Minimally Invasive and Novel Therapeutics (M.I.N.T.)
September 13th- 15th 2023

Conversion to handsewn RYGB

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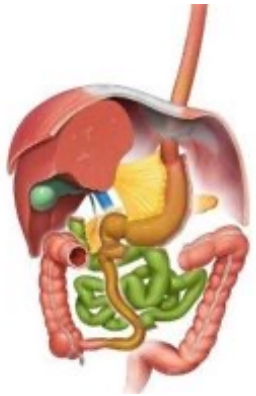
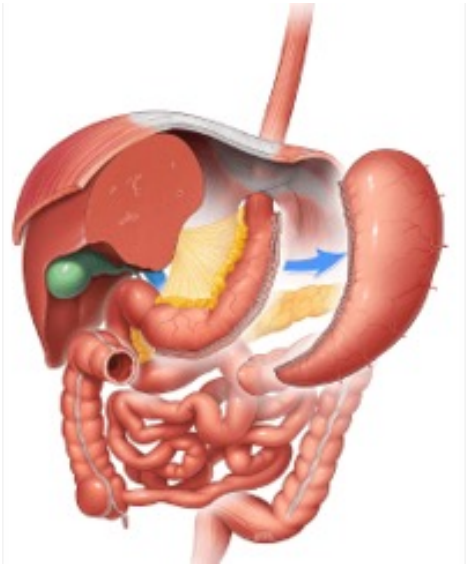
HARVARD MEDICAL SCHOOL

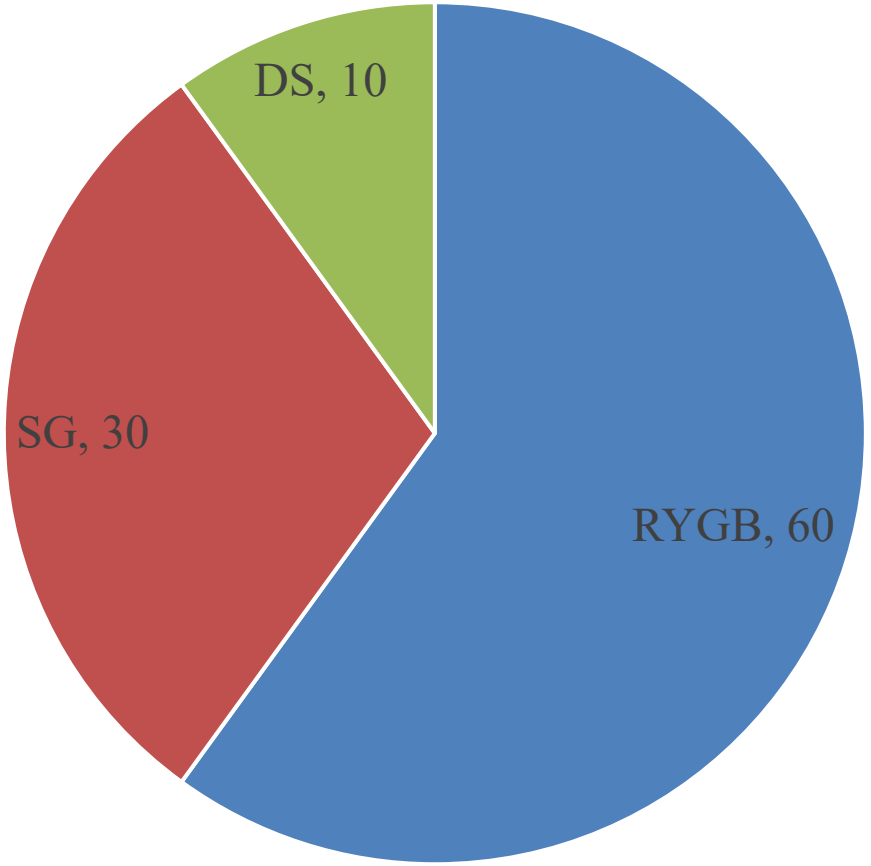
Brigham and Women's Hospital
Founding Member, Mass General Brigham

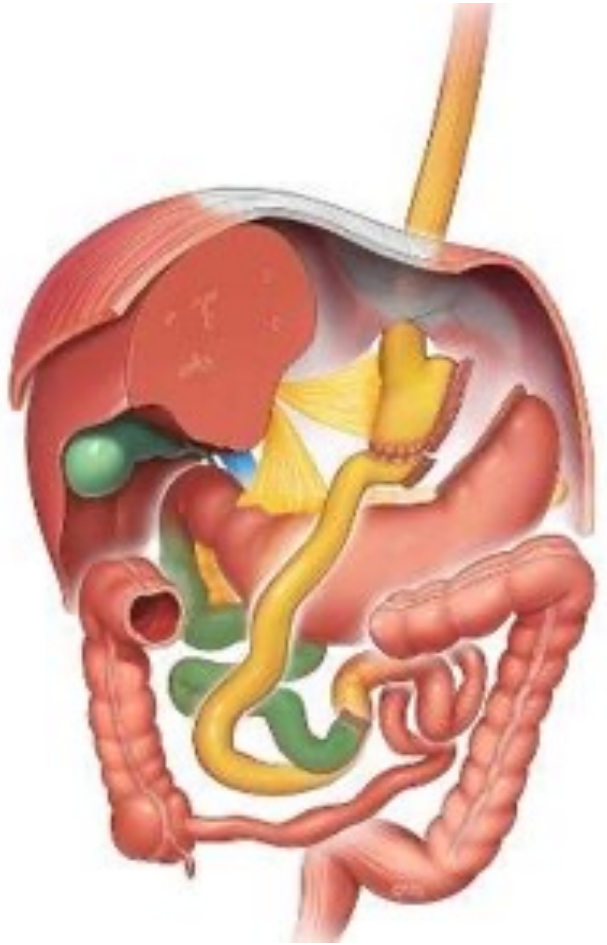
Speaker, Medtronic

Procedure disclosure









>5000 cases Primary 80% Revisions 20%

RYGB SG DS

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Brigham and Women's Hospital
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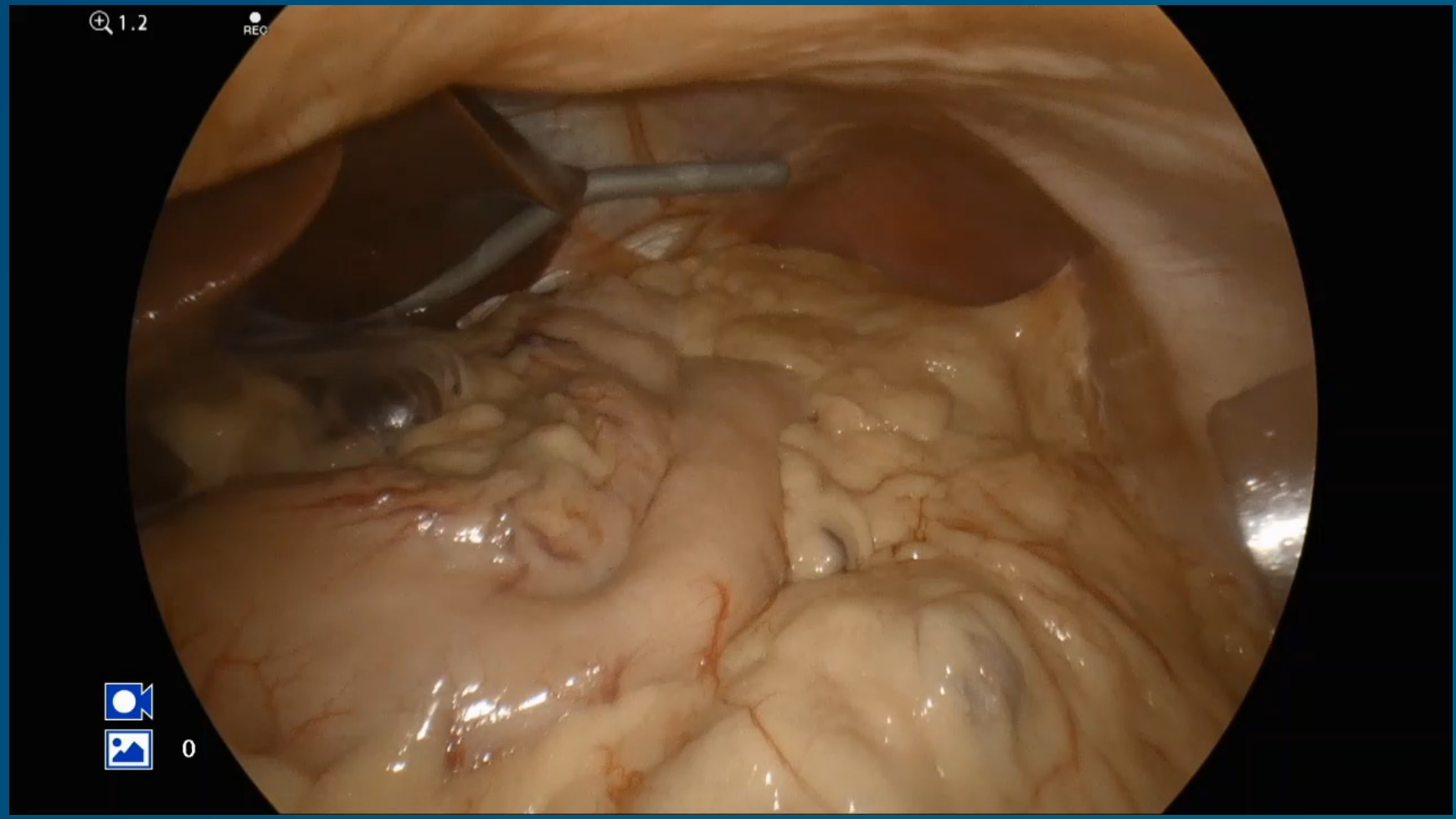
Why Handsewn RYGB & why not?

- Lower cost, similar outcomes to linear GJA [leak, marginal ulcer, stricture].
- Reproducible anastomosis in primary and revisional RYGB.
- Can be done in GJA, Duodenoilesotomy, distalization etc...
- Oversewing SG.

