

# A Generalists' Guide To Bowel Pathology

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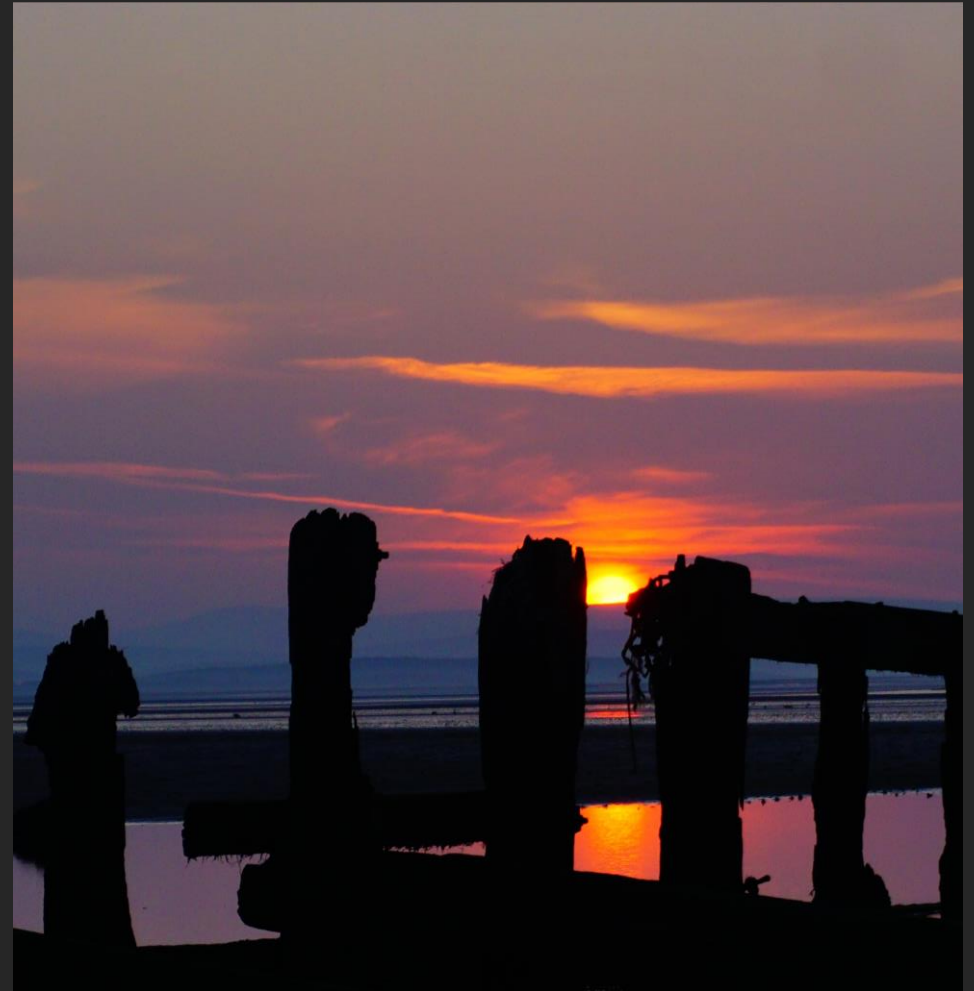
## Disclosures

Speaker fees - Canon Medical  
Systems/Janssen /Abbvie/Tillots  
/Advisory Lilly pharma.

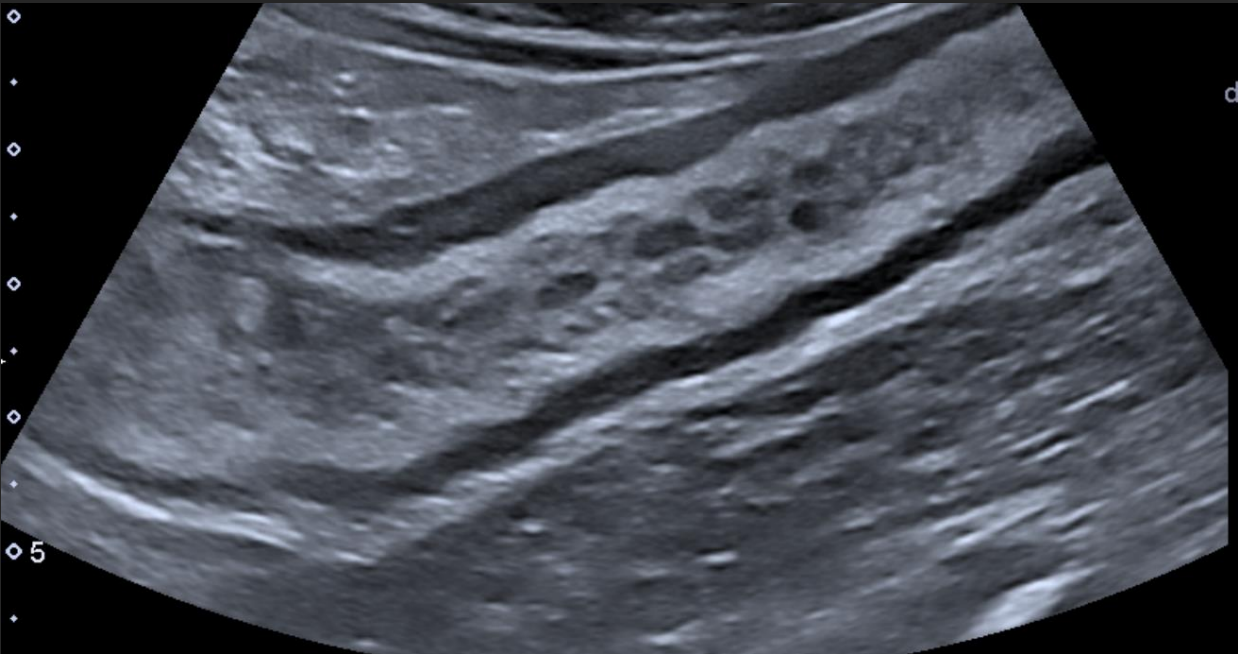


# Rules

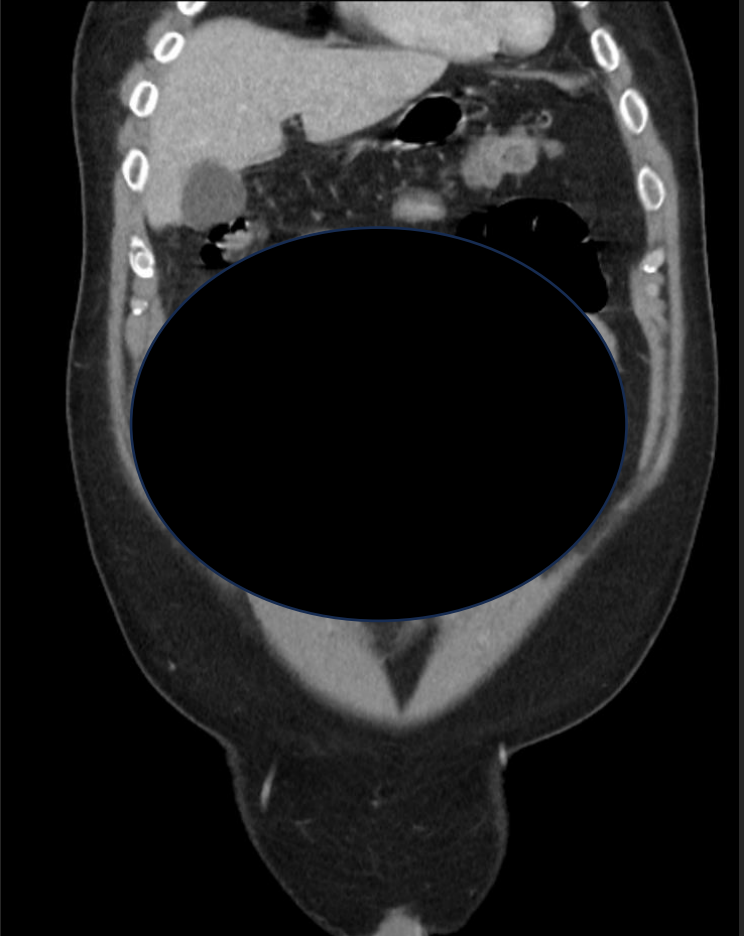
1. Scan it
2. Identify it
3. Interpret it



Bowel looks abnormal– recommend CT.....



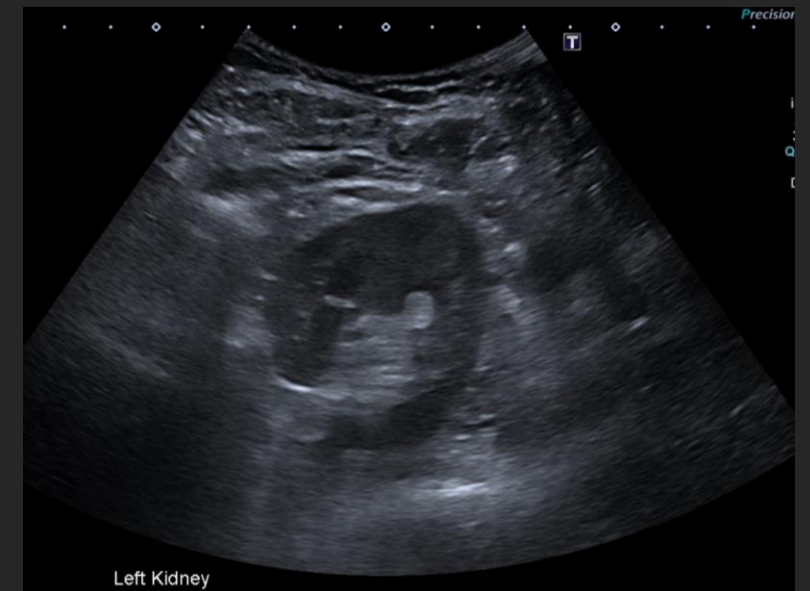
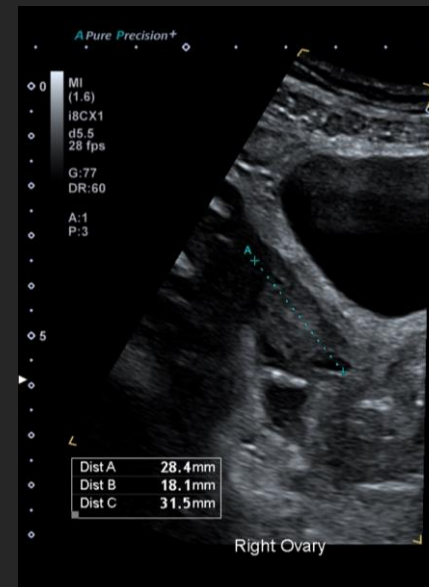
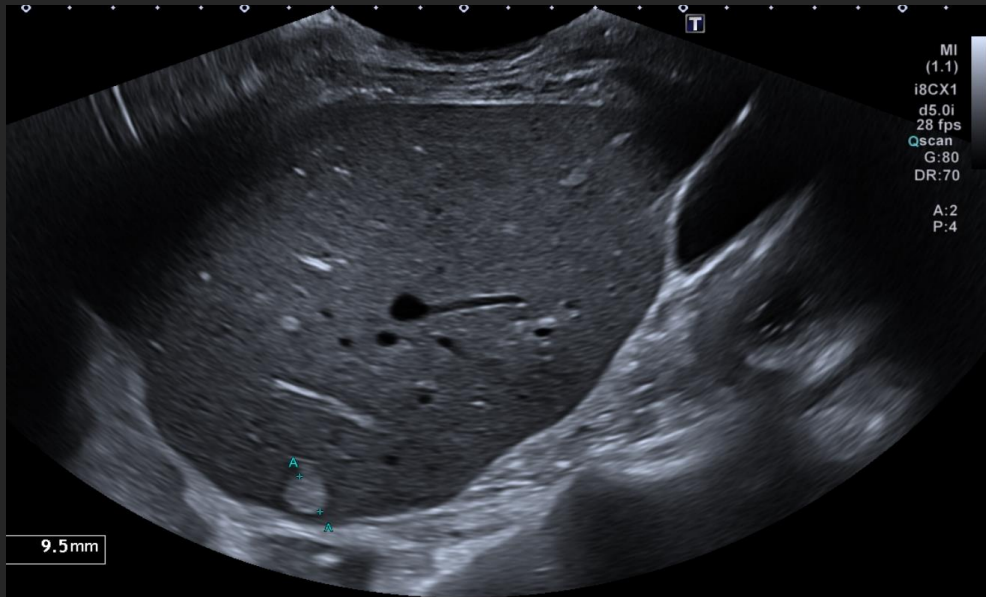
Scan it.....

