

EUS Anatomy

Neo Seabi

Endo-hepatology meeting

June 2025

Focus for today

HPB anatomy

Acknowledgements: Dr MU Khan

Important considerations

- Linear array echoendoscope ROM: 120-180 degrees
- Follow stations
- Transducer position can be determined by EUS image
 - Descending aorta/pancreas: transducer facing posteriorly
- Ensure good image e.g. suck air out
- EUS terminology

A

Scope movements

Big knob down – towards me



Big knob up – away from me



B

Scope movements

Clockwise rotation



Anti-clockwise rotation

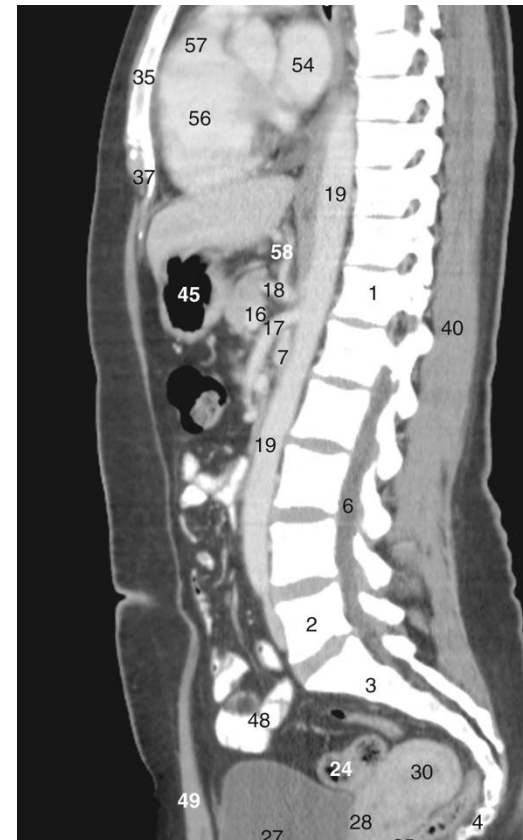
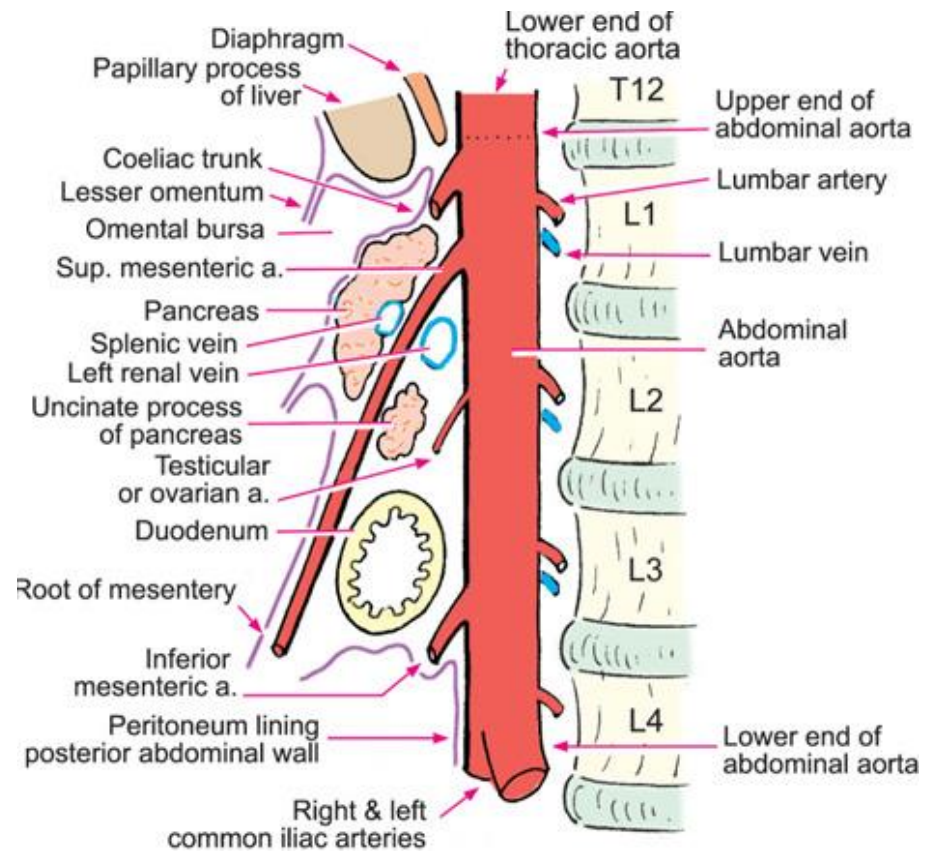
Identifying the abdominal aorta

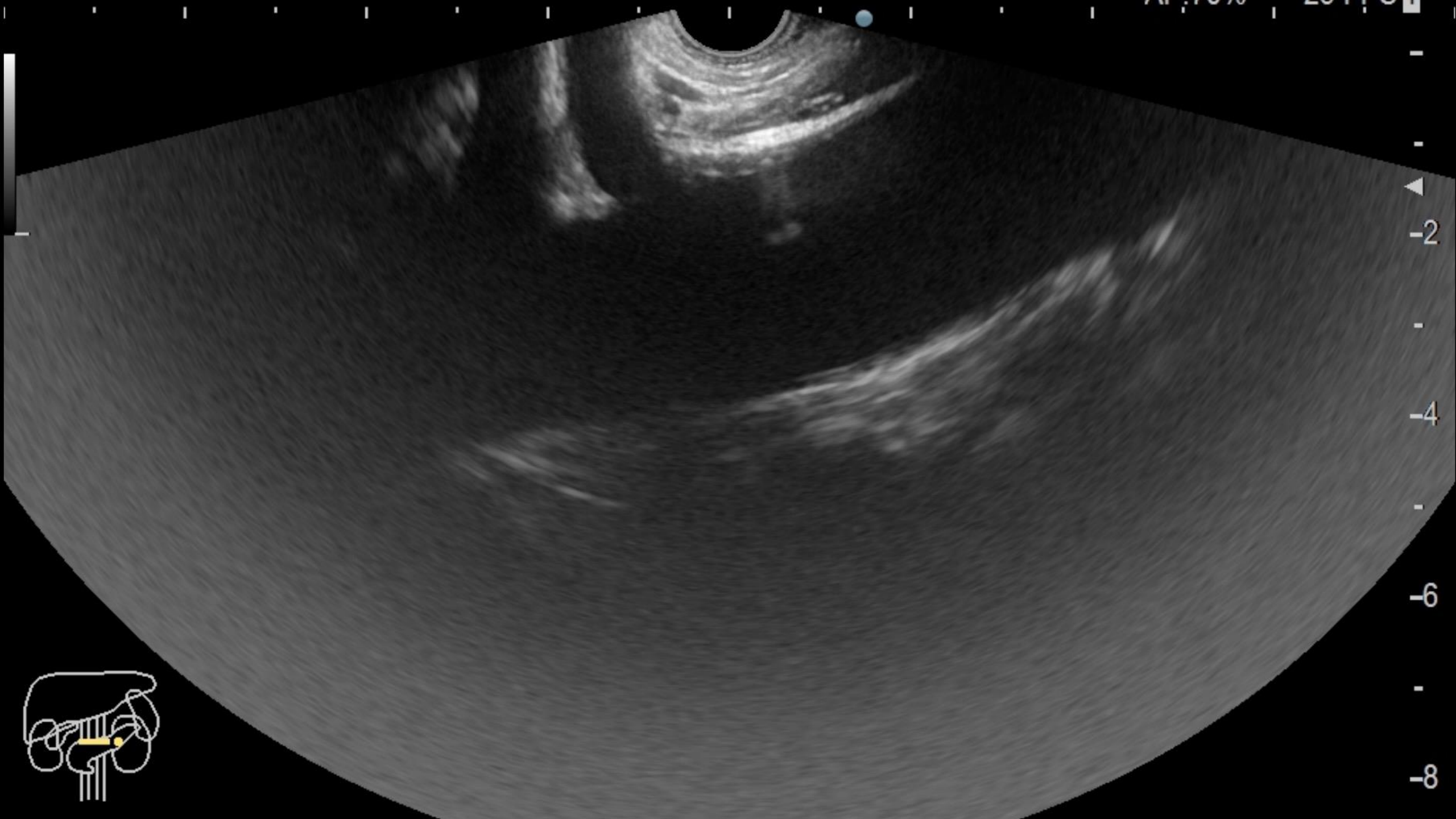
- Important landmark for e.g.
 - Pancreas localisation
 - Coeliac plexus neurolysis
 - Cancer staging

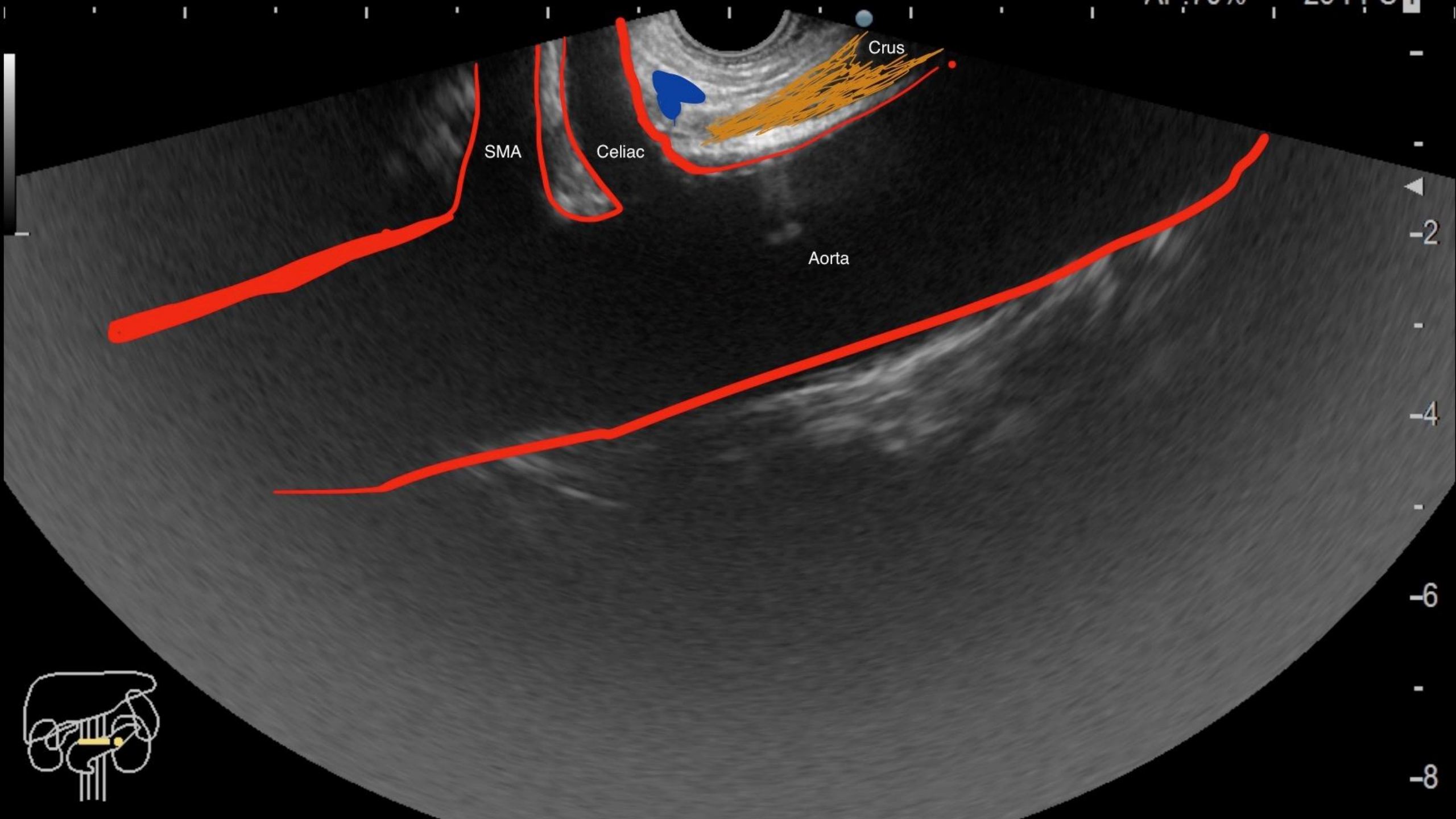
How to find it ?