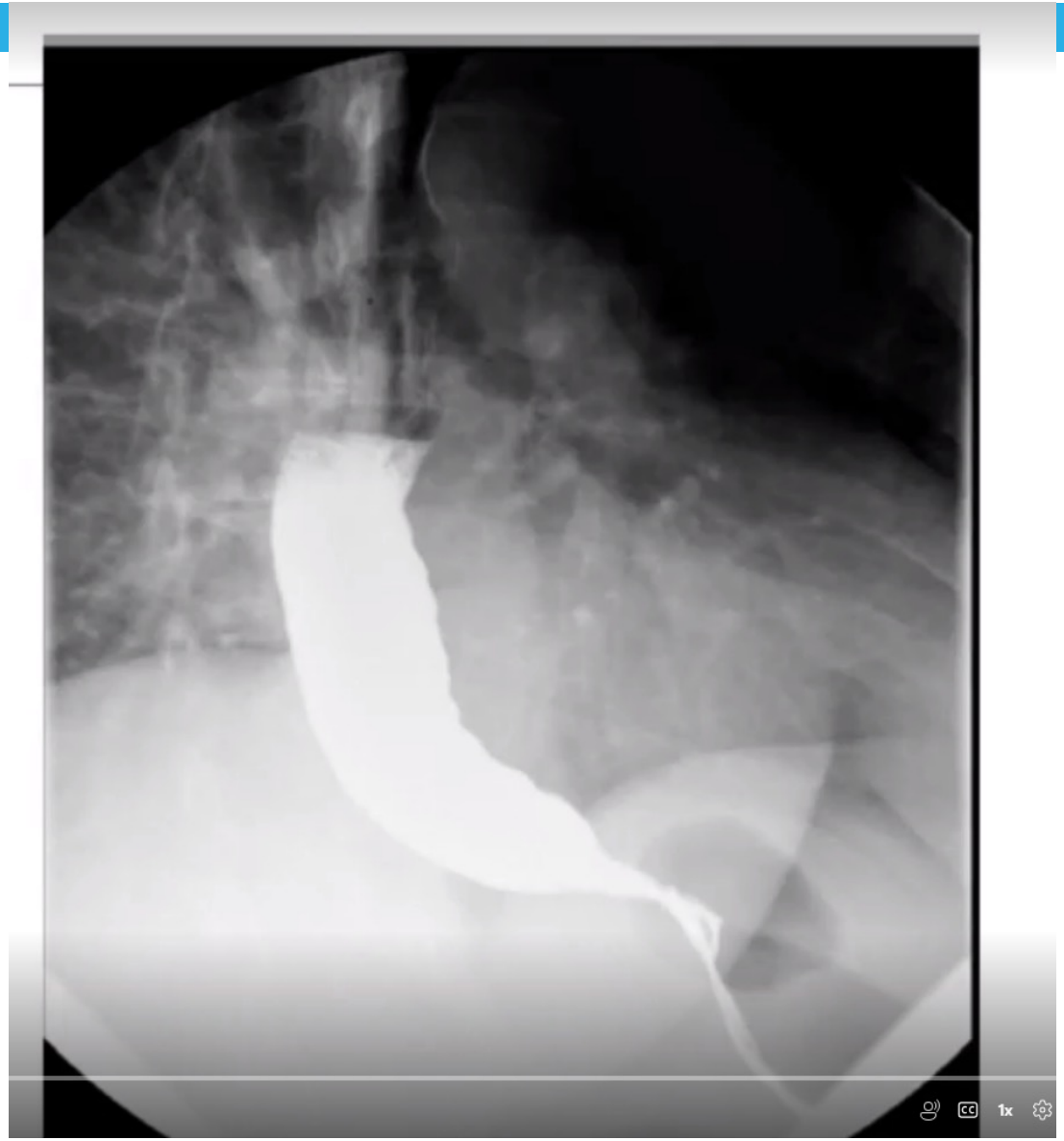


Longer learning curve.

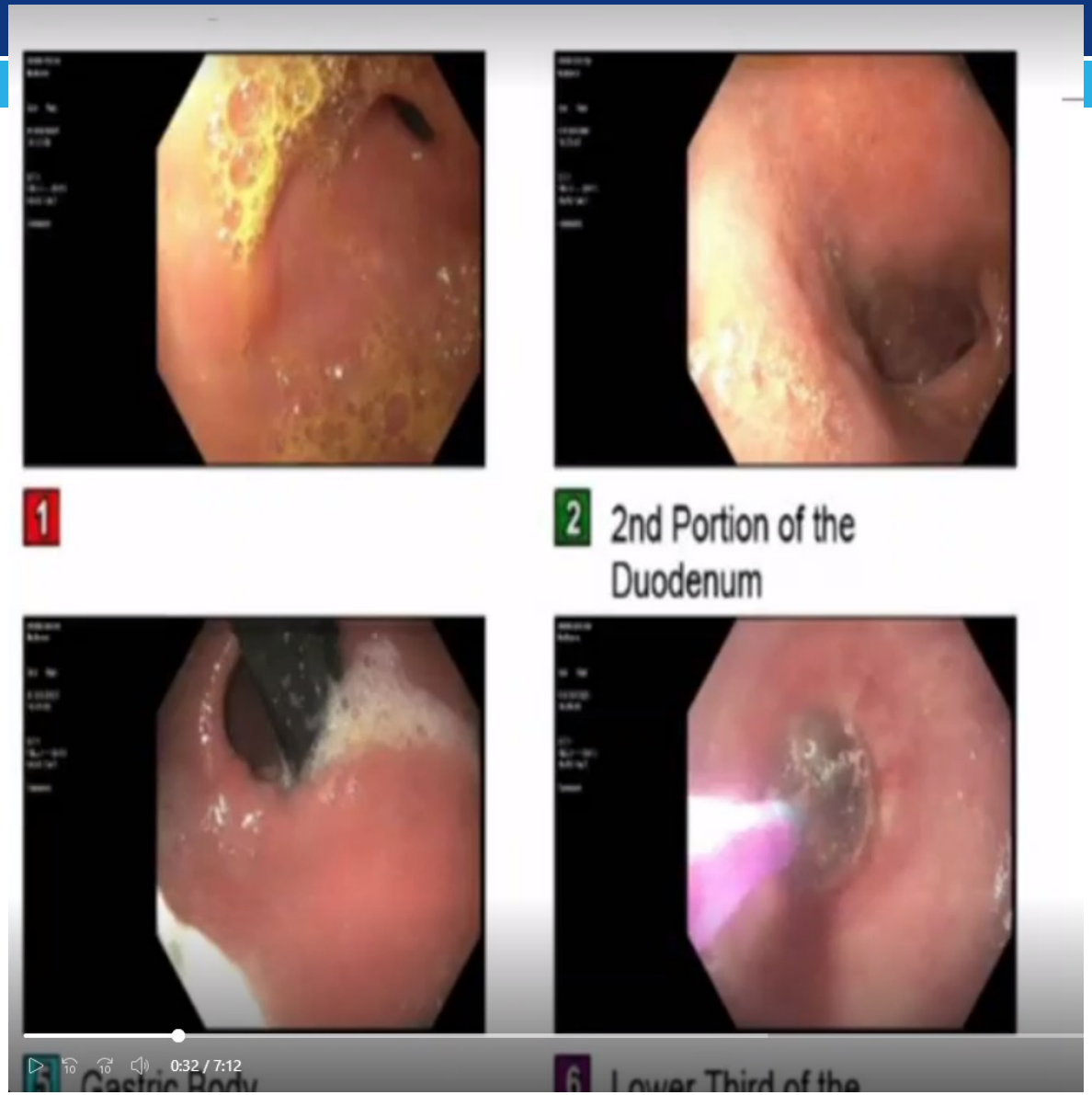
Patient is a 55-year-old female with BMI 39 s/p SG 2013 presenting with dysphagia & GERD daily PPIs, no history of GERD or dysphagia prior to SG. History of COVID in Aug 2020.

PMH of Prediabetes, HTN, OSA, Depression & kidney stones.

PSH Chole, C section Hysterectomy

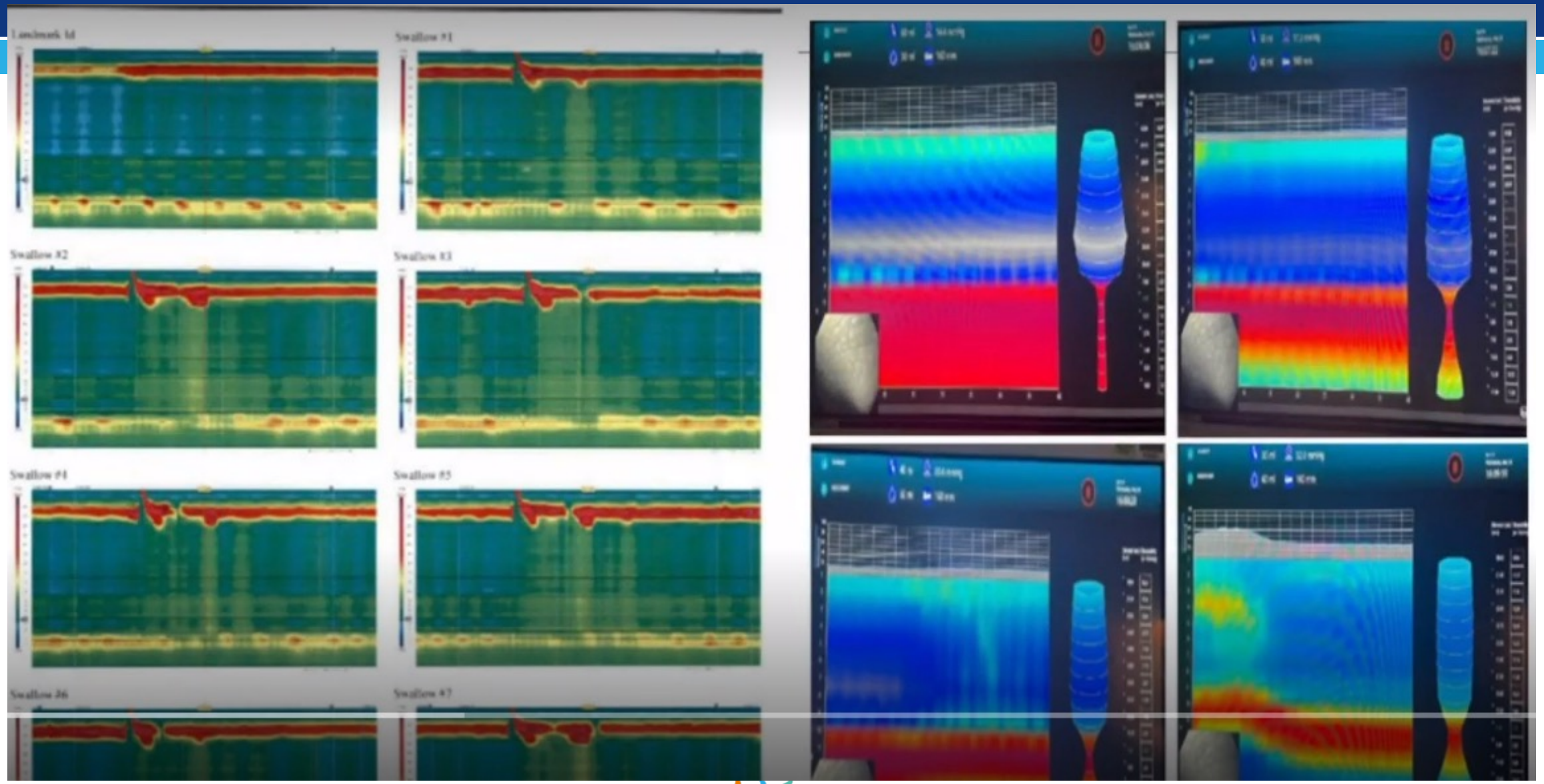


What Next?



