



EGIDs Update

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Eastern Allergy Conference
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Objectives

- Provide a brief clinical overview of eosinophilic gastrointestinal disorders (EGIDs)
- Review current strategies for the diagnosis and management of non-EoE EGIDs
- Summarize the updated guidelines on the diagnosis and management of EoE



Case Presentation

- 28 year-old male with history of mild intermittent asthma presents for evaluation of abdominal pain
 - 2017 → started to have intermittent nausea and vomiting
 - June 2019 → found to have low iron levels
 - EGD in 2019 demonstrated eosinophil-rich chronic gastritis
 - Started on budesonide with improvement in symptoms and then stopped

Case Presentation (continued)



- March 2021 → peripheral eosinophilia (AEC 1800)
- Work-up for hypereosinophilic syndrome was negative
- **EGD (2021) demonstrated:**
 - Duodenum: Histologically unremarkable
 - Stomach: abundant reactive epithelial changes and increased eosinophils (> 50 eos/hpf in 5 separate fields) predominantly in the lamina propria
 - Esophagus: Increased intraepithelial eosinophils (up to 37/hpf)

Eosinophilic GI Disorders (EGIDs)



- **Definition:** Disorders that selectively affect the gastrointestinal (GI) tract with eosinophil-rich inflammation in the absence of known causes of eosinophilia
- **Nomenclature:**
 - ☐ Eosinophilic esophagitis (EoE)
 - ☐ Eosinophilic gastritis (EoG)
 - ☐ Eosinophilic enteritis (EoN → EoD, EoI, EoJ)
 - ☐ Eosinophilic colitis (EoC)

