Case Based Decision Making
Endo Skills 2025
Part 1: Upper GI Tract (mostly)

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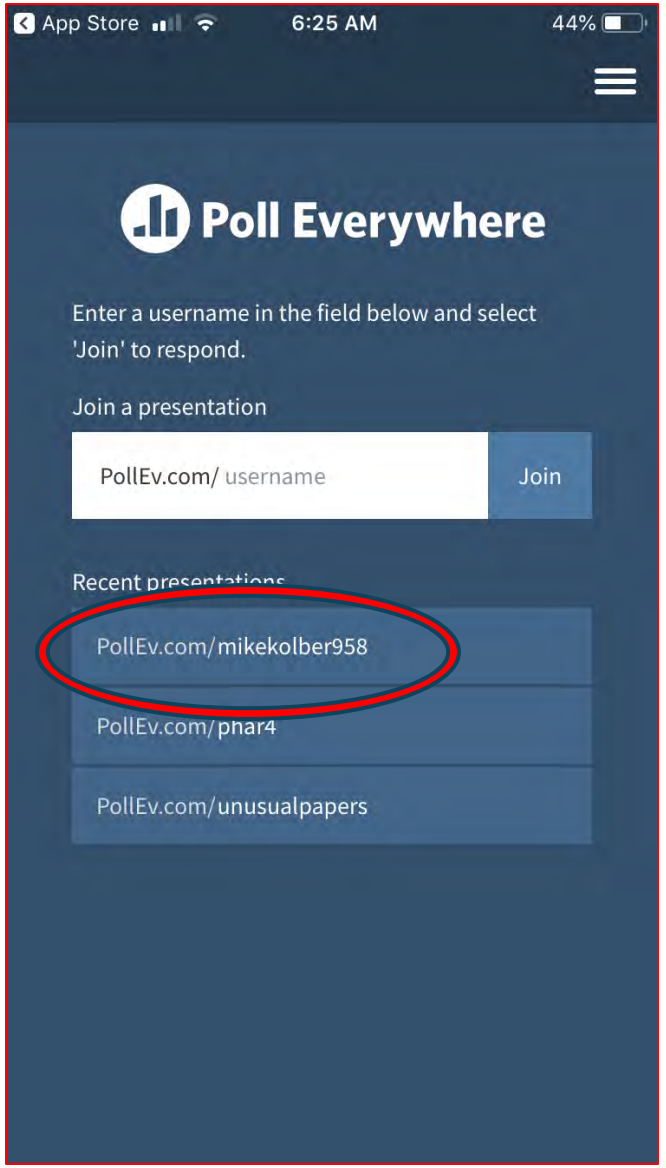
Clarence Wong MD FRCPC

Peace River/Edmonton



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Kolber Disclosure

- **Relationships with financial sponsors:**
  - **Grants/Research Support:** CIHR (BedMed Study)
  - **Expenses or Honoraria:**
    - ACFP, Alberta Health (Expert Drug), SRPC, AMA, CCFP
  - **Consulting Fees or Patents:** N/A
  - **Other:** Employee University of Alberta
    - EMPRSS: Electronic Medical Procedure Reporting Systems
    - Medical Director: Backcountry ski lodge

PEER PATIENTS EXPERIENCE EVIDENCE RESEARCH

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Wong Disclosure

- **Relationships with financial sponsors:**
  - **Grants/Research Support:**
  - **Expenses or Honoraria:**
  - **Consulting Fees or Patents:** N/A
  - **Other:** Employee University of Alberta
    - Director, Division of Gastroenterology
      Section Chief, Gastroenterology, Edmonton Zone, AHS

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Learning Objectives

Critical Thinking in Endoscopy:

- Apply critical thinking for diagnostic and treatment options in endoscopic scenarios.

Advanced Endoscopic Techniques and Planning:

- Identify appropriate steps for polypectomy including initial assessment and post-removal management.
- Reflect upon when to consider advanced endoscopists.

Surveillance:

- Develop surveillance plan based on lesion size, removal and pathology.

Collaborative Practice:

- Recognize the value of collaboration in managing endoscopic cases

Get Poll Everywhere

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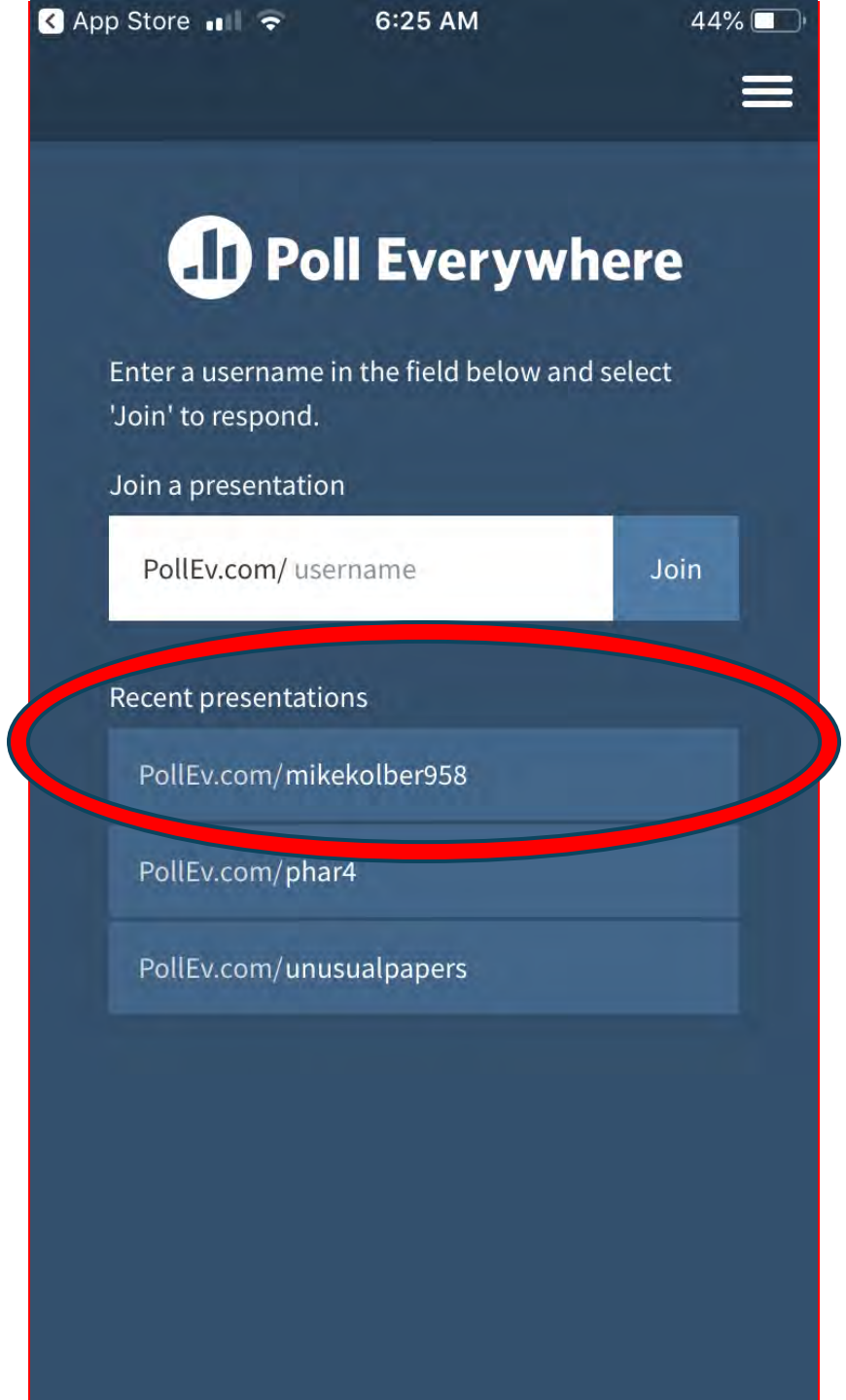


Patient Consent

- All patients have provided consent to share their stories / pictures

Case 1: Age greater than Hemoglobin

- 78 year-old frail♀, gradual onset of short of breath, lightheaded. Hemoglobin (Hb)~50, low MCV. 2 units prbcs, post transfusion Hb ~90.
  - No GI loss. Family Hx of gastric cancer (brother in 50s).
  - On ASA (stroke 2021). Last Hb 2019 = 109.
  - CT abd/chest 2024: hiatus hernia, benign lung nodules, diverticulae
- Endo 2018: FIT+/anemia (Hb = 112): colon: 6mm polyp.
  - Gastro: GEJ @ 35cm. HP neg.

Test	Result	Ref. Range (Units)	Abnormality
Auto WBC	7.9	4.0-11.0 (10^9/L)	
RBC	* 3.47	3.80-5.20 (10^{12}/L)	Low
Hemoglobin	** 49	120-160 (g/L)	Low Critical
Hematocrit	* 0.21	0.36-0.48 (L/L)	Low
MCV	* 59	80-100 (fL)	Low
	In the absence of iron deficiency or anemia of chronic disease, these findings may indicate thalassemia. Suggest iron studies if not recently perfomed. Clinical correlation is required.		
MCHC	* 239	310-360 (g/L)	Low
RDW	* 22.6	<16.0 (%)	High
Platelets	366	140-400 (10^9/L)	
Neutrophil Absolute	6.1	1.8-7.5 (10^9/L)	
Lymphocytes Absolute	1.4	0.5-4.5 (10^9/L)	
Monocytes Absolute	0.3	0.0-1.1 (10^9/L)	
Eosinophils Absolute	0.1	0.0-0.7 (10^9/L)	
Basophils Absolute	0.0	0.0-0.3 (10^9/L)	

Case 1: Age greater than Hemoglobin: 78 yo with Hb now 90, denies GI loss. On ASA. CT scan shows hiatus hernia. Last scopes 2018 – minimal findings. What would you do now?