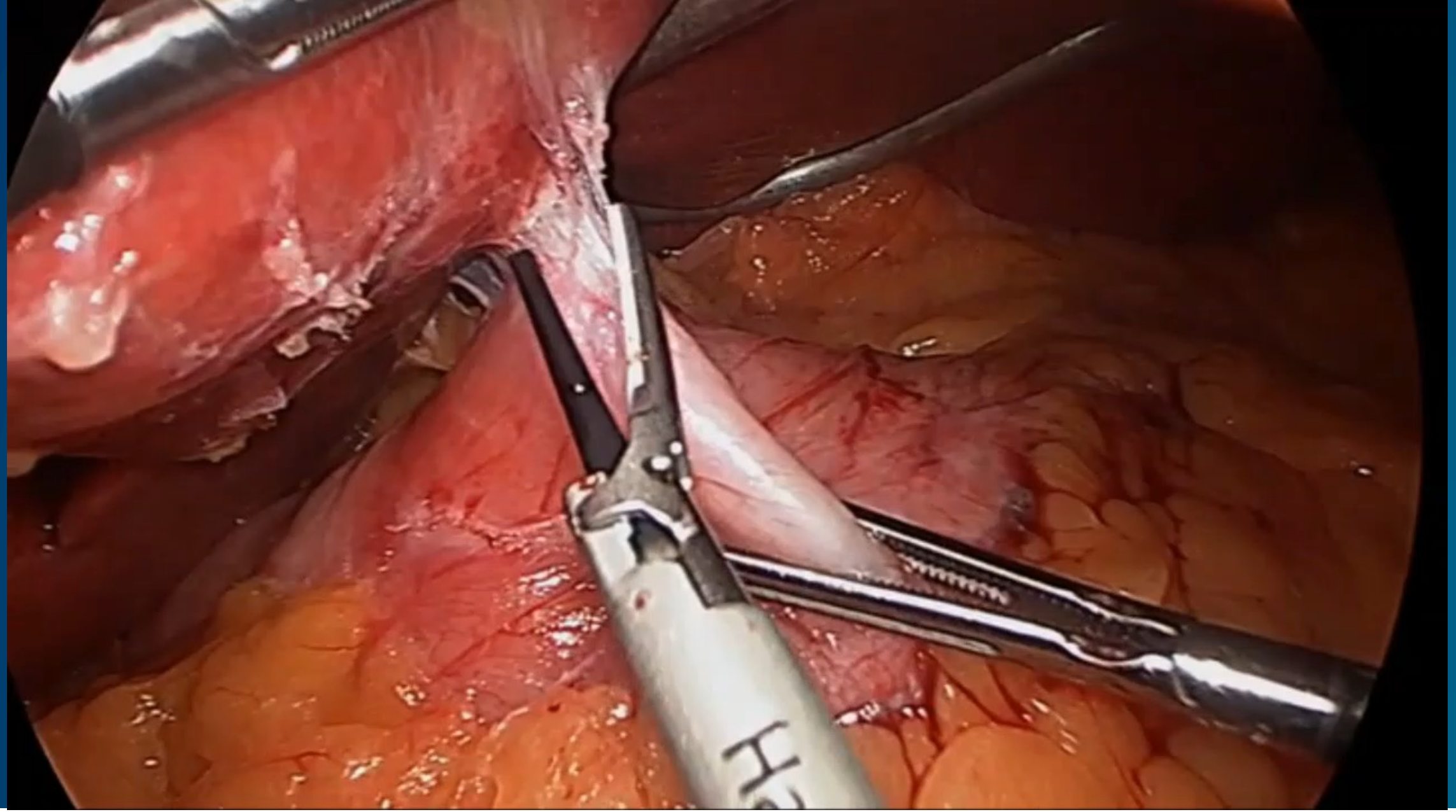
EGD shows a small hiatal hernia.
Smooth stricture at the GE junction.
EGD with dilatation performed.

No improvement.
What next?


Swallow #1
Swallow #2
Swallow #3
Swallow #4
Swallow #5
Swallow #6
Swallow #7

55 Y/O GERD & Achalasia s/p SG BMI 39 HTN OSA PreDM HH

- History of SG precludes Fundoplication.
- POEM vs Lap Heller?
- How would you manage GERD if POEM only?
- Would you consider SADI with POEM or Heller?
- RYGB with Heller vs RYGB with POEM?

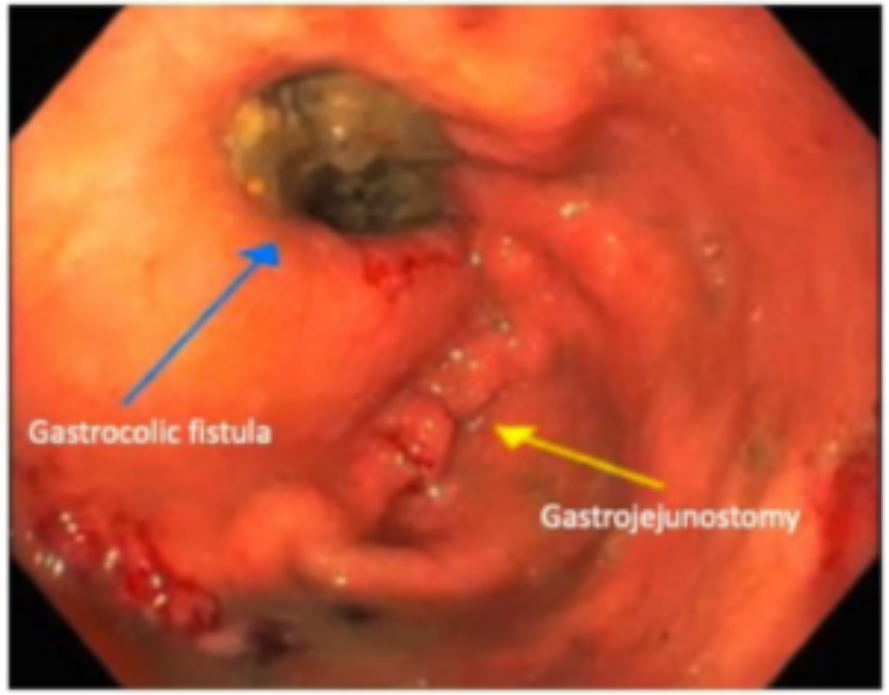


Take down of gastrogastric and gastrocolic fistula revision RYGB

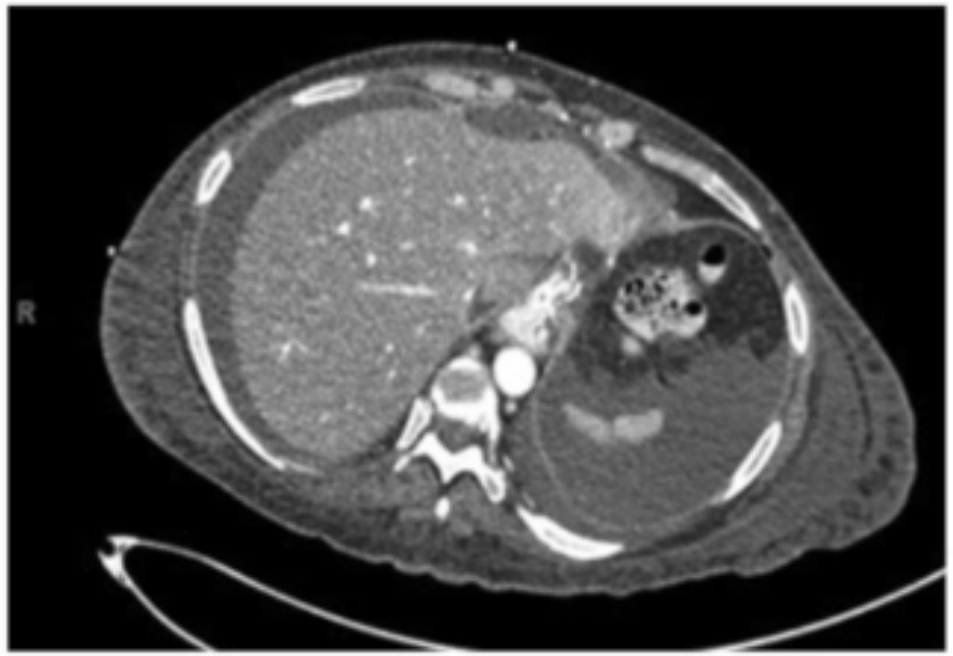
- **Patient is a 33-year-old female s/p SG 2013 converted to RYGB 2020 for refractory GERD in Florida complicated with MU requiring revision of GJA.**
- **In Dec 2020, Now BMI 18 she developed recurrent MU, GJA stricture, GG fistula [seen on EGD and MRI] & severe malnutrition requiring TPN.**
- **Acute episode of liver decompensation with ascites had PEJ placed into the Roux limb and she developed PE put on Eliquis.**
- **What would you do Next.**

Take down of gastrogastric and gastrocolic fistula revision RYGB

EGD showed a gastrocolic fistula



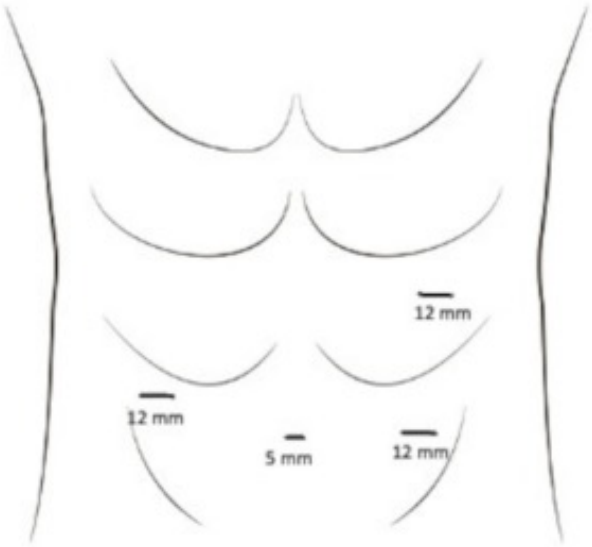
Acute episode of liver decompensation with ascites