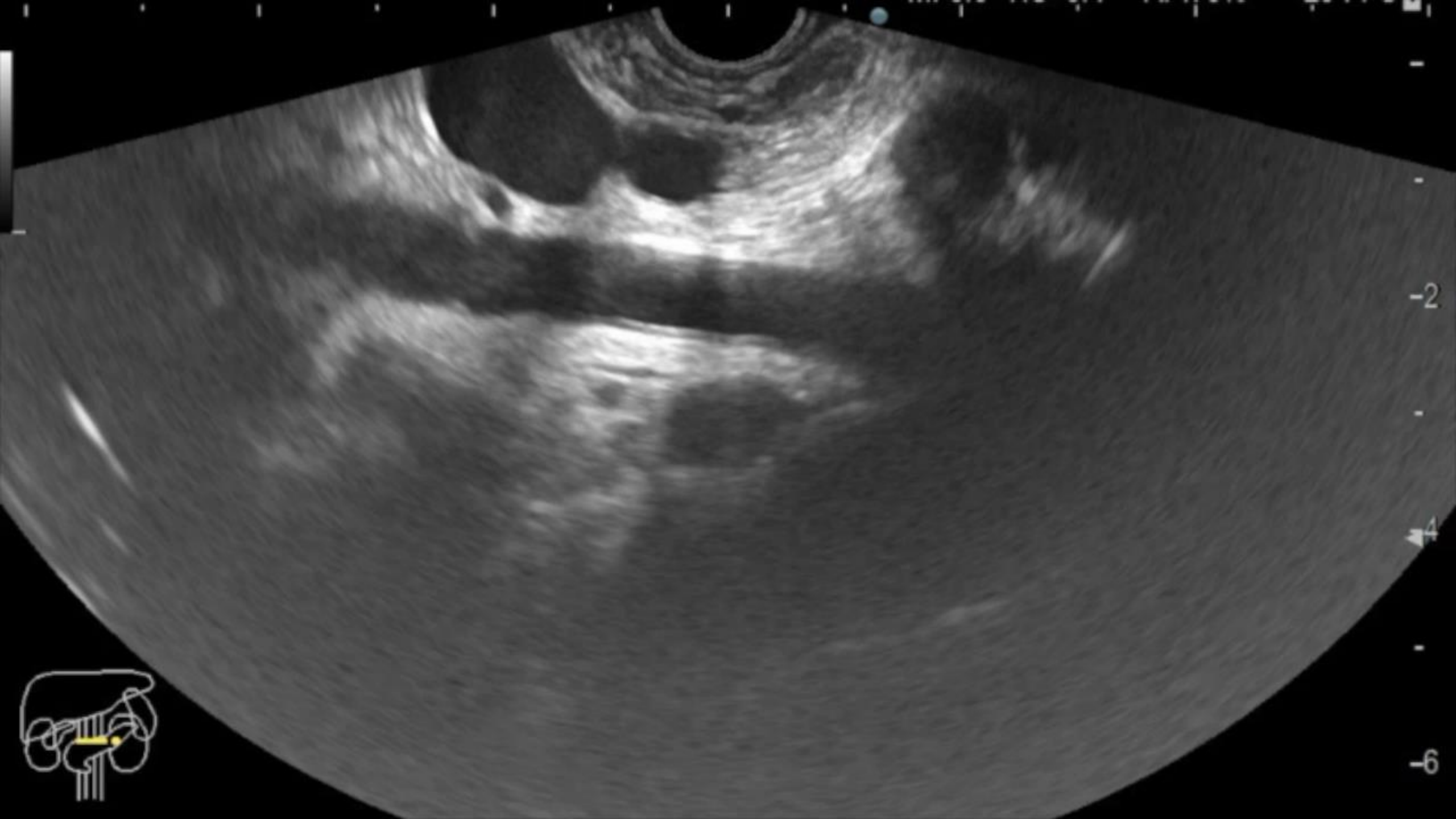
- follow it from thorax to abdomen
- Find it directly in abdomen

Abdominal aorta & relations



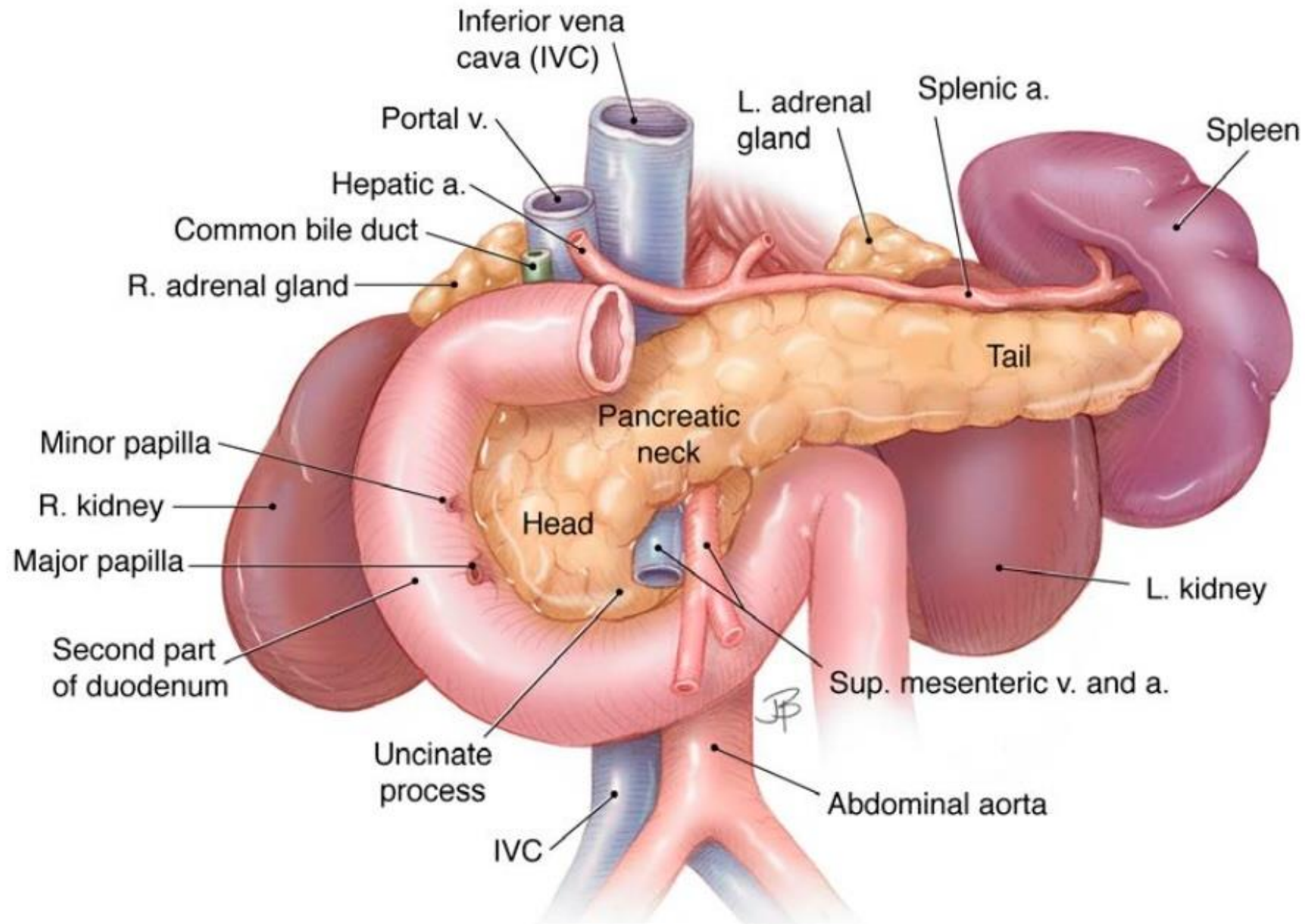


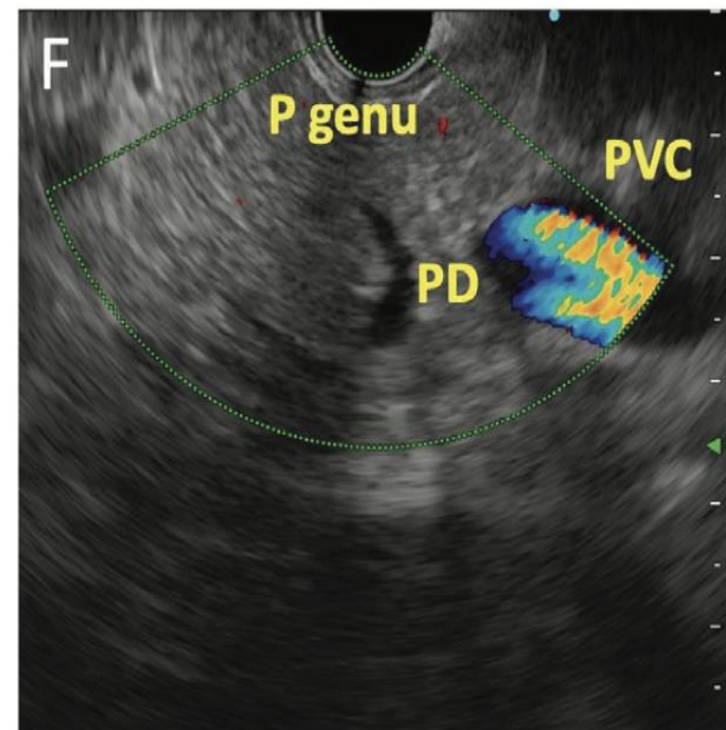
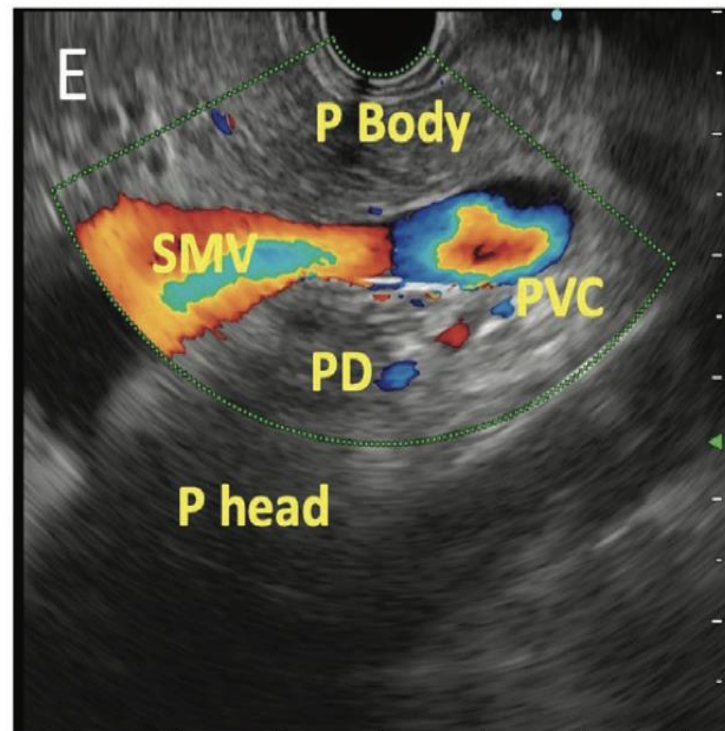
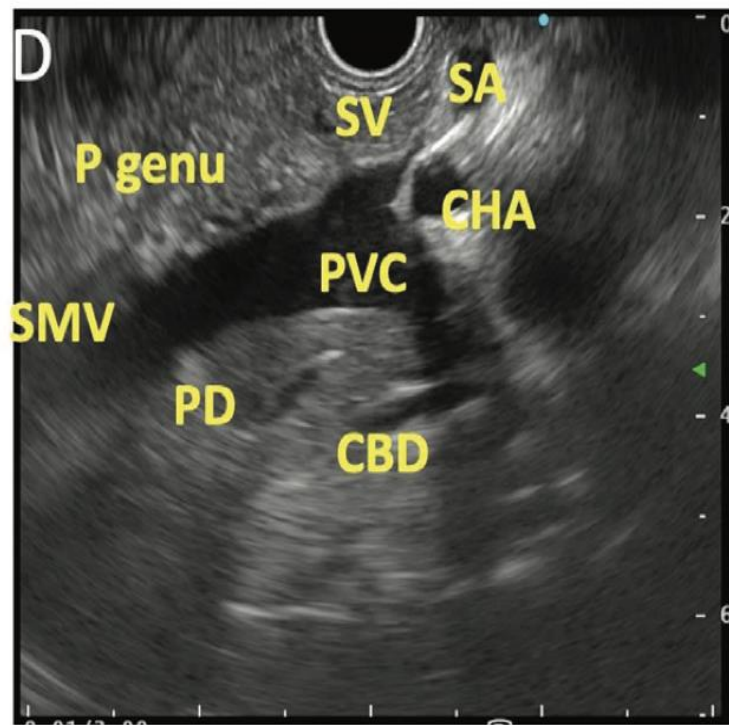


