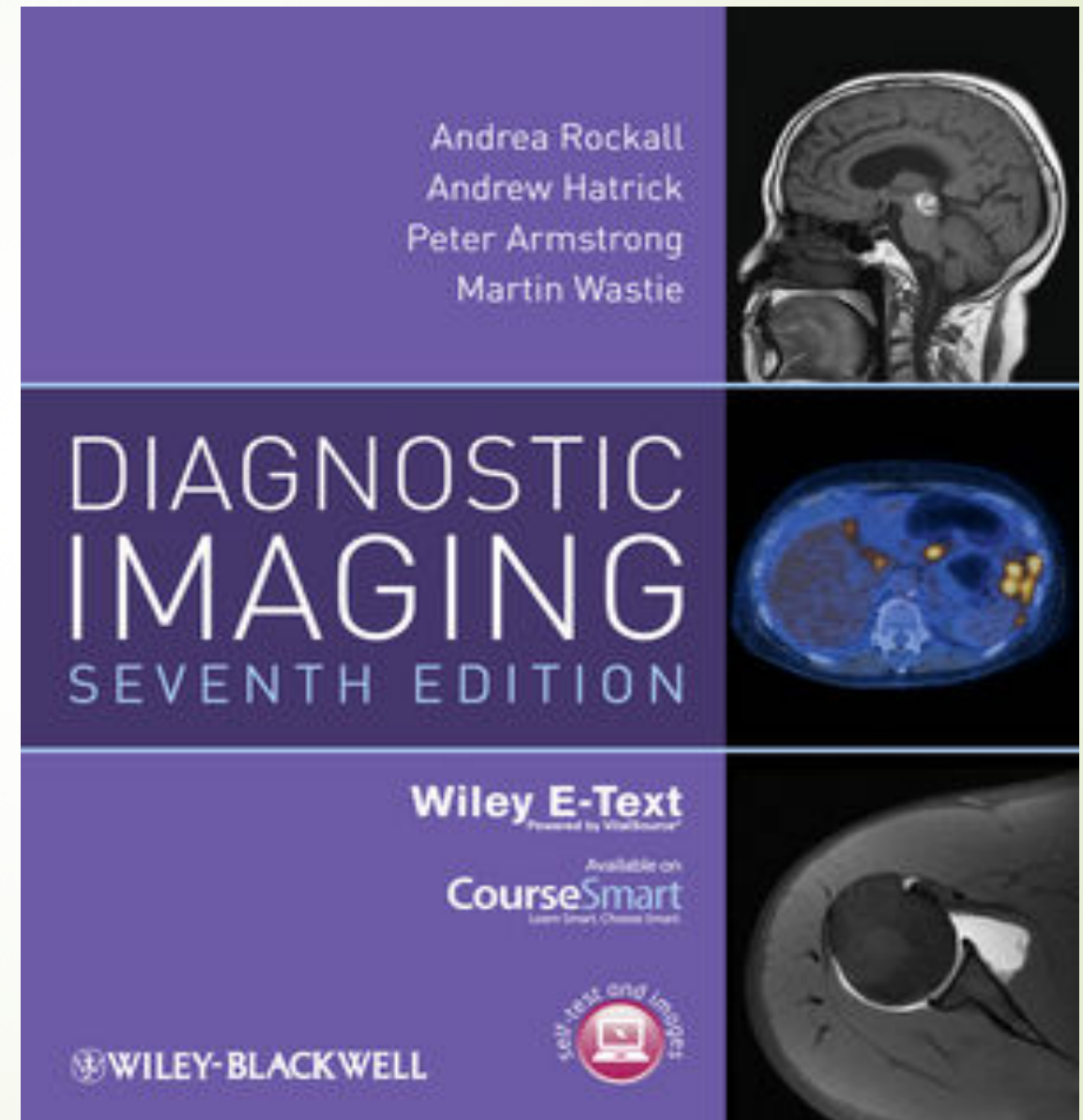


Objectives:

- 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)



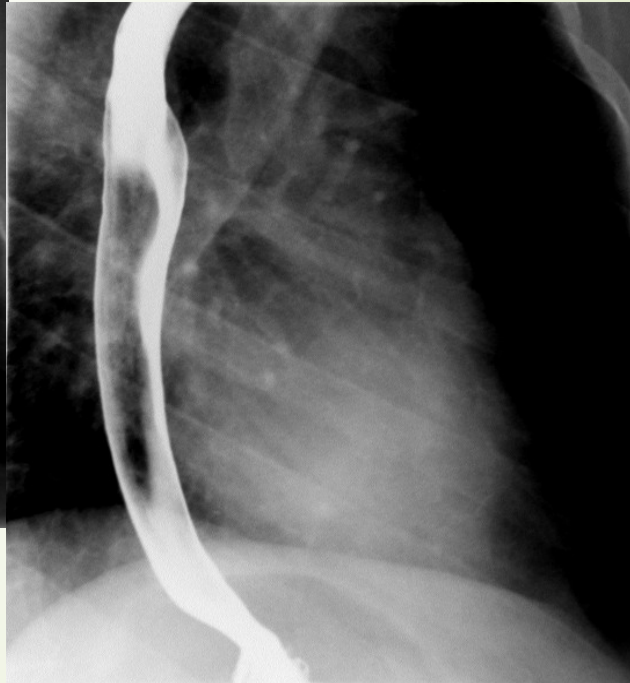
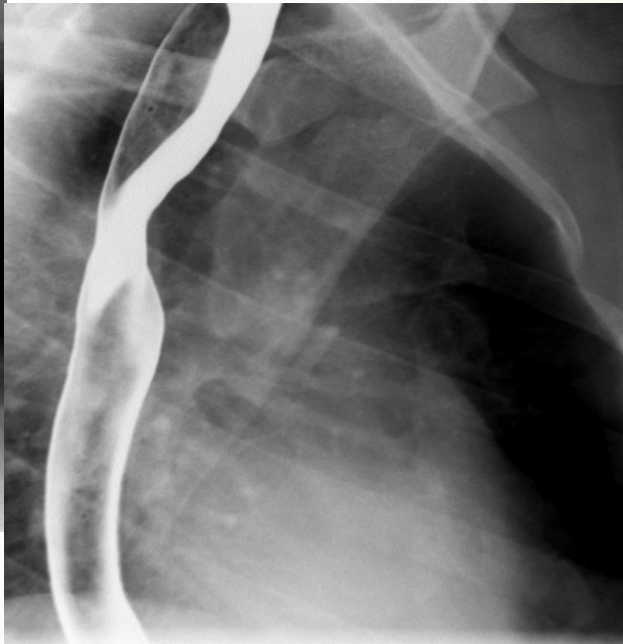
Esophagus