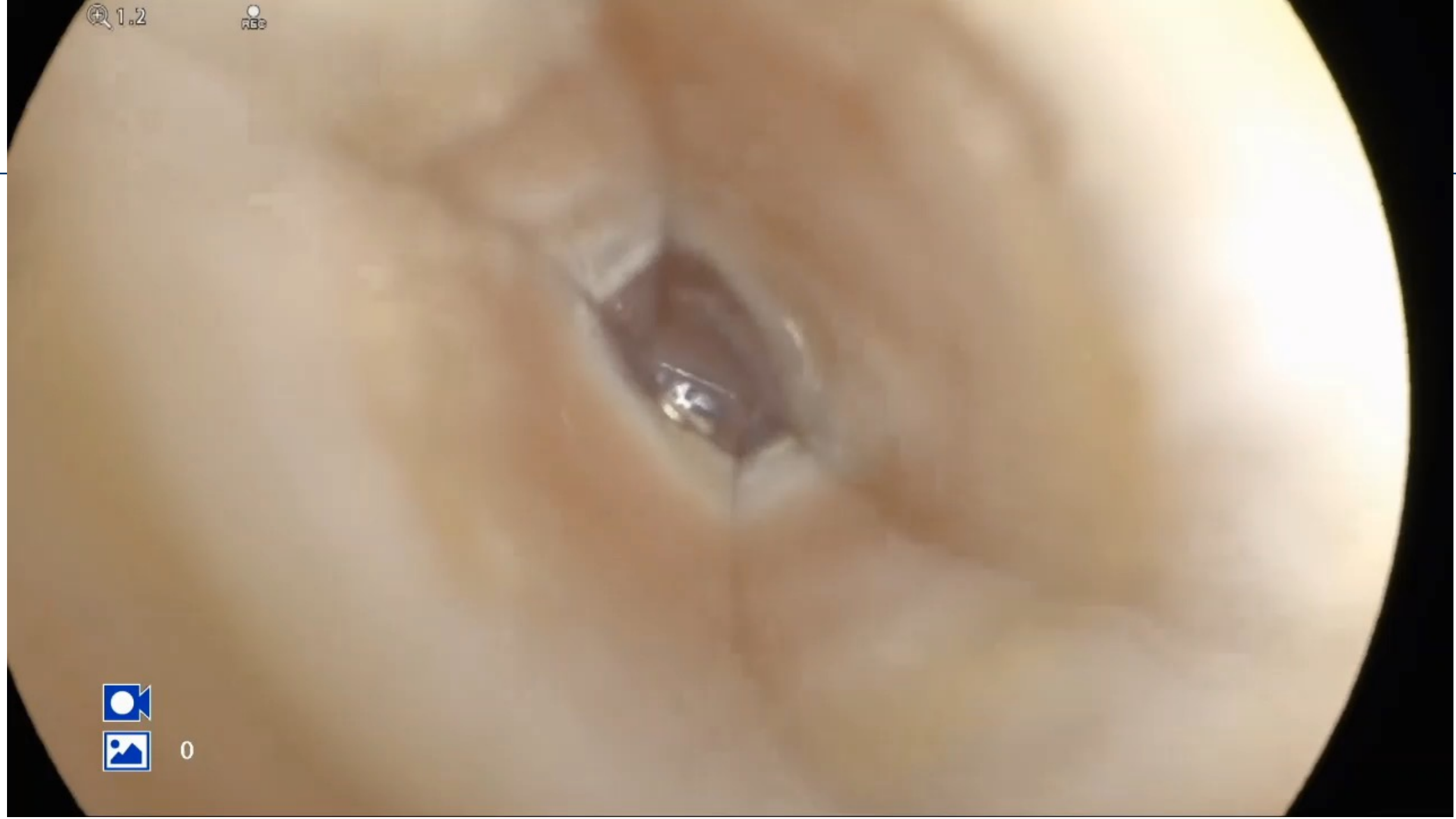


Take down of gastrogastric and gastrocolic fistula revision RYGB

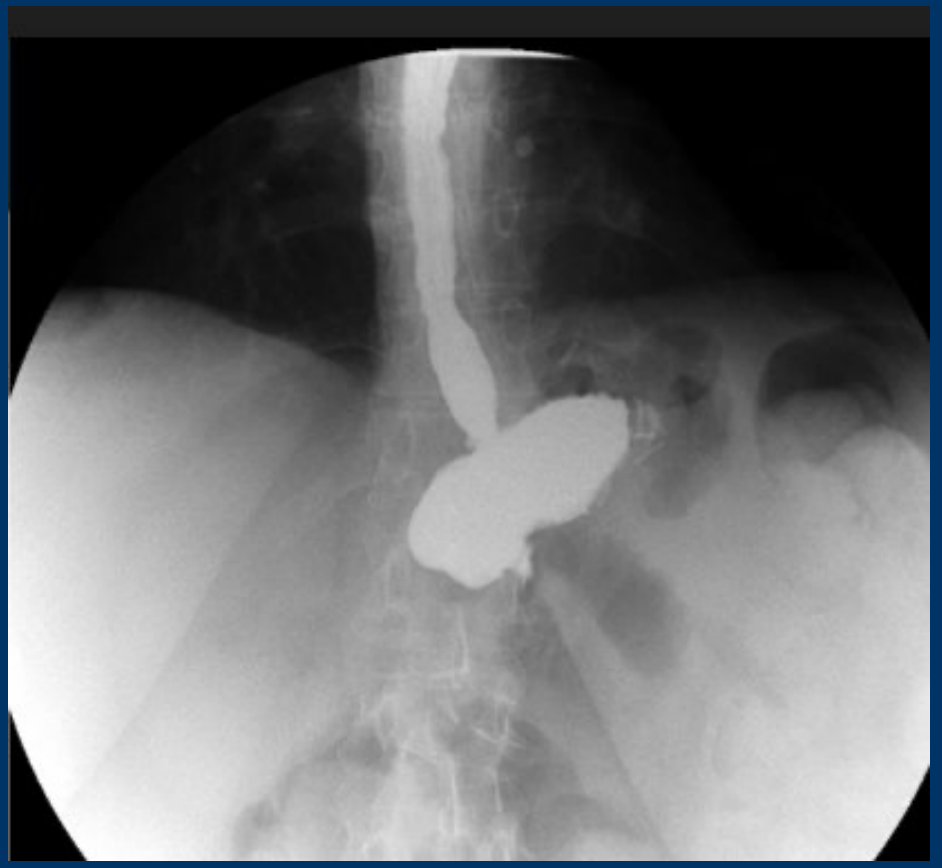
- **Optimized with enteral feeding, antifactor Xa checked on LMWH for a level above 0.5 IU.**
- **Anemia improved with IV iron.**
- **On J feeding, BMI 18.5 Albumin 3.8.**
- **Liver function recovered & ascitis resolved.**
- **Now ambulating no sepsis.**

