GASTROSCOPY FROM A TO Z

MOVEMENT & POSITIONING



Lynn Debels

UZ Brussel · VUB

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BSGIE
Belgian Society of Gastrointestinal Endoscopy

ONE ROUTE, EVERY PATIENT

A diagnostic gastroscopy is a fixed sequence. Learn the route once, and run it the same way every time.

A	B	C	D	E	F	G
SET-UP	**POSITION**	**INTUBATE**	**INSPECT**	**WITHDRAW**	**SAMPLE**	**REPORT**
patient, room, scope	*left lateral, airway safe*	*direct vision only*	*oesophagus · stomach · duodenum*	*the oesophagus again, now in VCE*	*targeted, protocol-based*	*structured, with photos*

Today's focus: steps B to E. How the patient lies, how the scope moves, and in which order you look.

ONE ORDER, EVERY TIME

Finish each organ before you move on to the next. Keep the duodenum for last.

1 → 2 → 3

OESOPHAGUS

In: white light, take the measurements. Out: again, with virtual chromoendoscopy (VCE). Do not miss a squamous cell carcinoma.

STOMACH

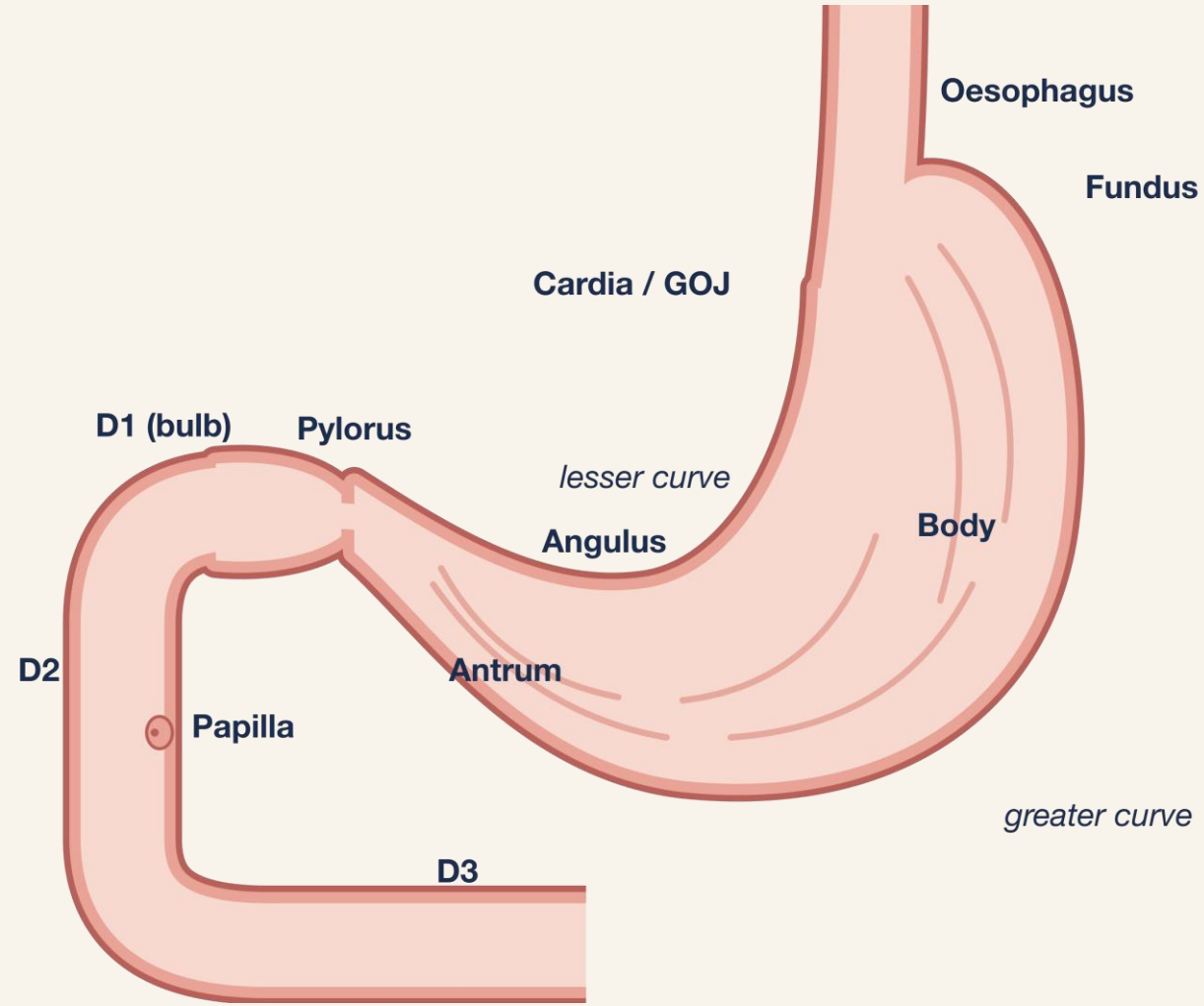
Complete it before you leave it: forward view and retroflexion, all four walls.

DUODENUM

Last. The least important pathology, and the pylorus is what a lightly sedated patient tolerates worst.

Structure beats modality: white light in and VCE out, or both on the way in. Either is fine, as long as you always follow the same approach.

THE MAP



HOW TO READ THE DRAWINGS

The endoscope
the grey dot is the tip

What you see
the field of view from the tip

What you do
push, pull, turn or rotate

Front view
the patient's left is on the right of the drawing

01

BEFORE THE SCOPE

patient · room · endoscope

CHECK BEFORE YOU START

THE PATIENT

- Indication clear
- Consent, including trainee involvement
- History, comorbidities, medication
- Antithrombotics managed per guideline
- PPI use noted
- Fasting confirmed

YOU & THE ROOM

- Monitor straight ahead, at or just below eye level
- Neutral wrists and elbows
- Pedals and tower within easy reach



THE ENDOSCOPE

- CO_2 / water and suction working
- Tip deflection in all 4 directions, brakes off
- White balance and image OK
- Working channel drained
- Biopsy forceps and pots ready

POSITIONING THE PATIENT

Left lateral decubitus

Head on a low pillow, neck neutral to slightly flexed, chin towards the chest

Bite block in place

Inserted before sedation, held throughout

Airway protected

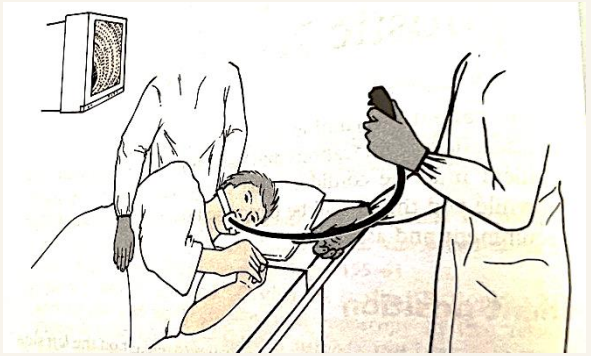
Oxygen and suction ready, monitoring connected

Pressure points padded

IV line secured and visible

Re-assess

After sedation and again after intubation



*Cotton and Williams Practical Gastintestinal Endoscopy

A CLEAN VIEW STARTS HERE

Mucolytic + antifoam drink before the procedure (e.g. simethicone ± N-acetylcysteine)