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

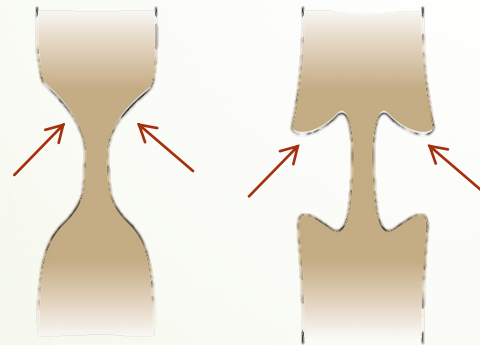
Corrosive Esophageal Stricture

Peptic Esophagitis Stricture

Achalasia

Malignant Stricture

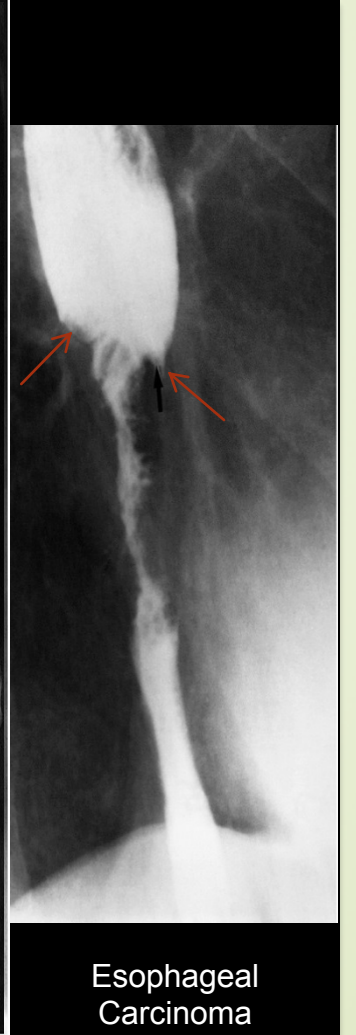
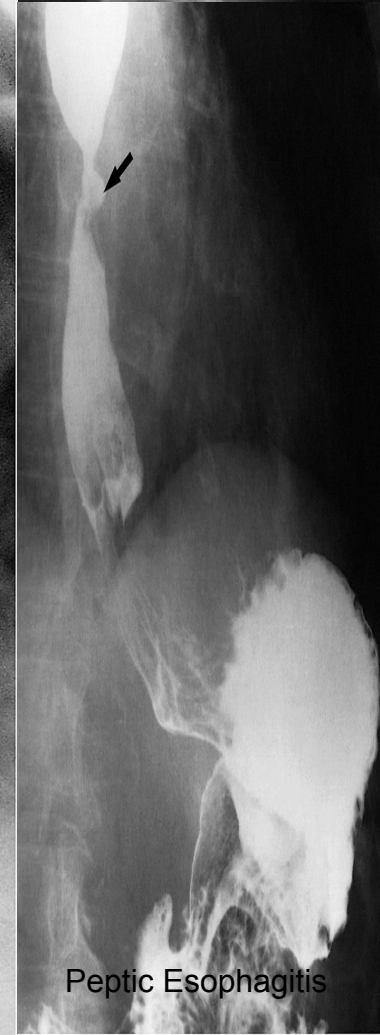
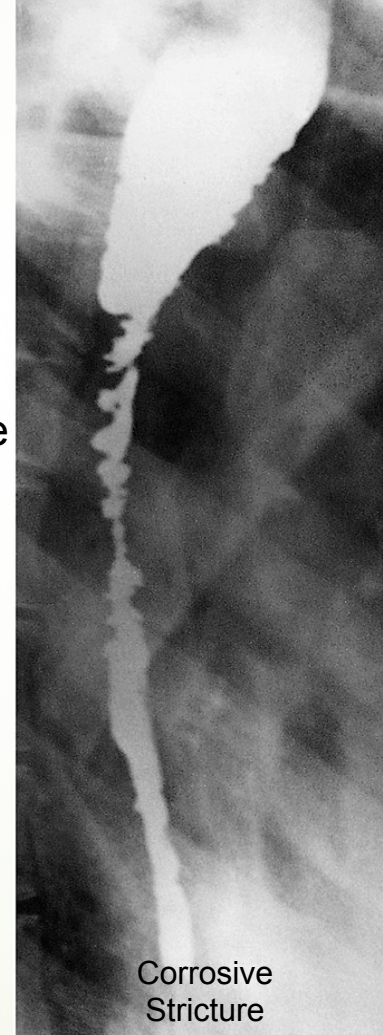
Esophageal Carcinoma Stricture



Esophageal Stricture

(a) Tapering ends- benign

(b) Overhanging edges- shouldering-- malignant

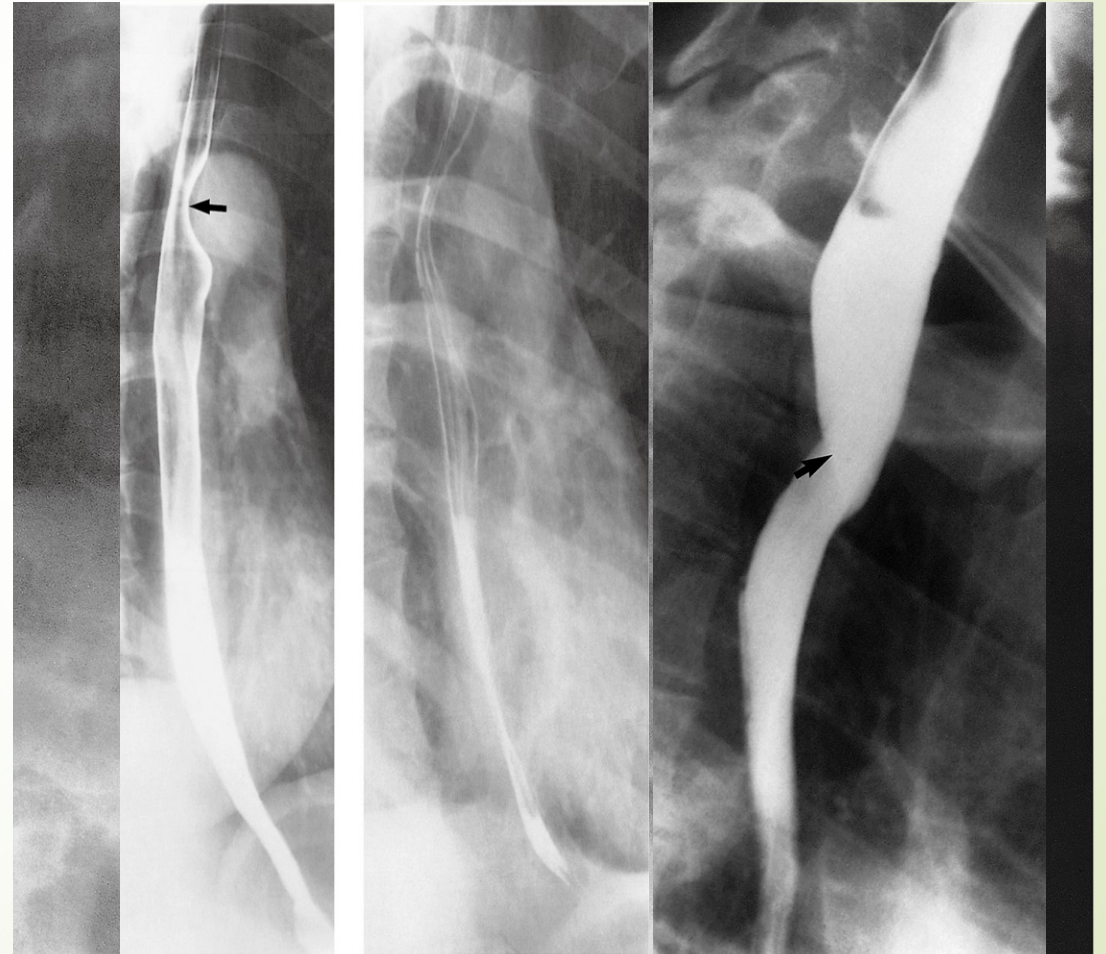


Esophagus

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)



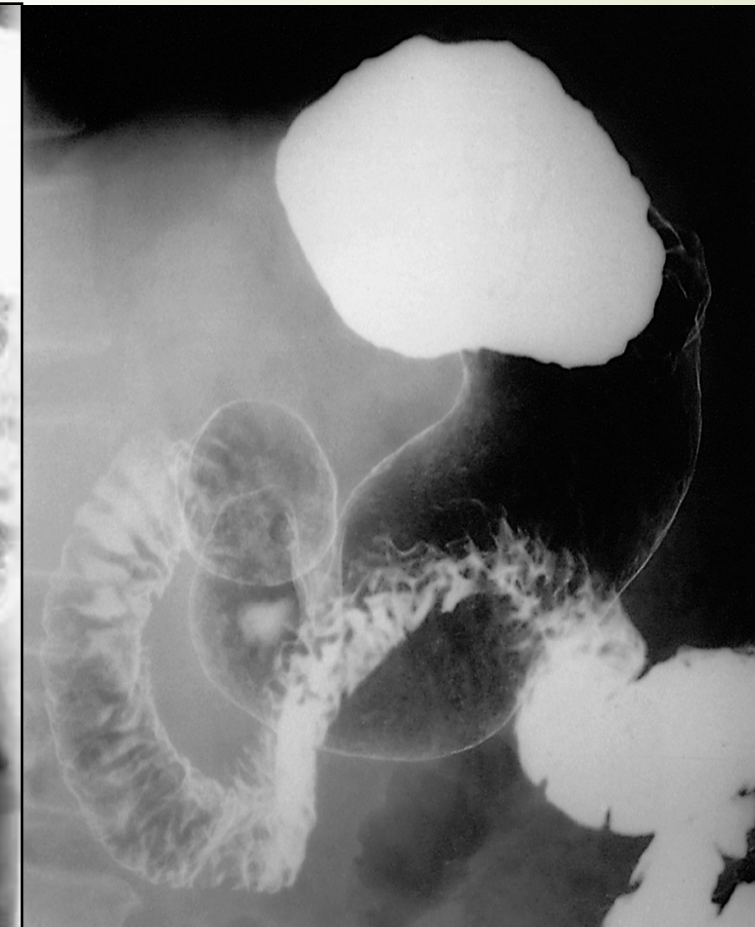
Stomach

IMAGING MODALITIES:

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

Stomach

Barium Meal

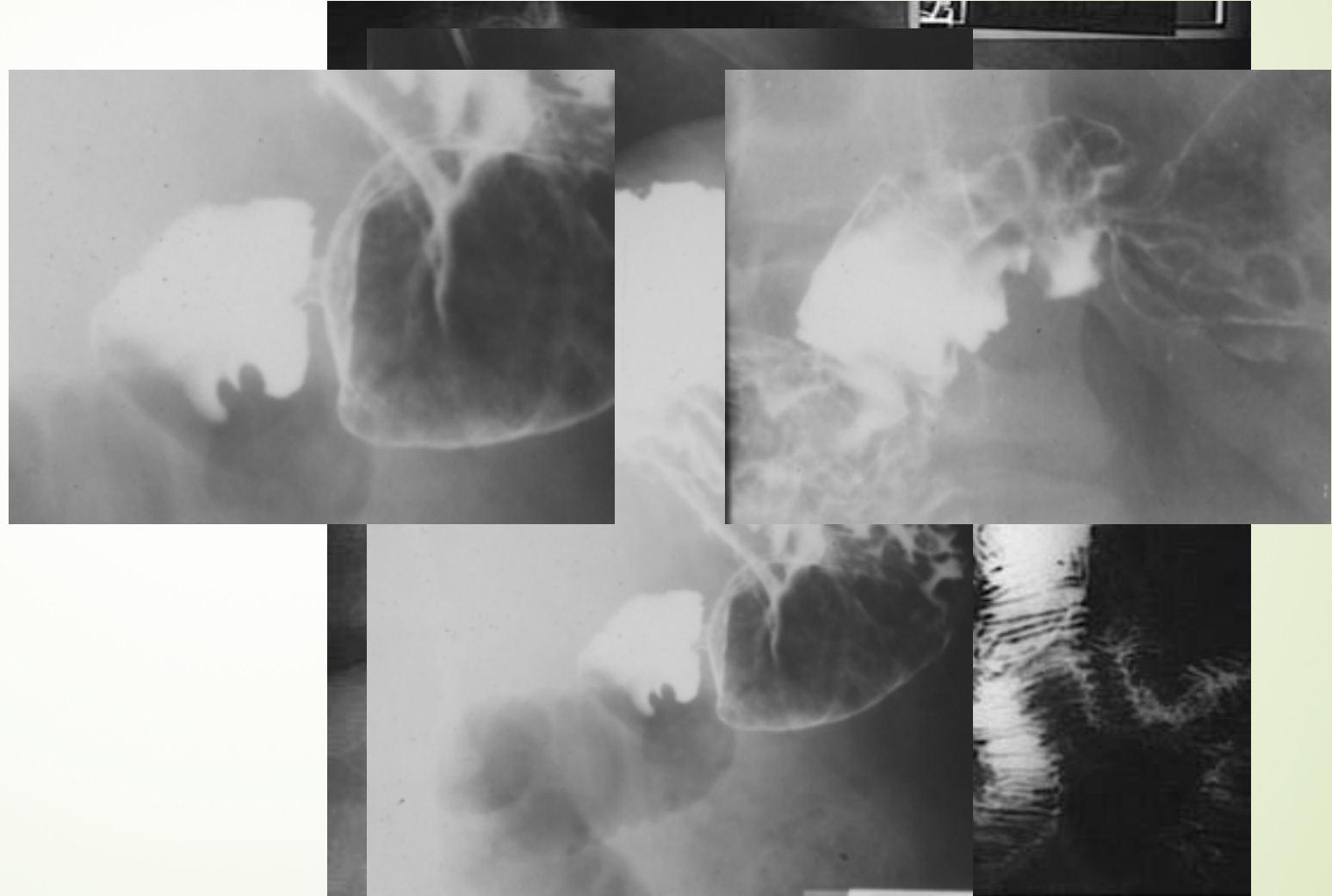


Normal study- Double contrast

Stomach

Barium Meal

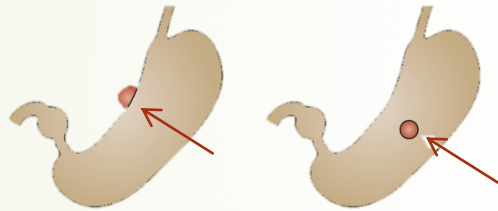
Epigastric Pain
Peptic Ulcer Disease
Duodenal Ulcer



Stomach

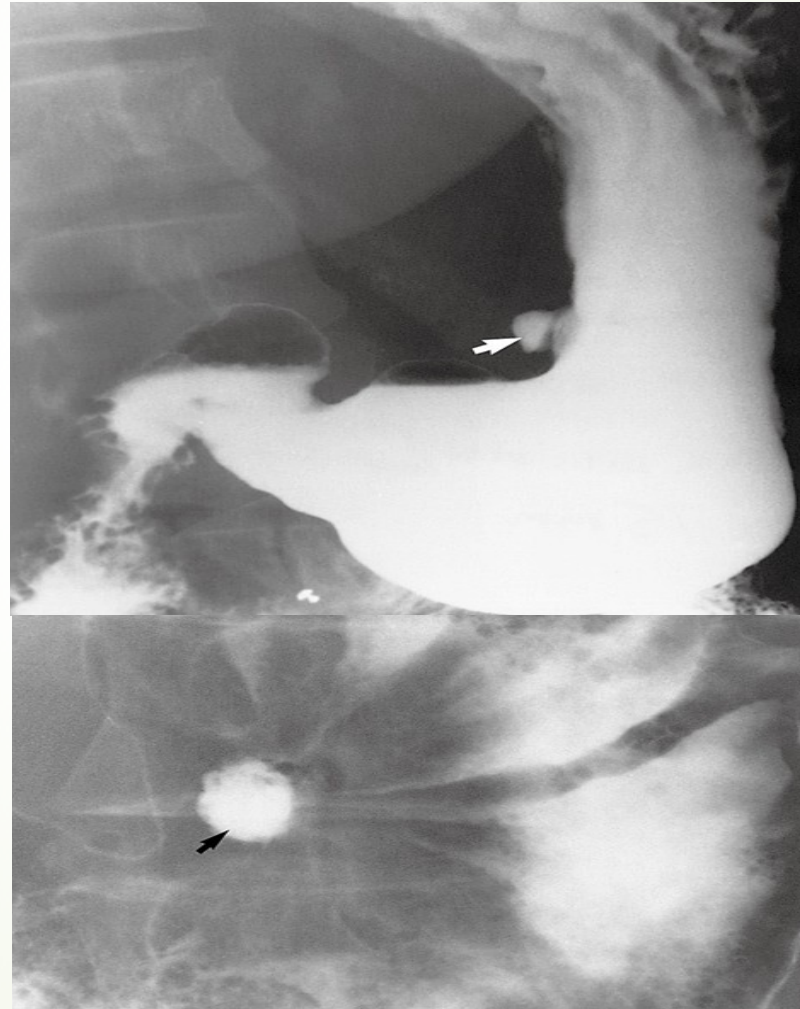
Epigastric Pain

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



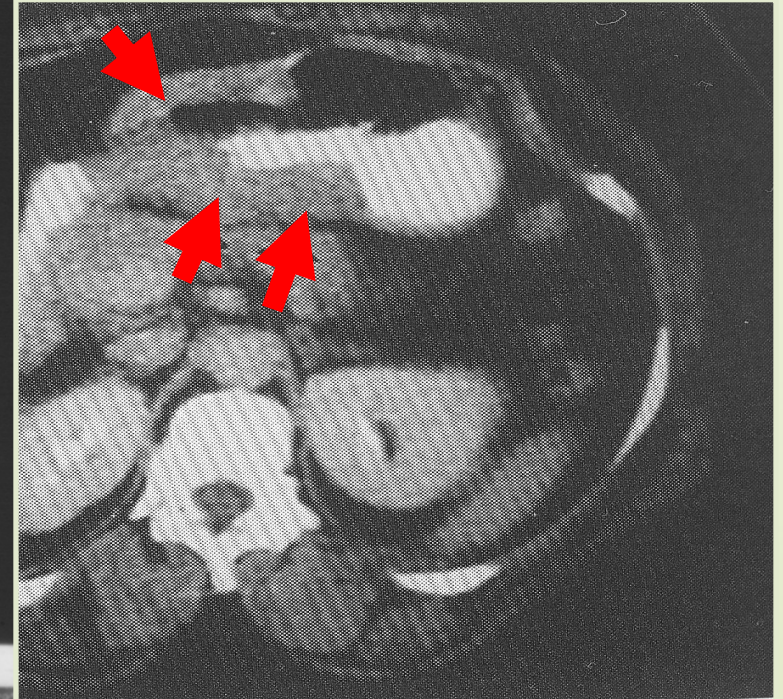
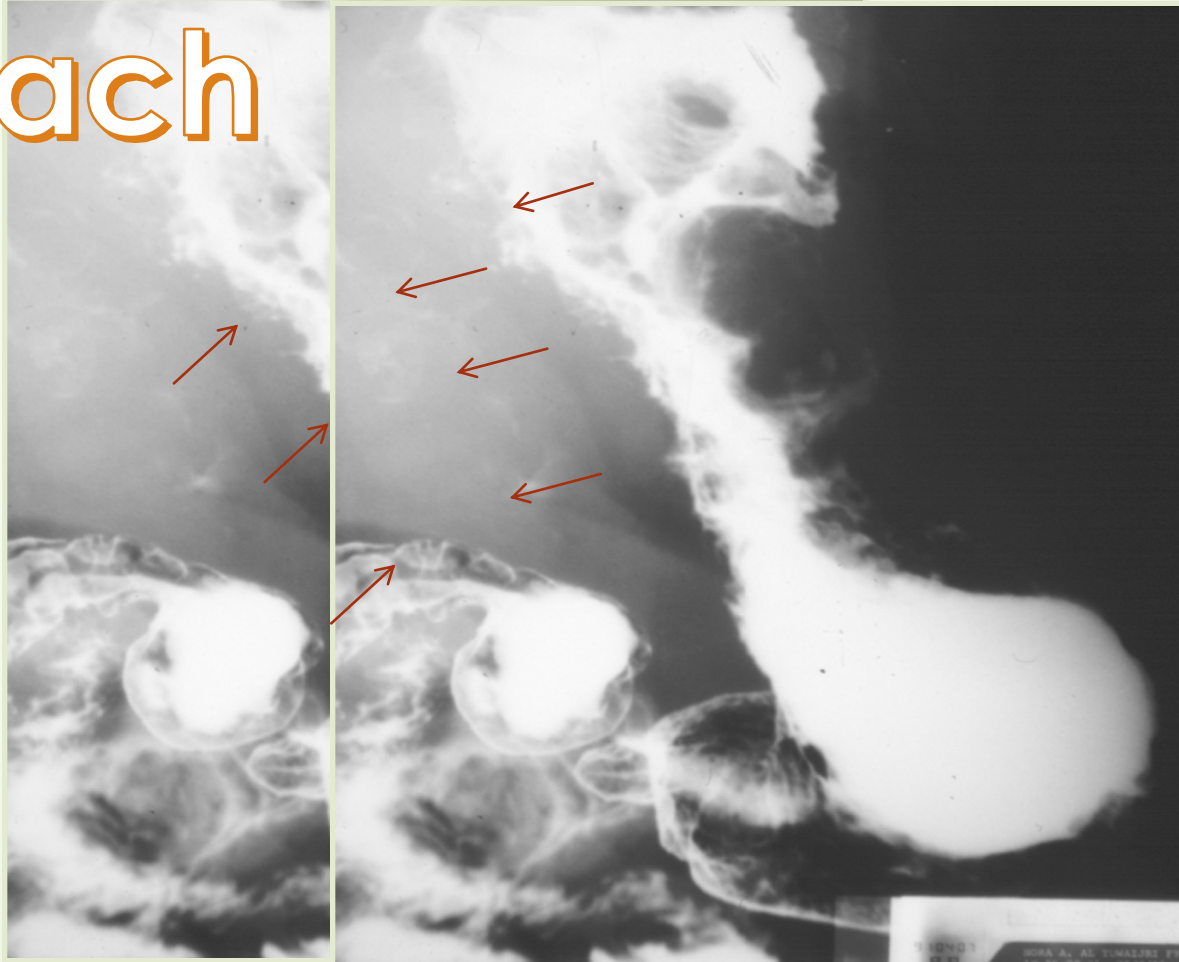
Gastric Carcinoma



