

Tackling Refractory GERD and Chest Pain

What's New in GI 2025

February 22, 2025

Kerry B. Dunbar, MD, PhD, AGAF, FASGE, FAFS
Professor of Medicine

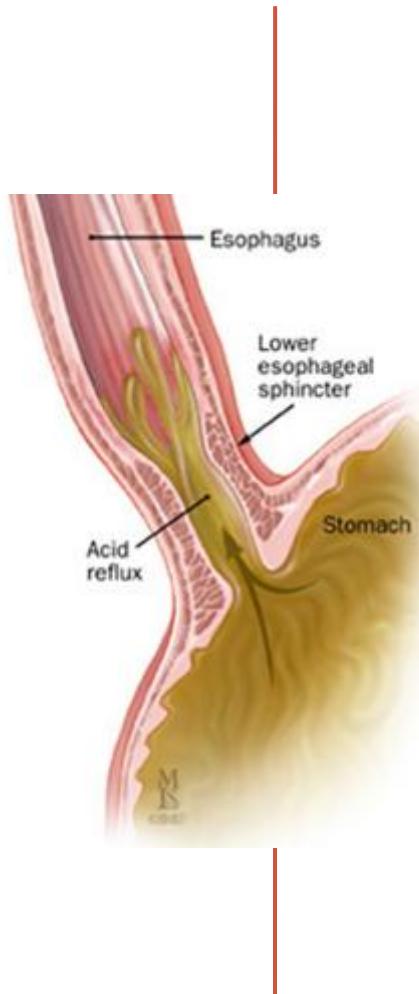
University of Texas Southwestern Medical Center
Gastroenterology Section Chief, VA North Texas
Healthcare System



GERD Symptoms

GI Symptoms

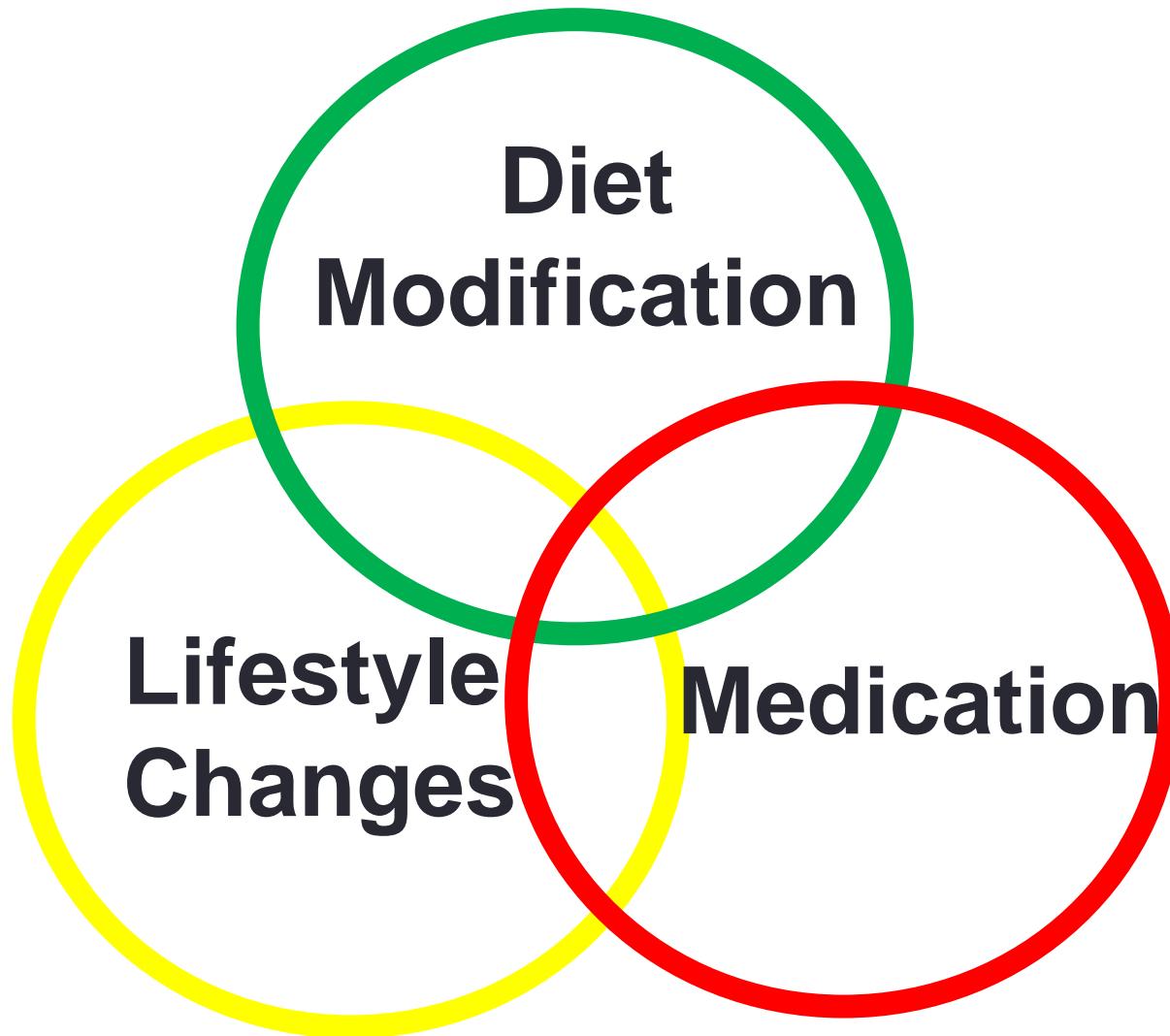
- Heartburn
- Regurgitation
- Chest pain
- Belching
- Epigastric pain
- Nausea



