



QUALITY IN ENDOSCOPY

ESGE / EASL / ESGAR SYMPOSIUM

ERCP & EUS

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Understanding EUS anatomy – radial and linear

Session No.: 7

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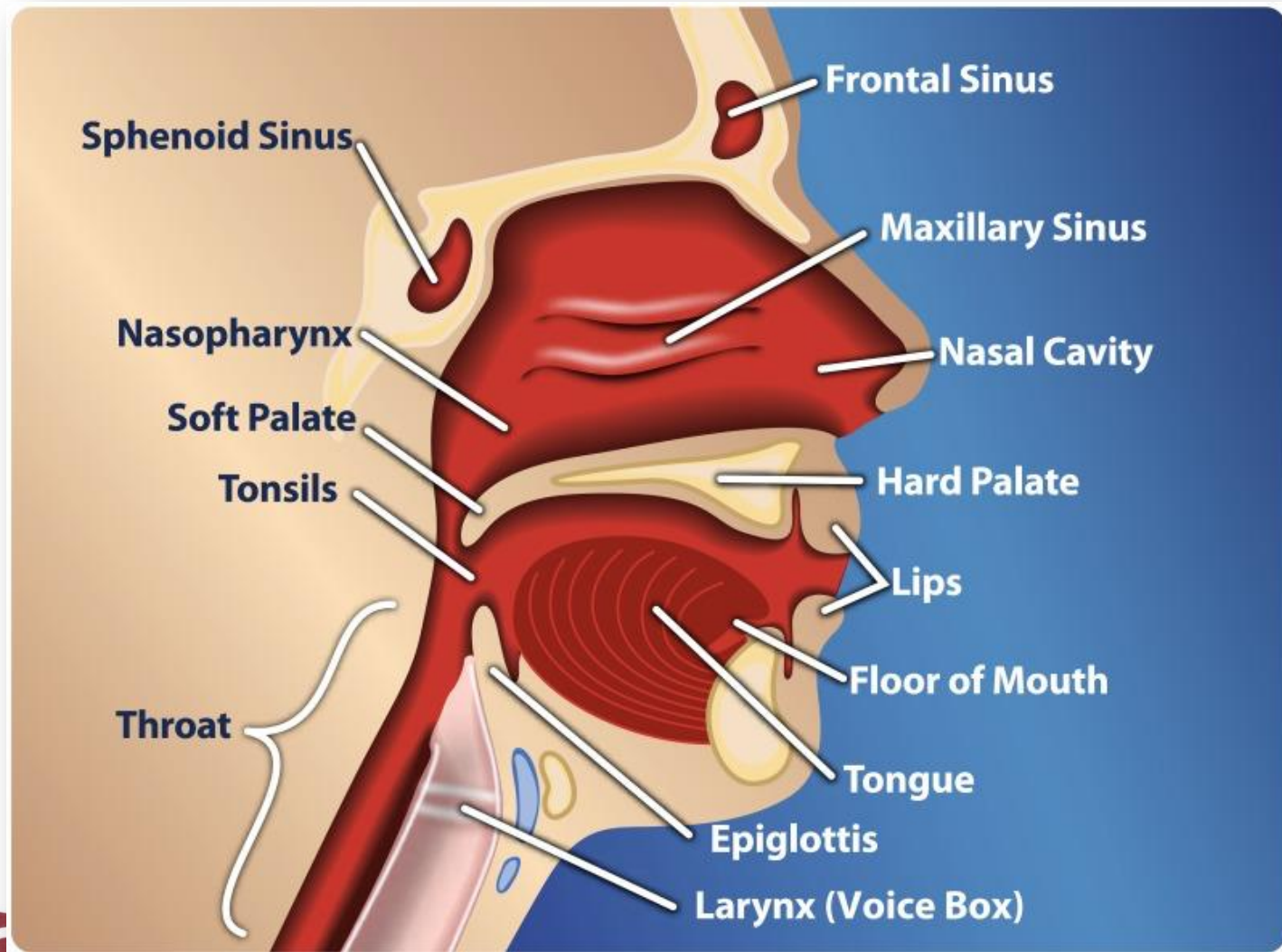
Understanding linear EUS anatomy

- Introduction into the esophagus
- Mediastinum
- Proximal stomach
- Duodenal bulb
- Descending duodenum
- Deep duodenum

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Introduction into the esophagus



Introduction into the esophagus

- Hold scope with R hand at 25cm from tip
- Introduce into back of the throat until ~10cm
- Tip up heavily until 15cm
- Tip down and slowly advance in until 25-30cm
- Give the patient a rest
- Lights off or at least do not watch the endoscopy screen!