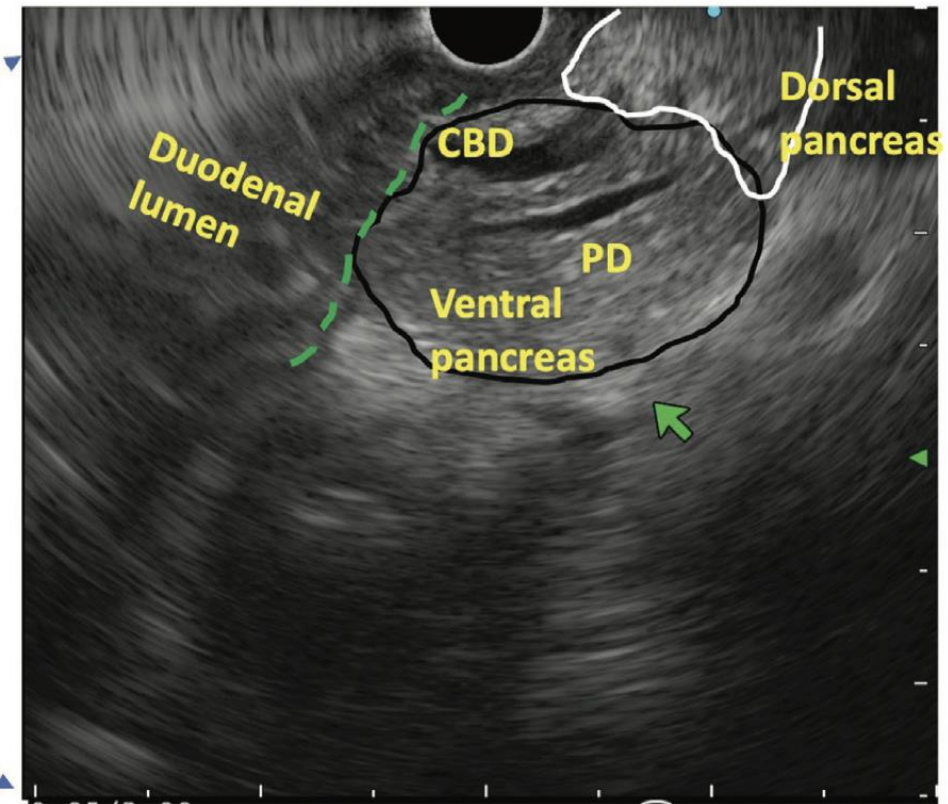
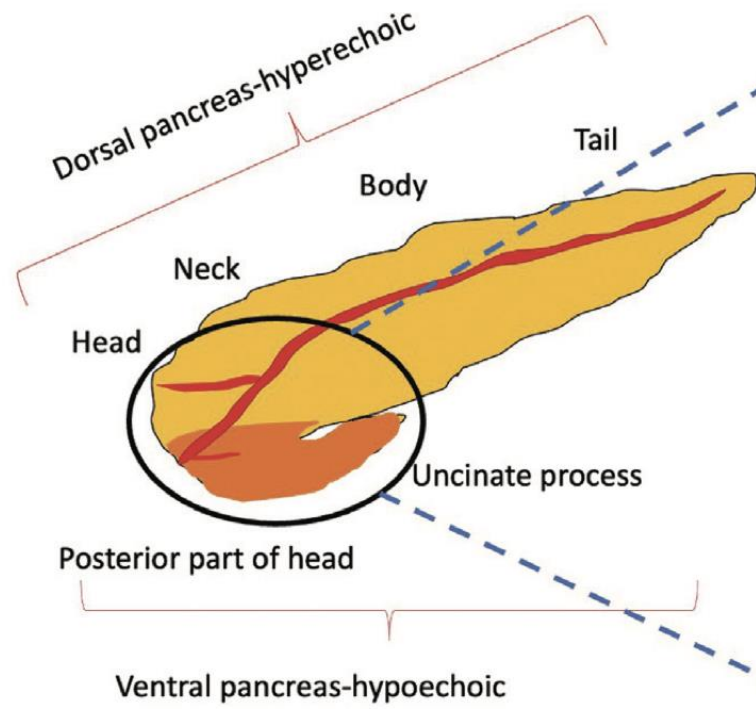


Identifying the pancreas

- Salt and pepper appearance
- Can be scanned completely from the stomach
- Head and uncinate best seen from duodenum
- Stomach:
 - Follow branches of the aorta
 - Find left portal vein/ confluence







F

2025031817295178a504*** EUS-1/General

17:52:40

EG-580UT

MI:0.5

TI:0.2

AP:100%

D:80mm

F

FR:26.8Hz

B

FB:7.5M

G:46

DR:55

1540m/s

E:2

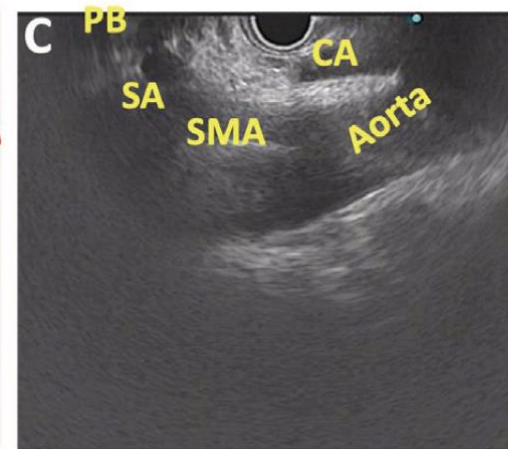
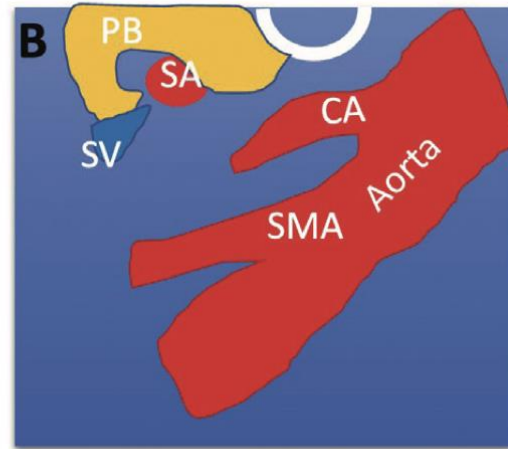
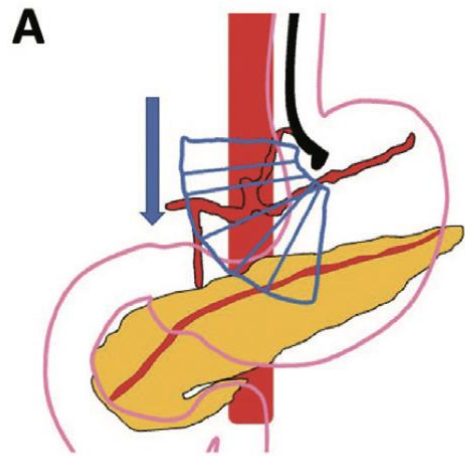
P:2