0

Stop the ASA

0%

Consider endoscopic evaluations

0%

Repeat her FIT and hope it is negative

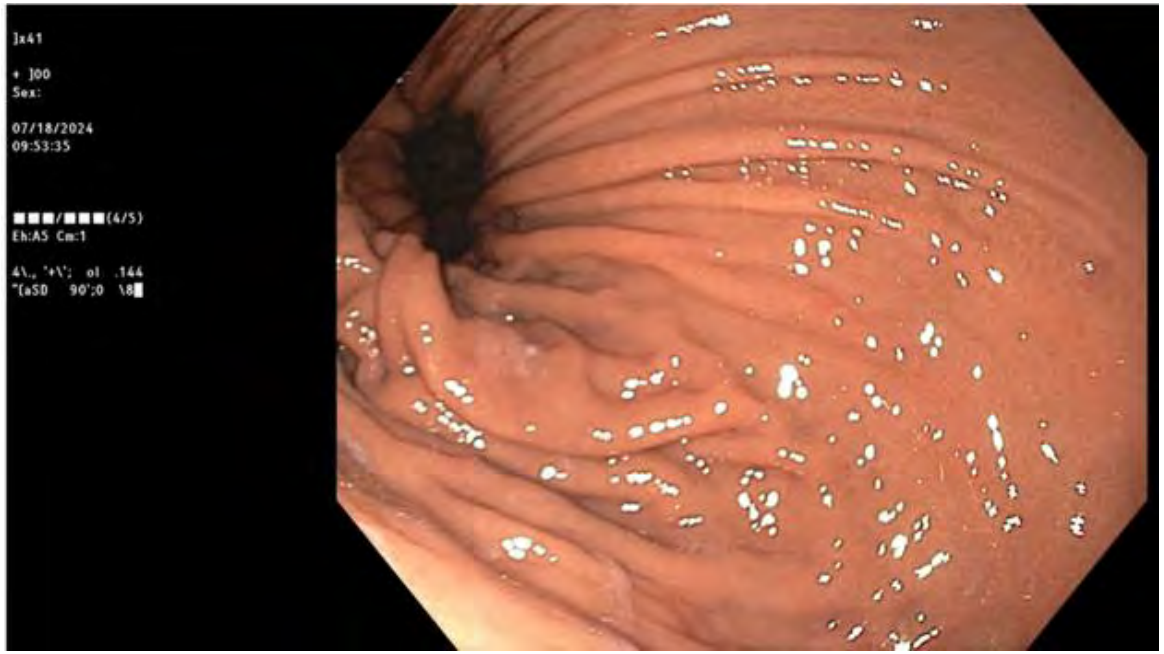
0%

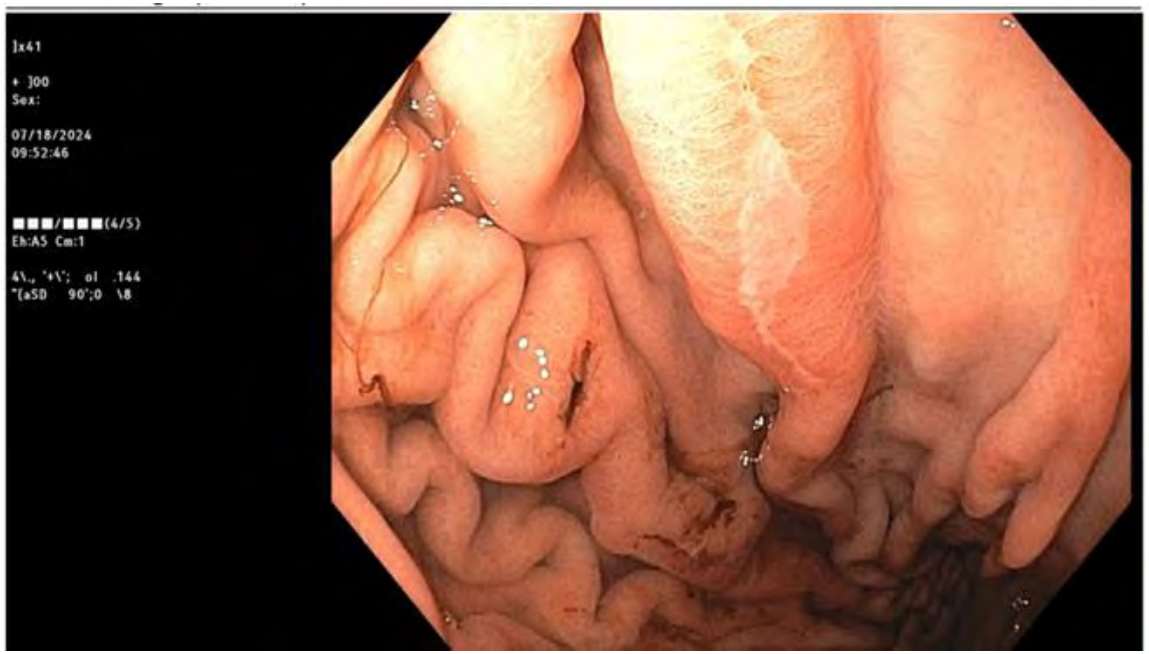
Make sure her green sleeve (code status) is updated

0%

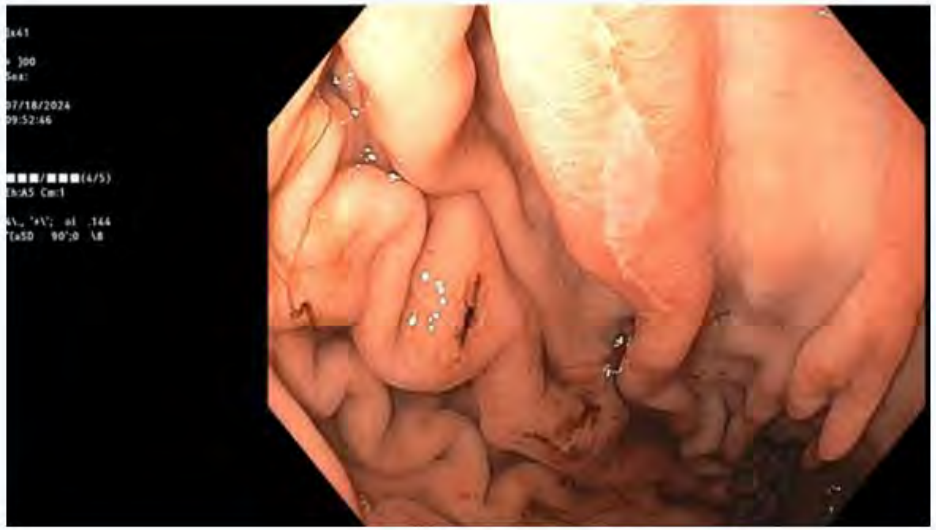
Case 1: Age greater than Hemoglobin

- Gastroscopy (Peace River): June 2024: what is the diagnosis?





Case 1: Age greater than Hemoglobin: What's the Diagnosis?



(A) Normoscopy

0%

(B) Hiatus hernia

0%

(C) Linear ulcer peptic syndrome (LUPS)

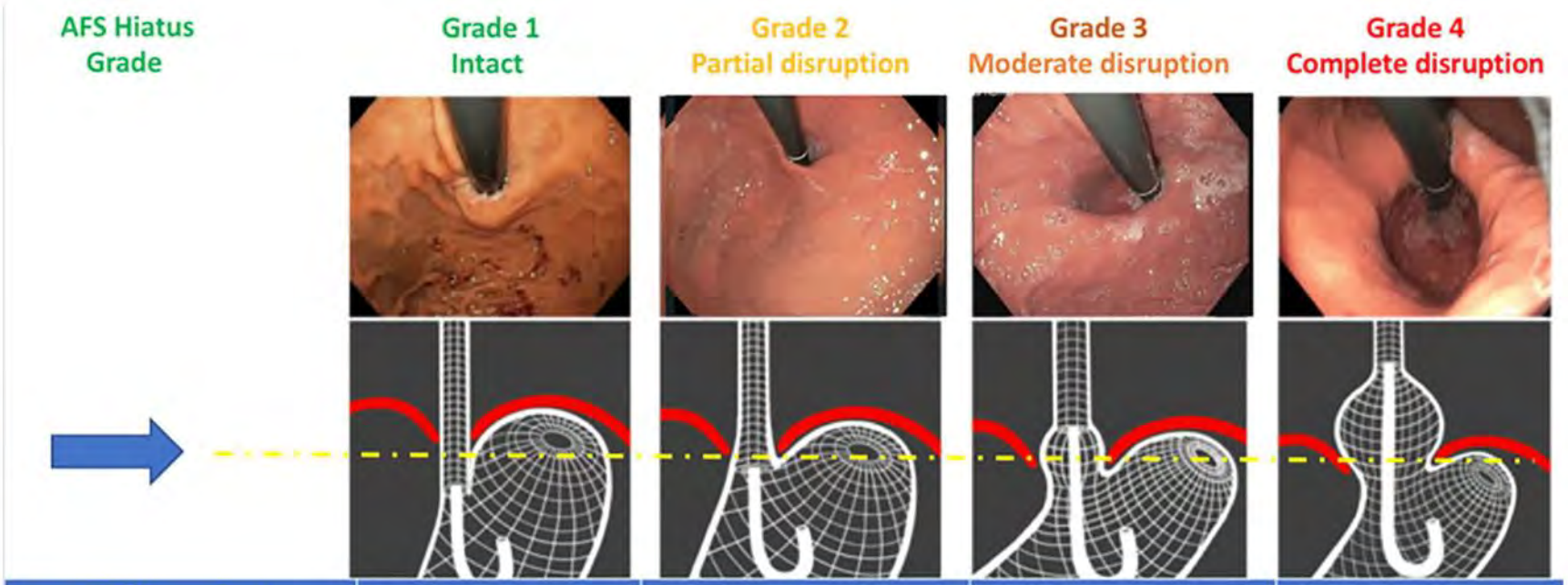
0%

(D) Hiatus hernia with Cameron Lesion

0%

HH check

- Sliding or Paraesophageal?
- Hill vs AFS grade?