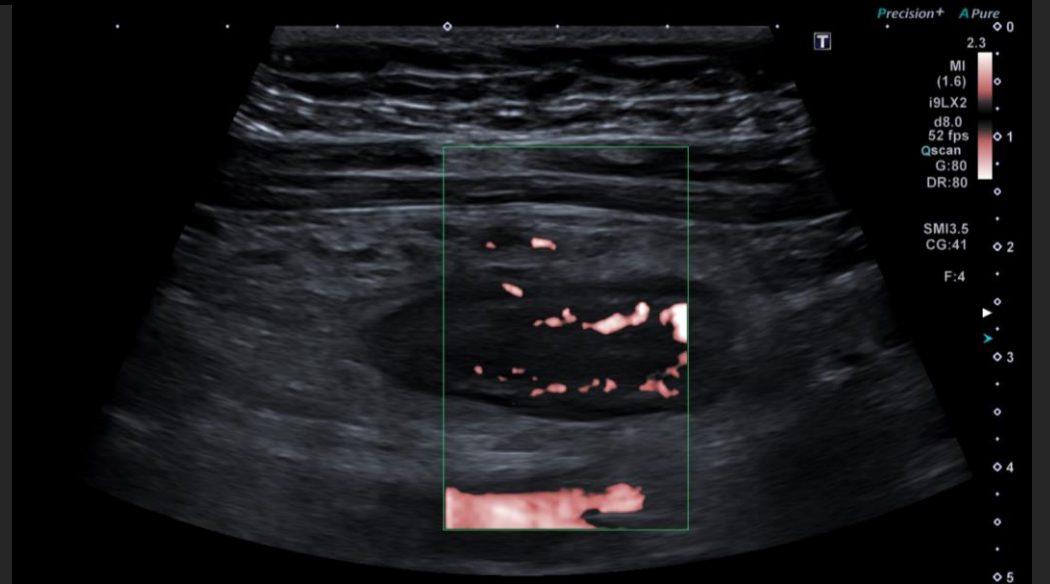
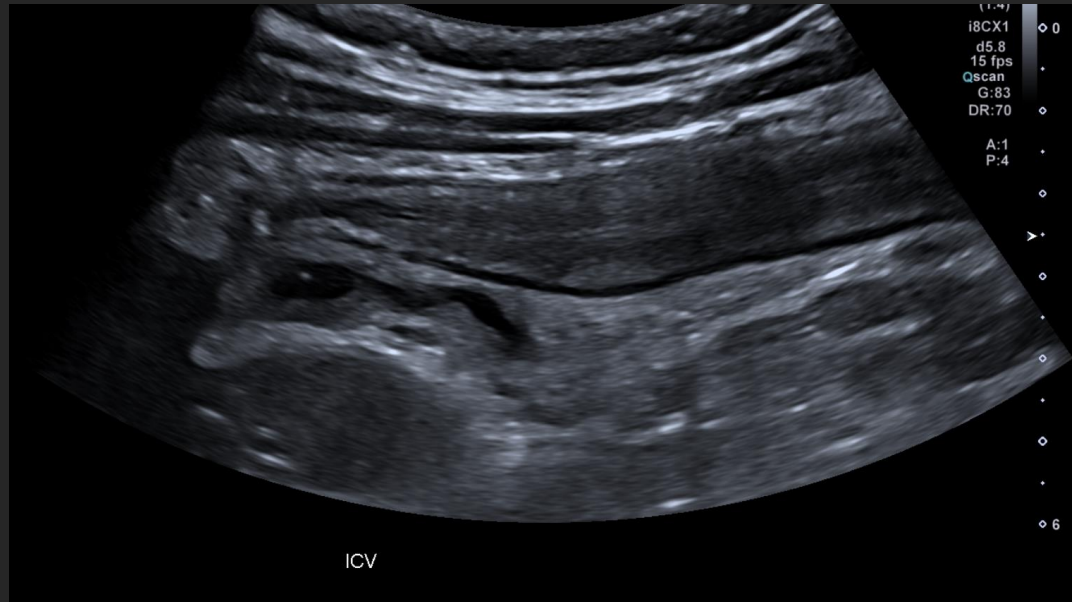
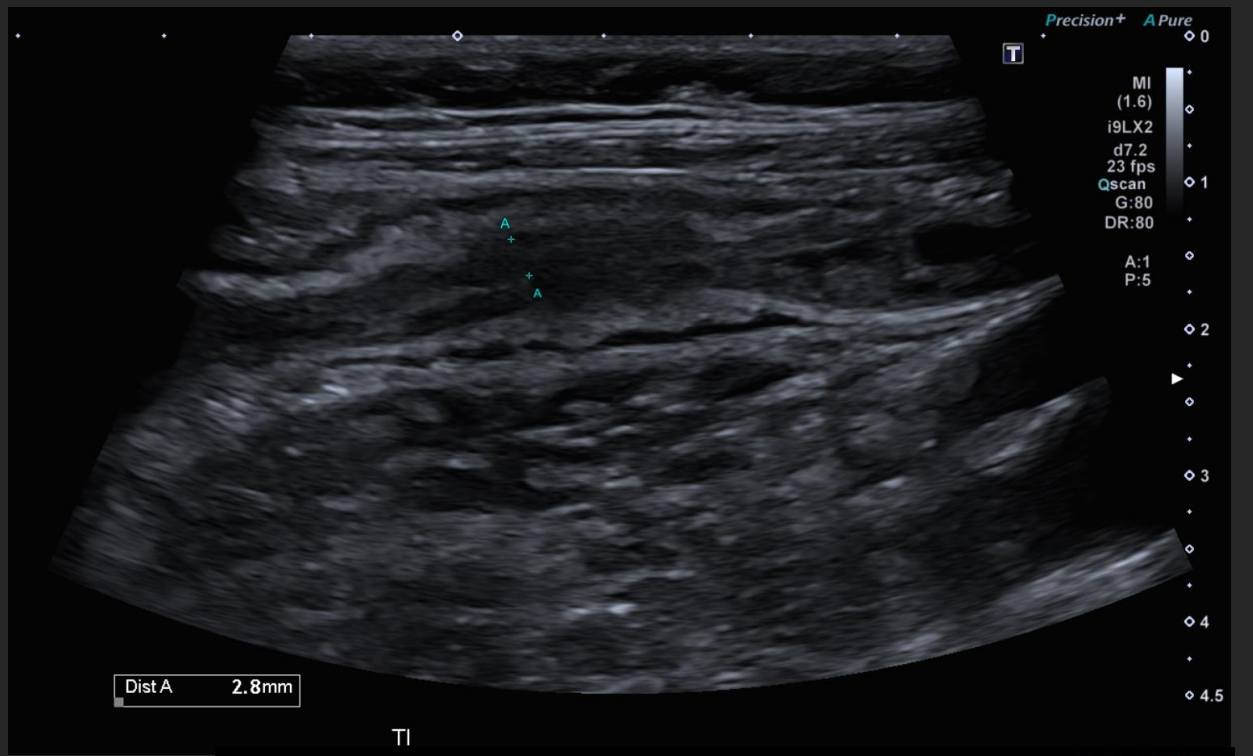
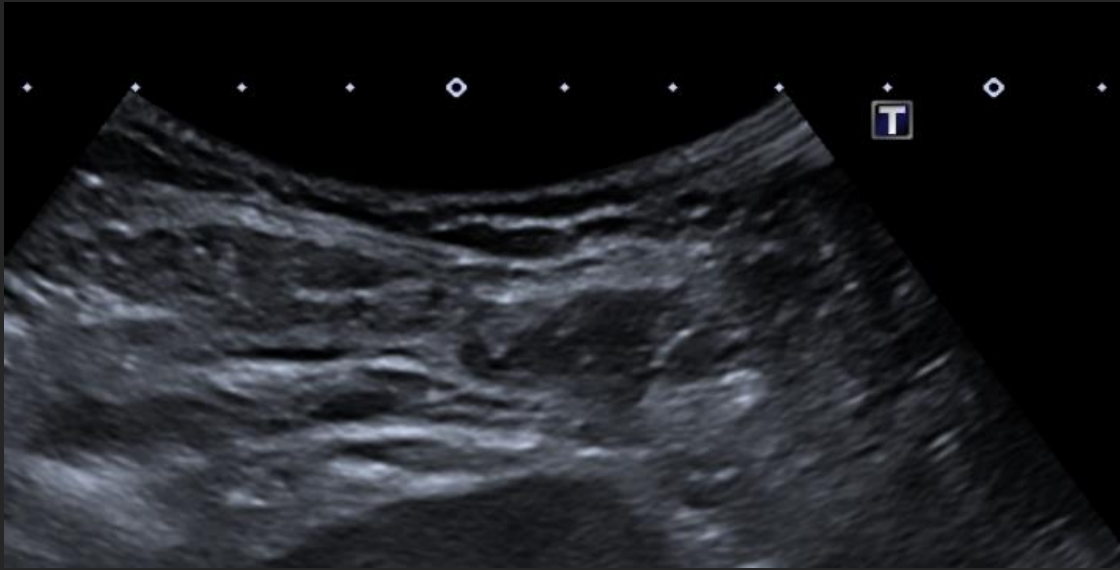


## Clinical Details:

tiredness. wt loss. change in bowel habit. abdo tender L side. pain intermittent L side abdo and some vomiting. for USS urgent to assess for cause please. thanks

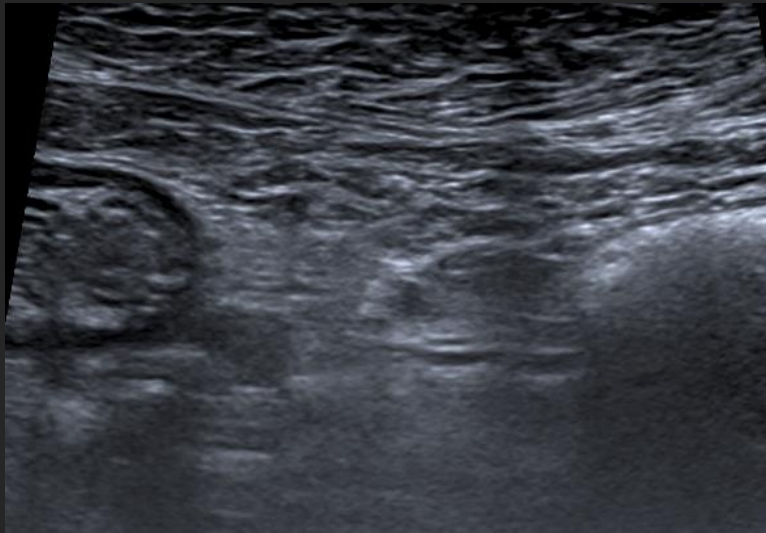
**Findings:** There is a 9.5 mm well-circumscribed solid brightly echogenic focus in the right lobe of liver. This appearance is consistent with a haemangioma. The liver appears otherwise normal. No abnormality seen in the gallbladder and biliary tree, pancreas, spleen and both kidneys. Normal aorta and IVC. The urinary bladder appears smooth walled and normal. No pelvic mass or cyst seen.





# What went wrong there?

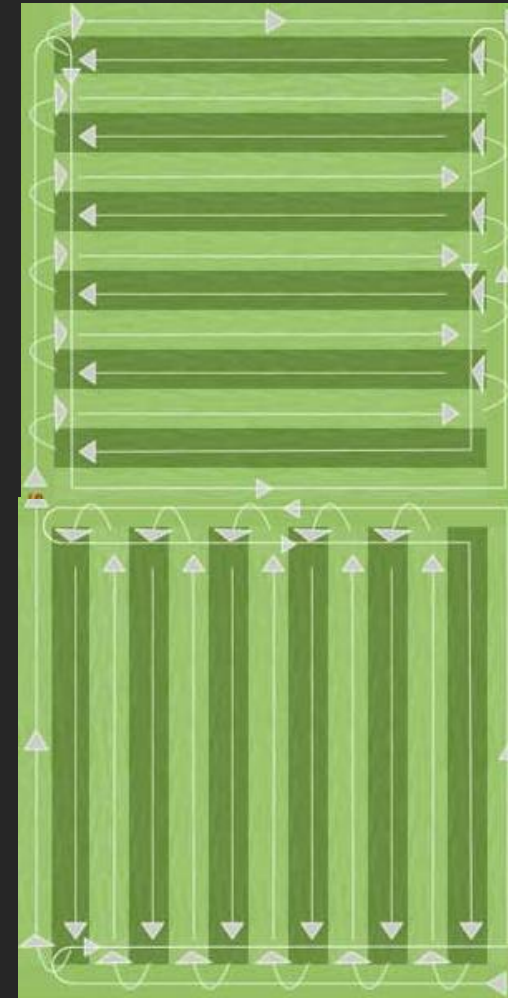
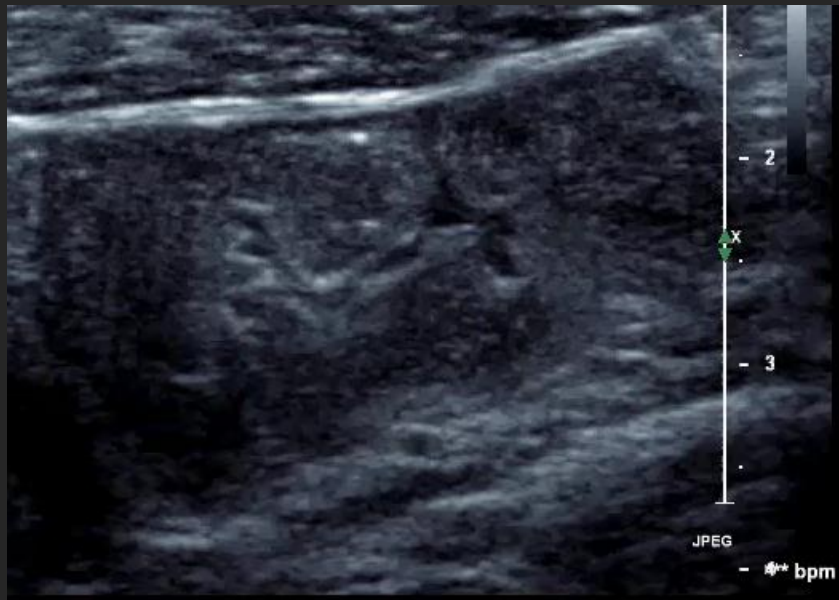
- Clinical blinkers?
- Scan technique?





# Survey

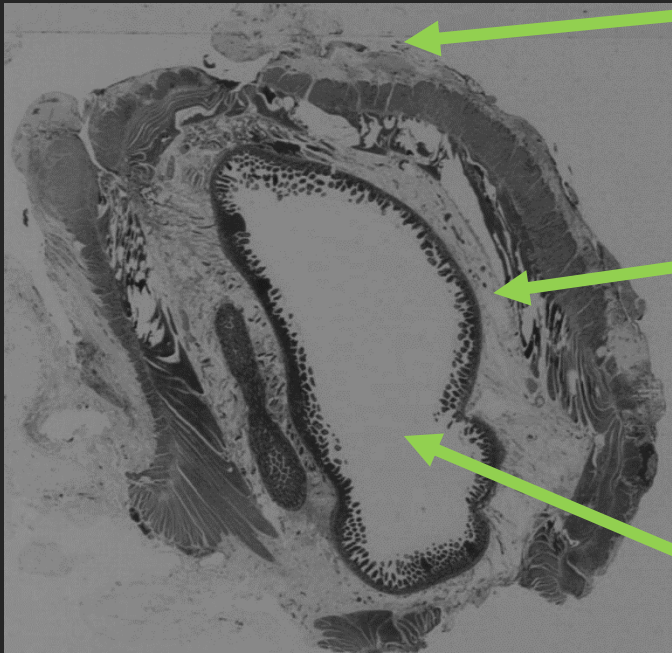
- Mow the lawn !
- Look for primary and secondary signs of disease processes



