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Barrett's Esophagus
Nursing Focused

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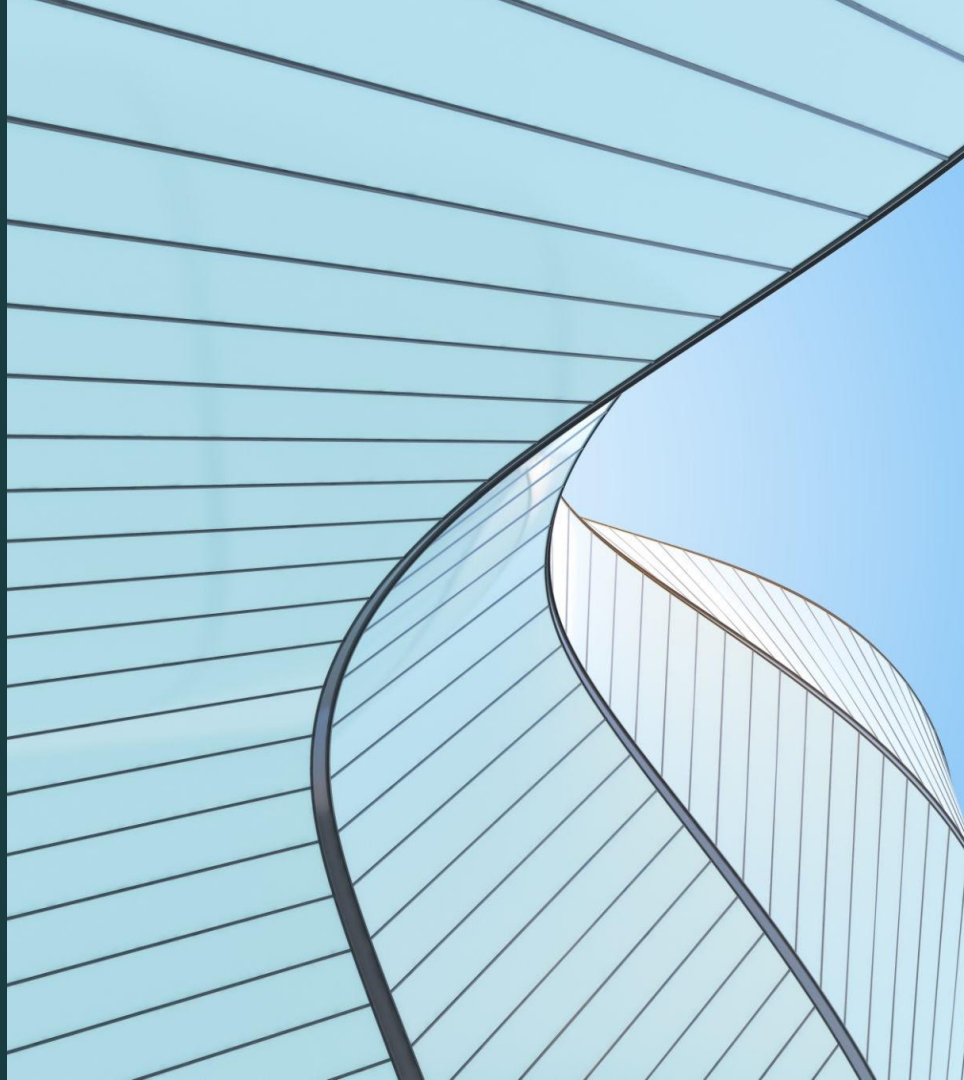


Disclosures

- I have no financial relationships including receipt of honoraria
- I have no Membership on advisory boards or speaker’s bureaus
- I have no patents for drugs or devices
- I have no other disclosures

Objectives:

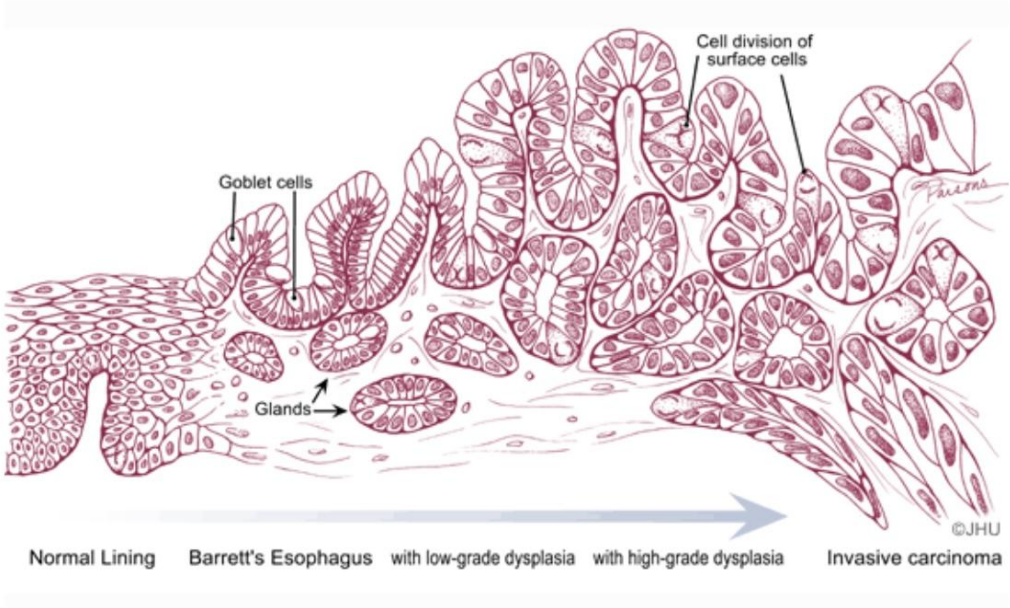
- Identify Barrett's Esophagus with the endoscopist
- Prepare for and help the endoscopist retrieve subsequent biopsies as per the endoscopist request
- Understand the therapies used to treat Barrett’s Esophagus and be able to educate patients on them upon discharge.