Epigastric Pain

Stomach

Barium Meal



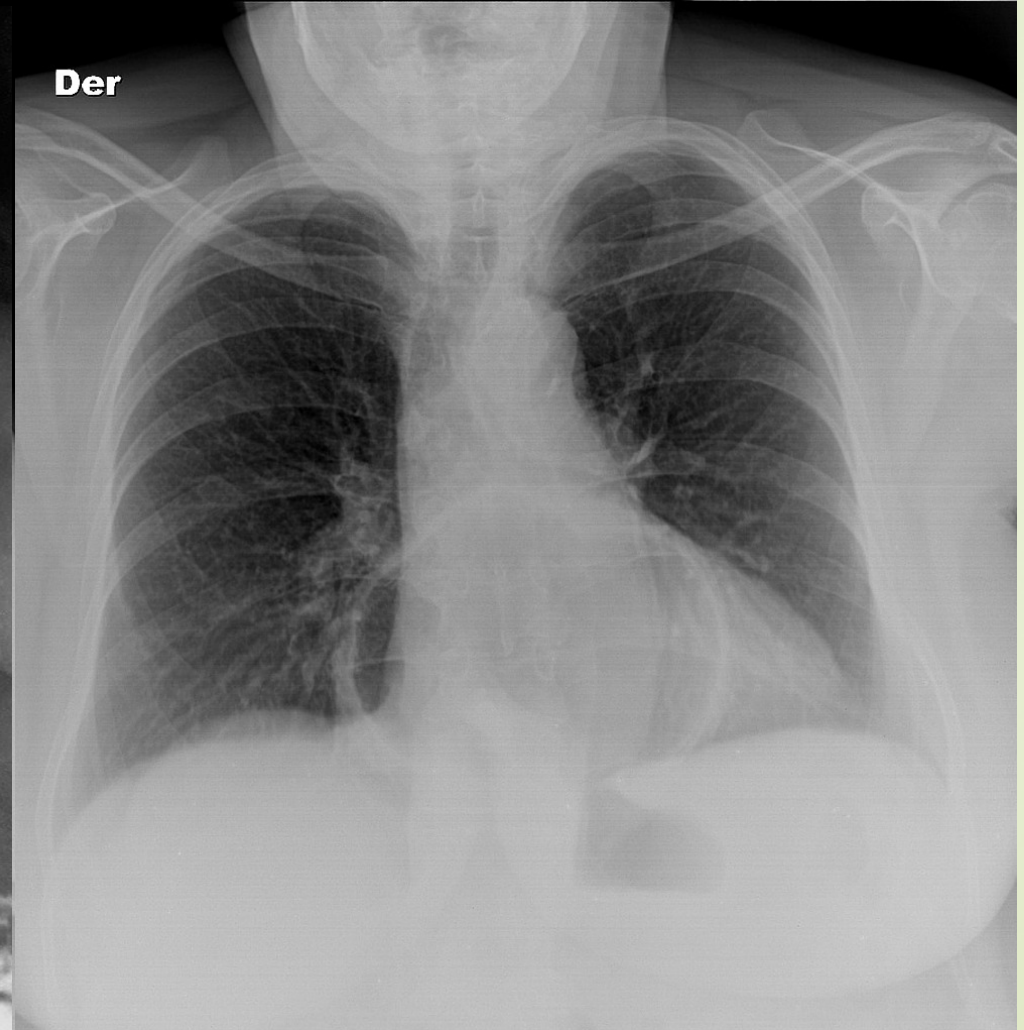
Gastric Lymphoma



Epigastric Pain

Stomach

Barium Meal



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)



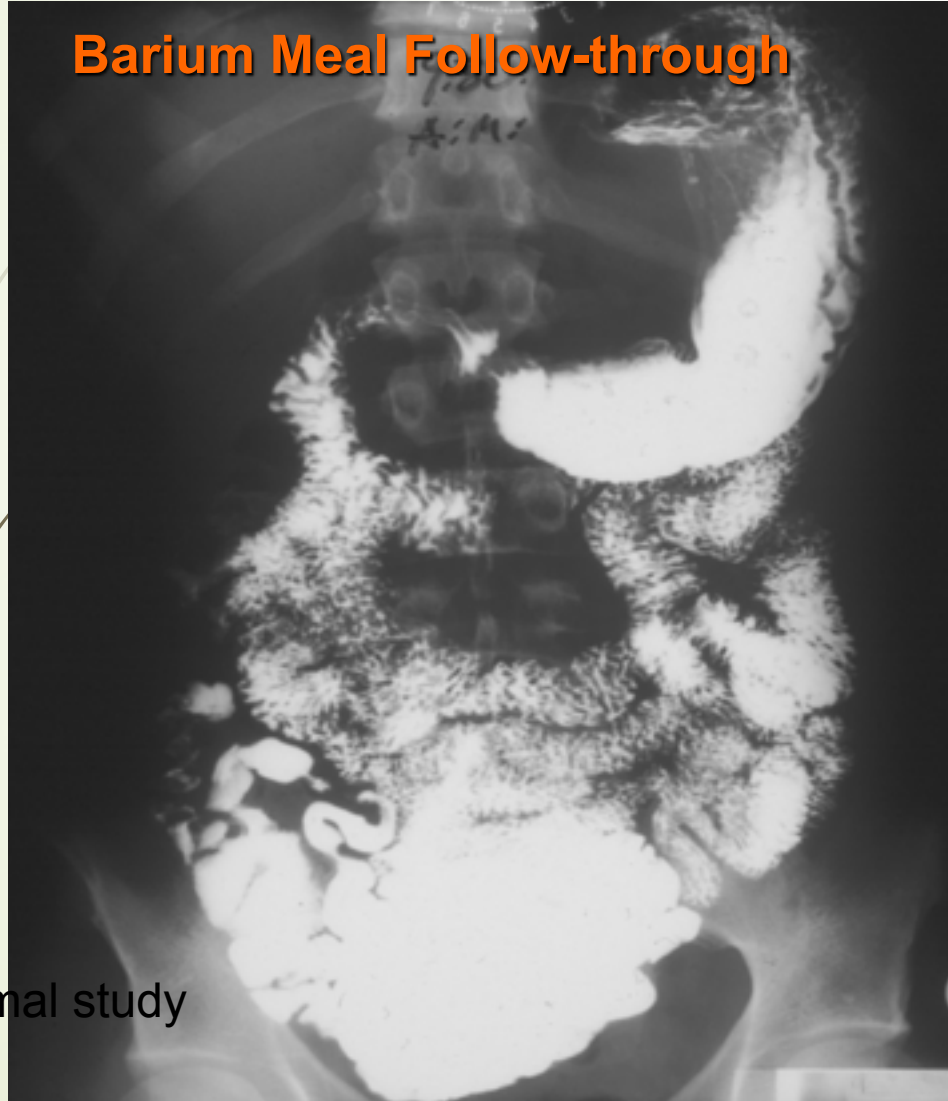
Small bowels

IMAGING MODALITIES:

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

Small bowels

Barium Meal Follow-through



Normal study

Small Bowel enema

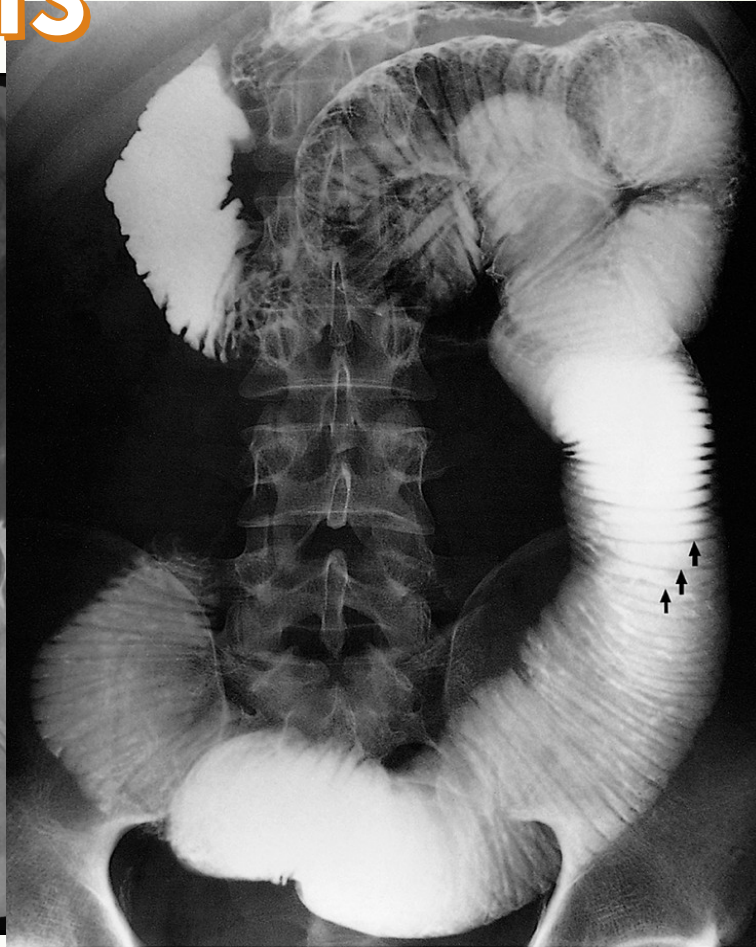
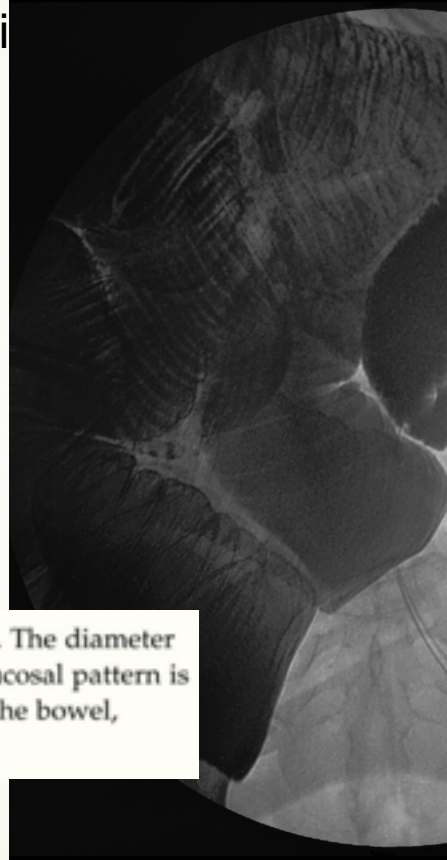


Small bowels

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).

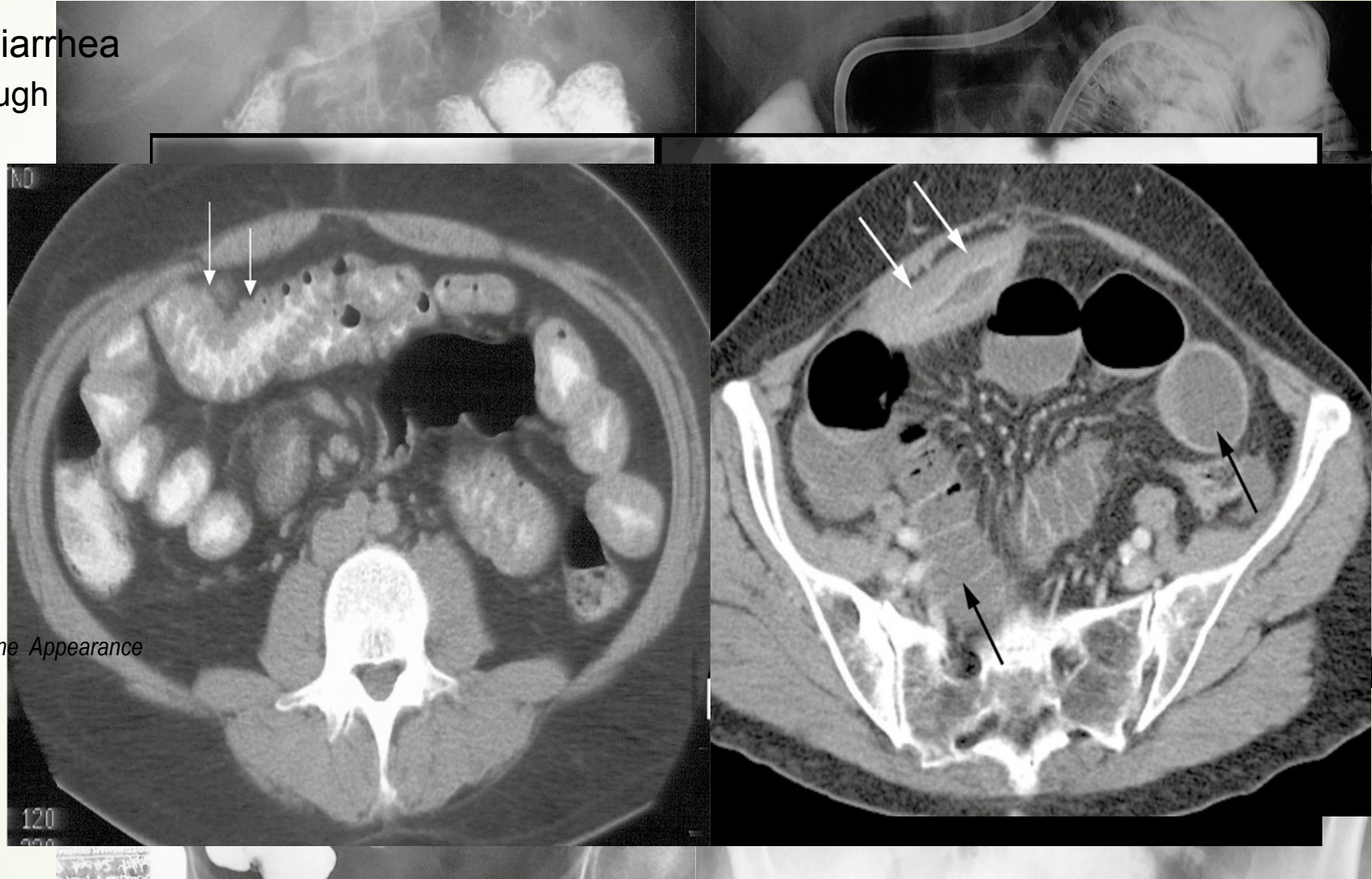


Small bowels

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)

