Eosinophilic Esophagitis (EoE): Symptom Recognition, Treatment, and Testing

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Pediatric Update

March 5, 2026

Financial Disclosures

I have relationships with Regeneron, Sanofi, Takeda, AstraZeneca and EvoEndo as a consultant/advisory board member and speaker. The relationships have been mitigated and will not impact this presentation.

Clinical trial site involvement: Regeneron/Sanofi (Dupilumab), Allakos (Lirentelimab), Bristol Meyers Squibb (Cendakimab), Takeda (Eohilia), AstraZeneca (Tezepelumab)

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Learning Objectives

- Recognizing the Burden of EoE
- Identifying the Clinical Signs and Symptoms of EoE
- Diagnostic Considerations for Pediatric patients with EoE
- Exploring Current Treatment and Future Treatments for EoE
- Collaborative Care in the Pediatric patient with EoE
- ***Discussing innovative testing and surveillance for EoE ***

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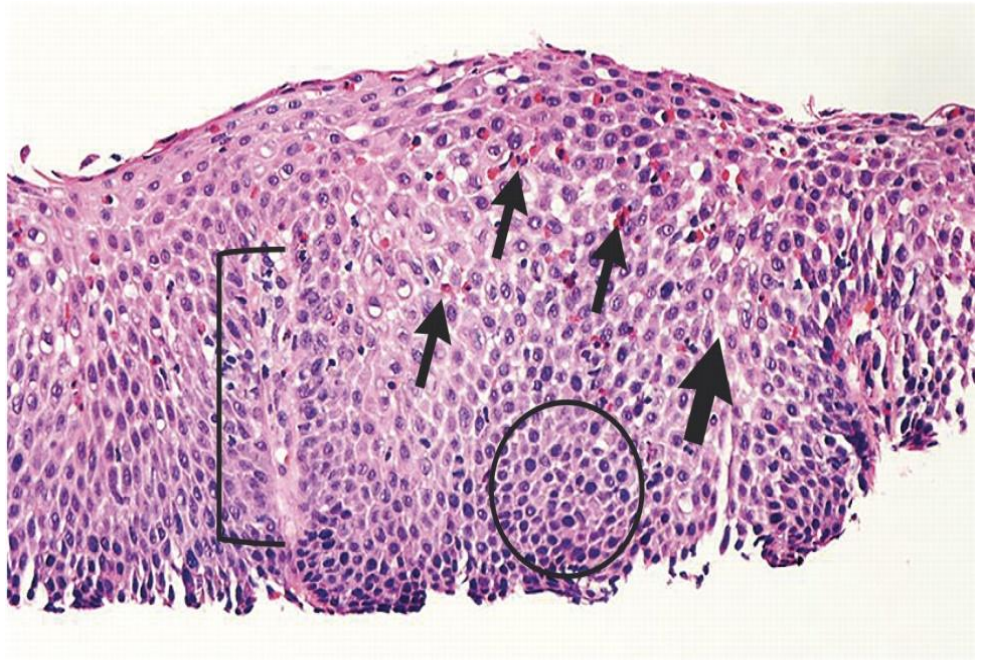
What is Eosinophilic Esophagitis (EoE)?

Definition: Eosinophilic Esophagitis (EoE)

Clinical and histopathologic diagnosis of chronic gastrointestinal (GI) inflammation involving Th2 pathway:

1. Symptoms of esophageal and GI dysfunction

2. Esophageal biopsies demonstrating at least 15 eosinophils/high powered field in the absence of other condition associated with esophageal eosinophilia



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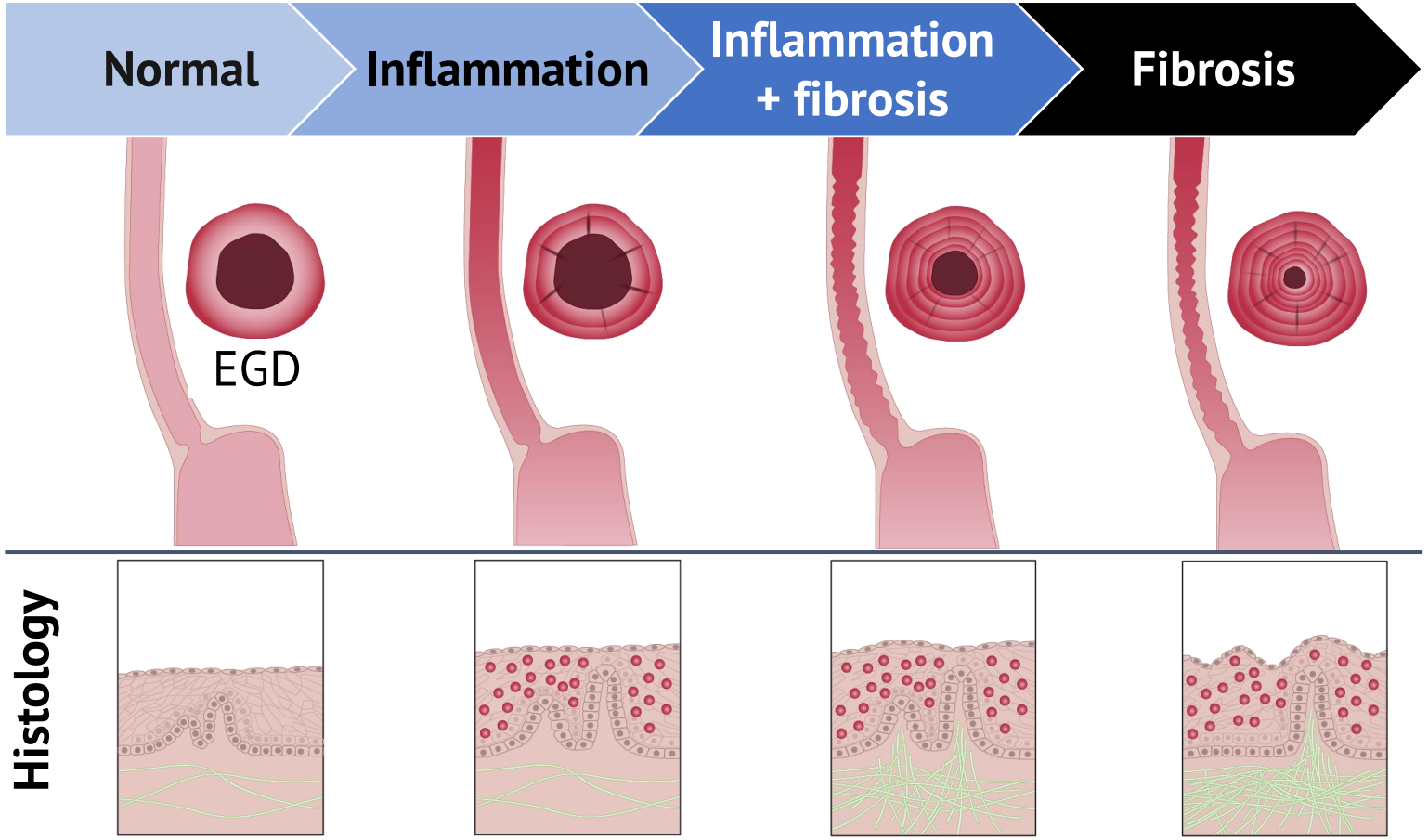
The Progression of EoE: Development of Inflammation to Fibrostenosis



- Fibrostenosis can progress in the absence of symptoms
- Coping strategies may leave disease undetected or underestimated
- Spontaneous resolution of eosinophilia is uncommon

Abbreviation(s): EGD: esophagogastroduodenoscopy.
Reference(s): Dellon ES, Hirano I. *Gastroenterology*. 2018;154:319-332.

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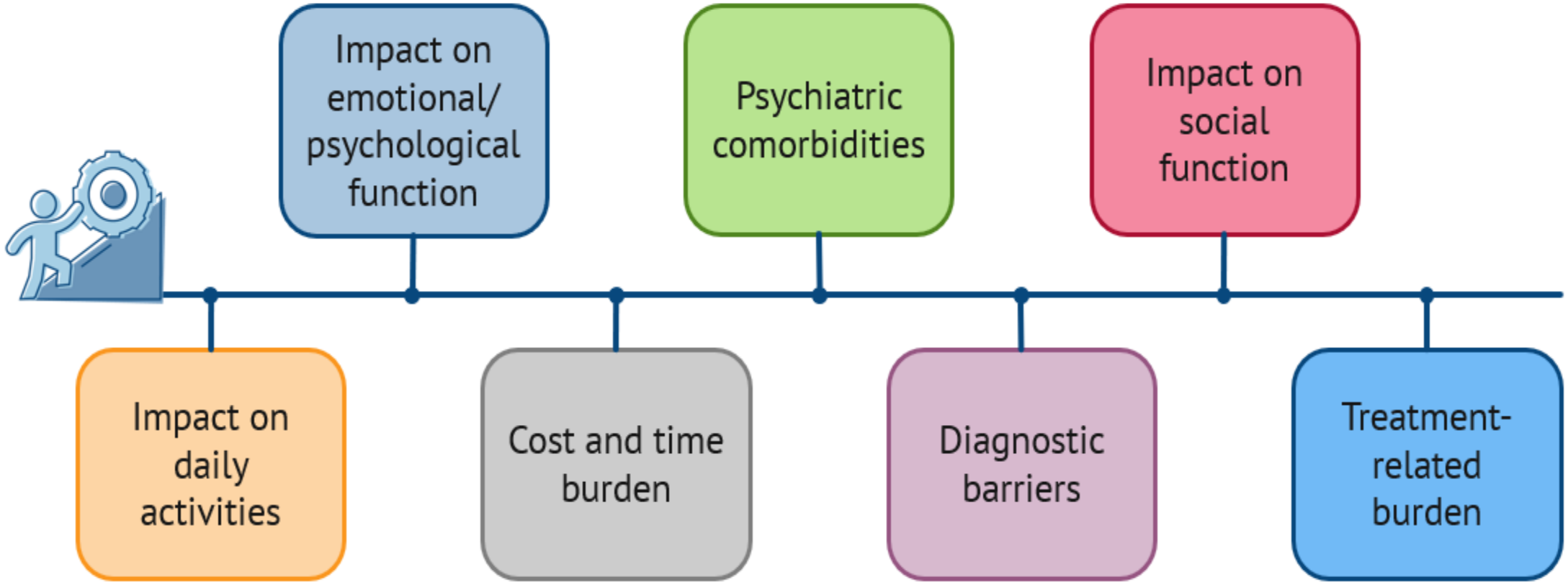
Burden of EoE

The Burden of EoE on Patients and Caregivers[1,2]



Reference(s): 1. Pokrzywinski RM et al. *Adv Ther.* 2020;37:4458-4478; 2. Jensen ET et al. *Clin Transl Gastroenterol.* 2024;15:e00672.