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Mediastinum

- No visual inspection of esophagus with EUS-scope
- Keep scope straight
- Slight tip up, beware of too much pressure
- Start looking for descending aorta @ 25cm
- Rotate with shoulders & left hand, no R hand torque!
- Practice performing 360 degree rotation, from atrium to atrium

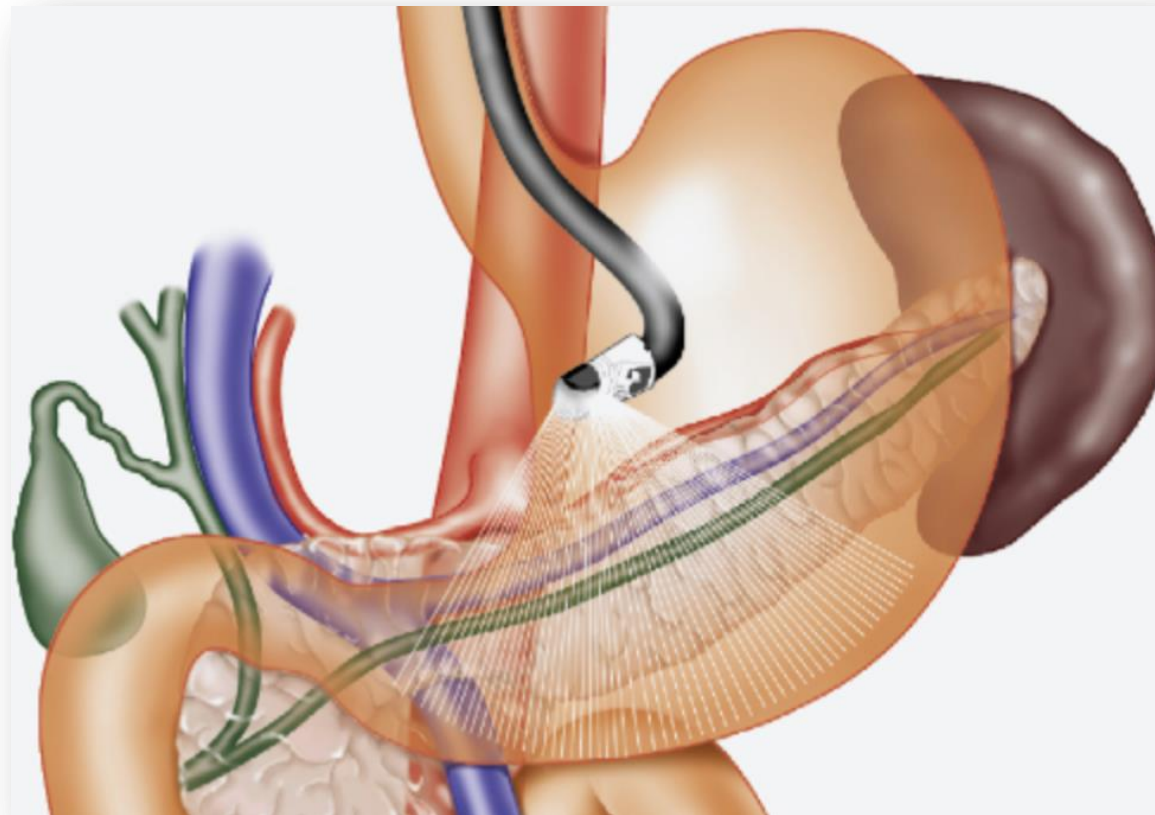


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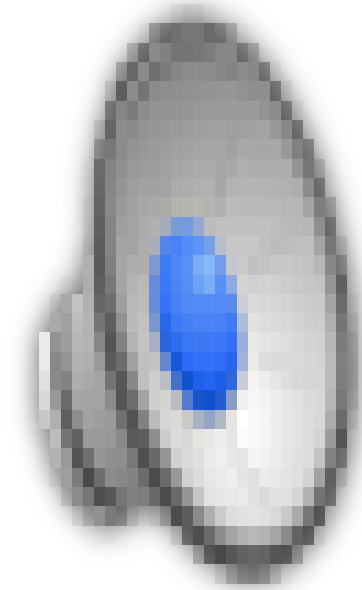
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Proximal stomach – *Pancreas station 1*