Extraesophageal Symptoms

- Throat-clearing
- Cough
- Hoarseness
- Sore Throat
- Asthma
- Globus sensation
- Water brash
- Dental erosions

Initial Treatment of GERD



Diet and Lifestyle Modification

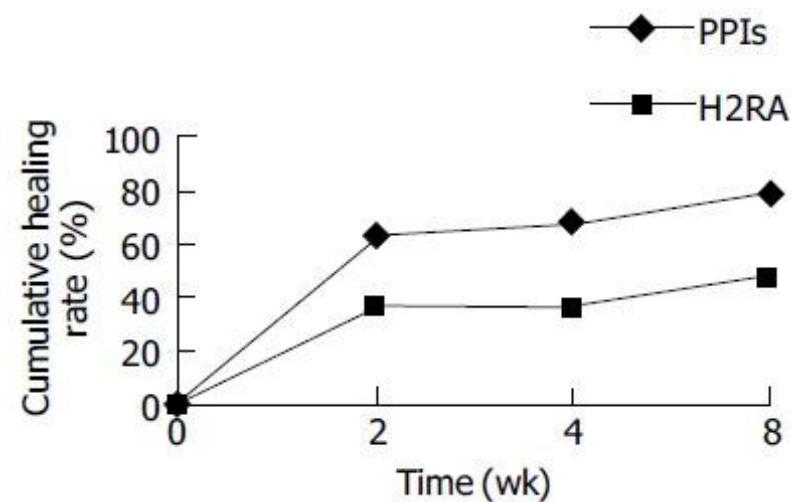
- Small meal size
- Reduce dietary fat, caffeine, alcohol, other triggers
- Stay upright for several hours after eating
- Weight loss

- Elevate head of the bed for sleeping
- Sleep in the left lateral decubitus position
- Smoking cessation



Medications for GERD

- Compared to H2RAs and antacids, PPIs are more effective for
 - Healing erosive esophagitis
 - Controlling GERD symptoms
- FDA approved dose of PPI for GERD is once-daily
Often used twice daily in clinical practice

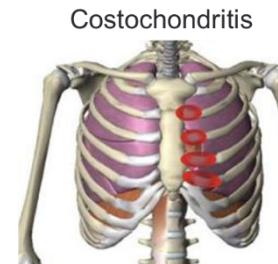
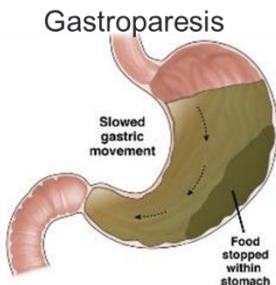
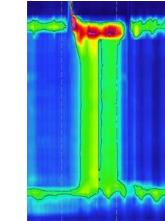


Refractory GERD Symptoms

10% to 40% of patients have persistent, bothersome GERD symptoms despite PPI use, diet, lifestyle

What Causes Refractory GERD Symptoms?

- Abnormal acid reflux continues despite PPIs
- Heartburn is caused by an esophageal disorder other than GERD
 - Eosinophilic esophagitis
 - Motility disorders
- Heartburn is caused by extraesophageal disorders

