

GIT Radiological investigations and anatomy

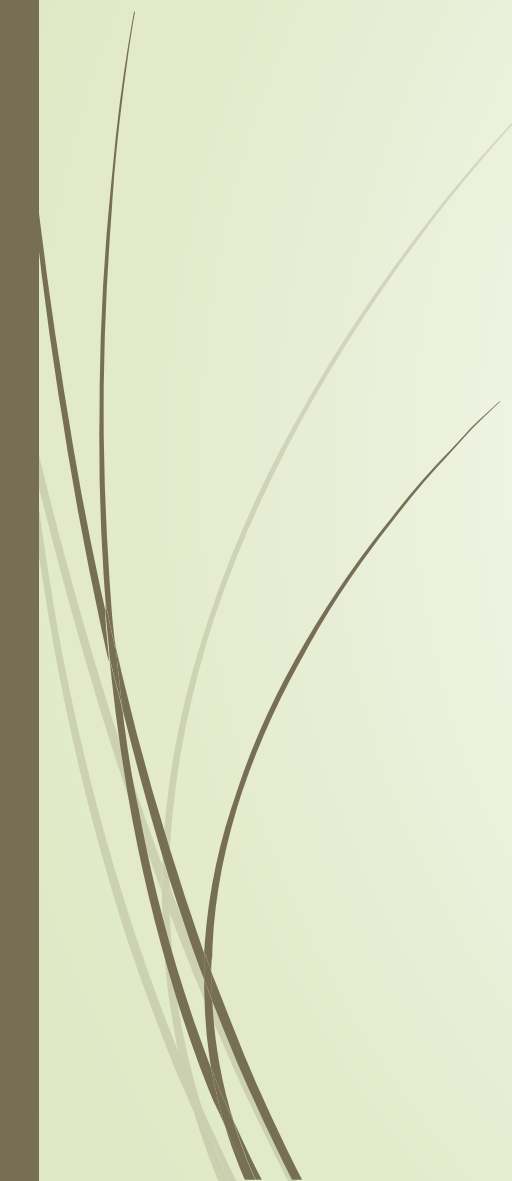


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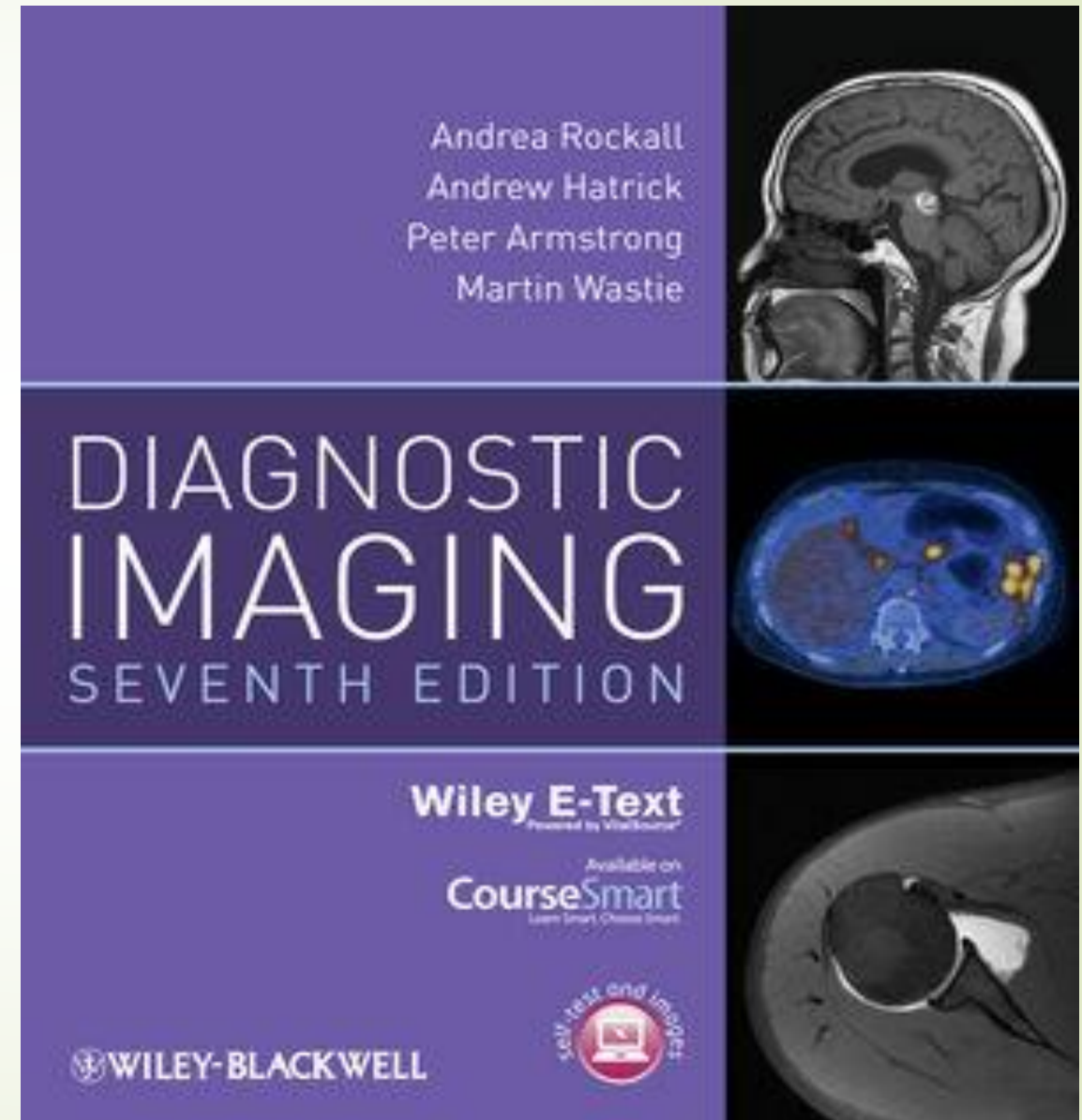


Objectives:

- To know various radiological investigations used for GIT.
 - To understand step wise approach in requesting GIT radiology investigations.
 - To be familiar with radiological appearance (anatomy) seen in various imaging modalities.
 - To interpret plain x-ray radiograph of abdomen with common pathologies.
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Reference:

- Diagnostic imaging:
- Chapter 5 and 6



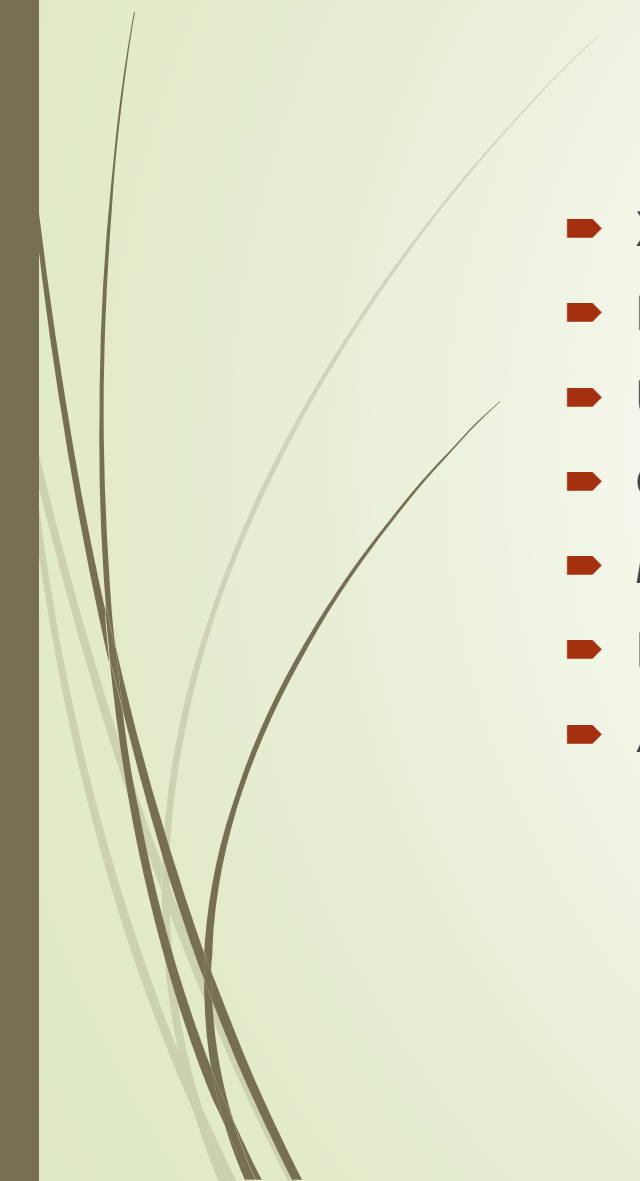


What are radiological investigations that you know ?





IMAGING MODALITIES:

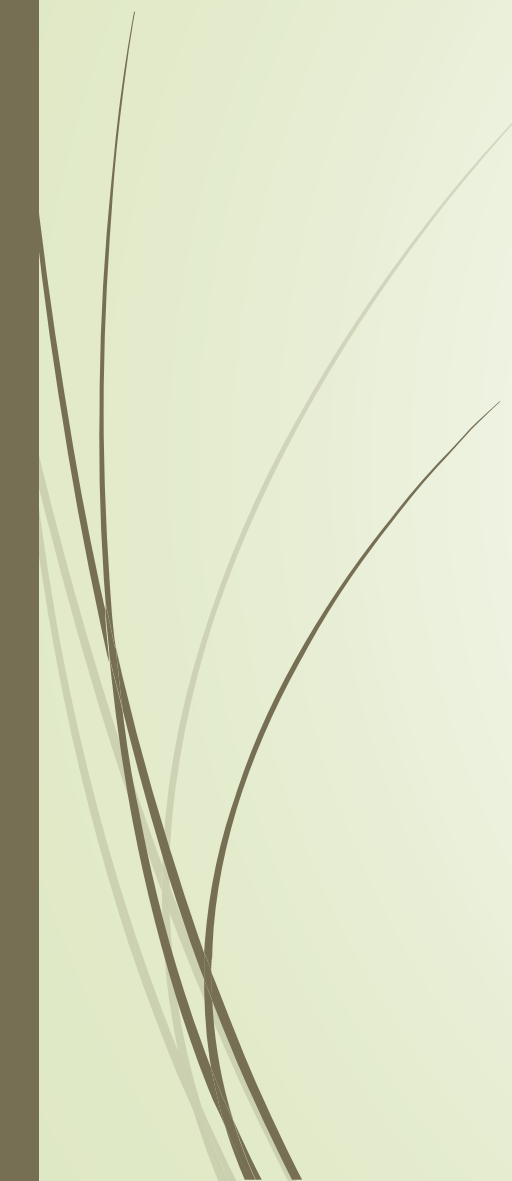
- X-RAY.
 - FLUOROSCOPY (CONTRAST STUDY).
 - ULTRASOUND.
 - CT.
 - MRI.
 - NUCLEAR MEDICINE.
 - ANGIOGRAPHY.
- 



What is peculiar about GIT?



GIT characteristics:

- Hollow viscus (not solid).
 - Usually filled with gas.
 - Motility.
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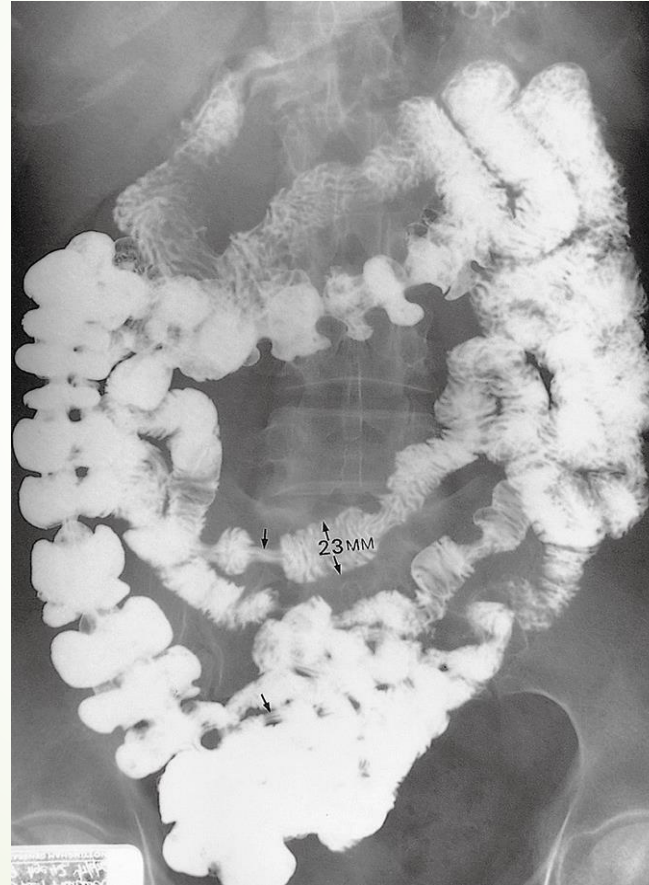
X-ray (plain radiography)

- Often used as first imaging modality.
- Cheap.
- Fast.
- Can be done bedside (portable)
- Useful for free gas or bowel obstruction.