LAYERS

CONTENTS

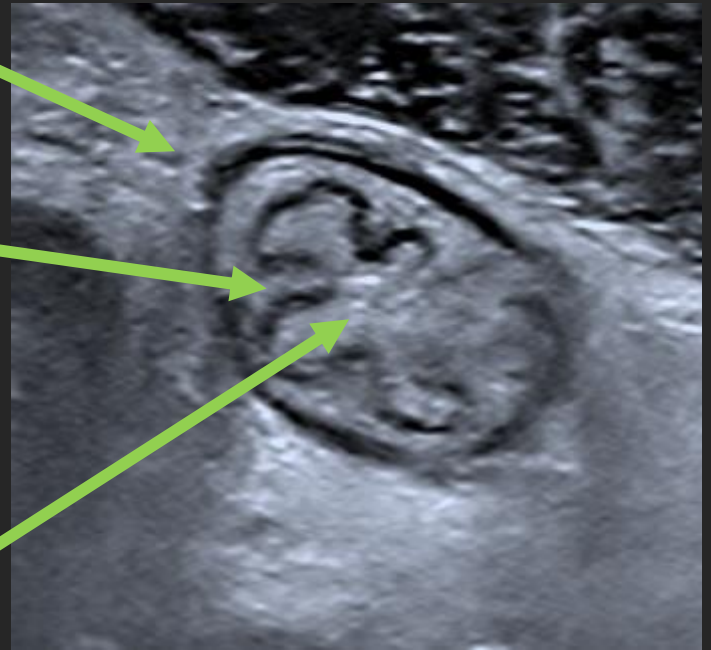
FAT



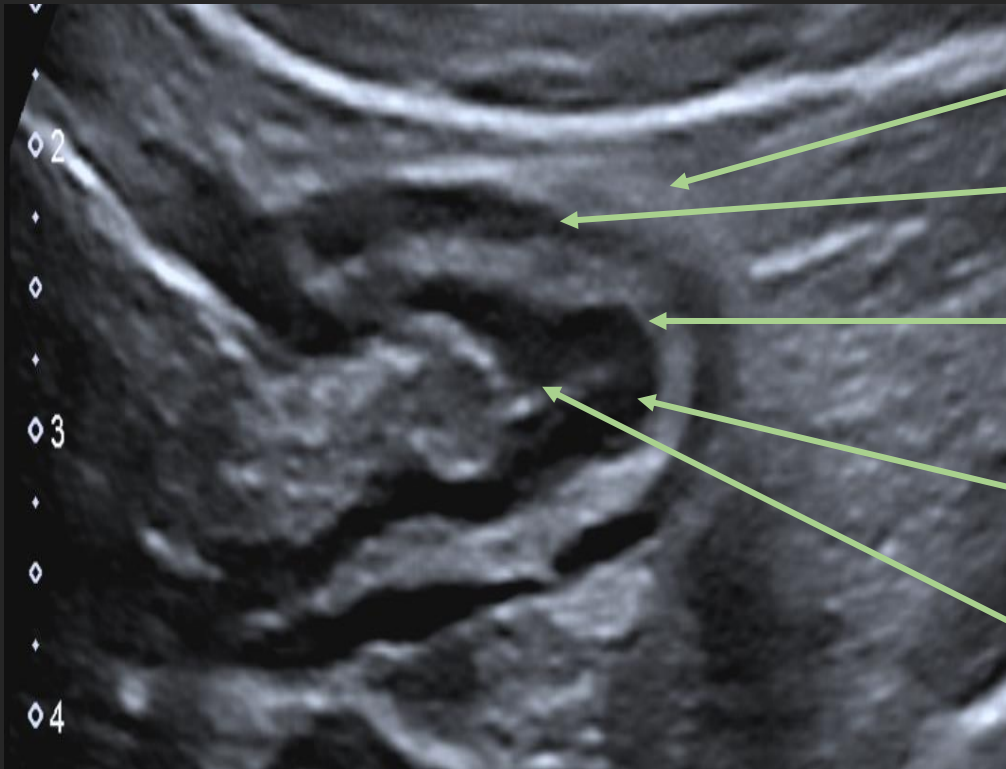
FAT

LAYERS

CONTENTS



# Layers



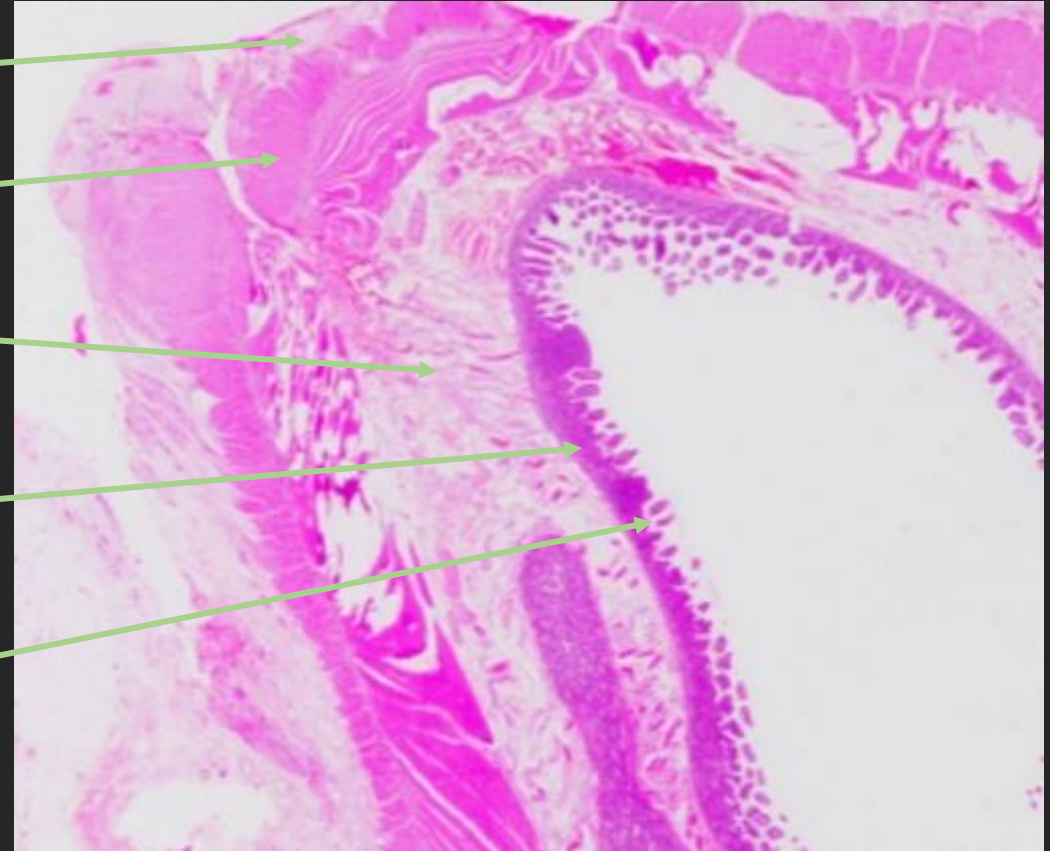
Serosa//Fat

Muscularis  
Propria

Submucosa

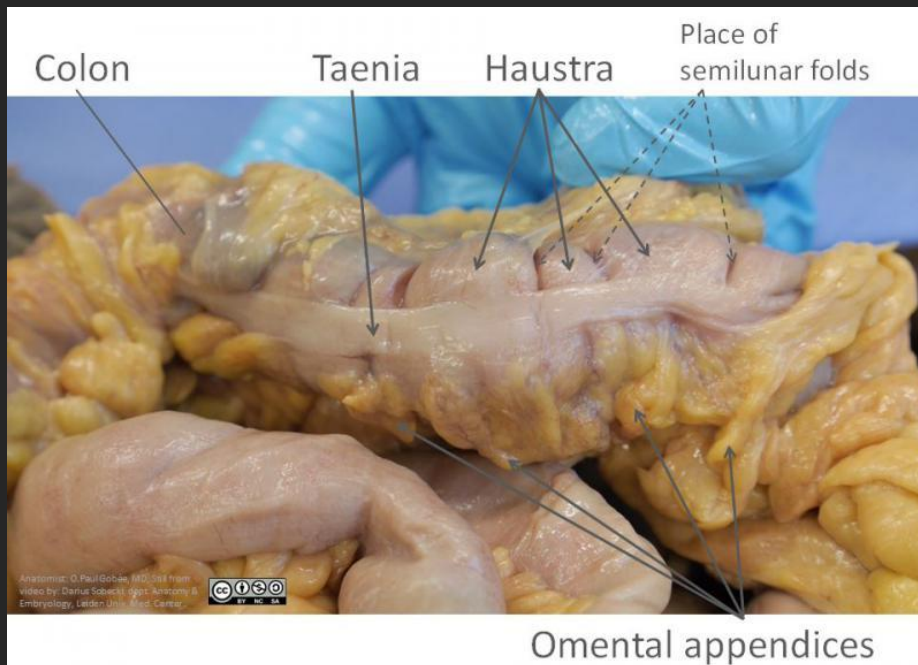
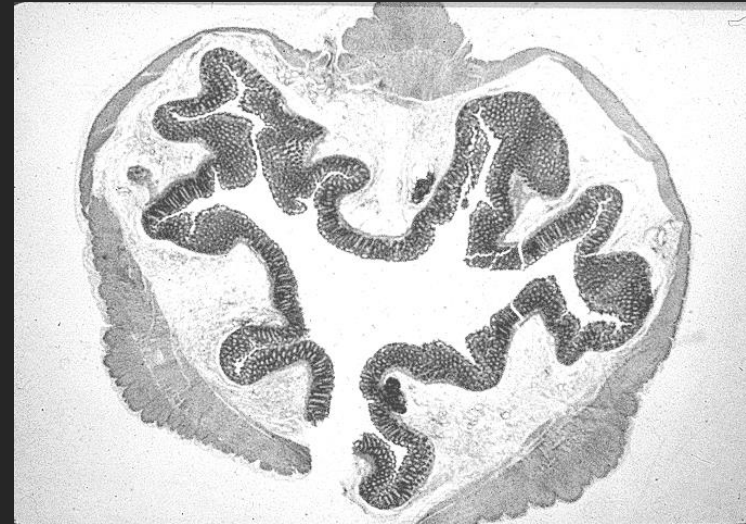
Inner muscularis

Mucosa

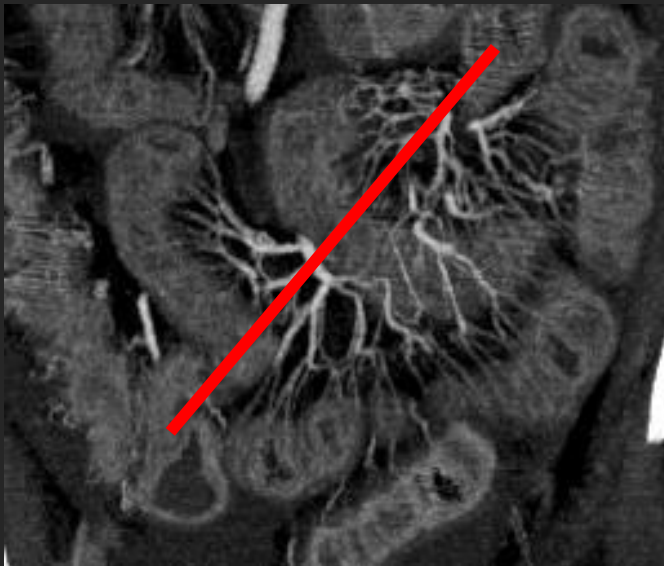
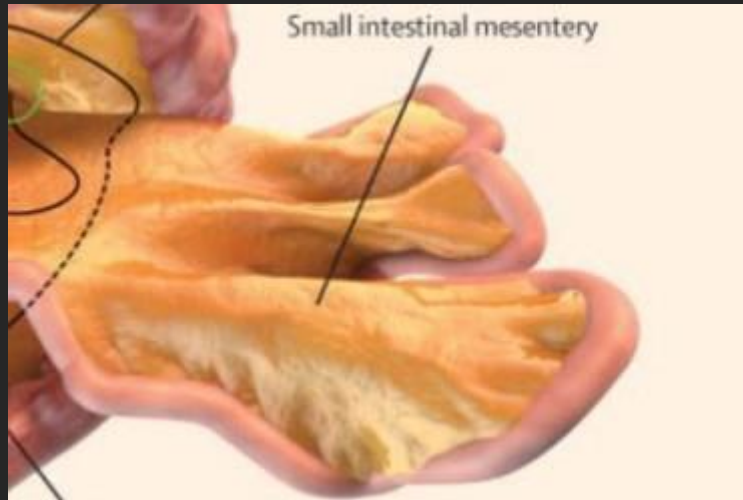


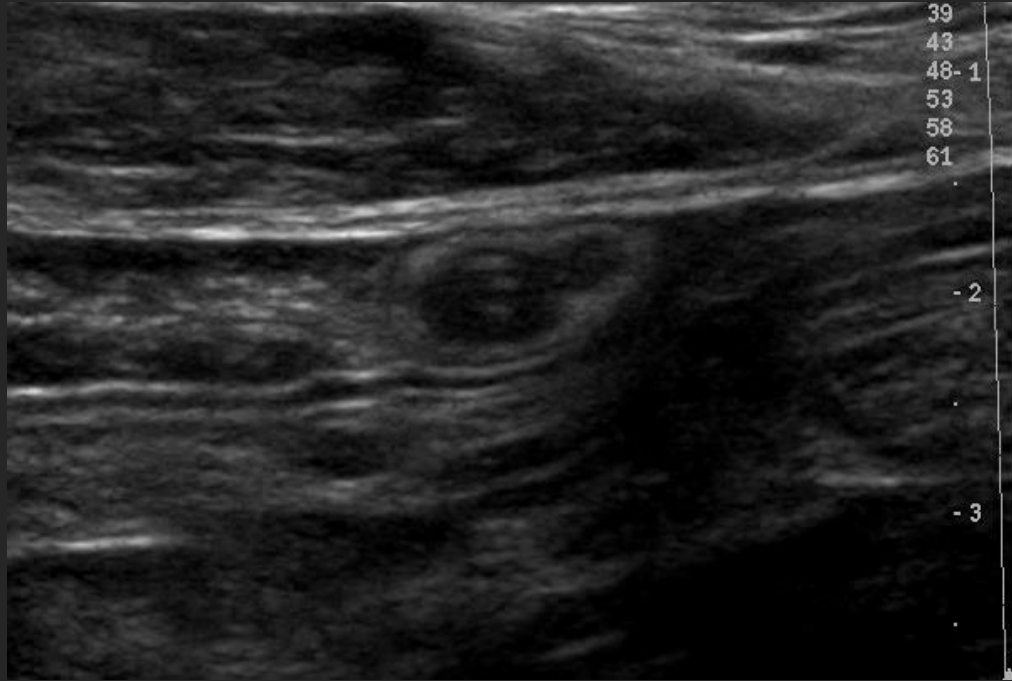
# Colon

- Thicker 4mm
- Longitudinal muscle bands



# Mesentery/Fat



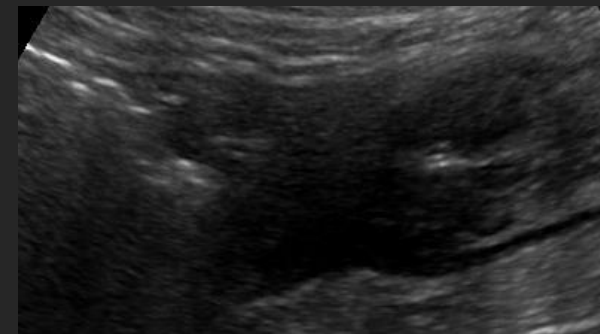
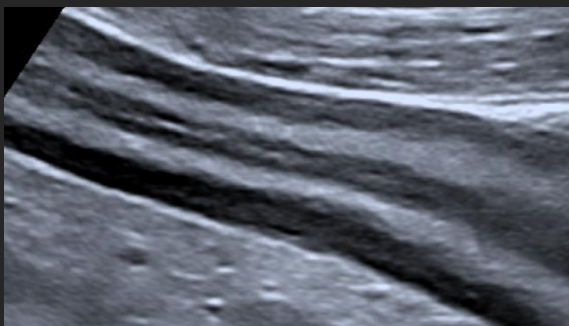