Re-dose through the working channel when bubbles or mucus remain

CO_2 rather than room air

Photograph only once the mucosa is clean

Score mucosal visibility with a validated tool

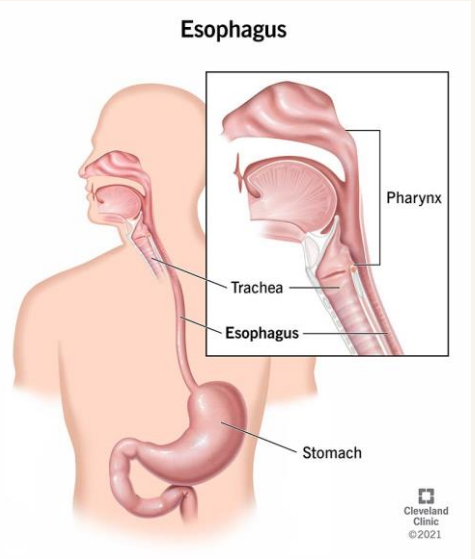
02

GOING IN

intubation

INTUBATION UNDER DIRECT VISION

Before you start: neck neutral · external shaft straight · controlled grip · channel drained



1 → 2 → 3 → 4

TONGUE

Midline, slight tip-up, follow the curve of the tongue

LARYNX

Identify epiglottis and vocal cords; never enter the trachea

BEHIND THE ARYTENOIDS

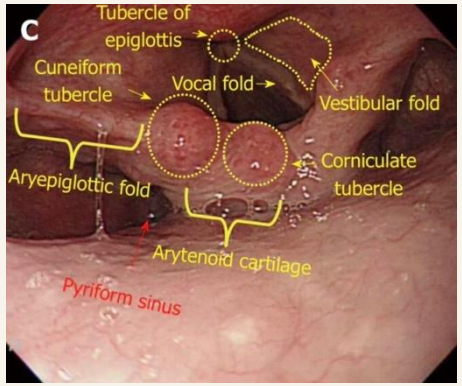
Stay posterior, just beside the midline, towards the upper sphincter