Fluoroscopy (contrast study)

- Can be used as first imaging modality.
- Cheap.
- Use of contrast.
- Recently replaced by CT and MRI
- Useful for intraluminal pathology.
- Can give clue about the motility (function)



Ultrasound

- Relatively cheap.
- No radiation.
- Limited uses (gas filled structures).
- Used in pediatrics and pregnant ladies

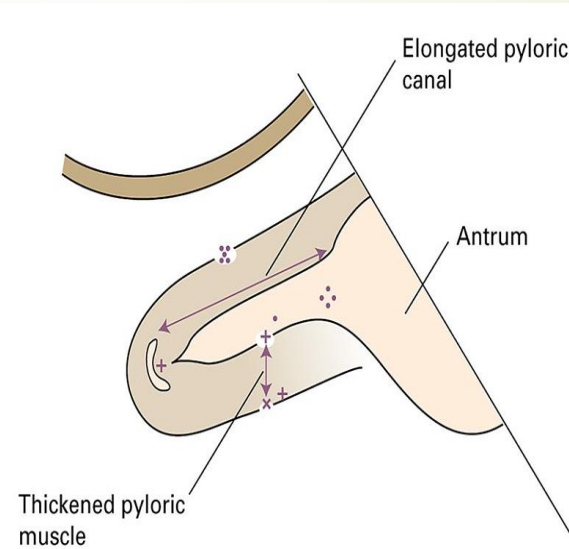
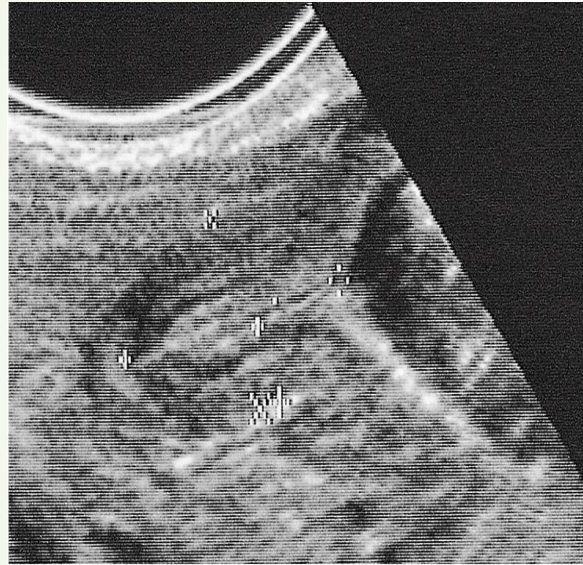
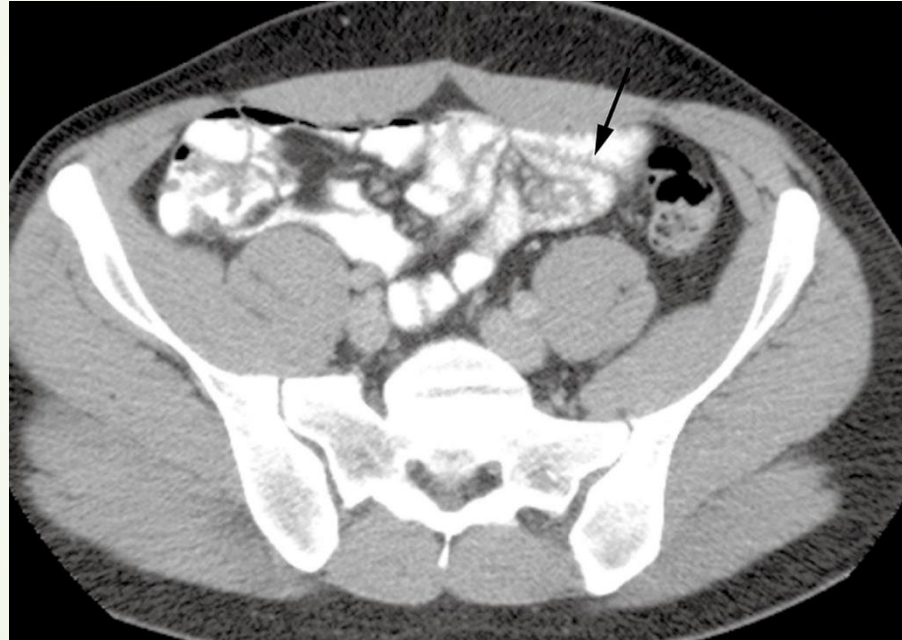


Fig. 6.29 Pyloric stenosis. Ultrasound scan in a neonate showing a thickened, elongated pyloric canal.



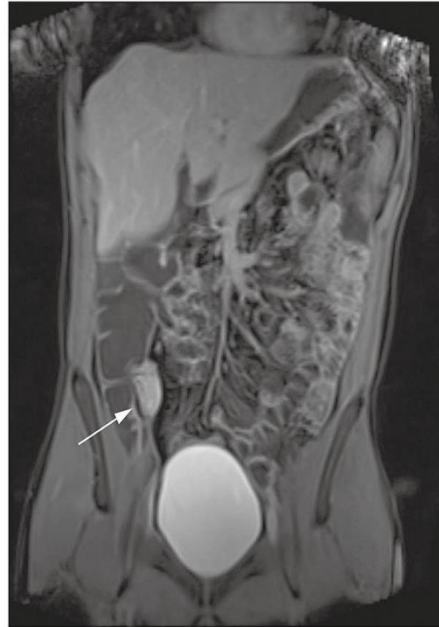
CT (computer tomography)


- Expensive.
- More radiation.
- Fast.
- Contrast (iv, oral &rectal) usually used.
- Used in emergency department.



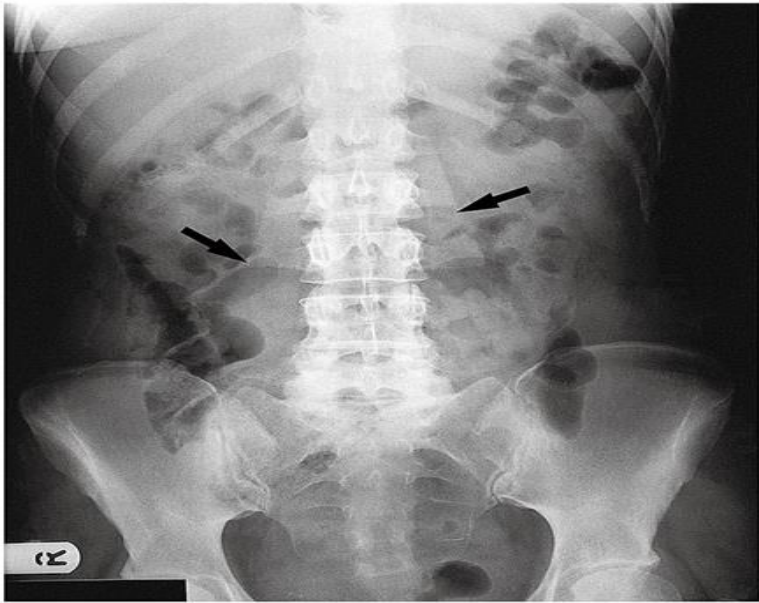
MRI (Magnetic resonance imaging)

- More expensive than CT.
- No radiation.
- Slow and affected by artifacts.
- Excellent for soft tissue.