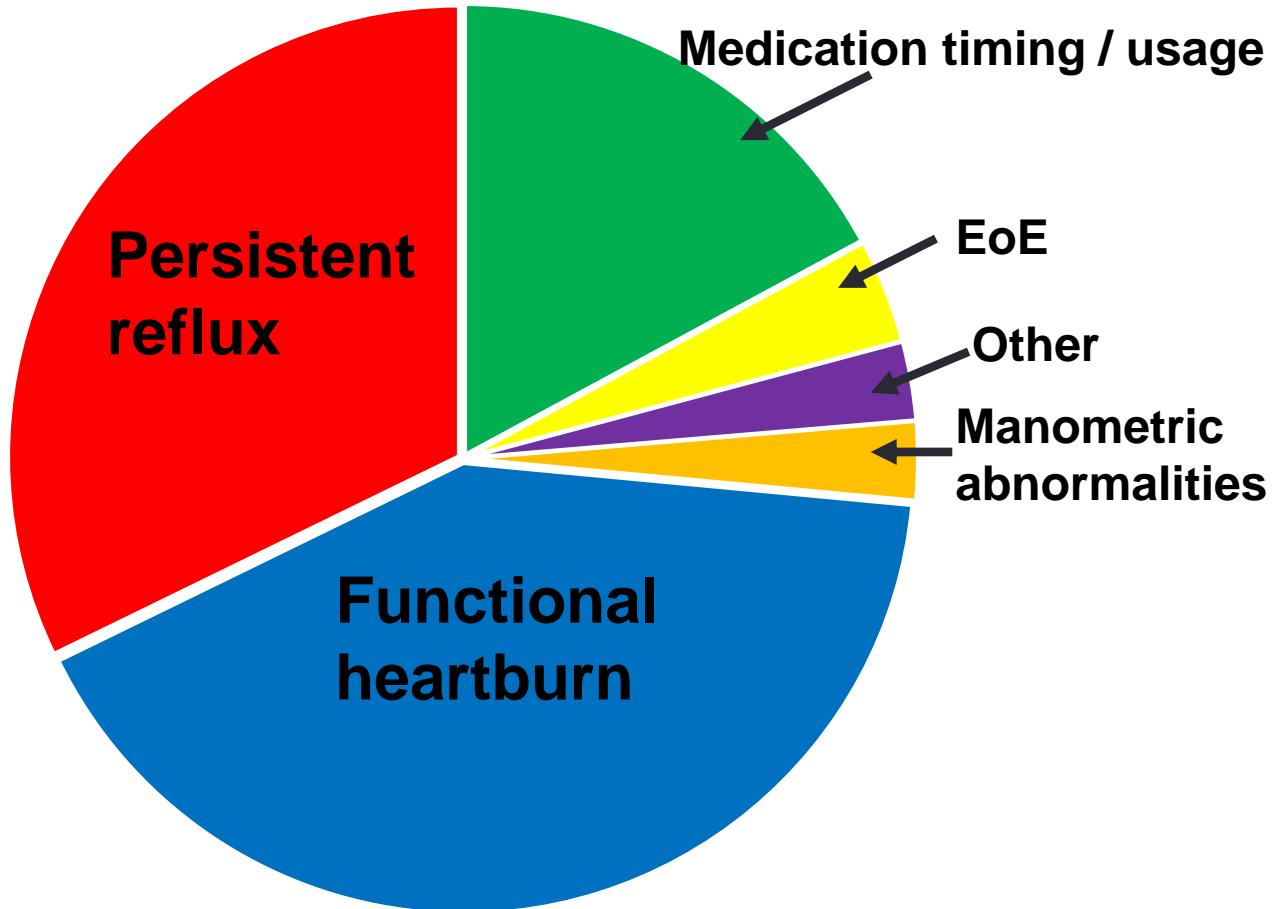


- Reflux hypersensitivity – physiologic reflux episodes evoke heartburn
- Heartburn is functional / disorder of the gut-brain axis

Causes of Persistent Heartburn with PPI Use

Patients underwent:

- EGD
- Esophageal manometry
- pH impedance testing on BID PPI



Persistent GERD Symptoms - Questions to Ask

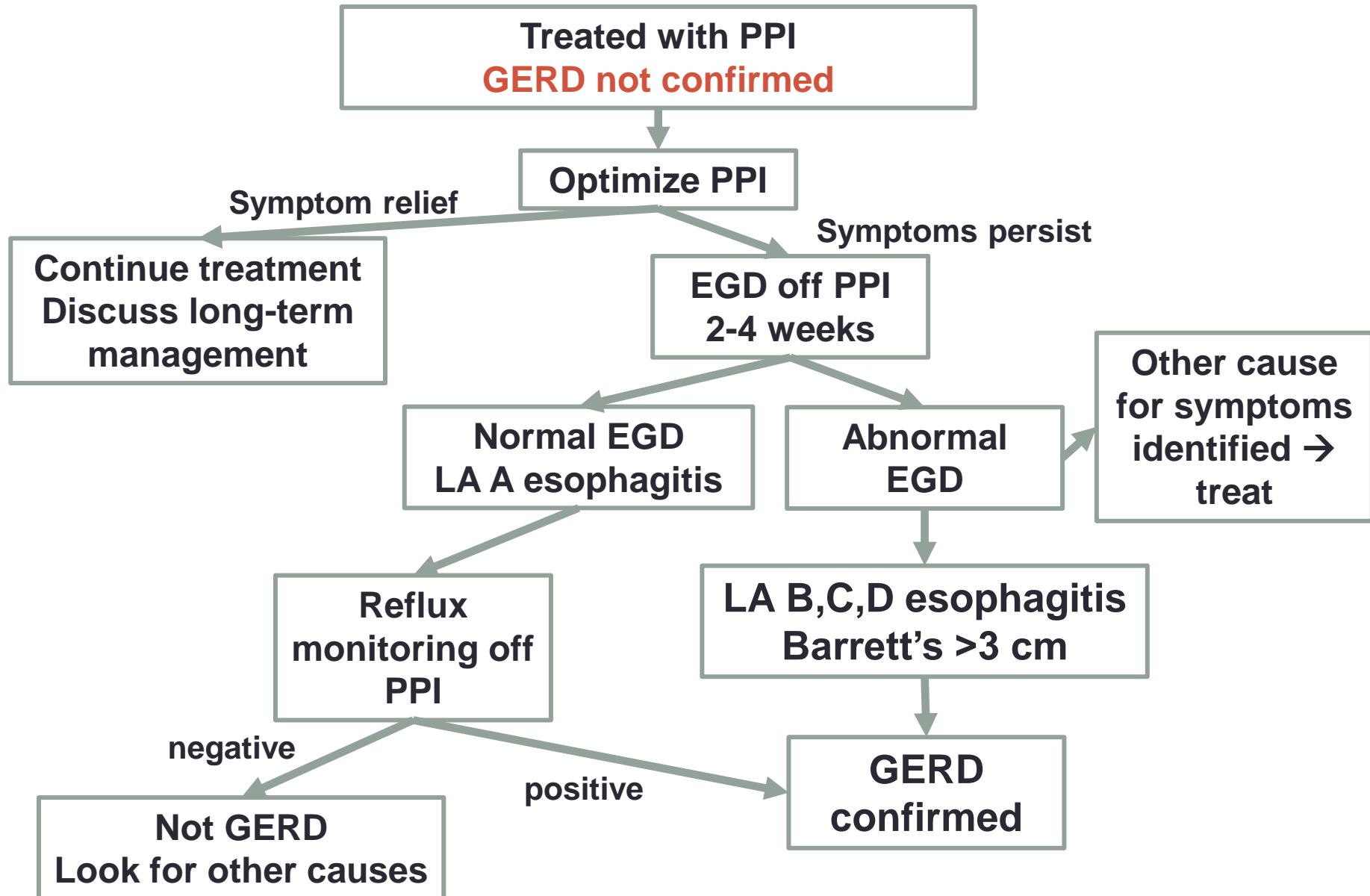
- Which symptoms ?
 - Heartburn
 - Regurgitation
 - Chest pain
 - Extra-esophageal – cough, laryngeal symptoms
 - Belching
 - Other GI/ non-esophageal symptoms
- How often?
 - Once? Multiple times per week?
- Testing and treatment choice will depend on the medical history