UPPER SPHINCTER

Gentle, steady pressure; (ask the patient to swallow); advance when it opens

STOP AND RETHINK IF

Resistance: never push blindly.
Pull back, re-centre, try again



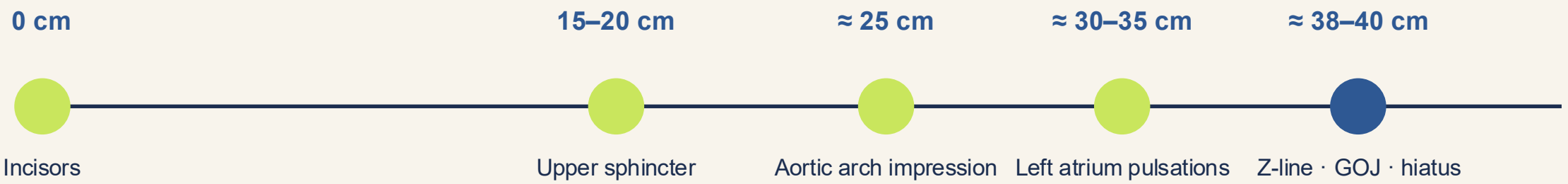
03

THE OESOPHAGUS

orientation

THE OESOPHAGUS: MEASURE AS YOU GO

Approximate distances from the incisors in an adult



Minimal air, aspirate promptly

Inspect on the way in with just enough insufflation to open the lumen

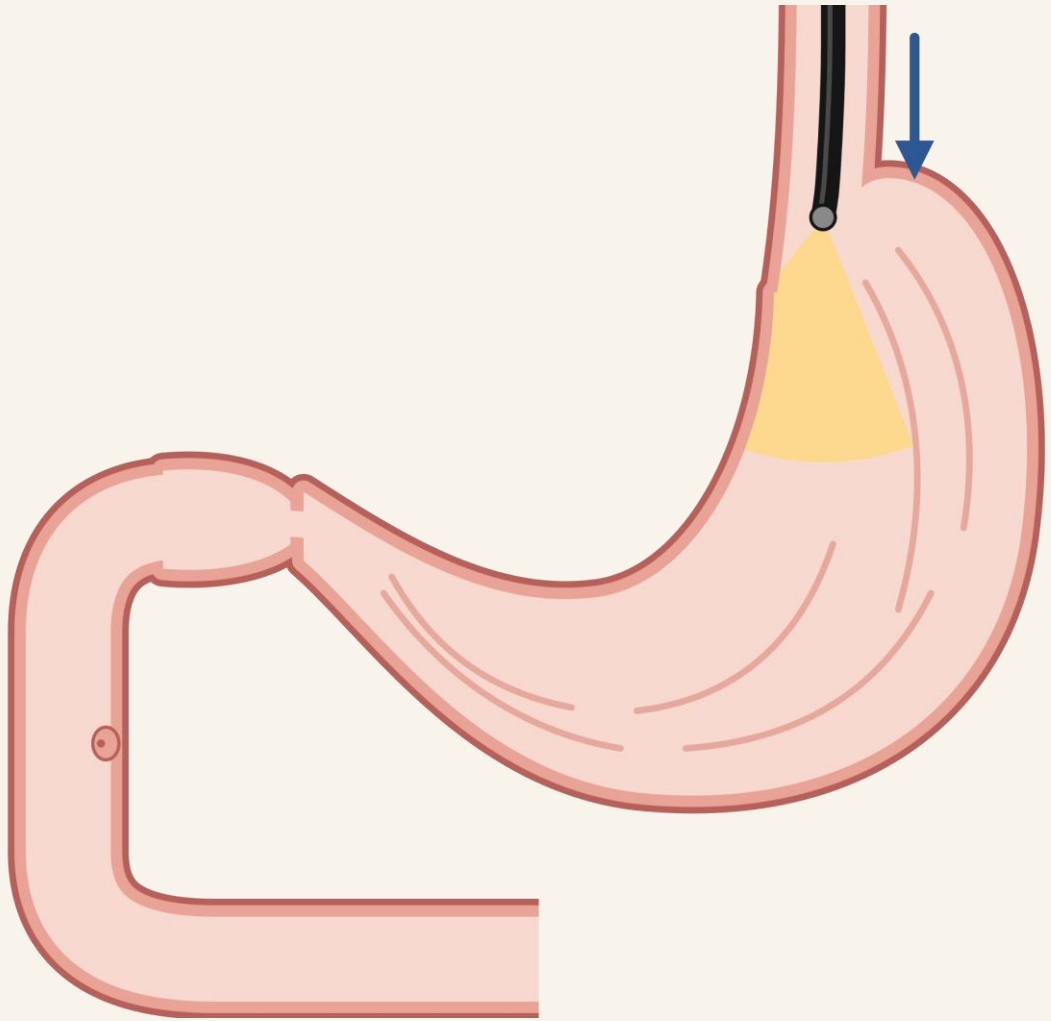
White light first

Then image-enhanced endoscopy for any suspicious mucosa

Record three distances

Z-line, GOJ (top of the gastric folds) and the diaphragmatic pinch

THE OESOPHAGUS, ON THE WAY IN



1 ON THE WAY IN

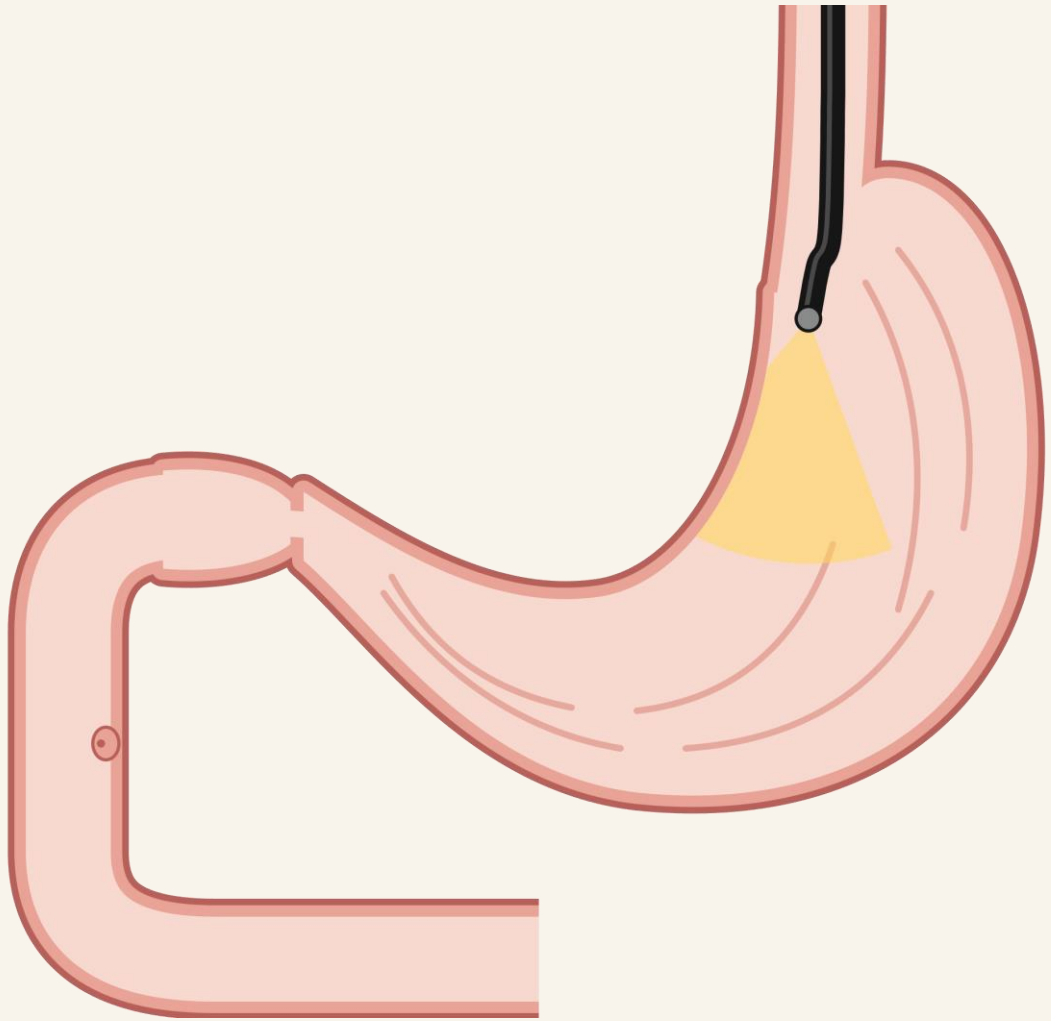
WHAT YOU DO

- Advance slowly under direct vision
- Minimal air; aspirate fluid promptly
- White light; measure from the incisors

WHAT YOU SEE

- The lumen straight ahead
- Aortic arch ≈ 25 cm, left atrium ≈ 30–35 cm
- Z-line ≈ 38–40 cm

THE GOJ, AND INTO THE STOMACH



2 ON THE WAY IN

WHAT YOU DO

- Record Z-line, GOJ and diaphragmatic pinch
- Ask the patient to sniff to show the hiatus
- Then advance into the stomach and aspirate the pool

WHAT YOU SEE

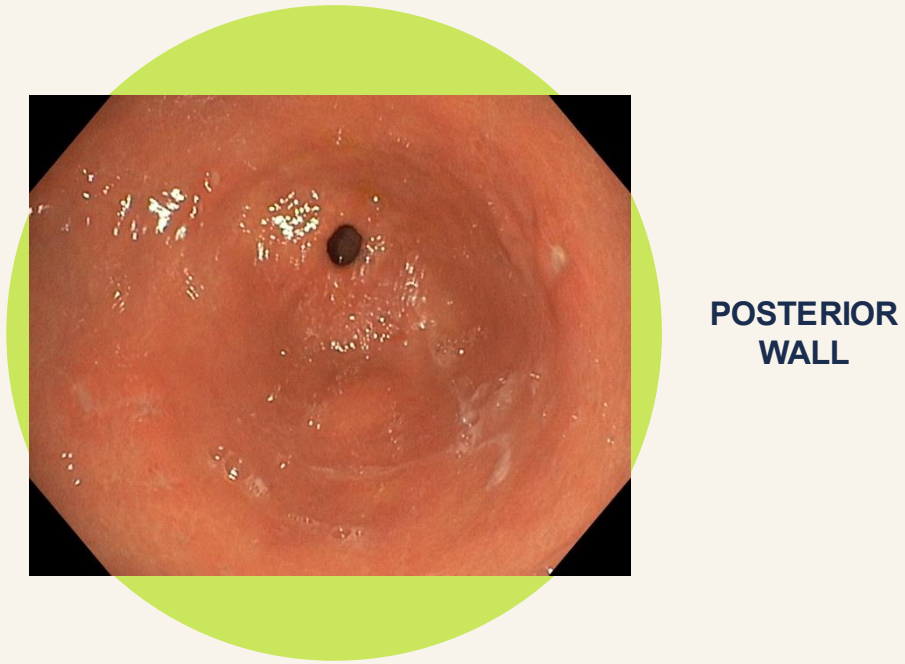
- The squamocolumnar junction
- Top of the gastric folds
- The stomach opening up ahead

04

THE STOMACH

orientation · retroflexion

FIND YOUR WAY: ORIENTATION



Forward view, gastric body, scope not rotated

1 Entering

Aspirate the gastric pool. Insufflate just enough to open the folds

2 Navigate

Follow the greater-curve folds like rails, with combined torque and tip angulation, towards the angulus