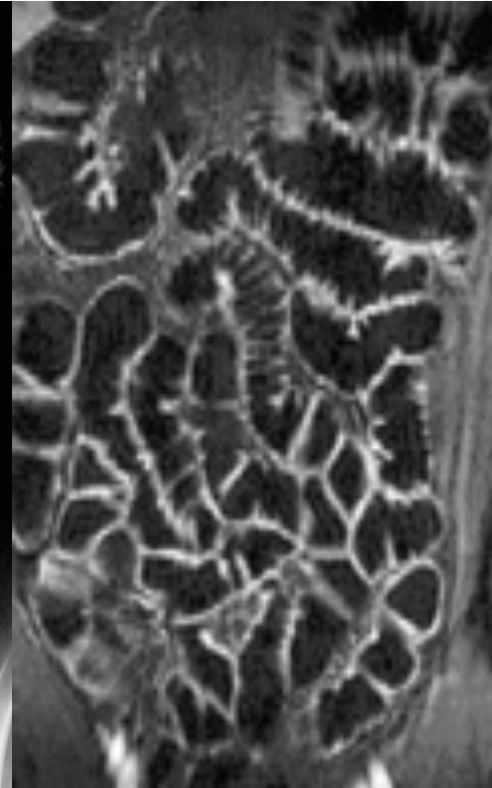


Small bowels

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



Small Bowel Enema



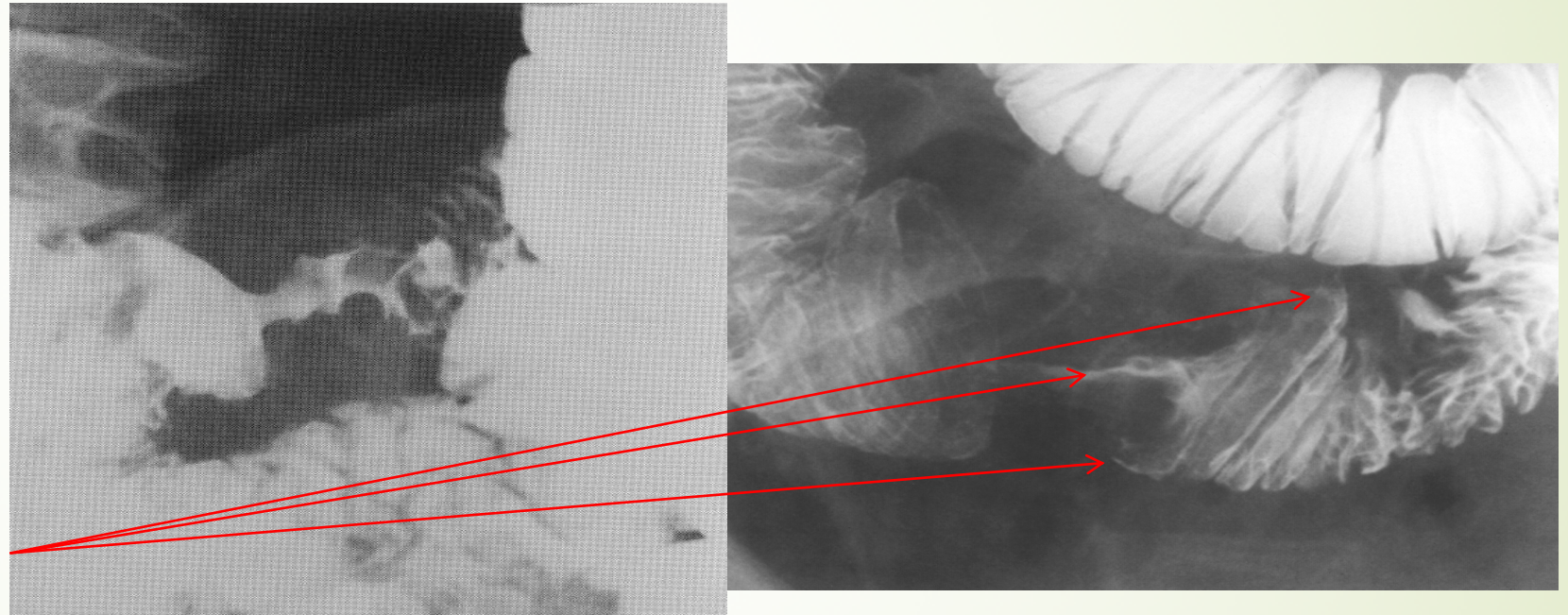
MR Enterography

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

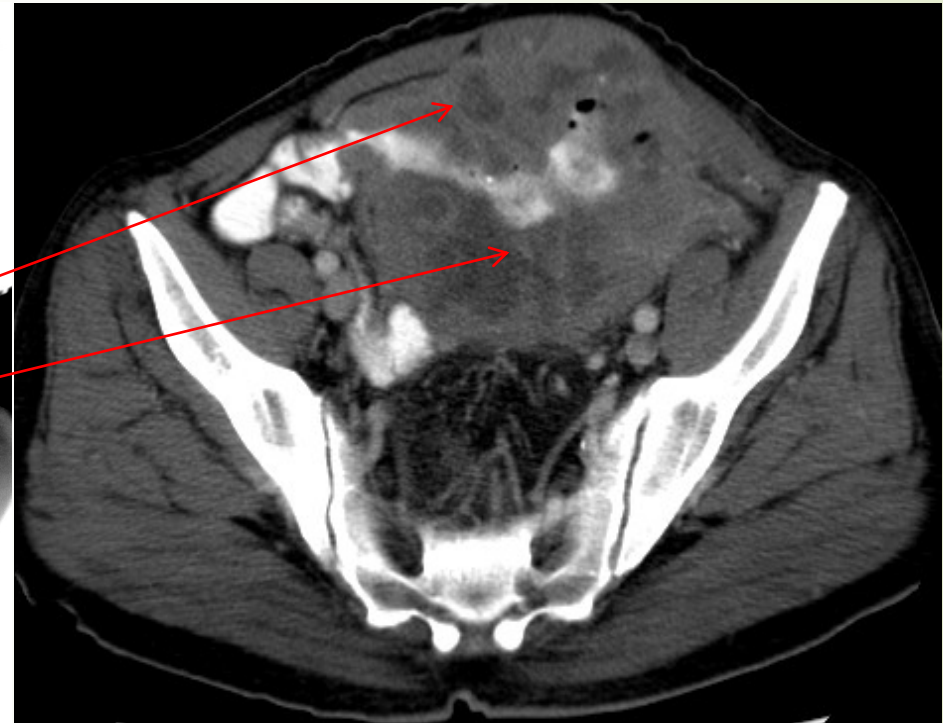
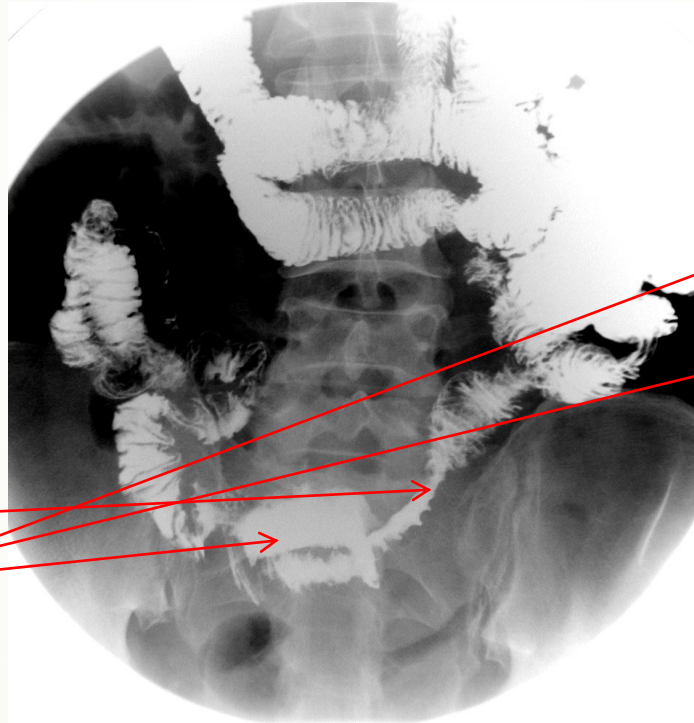
GI Bleeding & weight loss
SB enema

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:

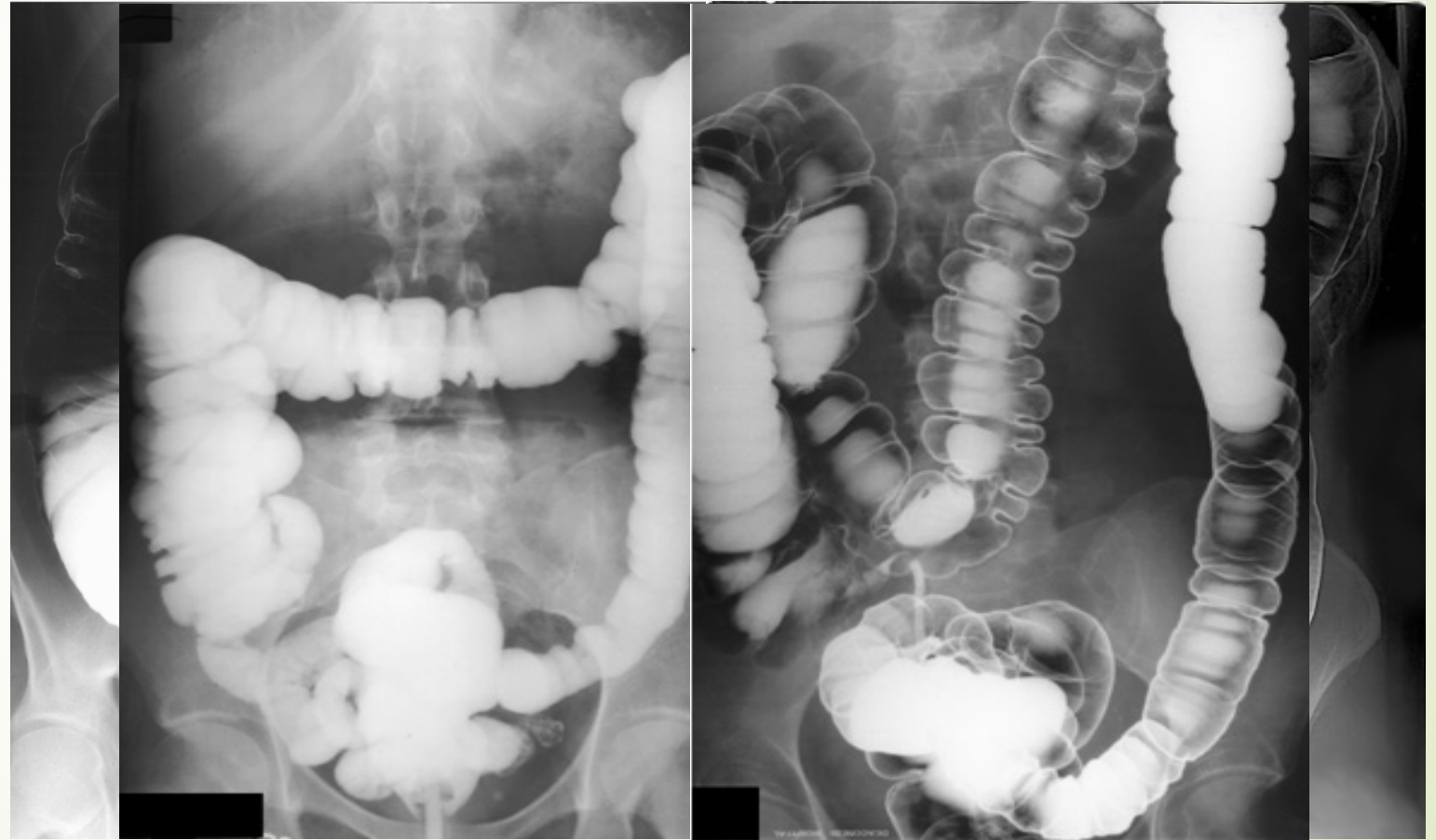
- ▶ X-RAY.
- ▶ FLUOROSCOPY (Barium enema).
- ▶ CT.
- ▶ MRI.
- ▶ ULTRASOUND.
- ▶ NUCLEAR MEDICINE.
- ▶ ANGIOGRAPHY.