M:G7

SR:2

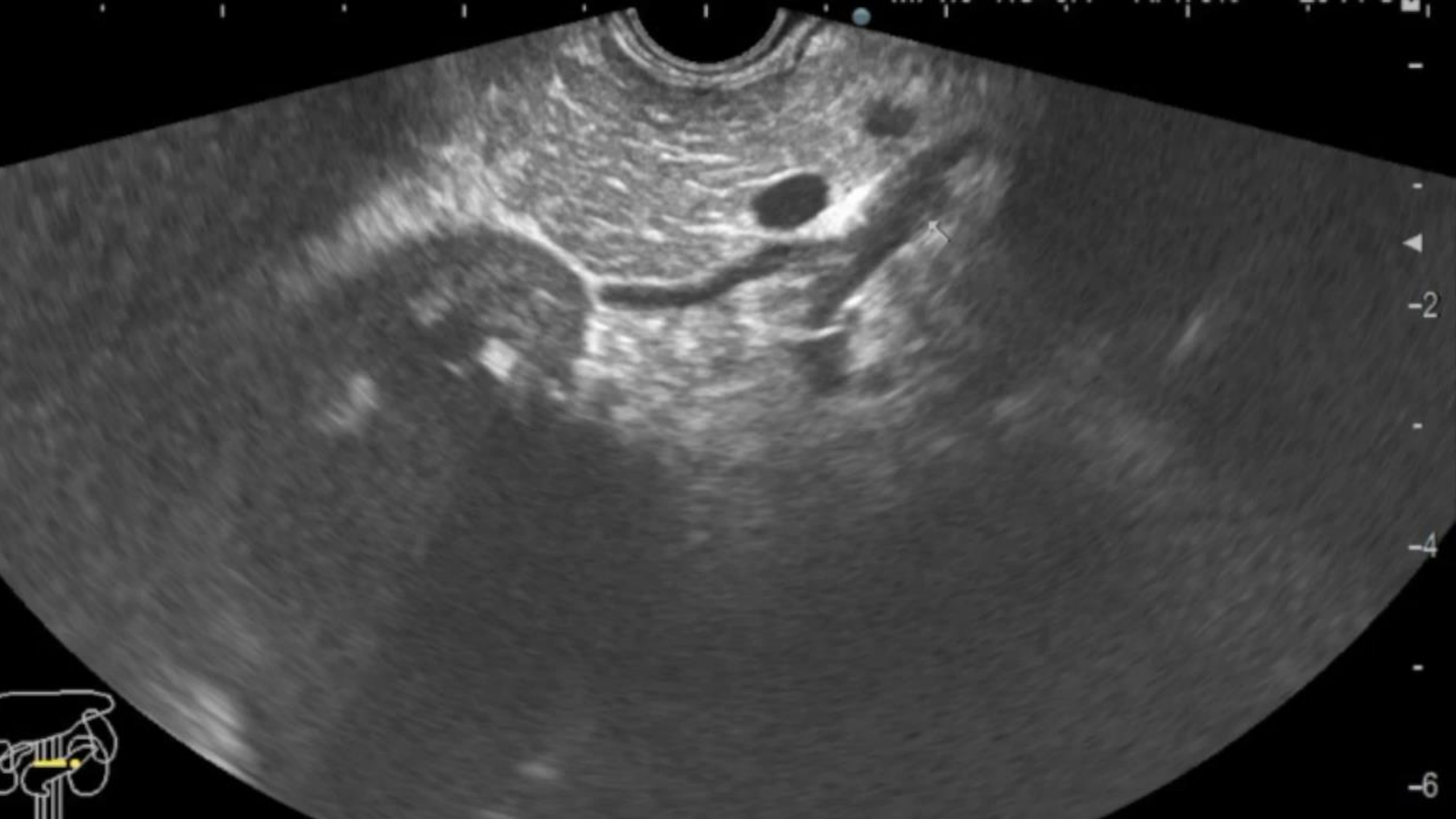
S:2

80



Push and do clockwise rotation





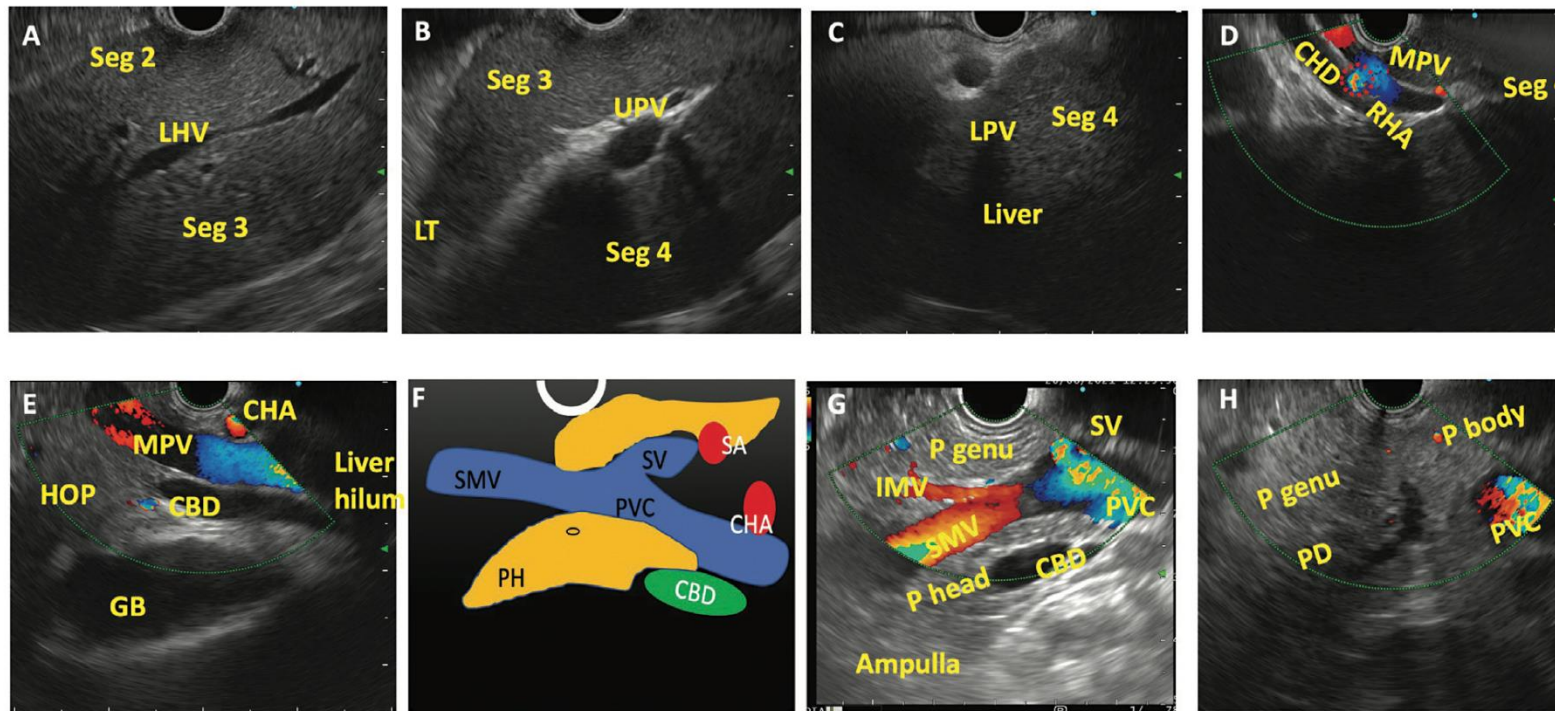


From aorta to pancreas



1. Push to distal stomach then pull: Clockwise torque
2. After UPV, then push to follow MPV, stay neutral

Station 1B: Finding liver hilum from GE junction and then pancreas

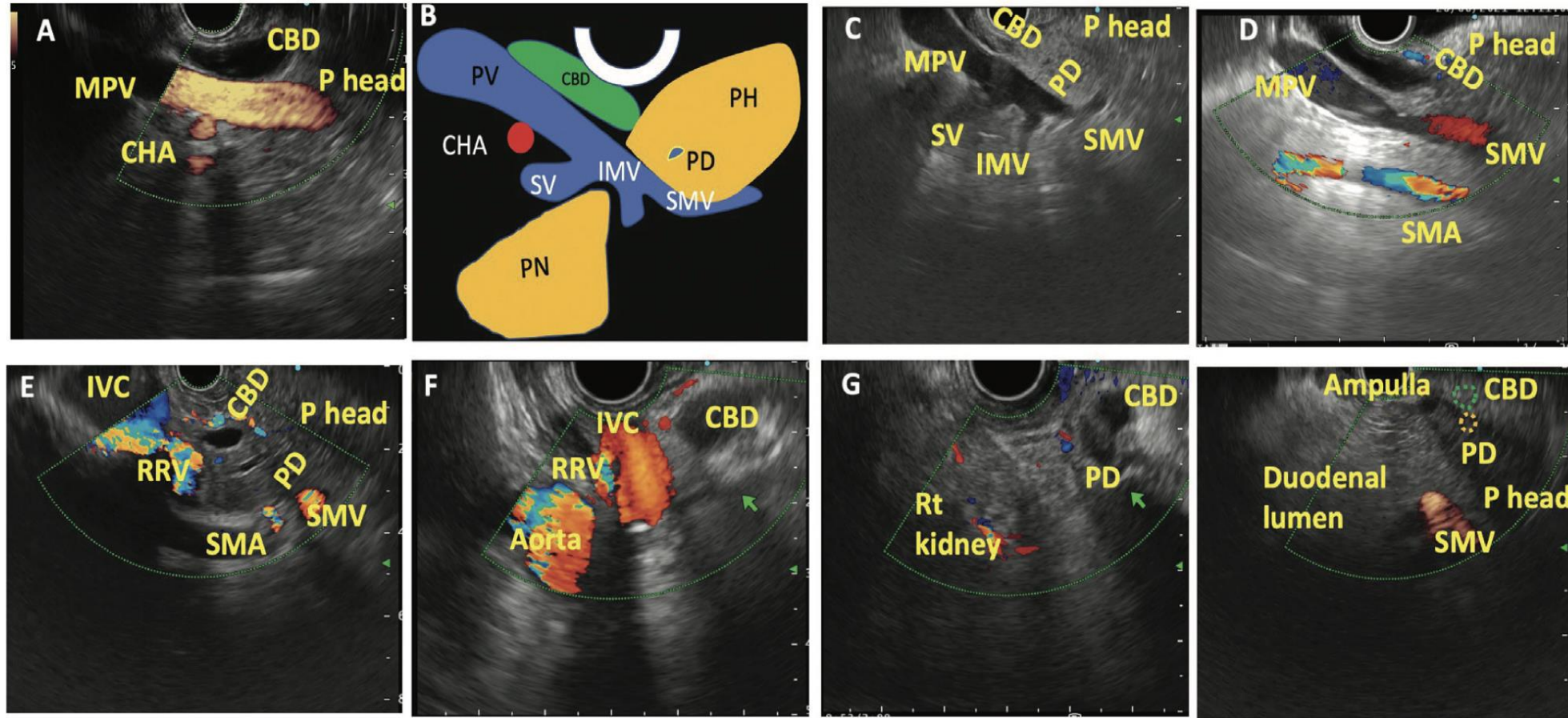


Hilum



Long position, upward deflection, rotate

Station 2: From duodenal bulb

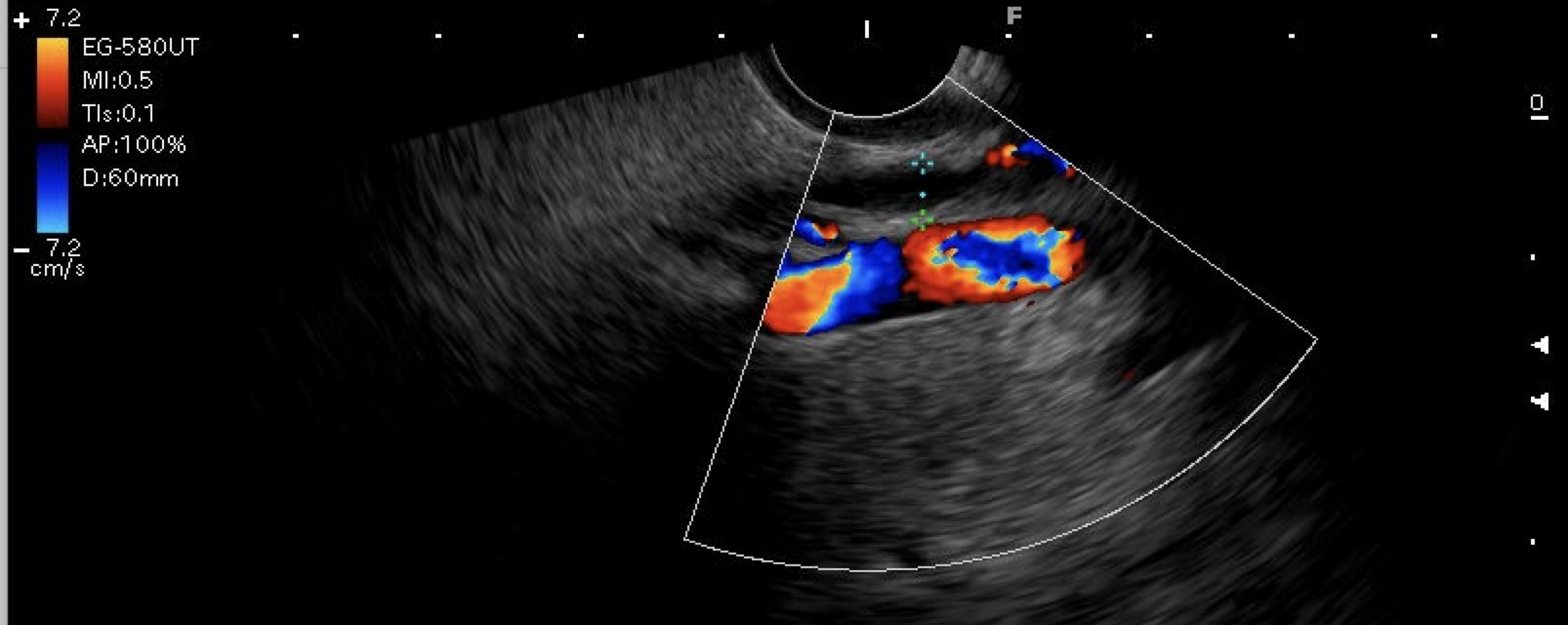


F

2024120317092578a504... EUS-1/General

2024/12/03
17:53:24

+ 7.2
EG-580UT
MI:0.5
TI:0.1