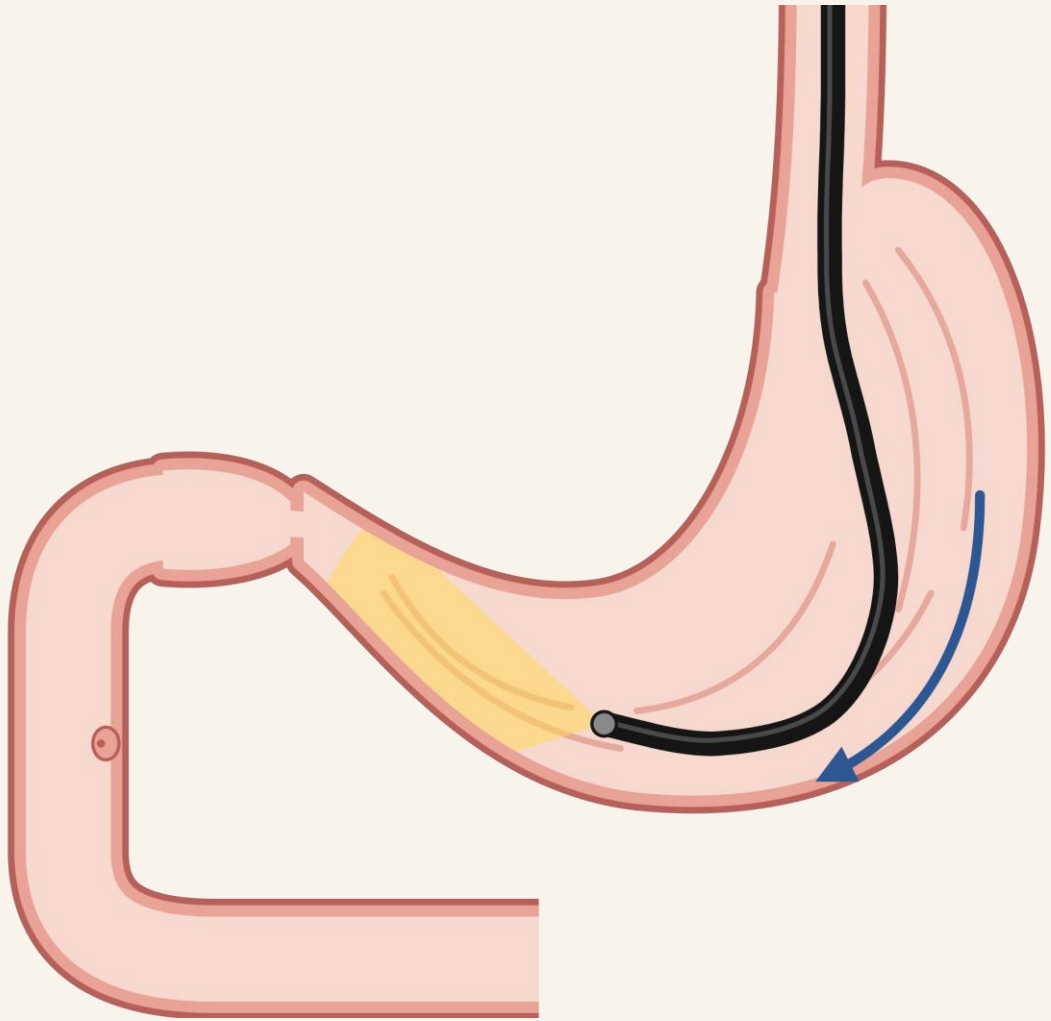
3 Antrum

Tip up at the angulus, then advance: the pylorus comes into view ahead

4 Lost?

Pull back, add a little air, find the folds again. Never advance without a lumen

THE STOMACH, FORWARD VIEW



3 ON THE WAY IN

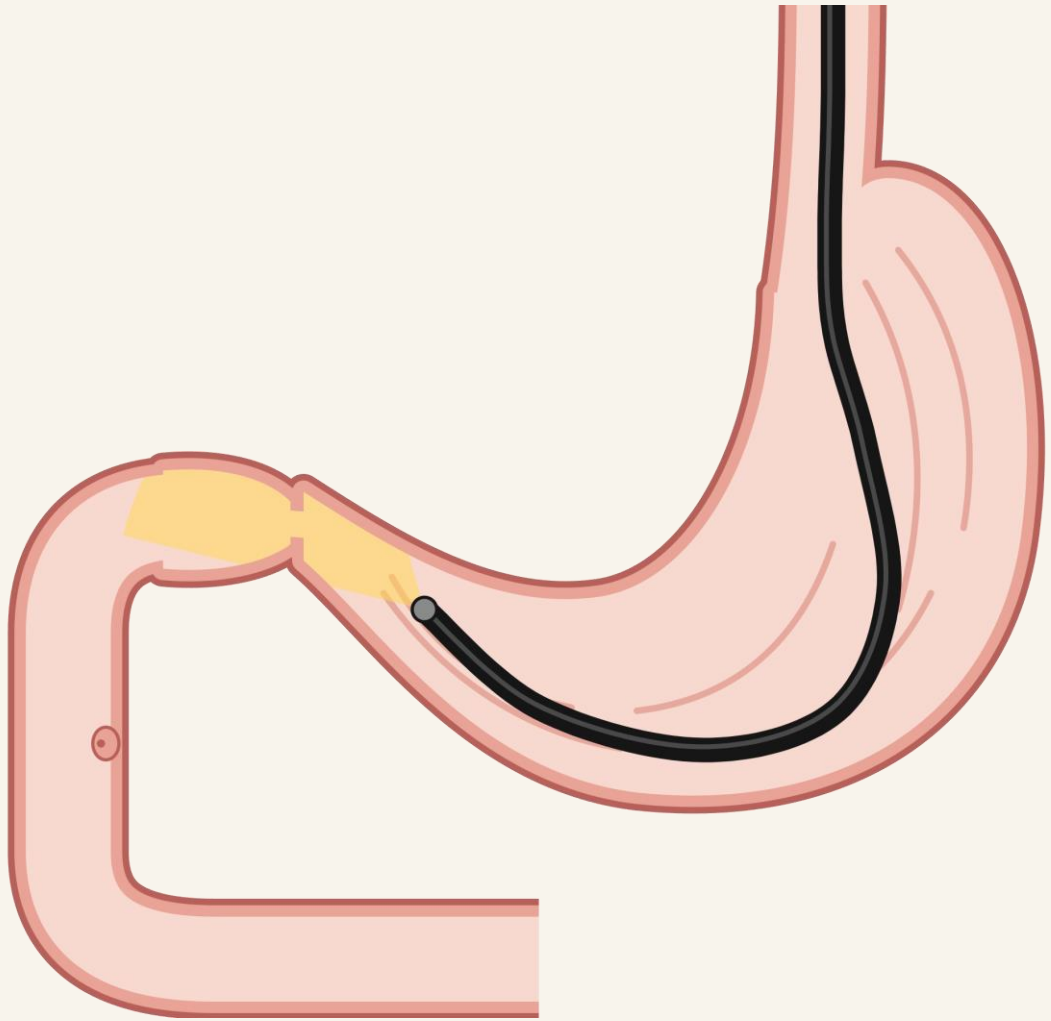
WHAT YOU DO

- Insufflate just enough to open the folds
- Follow the greater-curve folds like rails
- Steer with torque on the shaft plus tip angulation

WHAT YOU SEE

- Body with its rugal folds
- Lesser curve at 12, greater curve at 6
- The angulus coming into view