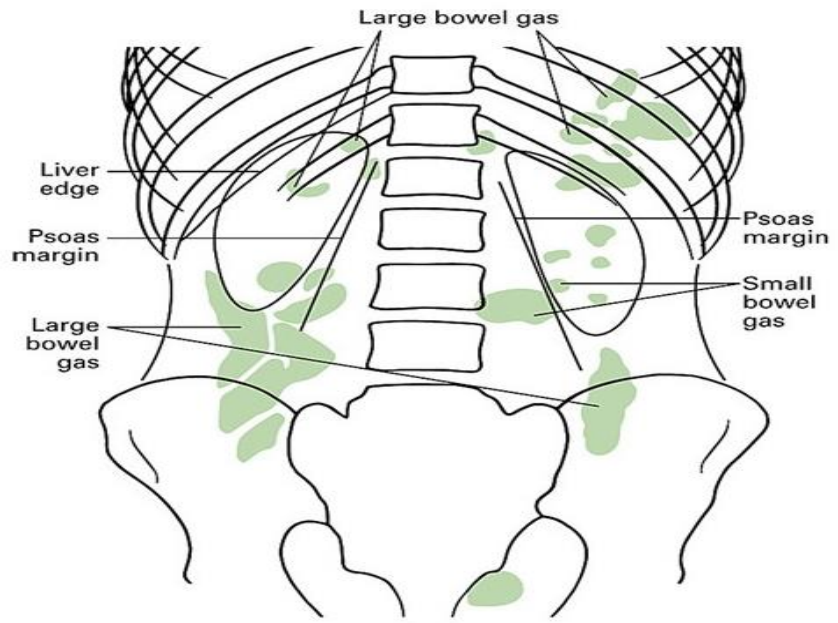




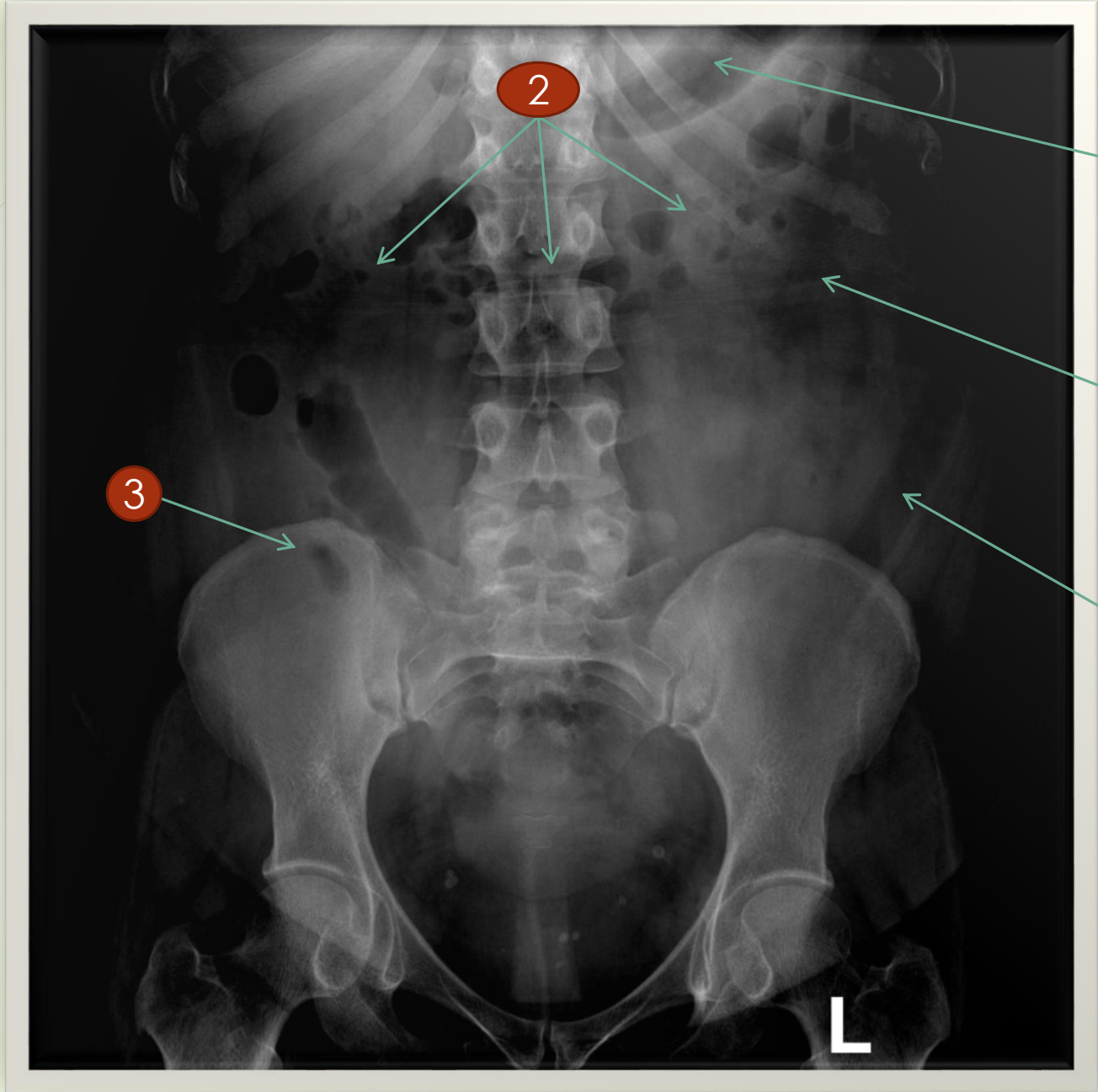
Radiological appearance of GIT

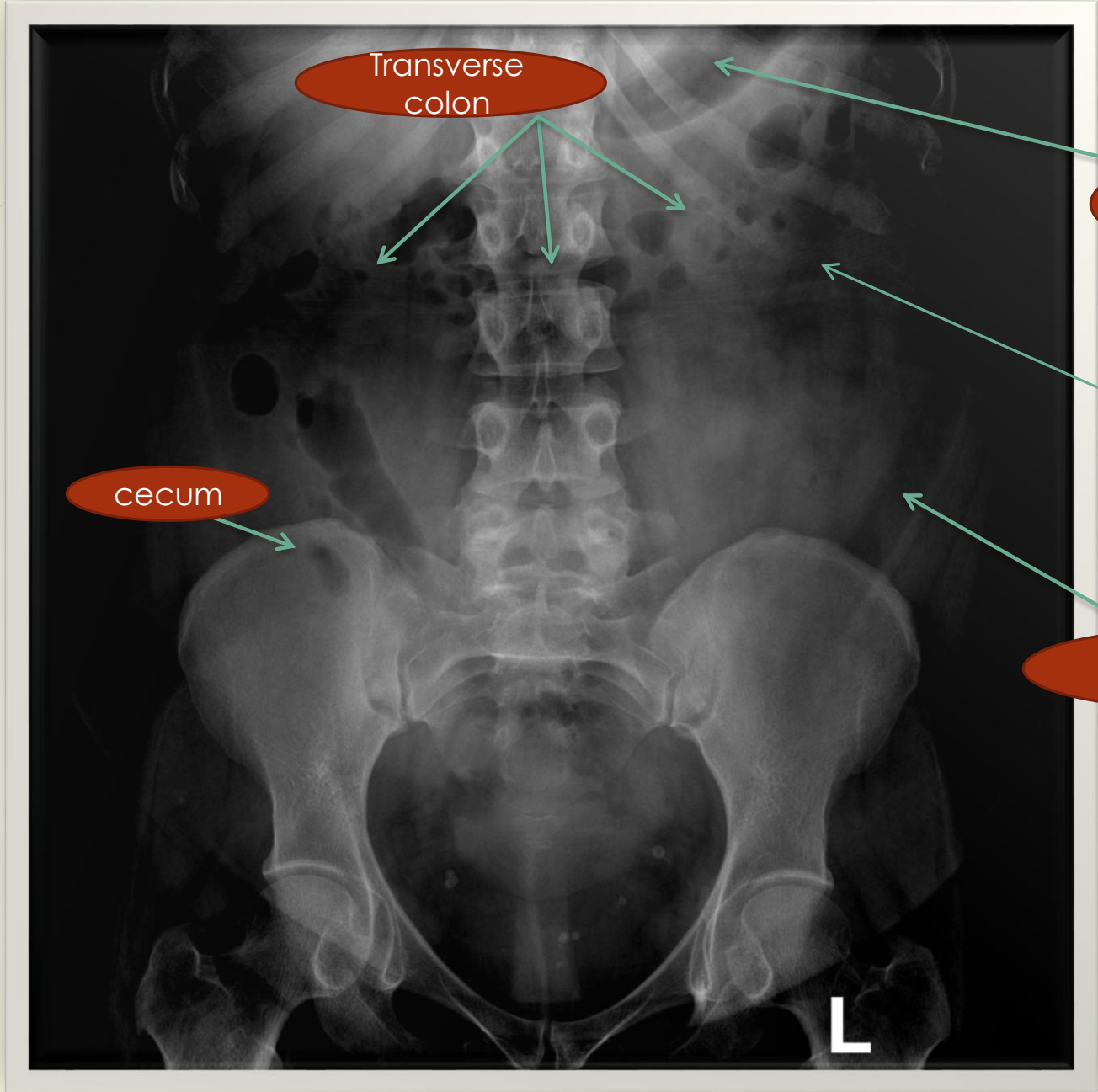


(a)



R SJD
SUPINE





Transverse colon

stomach

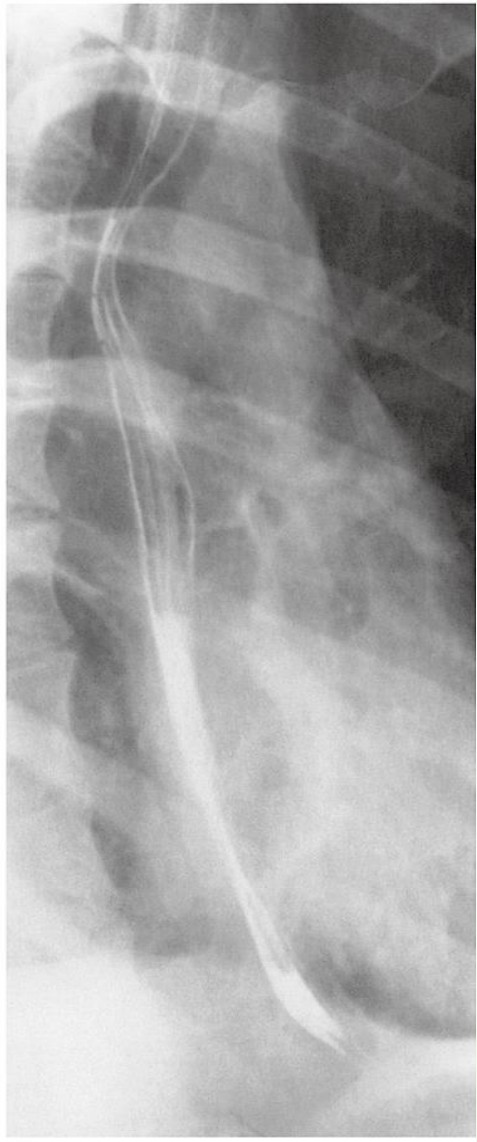
Small bowel

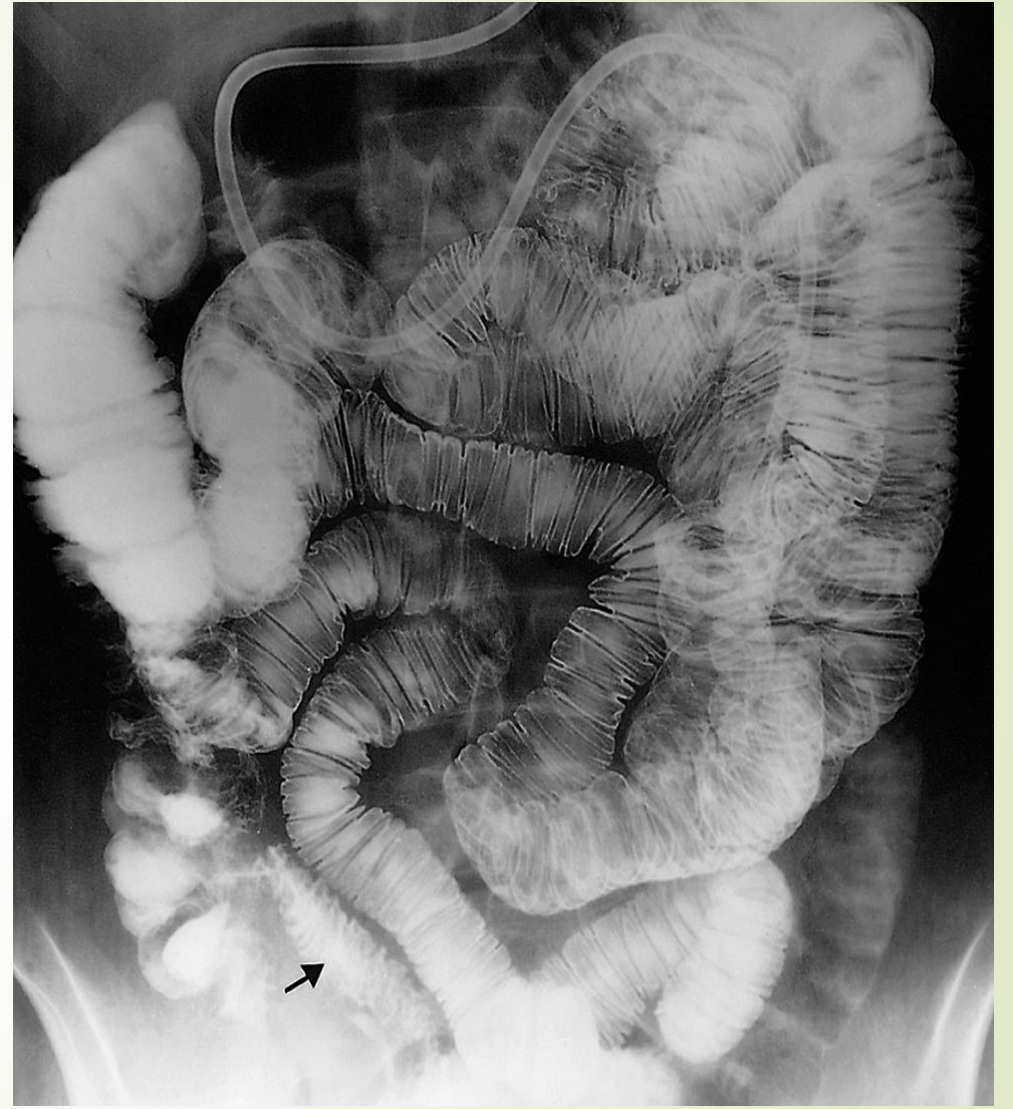
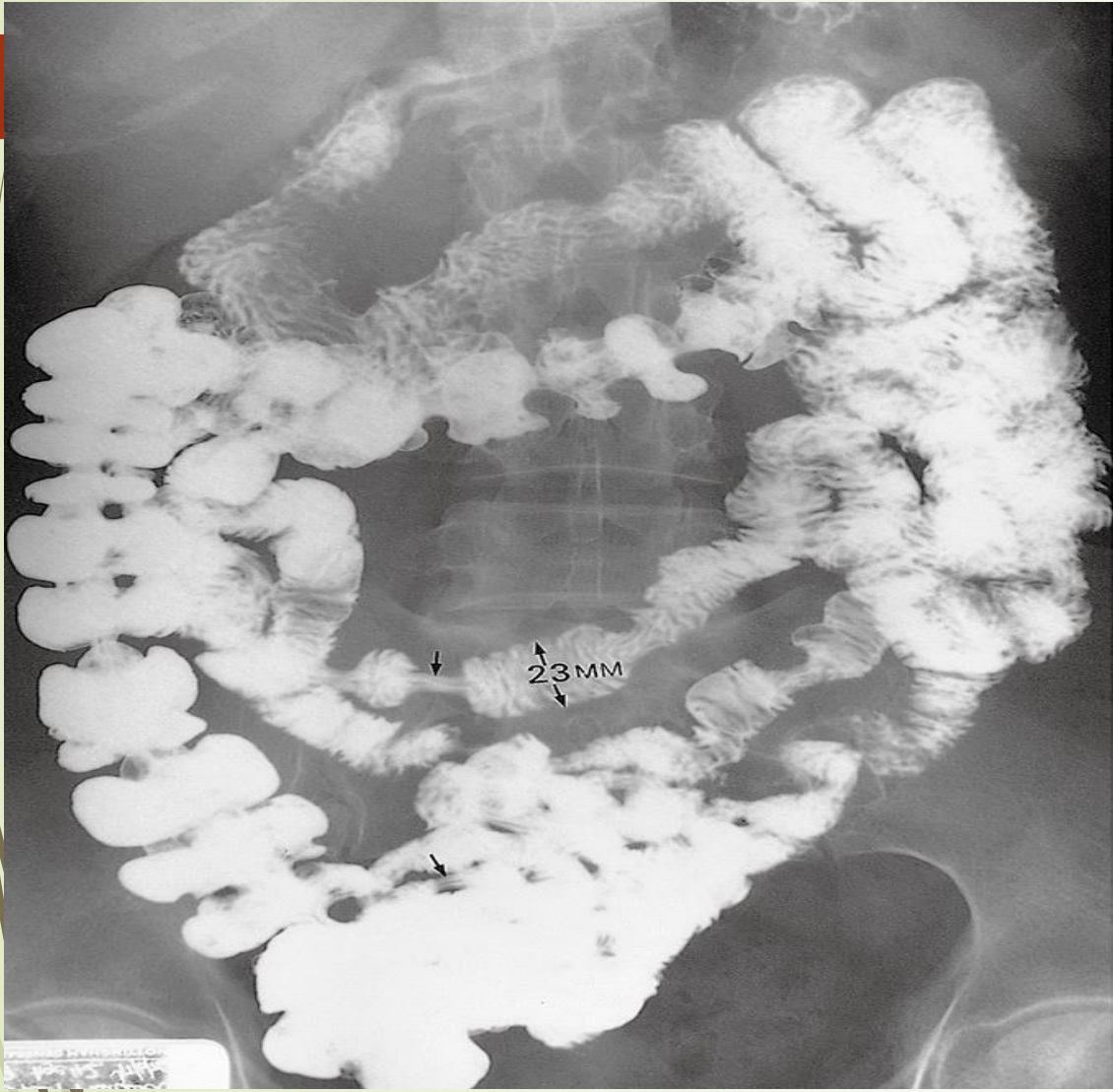
cecum