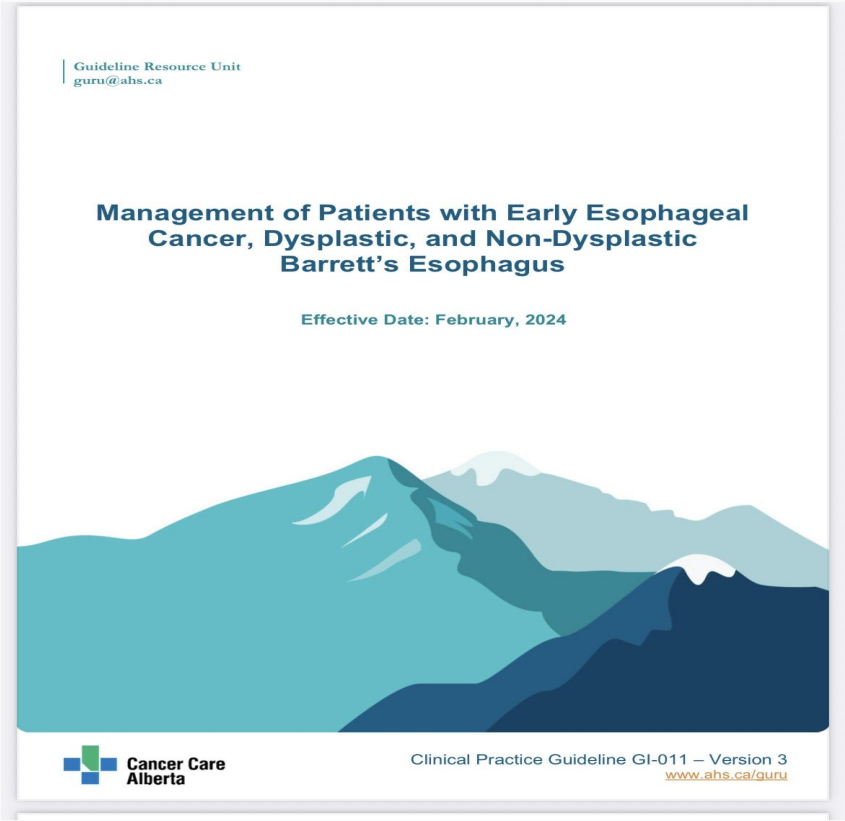
What is Barrett's Esophagus?

- Occurs when the normal lining of the esophagus changes due to chronic exposure to stomach acid, creating tissue that resembles the lining of the small intestine.
- This can increase the risk of developing esophageal adenocarcinoma
- Pathology reports classify this as: Non-Dyslastic Barrett's, Barrett's with Low Grade Dysplasia(LGD), or Barrett's with High Grade Dysplasia (HGD)
- Patients with non-Dysplastic Barrett's need monitoring via biopsies
- Patients with Dysplasia usually need treatment for example RFA or Cryo therapy

Barrett's esophagus Pathophysiology Pathway

- GERD, acute then chronic esophagitis
- ↓
- Barrett's esophagus
  (Non dysplastic)
- ↓
- Low Grade dysplasia
- ↓
- High Grade dysplasia
- ↓
- Adenocarcinoma





https://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-gi011-barretts-esophagus.pdf

How to help your endoscopist identify Barrett's

- Use acetic acid or Lugols/iodine for chromoendocopy
- Recognize normal vs Barrett's tissue endoscopically with NBI
- Barrett's can appear circumferentially, in tongues, or in islands or any combination of the three

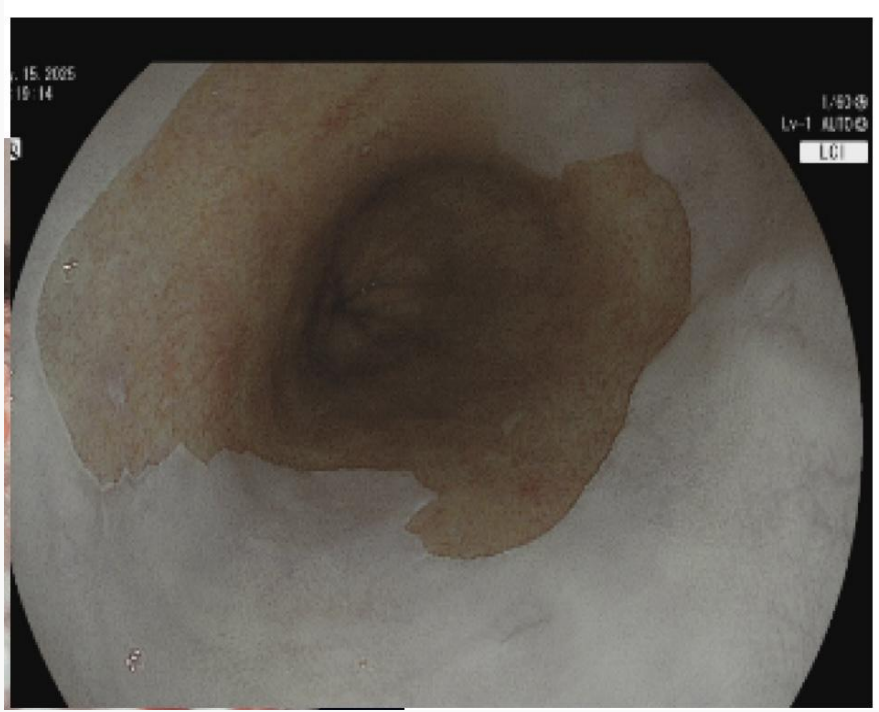
Chomoendoscopy what is it and why do we use it?

- Chromoendosopy is used to assist in identifying abnormal or dysplastic tissue
- For Barrett's acetic acid or iodine/Lugols is commonly used
- acetic acid needs to be at 2-3%. We use 2.5% (20 ml SW and 20 ml Acetic acid 5%)
- iodine/ Lugols needs to be diluted (4 ml iodine to 16 ml SW)
- Either formula causes abnormal tissue to be more pronounced
- When performing chromoendoscopy ensure it is before biopsies or your patient will be very uncomfortable

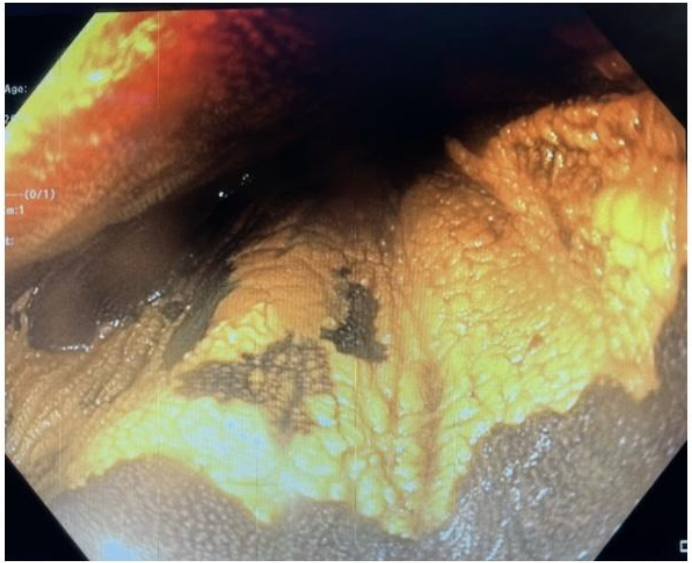
Nurse’s role in chromoendoscopy

- HOB > 30 degrees
- mix either acetic acid or iodine in syringe
- using a spray catheter slowly instill down the esophagus thru the working channel
- document amount used in chart