THE ANTRUM AND PYLORUS



4 ON THE WAY IN

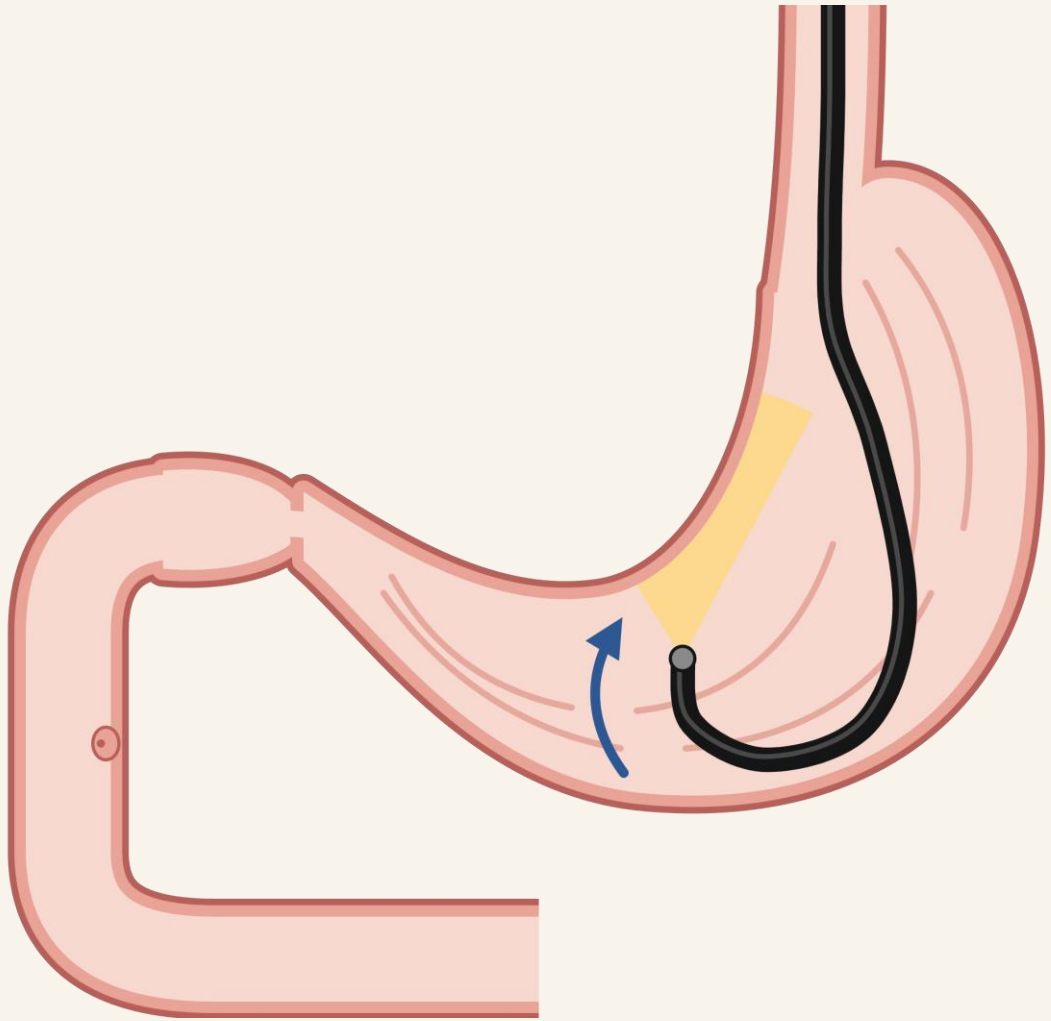
WHAT YOU DO

- Tip up at the angulus and advance
- Inspect the antrum, all four walls
- Look at the pylorus, but do not pass yet

WHAT YOU SEE

- The antrum funnelling towards the pylorus
- The pylorus in the centre of the screen

THE J-MANOEUVRE, IN PICTURES



5 ON THE WAY IN

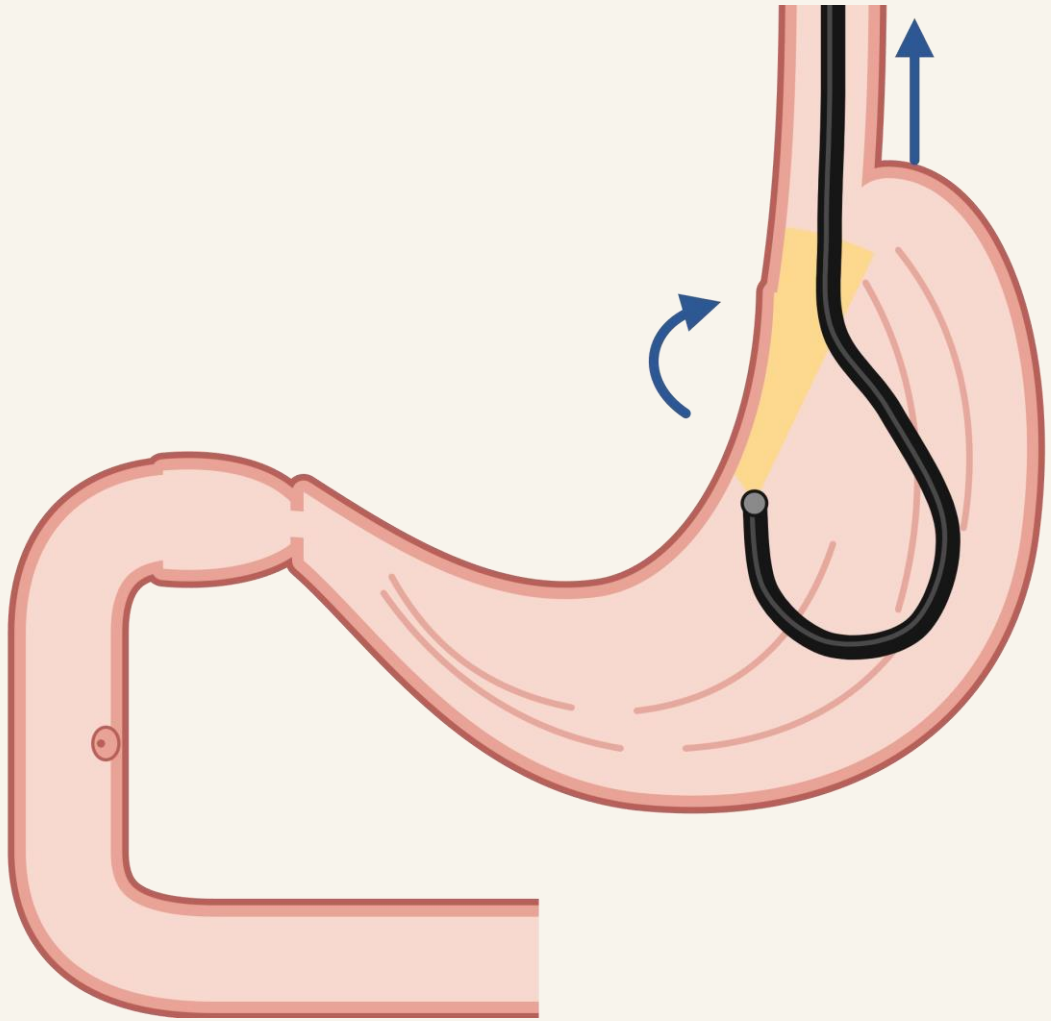
WHAT YOU DO

- Distal body or antrum, enough air
- Big wheel fully up
- Advance gently: the scope curls back

WHAT YOU SEE

- The angulus (incisura) from above
- The lesser curve
- Your own scope coming down

RETROFLEXION AT THE CARDIA



6 ON THE WAY IN

WHAT YOU DO

- Keep the tip up and pull back to the cardia
- Rotate the shaft 180° both ways
- Release all angulation before you leave the stomach

WHAT YOU SEE

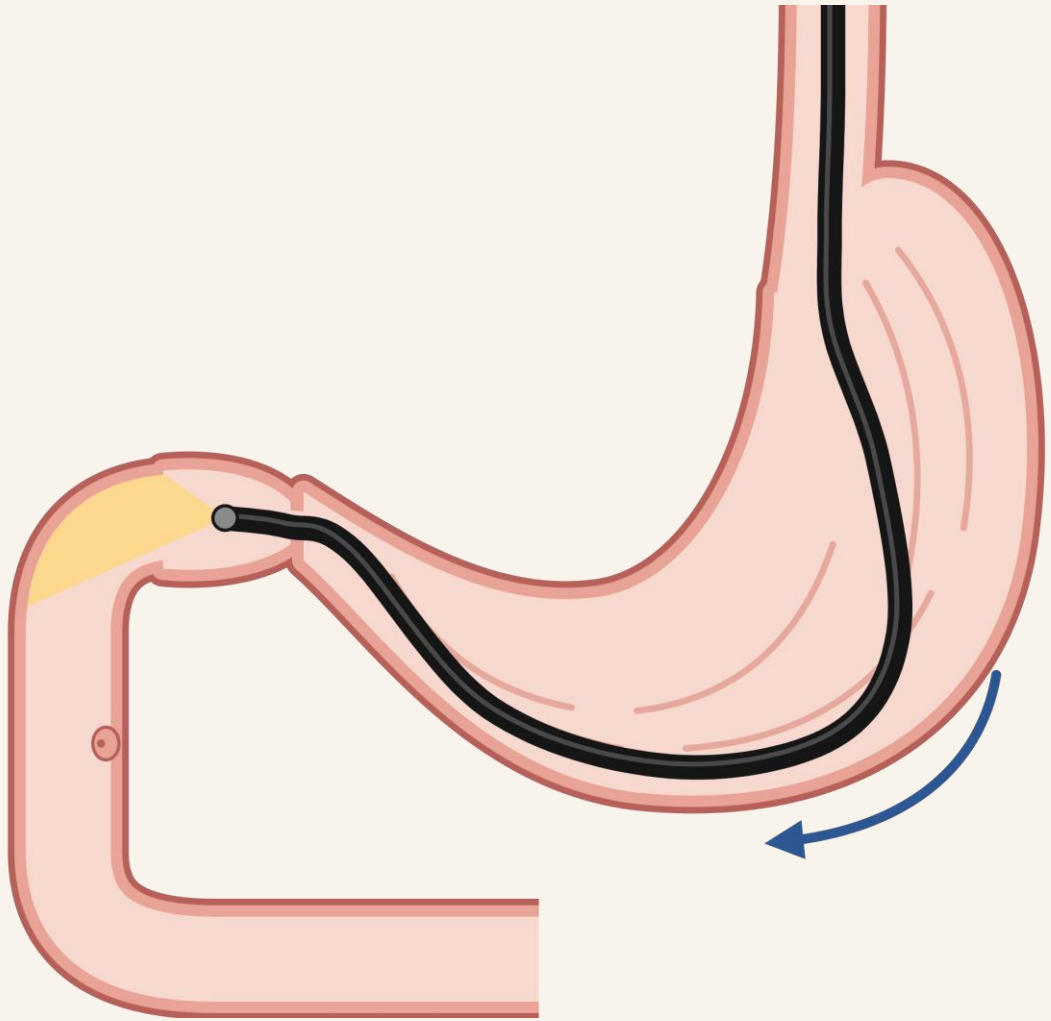
- The cardia and the GOJ hugging the scope
- The whole fundus
- The high lesser curve