# LAYERS

Preserved

Ill defined

Lost

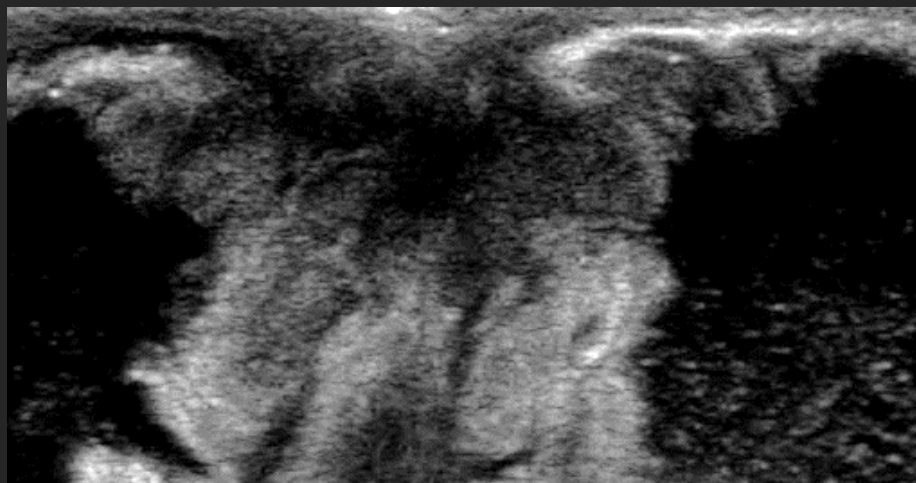




Lost

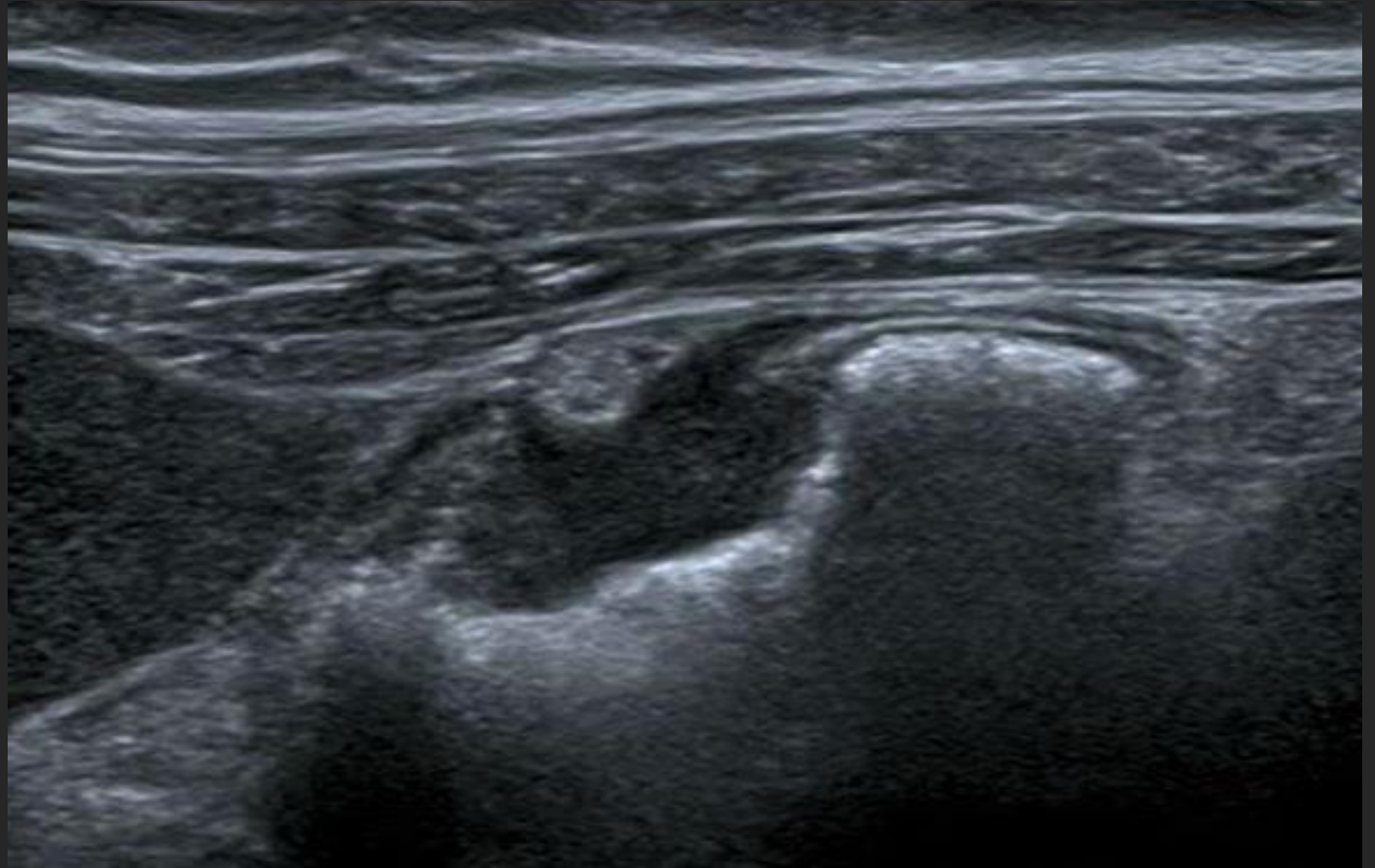
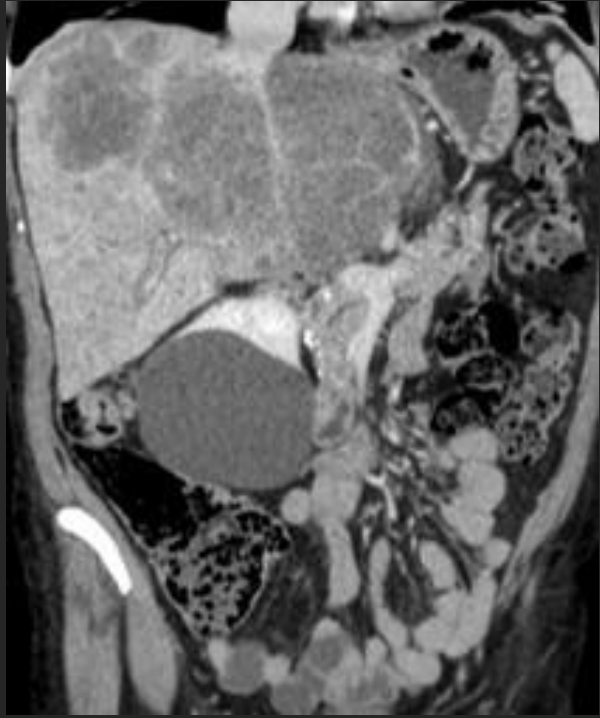


Tumours

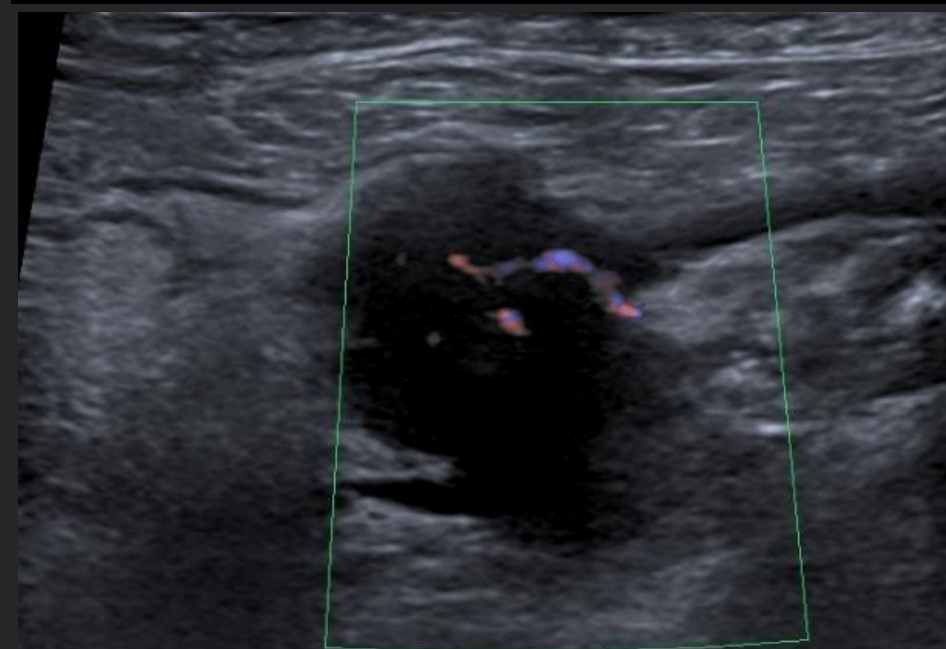
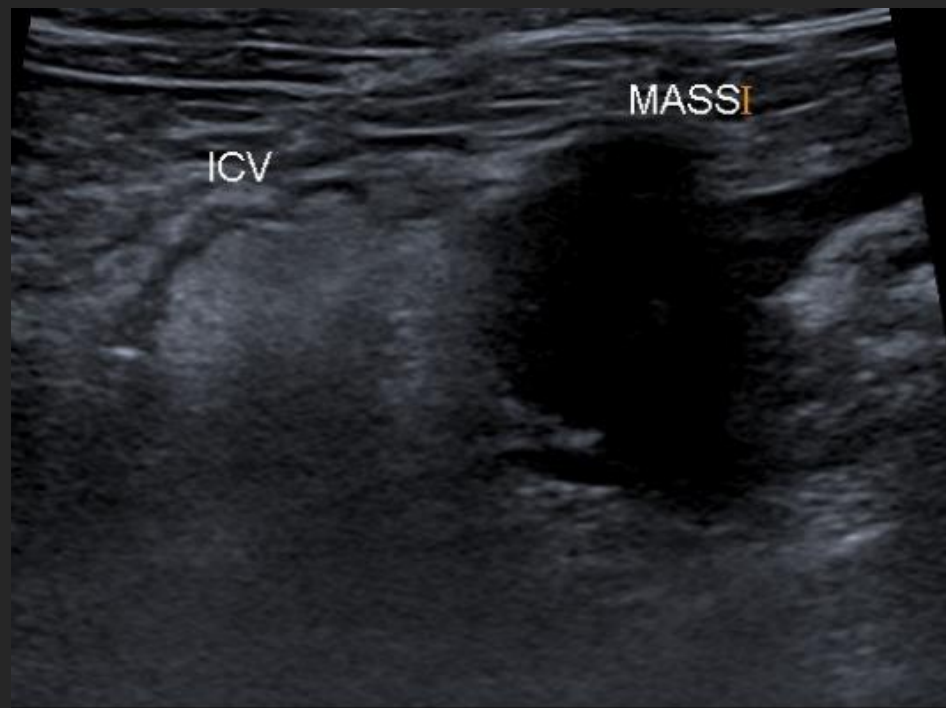
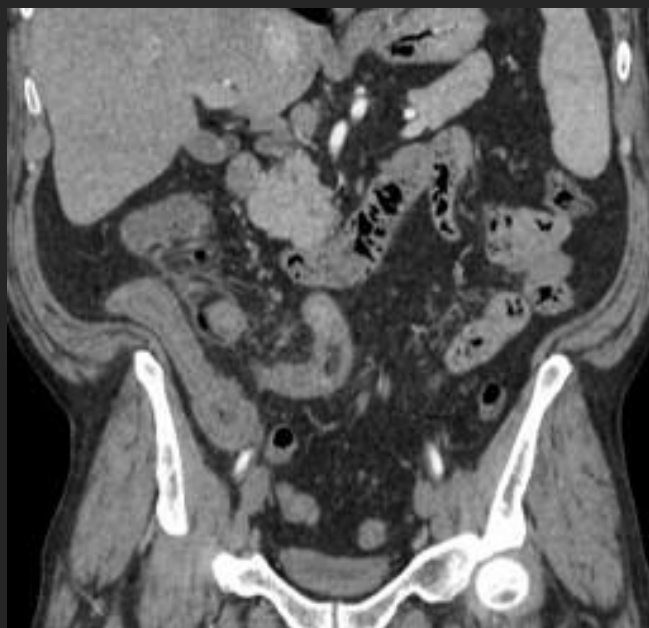