AFS Hiatus Grade	1	2	3	4
Hiatal axial Length, cm (L)	None (0 cm)	None (0 cm)	0-2 cm	>2 cm
Hiatal aperture, cm (D)	Snug to scope 1 cm	Loose 1-2 cm	Open 2-3 cm	Wide open >3 cm
Flap valve (F)	Present, full lip with Omega shape (F+)	Absent, thinning & flattening valve lip (F-)	Absent (F-)	Absent (F-)
LDF components	L0, D1, F+	L0, D1-2, F-	L0-2, D2-3, F-	L>2, D>3, F-

Nguyen NT, Thosani NC, Canto MI, et al. The American Foregut Society White Paper on the Endoscopic Classification of Esophagogastric Junction Integrity. Foregut 2022;2:339-348.

Case 1: Age greater than Hemoglobin: Teaching Points

- Cameron lesions: cause of occult GI loss, anemia
  - If think could tolerate surgery: consider surgery
  - If older and poor surgical risk: conservative: PPI, iron.
- Measurements: Top gastric folds and GEJ
- Hill criteria or AFS grade

Case 2: The case of recurrent dysphagia

- 38 yo with previous solid food dysphagia ~ 2010. Gastroscopy and barium swallow normal. Referred EDM GI: repeat gastro (esophageal bx for eosinophilic esophagitis) normal.
- Manometry 2010:

Summary and Conclusions: Normal LES pressure. The esophageal body is markedly abnormal. No peristalsis seen. 100% swallows are of decreased amplitude thru out esophageal body. The findings are highly suggestive of achalasia or early scleroderma esophagus. However the fact that the LES pressure is normal is atypical for both.

- 2023: recurrent, non-progressive dysphagia (solids > liquids). Self-inflicted vomiting prior to bed to ↓ GERD at night. No weight loss.
  - Smoker and drinker, on PPI.

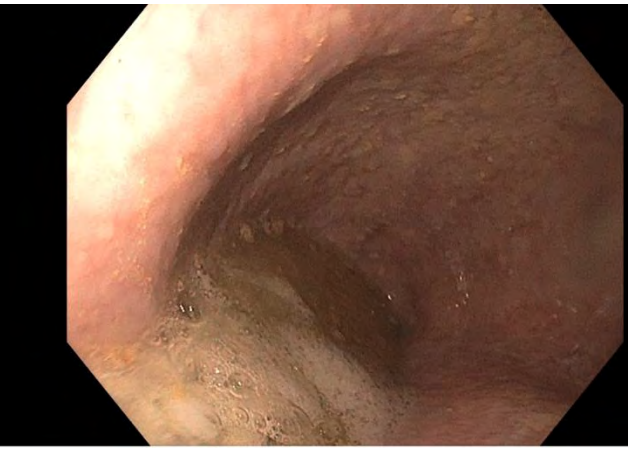
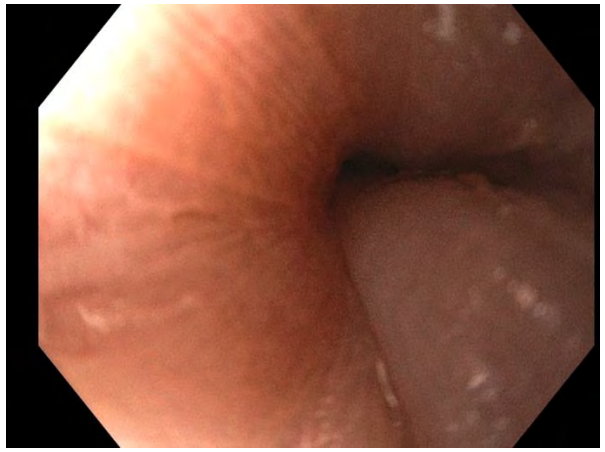
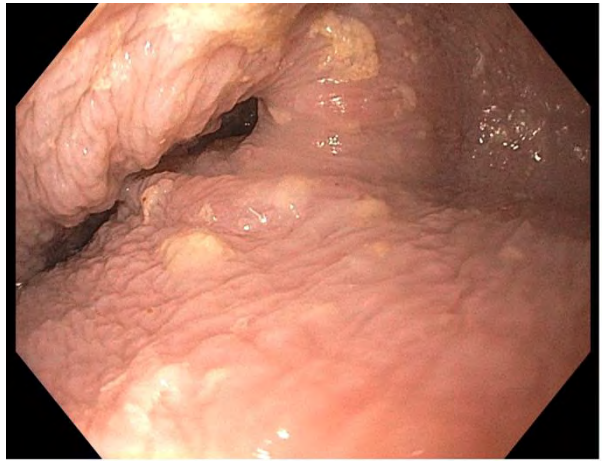
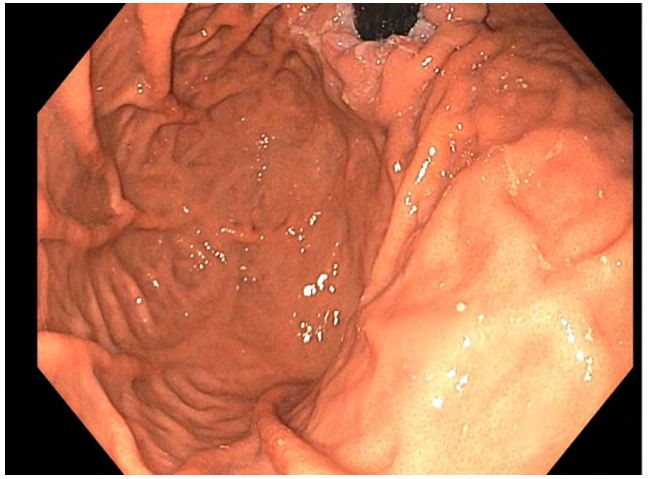
Case 2: The case of recurrent dysphagia

- Recurrent, non-progressive dysphagia (solids > liquids) with self-inflicted vomiting prior to bed without weight loss.
  - Smoker and drinker. On PPI.

- What would you do now?

1. Keep him on the PPI and see how things go.
2. Keep him on the PPI, encourage to stop smoking.
3. **Keep him on the PPI, encourage to stop smoking and consider repeat gastroscopy**
4. Keep him on the PPI and consider a video fluoroscopic swallowing study

Case 2: Recurrent Dysphagia: Gastro Peace River 2024

Findings

- Esophagus full of food
  Distal esophagus: narrowing: gentle pressure allowed passage of regular gastroscopy
  Esophageal mucosa pale
  ? Achalasia: Bx for EOE done as well

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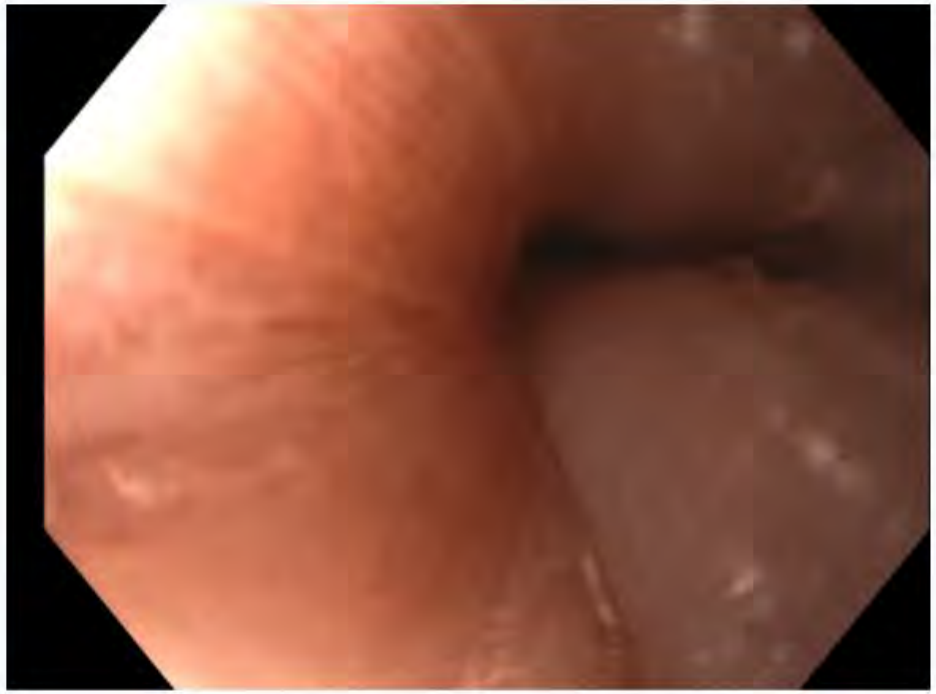
Case 2: Recurrent dysphagia: Distal esophagus narrowed, food/fluid in esophagus. What would you do now?