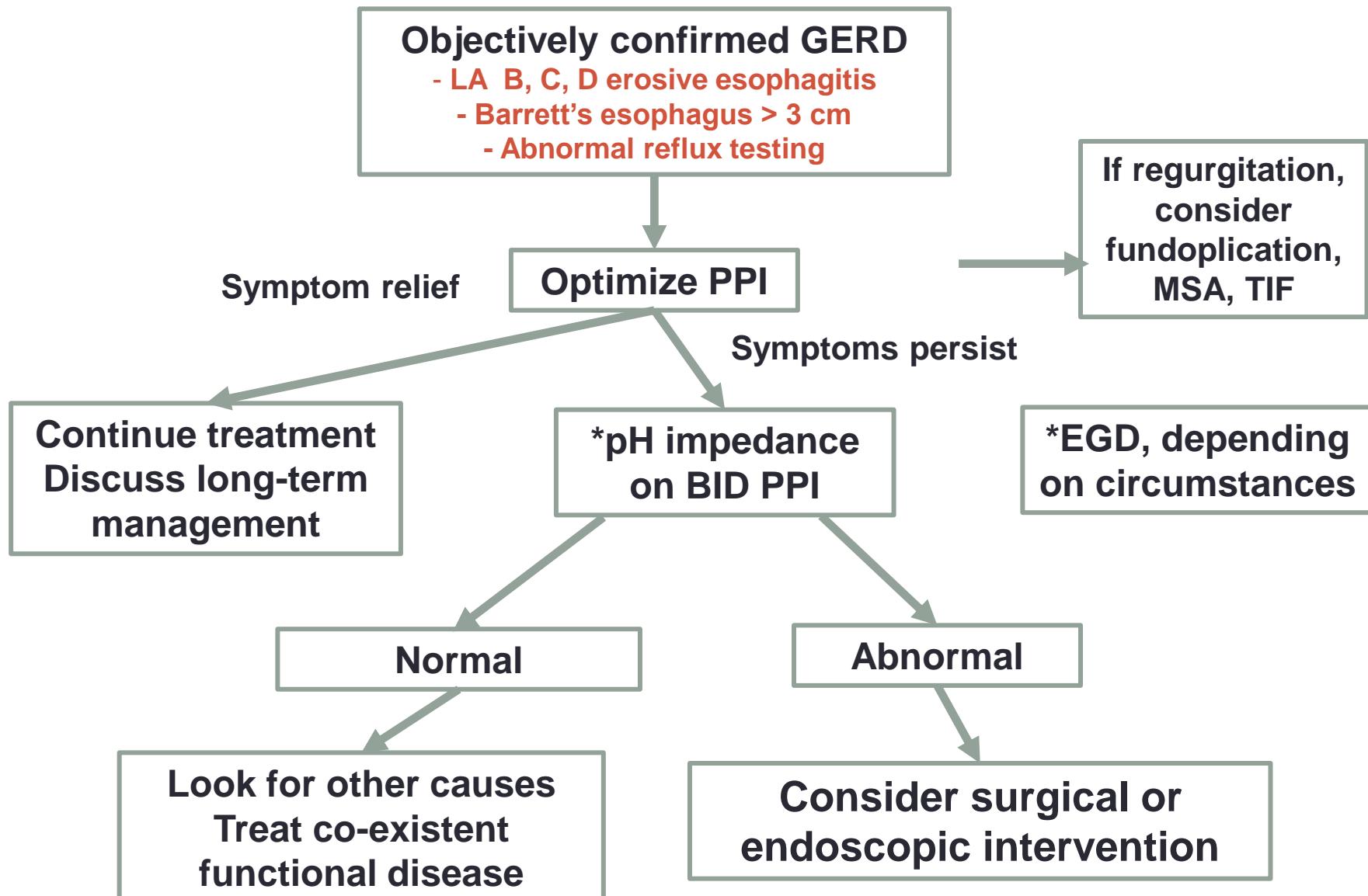
Evaluation and Management of Refractory GERD Symptoms

What to do when diet, lifestyle, and
medications aren't working

Evaluation of Persistent GERD Symptoms

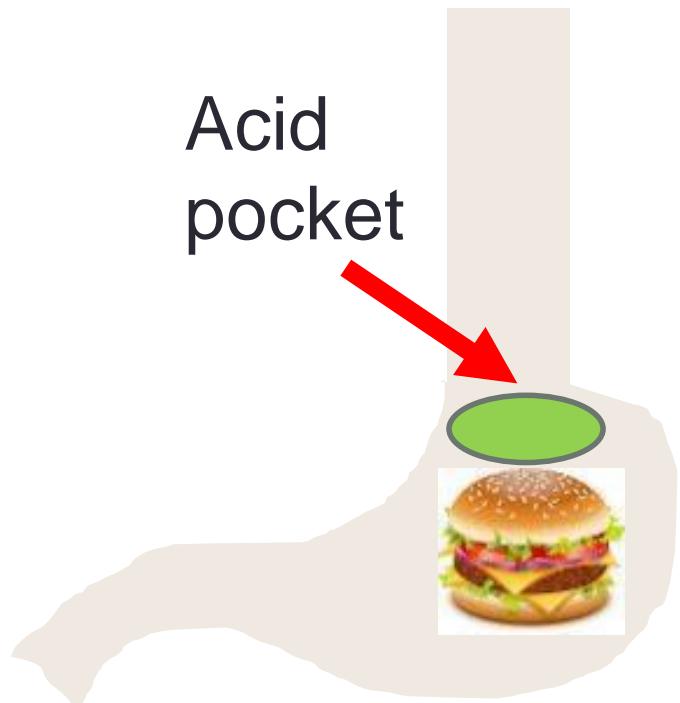


Evaluation of Persistent GERD Symptoms



Alginates

- Floats on top of the acid pocket / gastric contents in the stomach
- Good for mild or intermittent GERD symptoms
- Also good for add-on therapy in refractory GERD
- Several options for alginates



Baclofen

- Reduces transient lower esophageal sphincter relaxation → fewer reflux events
- Off label use
- Some small studies show success
- Multicenter VA study of patients with heartburn refractory to PPIs
 - Patients with abnormal pH testing on omeprazole 20mg BID
 - Adding baclofen to BID PPI was no better than placebo for heartburn
- **May be helpful with persistent regurgitation and belching**