# Colonic Tumours





# Small Bowel

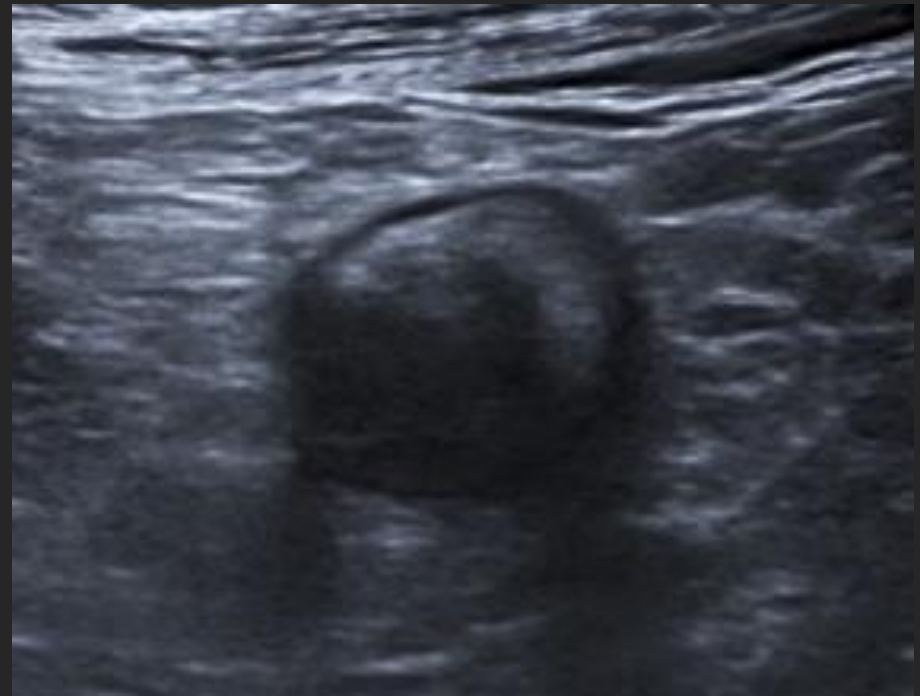


Lost

Necrosis



Fibrosis



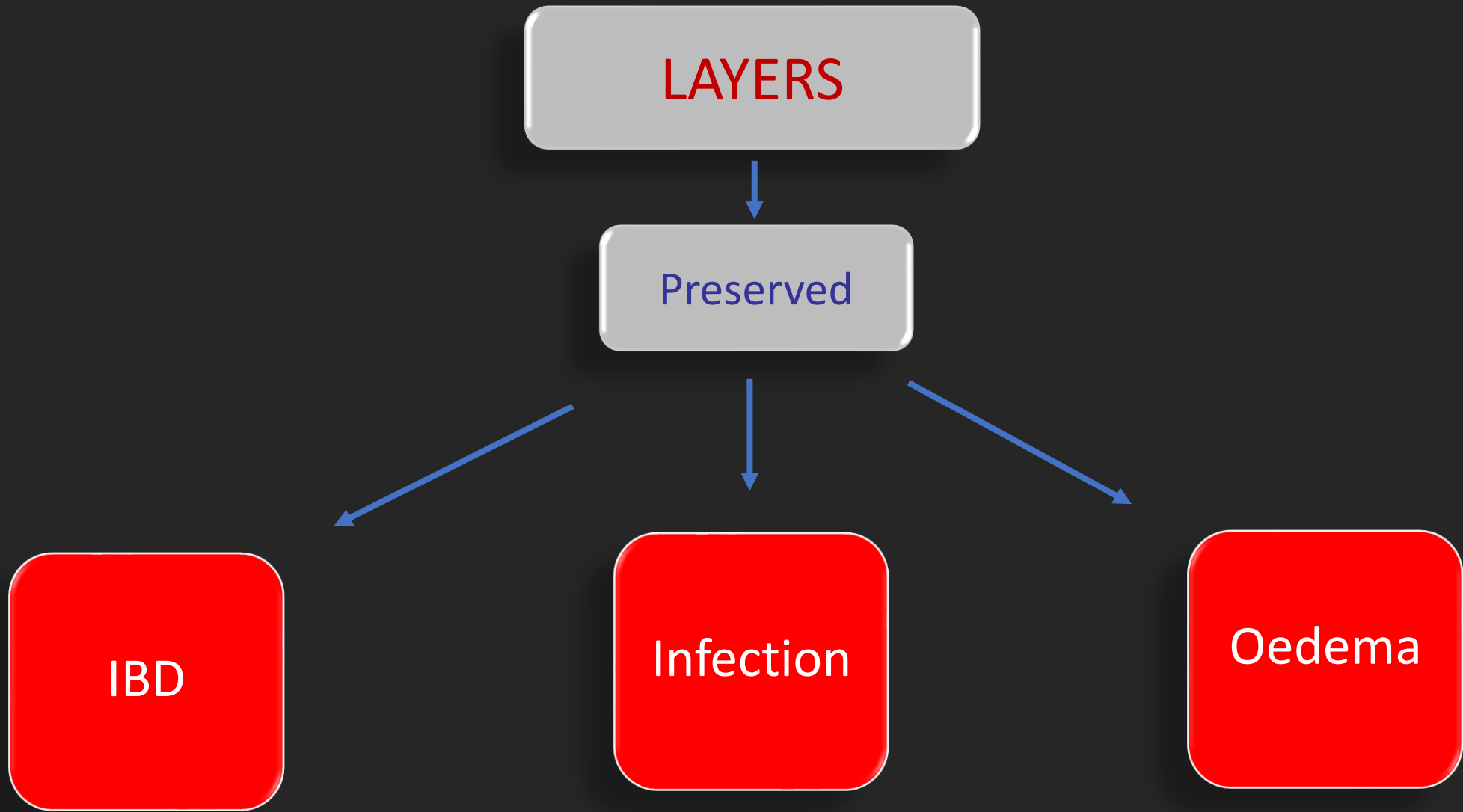
LAYERS

Preserved

IBD

Infection

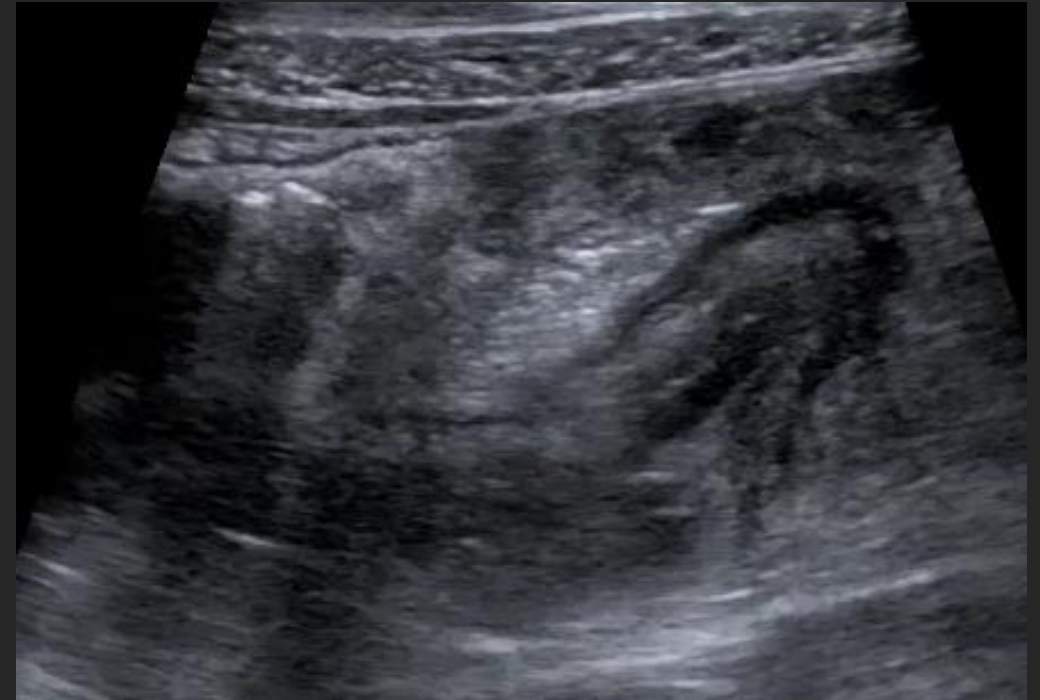
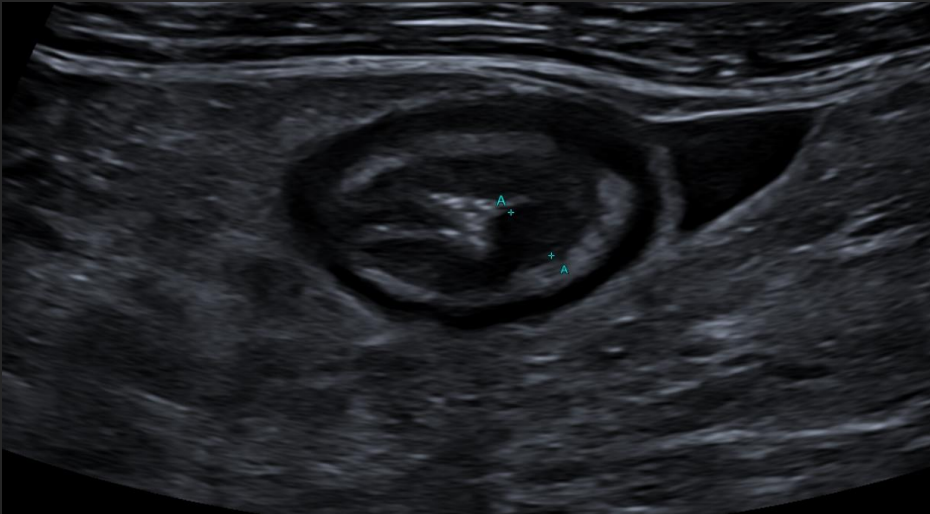
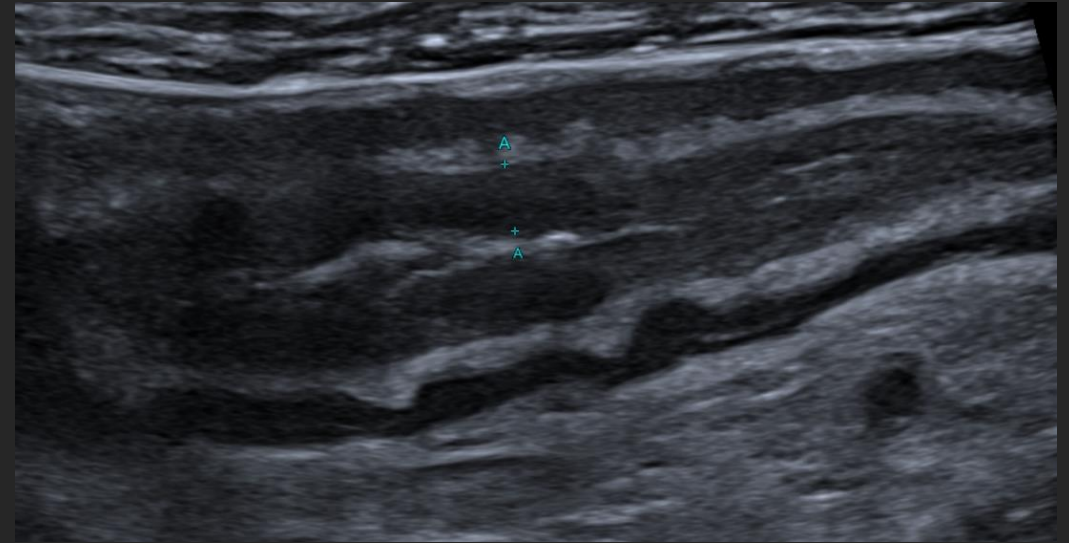
Oedema



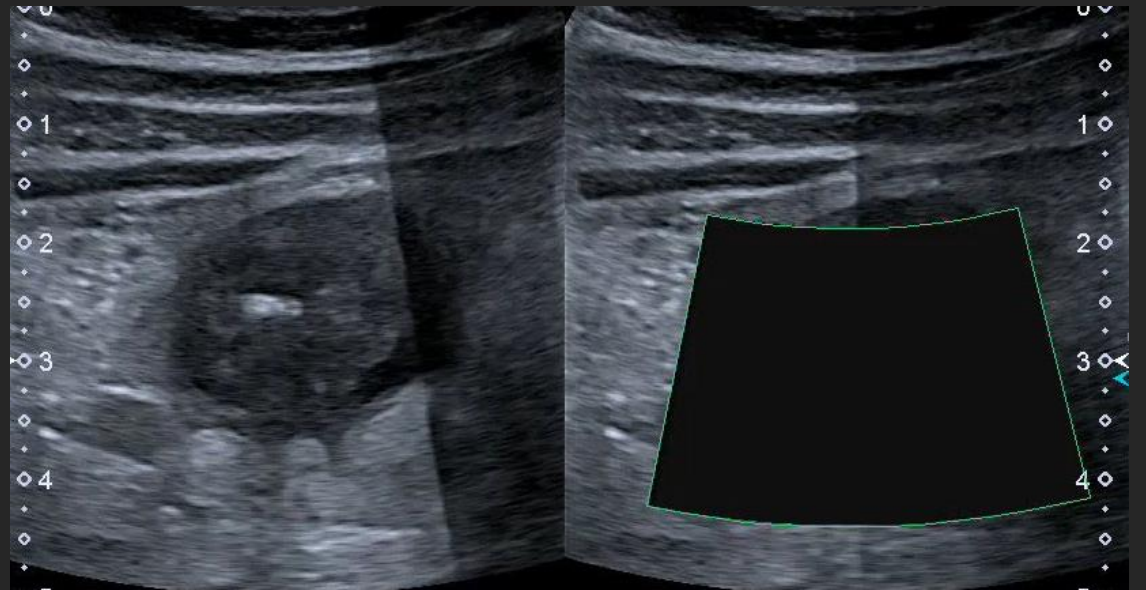
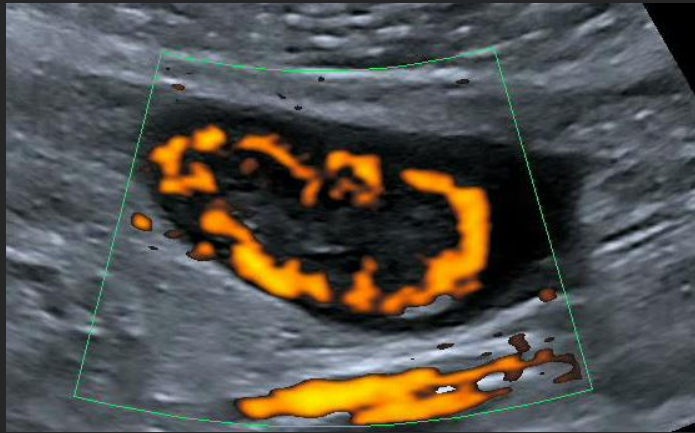
# IBD

## Crohn's Disease

- Locations TI/SB/Colon
- Mucosa /submucosa +fat
- Ulcers / phlegmon / vascularity  
fistulae / abscesses
- Skip lesions