0



Bring him back for a balloon dilation

0%

Try nitro spray for diffuse esophageal spasm

0%

Consider barium swallow to confirm your suspicion.

0%

Encourage ongoing PPI as must be a GERD related stricture

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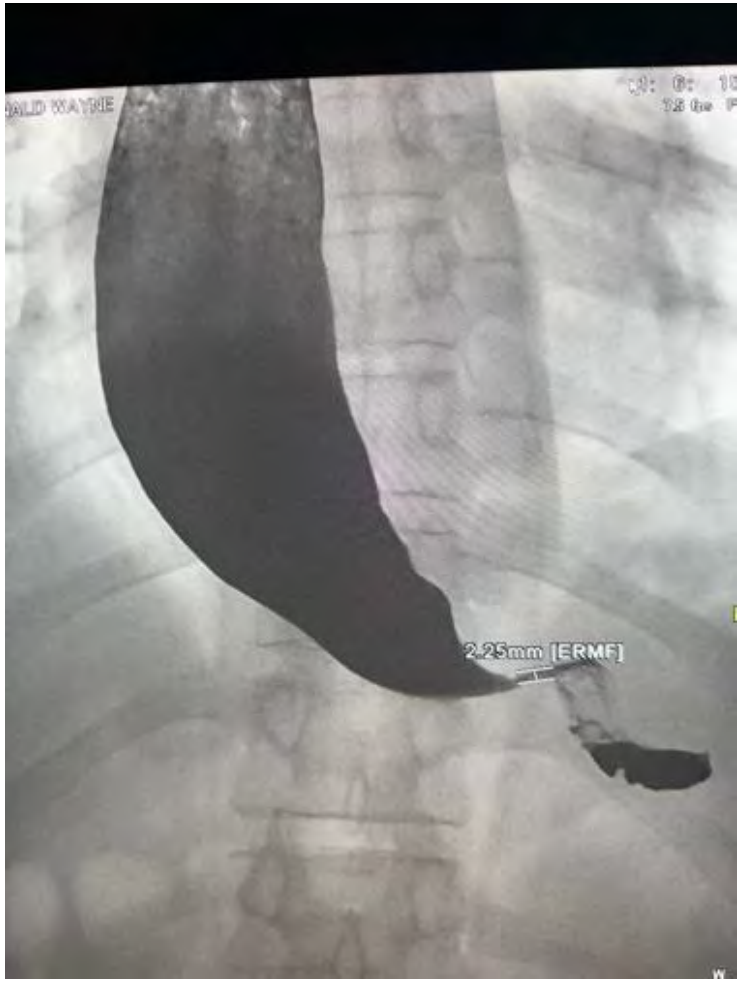
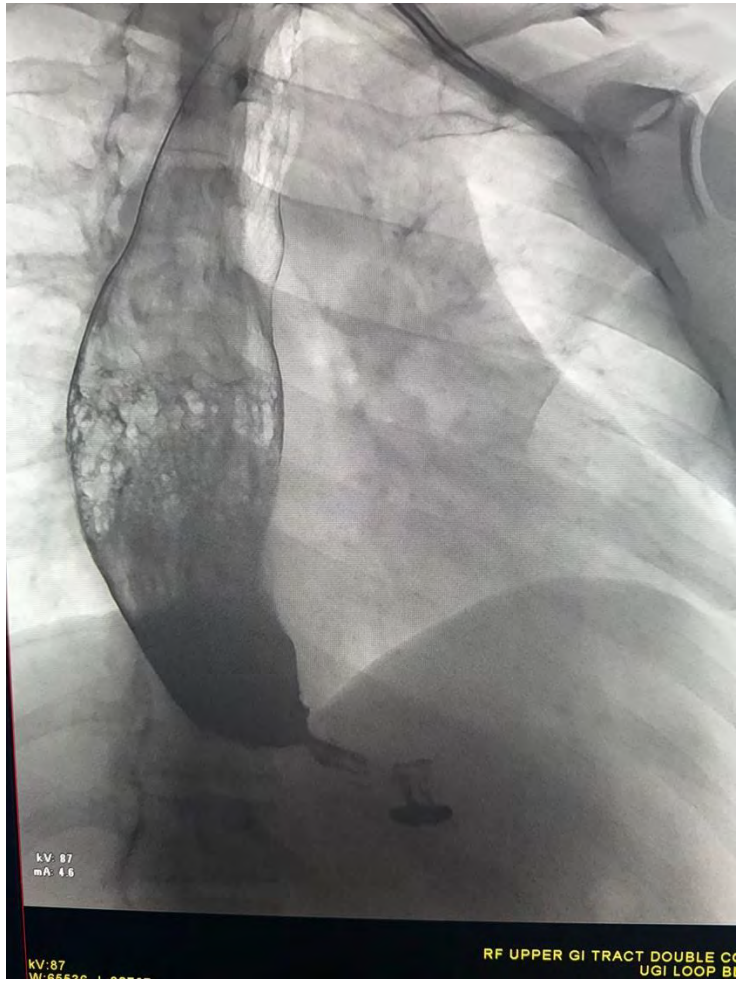
Case 2: Recurrent Dysphagia: Barium swallow





Dr. K. Lemay, Grande Prairie Regional Hospital

Case 2: Recurrent Dysphagia: What to do now?

Bring him back for a balloon dilation

0%

Try nitro spray for diffuse esophageal spasm

0%

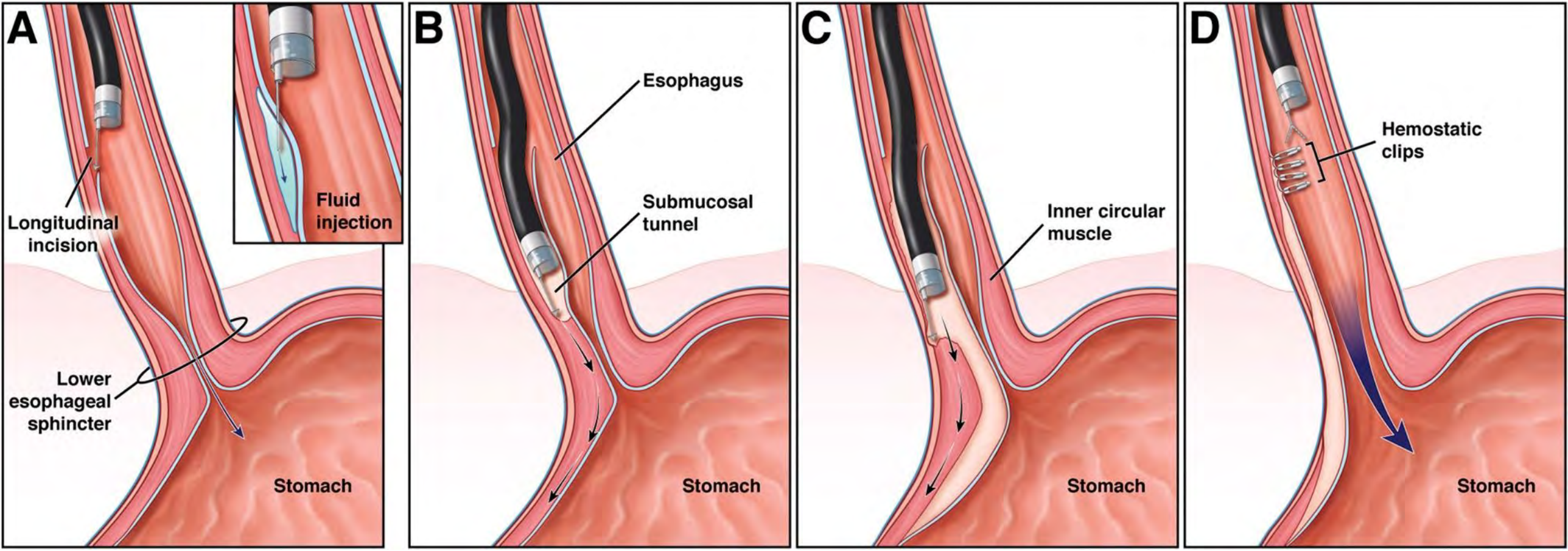
Try nitro spray or calcium channel blocker for achalasia