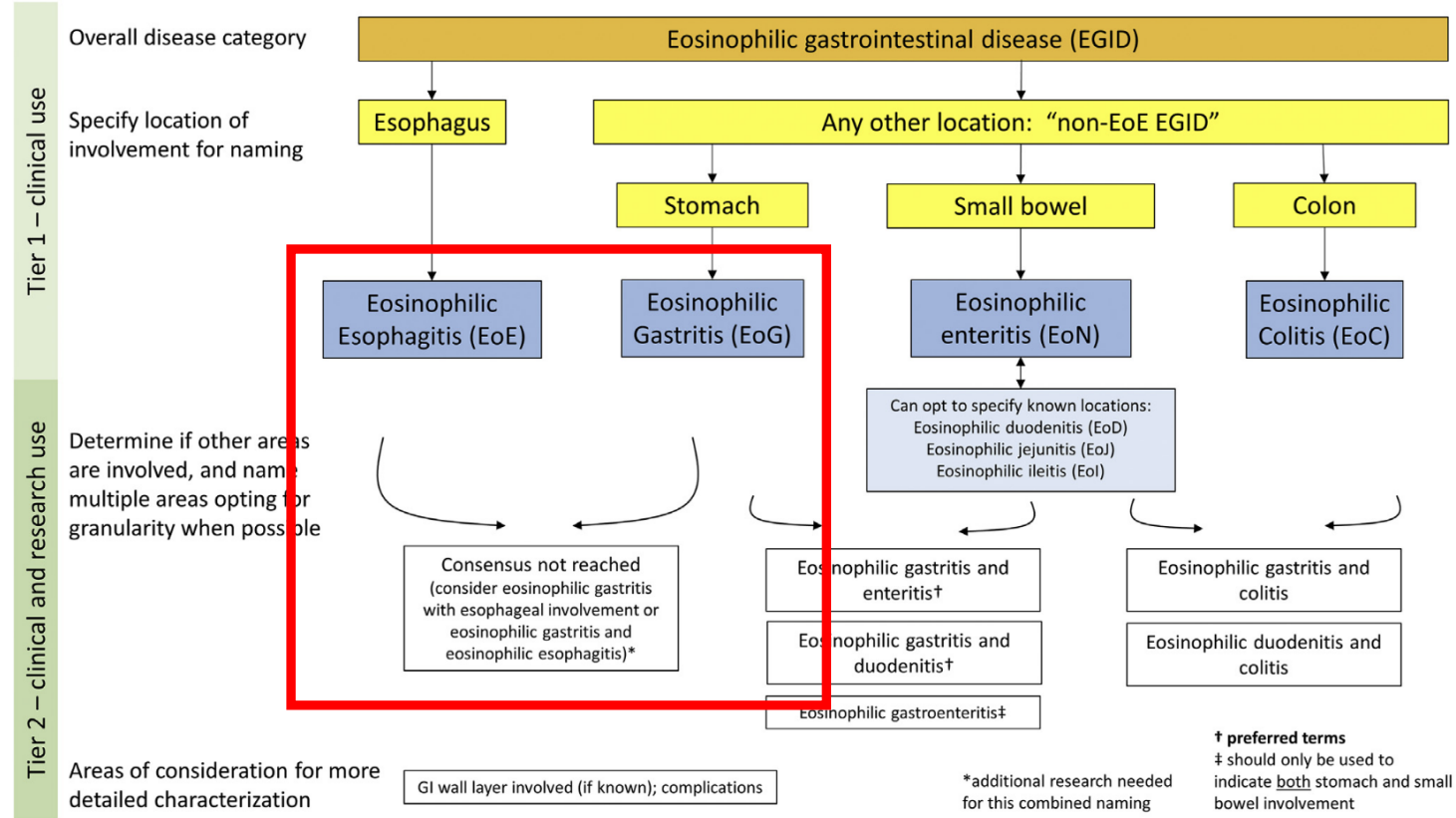


Figure 2. Consensus nomenclature framework for EGIDs. Note that for naming multiple involved GI segments, representative examples are provided, but not all possible combinations are listed.



Diagnosis

- Eosinophilic Gastritis (EoG) with esophageal involvement
OR
- Eosinophilic Gastritis (EoG) and EoE



Epidemiology

- Prevalence estimates:
 - EoG: 6.3 per 100,000
 - EoN: 8.4 per 100,000
 - EoC: 3.3 per 100,000
- More common in 3rd – 5th decades
- Males = females (1:1)
- Strongly associated with other allergic diseases (except EoC)

Jensen ET, *et al*, JPGN, 2016
Mansoor E, *et al*, CGH, 2017



Clinical Symptoms

1. Location and extent of segment involved

- Stomach
- Small intestine
- Large intestine

2. Layer of tissue affected

- Mucosal
- Muscularis
- Serosal



Clinical Symptoms

- **Mucosal:** Nausea, vomiting, abdominal pain, bloating, diarrhea, blood loss, iron deficiency anemia, malabsorption, protein-losing enteropathy, failure to thrive
- **Muscularis:** Decreased motility, bowel obstruction
- **Serosal:** Ascites



Laboratory Findings

- Elevated absolute eosinophil count
- Decreased albumin
- Prolonged prothrombin time
- Abnormal D-xylose test (carbohydrate malabsorption)
- Iron-deficiency anemia
- Elevated ESR
- Elevated IgE