AP:100%
D:60mm
- 7.2
cm/s



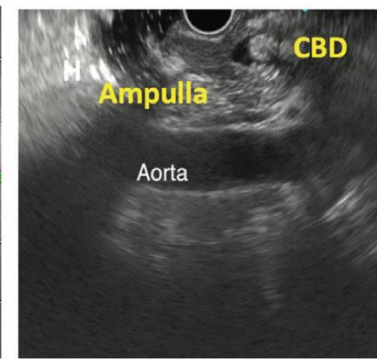
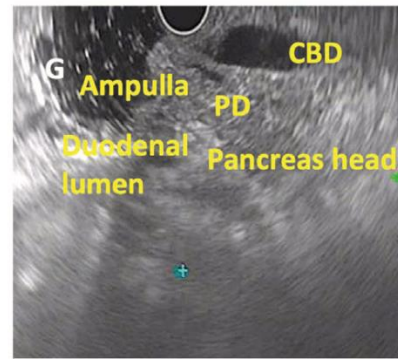
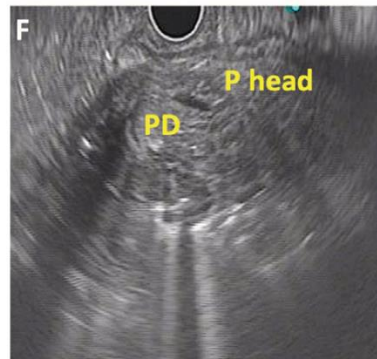
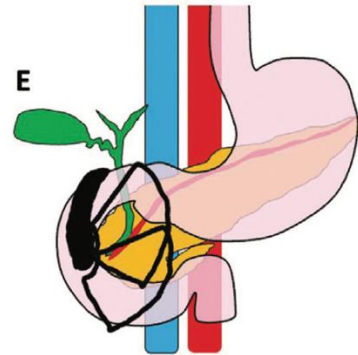
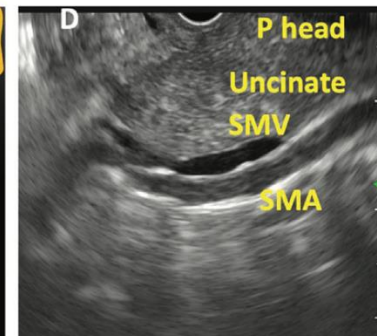
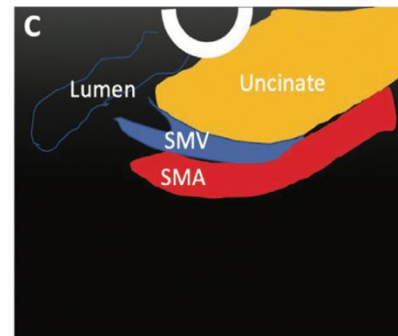
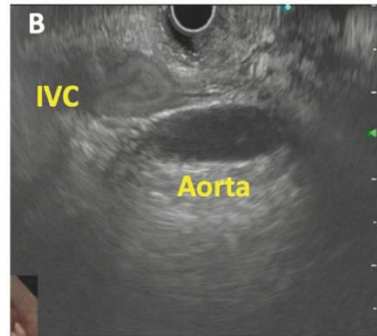
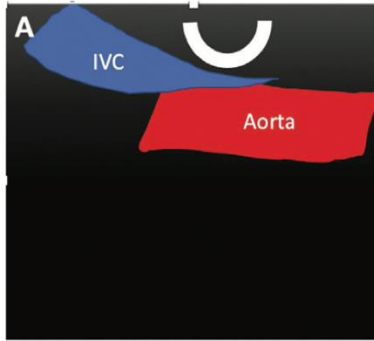
Bile duct in bulb



Bulb



Station 3: From descending duodenum



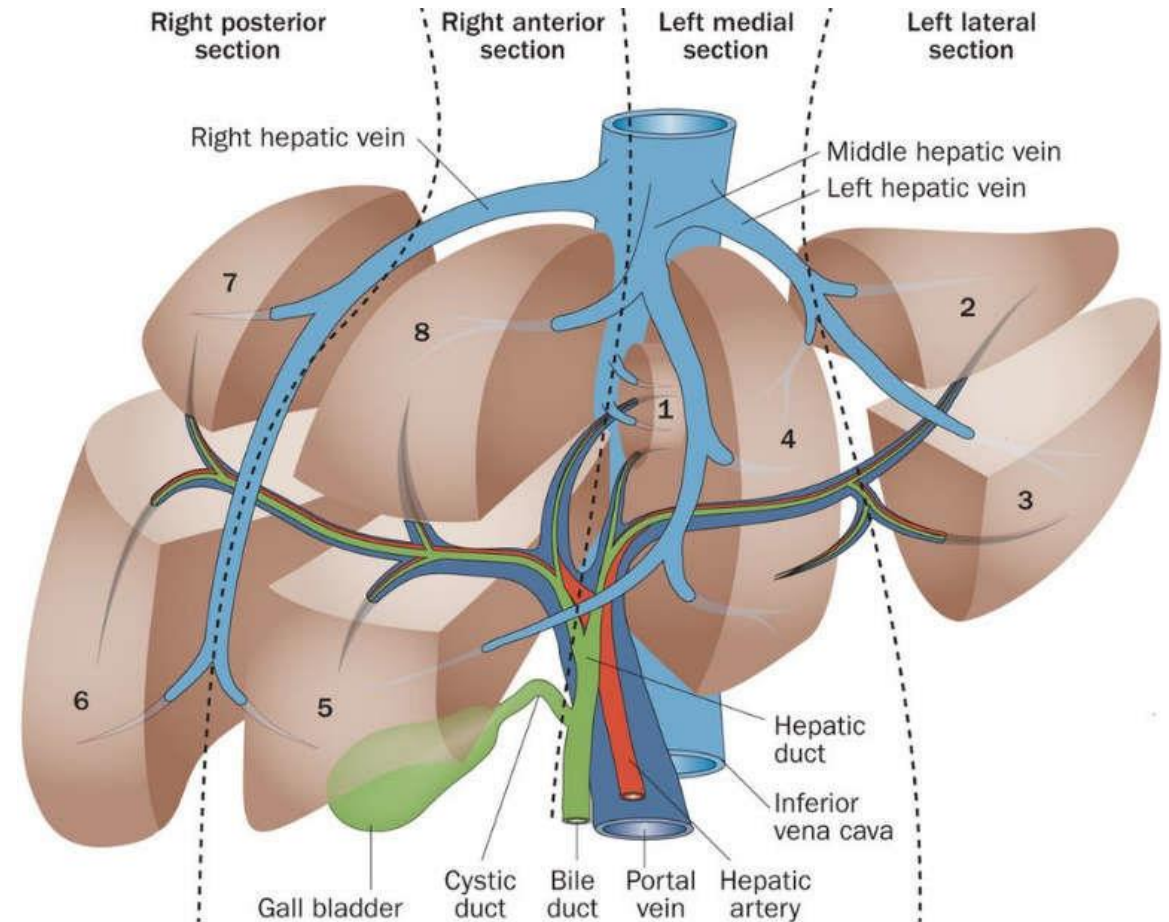
Second part duodenum, short scope, pull back clockwise

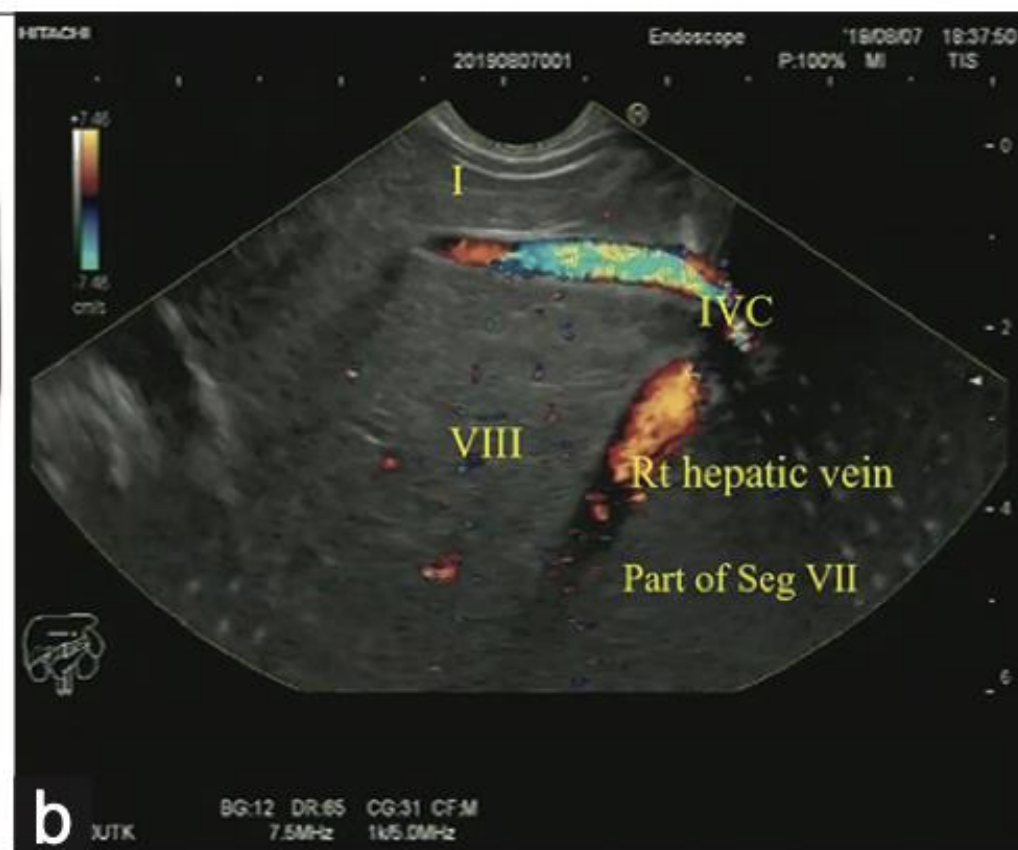
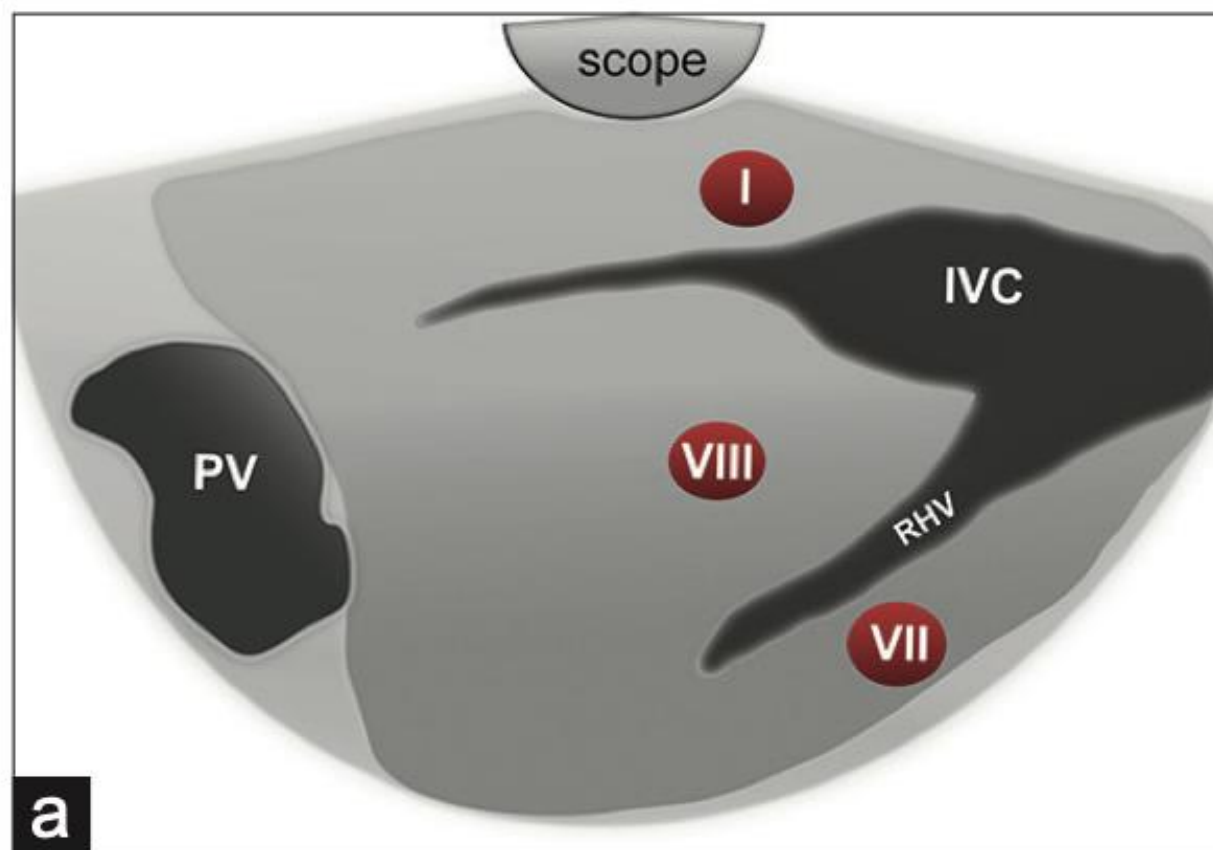