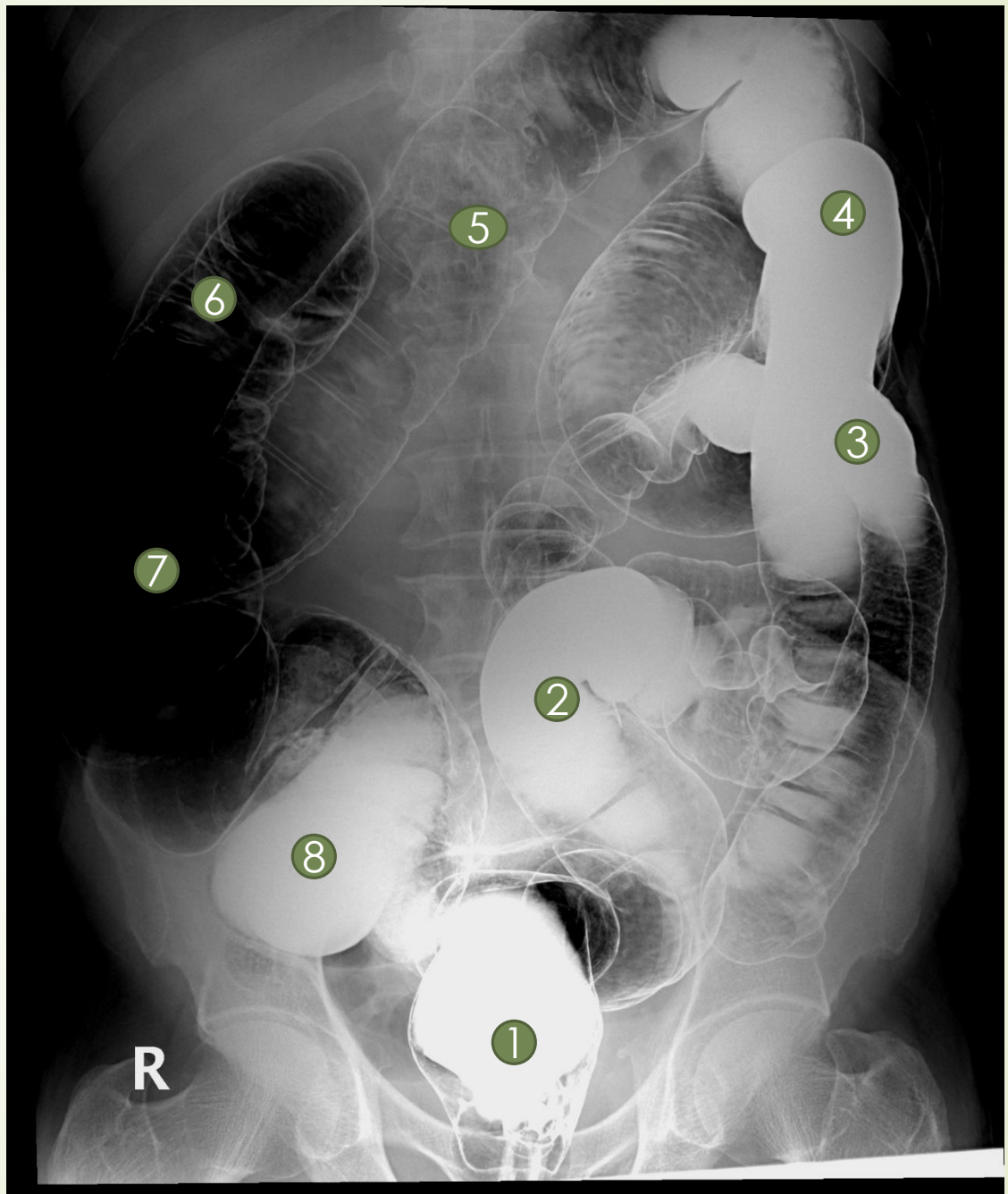
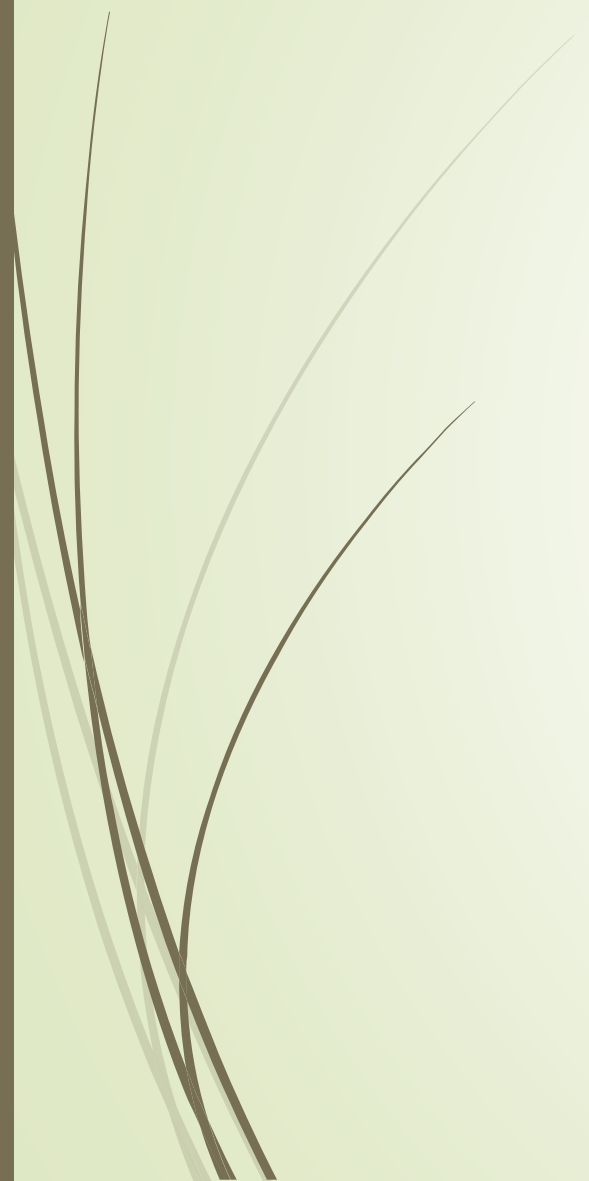
Descending colon