0%

Refer to a gastroenterologist with experience in endoscopic myotomy

0%

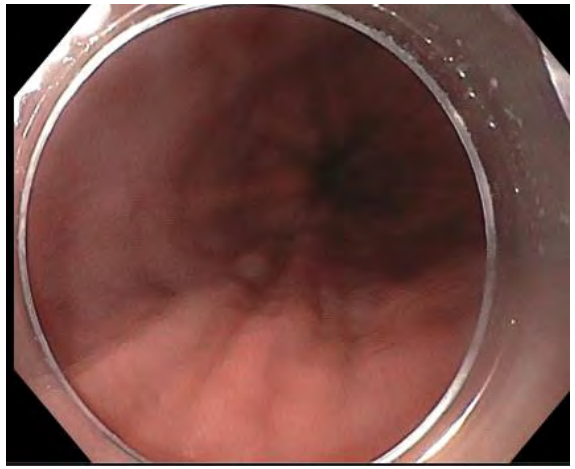
Peroral Endoscopic Myotomy

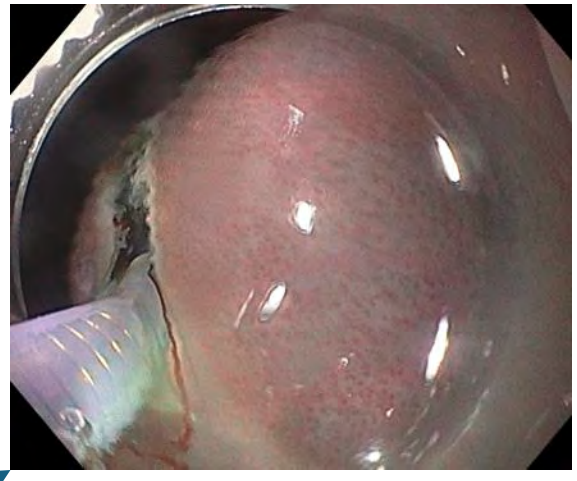


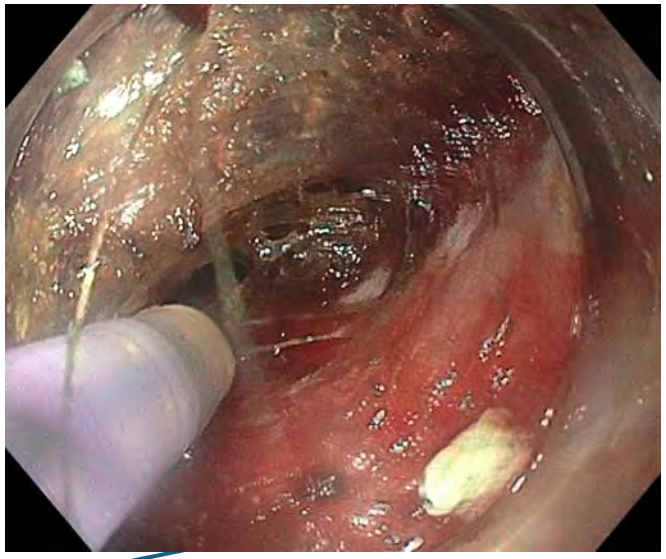
Khashab, Mouen A. et al. Gastroenterology, 2019, Volume 157, Issue 5, 1184 - 1189

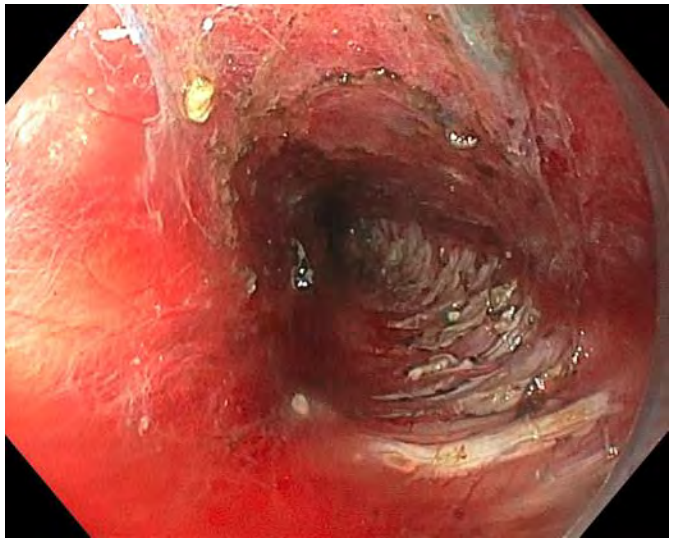
Case 2: Peroral Endoscopic Myotomy: Clarence Nov 2024