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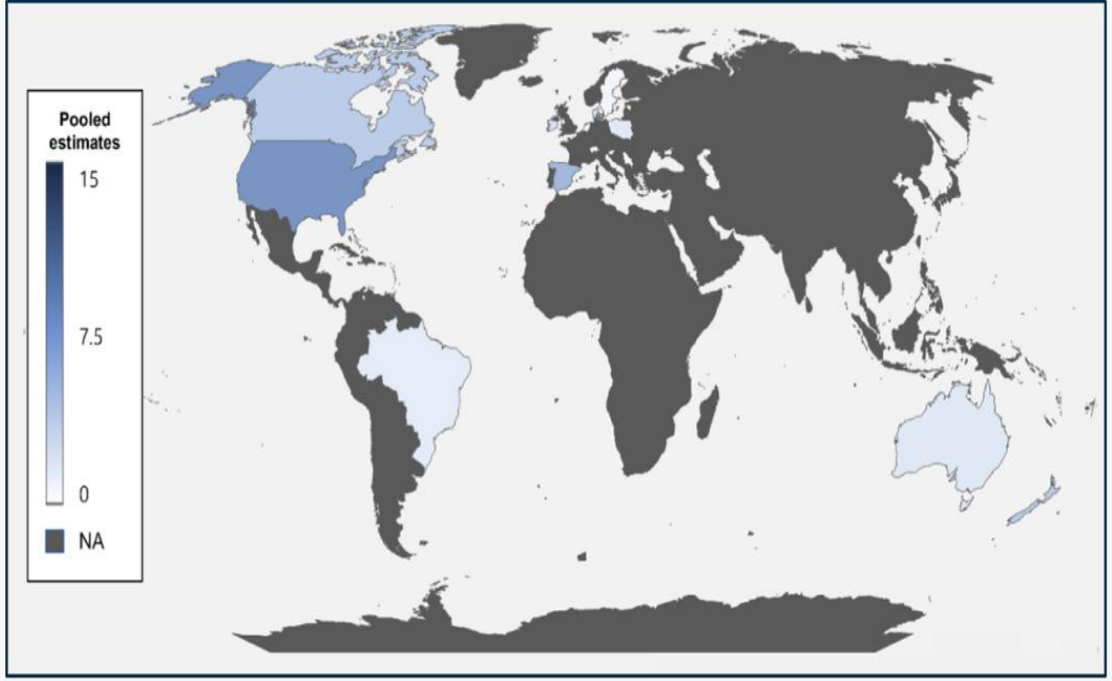
Global incidence and prevalence of eosinophilic esophagitis (EoE), 1976-2022

Systematic review
Meta-analysis

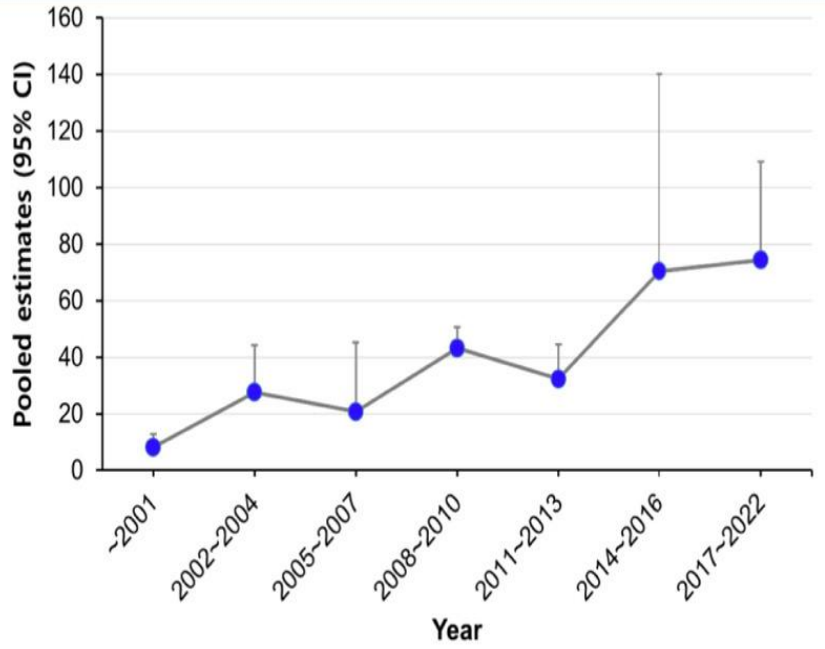
288 million participants

147,668 patients with EoE

Global map
15 countries across the five continents



Time trends of prevalence of EoE
cases per 100,000 inhabitant-years



- **Global incidence of EoE: 5.31 (95% CI, 3.98–6.63)** cases per 100,000 inhabitant-years
- **Global prevalence of EoE: 40.04 (95% CI, 31.10–48.98)** cases per 100,000 inhabitant-years

Clinical Gastroenterology and Hepatology

Papadopoulos et al. June 2023 CGH

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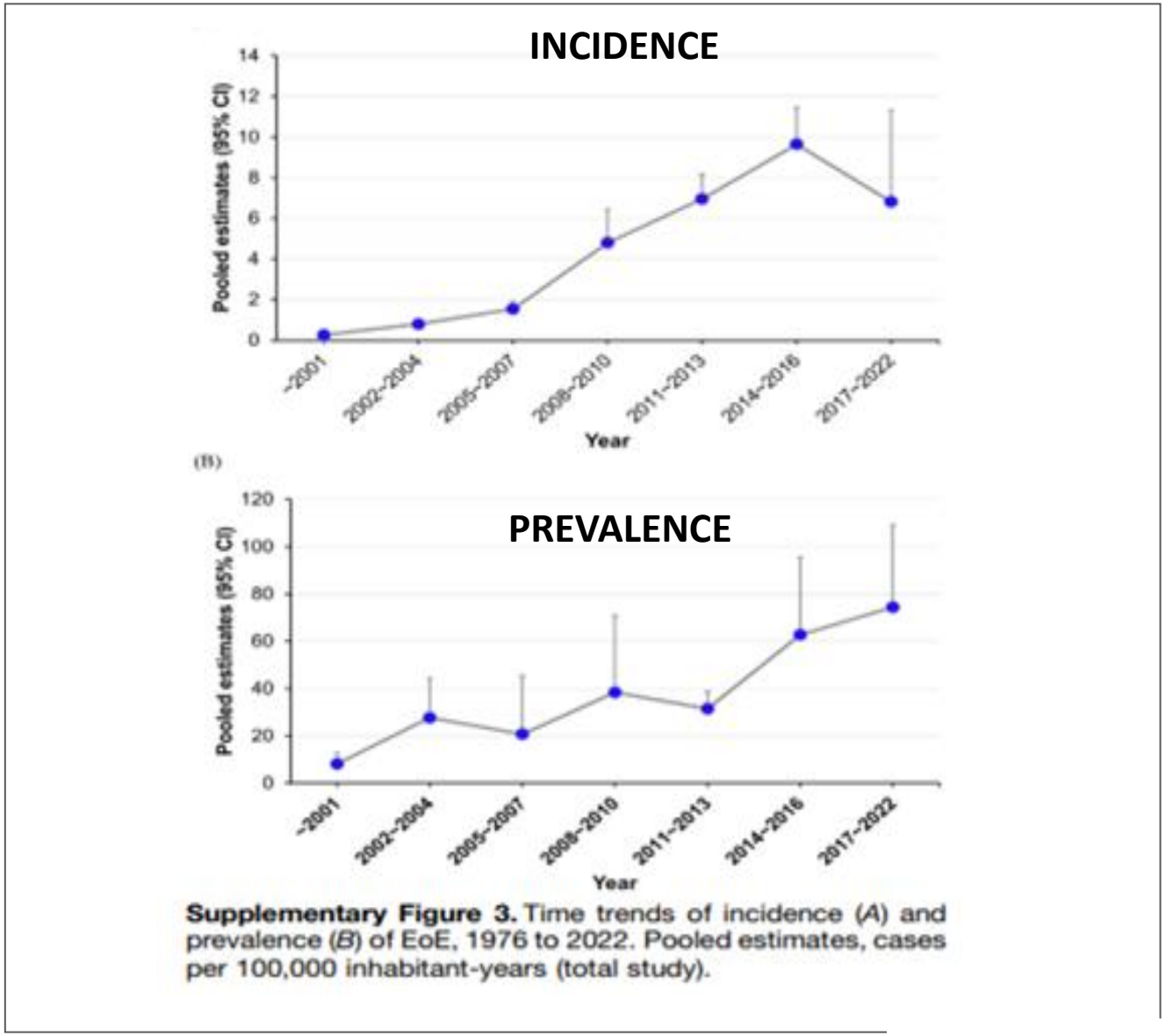
Epidemiology of EoE

- BOTH Incidence and Prevalence rates outpace an increased recognition of disease

- Suggesting that there are ENVIRONMENTAL factors are contributing to this rise



Supplementary Figure 3. Time trends of incidence (*A*) and prevalence (*B*) of EoE, 1976 to 2022. Pooled estimates, cases per 100,000 inhabitant-years (total study).