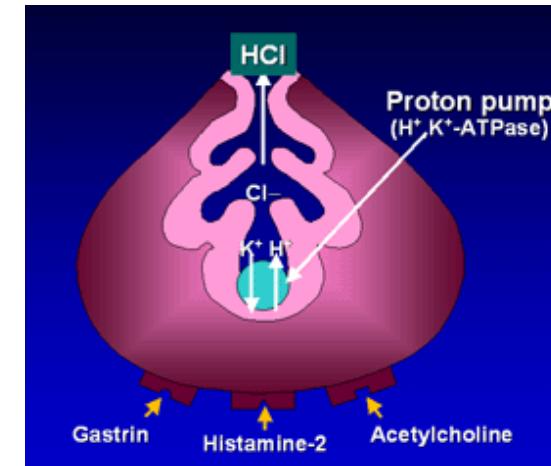
Prokinetics and GERD Symptoms

- Prokinetics + PPI - meta-analysis of 12 RCTs, 2403 pts
- No significant improvement in symptoms or healing of esophagitis
- Reduction in reflux episodes, but not esophageal acid exposure time
- Adverse events higher

Prokinetics are not recommended for GERD without further testing

Potassium-Competitive Acid Blockers (PCABs)

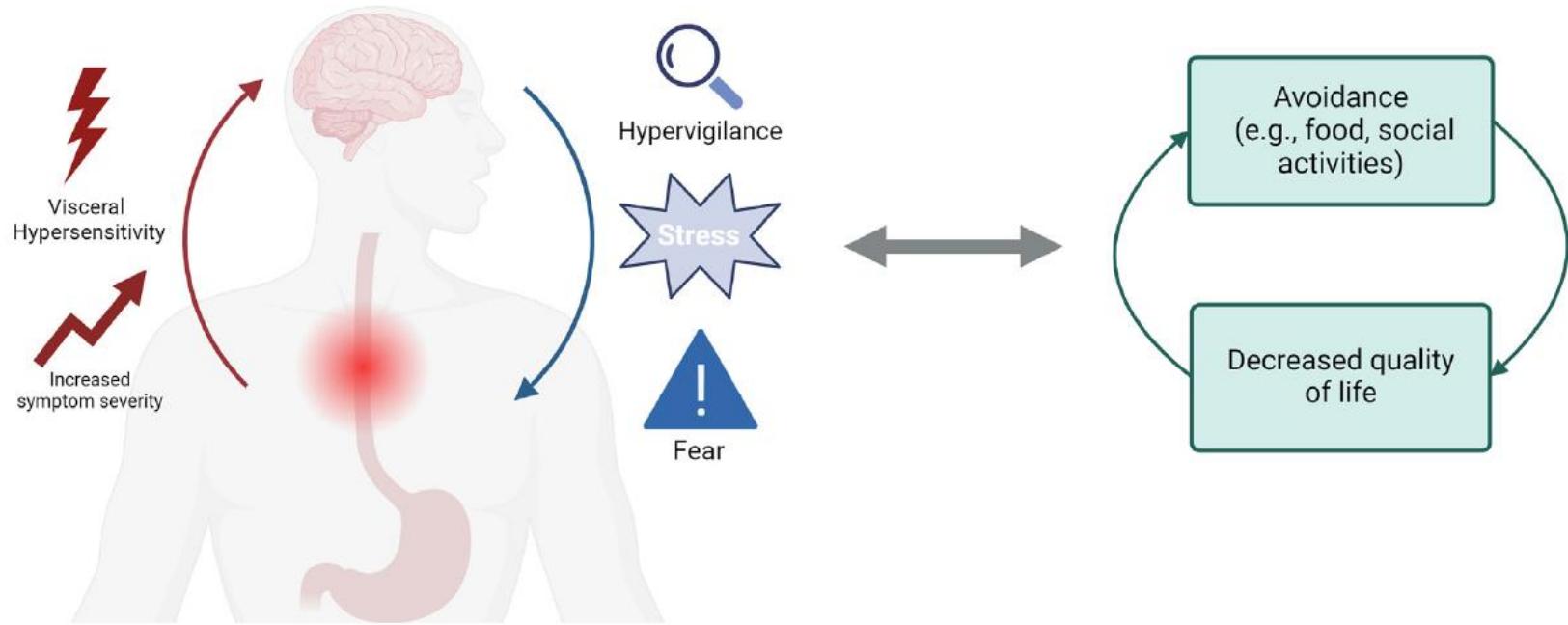
- Bind to the potassium portion of the H^+/K^+ ATPase in parietal cells → inhibit gastric acid secretion
- Vonoprazan – only PCAB available in the US
 - Dosage is 20 mg once daily
- Other PCABs are in development and being tested in RCTs
- Approved for:
 - Treatment of acute erosive esophagitis
 - Maintenance treatment of erosive esophagitis
 - Treatment of nonerosive reflux disease
 - As part of combo therapy for *H pylori*
- Not recommended during pregnancy and breastfeeding



Which Patients with Persistent GERD may benefit from a PCAB?