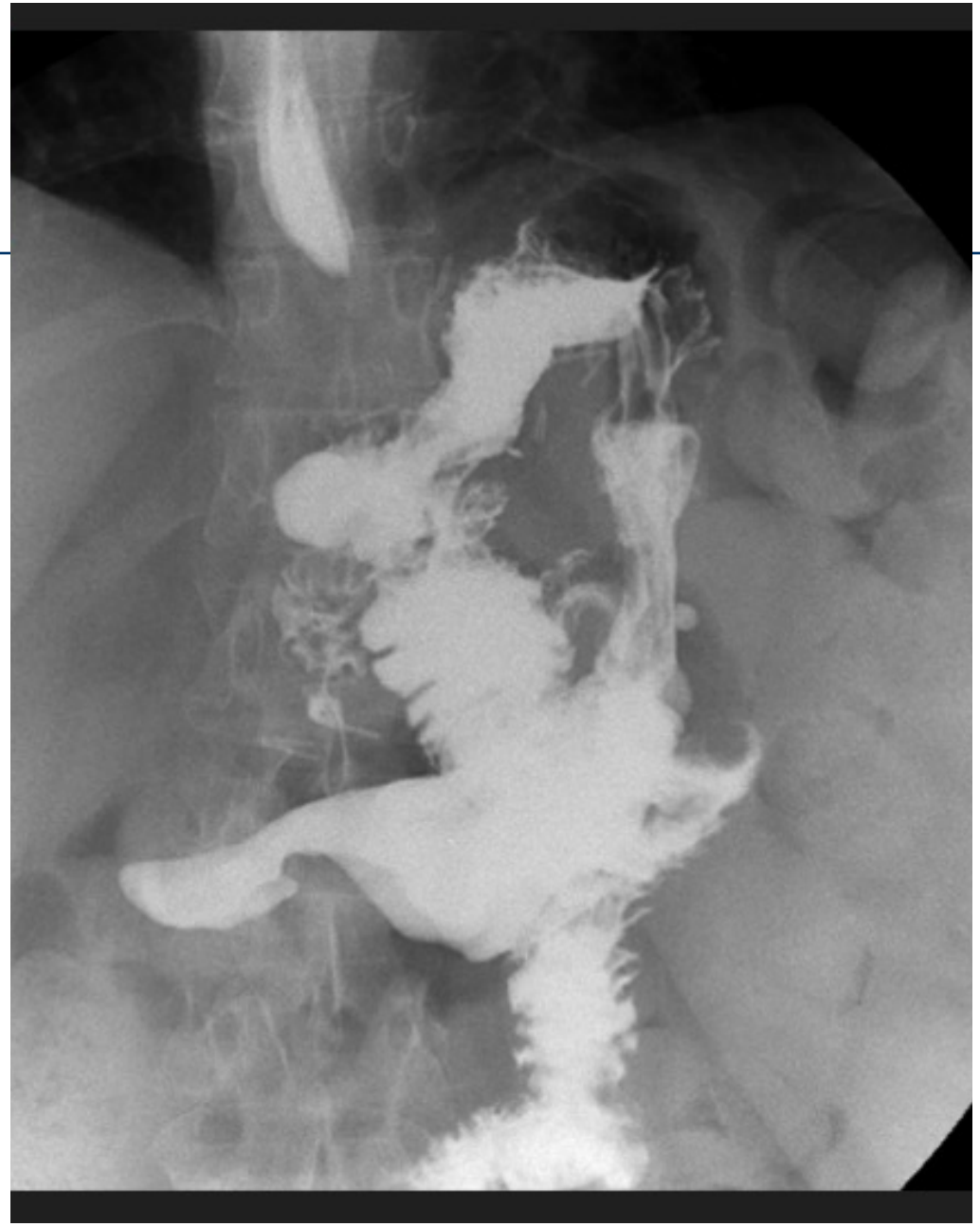
Port Placement

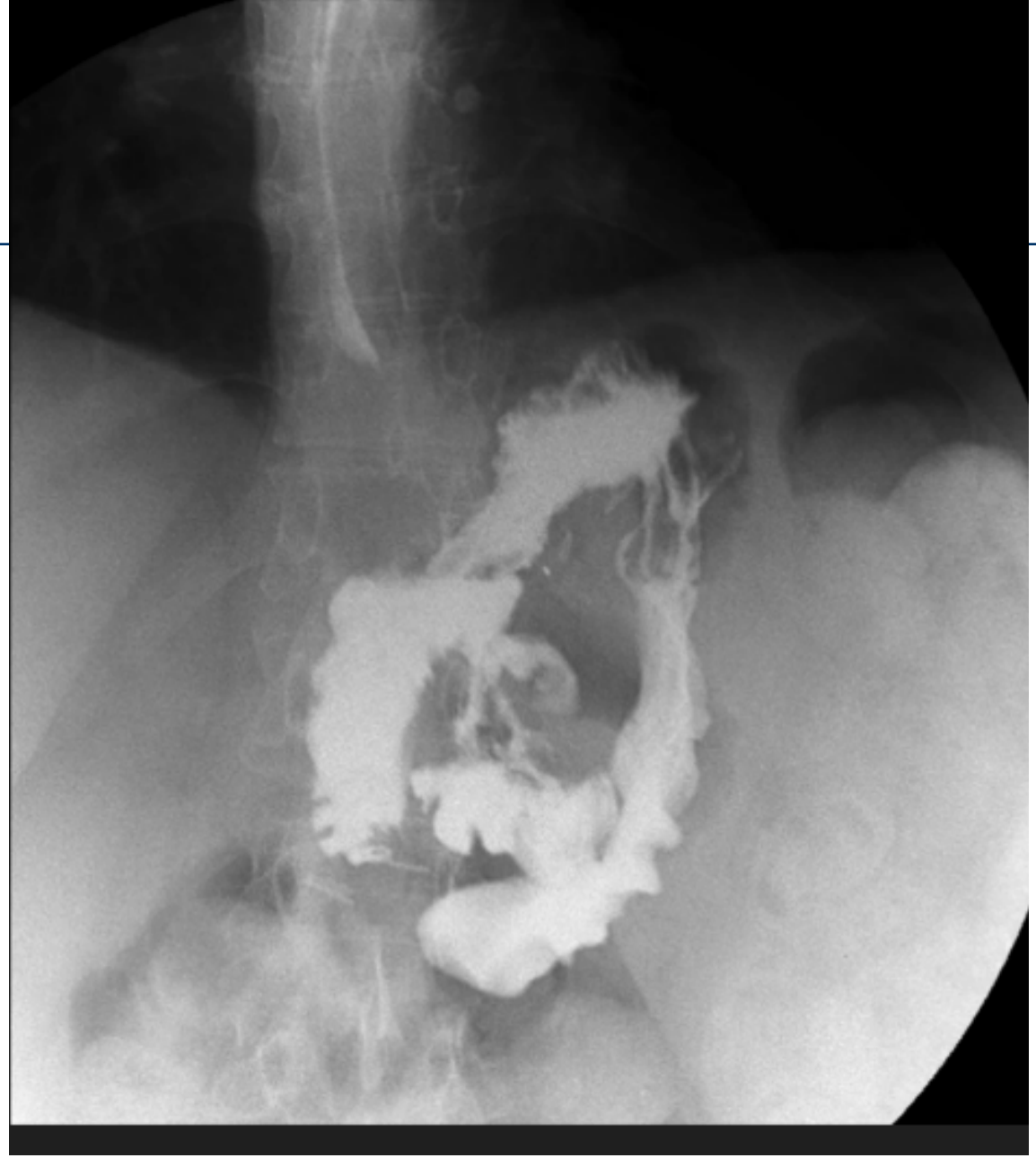


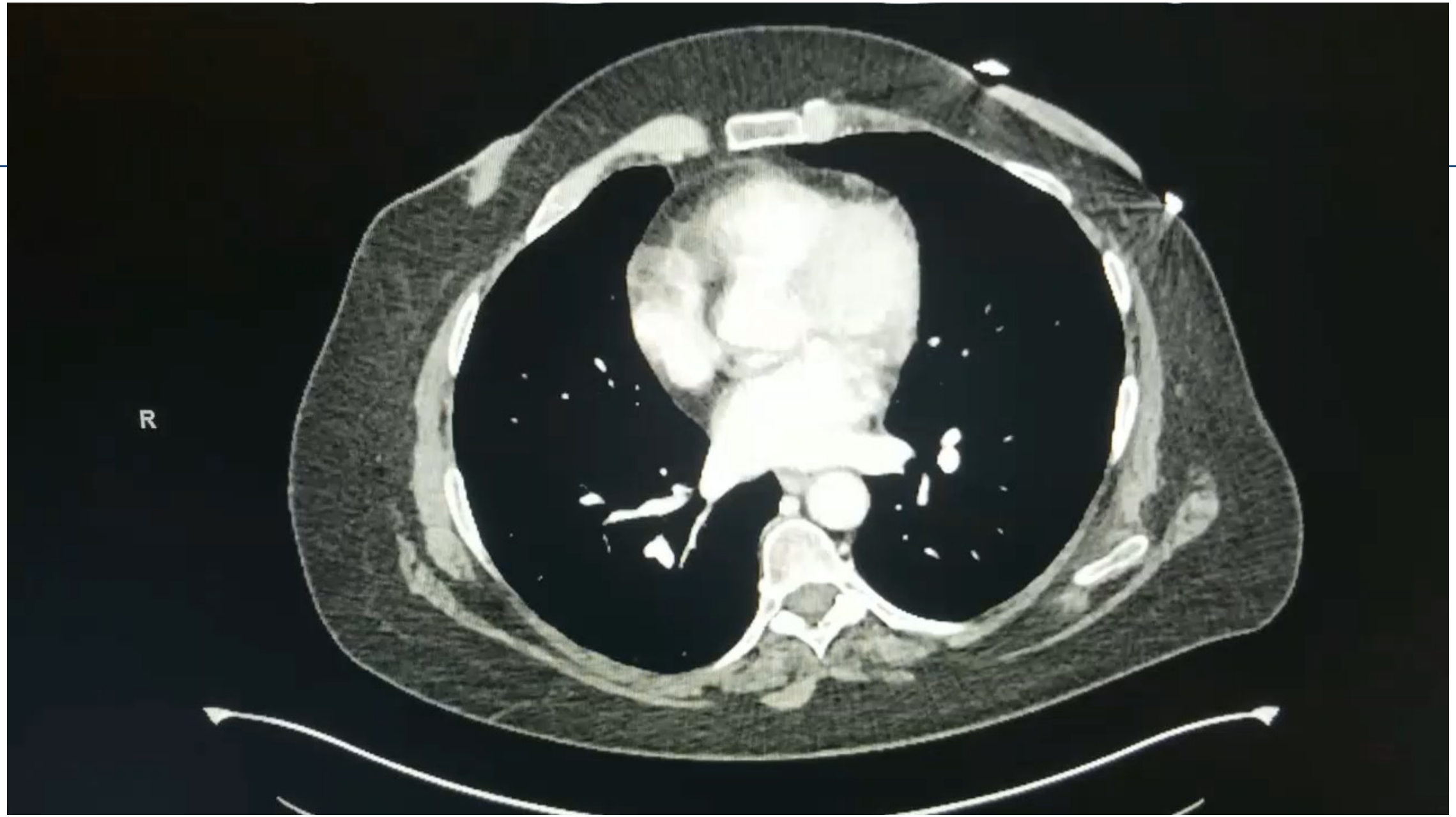

1.2
REC
0

- Patient is a 52-year-old male s/p Robotic RYGB 2012 complicated by recurrent marginal ulcer 2013-2018.
- Patient developed gastro-gastric fistula 2017.
- Admission due to suspected perforated marginal ulcer 2018.
- Developed GJA stenosis and on EGD GG fistula





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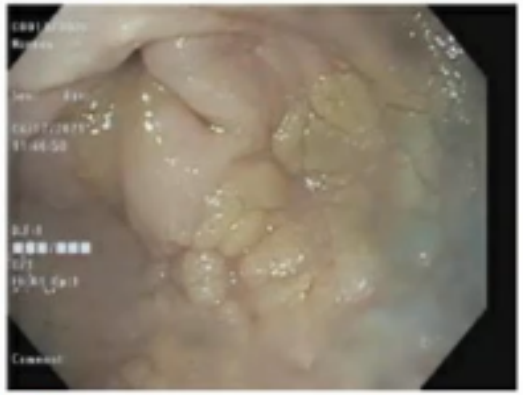
64 y/o F PEH, large mesocolon hernia GJA stenosis & POSED

- Laparoscopic RYGB in 2002
- 2019 developed symptoms of nausea and vomiting as well as regurgitation
- Workup including manometry and was diagnosed with achalasia
- POEM performed for achalasia
- Diagnosed with a stricture at the GJ and underwent laparoscopic revision of the GJ and placement of a gastrostomy tube in 3/2020
- 5/2021 EGD showed stricture at GJ again and a stent was placed
- 6/2021 stent was removed and botox
- 6/2021 Endoflip
- 7/2021 patient returned to the ED with worsened symptoms

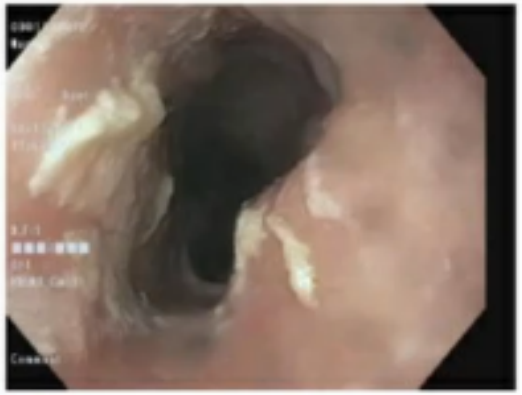
Manometry and POEM

- Manometry
  - Type 2 achalasia
  - IRP 25
- POEM
  - Pre-myotomy DI
    - 40: 2.1
    - 50: 1.1
    - 60: 0.8
  - Also noted GJ stricture which was dilated

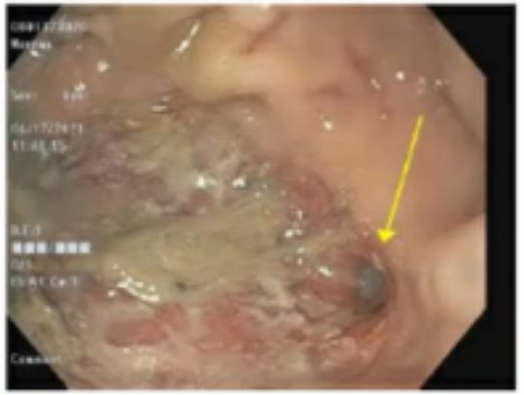
4/2021 EGD



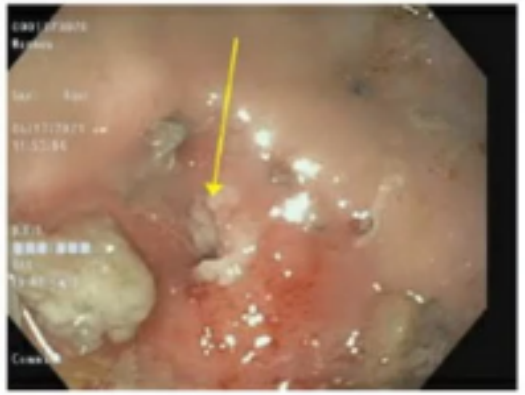
1 Lower Third of the Esophagus



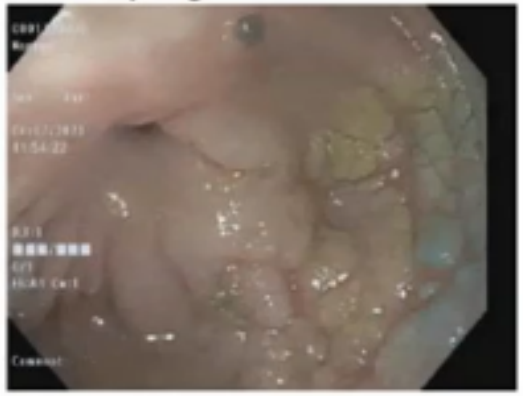
2 Upper Third of the Esophagus



3 previous PEG site?



4 gastrojejunal anastomosis



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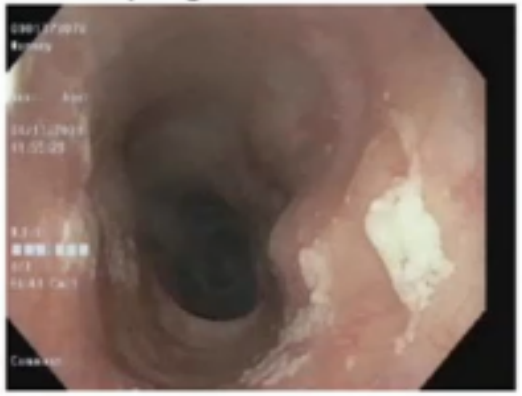

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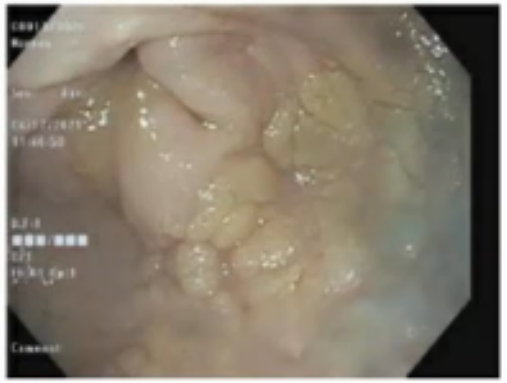
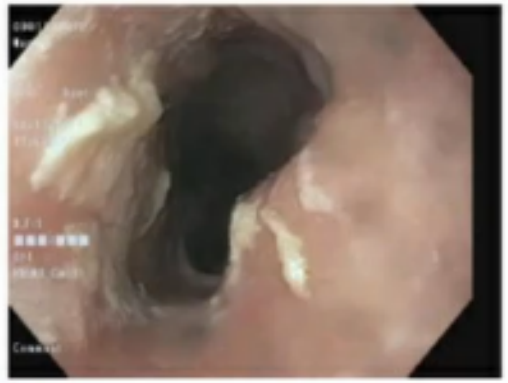
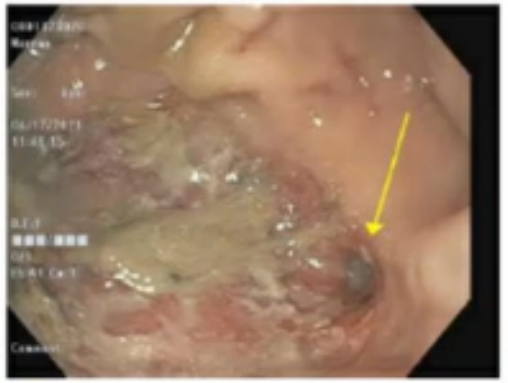
4/2021 EGD



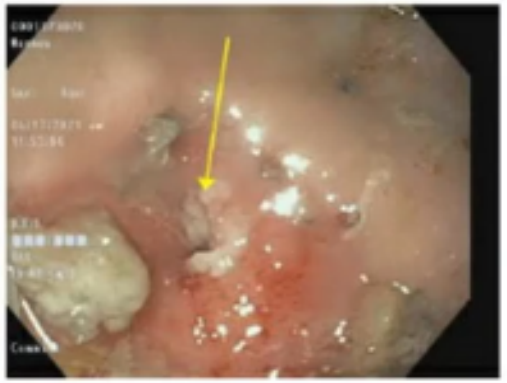
1 Lower Third of the Esophagus



2 Upper Third of the Esophagus



3 previous PEG site?