- Entrance over descending aorta, tip down after passing crus of the diaphragm
- Ideal position for pancreatic body & tail, L adrenal



Proximal stomach – *Pancreas station 1*

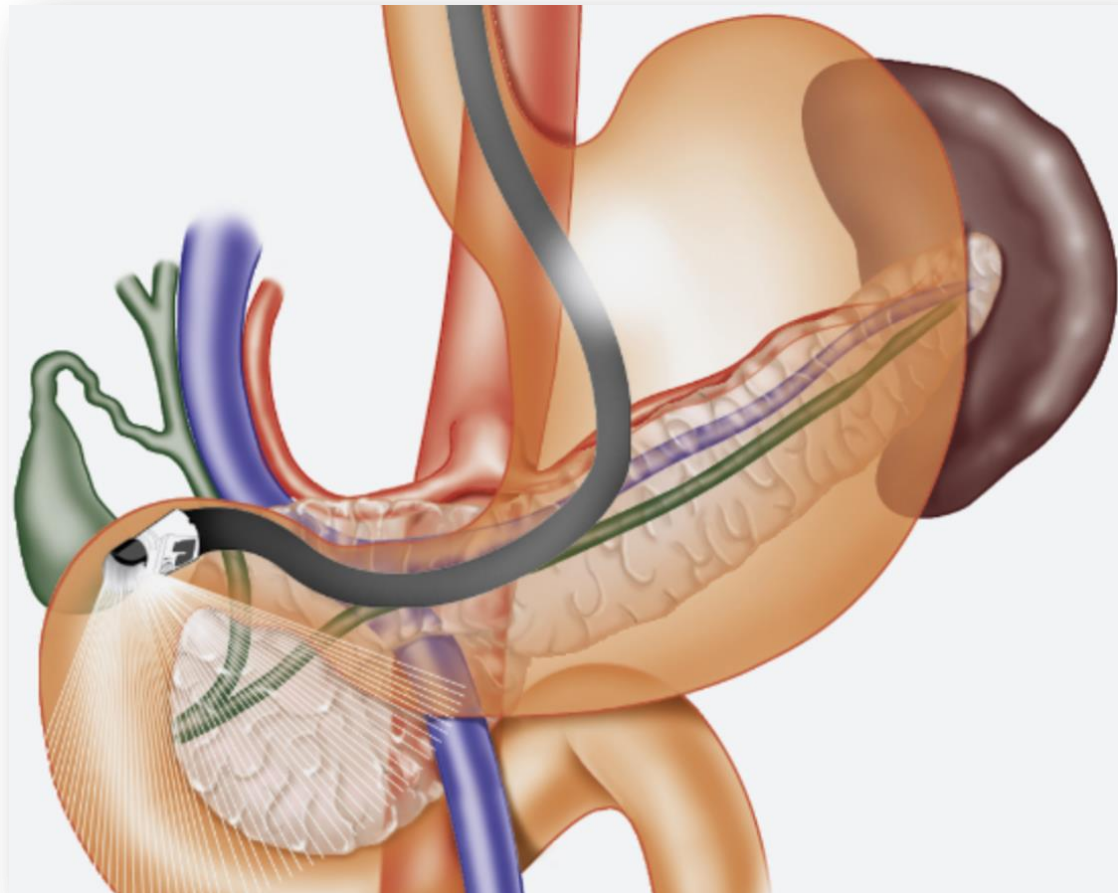


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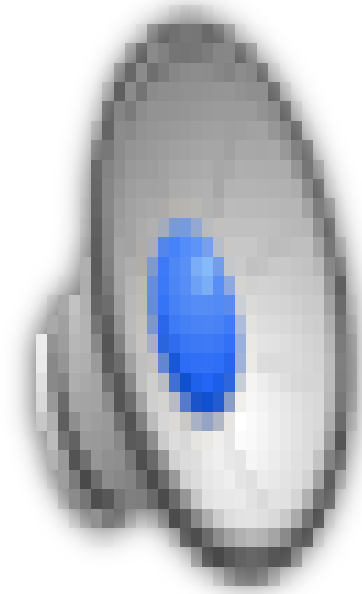
- Introduction into the esophagus
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Duodenal bulb – *Pancreas station 2*