L

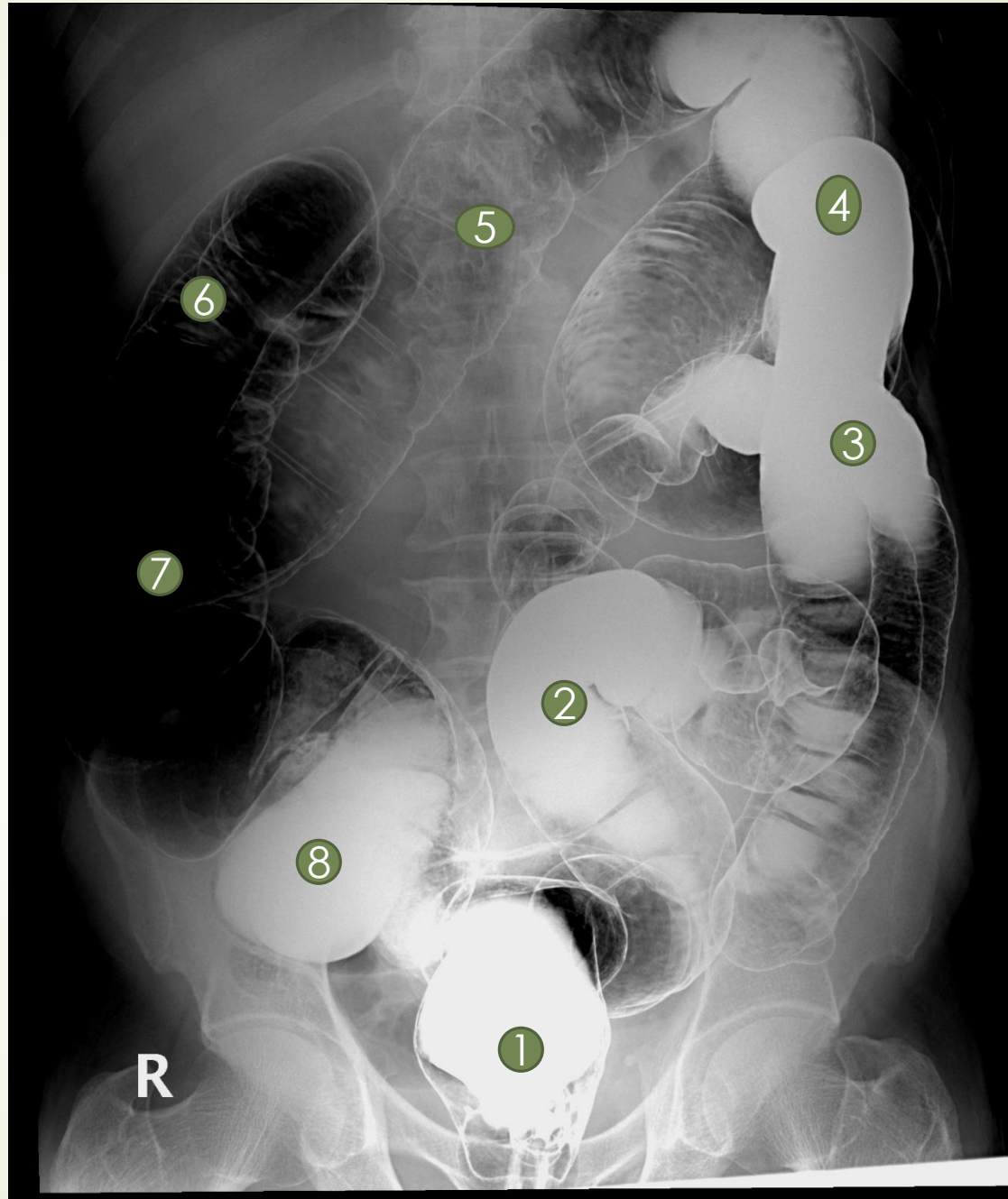


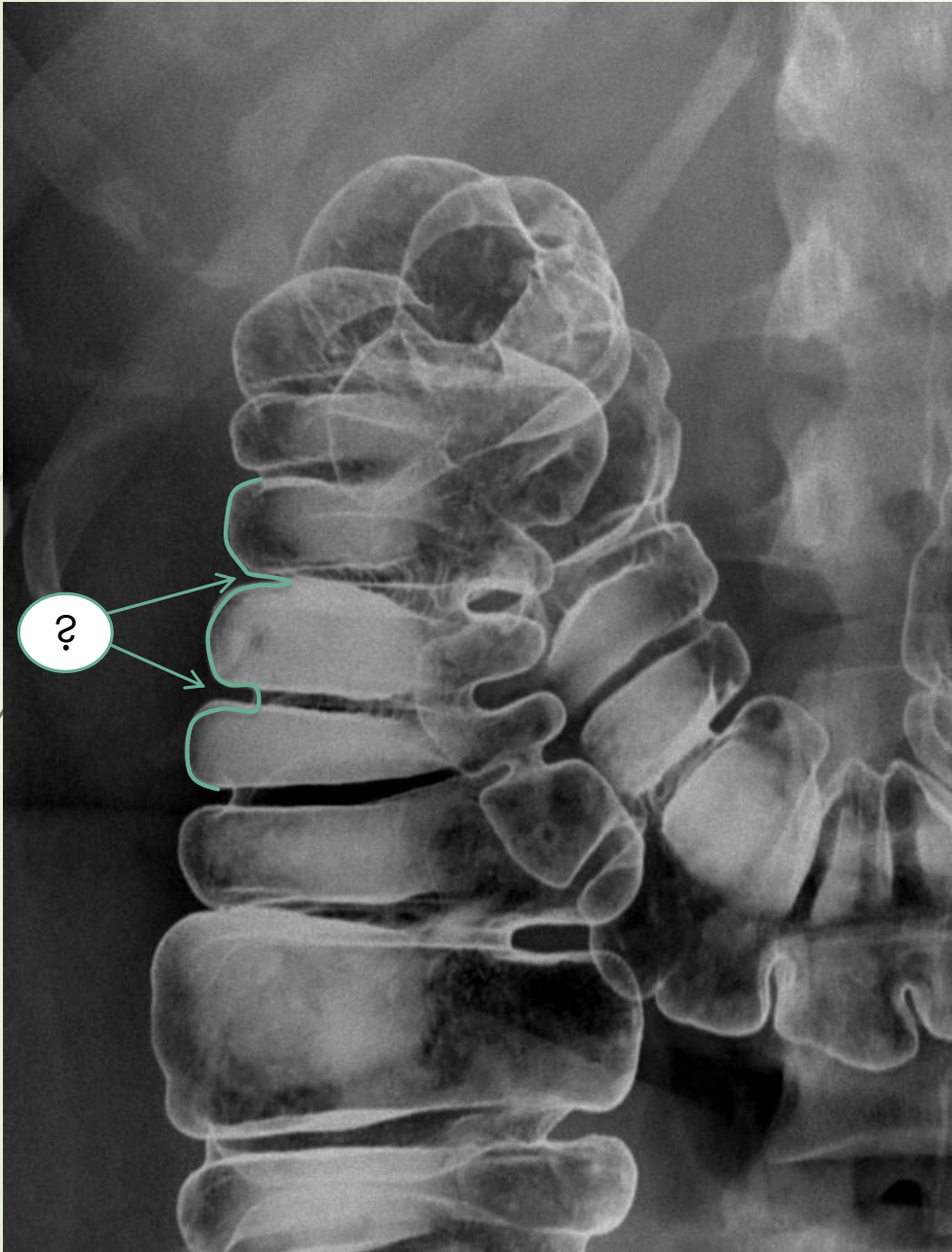


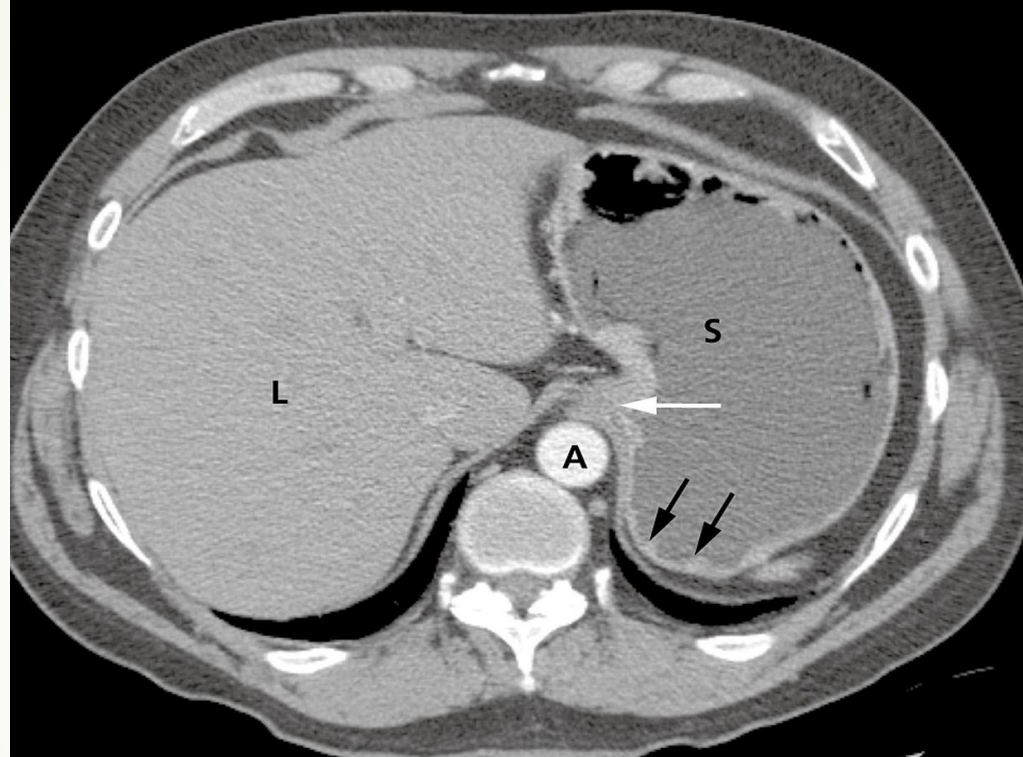




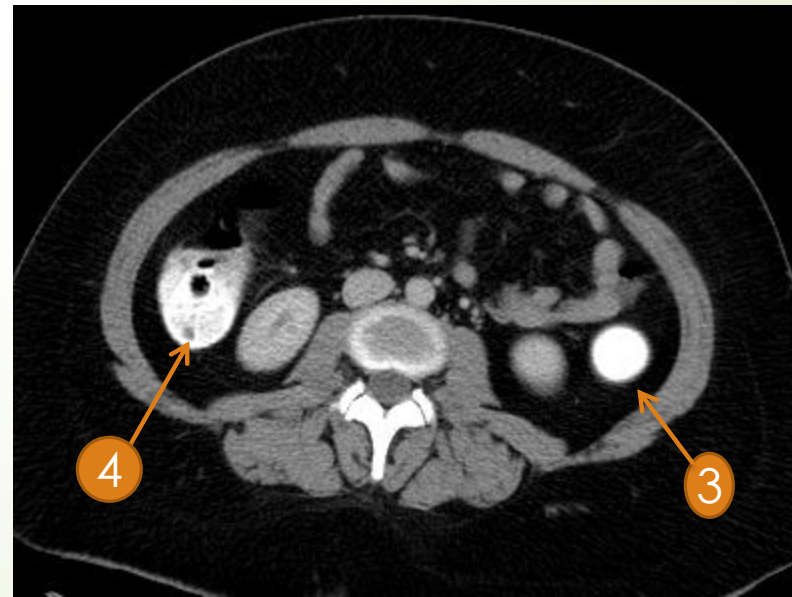
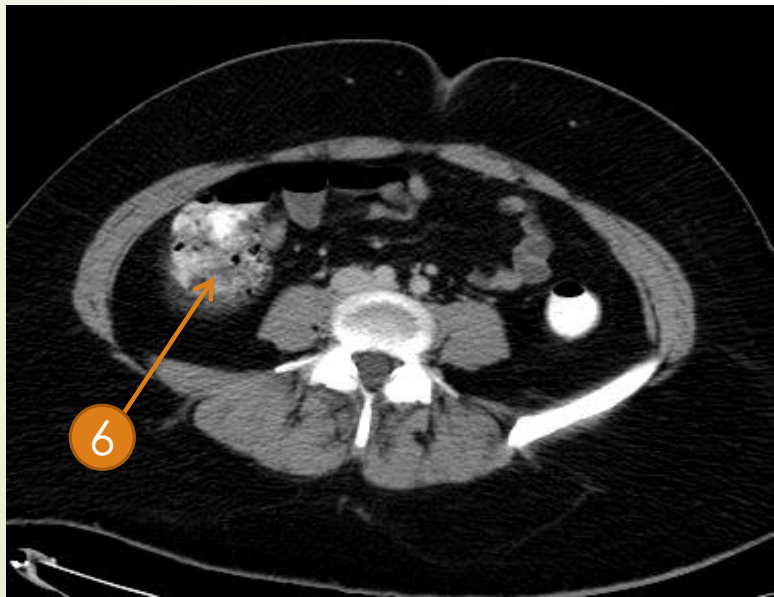
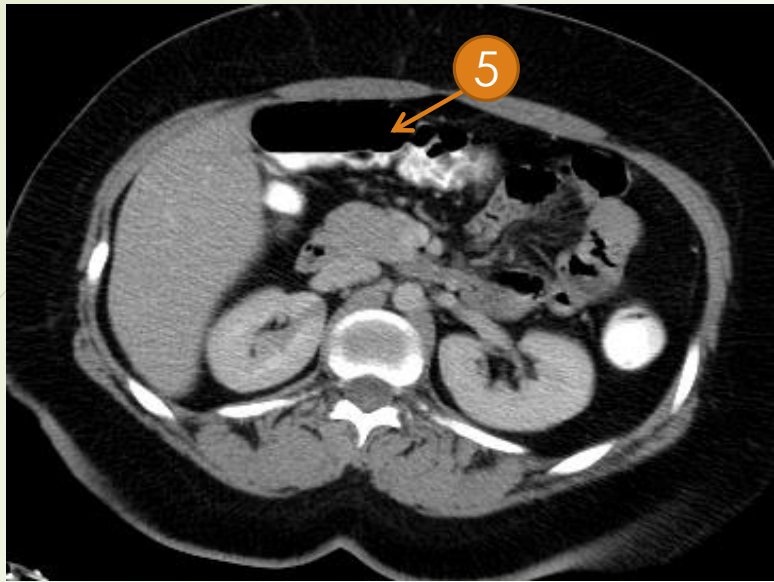
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1. Rectum
 2. Sigmoid colon
 3. Descending colon
 4. Splenic flexure
 5. Transverse colon
 6. Hepatic flexure
 7. Ascending colon
 8. cecum

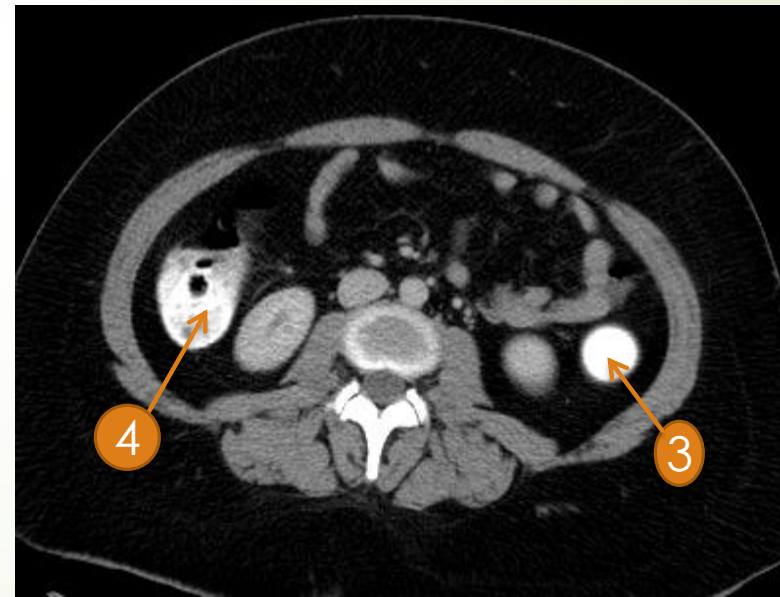
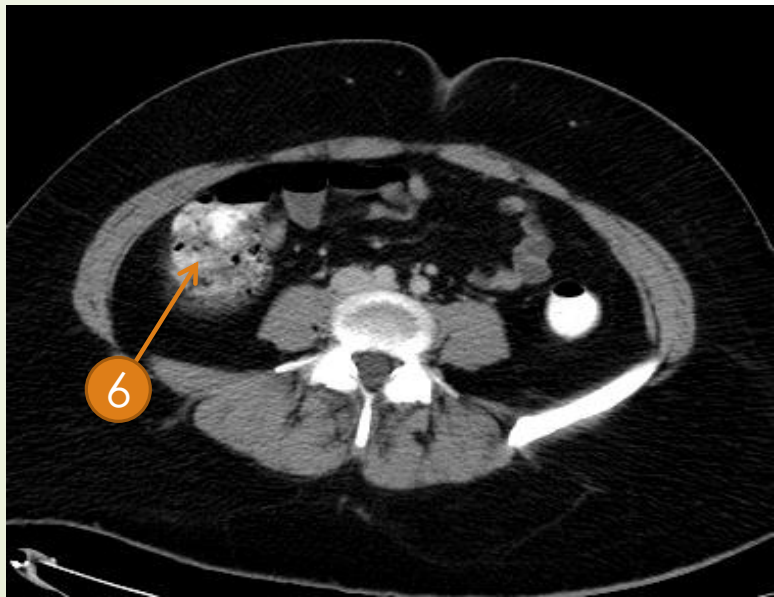
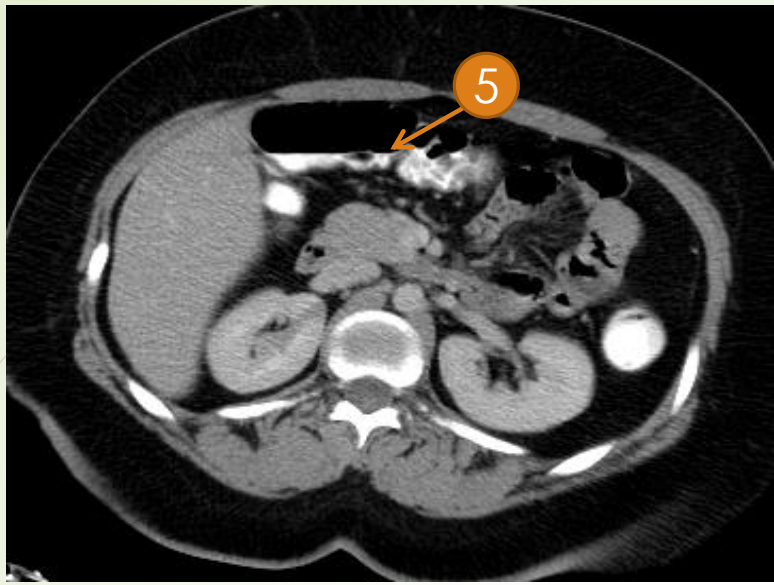






S stomach.
L liver.
A aorta.