- AGA Clinical Practice Update – cautious use due to expense
 - Daily PCAB has modest clinical superiority over BID PPI
 - Can consider for symptoms and/or erosive esophagitis that doesn't improve with BID PPI
 - Healing and maintenance of severe erosive esophagitis
 - Los Angeles Grade C and D erosive esophagitis
 - Intermittent treatment of NERD symptoms (relief within 3 hours)
- Possible future uses – need studies
 - Patients undergoing ablation of Barrett's esophagus who have persistent erosive esophagitis and lack of healing
 - Patients with esophageal aperistalsis with severe reflux symptoms and persistent esophagitis
 - Lung transplant population
- More guidance to come from other GI societies

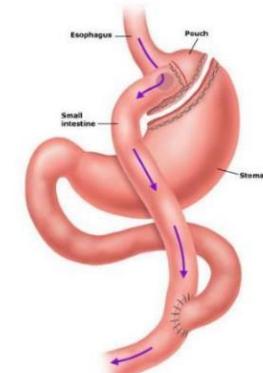
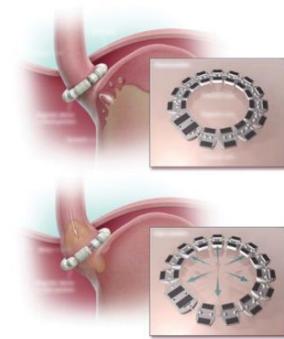
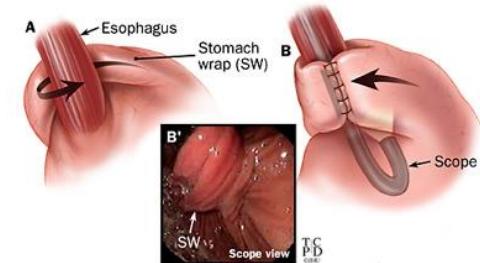
Esophageal Symptom Hypervigilance



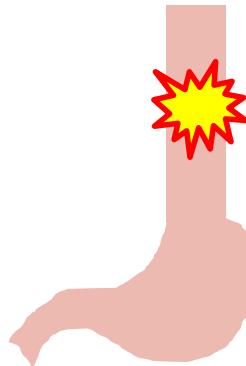
- Additional options for treatment of distressing GERD, reflux hypersensitivity, functional heartburn, disorders of the gut-brain axis
 - Neuromodulators to decrease visceral hypersensitivity
 - Gut-directed hypnotherapy
 - Cognitive behavioral therapy

Surgery and Refractory GERD

- Fundoplication
 - Most patients have good control of symptoms
 - ~17% of patients have recurrence by 5 years
 - Benefit in PPI-responders, abnormal pH testing
- Magnetic sphincter augmentation
 - Ring of magnetic beads placed around the distal esophagus, increases pressure at the LES
 - At 5 years, 85% of patients are off PPI
- Gastric bypass
 - 6 months after surgery, 70% of patients have significant improvement in GERD

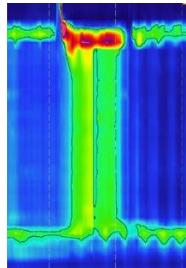


Evaluation and Management of Chest Pain

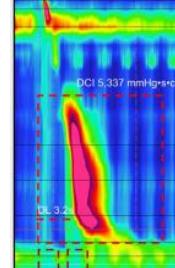


Chest pain and GERD

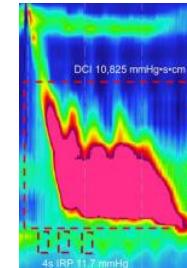
- Some non-cardiac chest pain is due to GERD
 - Burning, tightness, may be worse after meals
 - Abnormal pH testing in ~40% of patients
- Chest pain also occurs with motility disorders



Achalasia



Esophageal Spasm



Jackhammer Esophagus

- DGBI with chest pain – esophageal hypersensitivity, functional heartburn, functional chest pain
- Non-esophageal causes are important