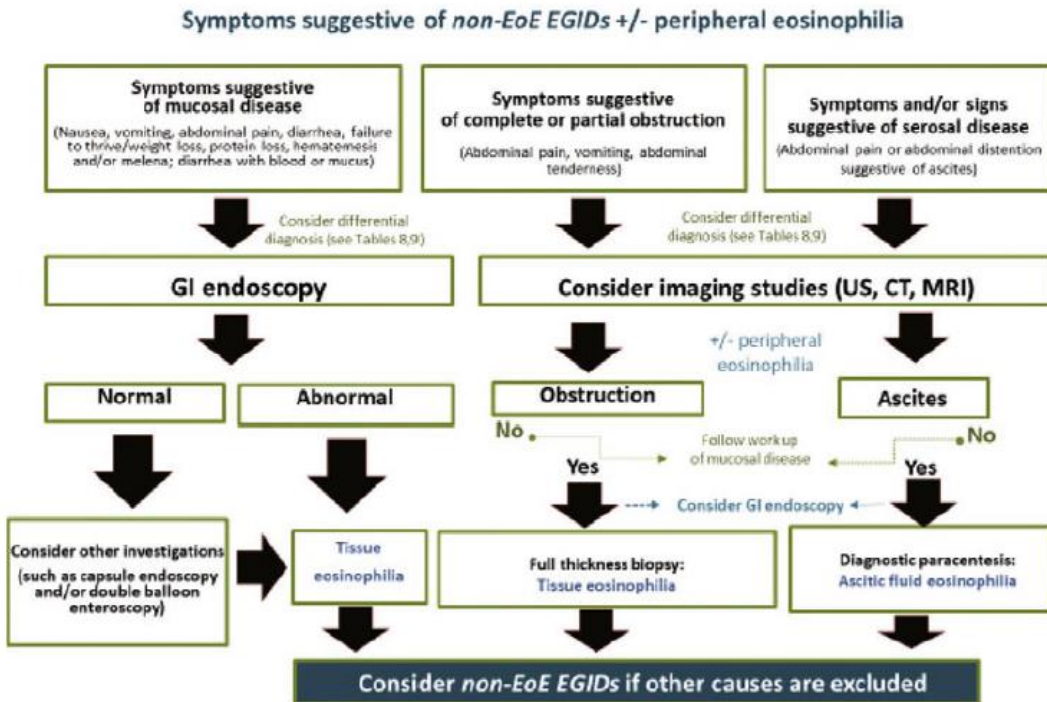
Tissue Biopsies

- Limited guidelines
- Suggested cut-offs:
 - **Stomach:** > 30 eos/hpf in 5 separate fields
 - **Duodenum:** > 50 eos/hpf
 - **Ileum:** > 60 eos/hpf
 - **Cecum and Ascending colon:** > 100 eos/hpf
 - **Transverse and Descending colon:** > 80 eos/hpf
 - **Rectum and Sigmoid colon:** > 60 eos/hpf

Imaging

- If concern for EoG and EoN is high with negative biopsies:
 - Consider imaging (CT, MR enterography)
 - Consider a full-thickness biopsy to assess deeper layers

Suggested Algorithm





Treatment

- Steroids (systemic and topical)
- Elimination diets
- Biologics?

“There is a lack of randomized controlled trials assessing the efficacy of the available treatment options for non-EoE EGIDs.”

~Joint ESPGHAN/NASPGHAN Guidelines on Childhood EGIDs beyond EoE, 2024



Treatment

- Steroids (systemic and topical)
- Elimination diets
- Biologics?

Steroids

■ Systemic (to induce remission):

- Prednisone 5-60 mg/day followed by 4-6 week taper

■ Topical:

- Budesonide 0.25 – 9 mg/day

- ☐ Fewer systemic side effects

- ☐ Enteric coated forms can be used:

- ☐ Distal small bowel and colon: Intact enteric coated pills

- ☐ Duodenum and jejunum: Open capsules with granules intact

- ☐ Stomach: Open capsules and crush granules



Treatment

- Steroids (systemic and topical)
- Elimination diets
- Biologics?

Elimination Diets

- Elemental diet
- Six food elimination diet
- Empiric elimination diet





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Food allergy and gastrointestinal disease

Prospective study of an amino acid–based elemental diet in an eosinophilic gastritis and gastroenteritis nutrition trial

Nirmala Gonsalves MD ^a  , Bethany Doerfler RD ^a, Angelika Zalewski ^a, Guang-Yu Yang MD ^b, Lisa J. Martin PhD ^c, Xue Zhang PhD ^c, Tetsuo Shoda MD, PhD ^d, Michael Brusilovsky PhD ^d, Seema Aceves MD, PhD ^e, Kathy Thompson ^f, Amanda K. Rudman Spergel MD ^f, Glenn Furuta MD ^g, Marc E. Rothenberg MD, PhD ^d, Ikuo Hirano MD ^a

→ Histologic, endoscopic, clinical, and quality of life improvements in EoG/EoN with elemental diet.



Treatment

- Steroids (systemic and topical)
- Elimination diets
- **Biologics?**

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Anti-Siglec-8 Antibody for Eosinophilic Gastritis and Duodenitis

Evan S. Dellon, M.D., M.P.H., Kathryn A. Peterson, M.D., Joseph A. Murray, M.D.,
Gary W. Falk, M.D., Nirmala Gonsalves, M.D., Mirna Chehade, M.D., M.P.H.,
Robert M. Genta, M.D., John Leung, M.D., Paneez Khoury, M.D.,
Amy D. Klion, M.D., Sabine Hazan, M.D., Michael Vaezi, M.D.,
Adam C. Bledsoe, M.D., Sandy R. Durrani, M.D., Chao Wang, Ph.D.,
Camilla Shaw, B.S.N., R.N., Alan T. Chang, B.S., Bhupinder Singh, M.D.,
Amol P. Kamboj, M.D., Henrik S. Rasmussen, M.D., Ph.D.,
Marc E. Rothenberg, M.D., Ph.D., and Ikuo Hirano, M.D.

Phase 3 study did not meet clinical endpoint (2023)
→ no longer being studied in EGID

Benralizumab



Benralizumab for eosinophilic gastritis: a single-site, randomised, double-blind, placebo-controlled, phase 2 trial

Kara L Kliewer, Cristin Murray-Petzold, Margaret H Collins, Juan P Abonia, Scott M Bolton, Lauren A DiTommaso, Lisa J Martin, Xue Zhang, Vincent A Mukkada, Philip E Putnam, Erinn S Kellner, Ashley L Devonshire, Justin T Schwartz, Vidhya A Kunnathur, Chen E Rosenberg, John L Lyles, Tetsuo Shoda, Amy D Klion, Marc E Rothenberg

Phase 2 study showed improvement in histology but no difference in endoscopic scores. Phase 3 was started but is no longer recruiting.