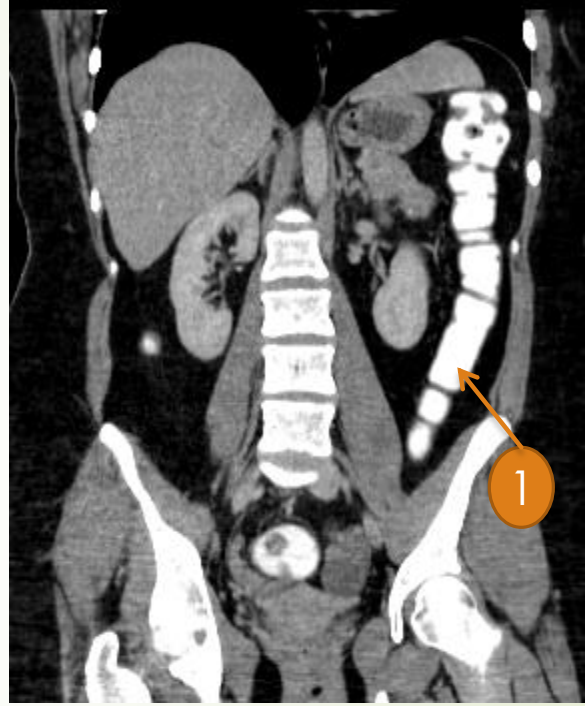
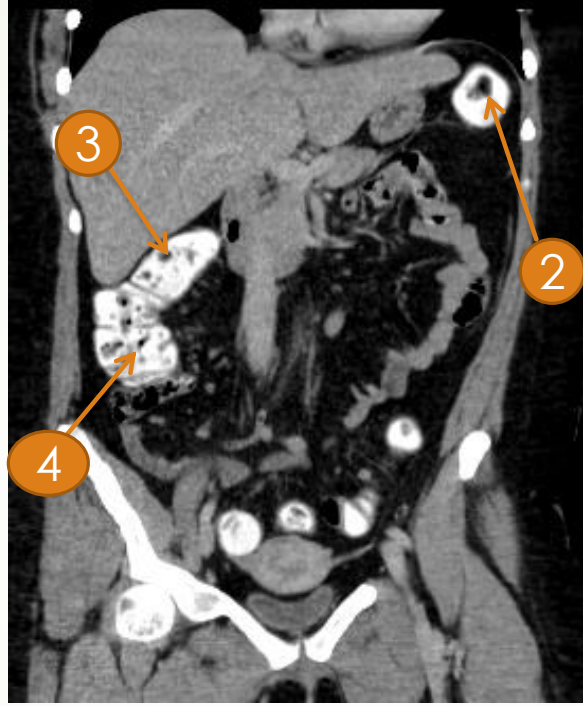
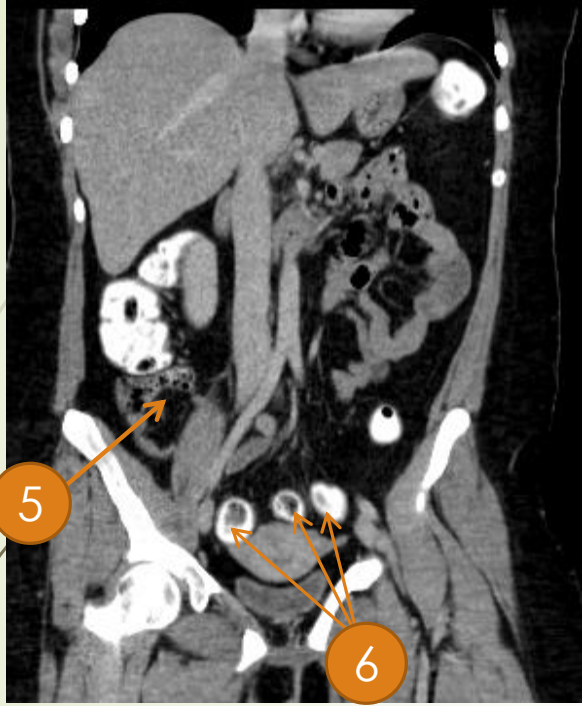
4-Ascending colon

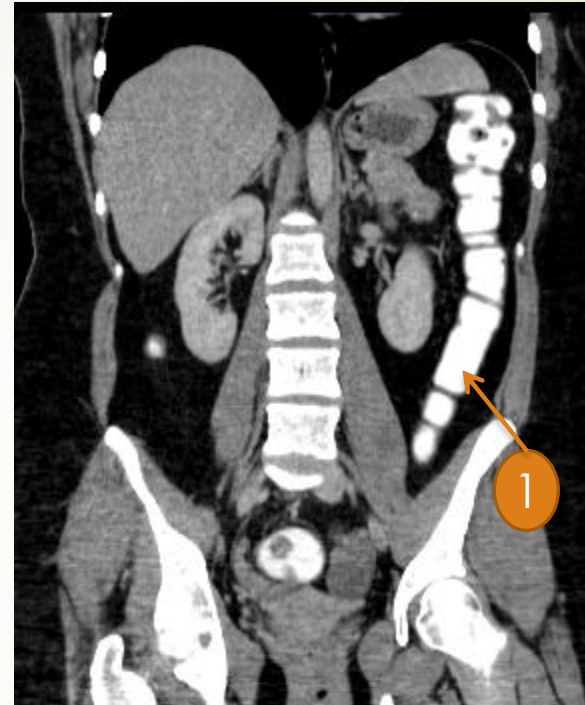
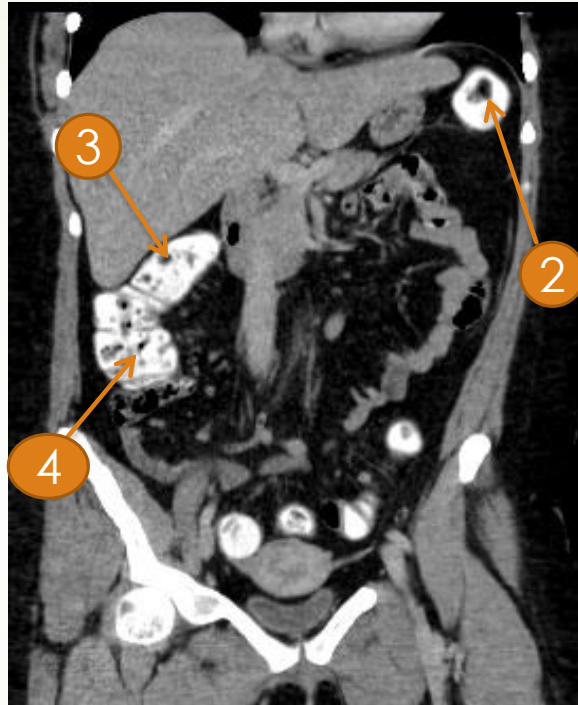
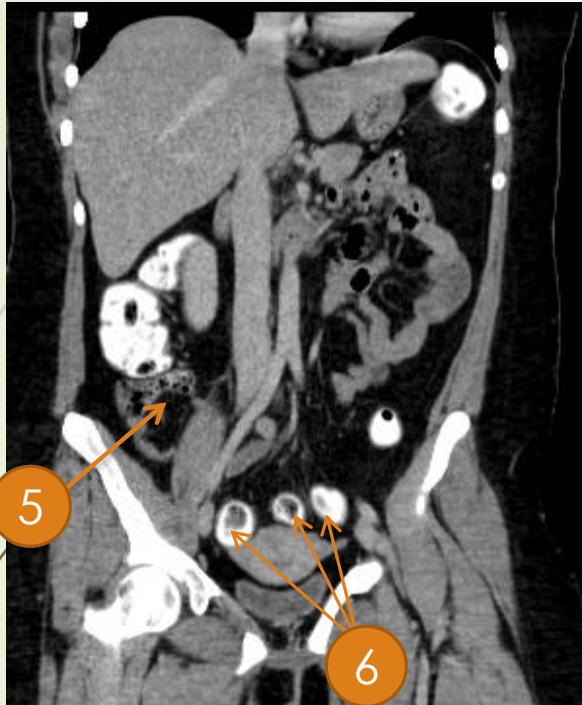
3-Descending colon
6-Cecum