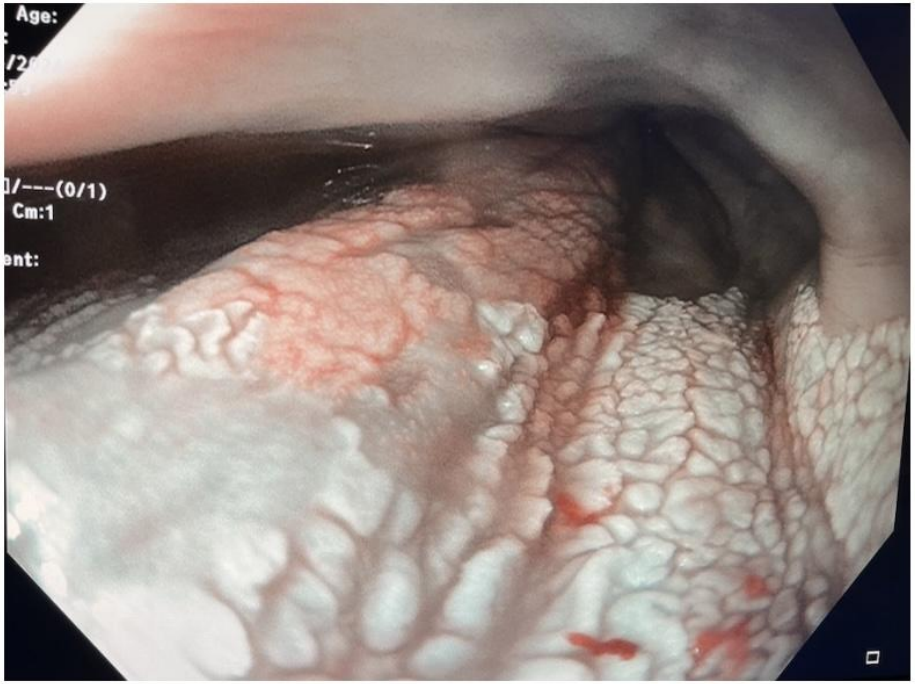
Pre and post acetic acid



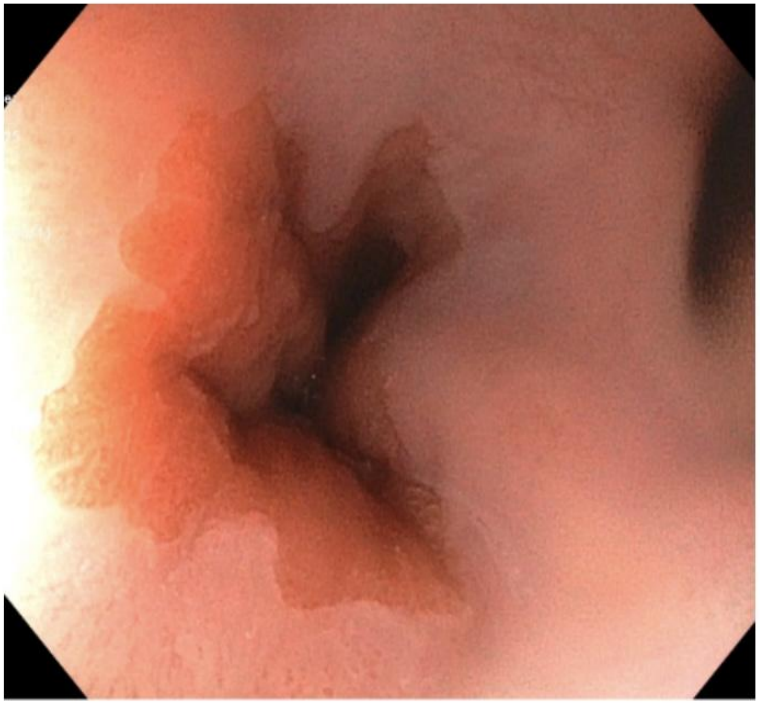
- Lugol’s

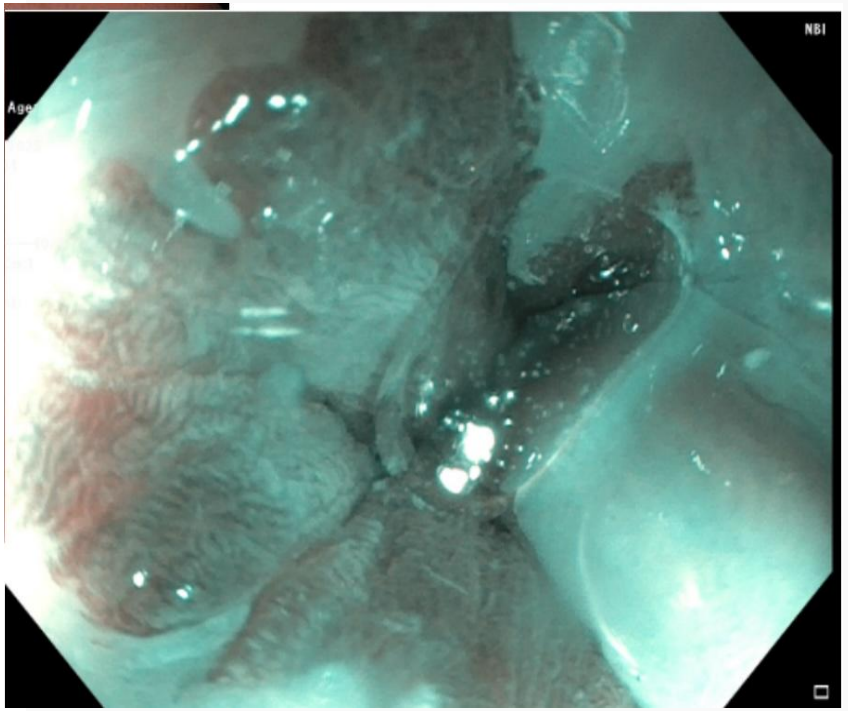


- Acetic acid

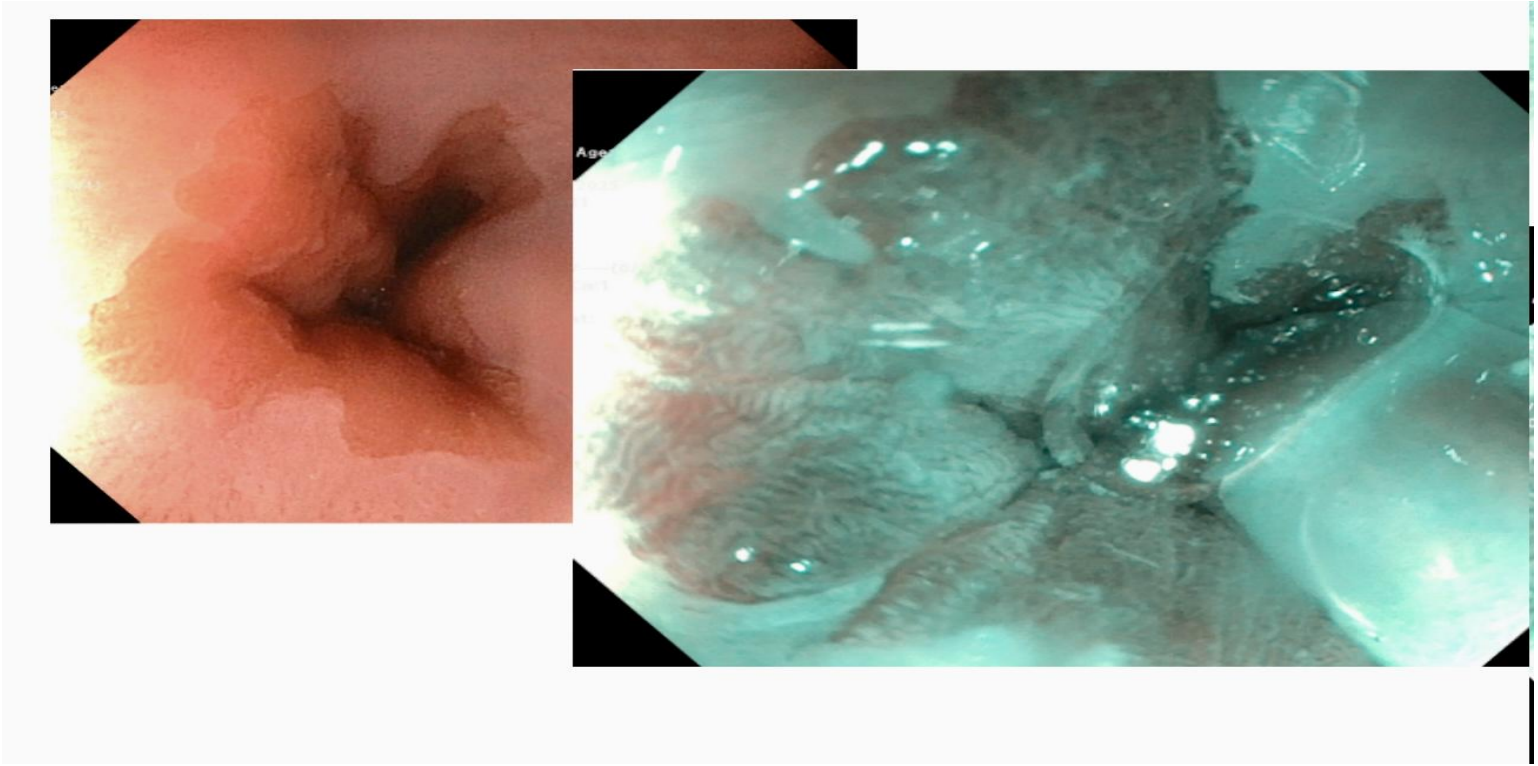


Pre and post using Acetic acid and NBI





NBI



Common terms used to describe Barrett's in charting

- LGD- low grade dysplasia
- HGD- High Grade dysplasia
- DP- Diaphragmatic pinch
- TGF- Top of the Gastric Folds
- C- Circumferential height of Barrett's from TGF
- M- Maximal height of Barrett's (also referred to as the tongue) from TGF
- I- Island of Barrett's from TGF
- Both M & I can have an o'clock for location

A Pt with C2M5I7 has circumferential Barrett's from TGF for 2 cm a maximal tongue for 3 cm more and an Island 7 cm from TGF

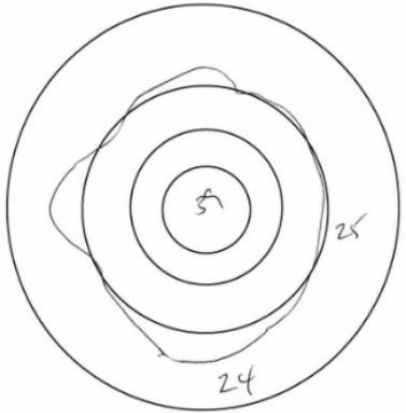
Diaphragmatic Pinch	Top of the Gastric Folds	Circumferential extent	Maximal extent	Islands
40 cm	37 cm	25 cm	24 cm 6 0'clock	cm 0'clock
			cm 0'clock	cm 0'clock
			cm 0'clock	cm 0'clock
Length of Hiatus Hernia _____ cm	TGF is at _____ cm	C 12	M 13	I

Inlet patch 17

Hill Grade Classification: I (II) (III) IV

AFS Hiatus Grade: L 3 D 2 F +

Today's Pathology			
Bottle	Level cm	0'clock position	Pathology results
1	37		
2	35		
3	33		
4	31		
5	29		
6	27		
7	25		
8	24		
9	20		
10			



RAH Endoscopy Modified Prague Classification Esophagial (rev 05.2020)

Preparing for and documenting Biopsies

- Biopsies will be targeted to areas that showed signs of Barrett's
- these can be numerous if your C,M, & I numbers are high
- often 4 quadrants/o'clocks every 1 cm
- these need to be documented the same way in the specimens
- for example 36cm esophagus at 3 o'clock or 3603 esophagus
- this allows all staff to know exactly where dysplasia is located in pathology

My patient has dysplasia now what?