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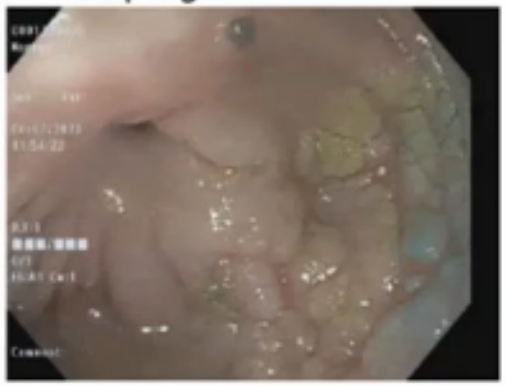

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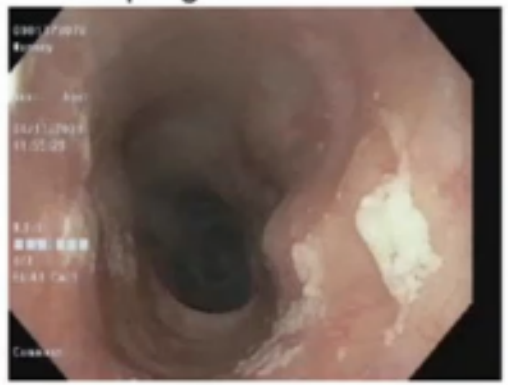

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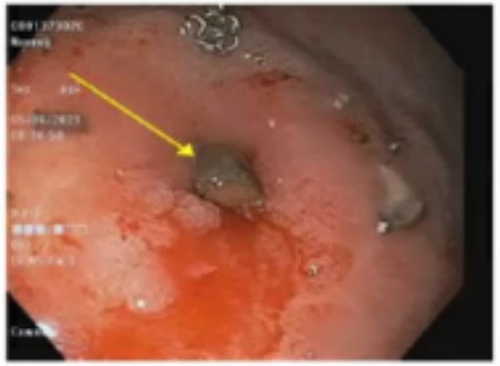
5/6/2021 EGD with Stent



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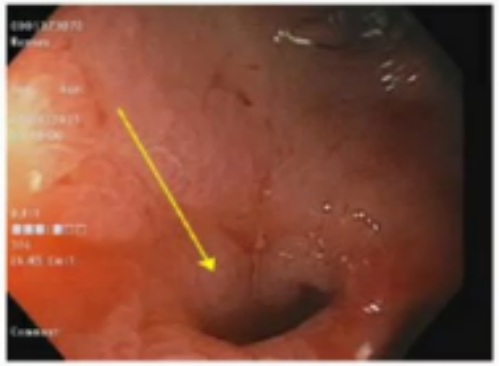

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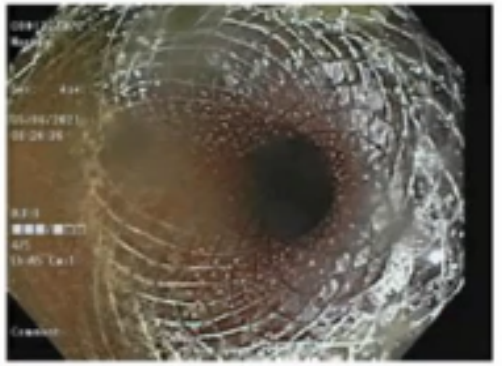
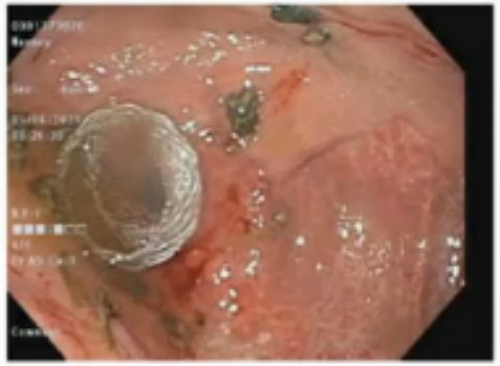
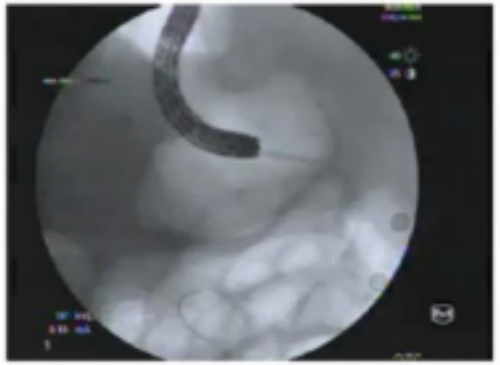