Segmental liver anatomy

- Couinaud
- 8 segments
- Portal vein marks superior/ inferior
- EUS: From proximal stomach find IVC, then move anti-clock while pushing





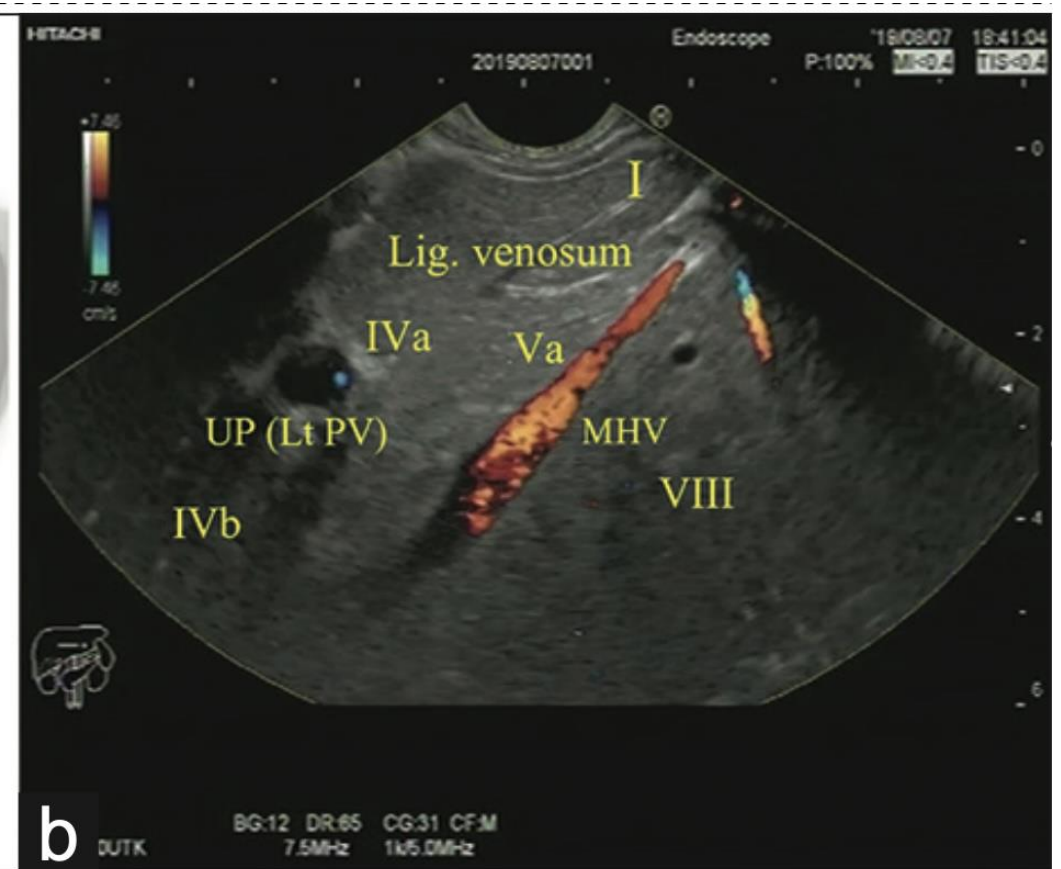
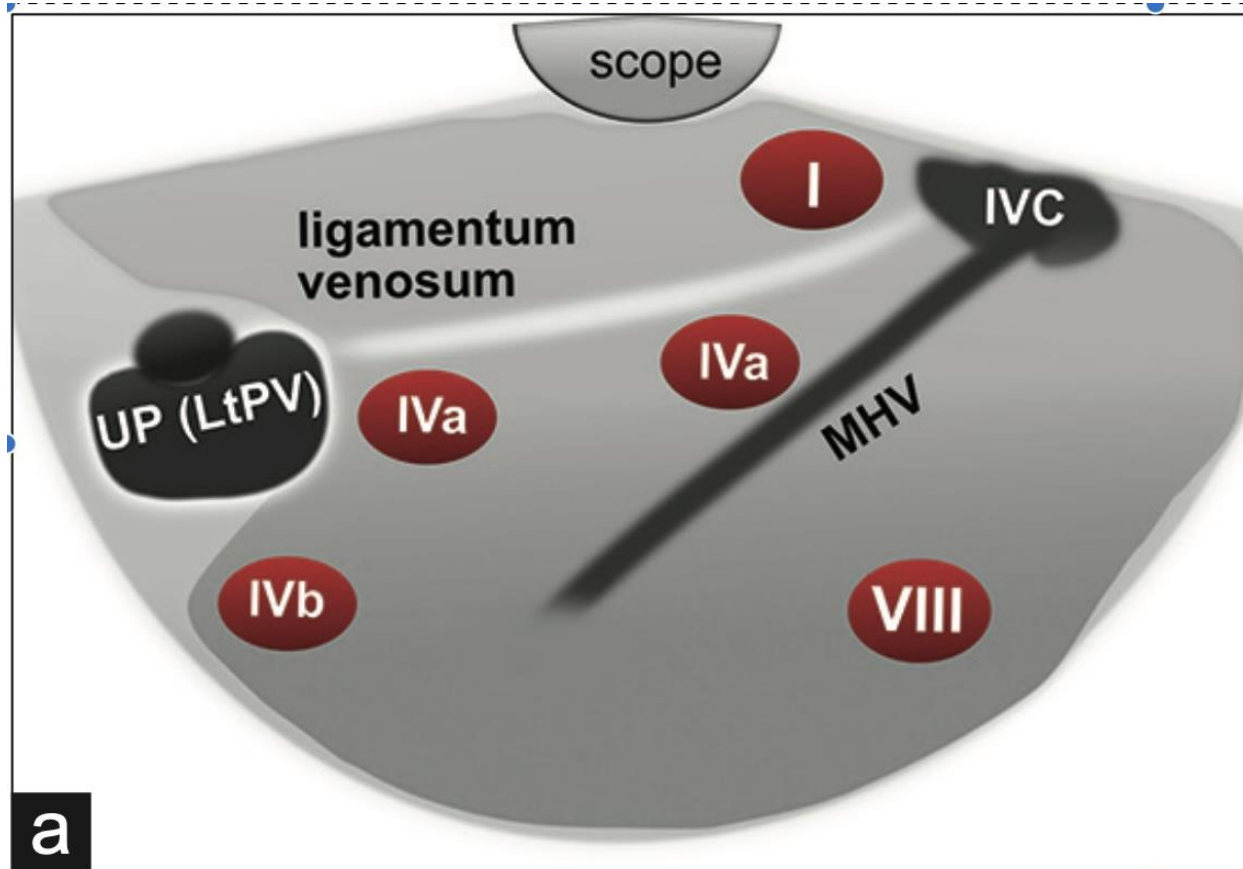
MRS R MAHESH