- There are several therapies used to treat LGD/HGD in Barrett's
- RFA, Cryogenic and EMR/ ESD
- RFA- Radiofrequency Ablation (hot)
- Cryotherapy- Freezing the tissue (cold)
- EMR- Endoscopic Mucosal Resection (cut)
- ESD-Endoscopic Submucosal Dissection (cut)
- currently done in major centres and under anesthesia

RFA- Radiofrequency Ablation

Various catheters are used either thru or on the scope to use heat to ablate the dysplasia

HALO 360+ catheter is introduced over a guidewire

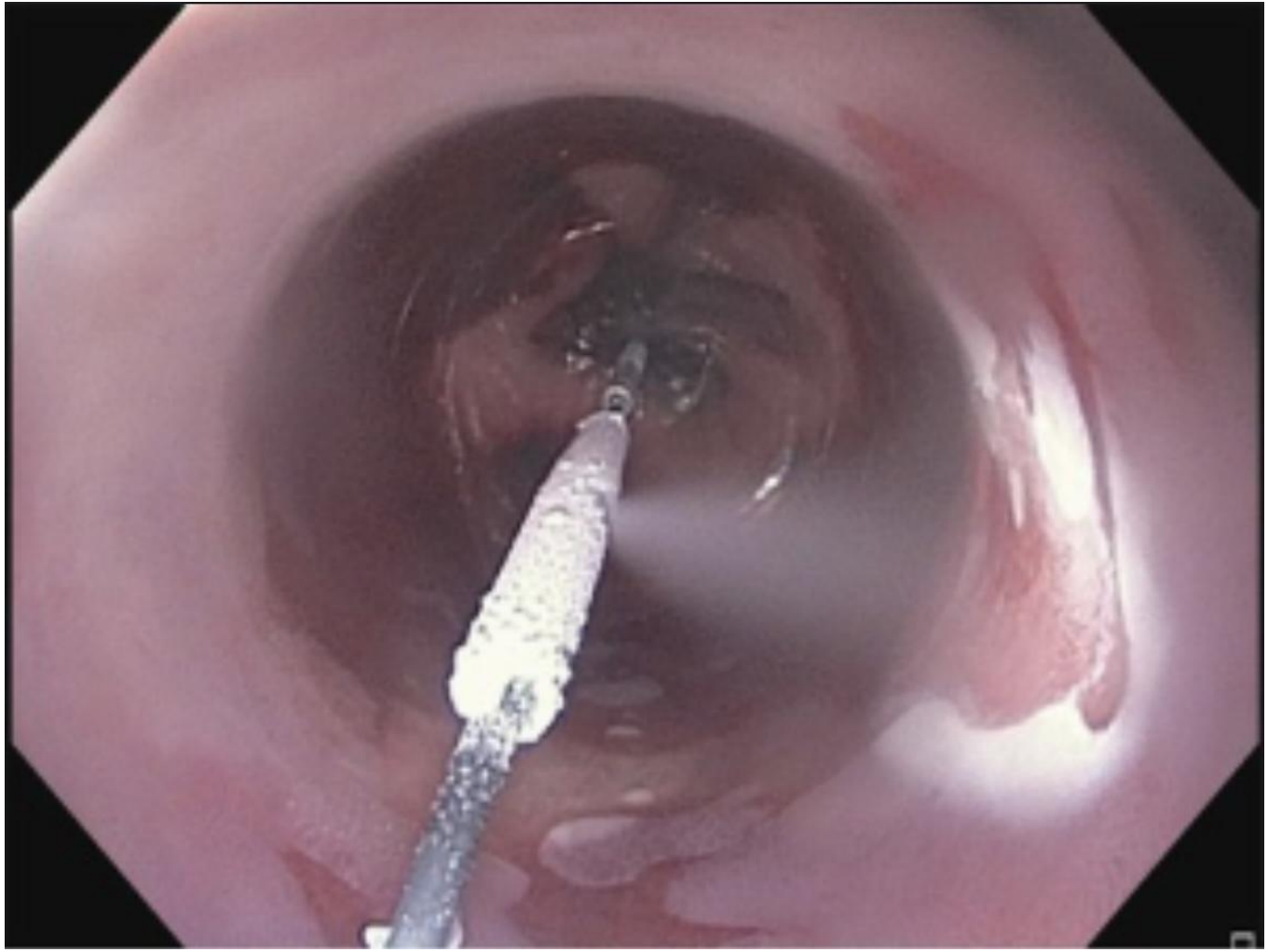
Ablation Effect

HALO 90 catheter is mounted on the endoscope

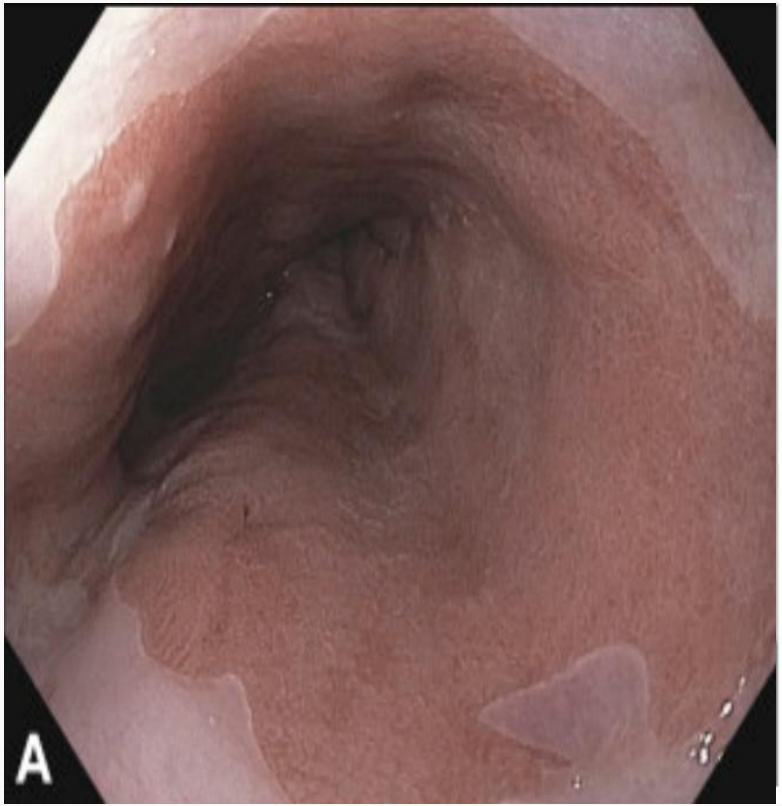
Ablation Effect

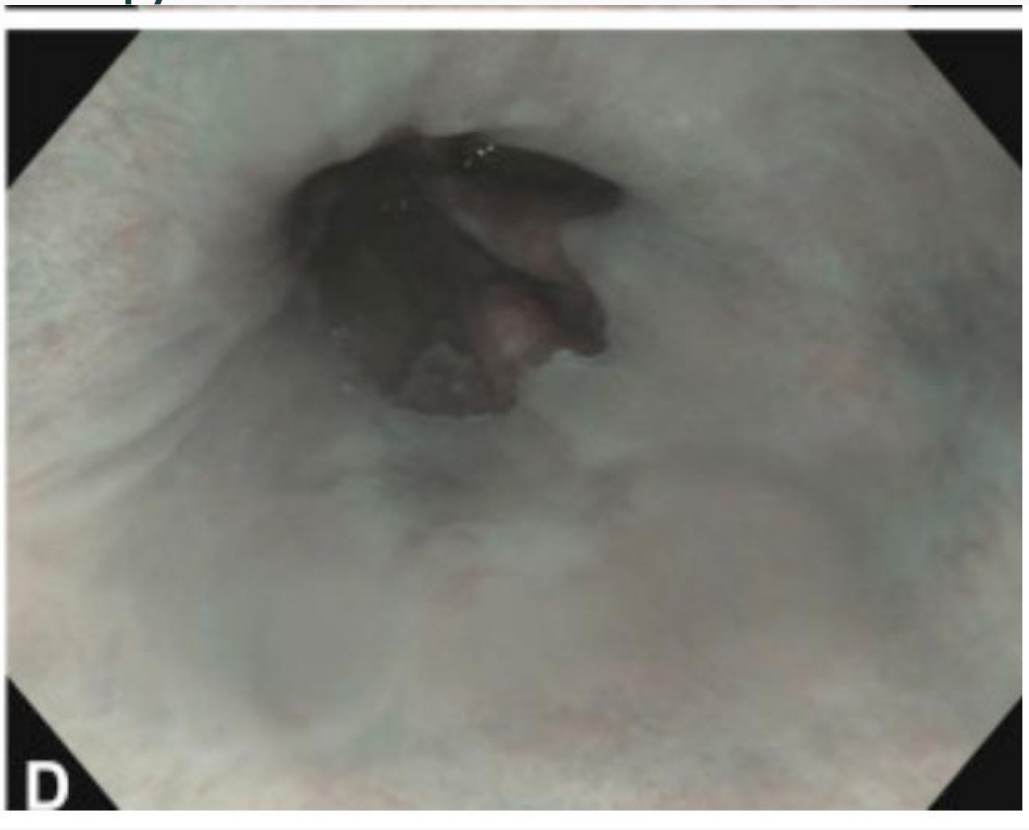
Cryotherapy

Cryotherapy uses a catheter inside a balloon to deliver cold to ablate the dysplasia



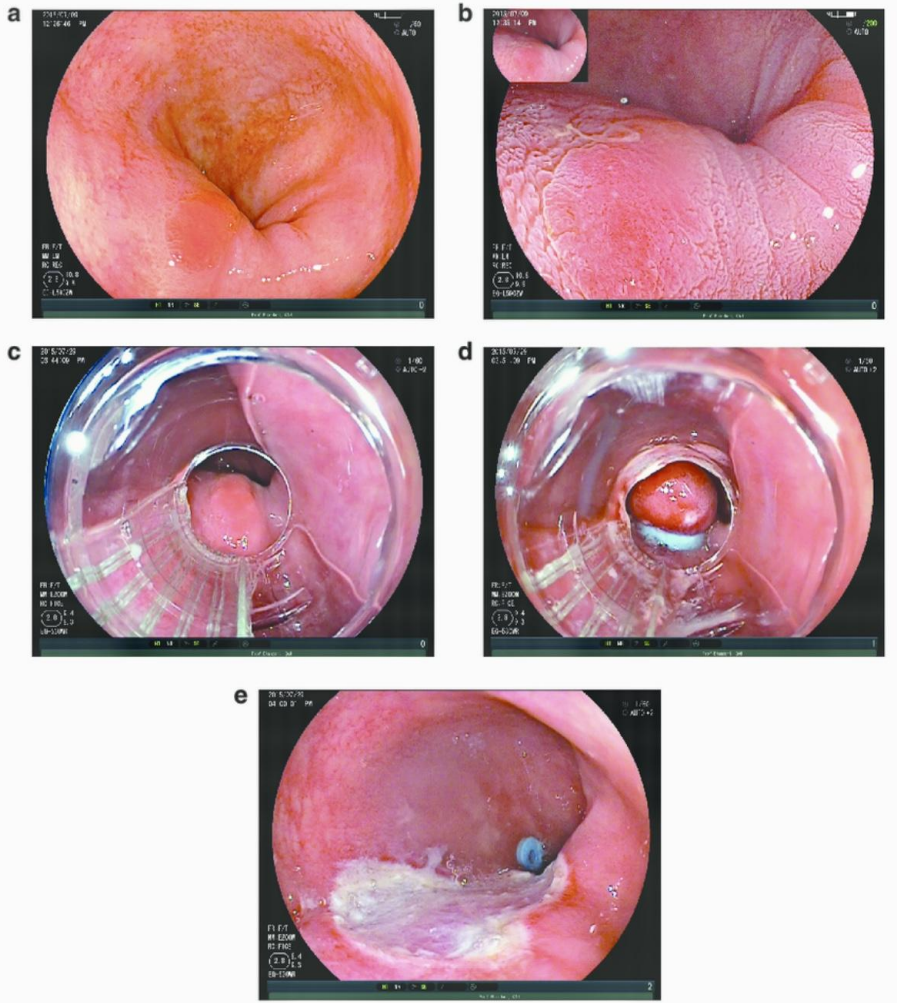
Barrett’s esophagus pre and post cryotherapy