2-Sigmoid colon

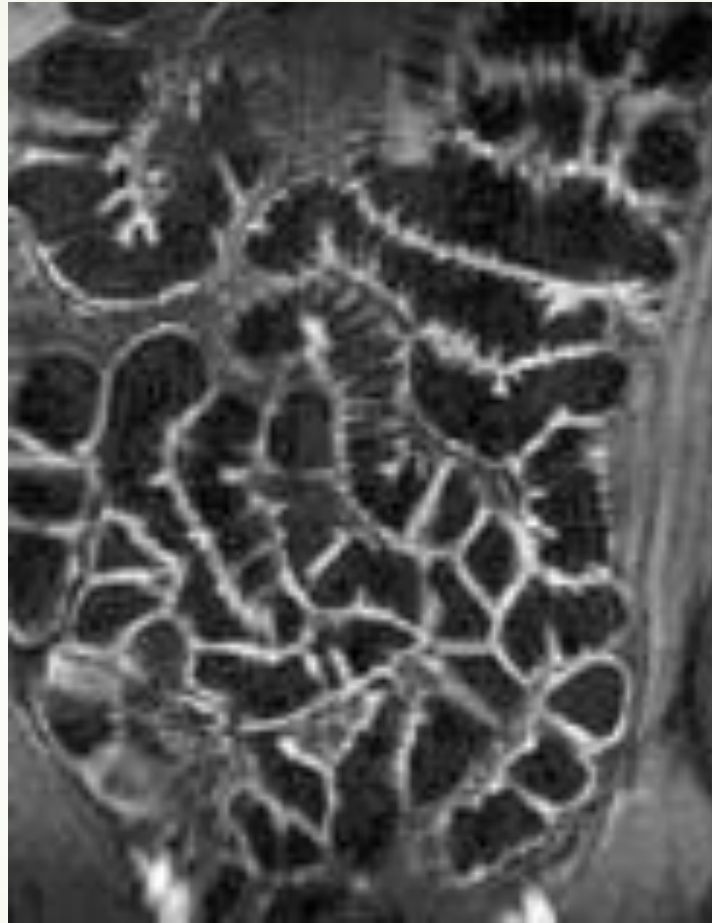
5-Transverse colon

1- Rectum





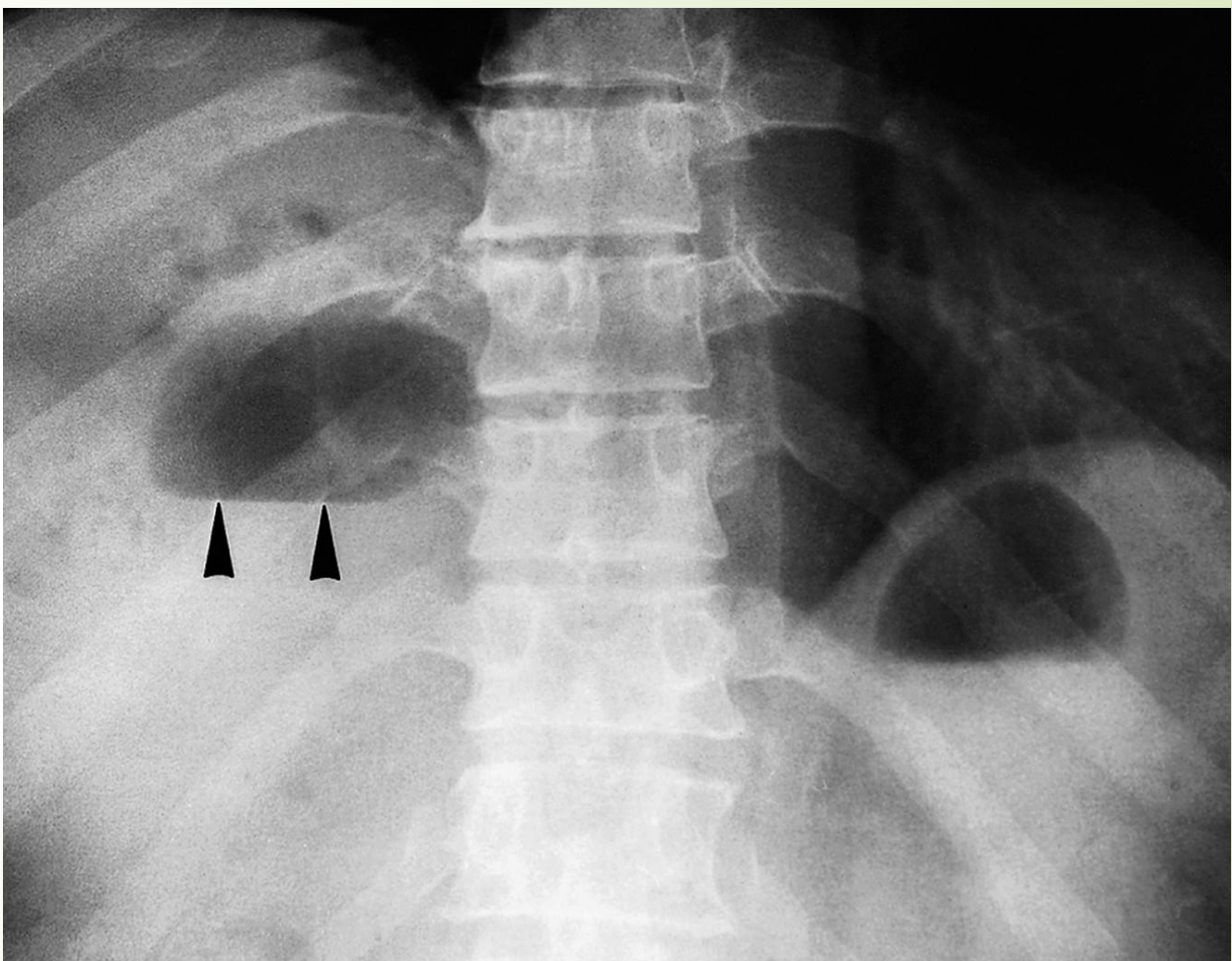
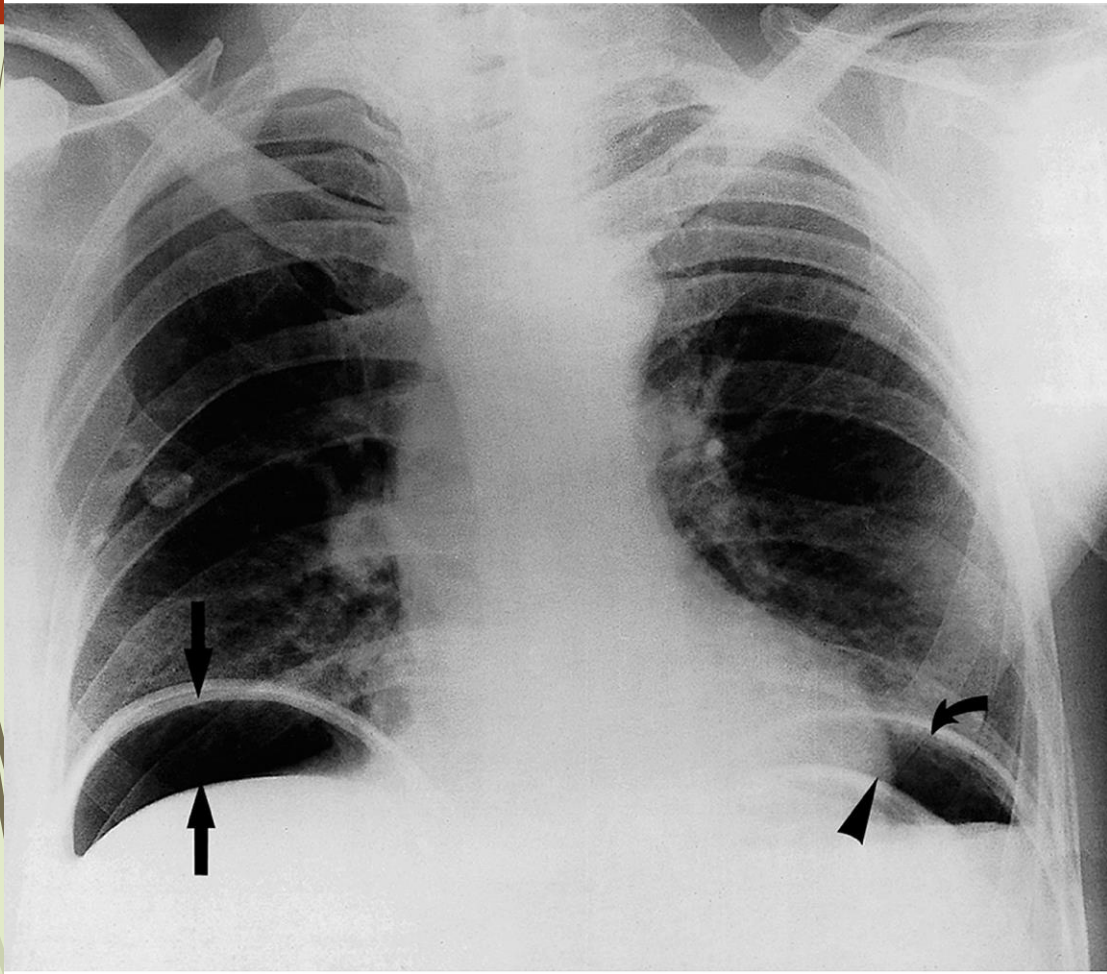
1. Descending colon
2. Splenic flexure
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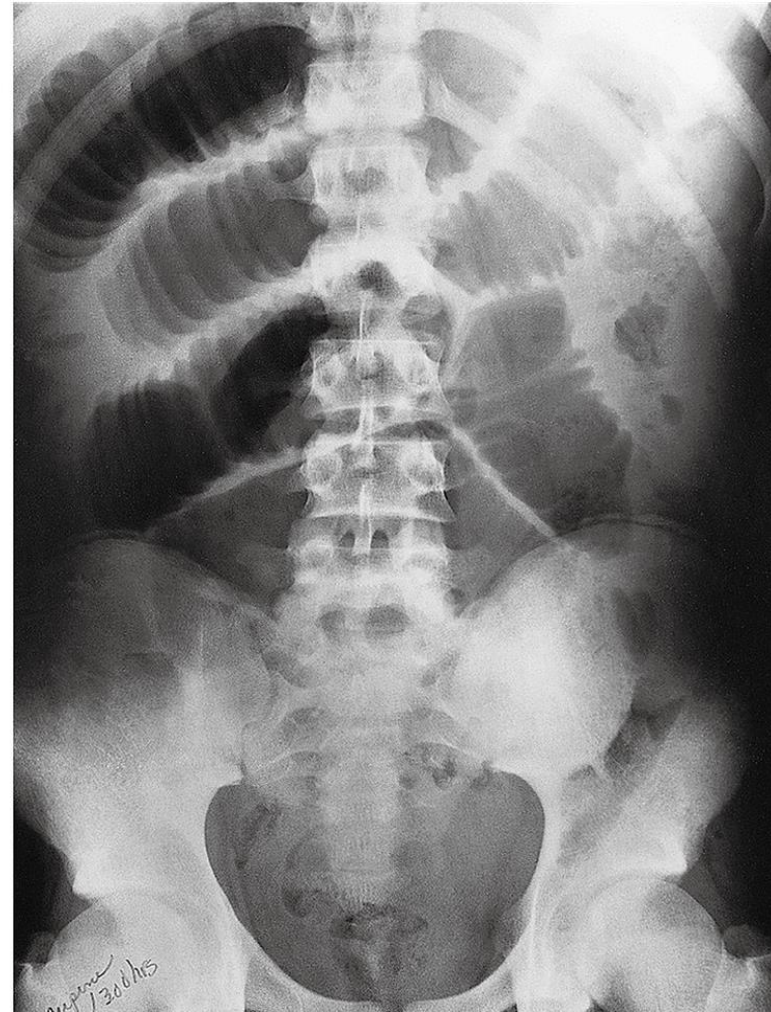
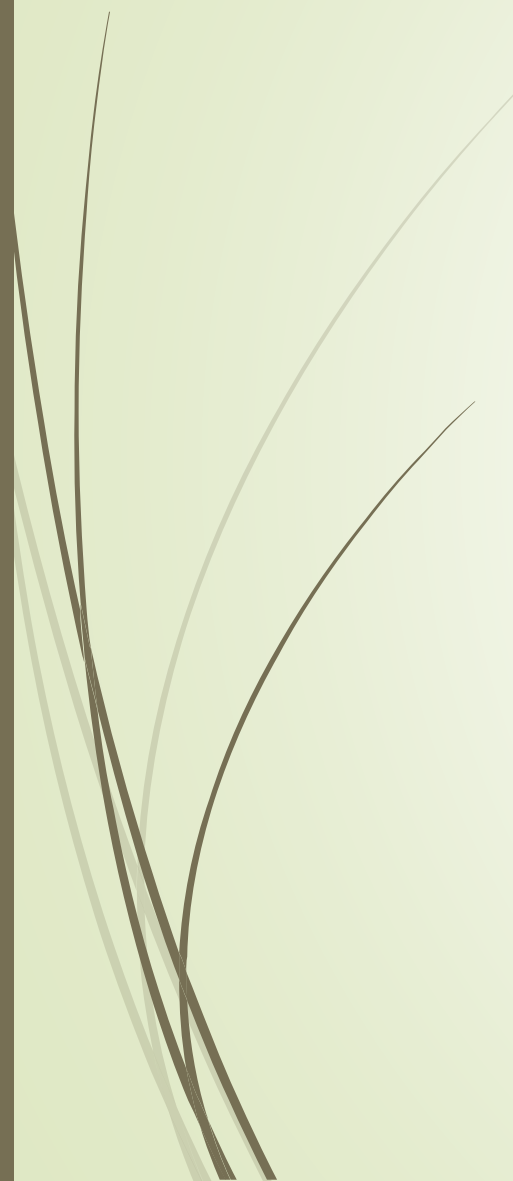


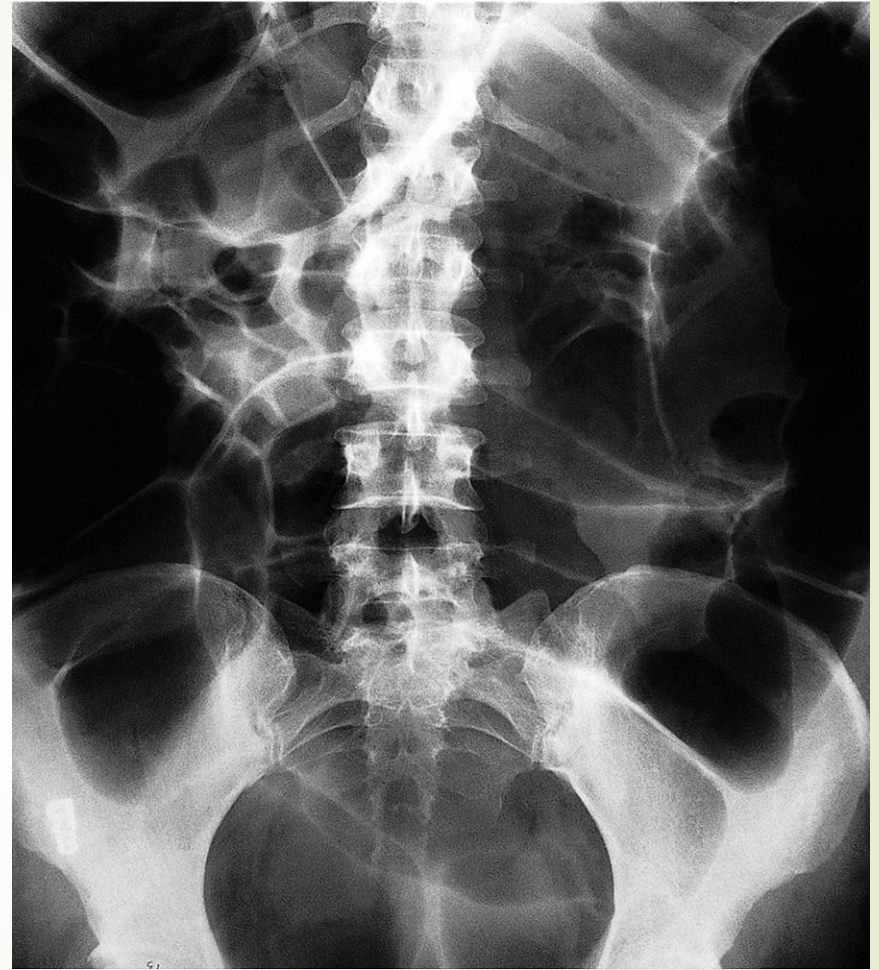
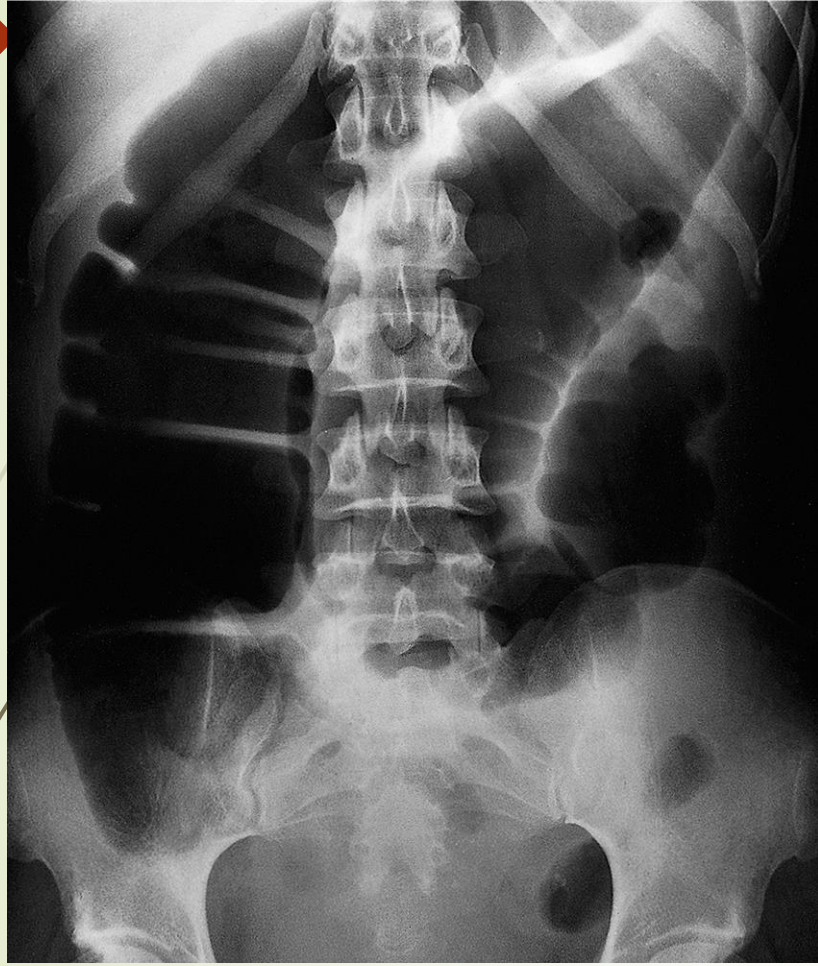
MRI enterography