Dupilumab

NCT03678545:

- Phase 2 double-blind placebo-controlled randomized controlled trial
- 40 patients (12-70 years) with EoG
- Dose: 600 mg followed by 300 mg every other week

NCT05831176

- Phase 2, randomized, open-label study
- Part A: Treatment (up to 24wks)
- Part C: Extended-treatment (up to 52 wks)
- Patients with EoG (+/- EoD)



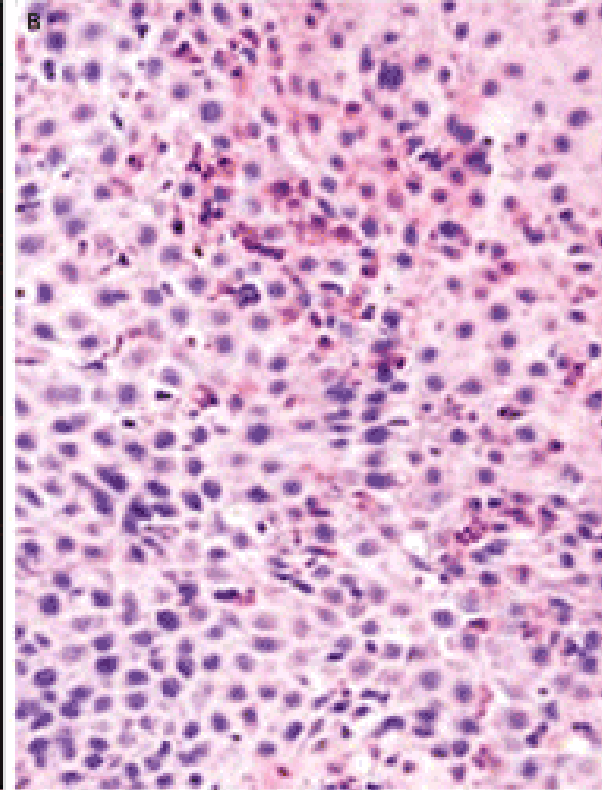
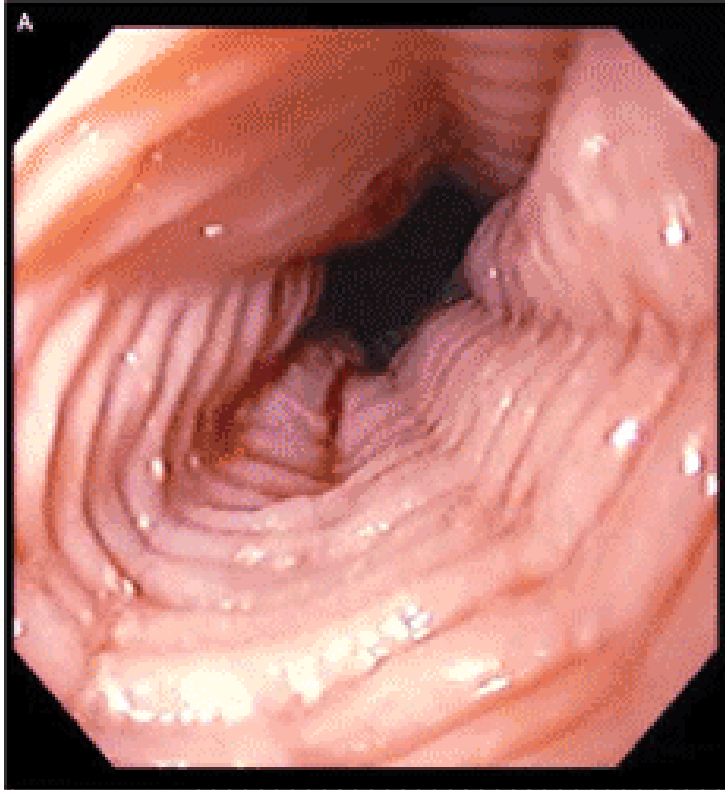
Other biologics

- Mepolizumab → case reports
- Vedolizumab → case reports
- Cendakimab → Phase 3 study designed

Back to the patient . . .

- He was restarted on budesonide twice daily (crushed granules) and a PPI once daily
- Repeat EGD demonstrated persistent eosinophils in the stomach and esophagus.
- He was eventually started on dupilumab (for the EoE indication) and a repeat endoscopy demonstrated remission

Eosinophilic Esophagitis



Guideline Update!