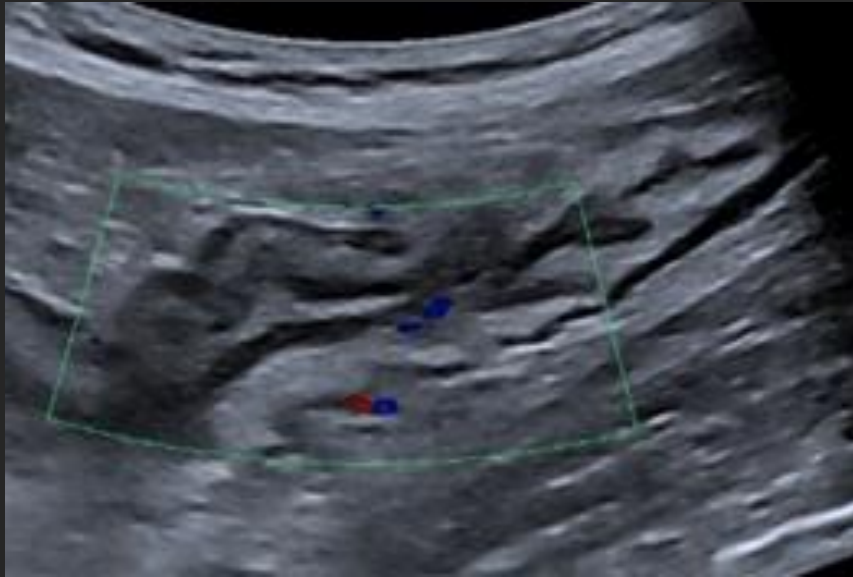


# Other features

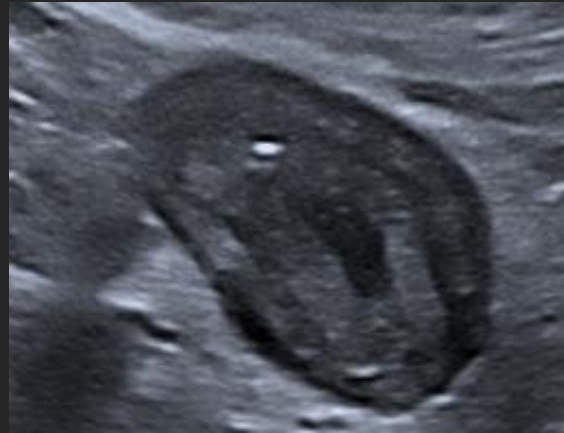




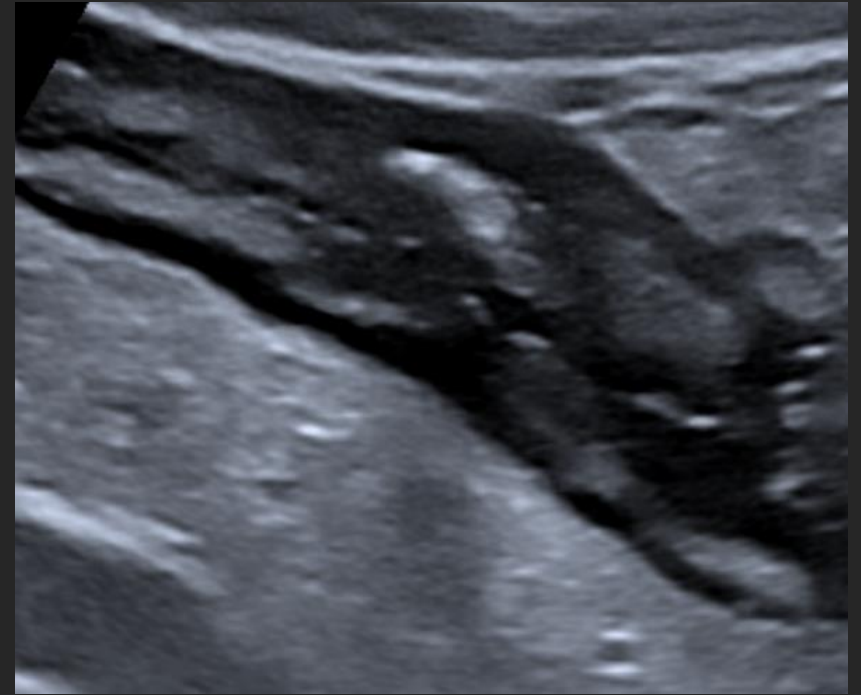
UC



COLON



CROHNS



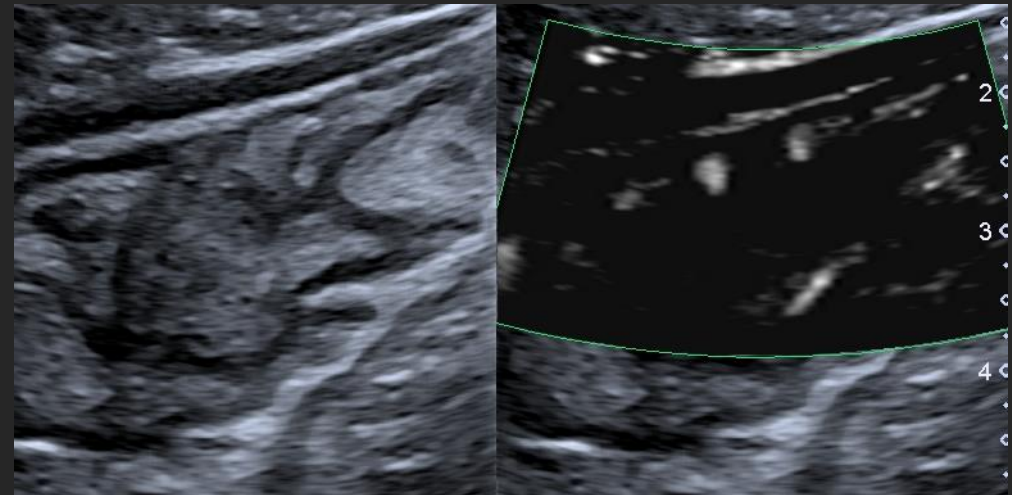
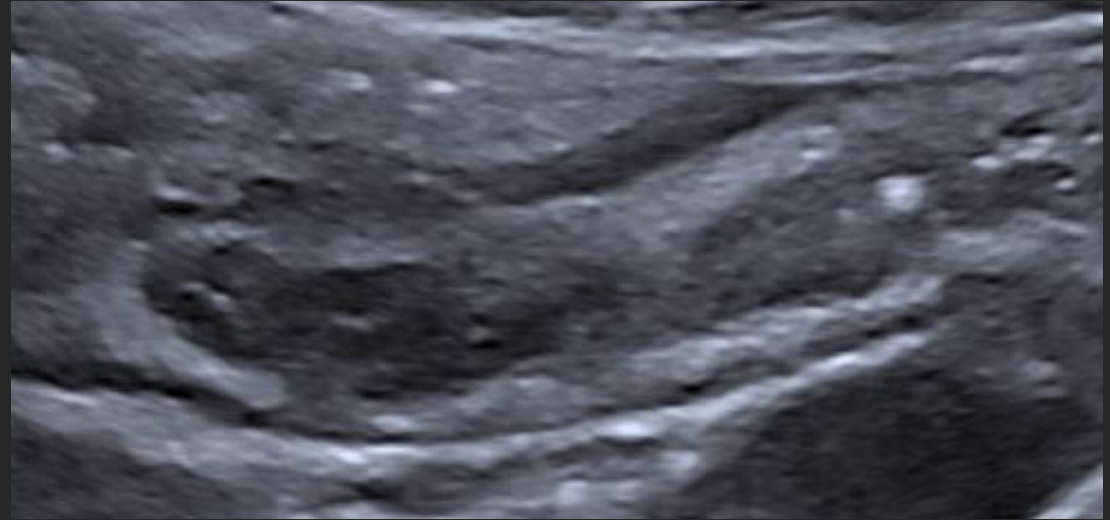
- Long segment – continuous
- Usually mucosa
- Ulcers shallow
- Vascularity variable

- Thicker mucosa / submucosa
- Discontinuous - skip
- Ulcers deeper
- Fat change
- Vascular

# Infection

## Ileocolitis

- Acute
- TI +/- RC
- Mucosa /submucosa – not fat
- Self limits



## Oedema

- Proximal to obstruction
- Adjacent to inflammatory change
- Congestion – smv thrombosis
- Other



LAYERS



Preserved



Single



IBD-UC /  
early CD/  
Infection



Muscular  
hypertrophy

# Single layer – muscular hypertrophy

- Commonest
- Outer muscularis hypertrophy – usually sigmoid associated diverticulosis



LAYERS

Ill defined

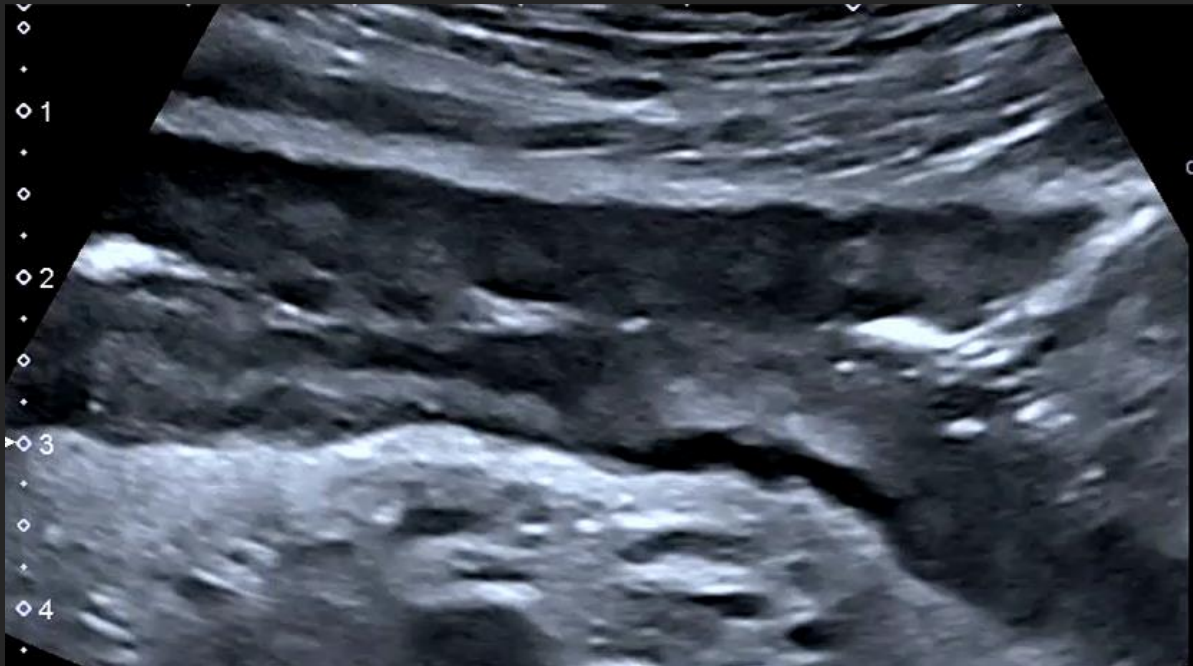
IBD Acute

Ischaemia

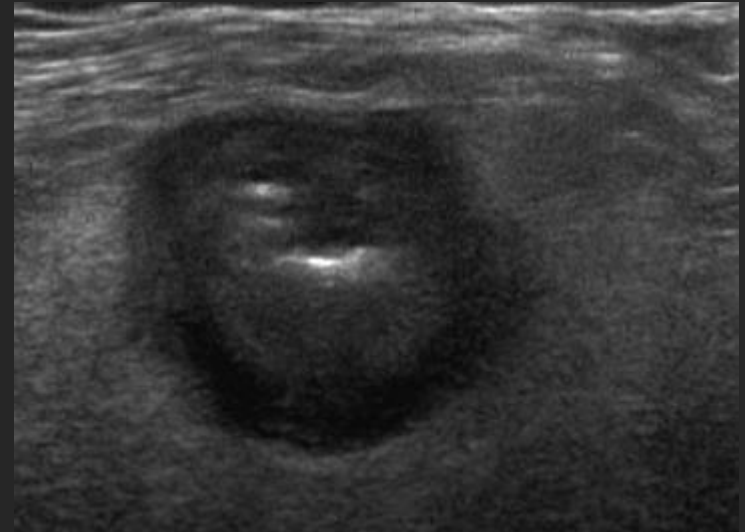
Fibrosis

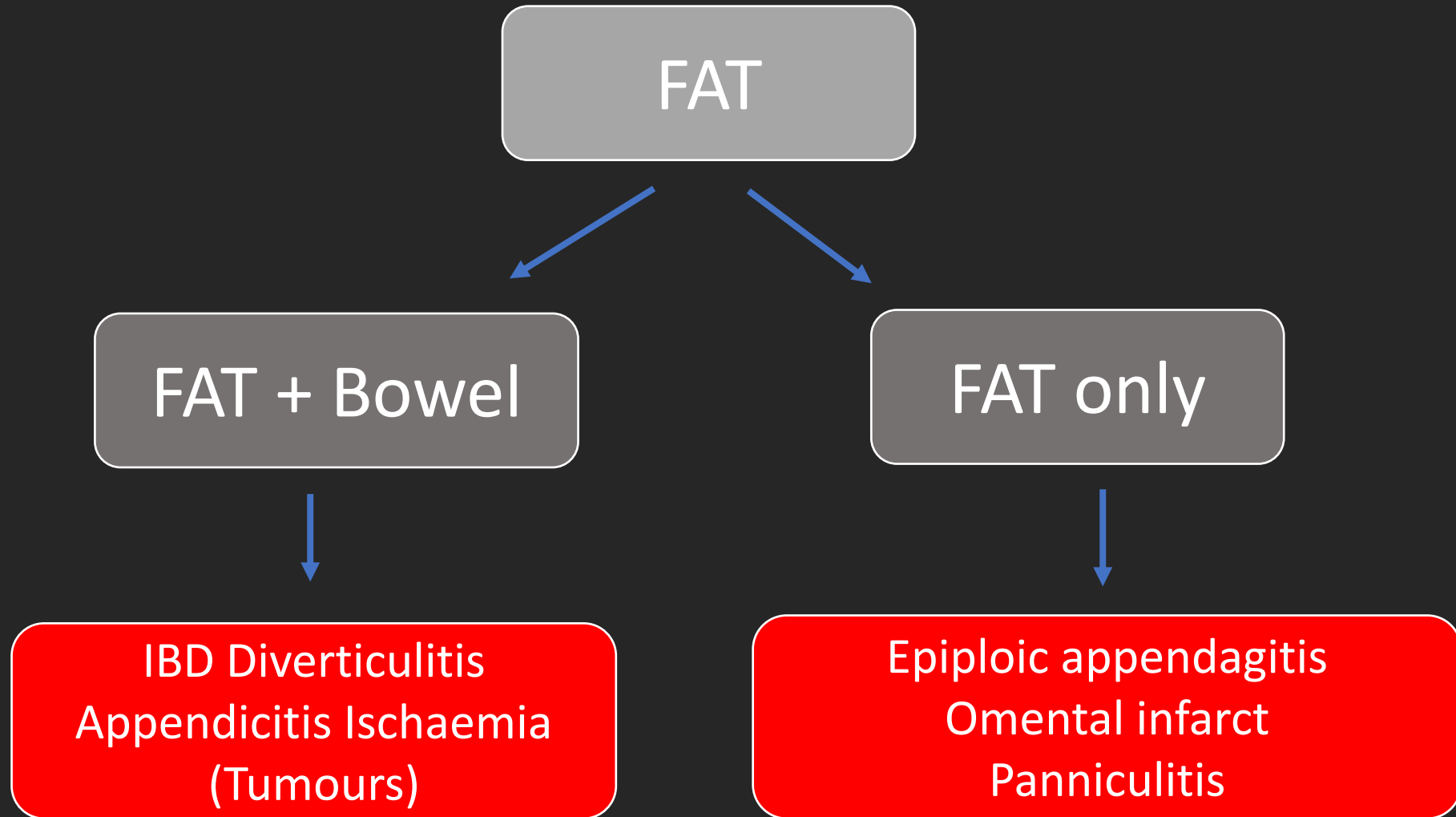
Layers ill defined

**IBD**



**Ischaemia**





FAT

FAT + Bowel

FAT only

IBD Diverticulitis  
Appendicitis Ischaemia  
(Tumours)

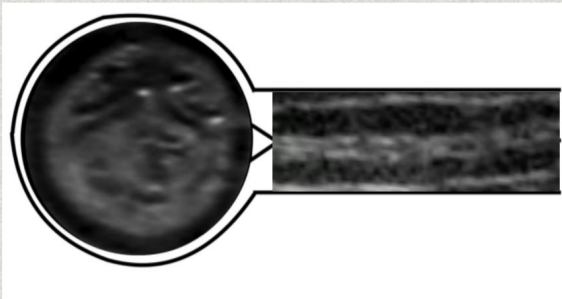
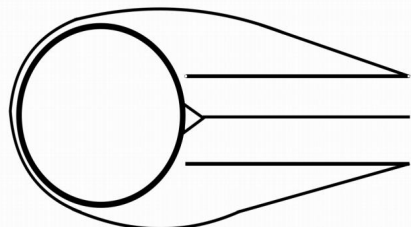
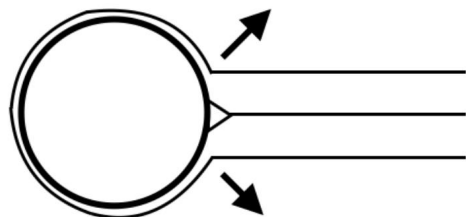
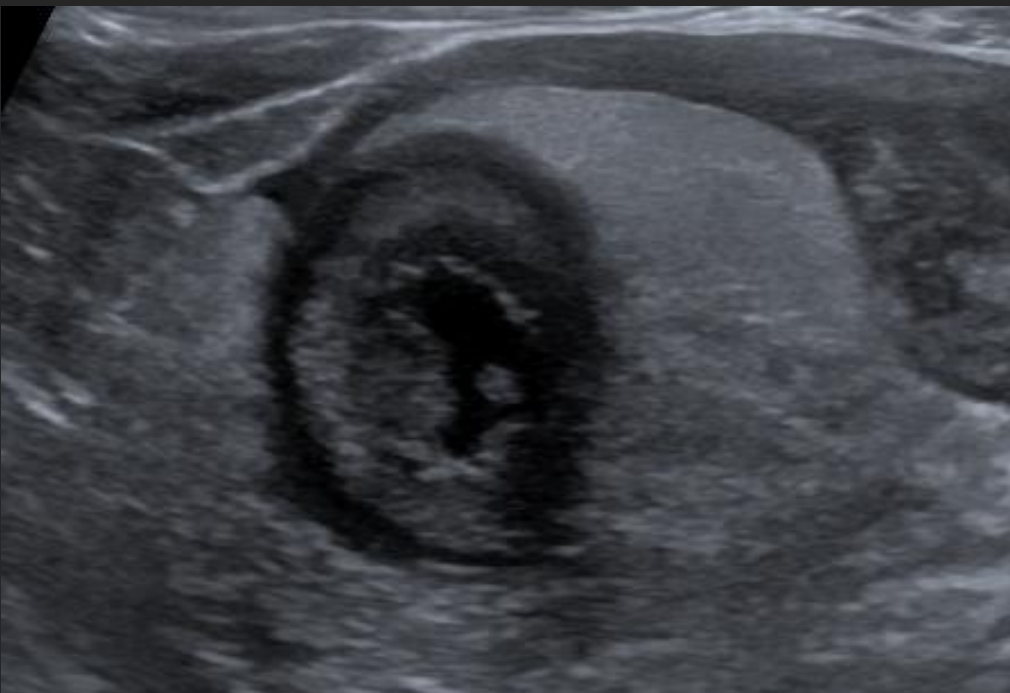
Epiploic appendagitis  
Omental infarct  
Panniculitis