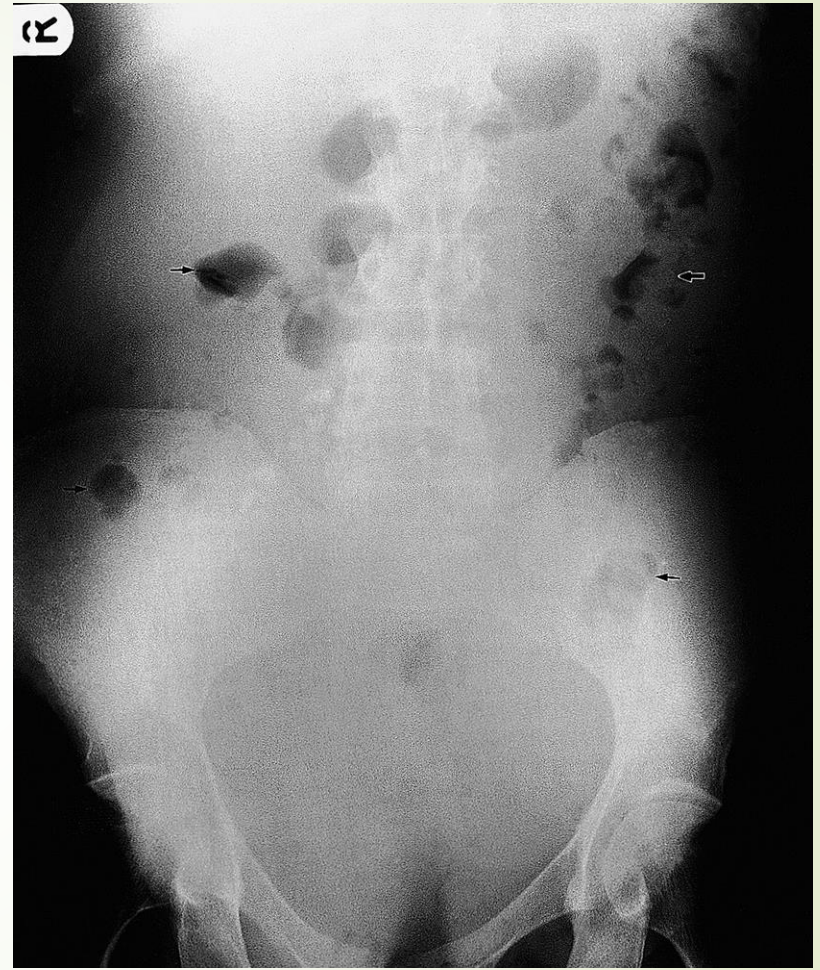
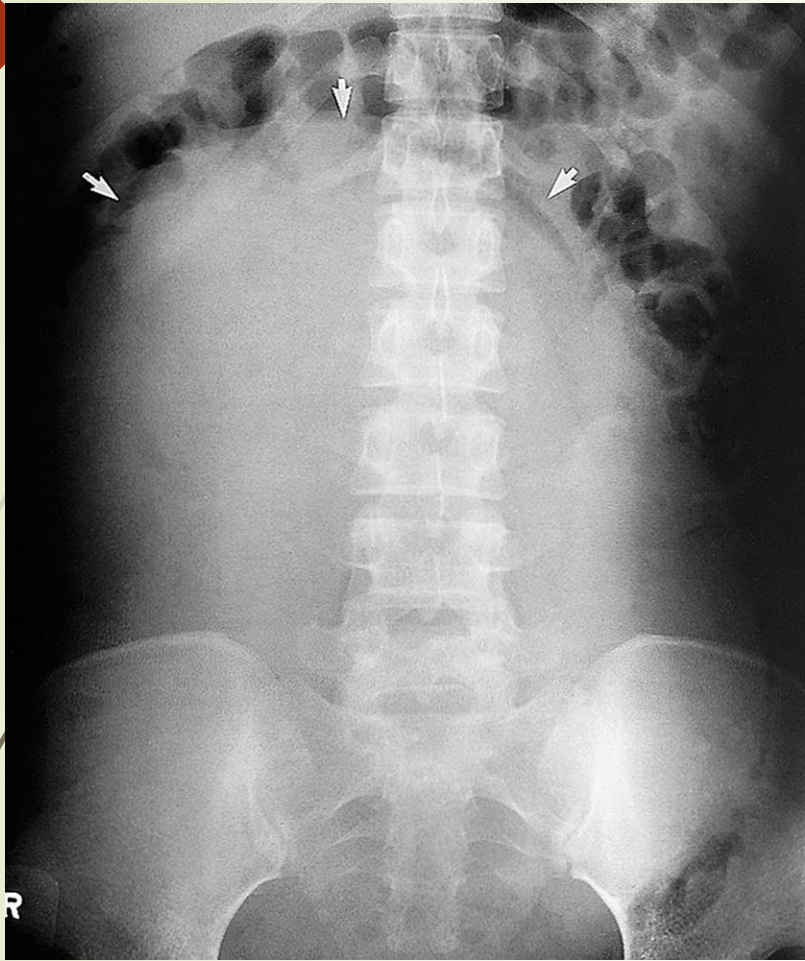


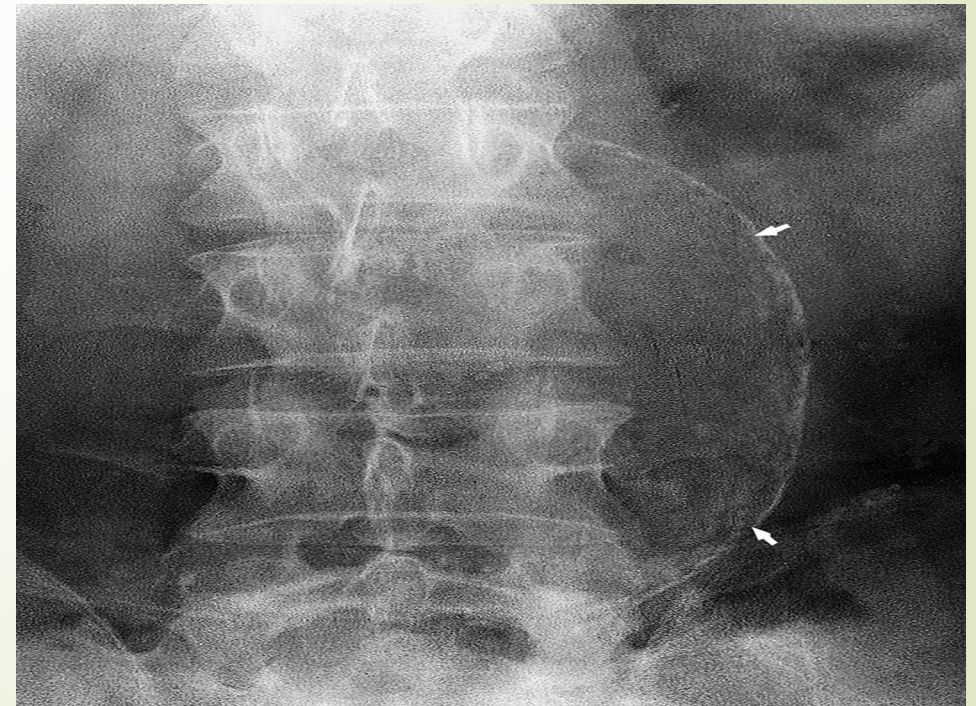
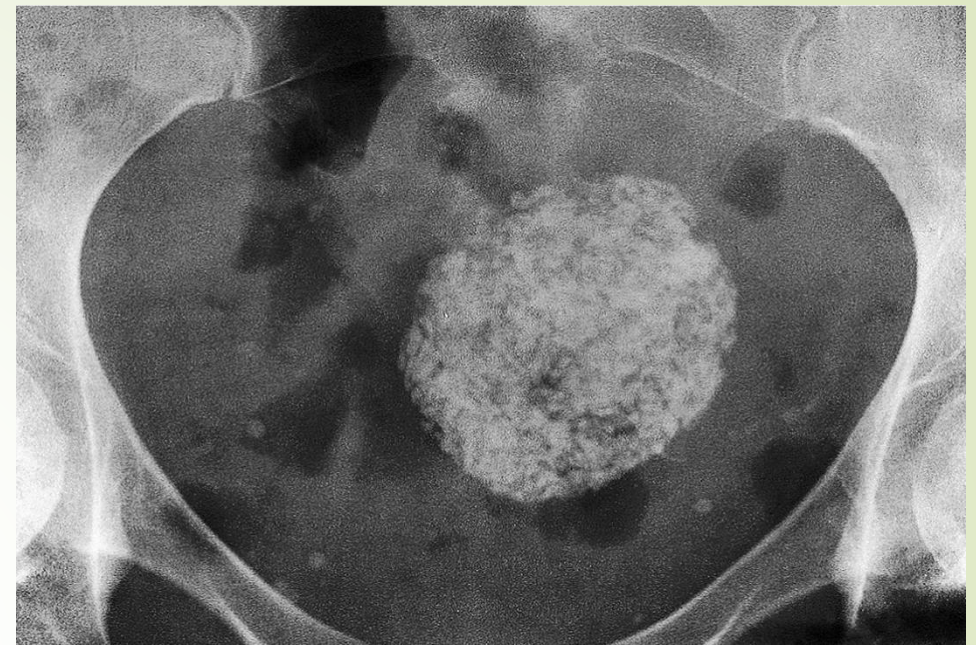
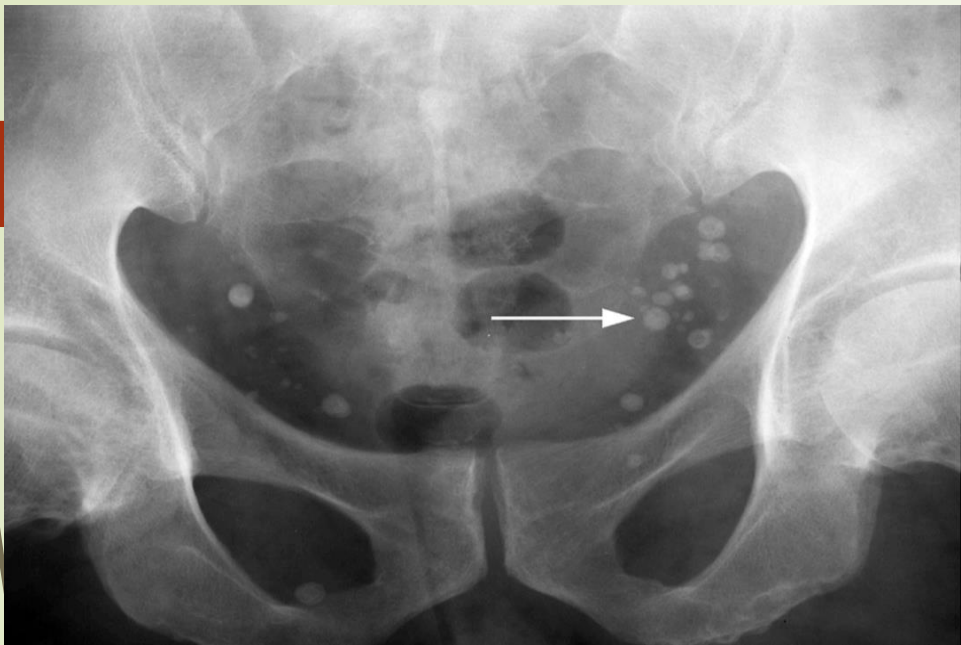
Common plain x-ray abdomen radiograph findings













THE END

THANK YOU