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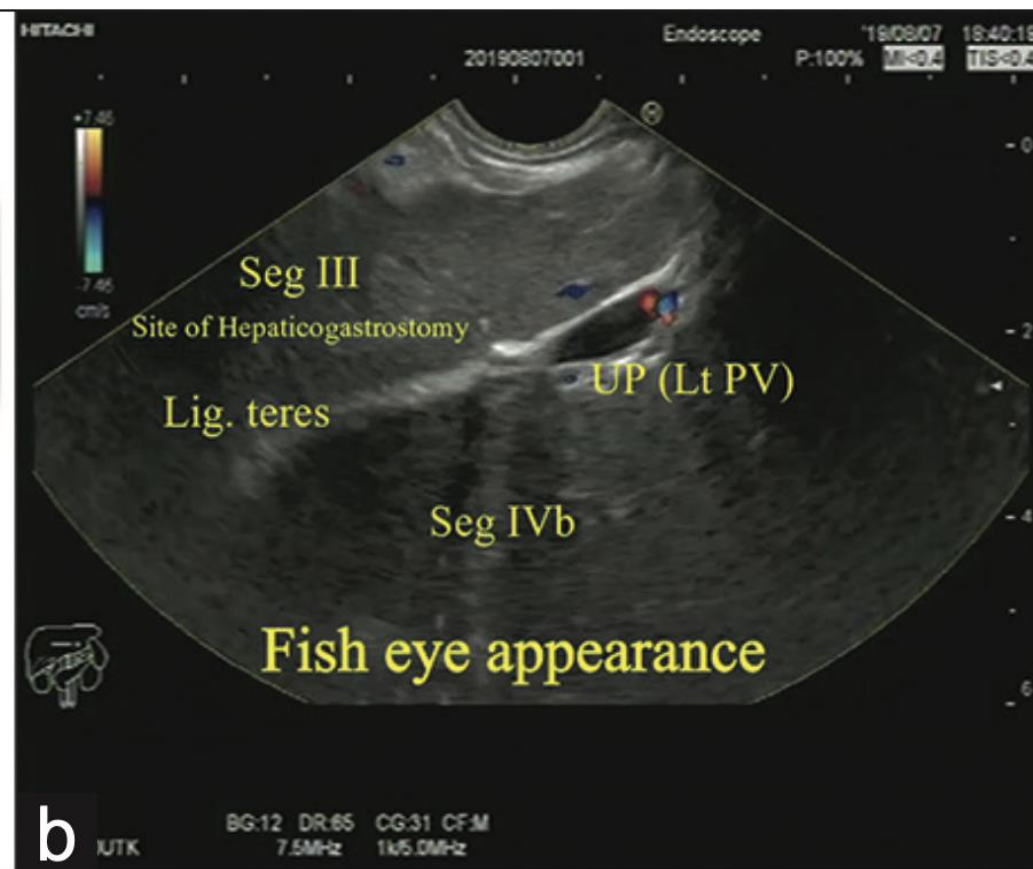
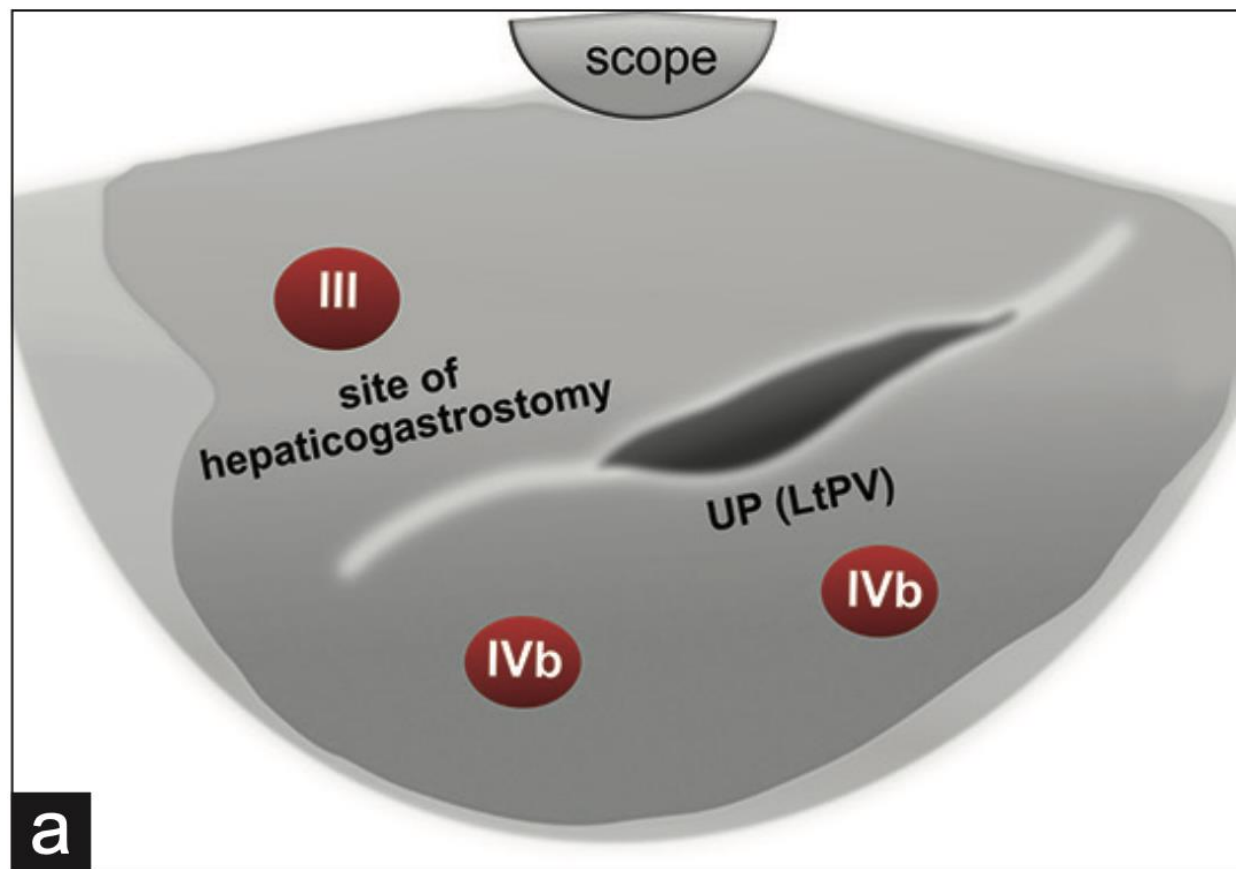
2025/06/19
16:13:23

EG-580UT
MI:0.5
TI:0.2
AP:100%
D:60mm

FR:29.9Hz **B** FB:7.5M G:46 DR:55 1540m/s E:2 P:2 M:G7 SR:2 S:2

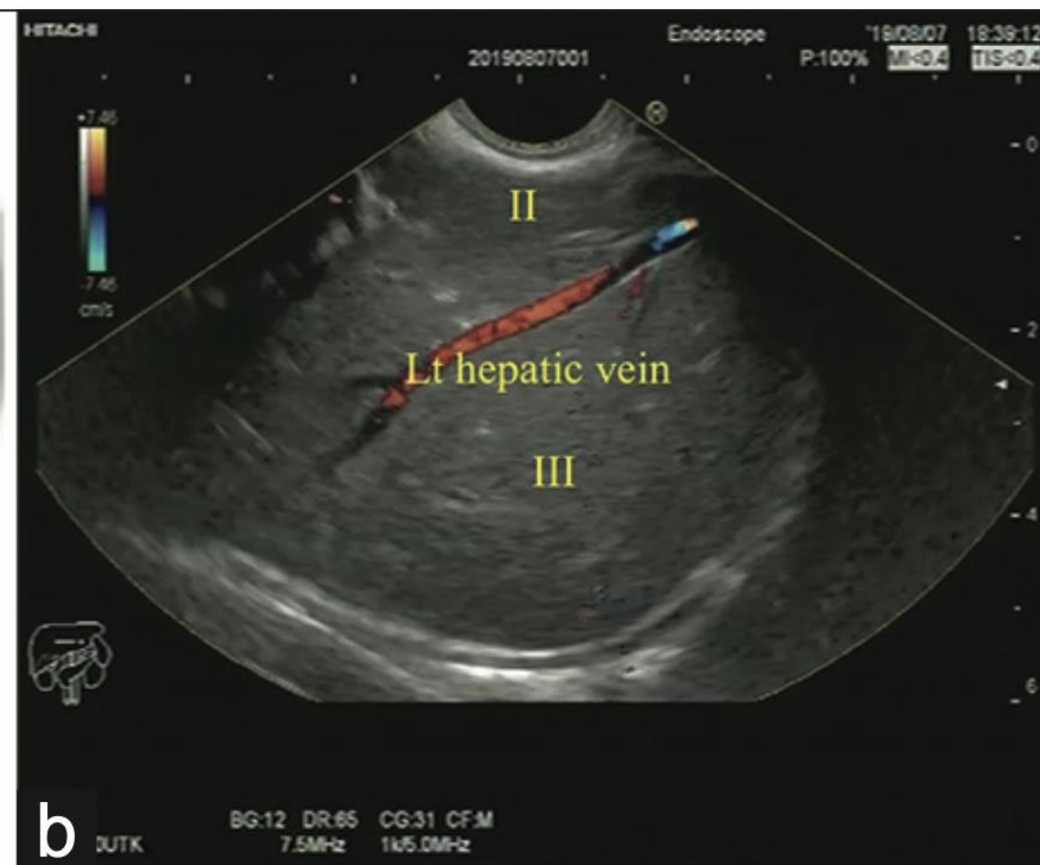
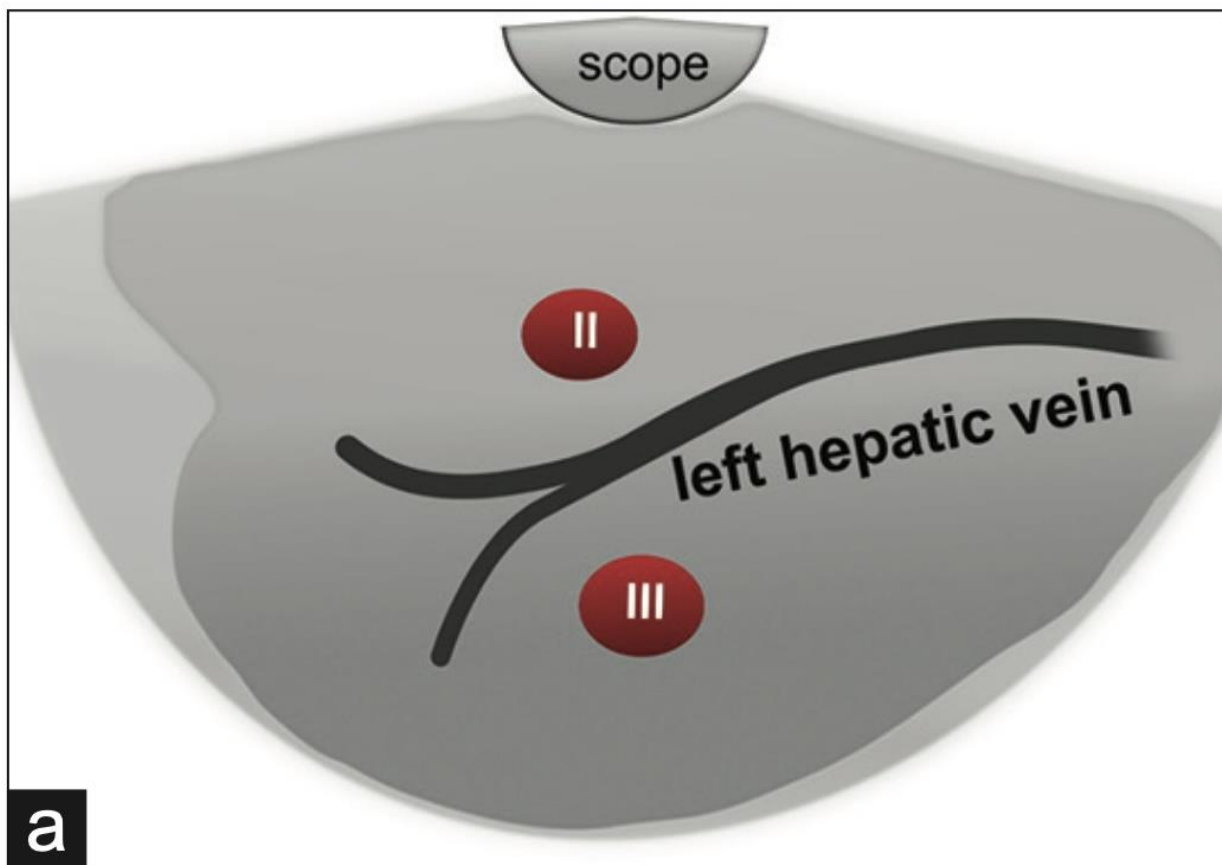