CME

ACG Clinical Guideline: Diagnosis and Management of Eosinophilic Esophagitis

Evan S. Dellon, MD, MPH, FACG¹, Amanda B. Muir, MD^{2,3,4}, David A. Katzka, MD, FACG⁵, Shailja C. Shah, MD, MPH^{6,7}, Bryan G. Sauer, MD, MSc, FACG⁸, Seema S. Aceves, MD, PhD^{9,10}, Glenn T. Furuta, MD^{11,12}, Nirmala Gonsalves, MD, FACG^{13,*} and Ikuo Hirano, MD, FACG^{13,*†}

Definition of EoE (2025)

- **A clinicopathologic disorder defined by the following criteria:**
 - Symptoms related to esophageal dysfunction
 - Eosinophil-predominant inflammation on esophageal biopsy (≥ 15 eos/hpf)
 - Secondary causes of esophageal eosinophilia are excluded

Diagnosis



Table 1. EoE recommendations

Statement	Quality of evidence	Strength of recommendation
Diagnosis		
1. We recommend that EoE is diagnosed based on the presence of symptoms of esophageal dysfunction and at least 15 eos/hpf on esophageal biopsy, after evaluating for non-EoE disorders that cause or potentially contribute to esophageal eosinophilia	Low	Strong
2. We recommend using a systematic endoscopic scoring system (e.g., the EoE Endoscopic Reference Score) to characterize endoscopic findings of EoE at every endoscopy	Low	Strong
3. We recommend obtaining at least 6 esophageal biopsies from at least 2 esophageal levels (e.g., proximal/mid and distal), targeting EoE endoscopic findings, if possible, to assess for histologic features consistent with EoE	Low	Strong
4. We recommend that eosinophil counts be quantified on esophageal biopsies from every endoscopy performed for EoE	Low	Strong

Treatment



Treatment		
<i>PPIs</i>		
5. We suggest PPIs as a treatment for EoE	Low	Conditional
<i>Topical steroids</i>		
6. We recommend the use of swallowed topical steroids as a treatment for EoE	Moderate	Strong
7. We suggest the use of either fluticasone propionate or budesonide in patients with EoE being treated with topical steroids	Low	Conditional
<i>Dietary elimination</i>		
8. We suggest an empiric food elimination diet as a treatment for EoE	Low	Conditional
9. We do not suggest currently available allergy testing to direct food elimination diets for treatment of EoE	Very low	Conditional
<i>Biologics</i>		
10. We suggest dupilumab as a treatment for EoE in individuals 12 years of age or older who are nonresponsive to PPI therapy	Moderate	Conditional
11. We suggest dupilumab as a treatment for EoE in pediatric patients (ages 1–11 years) who are nonresponsive to PPI therapy	Low	Conditional
12. We cannot make a recommendation for or against cendakimab, benralizumab, lirentelimab, mepolizumab, or reslizumab as a treatment for EoE	—	—
13. We suggest against using omalizumab as a treatment for EoE	Low	Conditional