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Environmental Exposures: Role of the Microbiome

- Household exposures- family members
- Mode of Delivery- C-section v Vaginal
- Mode of Feeding- formula v breast feeding, decreased variety of foods
- Maternal exposure to PPIs
- Detergent Exposure

Detergent exposure induces epithelial barrier dysfunction and eosinophilic inflammation in the esophagus

Alfred D. Doyle[1], Mia Y. Masuda[1], Grace C. Pyon[1], Huijun Luo[1], Arina Putikova[1], William E. LeSuer[1], Samuel Flashner[3], Matthew A. Rank[1,2], Hiroshi Nakagawa[3], Hirohito Kita[1], Benjamin L. Wright[1,2]

[1]Division of Allergy, Asthma, and Clinical Immunology, Mayo Clinic Arizona, Scottsdale, Arizona

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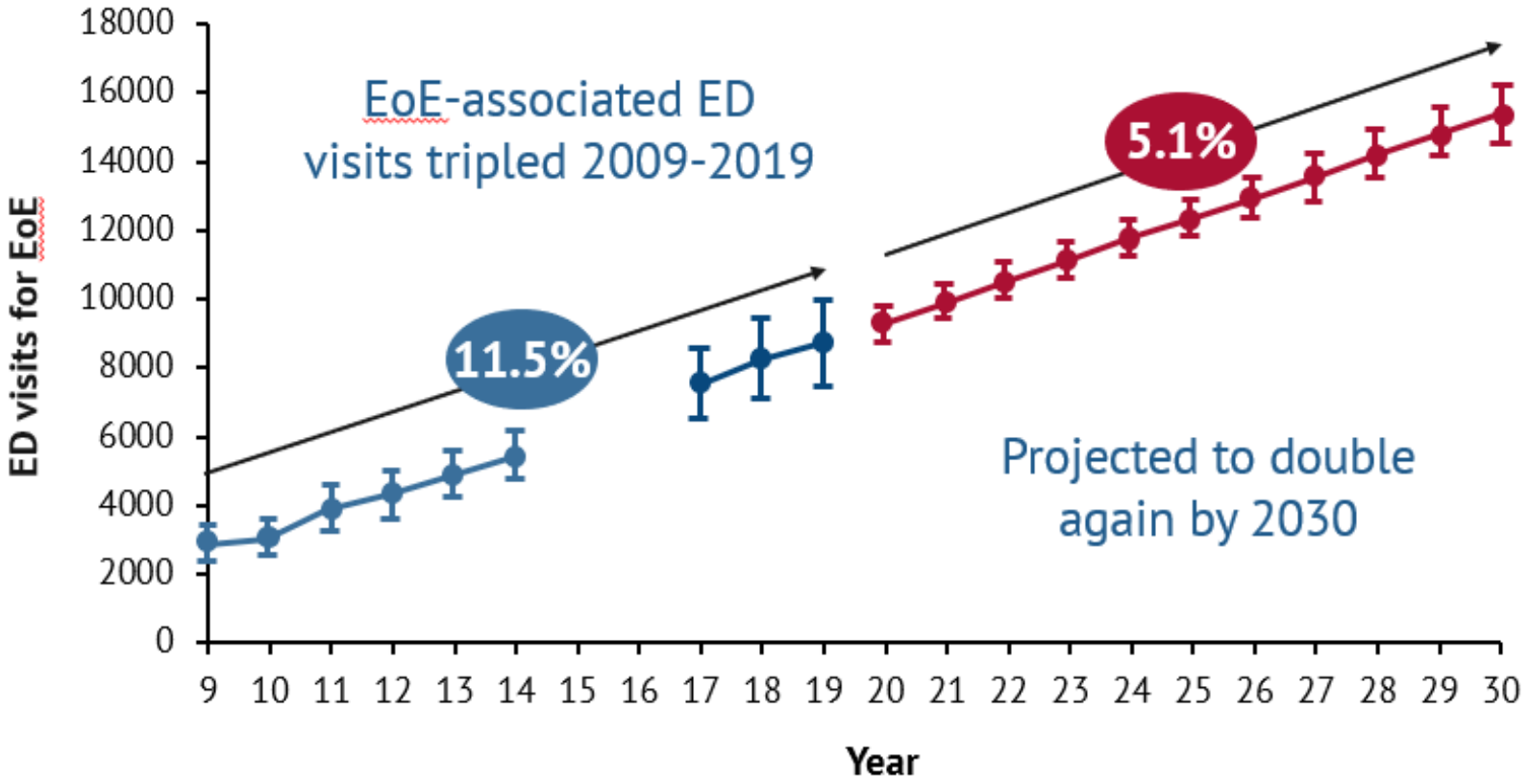
Epidemiologic Burden of EoE on ED Utilization

Nationwide Emergency Department Sample (n = 47,507 ED visits for EoE)



>700,000 ED visits for dysphagia, food impaction, or esophageal stricture in men <40 years old without formal EoE diagnosis

Includes both pediatric and adult patients.
Abbreviation(s): ED: emergency department.
Reference(s): Lam AY et al. *Clin Gastroenterol Hepatol.* 2023;21:3041-3050.

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Clinical Signs and Symptoms

12 yo male with history of autism and feeding issues. Parents describe avoidance of meats and hard textured foods his whole life. He has a very restricted diet only eating carbs and dairy based foods, dependent on supplemental liquid nutrition for adequate growth. He has seasonal allergies with chronic congestion. PCP for evaluation of his allergies and his ARFID.

6 yo allergic rhinitis, prescribed SLIT therapy by ENT and seen in clinic for new throat clearing and fullness sensation in throat. Parents report when ever patient is eating he is needing to clear his throat. He also has intermittent complaints of abdominal pain. PMHx: seasonal allergies with nasal congestion

2 year-old female with history of TEF. She had been feeding well with introduction to solids but started to pocket food in her mouth. Mealtimes have increased in time. She is preferring to drink milk and eat purees. She is Vomiting and having regurgitation symptoms. Recent hospitalization for pneumonia. Has been on chronic PPIs for reflux

Common Presenting Symptoms of EoE[1,2]

Infants/younger children

- Feeding refusal
- Delayed feeding skills
- Textural preferences
- Vomiting
- Slow weight gain
- Regurgitation

School-aged children

- Heartburn
- Abdominal pain
- Vomiting
- Dysphagia/hard swallows

Adults/adolescents

- Dysphagia
- Food impaction
- Chest/upper abdominal pain
- Heartburn

Reference(s): 1. Liacouras CA et al. *Gastroenterol Clin North Am*. 2014;43:219-229; 2. Horwitz A, Yunus S. *Prim Care*. 2023;50:283-294.

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Compensatory Eating Behaviors Associated With EoE

I	M	P	A	C	T
Imbibe fluids with meals	Modify food (cutting, pureeing)	Prolong meal times	Avoid hard-textured foods	Chew excessively	Turn away tablets/pills






Reference(s): Hirano I, Furuta GT. *Gastroenterology*. 2020;158:840-851.

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Questions to Elicit EoE symptoms

- Does the food get stuck when you eat?
- Does it take you longer than others to eat?
- Do you need to cut food into small pieces?
- Do you always need to drink with meals?
- Do you eat steak?
- Do you need to cut steak into small pieces?
- Do you eat crusty bread?
- Do you need to make crusty bread softer?
- Do you have to be reminded to chew a lot?

Reference(s): Muir AB et al. *Clin Exp Gastroenterol*. 2019;12:391-399.