- Enter in the bulb, rotate anti-clockwise
- Position tip in apex of the bulb



Duodenal bulb – *Pancreas station 2*

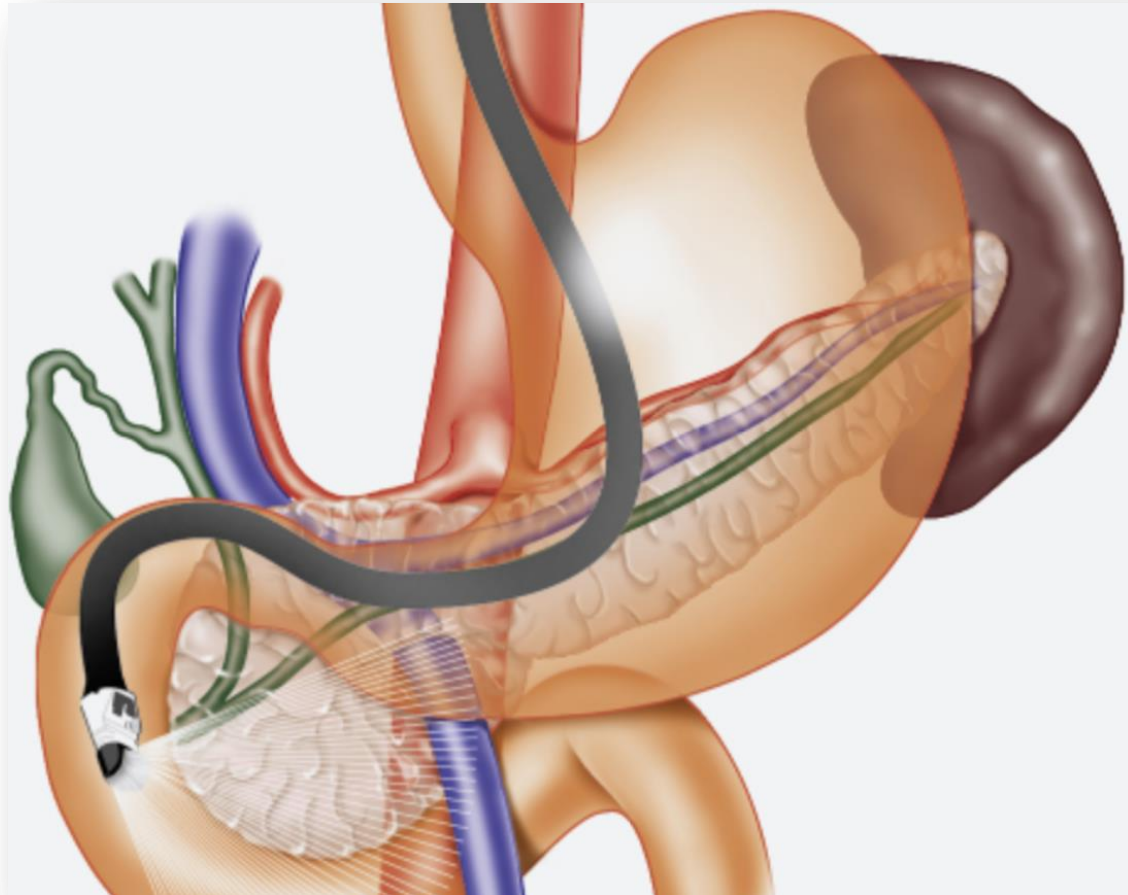


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- **Descending duodenum**
- Deep duodenum

Descending duodenum– *Pancreas station 3*

- Be VERY carefull (1:1000 perforations)
- Short scope position, “Kiss the papilla”



Descending duodenum– *Pancreas station 3*

- Be VERY carefull (1:1000 perforations)