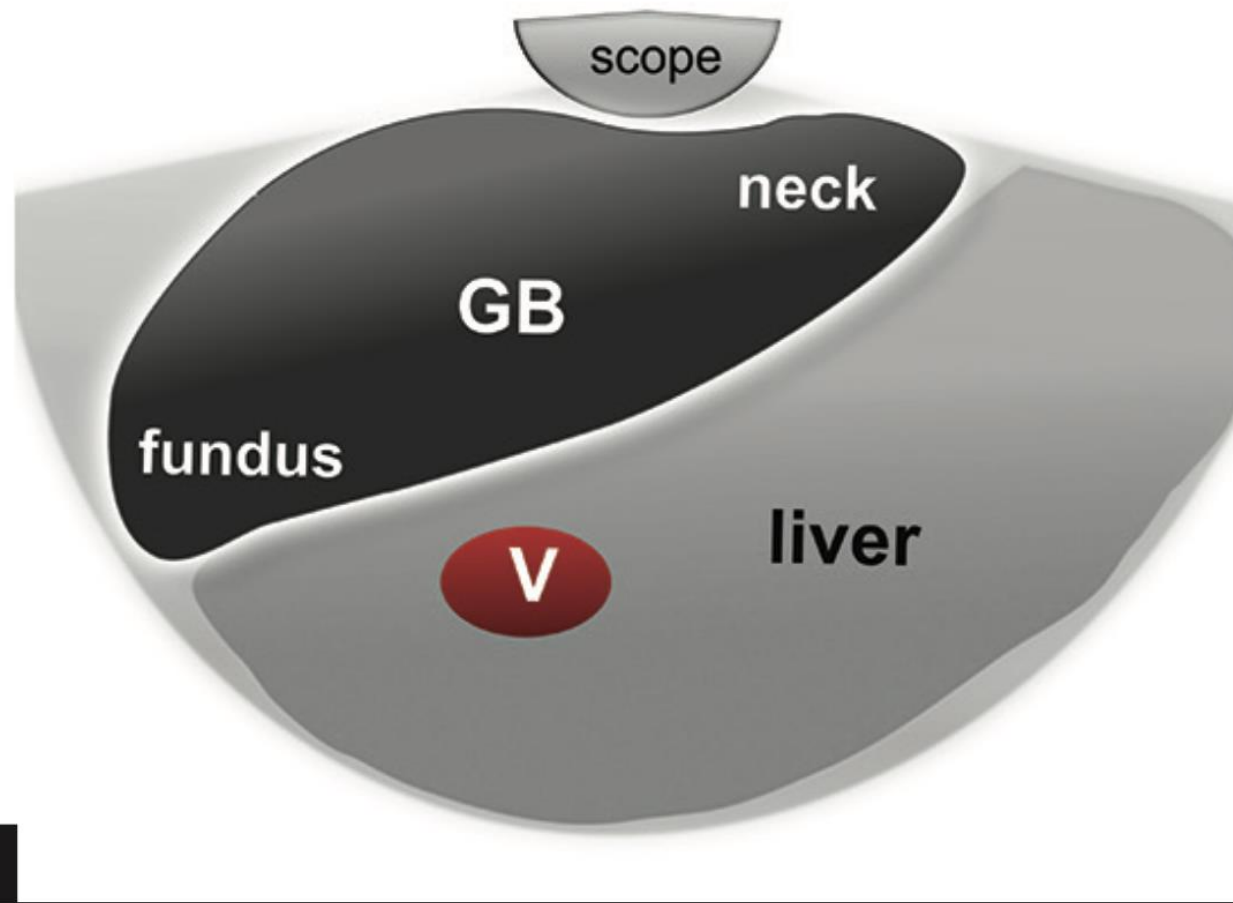
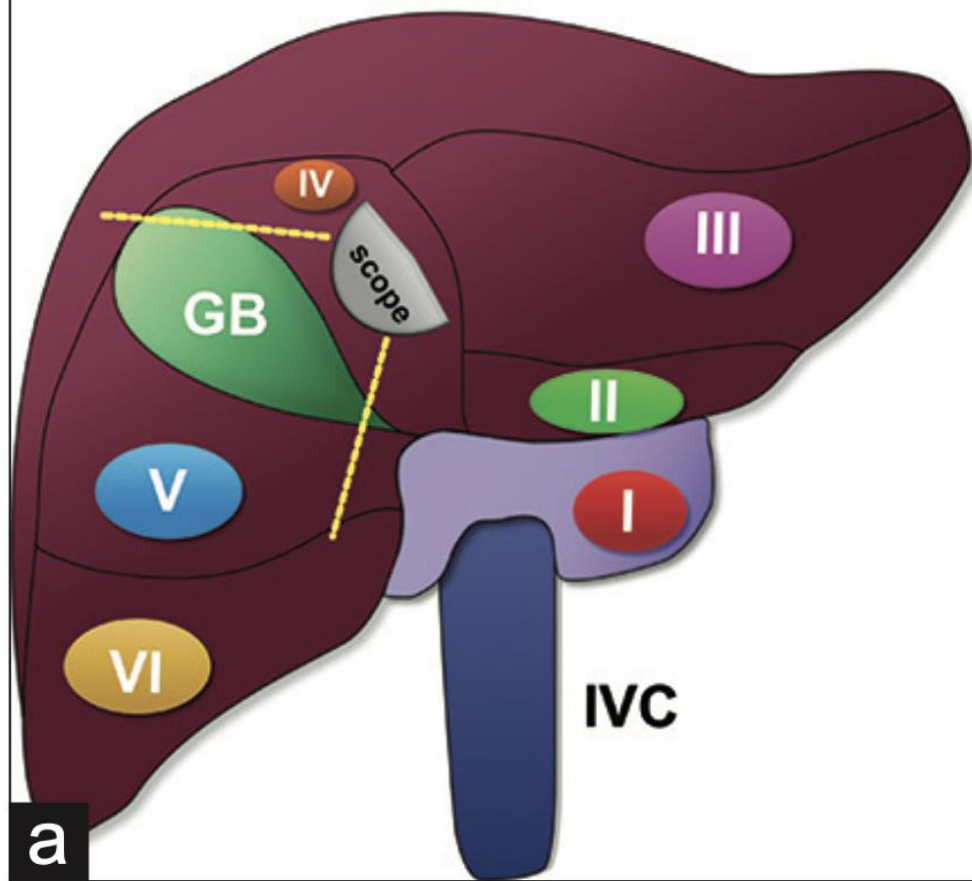


Dilated seg 3 duct for HGS

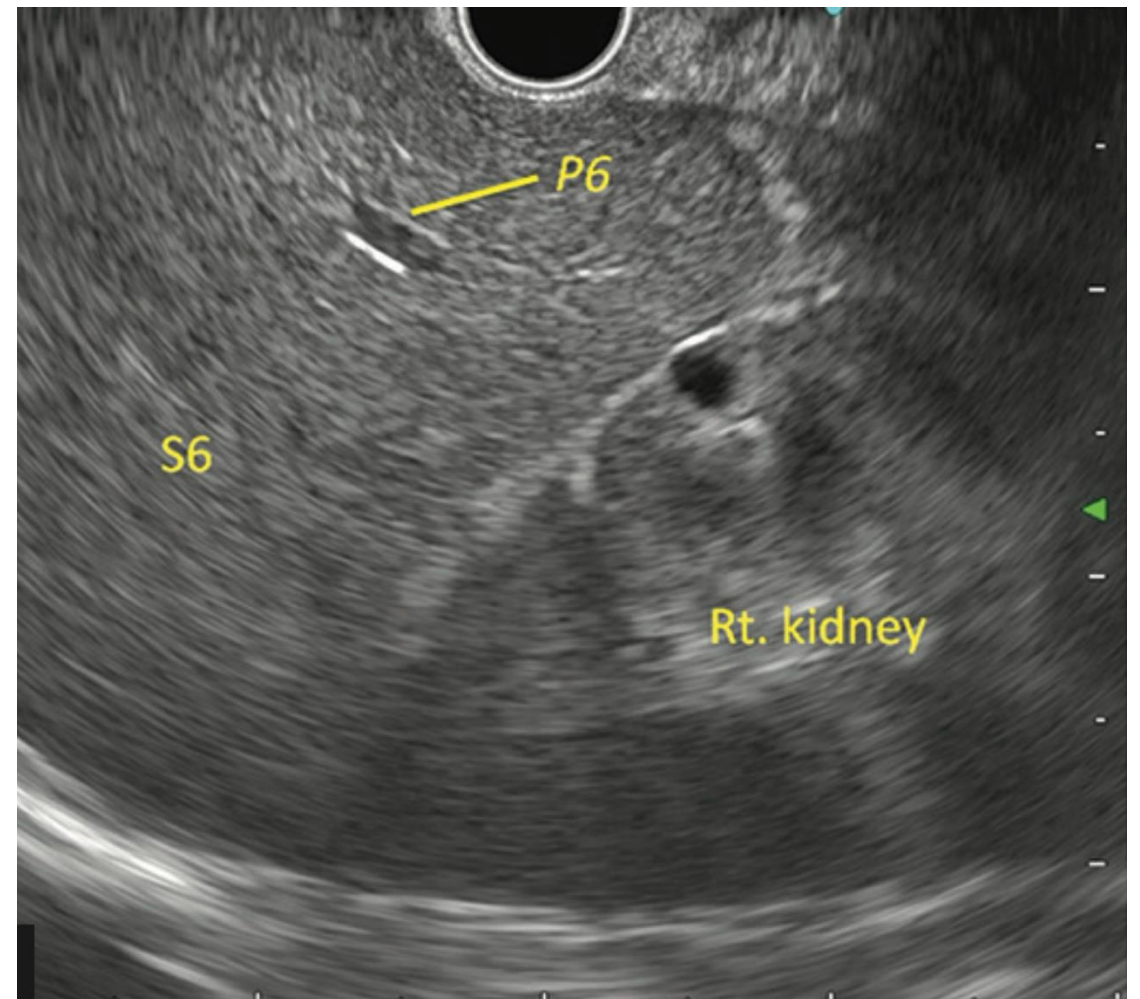
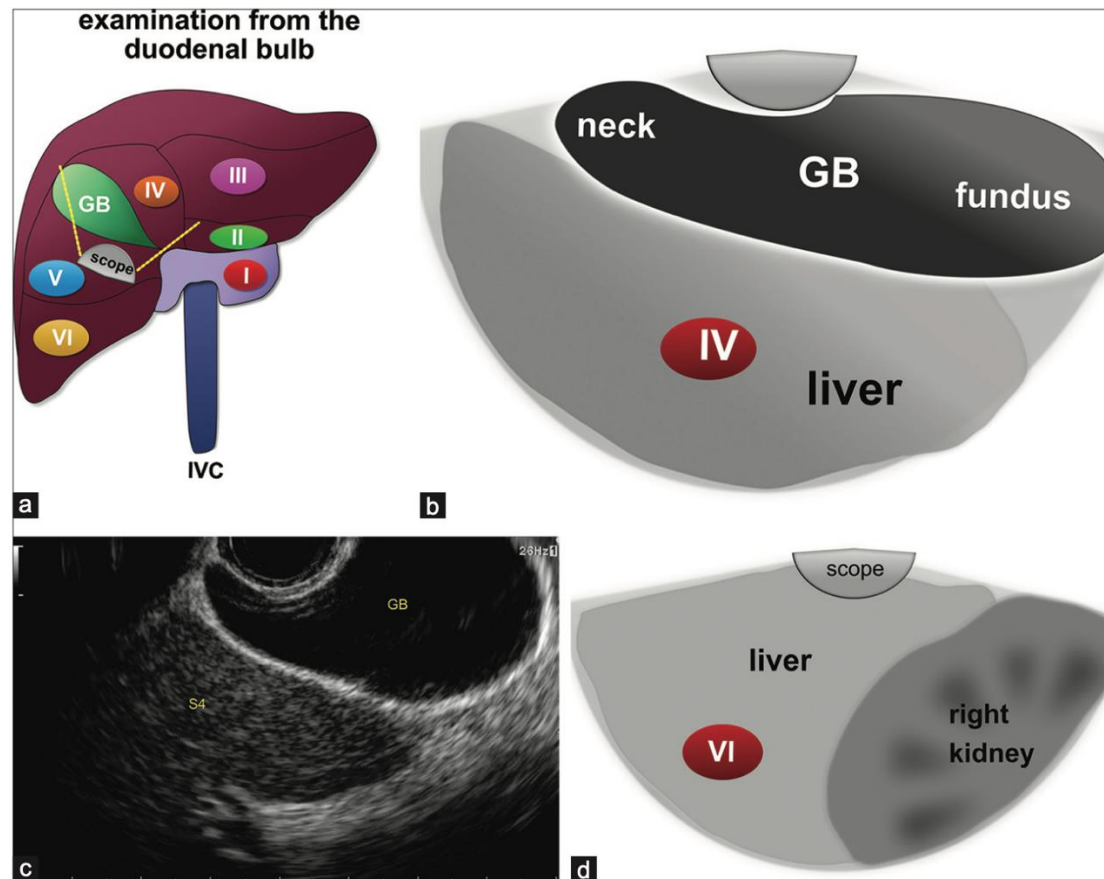




examination from the gastric body







Take home message

- Find specific landmarks...follow them
- Focus on stations
- Improve visibility
- Read books, watch videos, attend workshops or do fellowships

Ref

- Chavan. Dig. Endo. 2023
- Okasha. EUS. 2021
- Samasarena Clin endoscopy 2018