# Fat and bowel

## Crohns

- Fat creep
- Sign of activity



# Fat and bowel

## Appendicitis

- mesoappendix



## Fat and bowel

### Diverticulitis

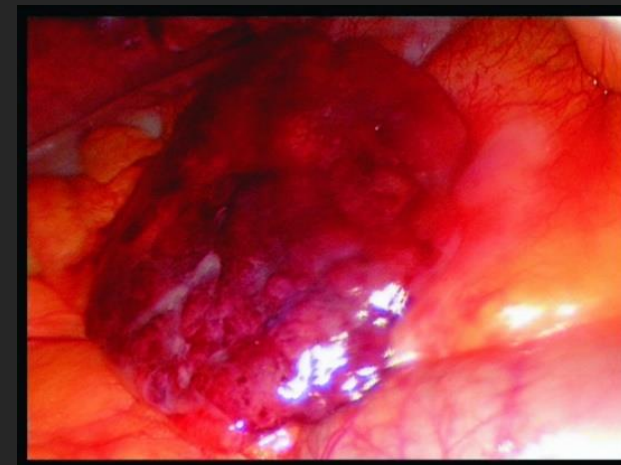
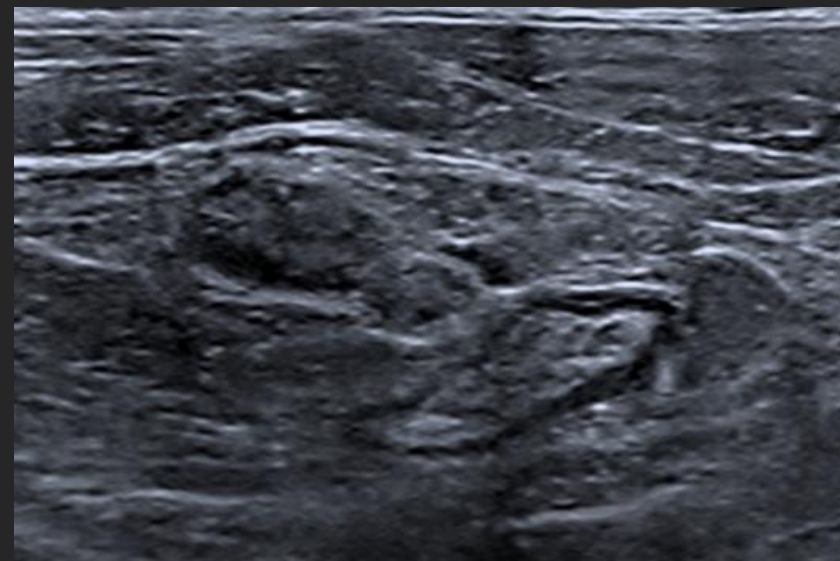
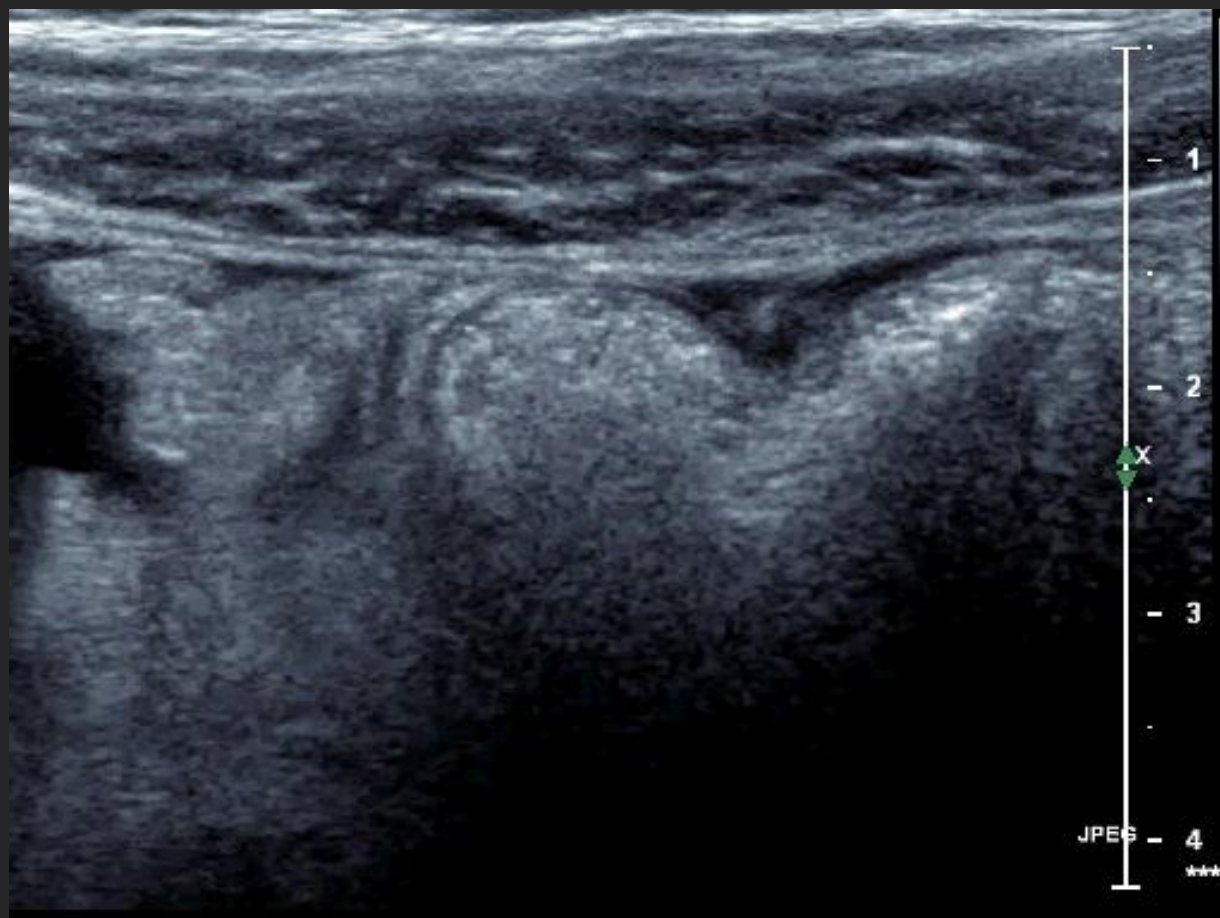
- Thickened diverticulum
- Sigmoid (Right Colon )
- Dome sign

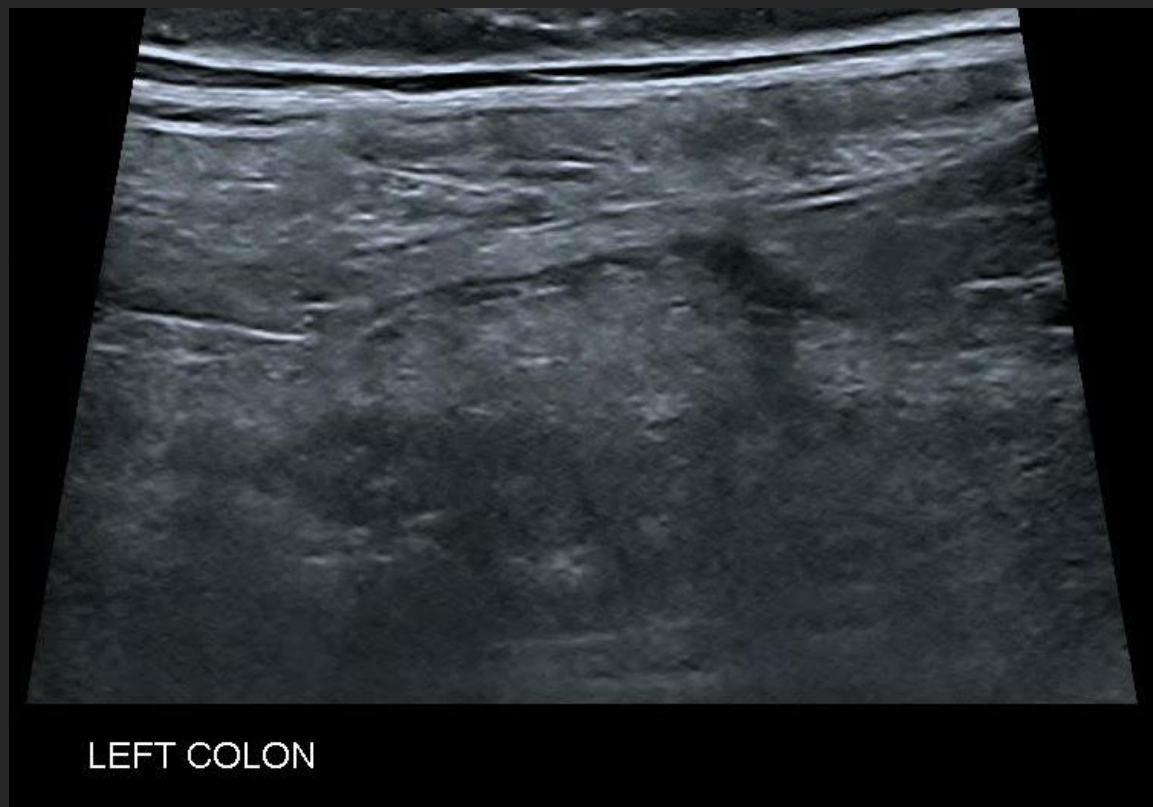
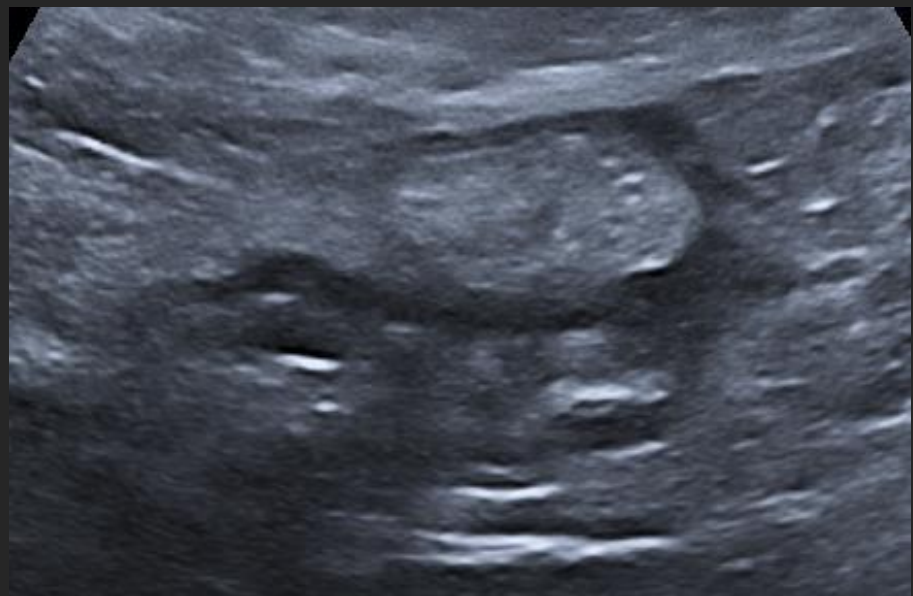


- Tumours



# Fat only





LEFT COLON

# CONTENTS

```
graph TD; A[CONTENTS] --> B[Increased]; A --> C[Solid]; B --- B1[Obstruction/ileus]; B --- B2[Enteritis]; B --- B3[Malabsorption]; C --- C1[Polyps]; C --- C2[Intussusception];
```

## Increased

Obstruction/ileus

Enteritis

Malabsorption

## Solid

Polyps

Intussusception

# Lumen - Obstruction

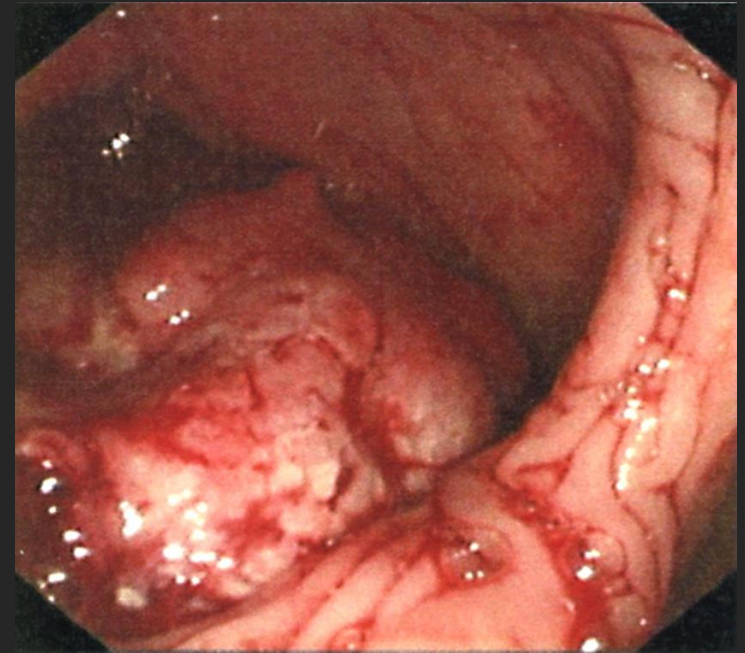


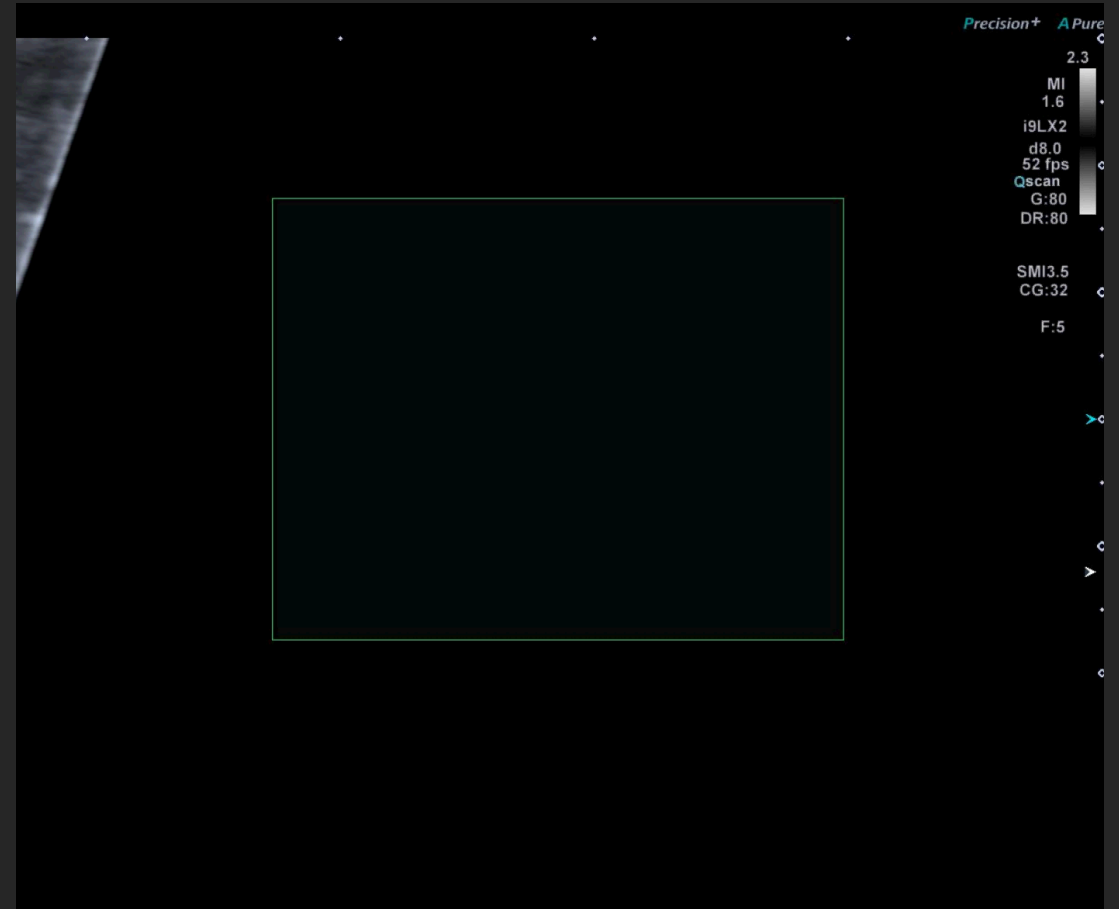
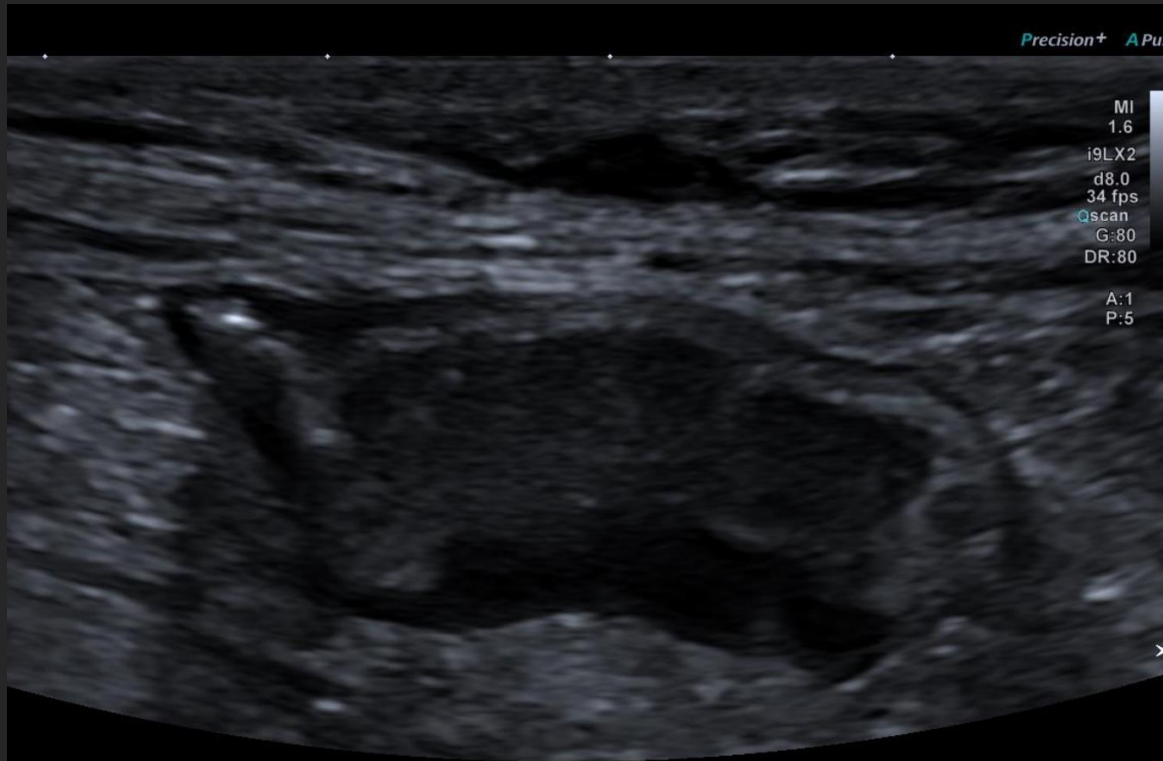
# Lumen - Obstruction