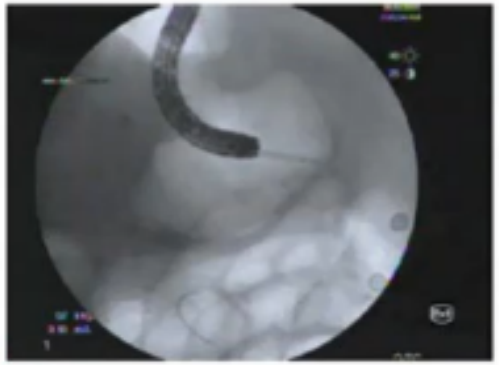
3 Gastrojejunal Anastomosis



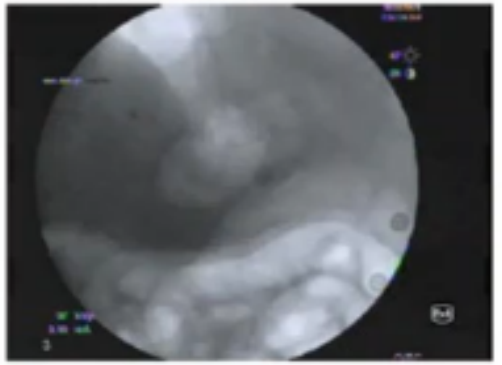
4 Gastrojejunal Anastomosis



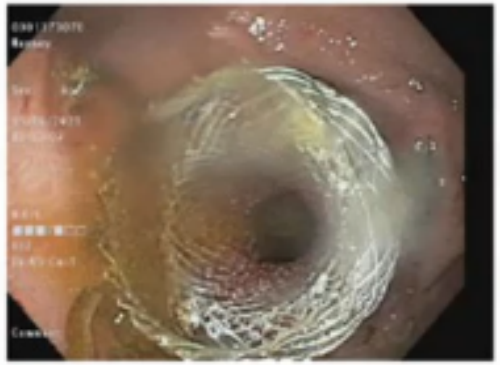
5 Gastrojejunal Anastomosis



6 Gastrojejunal Anastomosis

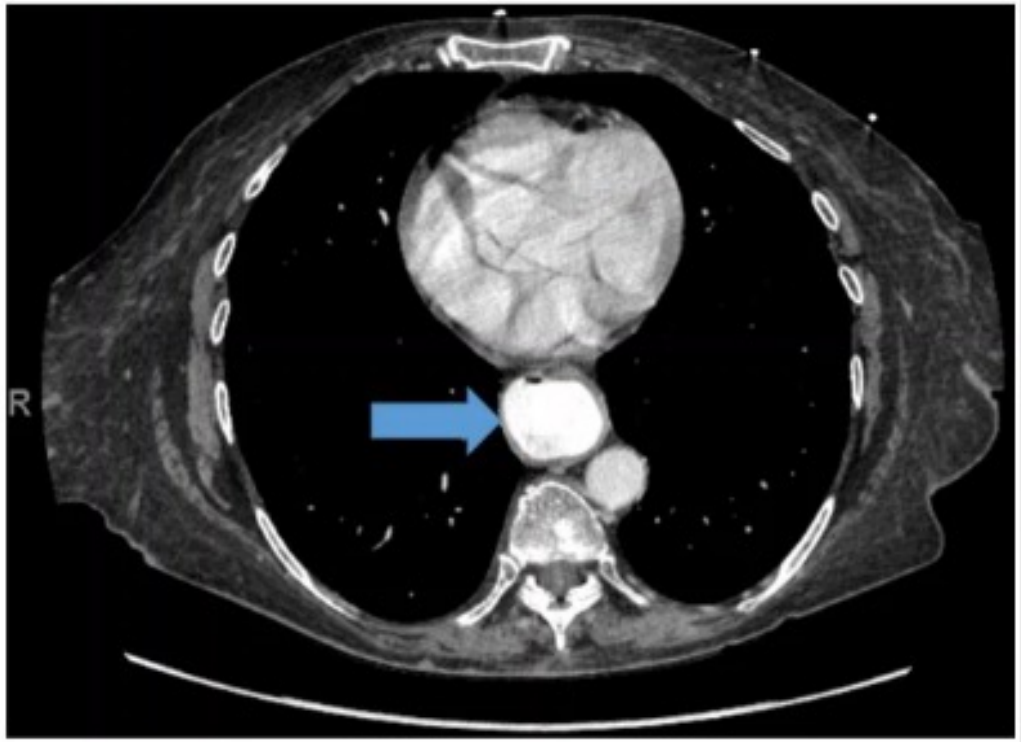


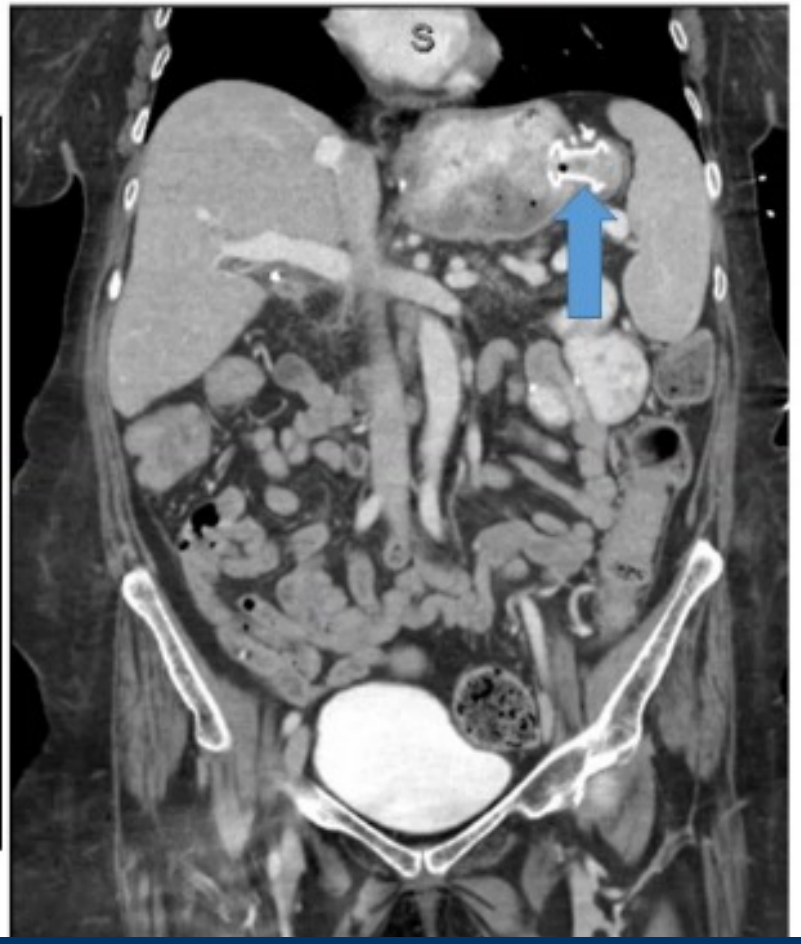
7 Gastrojejunal Anastomosis



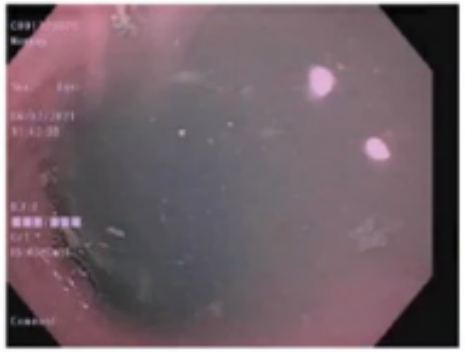
8 Gastrojejunal Anastomosis

5/28/2021 CT Scan

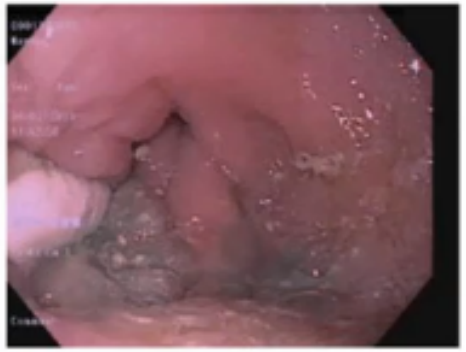




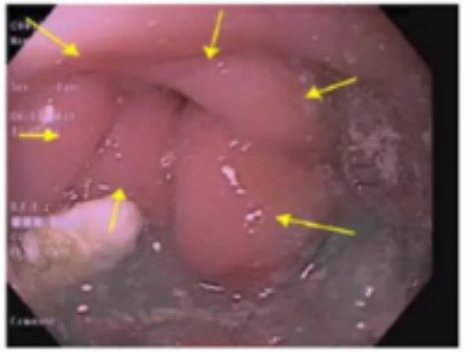
6/2/2021 EGD with Botox Injection



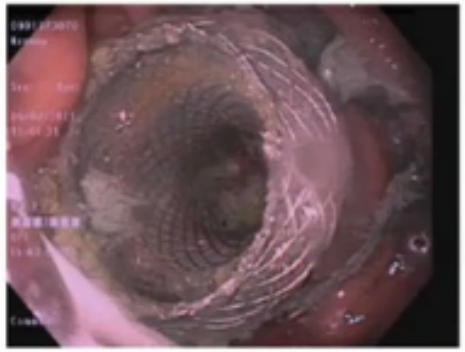
1 excess liquid in esophagus



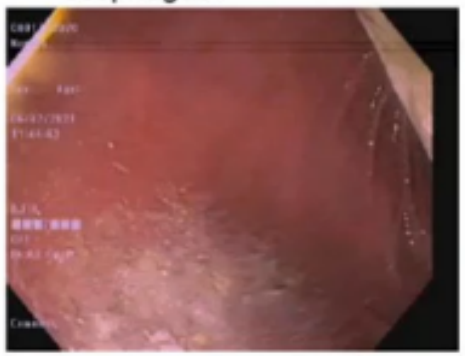
2 lower esophageal sphincter hypertonic



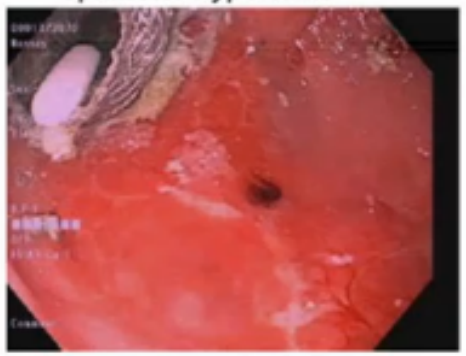
3 hypertonic LES



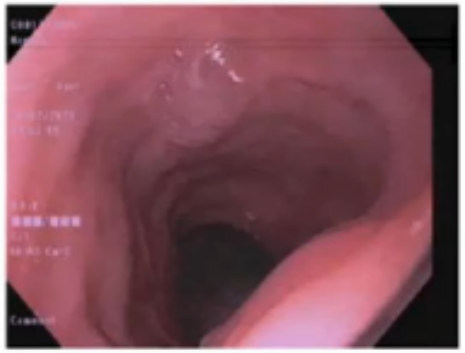
4 AXIOS stent at GJ anatasmosis



5 jejunum

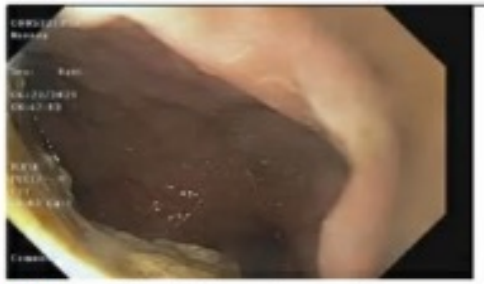


6 erythema where pill debris was present

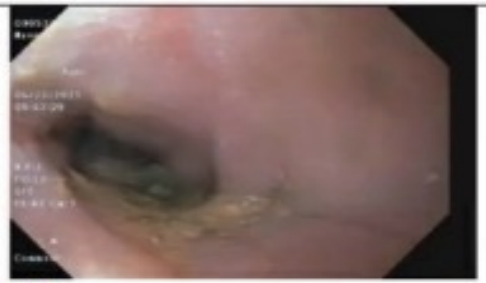


7 dilated proximal esopahgus

6/23/2021 EGD with Endoflip



5 Gastric Body stomach with food- not able to see GJ anastamosis



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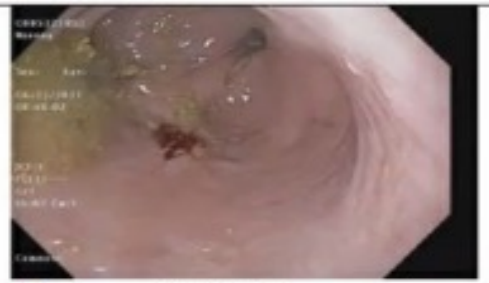
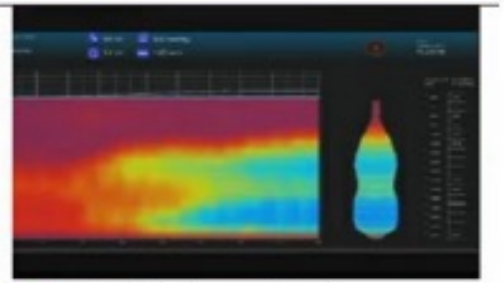
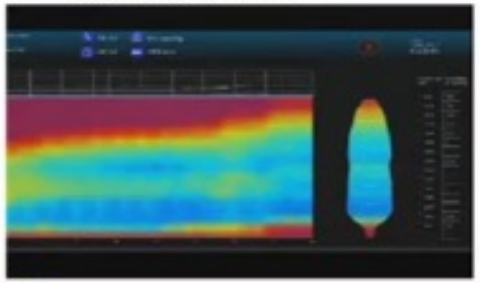


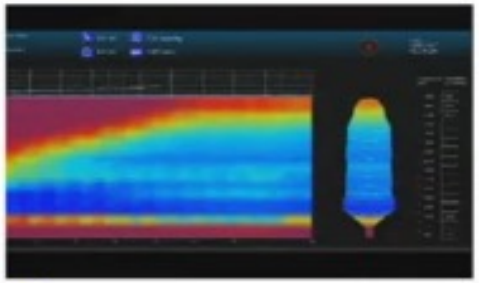
7 Lower Third of the Esophagus



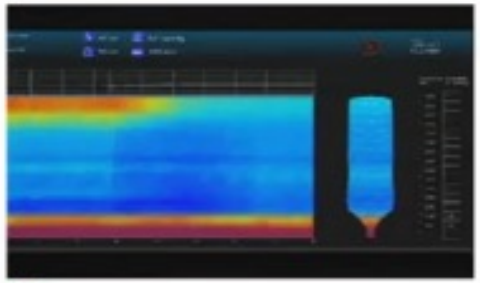
8 30 ml volume initial



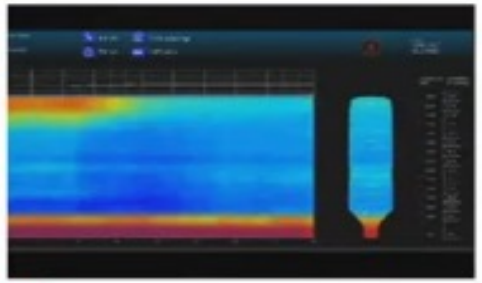
9 absent contractiliy 40 ml



10 Absent contractility

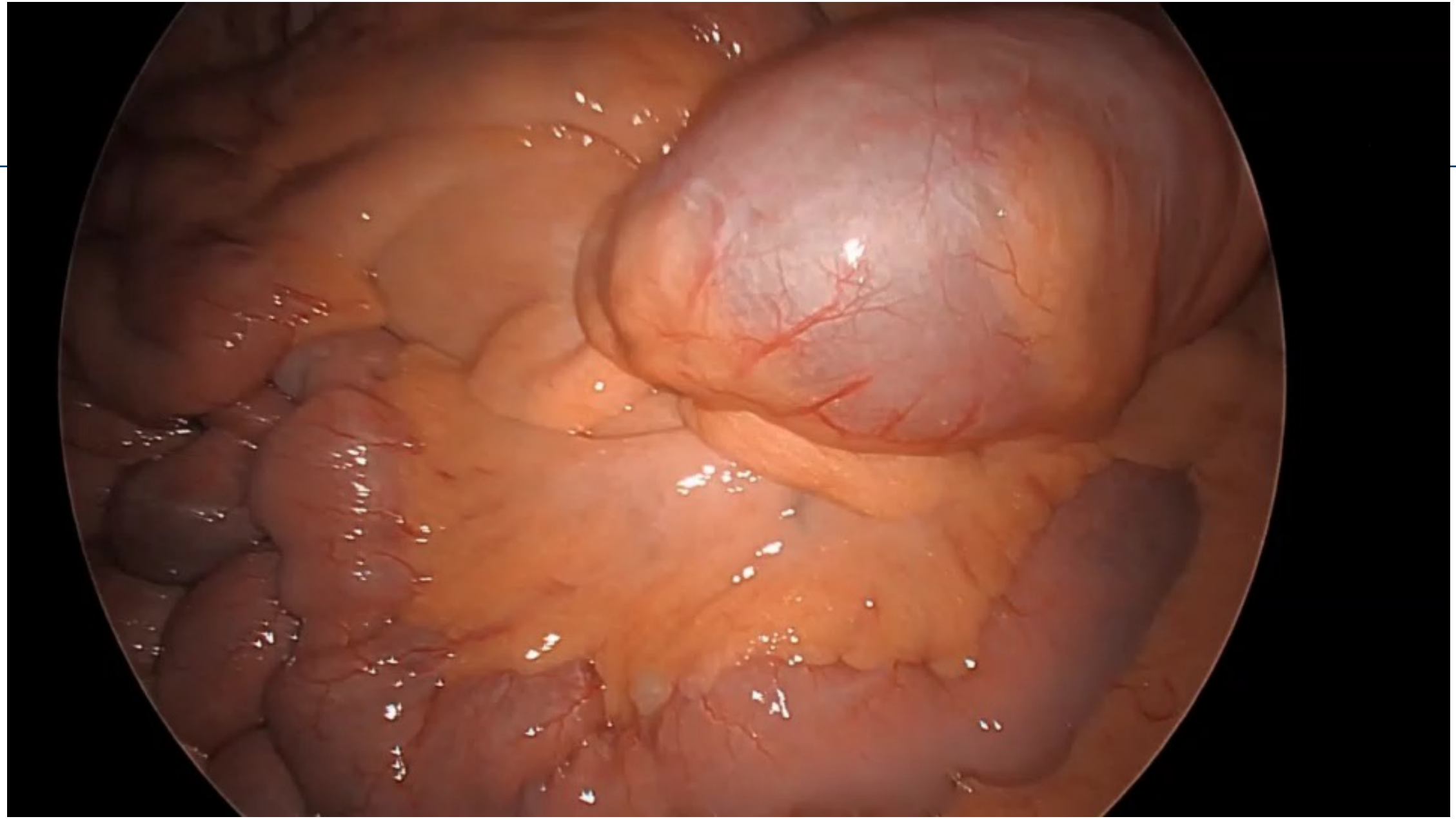


11 Absent contractility seen



12 50 ml volume with absent contractility

Absent contractility seen with all volumes up to 60mL. 30mL DI: 1.7 40mL DI: 2.7 60mL DI: 3.7
Findings not consistent with Achalasia