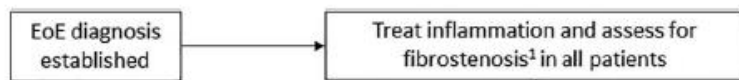
Maintenance and Monitoring

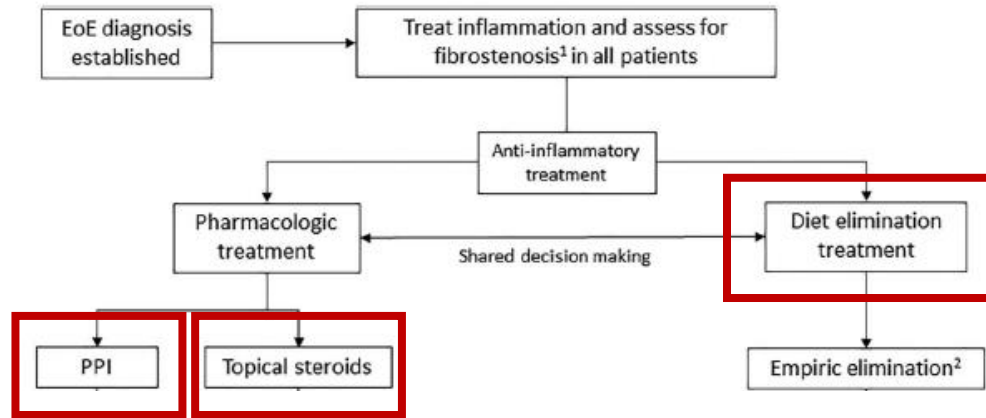
Maintenance therapy

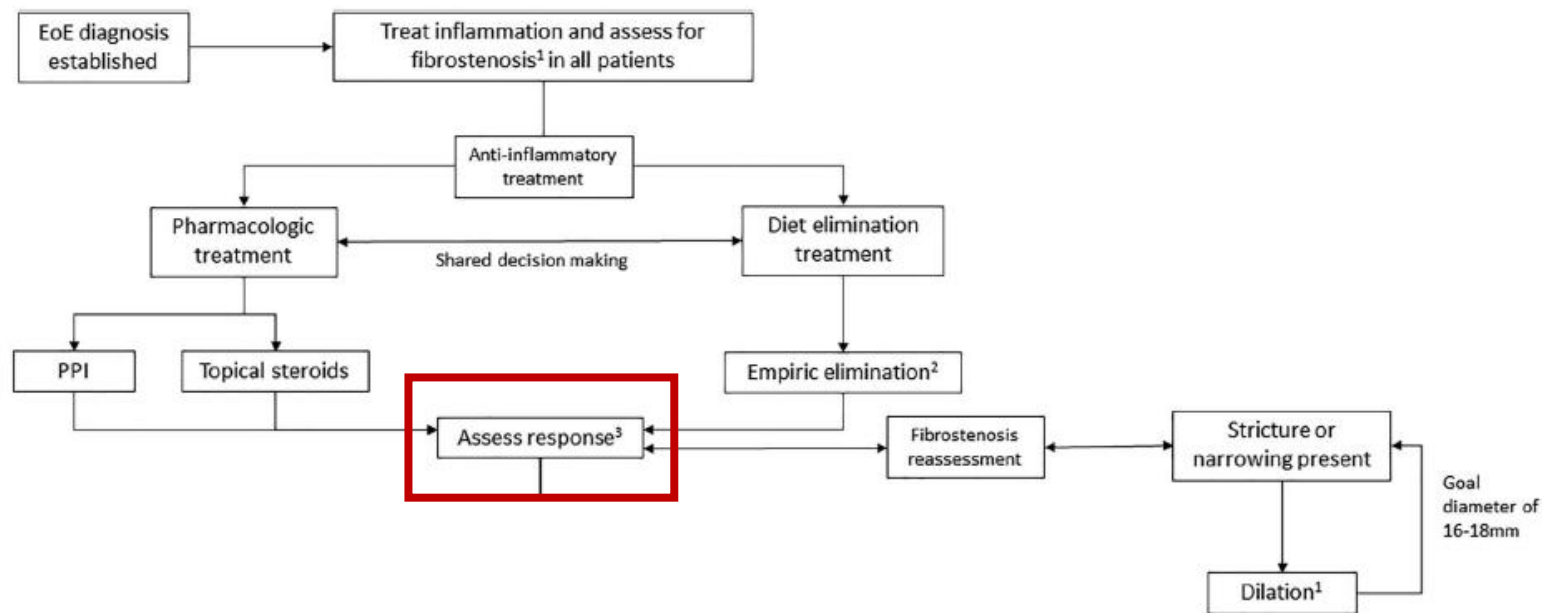
16. We suggest continuation of effective dietary or pharmacologic therapy