05

THE DUODENUM

last, once the stomach is complete

INTO D1: A LOT OF SCOPE IN THE STOMACH



7 ON THE WAY IN

WHAT YOU DO

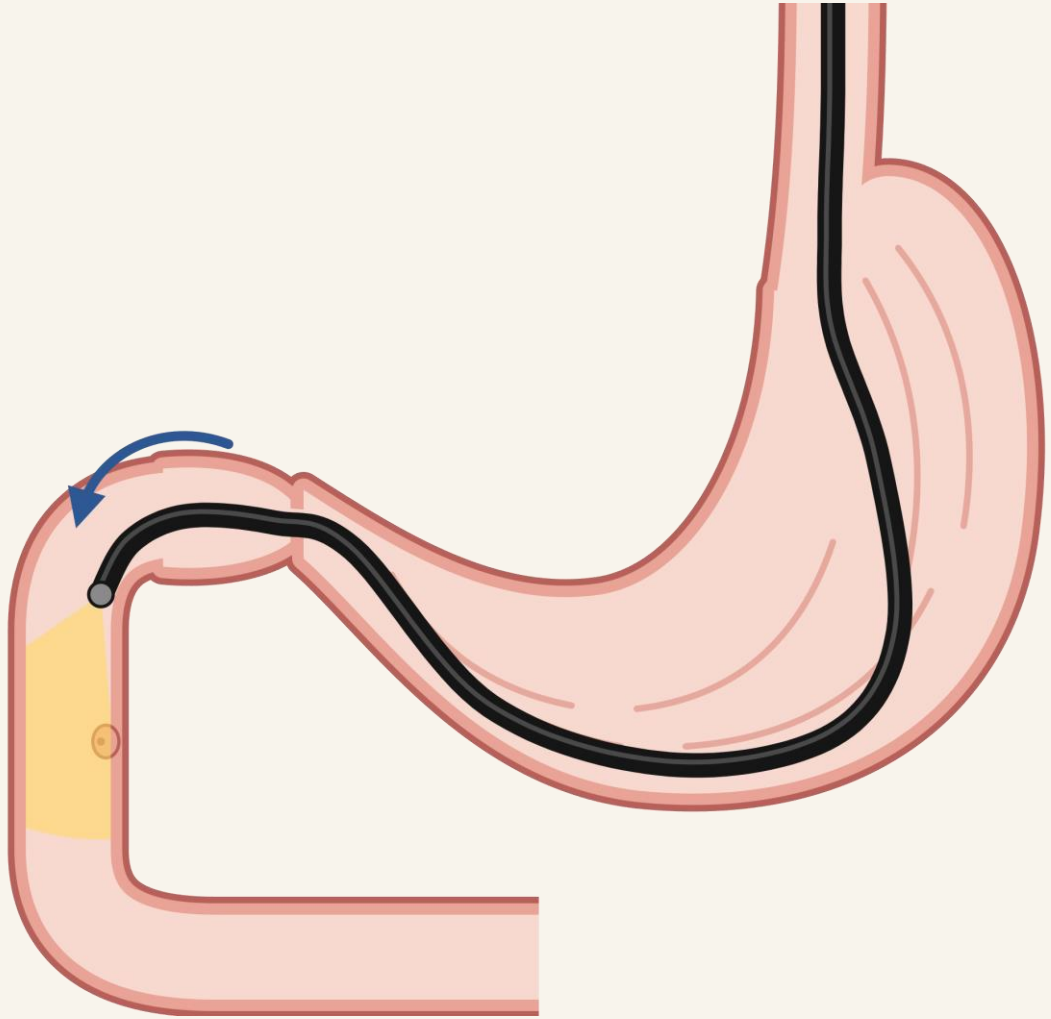
- Stomach complete? Only now pass the pylorus
- Centre it, gentle push, wait for it to open
- Inspect the bulb, all walls

WHAT YOU SEE

- The duodenal bulb

The scope now forms a loop along the greater curve. Pushing further only stretches the loop, and the patient feels it.