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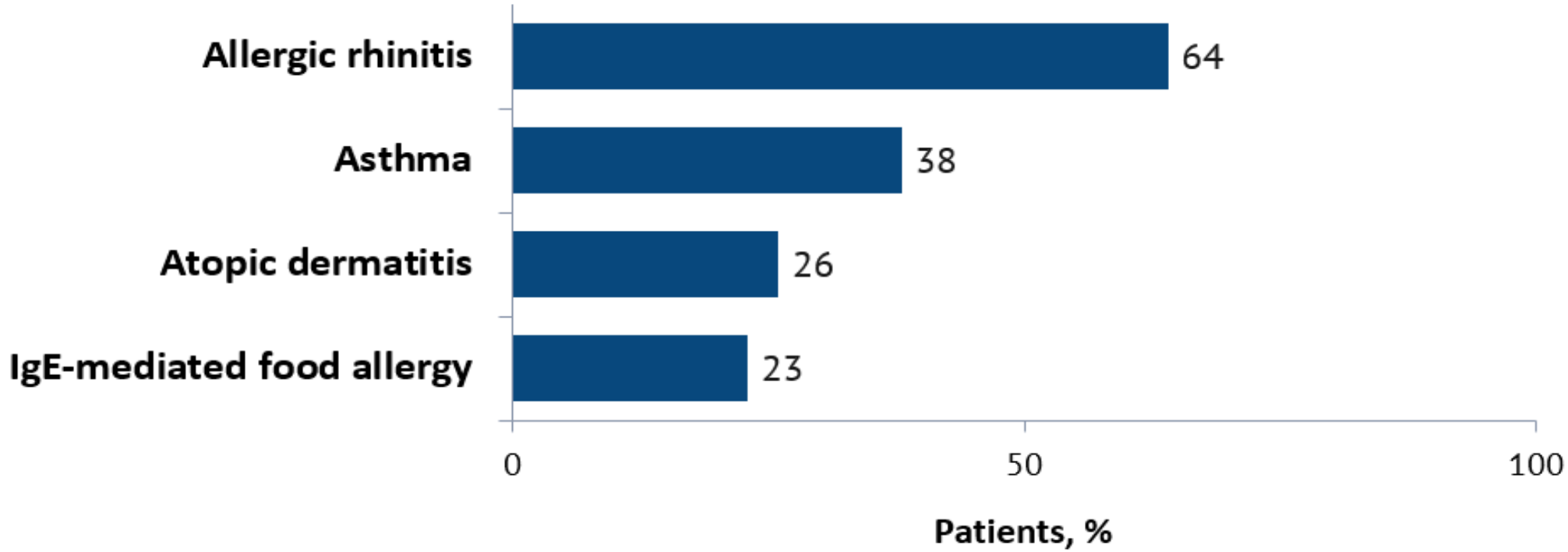
What are the common comorbidities associated with EoE?

Common Comorbidities Associated With EoE

Atopic conditions reported in US adults and patients with EoE in a multi-site cohort review



Abbreviation: IgE: immunoglobulin E.
Reference: Muir AB et al. *Clin Exp Gastroenterol*. 2019;12:391-399.

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Autoimmune Conditions Associated With EoE

	OR[a]	CI
IgA deficiency	16.54	4.48-61.12
Celiac disease	8.7	6.49-11.66
Common variable immunodeficiency	6.99	3.55-13.76
Systemic sclerosis	6.81	2.81-16.48
Crohn's disease	3.99	2.71-5.89
Ulcerative colitis	3.79	2.71-5.30
Hashimoto's thyroiditis	3.09	2.05-4.65
Multiple sclerosis	2.13	1.42-3.19
Lupus	1.79	1.09-2.93
Rheumatoid arthritis	1.71	1.3-2.26

Reference: Peterson K et al. *Am J Gastroenterol.* 2016;111:926-932.

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Autism and EoE

JPGN
Journal of Pediatric Gastroenterology and Nutrition

Original Article: Gastroenterology

Feeding Disorders in Children With Autism Spectrum Disorders Are Associated With Eosinophilic Esophagitis

Theresa A. Heifert, Apryl Susi, Elizabeth Hisle-Gorman, Christine R. Erdie-Lalena, Gregory Gorman, Steve B. Min, Cade M. Nylund

SYSTEMATIC REVIEW

Autism in patients with eosinophilic gastrointestinal disease: A systematic review with meta-analysis

Rian Vilar Lima, Maria Carolina Rocha Muniz, Luana Lima Barroso, Maria Clara Apolônio Pinheiro, Yuri Marques Teixeira Matos, Sarah Baltasar Ribeiro Nogueira, Hildenia Baltasar Ribeiro Nogueira

First published: 05 April 2024 | https://doi.org/10.1111/pai.14122 | Citations: 1

Tracheoesophageal Fistula and EoE

JPGN
Journal of Pediatric Gastroenterology and Nutrition

Original Article: Gastroenterology: Eosinophilic GI Disorders

Prevalence of Eosinophilic Esophagitis in Adolescents With Esophageal Atresia

Emilie Lardenois, Laurent Michaud, Anne Schneider, Mihaela Onea, Julie Rebeuh, Madeleine Gottrand-Aumar, Florence Renaud, Frederic Gottrand, Emmanuelle Leteurtre

First published: 01 July 2019 | https://doi.org/10.1097/MPG.0000000000002261 | Citations: 13

JOURNAL ARTICLE

Eosinophilic esophagitis in children with esophageal atresia

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J. Dhaliwal, V. Tobias, E. Sugo, V. Varjavandi, D. Lemberg, A. Day, T. Bohane, O. Ledder, A. Jiwane, S. Adams ... Show more

Diseases of the Esophagus, Volume 27, Issue 4, 1 June 2014, Pages 340–347,
https://doi.org/10.1111/dote.12119
Published: 01 June 2014

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12 yo male with history of autism and feeding issues. Parents describe avoidance of meats and hard textured foods his whole life. He has a very restricted diet only eating carbs and dairy based foods, dependent on supplemental liquid nutrition for adequate growth. He has seasonal allergies with chronic congestion. PCP for evaluation of his allergies and his ARFID.

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How to diagnose EoE?

Diagnostic Algorithm of EoE[1]

Clinical presentation suggestive of EoE

↓

EGD with biopsy

↓

Esophageal eosinophilia ≥15 eos/hpf (~60 eos/mm^2)

↓

Evaluate for non-EoE disorders that cause or potentially contribute to esophageal eosinophilia

↓

Eosinophilic esophagitis

: eos: eosinophils; hpf: high-powered field; PPI: proton pump inhibitor.

Dellon ES et al. *Gastroenterology*. 2018;155:1022-1033.

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Esophagogastroduodenoscopy with biopsies

Minimum of 6 biopsies from multiple locations in the esophagus

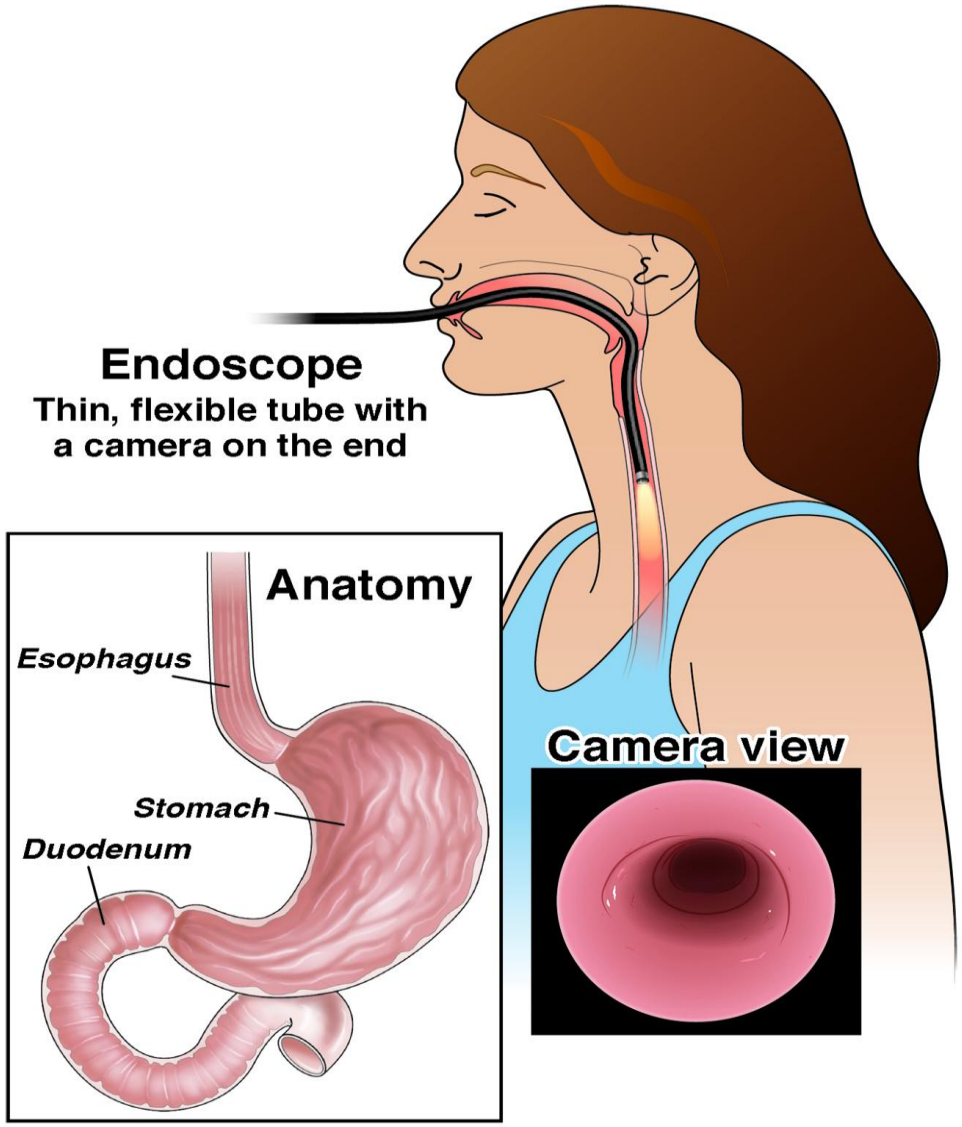
- Target areas of visible inflammation

Obtain regardless of esophagus endoscopic appearance

- Epithelium and lamina propria are unevenly involved

Take biopsies of the stomach and duodenum if symptoms or endoscopic abnormalities