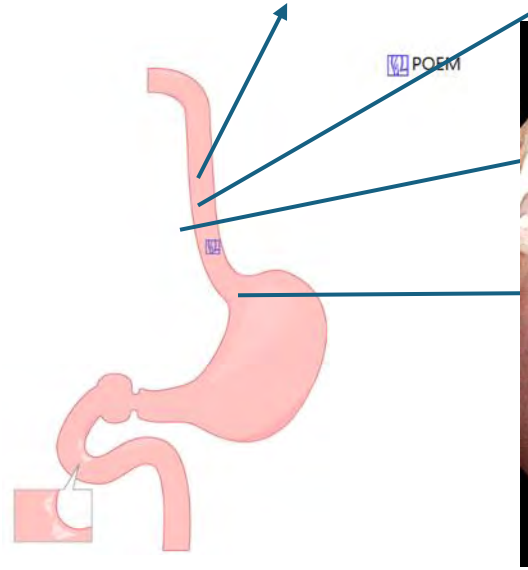
- Peroral Endoscopic Myotomy

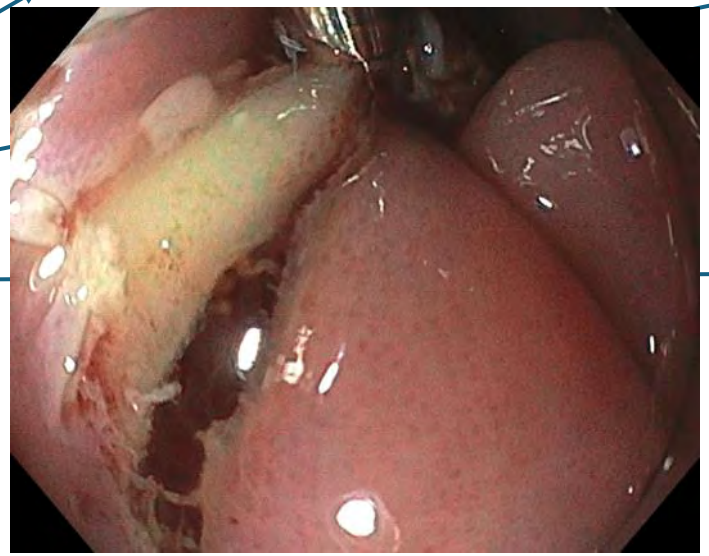


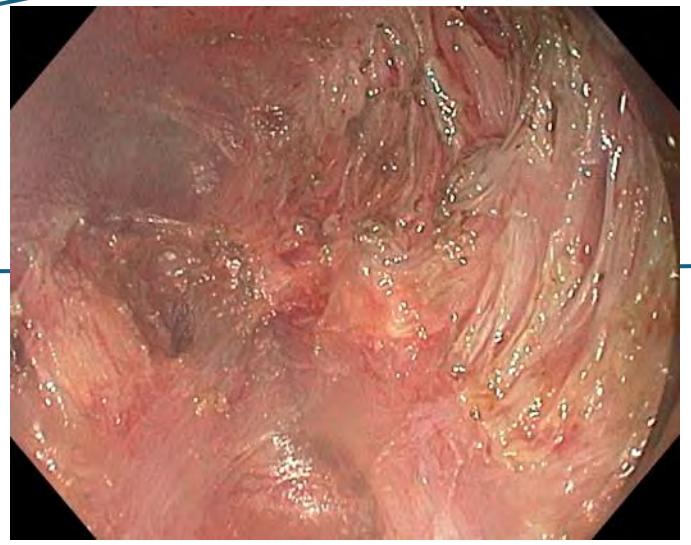


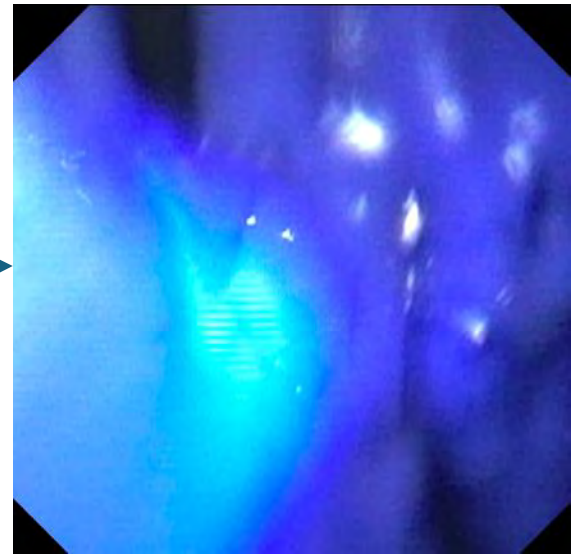




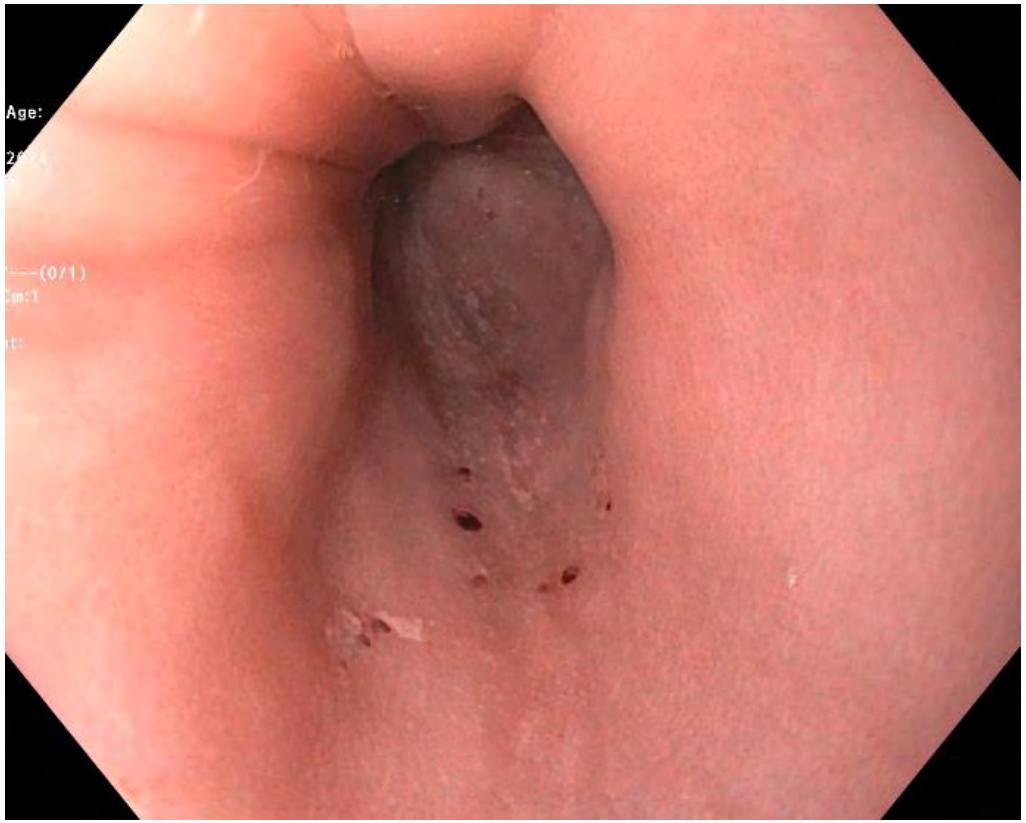


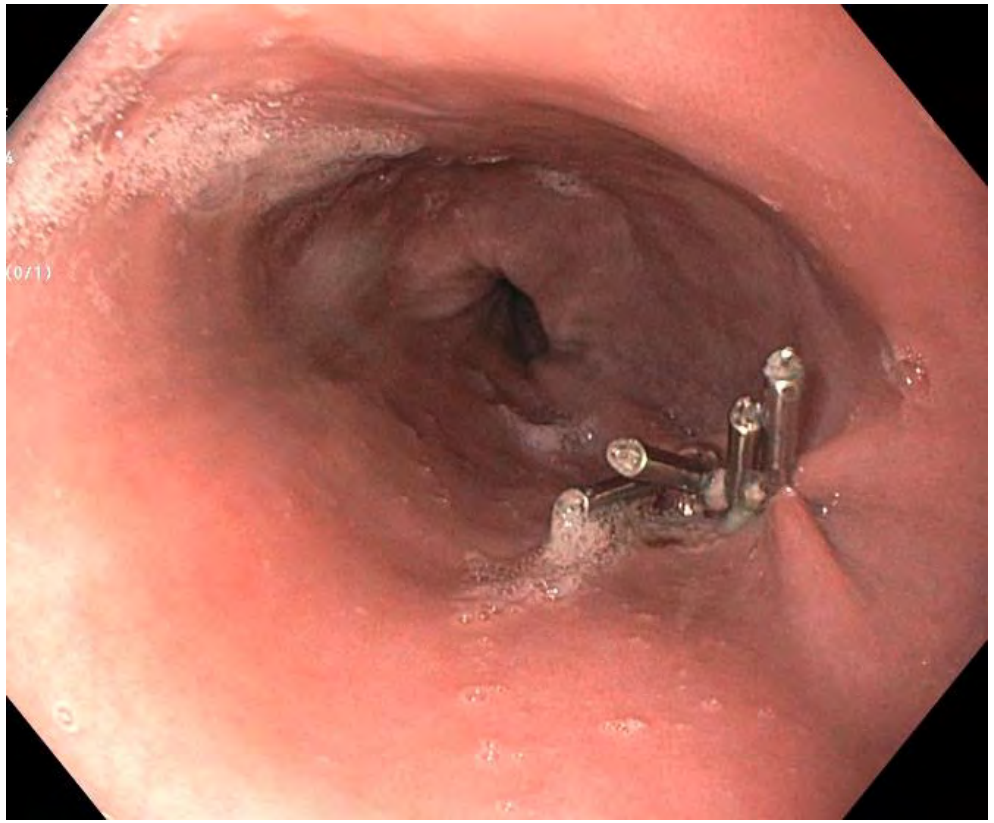






Case 2: 24 hrs Post POEM: repeat gastroscopy





- Discharge 24hrs post POEM
- Dec 2024: feels great, minimal dysphagia/GERD. No vomiting.

Case 2: Recurrent Dysphagia: Teaching Points

POEM: Pre-Checklist

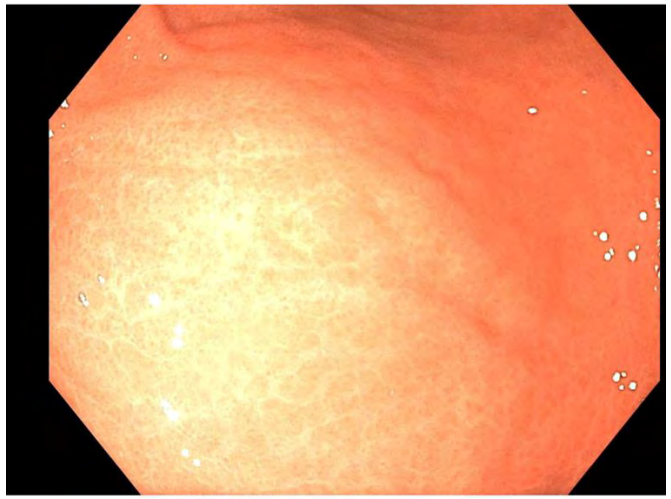
- EGD
  - Pictures of mid and distal esophagus
  - Picture of close RF of cardia – no Hiatus hernia!
- Rule out pseudoachalasia
- Barium study of esophagus (Timed barium swallow)
- Esophageal manometry

- Approach to Dysphagia
  - Esophageal vs oral/pharyngeal

Case 3: The case of the Persistent HP

- June 2023: 38 yo from Serbia: recurrent dyspepsia, FHx of gastric cancer (mom in 50s). Investigated in Serbia w gastro, HP positive, given ? Abx and repeat gastro with unknown findings.
  - Numerous UBTs in Canada: all positive
- Kolber gastro June 2023: gastritis, gastric erosions, duodenitis

28-Mar-2023 Urea Breath Test
25-Feb-2022 Urea Breath Test
30-Aug-2021 Urea Breath Test



	not compromised
Final Diagnosis	A. Gastric antrum, biopsies: Chronic active gastritis. Organisms consistent with Helicobacter pylori are present. B. Gastric body, biopsies: Chronic active gastritis C. Gastric cardia, biopsies: Chronic inactive gastritis. D. Pyloric mass, biopsies: Severe chronic active gastritis with erosion. See comment. E. Lesser curvature mass, biopsies: Severe chronic active gastritis with foveolar hyperplasia Organisms consistent with Helicobacter pylori are present

Case 3: The case of the Persistent HP

- Previous eradication attempts (Canada):
  - Dec 2019: Sequential 10 days
  - Oct 2021: Triple therapy 14 days
  - March 2022: CLAMET 14 days
  - March 2023: CLAMET 14 days
  - June 2023: Quad Tx x 14 days*

* Kolber involved

Case 3: The case of the Persistent HP: What would you do after the Quad therapy for persistent HP positive and gastric erosions?

Repeat UBT

0%

Repeat gastroscopy

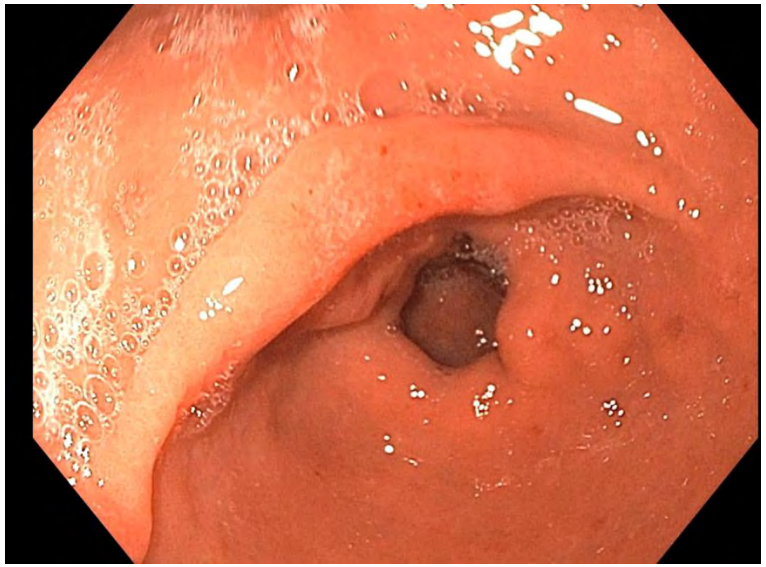
0%

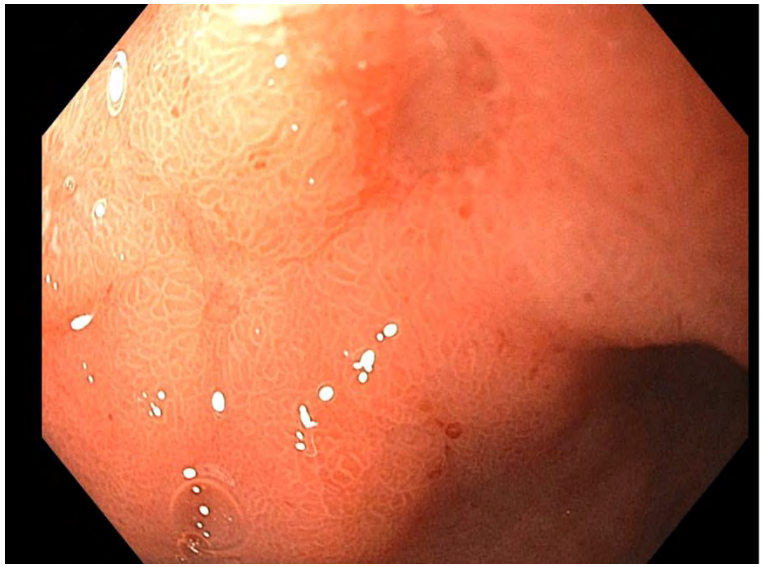
Don’t look anymore – he might be HP positive still

0%

Case 3: The case of the Persistent HP

- Repeat gastro Oct 2023: duodenal ulcer (clean based), gastritis and gastric erosions. HP positive again.
- Attempted to perform HP C + S. Unsuccessful.
- Patient went to Serbia for ~ 4 months





Final Diagnosis

infection

A. Stomach, antrum biopsy:
-Florid Helicobacter associated chronic gastritis, active.
-Negative for metaplasia or dysplasia.
B. Stomach, body biopsy:
-Helicobacter associated chronic gastritis of oxyntic mucosa,
-Negative for metaplasia or dysplasia.
C. Stomach, cardia biopsy:
-Mild Helicobacter associated chronic gastric carditis.
-Negative for metaplasia or dysplasia.