THE CORKSCREW



8 ON THE WAY IN

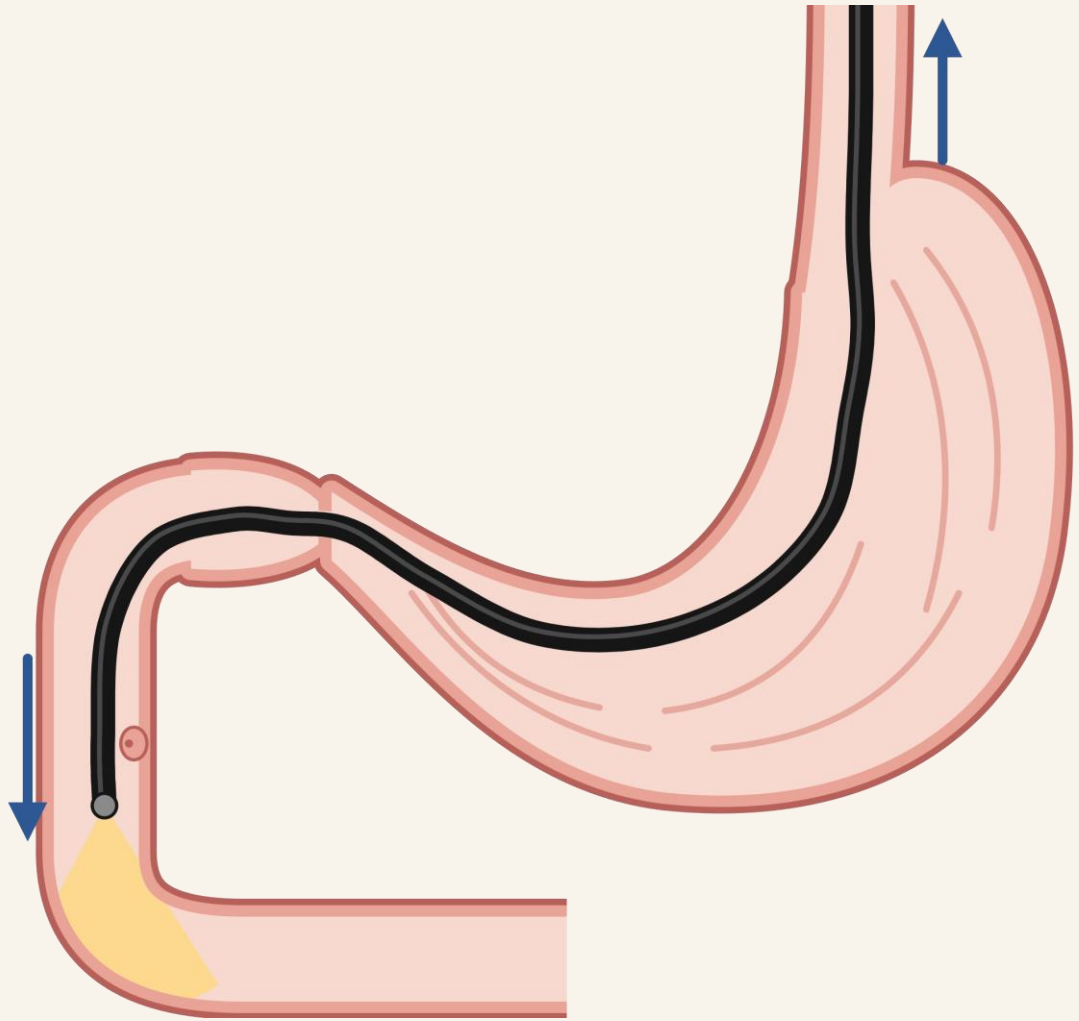
WHAT YOU DO

- At the end of the bulb: tip up and right
- Rotate the shaft clockwise

WHAT YOU SEE

- The superior duodenal angle
- The lumen of D2 turning downwards

PULL BACK TO GO DEEPER



9 ON THE WAY IN

WHAT YOU DO

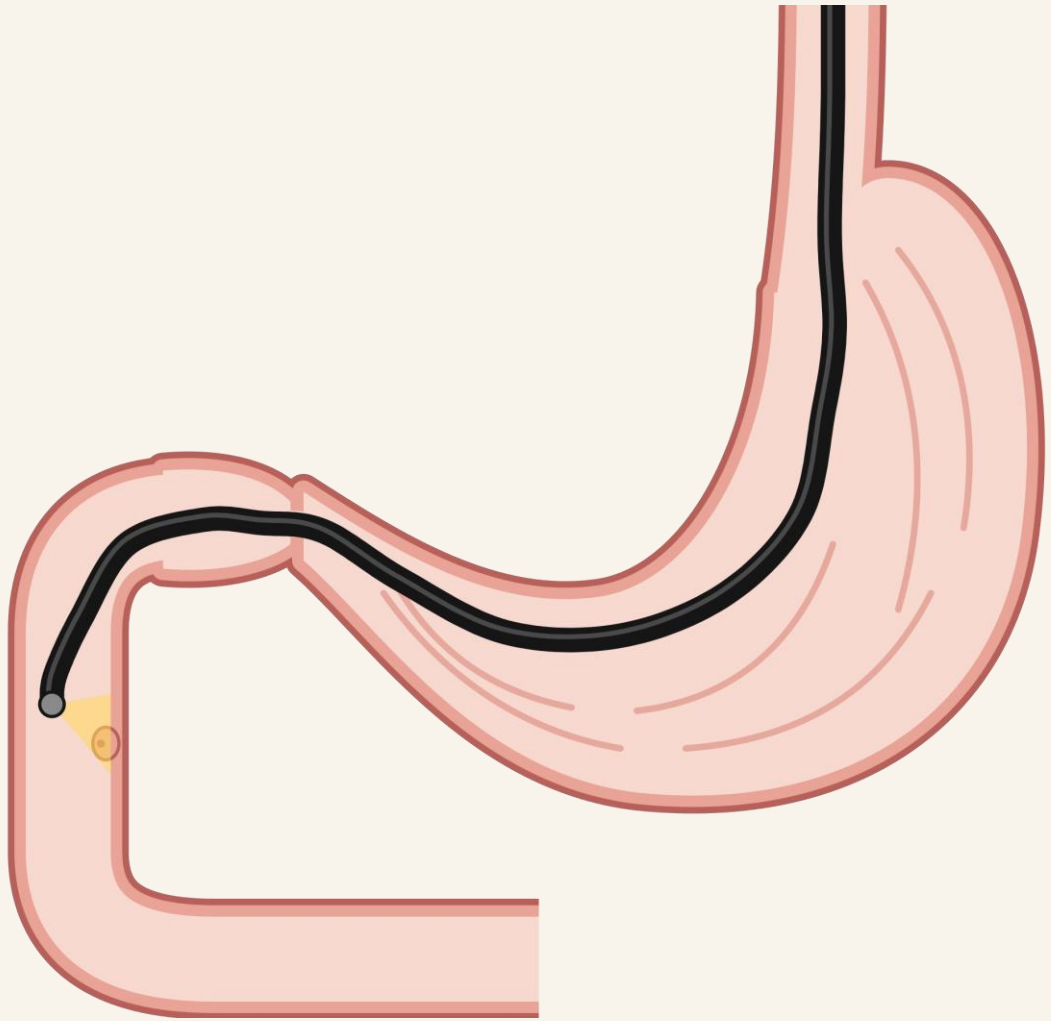
- Keep the clockwise torque and withdraw
- The loop straightens along the lesser curve
- The tip slides forward into D2

WHAT YOU SEE

- D2 with its circular folds
- Less scope inside: more comfortable

The paradox: by pulling back you shorten the loop, and the tip advances.

THE PAPILLA, WHEN INDICATED



10 ON THE WAY IN

WHAT YOU DO

- Keep the scope short and aligned
- Look at the medial (inner) wall of D2
- Cap first; side-viewer if still poor

WHAT YOU SEE

- The major papilla, posteromedial wall of mid-D2
- Often at the end of a longitudinal fold