Can not be diagnosed with SPT, Blood testing or Imaging studies



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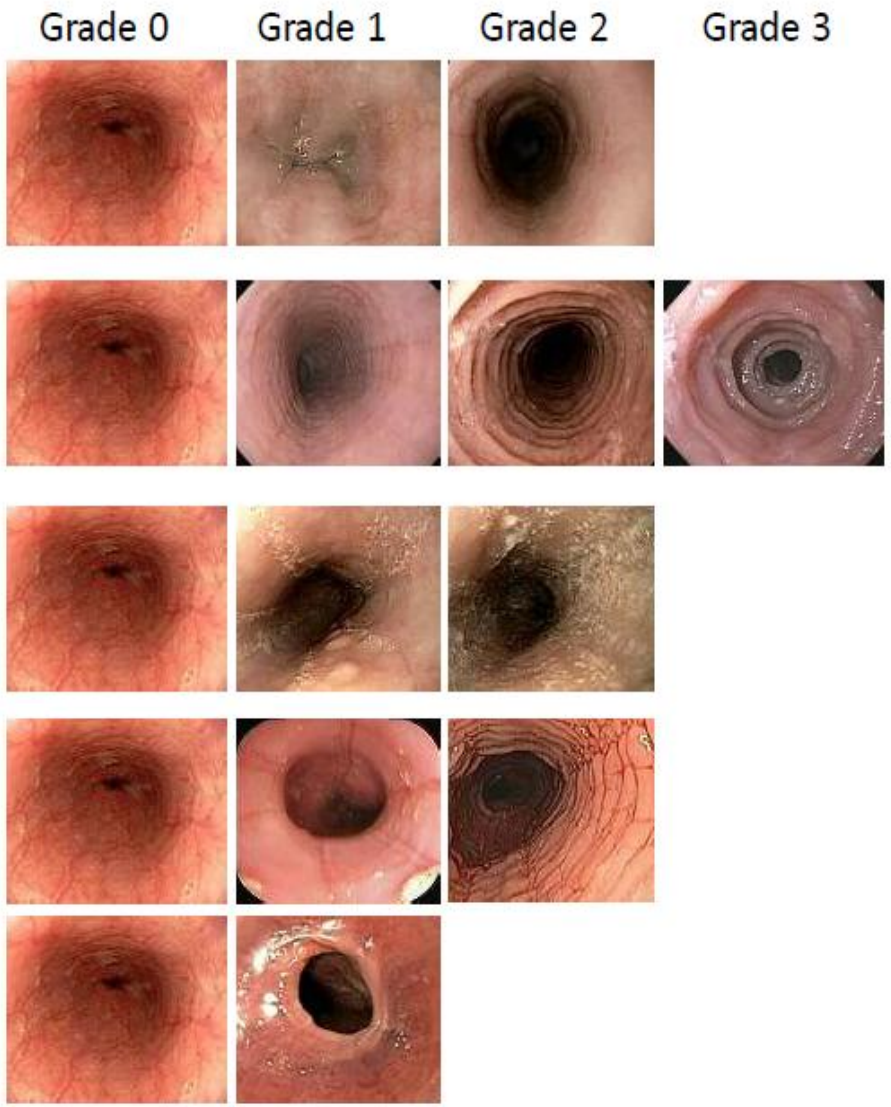
Endoscopy is still a mainstay component of diagnosing and managing EoE



Edema (loss vascular markings)
Grade 0: Distinct vascularity
Grade 1: Decreased
Grade 2: Absent

Rings (trachealization)
Grade 0: None
Grade 1: Mild (ridges)
Grade 2: Moderate (distinct rings)
Grade 3: Severe (not pass scope)

Exudate (white plaques)
Grade 0: None
Grade 1: Mild (≤10% surface area)
Grade 2: Severe (>10% surface area)

Furrows (vertical lines)
Grade 0: None
Grade 1: Mild
Grade 2: Severe (depth)

Stricture
Grade 0: Absent
Grade 1: Present

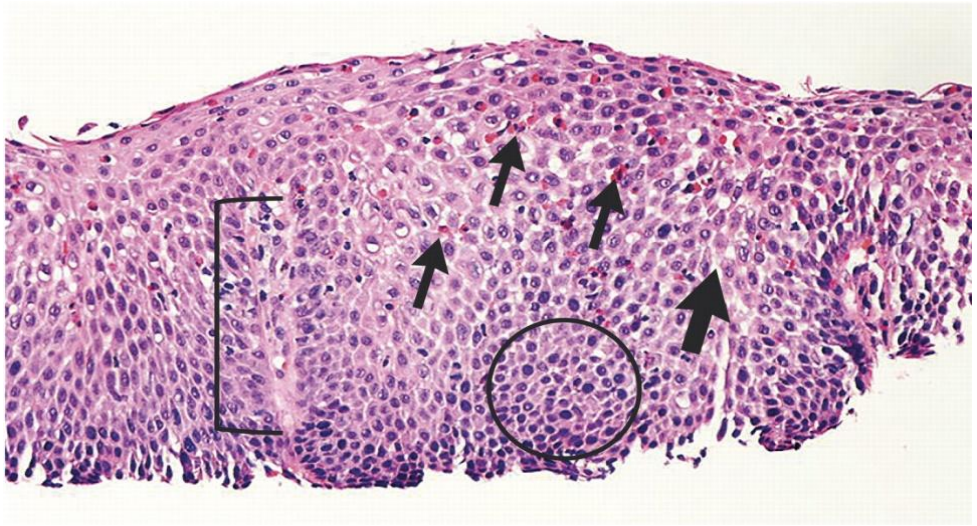
Endoscopic Reference Score (EREFS) uses the 5 most common endoscopic findings in EoE and is important for defining and monitoring disease activity

Applied to highest scoring area on each endoscopy

Hirano et al. Gut 2013; Aceves SS et al. GIE, 2022

EoEHSS (eosinophilic esophagitis histologic scoring system) evaluates 7 pathologic features in addition to peak eosinophil count for both severity and extent of pathology

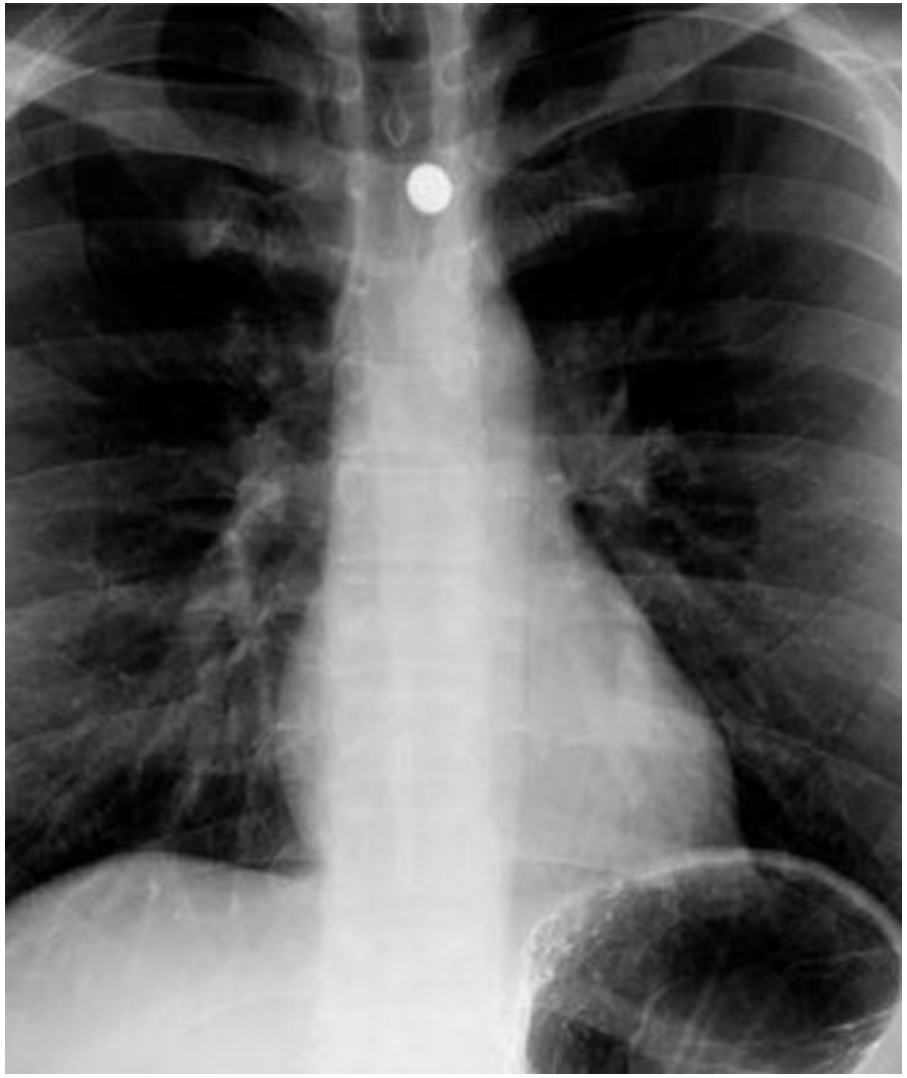
- ≥ 15 eosinophils per high power field approaches 100% sensitivity and 96% specificity for EoE
- Superficial eosinophils
- Eosinophil degranulation
- Eosinophilic microabscesses (> 4 clustering)
- Epithelial hyperplasia
- Intercellular edema/spongiosis
- Other inflammatory cells (lymphocytes, PMLs, mast cells)
- Dyskeratotic epithelial cells
- Subepithelial fibrosis as seen in basal zone hyperplasia and lamina propria fibrosis