Case 3: The case of the Persistent HP

- Organized repeat gastro for H pylori C + S
- July 2024: Gastric and duodenal erosions, gastritis

Final Diagnosis	History of Helicobacter pylori infection Random gastric biopsies: - Chronic active gastritis, moderate activity. - Helicobacter pylori-like organisms present. - Negative for intestinal metaplasia or dysplasia.

Culture	**HELICOBACTER PYLORI** *Helicobacter pylori*	**A**
Amoxicillin		**S**
	Interpretation is based upon EUCAST breakpoints.	
Clarithromycin		**R**
Tetracycline		**S**
	Interpretation is based upon EUCAST breakpoints.	
Gram Stain	Gram-negative bacilli resembling Helicobacter	
	Clinical Comment: Persistent HP positive: Fhx of gastric cancer: HP Culture and sensivity.	
	Specimen Description: Gastric antrum near pylorus	

Case 3: The case of the Persistent HP: Given the C + S results and previous eradication attempts, what HP eradication regimen would you use?

Culture	HELICOBACTER PYLORI	A
	Helicobacter pylori	
Amoxicillin		S
	Interpretation is based upon EUCAST breakpoints.	
Clarithromycin		R
Tetracycline		S
	Interpretation is based upon EUCAST breakpoints.	
Gram Stain	Gram-negative bacilli resembling Helicobacter	
	Clinical Comment: Persistent HP positive: Fhx of gastric cancer: HP Culture and sensivity.	
	Specimen Description: Gastric antrum near pylorus	

- Previous eradication attempts:
  - Dec 2019: Sequential 10 days
  - Oct 2021: Triple therapy 14 days
  - March 2022: CLAMET 14 days
  - March 2023: CLAMET 14 days
  - June 2023: Quad Tx (post scope)

Sequential therapy x 14 days

0%

Levo-Amox (PAL) x 14 days

0%

Rifabutin-Amoxil x 14 days

0%

Refer to Infectious diseases

0%

Case 3: The case of the Persistent HP

- August 2024: chose Levo-Amox (PAL) x 14 days.
- UBT Nov 2024: First time negative!

Urea Breath Test View Cumulative Results

Time Collected	18-Nov-2024 09:20	Time Received	19-Nov-2024 02:06
Time Reported	19-Nov-2024 13:34	Time Transmitted	19-Nov-2024 13:34
Order Number	1305432741		
Status	Final	Ordering Provider	KOLBER, MICHAEL
Relevant Information		Location	EDM MEDICAL LABS - BASE LABORATORY
		Specimen Type/Source	Breath-Breath/Mouth

Report Patient Demographics (for verification purposes) [redacted]

Test	Result	Ref. Range (Units)	Abnormality
Urea Breath Test	Negative A negative test may indicate absence of Helicobacter pylori infection.	Negative	

Case 3: The case of the Persistent HP: Teaching Points

- Eradication confirmation: select cases: PUD, current gastric cancer, MALT lymphoma, FHx of gastric cancer
  - Not normally for dyspepsia
- If after 2/3 attempts at eradication, still positive --> consider HP C+S
- Overview of how to collect for lab (back of room): https://td.albertaprecisionlabs.ca/Tests/Details/1468?newPage=0

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Case 3: Helicobacter C + S: How To?

- 1st case of day: needs to go endo → local lab → courier → base lab (Edmonton for us)
- Collect antral and body biopsies → Portagerm transport media
  - Call Edmonton Base Lab Microbiology Department (**825-394-1835)** to request Portagerm collection kits:
  - Each kit contains 8 vials of Portagerm sufficient for 8 patient samples.
- Put all in Styrofoam cooler with dry ice
- Send STAT via lab courier:
  - APL Edmonton Baselab (former DynaLIFE)
  - #200,10150-102 Street, Edmonton, AB T5J 5E2
- Further info: https://td.albertaprecisionlabs.ca/Tests/Details/1468?newPage=0

Agents	Stop for:
Proton pump inhibitors (H+, K+ ATPase Inhibitor	14 days
Antibiotics	28 days
Bismuth preparations (e.g., Pepto-Bismol)	14 days

NOTE: *Helicobacter pylori* culture for susceptibility testing is performed ***only*** if a history of treatment failure is indicated

The H. pylori collection kit contains:

- Portagerm Transport Media
- requisitions
- a collection checklist
- biohazard bags

Case 4: Third opinion, perianal pain

- 67 yo ♀ perianal discomfort all the time. Colon elsewhere 2023, anal lesion biopsied = inflamed squamous mucosa.
- Since then, private clinic for topical treatment. Using sitz baths, diltiazem…

Case 4: Third opinion, perianal pain. Given you are the third opinion on the case, what would you likely do?

Assure her that two other people looked, so will be fine

0%

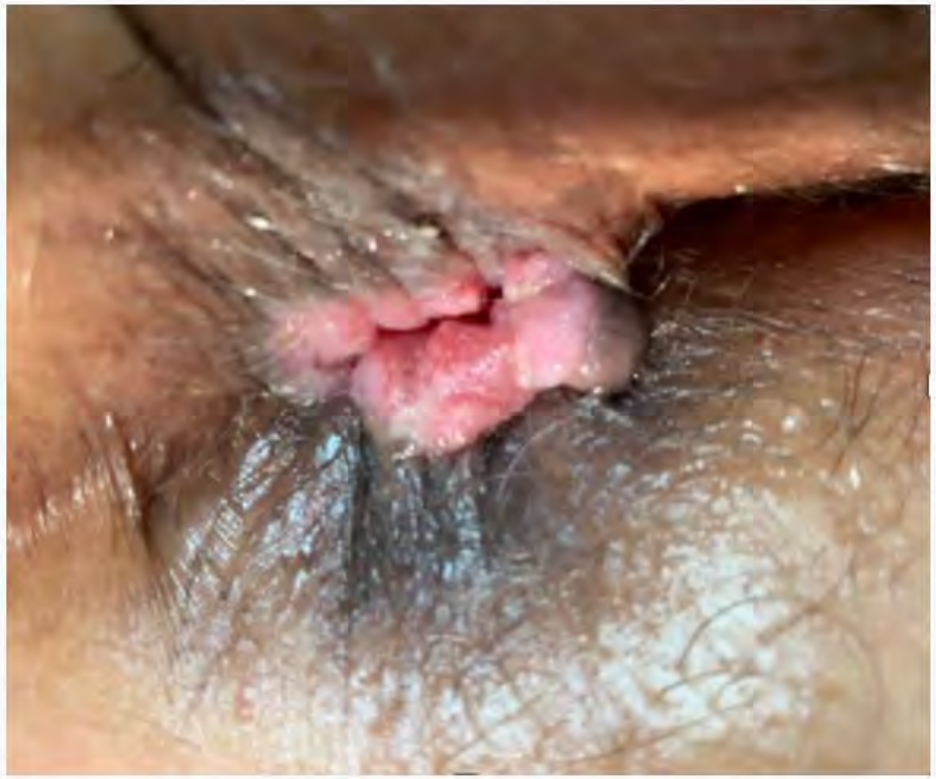
Send her back to the person who did her last colon

0%

Repeat the perianal/DRE exam

0%

Case 4: Third opinion, perianal pain. On exam, you see the lesion below, which feels hard. What is the most likely diagnosis?