06

COMING OUT

the oesophagus, a second time

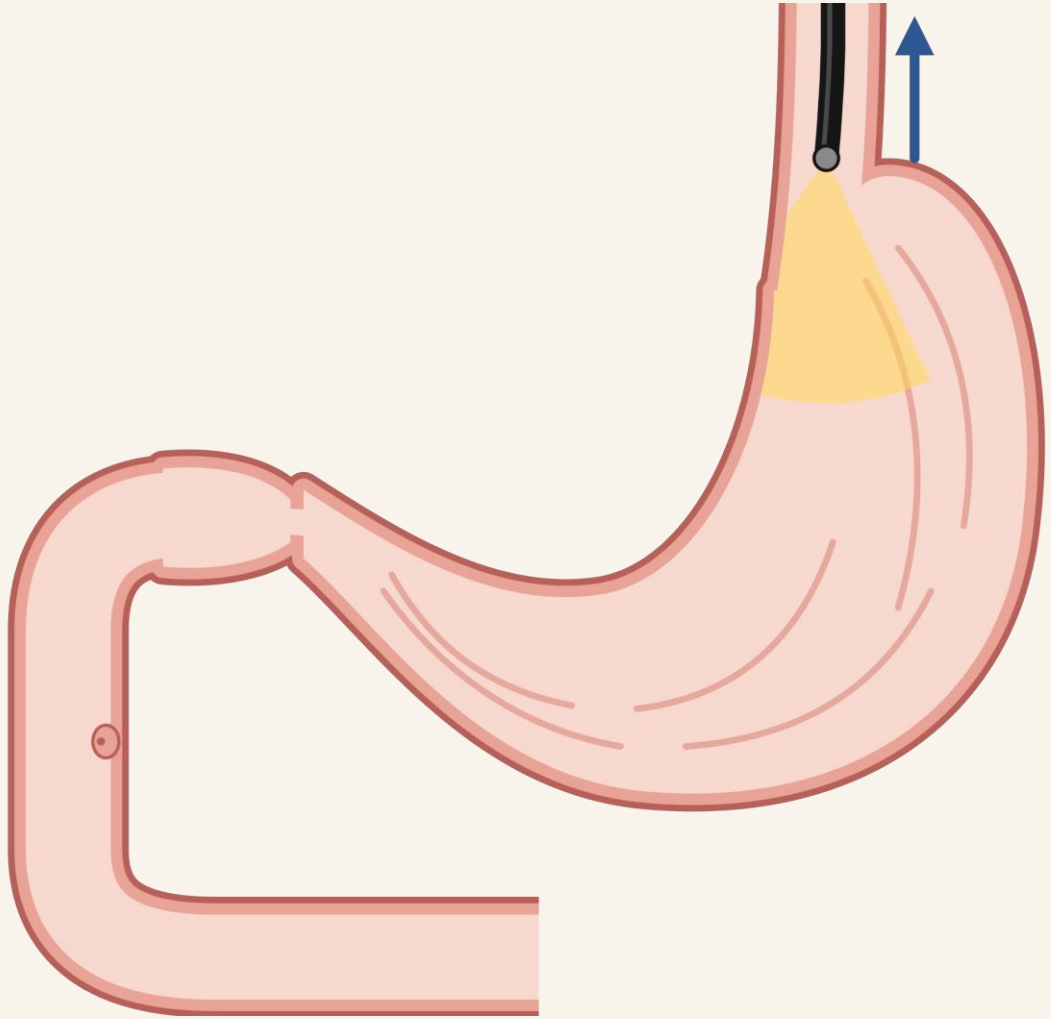
AT LEAST

7 MIN

of systematic mucosal inspection in every routine diagnostic gastroscopy

More when you sample or treat · Barrett's: at least 1 minute per cm

THE OESOPHAGUS, ON THE WAY OUT



11 ON THE WAY OUT

WHAT YOU DO

- Straighten and deflate the stomach first
- Withdraw slowly through the oesophagus
- Now with virtual chromoendoscopy (VCE)

WHAT YOU SEE

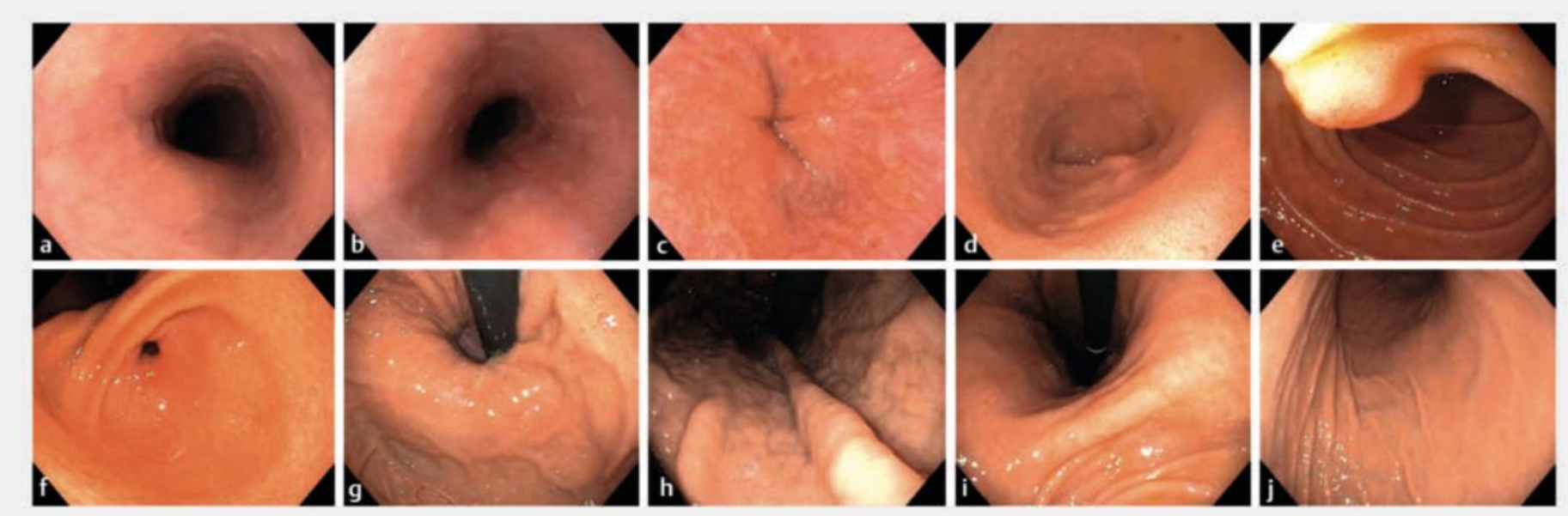
- The GOJ again
- The squamous mucosa in VCE: do not miss SCC
- The hypopharynx on the way out

THE ROUTE, STEP BY STEP



Final withdrawal: neutral angulation, continuous suction, eyes on the screen until the scope is out.

PHOTOGRAPH THE LANDMARKS



► **Fig. 2** The proposed sequence for the 10 recommended photos that should be captured during any diagnostic upper gastrointestinal endoscopy is: **a** photo #1, proximal esophagus; **b** photo #2, distal esophagus; **c** photo #3, Z line and diaphragmatic indentation; **d** photo #4, duodenal bulb; **e** photo #5, second part of duodenum; **f** photo #6, antrum; **g** photo #7, cardia and fundus in full inversion; **h** photo #8, lesser curvature of corpus in partial inversion; **i** photo #9, incisura in partial inversion; **j** photo #10, greater curvature of corpus in forward view.

** when indicated. A transparent cap helps for the GOJ, papilla and posterior duodenal wall.*


Performance measures for upper gastrointestinal endoscopy: a European Society of Gastrointestinal Endoscopy (ESGE) Quality Improvement Initiative – Update 2025

ESGE

Authors

Miguel Areia[1,2], Gianluca Esposito[3], Philippe Leclercq[4], Marcin Romańczyk[5,6], Jasmin Zessner-Spitzenberg[7], Pedro G. Delgado Guillena[8], Ashraf Monged[9], Raul Honrubia López[10,11], Hugo Uchima[12,13], Eduardo J. Ruiz Ballesteros[14], Alba Panarese[15,16], Lix Alfredo Reis de Oliveira[17], Shimaa Afify[18], Raf Bisschops[4], Monika Ferlitsch[7,19], External Voting Panel

AND ALL PATHOLOGY

Overview + close-up, before any biopsy or intervention.

Z-line in forward and retroflexed view.

WHEN IT GETS DIFFICULT

Cannot pass the sphincter

Check neck flexion and midline, ask for a swallow. Never force

Lost in the stomach

Pull back, a little air, find the folds and the lumen again

Bubbles and mucus

Flush antifoam / mucolytic through the channel, then suction

Red-out at the pylorus

You are against the wall: withdraw slightly and insufflate

Cannot reach D2

Shorten the scope: withdraw while rotating clockwise

Retching or restless patient

Less air, pause, reassure. Reconsider sedation or repeat later

TAKE HOME

1. Check patient, room and scope before every procedure
2. Intubate under direct vision only, and never force
3. Retroflex in every stomach, and straighten before you leave it
4. Oesophagus → stomach → duodenum last; oesophagus again on the way out
5. Photograph the landmarks and all pathology, then write a structured report

THANK YOU.

Questions?

Practise it today: Pr 4 Plastic Gastroscopy · Pr 6 Mikoto box upper GI