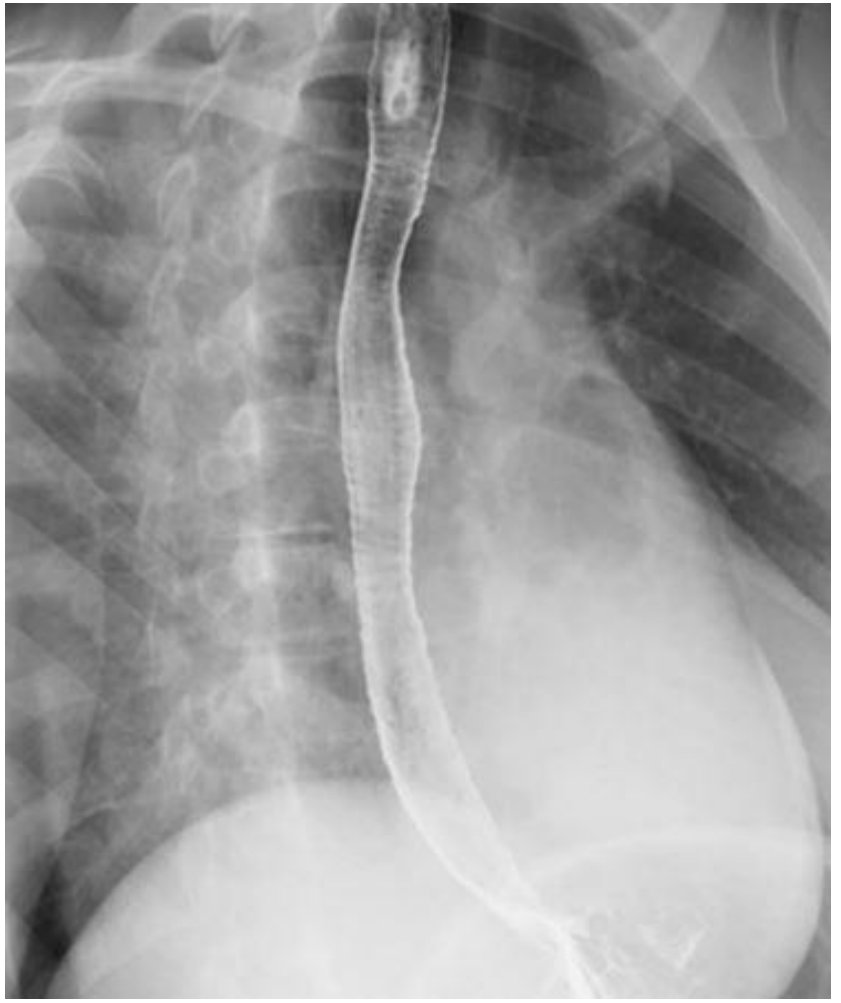


Collins MG et al. Dis Esophagus 2017

Assessing Disease Severity

Imaging: Esophagram





Clinical: EoE I-SEE Index

A Clinical Severity Index for Eosinophilic Esophagitis: Development, Consensus, and Future Directions

Evan S. Dellon,[1] Paneez Khoury,[2] Amanda B. Muir,[3,4] Chris A. Liacouras,[3,4,5] Ekaterina Safroneeva,[6] Dan Atkins,[7,8] Margaret H. Collins,[9,10] Nirmala Gonsalves,[11] Gary W. Falk,[4,12] Jonathan M. Spergel,[4,13] Ikuo Hirano,[11] Mirna Chehade,[14] Alain M. Schoepfer,[15] Calies Menard-Katcher,[16,17] David A. Katzka,[18] Peter A. Bonis,[19] Albert J. Bredenoord,[20] Bob Geng,[21,22] Elizabeth T. Jensen,[23] Robert D. Pesek,[24,25] Paul Feuerstadt,[26,27] Sandeep K. Gupta,[28,29,30] Alfredo J. Lucendo,[31,32,33] Robert M. Genta,[34] Girish Hiremath,[35] Emily C. McGowan,[36] Fouad J. Moawad,[37] Kathryn A. Peterson,[38] Marc E. Rothenberg,[39,40] Alex Straumann,[41] Glenn T. Furuta,[17,42,§] and Seema S. Aceves[22,43,§]

EOE: EOE Disease Severity Index Table & EREF | Esophageal String

EOE Disease Severity Index Scoring Reference

Date	Symptoms	Most severe complication to date	EREF Score	Inflammatory Features		Fibrostenotic Features		Total Score	Disease Severity
				Endo	Histo (Eos/hpf)	Endo	Histo		INACTIVE = 0, MILD = 1-6, MODERATE = 7-14, SEVERE = >15

Gastroenterology 2022;163:59–76

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EOE Disease Severity Index

Scoring Reference

Date	Symptoms	Most severe complication to date	EREF Score	Inflammatory Features		Fibrostenotic Features		Total Score	Disease Severity
				Endo	Histo (Eos/hpf)	Endo	Histo		INACTIVE = 0, MILD = 1-6, MODERATE = 7-14, SEVERE = >15
08-07-23	None								

None
>18 impact or ER
<18 impact or ER
Emer EGD or admit
esophogeal perf
malnutrition, <5%
persistent inflam
Systemic steroids

Last EGD

Date: _____

EREFS:

EREF Reference

Edema Grade	Rings		Furrows Grade	Stricture	Total EREFS Score
0	0	0	0	0	0

Date	Symptoms	Most severe complication to date	EREF Score	Inflammatory Features		Fibrostenotic Features		Total Score	Disease Severity
				Endo	Histo (Eos/hpf)	Endo	Histo		INACTIVE = 0, MILD = 1-6, MODERATE = 7-14, SEVERE = >15
08-07-23	None	None							

none
local
diffuse

Last EGD

Date:

Date	Symptoms	Most severe complication to date	EREF Score	Inflammatory Features		Fibrostenotic Features		Total Score	Disease Severity
				Endo	Histo (Eos/hpf)	Endo	Histo		INACTIVE = 0, MILD = 1-6, MODERATE = 7-14, SEVERE = >15
08-07-23	None	None	0	none	none				

none
15-60
>60

Last EGD

Date: 3/11/2019

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'I SEE' Increased Complications in Eosinophilic Esophagitis Patients Not Compliant with Follow Up Recommendations

Greenhall, E. DO[1], Bauer, CS MD[1,2], Swing, E PHD[1], Kelley, C BS[3], Kulangara, T BS[2], Schroeder, S MD[1,2]
[1]Phoenix Children's Hospital, Phoenix, AZ; [2]Univeristy of Arizona College of Medicine, Phoenix, AZ, [3]Creighton University School of Medicine

Background

- Eosinophilic Esophagitis (EoE) is a clinicopathologic disorder with gastrointestinal symptoms and esophageal eosinophilia
- Atopy is seen in 50-80% of EoE patients
- The "Index of Severity for Eosinophilic Esophagitis" (I-SEE) was developed in 2022 to quantify disease severity based on symptoms, endoscopic, and histological findings

Study Aim

To use I-SEE scoring to assess disease severity, propose follow-up timing, and track complications.

Methods

- Study Design: Single-center, retrospective cohort study at Phoenix Children's Hospital, using electronic health records (2015-2024)
- Inclusion: Patients with EoE diagnosis based on ICD-10 codes
- Follow-up intervals based on disease severity:
  - Inactive: within 360 days
  - Mild: within 180 days
  - Moderate: within 90 days
  - Severe: within 30 days
- Compliance: Defined as follow-up within the recommended timeframe
- Exclusion: Lost to follow-up (>3 years without visit)
- Data collected on atopy: allergic rhinoconjunctivitis (ARC), food/drug allergies(FA/DA), atopic dermatitis(AD), asthma

Results

Sample: 661 patients (aged 1.7 to 24 years; median 13 years); male predominance (72.6%)
Atopy: Present in 71.2% of patients. ARC: 65.1%, FA: 48.8%, asthma: 48.3%, AD: 29.9%, DA: 5.6%

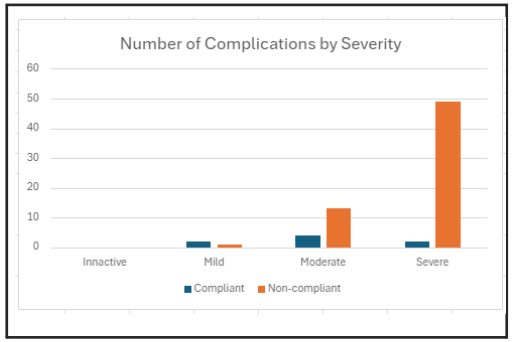
By Disease Category:

- **Inactive Disease**:
  - 44 patients; 85.7% compliance
  - No complications; atopy in 78.5%
- **Mild Disease**:
  - 368 patients; 61.4% compliance
  - 3 complications (2 compliant, 1 non-compliant)
  - No significant relationship between compliance and complications
- **Moderate Disease**:
  - 82 patients; 35.4% compliance
  - 17 complications (4 compliant, 13 non-compliant)
  - No significant relationship between compliance and complications
- **Severe Disease**:
  - 53 patients; 3.8% compliance
  - All patients experienced complications; atopy in 69.8%
  - Unable to assess compliance-complication relationship due to high complication rates

Complications:

- 73 total complications reported
- Most common: malnutrition (41%), decreased growth trajectory (12.3%), food impaction (12.3%), hospitalization (11%), persistent inflammation on immunotherapy (8.2%)
- Complications more common in non-compliant patients (p<.001) (Figure 1)
- Complications more likely in patients with atopy (p<.001)