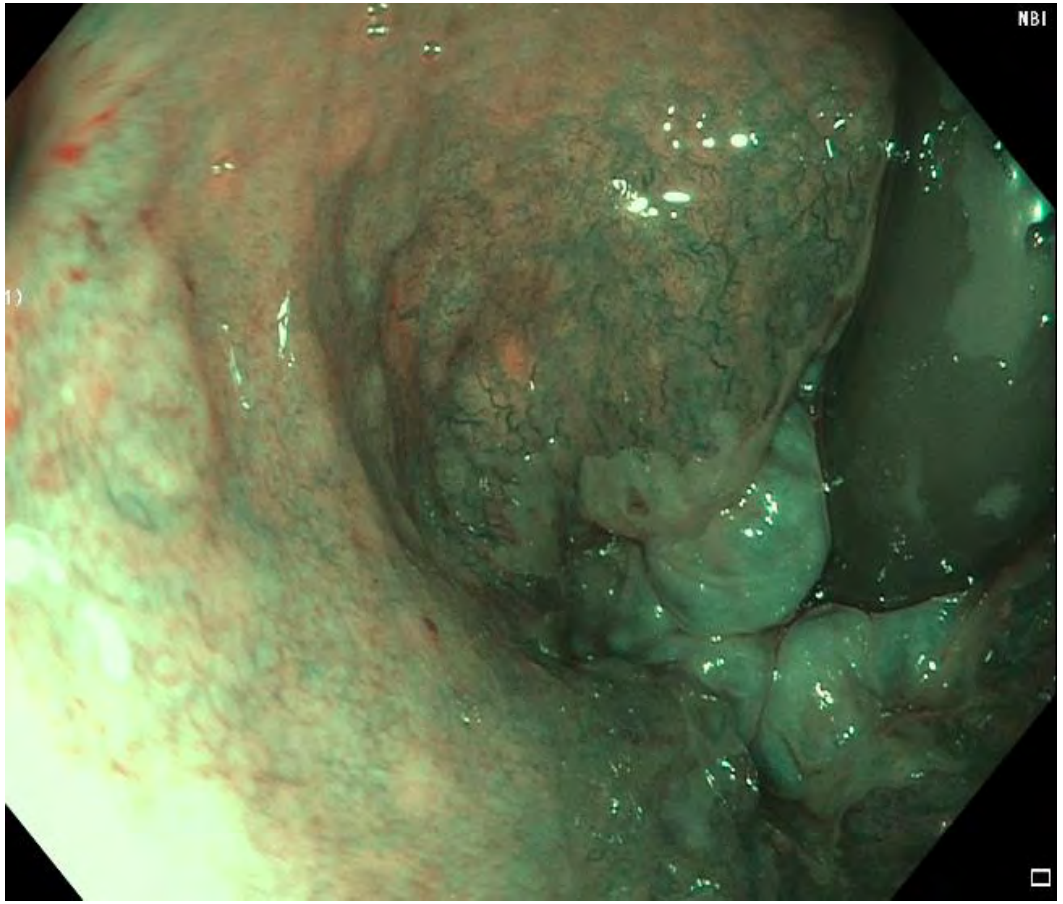
Anal wart 0%

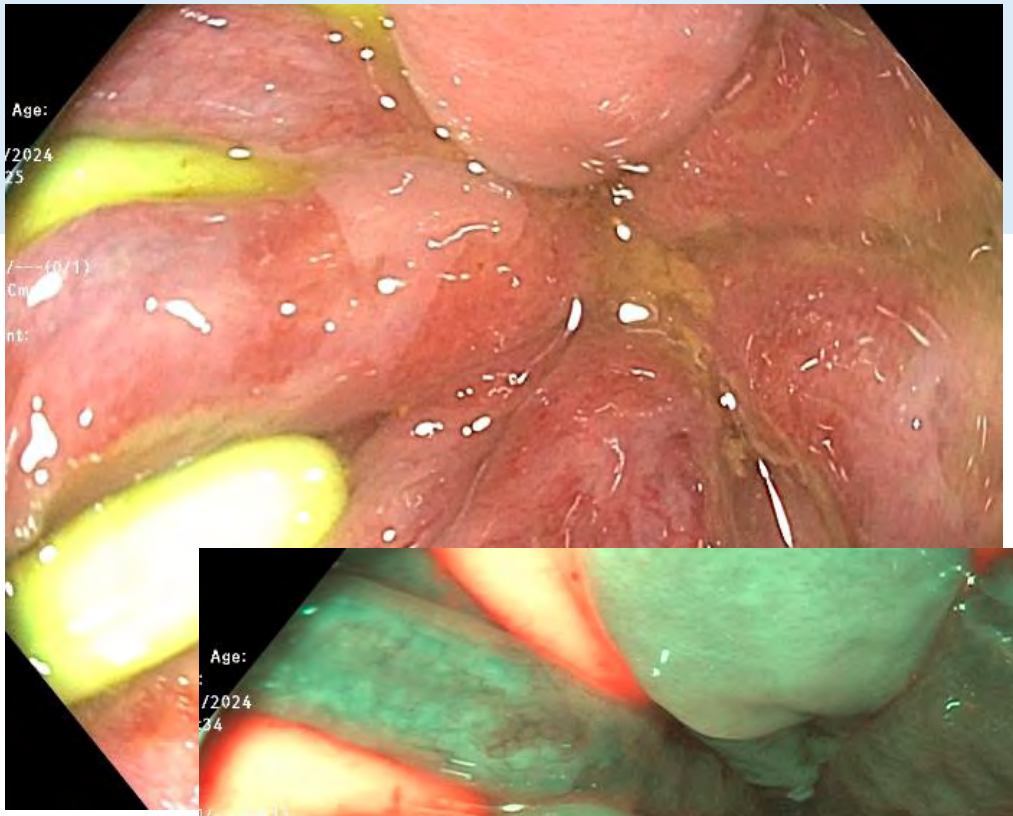
Anal fissure 0%

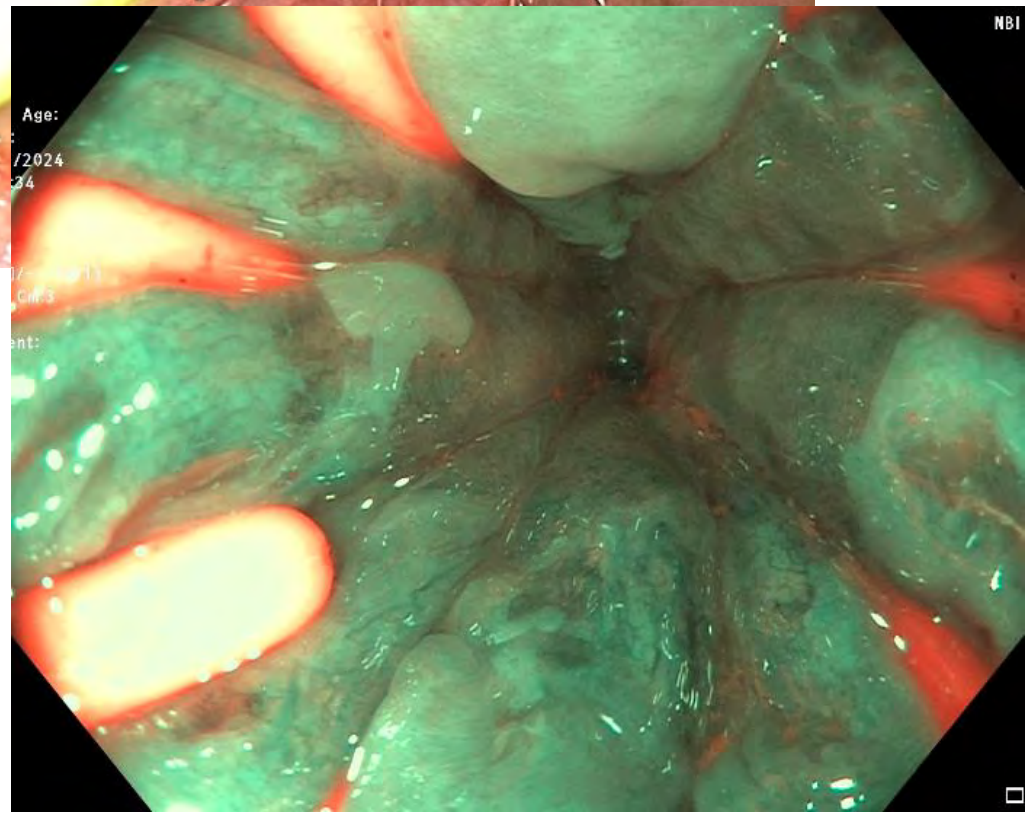
Anal cancer 0%

Anal papilloma 0%

Examination of the anal verge & dentate line







Case 4: Third opinion, perianal pain: Teaching Points

- Always look
  - ”Why rob a bank? That’s where the money is…”
- Anal cancers: increasing incidence. HPV related.
- Connect Care: excellent $3B picture sharing program.

Case 5: The case of the endo room walker

- 80 yo intermittent solid food dysphagia, 40’ wt loss.
  - virtual consult GI nurse
  - Gastroscopy in Mexico 6 months ago: ”hiatal hernia” - no report.
  - CT scan 2023: nothing significant.

  - Endo waiting room: frail, flat affect, weak hand shake, ? cogwheeling.
  - Took her for a walk down the hall: reduced arm swing, shuffled gait.

Case 5: The case of the endo room walker. Given the clinical history and exam you wish to:

Gastroscope her as Mexico must have missed something

0%

Trial of PPI for possible GERD stricture

0%

No gastroscopy, refer to neurology

0%

No gastroscopy, start Carbidopa

0%

Case 5: The case of the endo room walker

- 3 months later, confirmed Parkinson’s, on Carbidopa - ++ better
- More animated, no dysphagia, less cogwheeling, faster gait.

Case based decision making Teaching Points

- Consider Cameron lesions in anemia with large Hiatus hernia
  - Hills criteria / AFS and measurements: top gastric folds, GEJ
- Dysphagia needs investigation
  - Oral vs esophageal
  - Achalasia: key pics for POEM:
    - distal, mid esophagus (dilated or not) and RF cardia
- HP persistence: perform C & S locally
- Anal cancer: always look, NBI picture of SC junction
- Not all in your endo suite need endoscopy

Thank you!

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