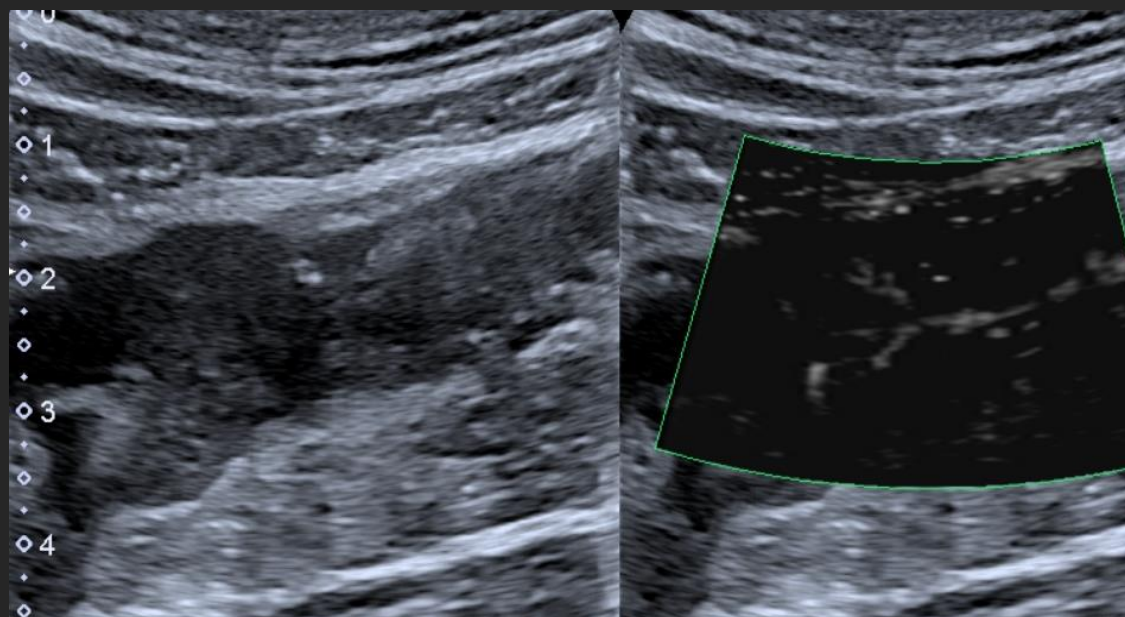
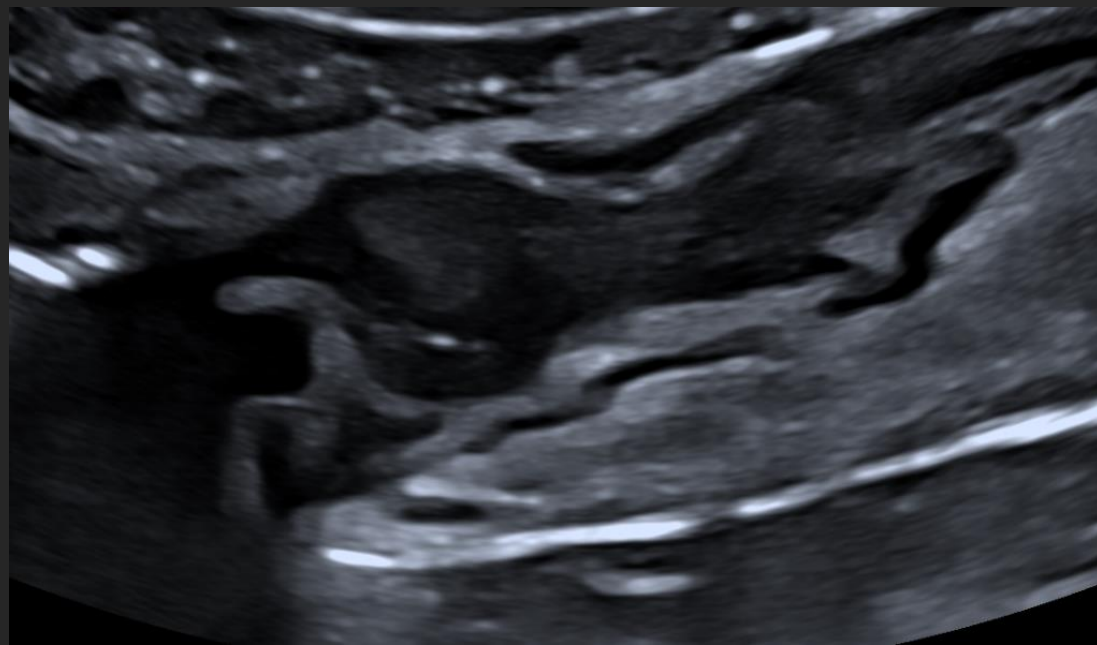
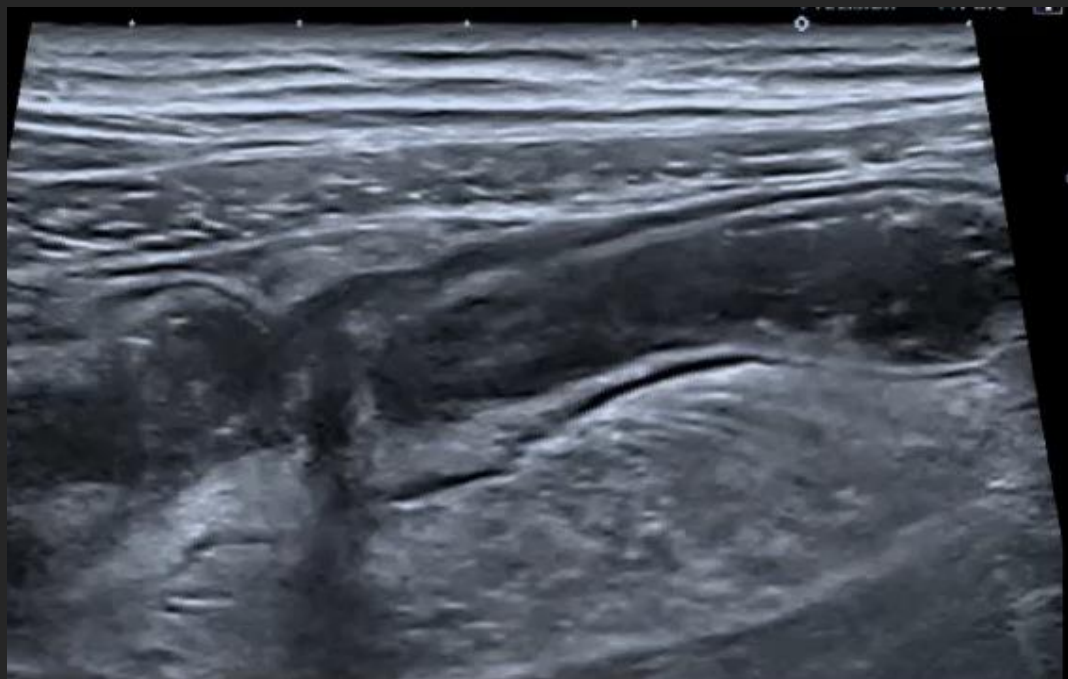


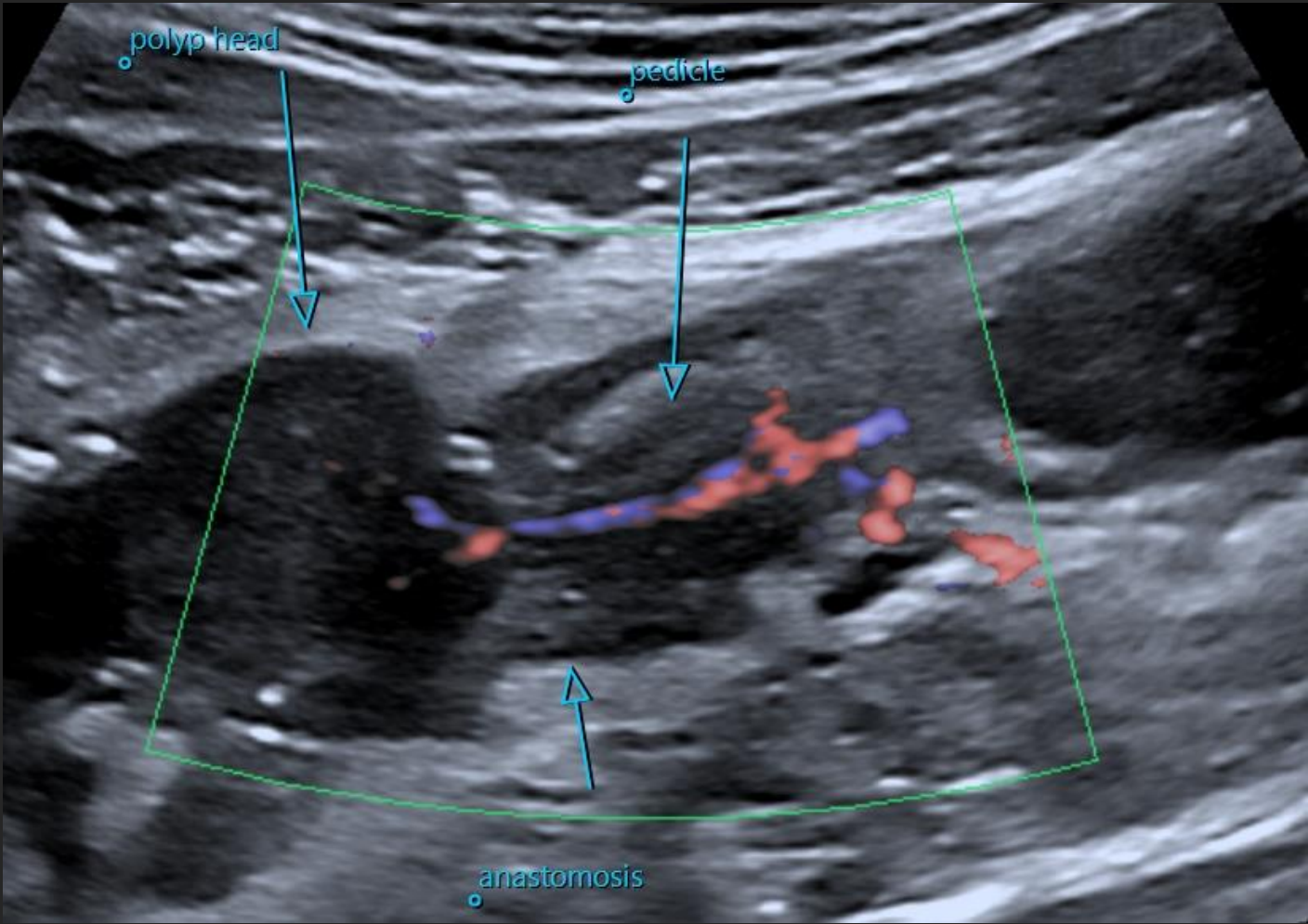


# Intraluminal mass



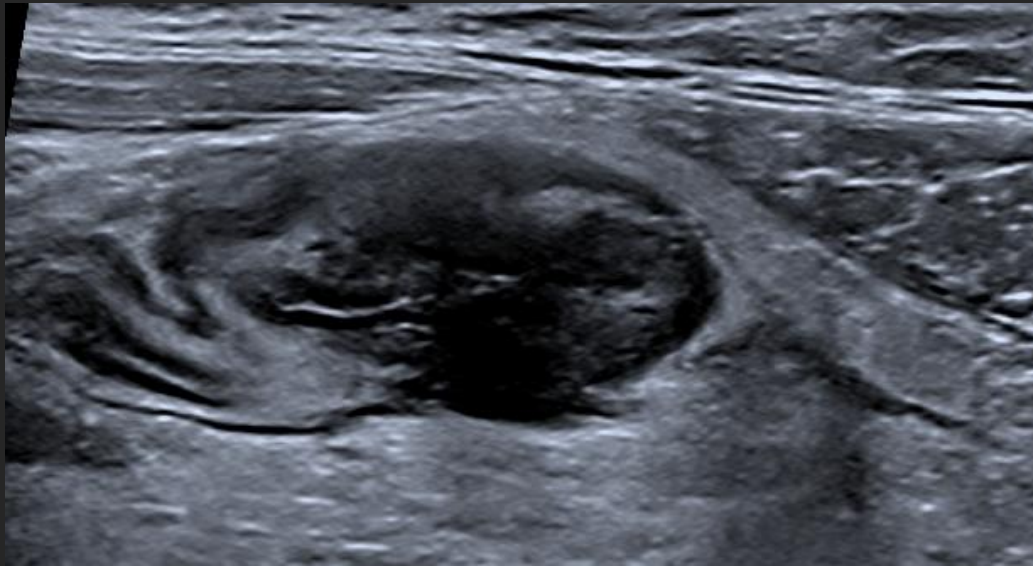






# The putting it all together slide

1. Scan it
2. Identify it
3. Interpret it



- Layers -preserved / destroyed or fuzzy ?
- Which layer affected ?
- What's going on in the fat ?
- What's going on in the lumen?
- Any other features - vascularity ?
- Does it fit clinically ?

Thank you