Figure 1



Dashboard

Conclusion

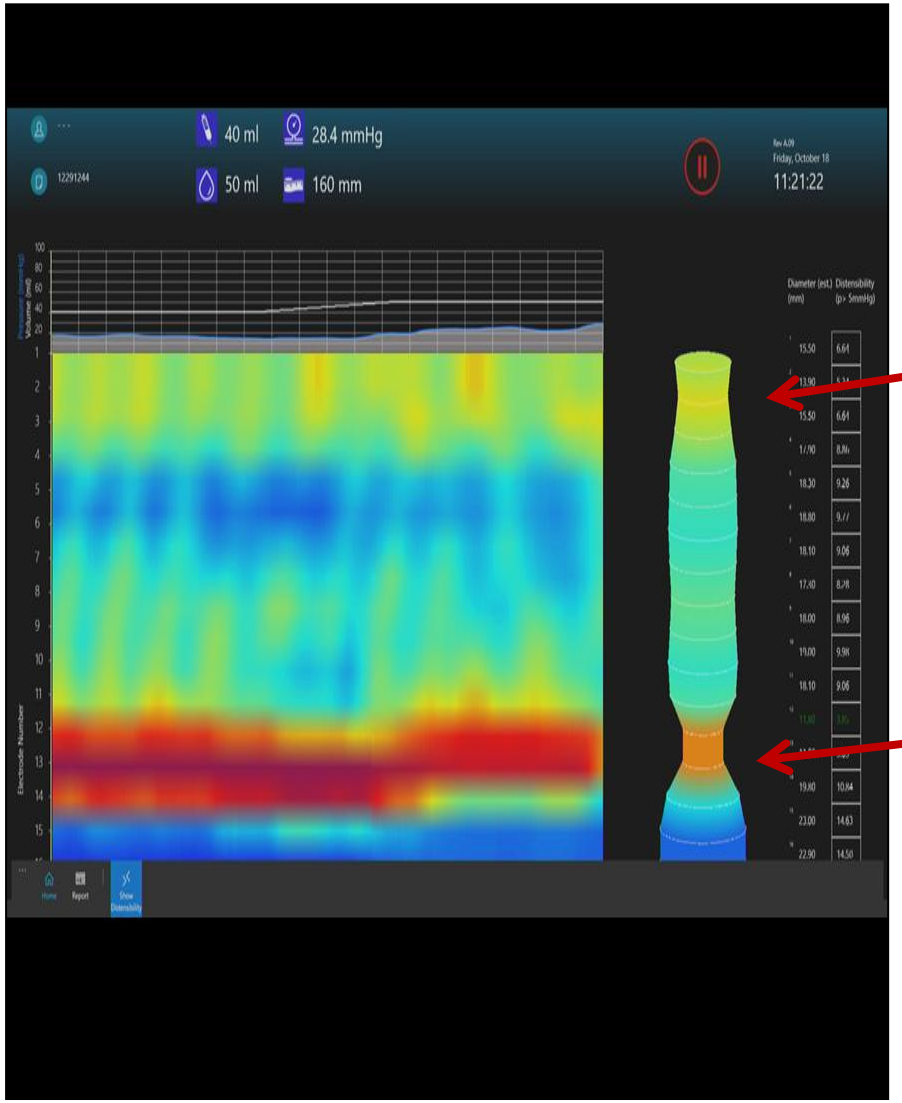
- Non-compliance with proposed follow-up timing increased the risk of complications
- Next steps: Utilize scheduling dashboard to prioritize follow-up, especially for severe cases due to poor compliance and high complication rates

Contact info/Sources

Contact | Sources | I-SEE Scoring

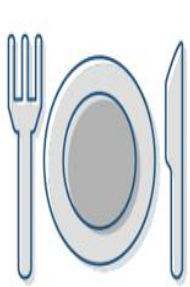
Endo-FLIP (Functional Luminal Imaging Probe)

- Utilizes high-resolution impedance planimetry to quantify the distensibility of the esophagus as a function of progressive increases in intraluminal diameter
- Plots a global assessment of esophageal distensibility
  - Reduced distensibility predicted risk for food impaction and dilation requirement
  - Strong and significant correlation between esophageal diameter and luminal diameter by FLIP
- Role in routine care has yet to be determined
  - More sensitive than endoscopy alone for detection of strictures

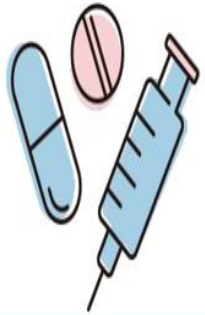


Exploring Treatment Options

Available Treatment Modalities for EoE



Dietary approaches



Pharmacotherapies

Endoscopic dilation

Treatment

- Goals:
  - Control of symptoms
  - Control of inflammation leading to prevention of complications
- Treatment considerations:
  - Efficacy
  - Ease of administration (e.g., Flovent)
  - Cost
  - Patient preference (e.g. sneaking)
  - Patient's baseline diet and nutritional status
- DDD: diet, drugs and dilation
  - 2 currently FDA approved treatment for EoE

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Esophageal Eosinophilia, ≥ 15 eos/hpf

Eosinophilic Esophagitis (EoE)

Consider Other Diagnoses:
- Gastroesophageal Reflux Disease
- Achalasia
- Lichen planus
- Caustic/pill/infectious esophagitis
- Eosinophilic gastrointestinal disease (e.g., eosinophilic gastritis with esophageal involvement)
- Crohn's disease

Shared Decision-Making Approach
Depends on patient-specific goals and motivation, see Table for Pros/Cons

Favored as initial approach due to cost and safety profile

Consider use as initial approach in selected patients – e.g. individuals who do not want medical therapy, severe disease, concomitant treatments, etc.

PPI twice daily
Only 30-50% are PPI-responsive
*BID dosing is important

Food Elimination Diet
Given cost/safety profile, favor FED in appropriately motivated patients

Swallowed Steroids
Fluticasone 220mcg 4 puffs swallowed BID
Budesonide 1-3 mg slurry BID
Eohilia- FDA approved

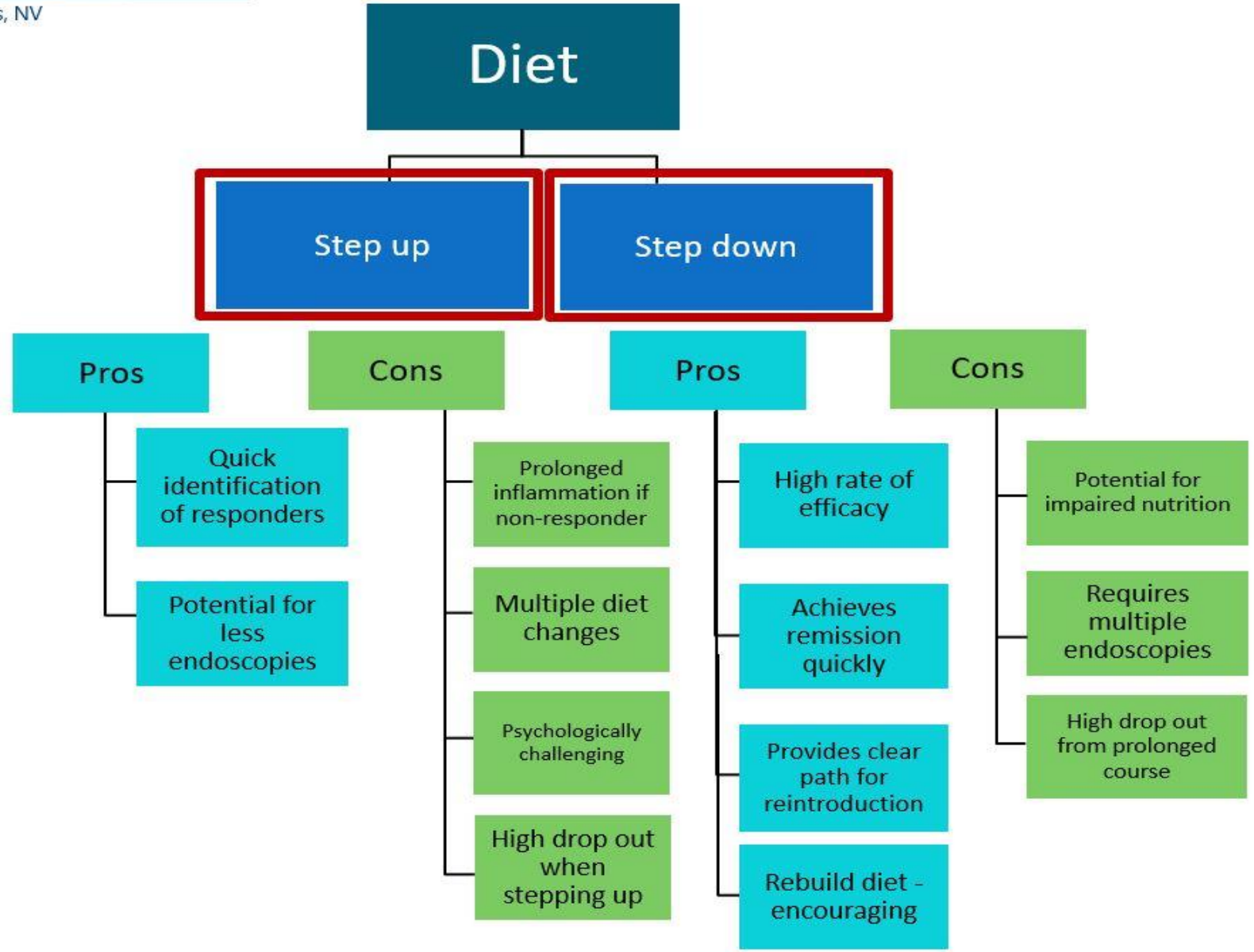
Dupilumab
Dupilumab 300mg SC q week

Optimization of Therapy
***Goals include symptomatic, endoscopic, and histologic remission**
May be monotherapy, PPI + Second treatment modality, or combination therapy (e.g., swallowed steroids + partial FED) depending or symptomatic, endoscopic and histologic response, dilation of fibrotic rings as needed to attain endoscopic remission

Maintenance Therapy
Continue treatment regimen that attained remission, repeat upper endoscopy in 1 year to confirm sustained remission, then every 2-3 years or with changes in symptoms or therapy

Reproduced from: Strategies for the Use of Dupilumab in EoE. Sauer BG et al. *AmJGastro.* 2023.