for EoE to prevent recurrence of symptoms, histologic inflammation, and endoscopic abnormalities	Low	Strong
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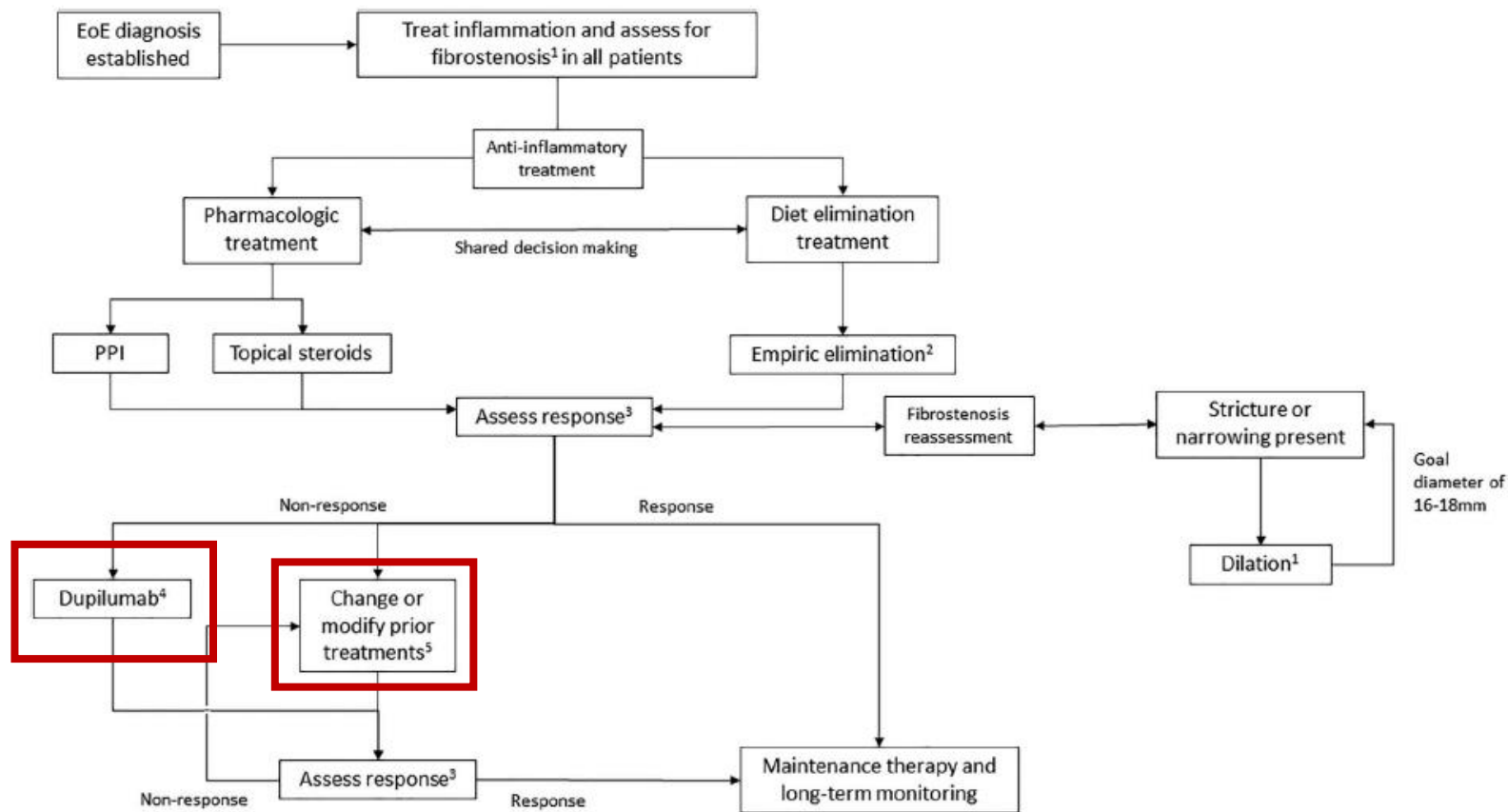
Monitoring and evaluation of response