Operative Procedure

- Patient was taken to the OR for laparoscopic repair of paraesophageal hernia, revision of GJ and placement of feeding tube
- Intraoperatively she was found to have
  - Large PEH involving the pouch of the RYGB
  - An incarcerated large mesocolon hernia with the entirety of the small bowel (Roux limb, jejunojejunostomy, medial limb and common channel) herniated through the defect in the supramesocolic compartment
  - Stricture at the GJ
  - BP limb 65cm, Roux limb 85cm

Post-Operatively

- Patient had an UGI POD 1 showed contrast staying in the distal esophagus
- AXR POD 2 showed the contrast had passed to the colon
- Patient was started on tube feeds and PO diet and discharged POD 6 off TPN
- Was re-admitted POD 14 for 3 days for pain control. CT scans were unremarkable
- Post op office visit at four weeks patient was still taking liquids and requiring PPI for reflux symptoms. Continued with tube feeds
- 6 week post op office visit patient was doing well tolerating liquid and solid diet. She still required PPIs for reflux. She was gaining weight and albumin was 4. Tube feeds were stopped with plans for removal in a few weeks

POSED

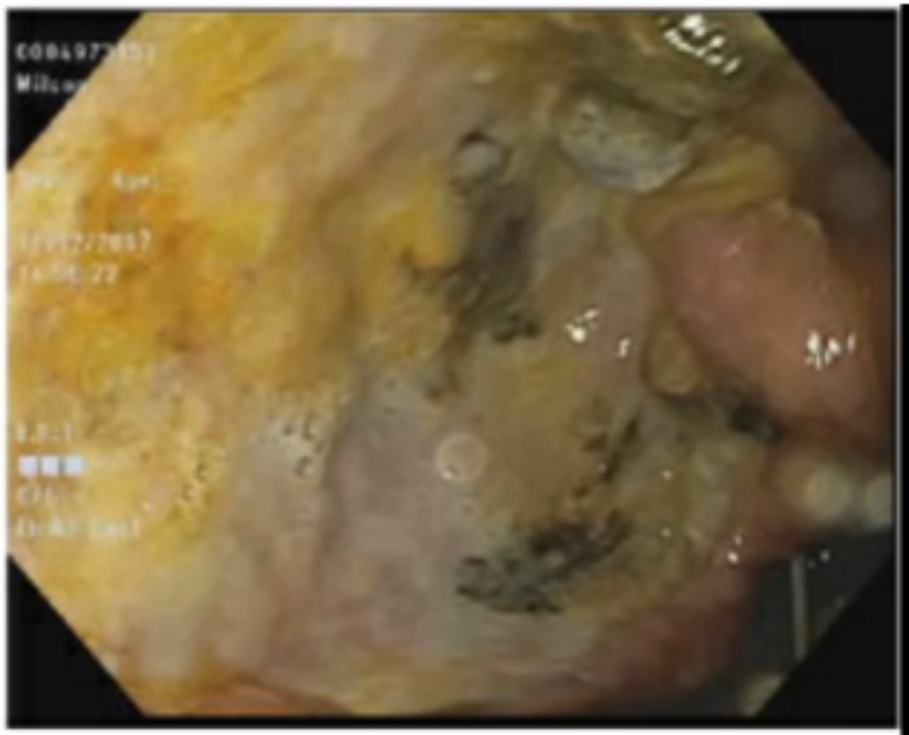
- Post Obesity Surgery Esophageal Dysfunction
- Presentation of an achalasia-like pattern secondary to mechanical or functional proximal gastric obstruction from bariatric surgery
- Characterized with no obstruction at the GEJ based on normal IRP, resistance to bolus flow by distal high pressure zones caused by bariatric surgery
- Cause of a high pressure zone can be a narrowed gastrojejunostomy, gastroplasty or sleeve gastrectomy
- These patients tend to respond better to therapy directed towards the obstruction rather than the lower esophageal sphincter (e.g. dilation or revision)
- Studies have shown close to 7% of post surgical patients develop achalasia
- 5.2% developed a separate achalasia-like pattern defined by aperistalsis and increased intragastric pressure (POSED)
- Increasing time since surgery was associated with the development of achalasia, POSED and major motility disorders

Laparosocpic subtotal gastrectomy & B II s/p open VBG.

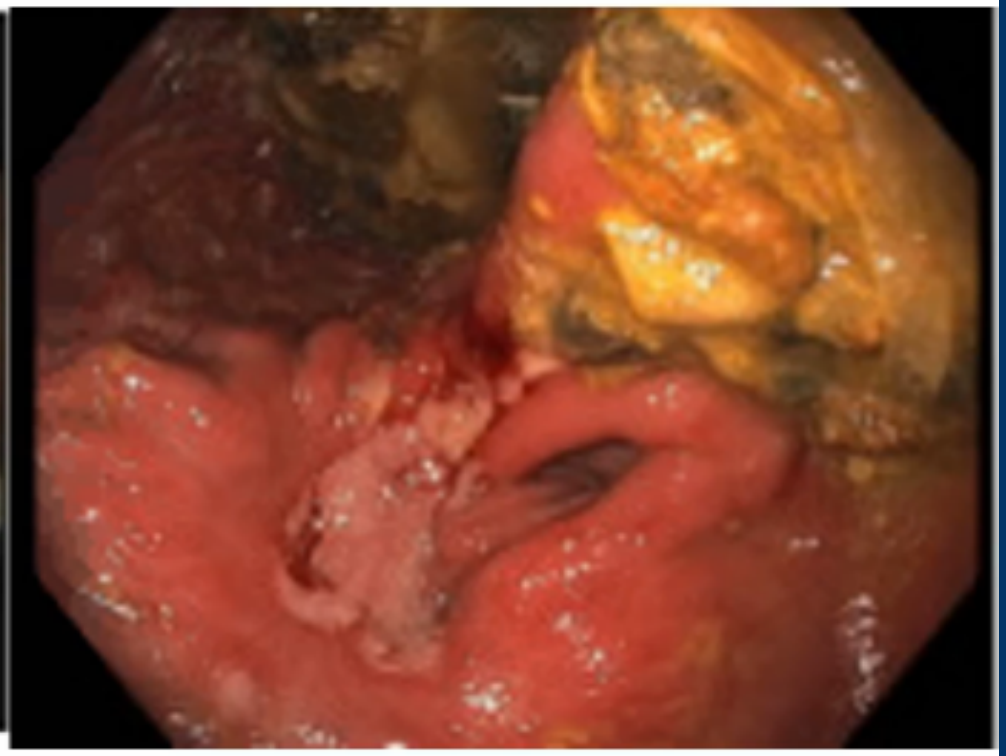
- Patient is a 33-year-old male s/p Open VBG 2005, history of recurrent PUD & history of NSAID abuse "Goodie powder".
- March 2016, X-lap VHR with biologic mesh for strangulated SB.
- April 2016 IR embolization of GDA for bleeding PUD following by difficult laparoscopy, gastrotomy and cautarization of bleeding ulcer.
- Oct 2016, Lap & drainage for perforated gastric ulcer.
- Nov 2017, UGI bleeding endoscopic bipolar cautery of a giant gastric ulcer 8x10 cm.
- Jan 2018, recurrent UGI bleeding [giant gastric ulcer 8x10 cm].
- March 2019, recurrent UGI bleeding giant gastric ulcer 8x10 cm].

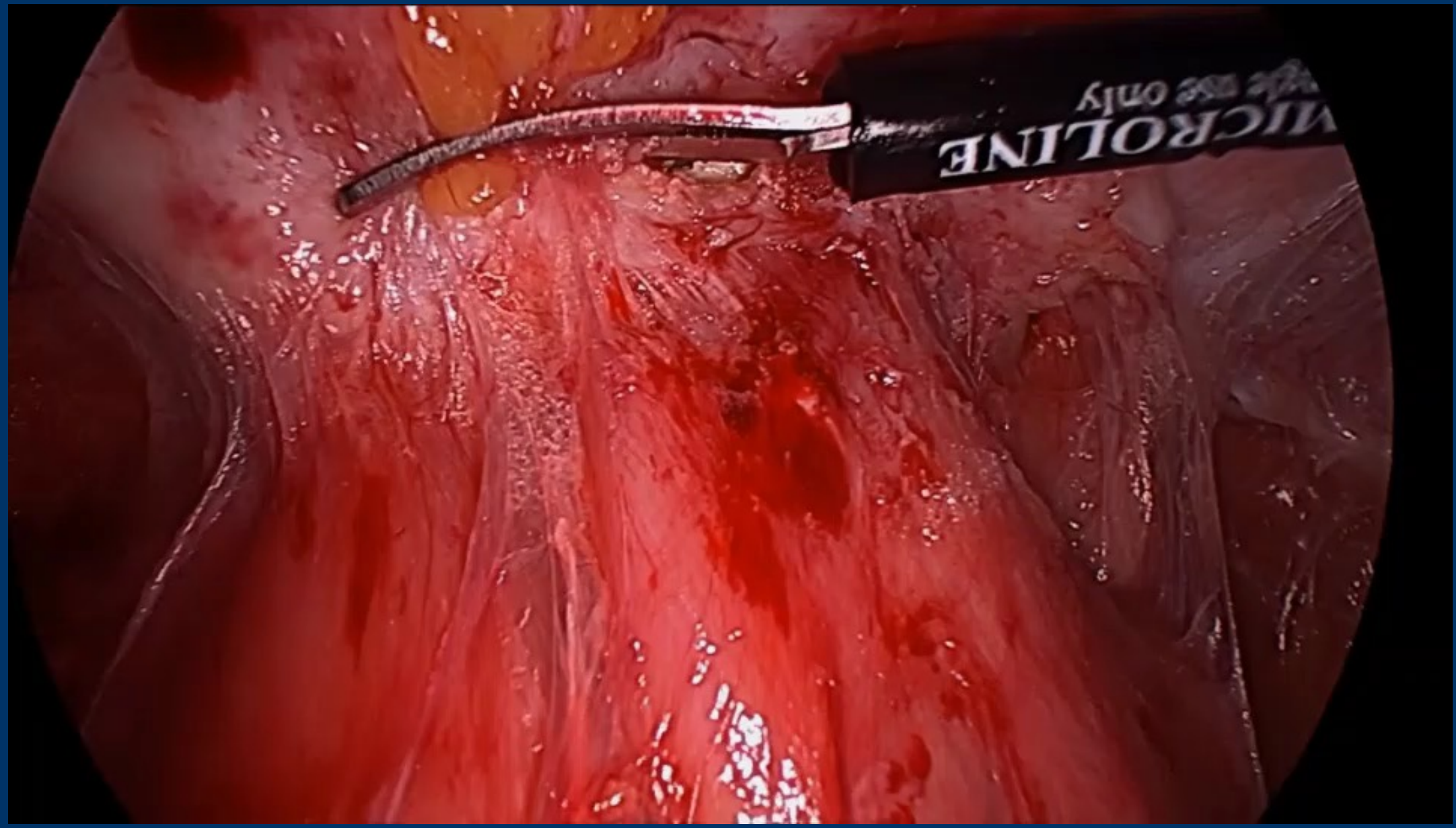
EGD

- November 2017



July 2019




MICROLINE

- ***Preoperative enteral nutrition is key for patients with malnutrition & previous MBS before revison.***
- Patients presenting with weight recurrence frequently have Dysphagia & GERD & a thorough evaluation is needed EGD, UGI, Bravo & Manometry.
- ***Intraoperatively, assess for an internal hernia, make sure there is not fistula, look for marginal ulcers.***
- Hand-sewn GJA using 3-0 PDS & 3-0 Monocryl.
- ***Intraoperative endoscopy.***

HARVARD
MEDICAL SCHOOL