Large bowels

Barium Enema

Single contrast

Double contrast



Normal study

Large bowels

Barium Enema/CT

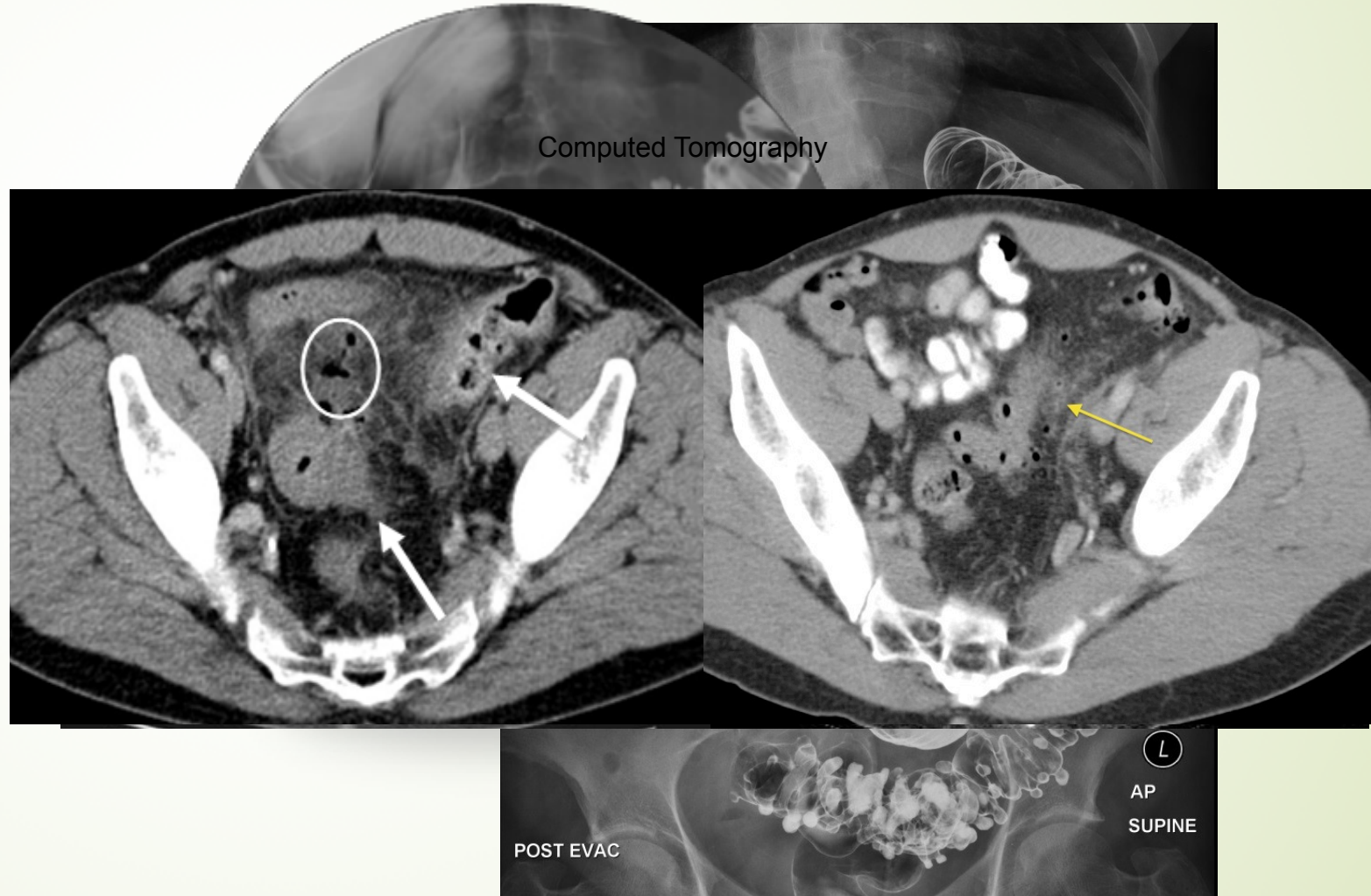
Abdominal Pain
Barium Enema

Colonic Diverticulosis

Colonic Diverticulitis → Inflammation

Double contrast

Computed Tomography



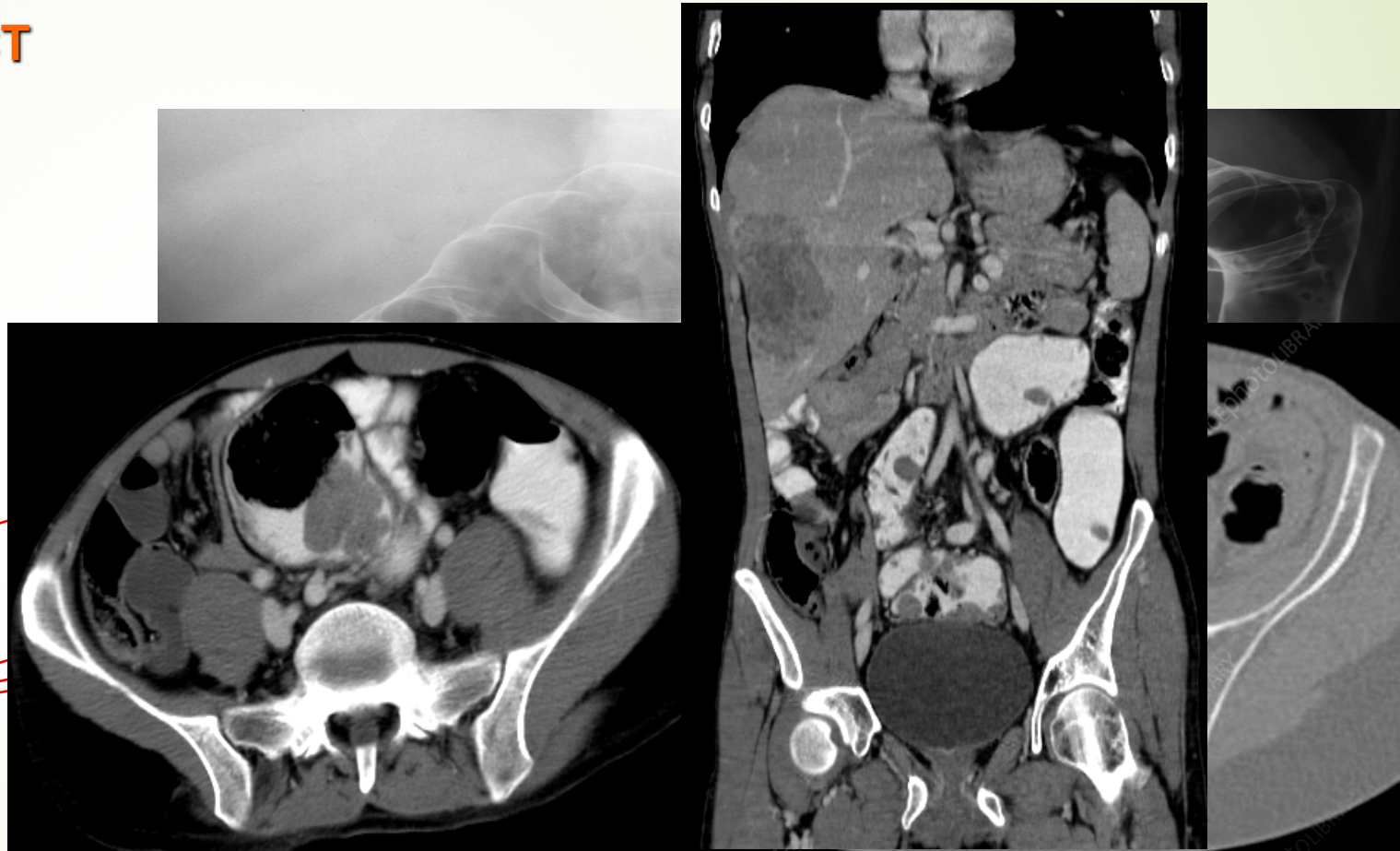
Large bowels

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

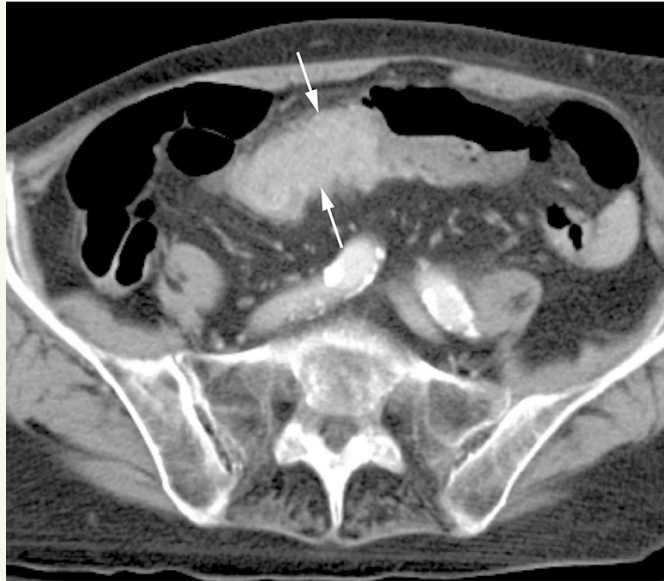


Large bowels

Barium Enema/CT

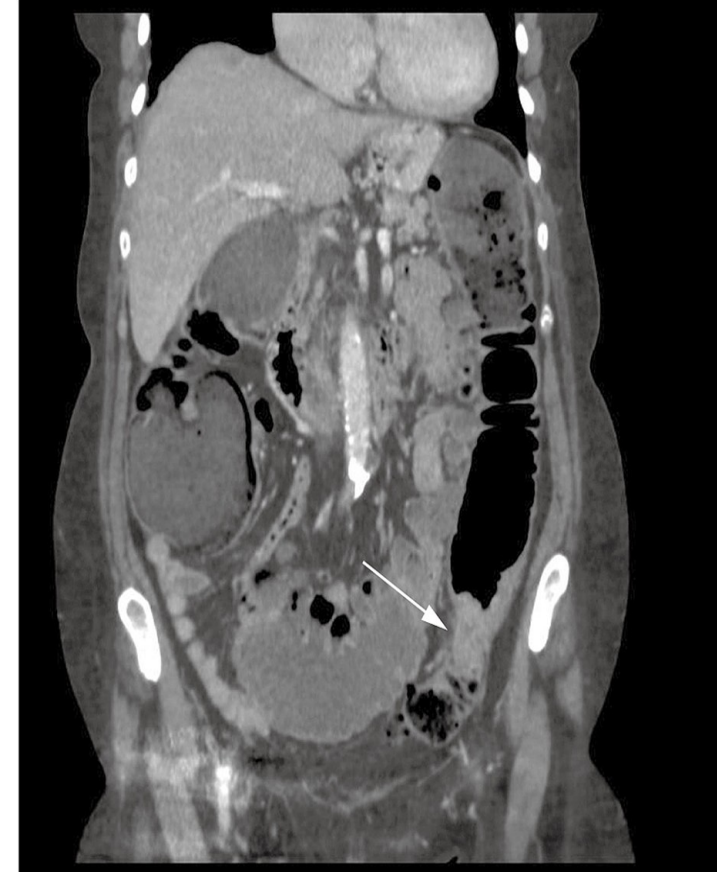
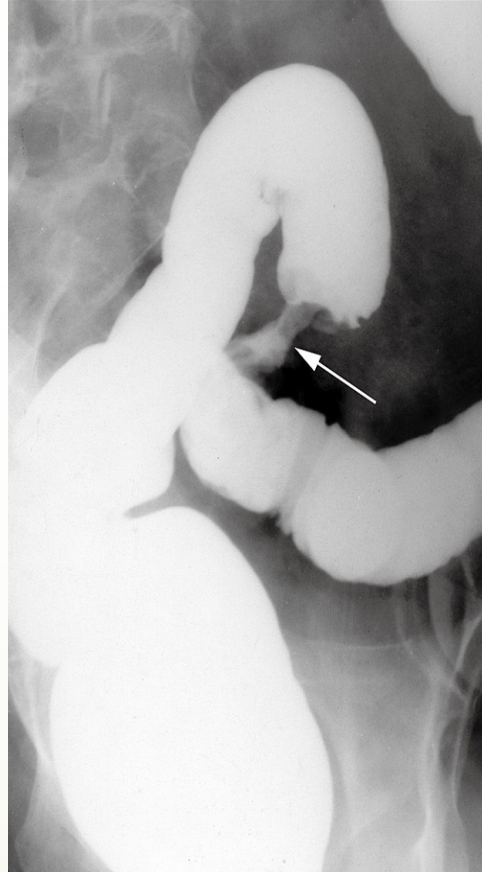
Abdominal Pain & lower GI bleeding

Barium Enema



Colonic Stricture → Colonic Cancer

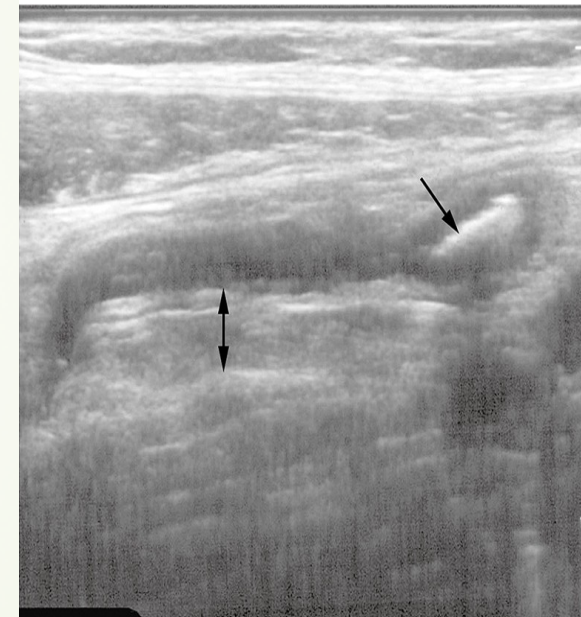
Double contrast Enema



Large bowels

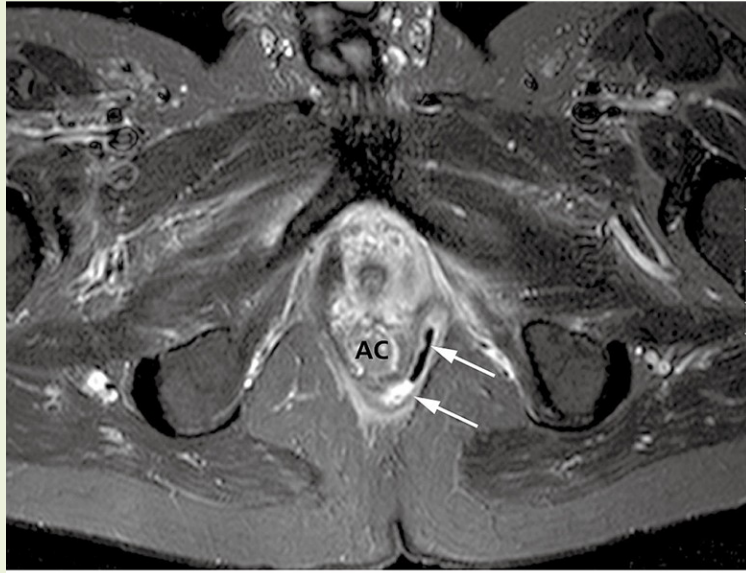
Abdomen CT / Ultrasound

RIF pain – Acute Abdomen



Acute appendicitis







THE END

THANK YOU