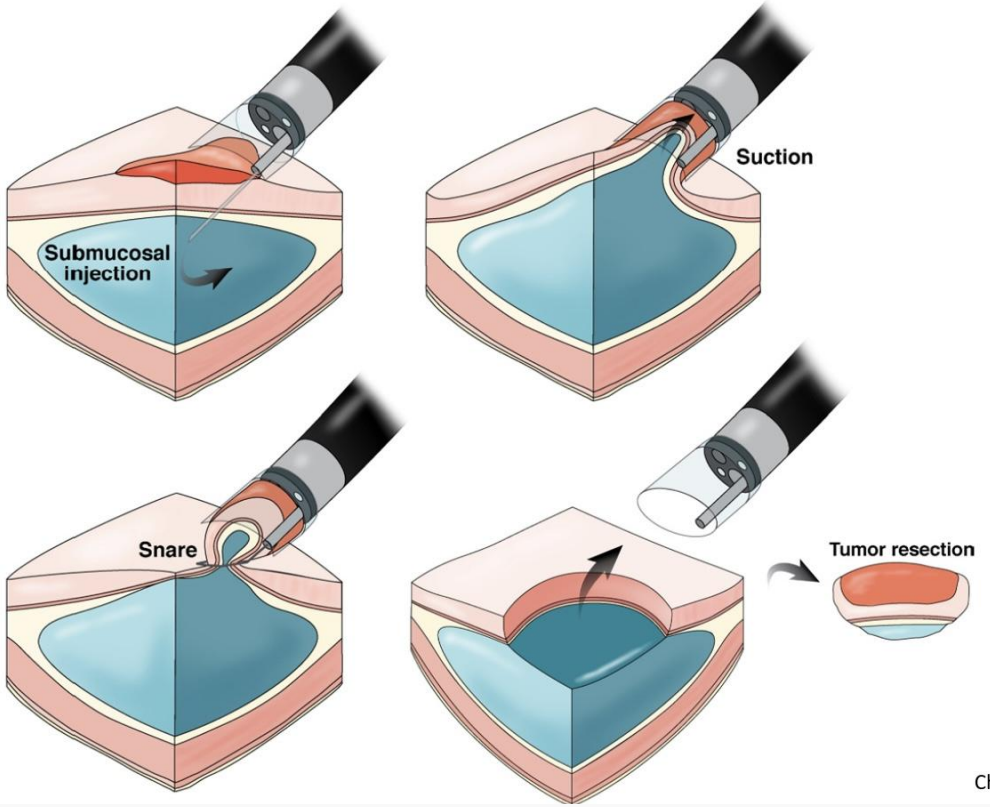




EMR- Endoscopic Mucosal resection

Mucosa is pulled up and resected in areas of dysplasia.