Cardiac Disease



Costochondritis

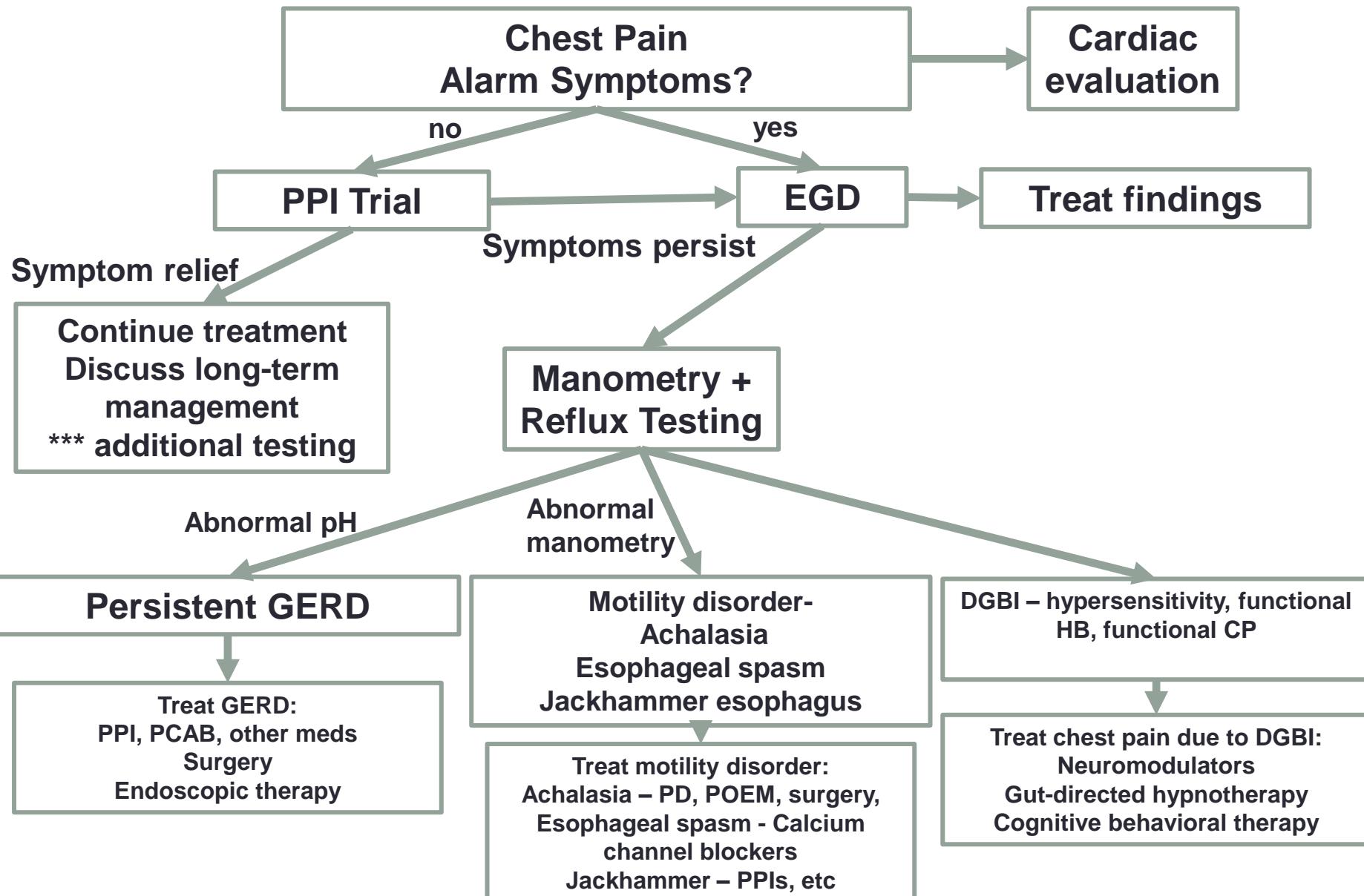


Pulmonary

Treatment of GERD-Related Chest Pain

- Chest pain is more likely to respond to standard GERD treatment if:
 - associated with typical GERD symptoms (heartburn, regurgitation)
 - abnormal acid-exposure time on pH testing
 - strong symptom correlation on pH testing
- With objective GERD - 3 of 4 will patients with non-cardiac chest pain will improve with PPI
- Without objective GERD – 1 of 3 will improve with PPI

Evaluation and Treatment of Chest Pain



Management of Refractory GERD and Chest Pain

- Selection of therapy depends on the symptom profile, severity, and frequency
 - Not all UGI symptoms are GERD
- Remember diet and lifestyle changes
 - Reduce trigger foods, caffeine, fat, alcohol
 - Stay upright after eating
 - Smaller meals
 - Weight loss

Management of Refractory GERD and Chest Pain

- PPIs are the most effective medication for GERD
 - Verify correct timing and dosing
 - PPI non-responders should have testing to determine whether GERD is present
- PCABs – option for some patients with refractory GERD
- Neuromodulators, gut-directed hypnotherapy are options to help with visceral hypersensitivity, hypervigilance, distress

Questions?