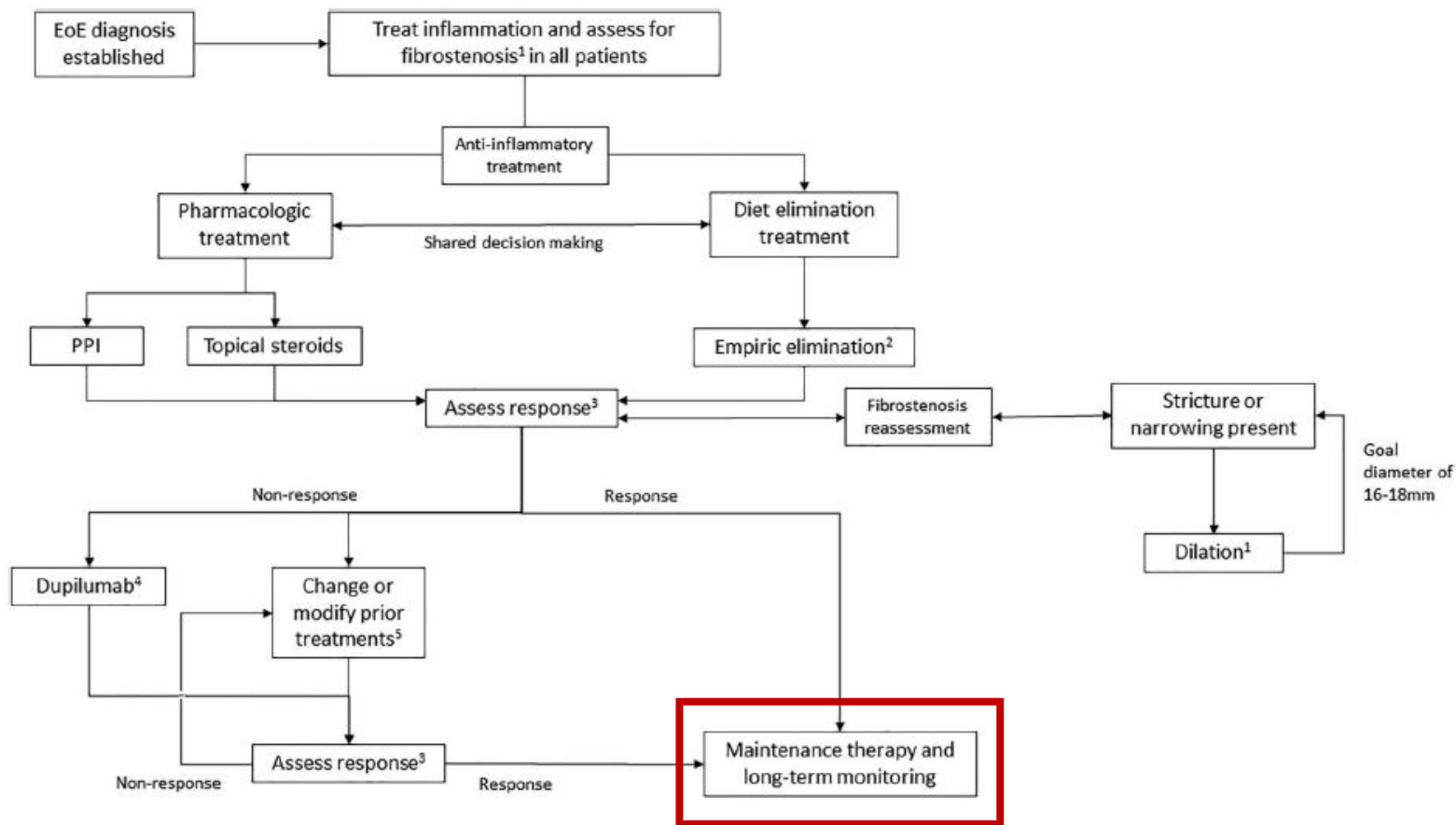
17. We recommend evaluating response to treatment of EoE with assessment of symptomatic and endoscopic and histologic outcomes	Low	Strong
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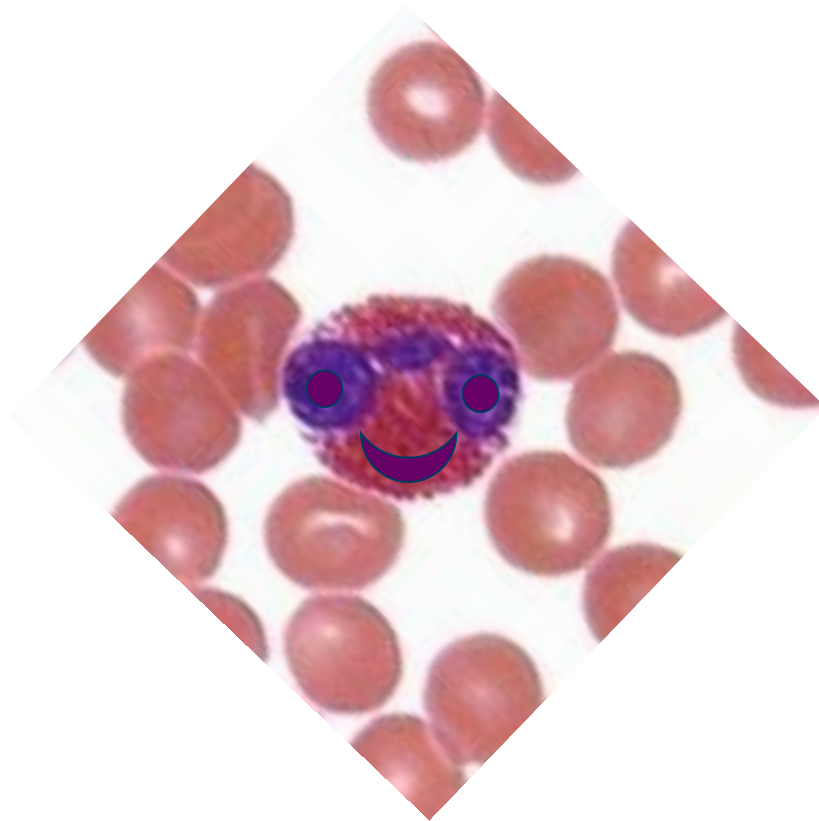




Conclusions

- A new nomenclature for EGIDs exists, based on the segment of gastrointestinal involvement
- Guidelines on the diagnosis and management of non-EoE EGIDs are being developed
- New guidelines for the diagnosis and management of EoE were published in January 2025

Thank You!



Questions?



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