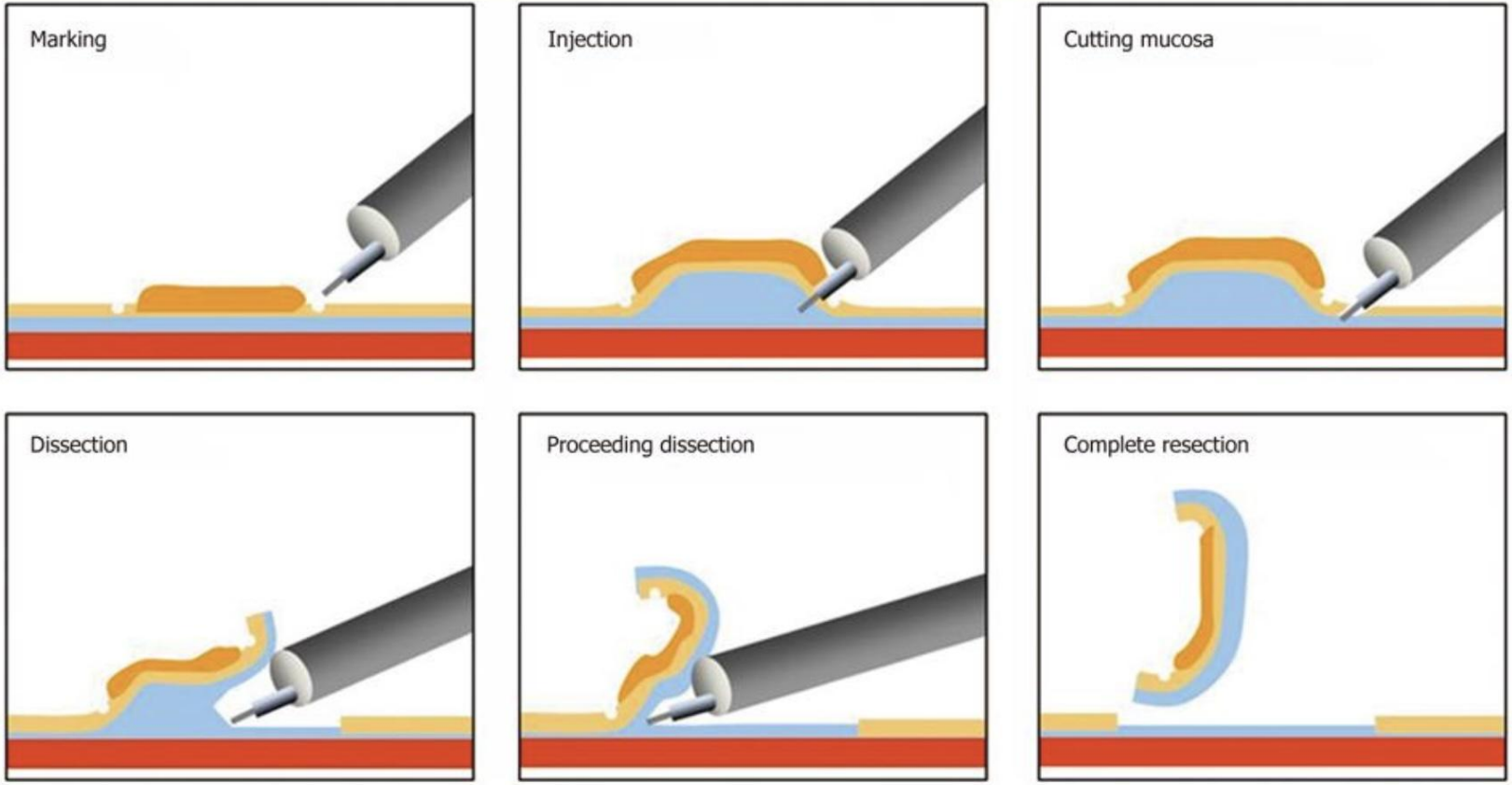

a
b
c
d
e

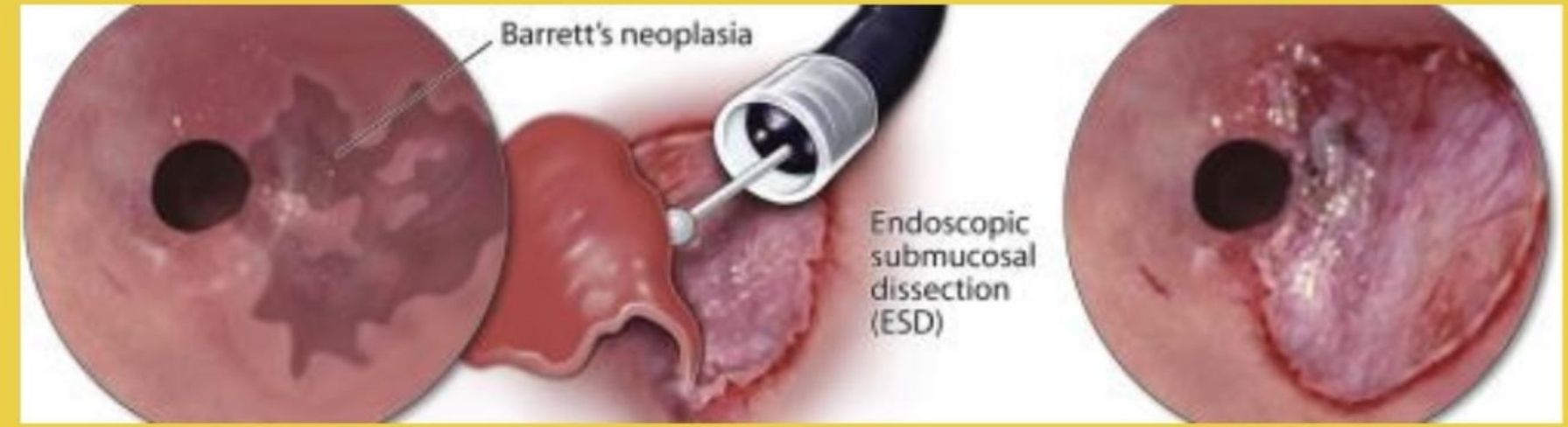


Chandrasekhara and Ginsberg, Gastroenterology 2011; 141:42.

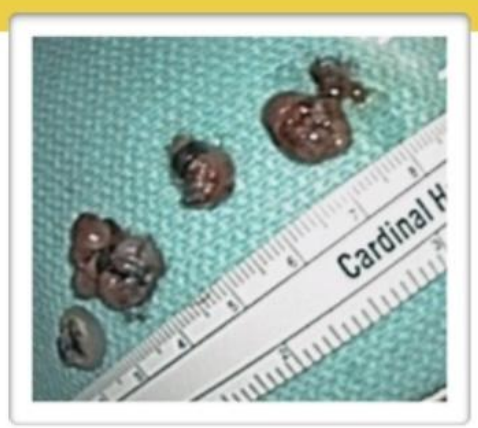
ESD- Endoscopic Submucosal Dissection

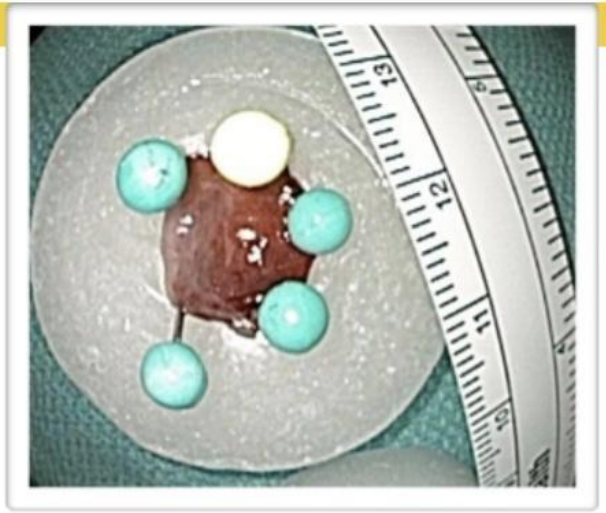
Similar to EMR but goes deeper than the mucosal layer, often larger in size and removed in one piece.


Marking
Injection
Cutting mucosa
Dissection
Proceeding dissection
Complete resection


Barrett's neoplasia
Endoscopic submucosal dissection (ESD)

Method of pining large specimens for pathology





ENDOSCOPIC ABLATION PROGRAM DISCHARGE INSTRUCTIONS

☐ **Radiofrequency Ablation (RFA)** ☐ **Endoscopic Mucosal Resection (EMR)**

MEDICATIONS

The following medications are taken by mouth as ordered by the physician. Take your medication while sitting. Remain in a sitting position for at least 30 minutes after taking your medication.

- ☐ Proton pump inhibitor _____
- ☐ Almagel and 2% Xylocaine mixture which is a freezing medication. It will numb the esophagus temporarily to relieve pain.
- ☐ Sulcrate suspension 1 gram, 4 times a day (after each meal and at bedtime) or as prescribed to coat the esophageal wall to protect it from gastric acid.
- ☐ If you are taking anticoagulant/antiplatelet medication restart _____
- ☐ Avoid non-steroidal anti-inflammatory medications (such as Advil, Motrin, Celebrex) for 7 days following treatment.
- ☐ Oral Viscous Budesonide take as prescribed by physician. Please take this medication every morning and every evening for 2 weeks. Please do not eat or drink anything for 30 minutes after taking this medication.
- ☐ Acetaminophen extra strength (with or without codeine) every 4 hours for pain.
- ☐ Anti-emetic (anti-nausea) medication such as Gravol for nausea as needed.
- ☐ Milk of Magnesia 30 mL twice a day as needed for constipation.

Post treatment diet and instructions

- Clear fluids for the rest of that day
- Full Fluids for the next 24 hours
- Soft diet for the next 7–14 days
- no carbonated drinks, no acidic food or drinks, moderately temperature for all food or drink

Risks and what to watch for post treatment

Out of town Patients are advised to stay in the major city for 24- 48 hrs post procedure

Pain can be common post ablation or EMR treatment usually relieved with acetaminophen and pink lady

Perforation is a risk of these procedures so patients are advised to attend to local ER if the post treatment medications have not provided relief, have become sharp in nature or have SOB

Bleeding is another potential complication- patients are advised to go to the local ER if any signs of melena or weakness/dizziness

Thank you

Questions? Comments?

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