Table 1. Baseline Characteristics

Characteristic	Total (n = 36)
Age, y (SD)	67 (11)
Male sex (%)	15 (42)
Perforation location (%)	
Esophagus	5 (14)
Stomach	6 (17)
Duodenum	12 (33)
Colon	13 (36)
Etiology of perforation	
Therapeutic (%)	18 (50)
ESD	6 (17)
EMR	8 (22)
Polypectomy	4 (11)
Diagnostic (%)	13 (36)
EUS	5 (14)
Colonoscopy	8 (22)
Other (%)	5 (14)

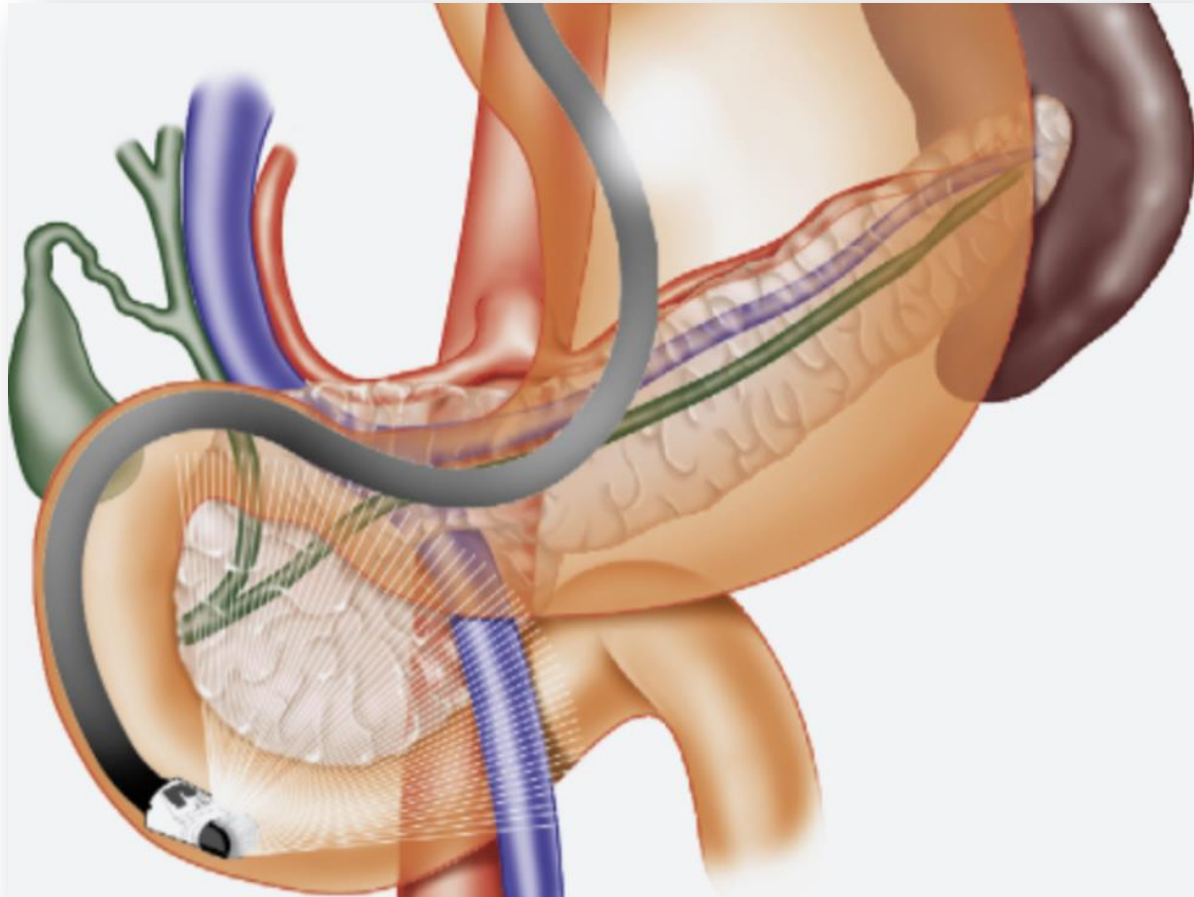


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Deep duodenum – *Pancreas station 4*

- Deep, semi-long scope position
- Only few landmarks present



Summary & conclusions

- Linear EUS anatomy depends on station based approach
- Don't spoil your training by combining with radial EUS
- Study CT-scan carefully before EUS
- Consider circumstances if/when FNA is necessary
- Explain investigation to patient
- Gentle scope handling
- Rotate shoulders continuously