- 129 patients randomly assigned to 1FED or 6FED
- At 6 weeks 40% of 6FED and 34% of 1FED reached histologic remission [95% CI-11 to 23]; p=0.58
- Suggest eliminating animal milk alone is an acceptable initial dietary therapy



Kliewer KL et al. Lancet Gastro Hepatol 2023

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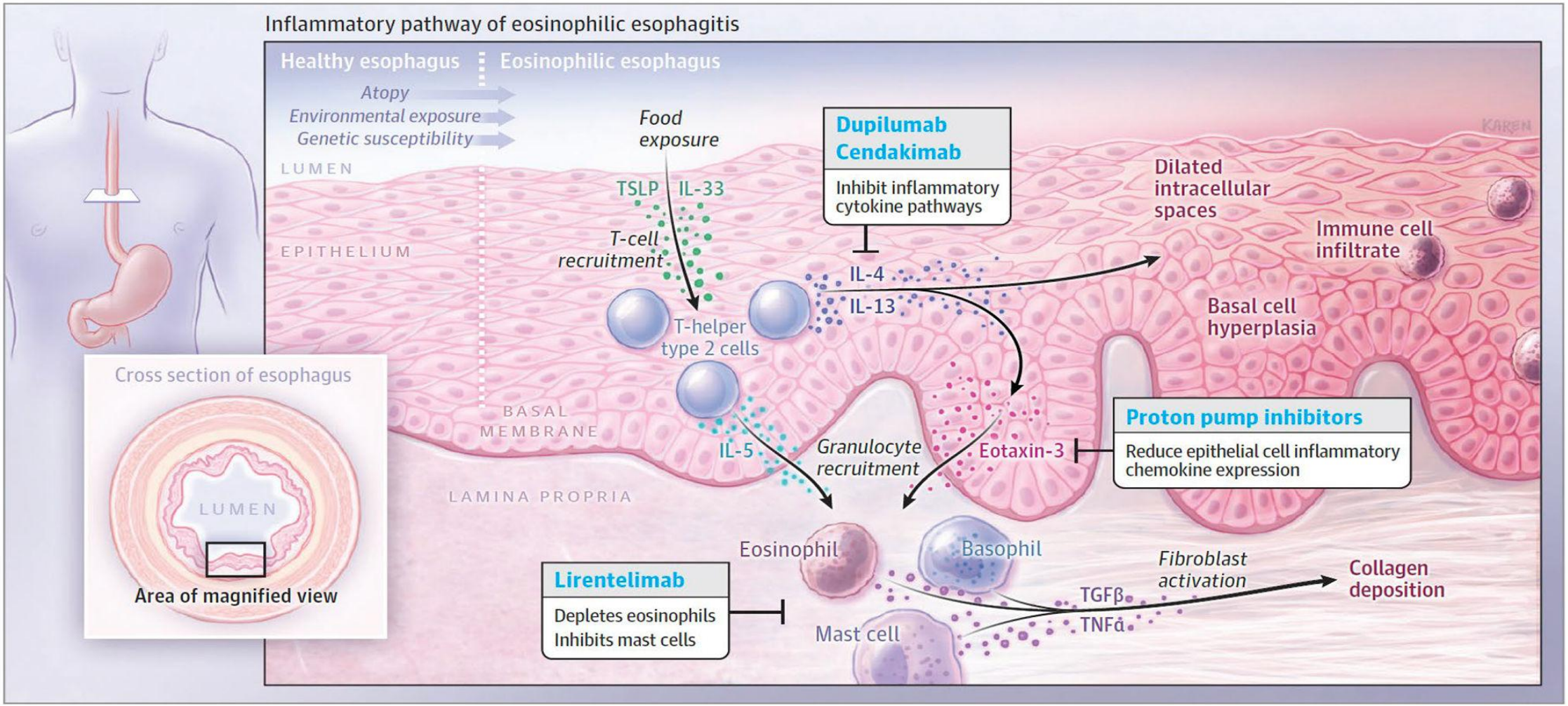
Pharmacologic Therapies



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Treatment Biologics Current and Future

- **Only FDA approved Biologic – Dupilumab**: completed Phase III studies for both pediatric patients > 1yo, > 15kg. Dosing: 15kg-30kg: 200mg every other week, 30-40kg: 300mg every other week, > 40kg: 300mg every week.

Medication	Mechanism of Action	FDA Approved Indications	Trial Stage
Cendakimab	IL-13R antagonist	None	Phase 3
Tezepelumab	Anti-TSLP	Severe asthma (12+ years)	Phase 3
Barzolvolimab	Anti-KIT	None	Phase 2
CALY-002	IL-15	None	Phase 1

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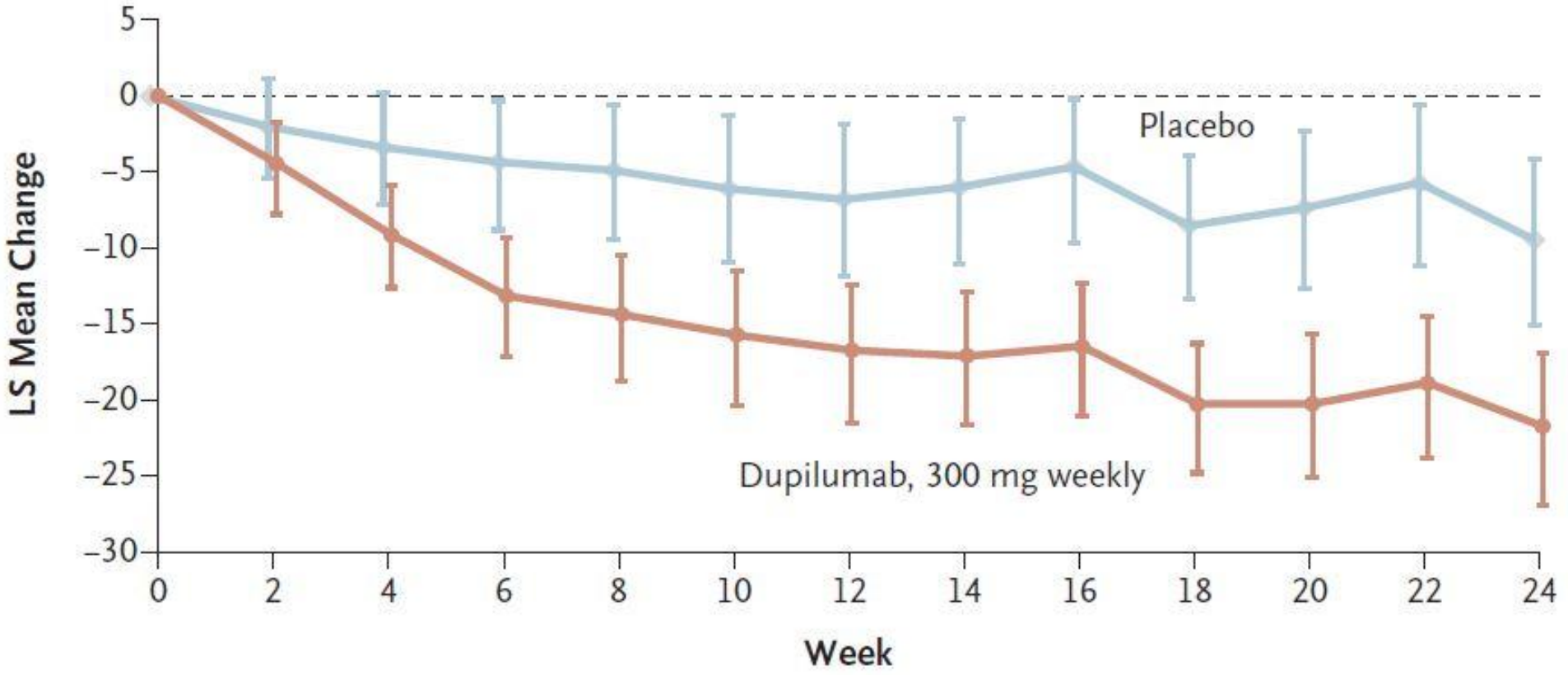
Dupilumab – Liberty TREET phase 3

Least Squares mean changes from baseline in DSQ score over time.

Reduction in symptoms!



No. of Patients/No. with Imputed Values													
Placebo	39/0	37/2	35/4	33/6	34/5	33/6	33/6	30/9	27/12	29/10	29/10	26/13	28/11
Dupilumab	42/0	42/0	42/0	40/2	41/1	41/1	40/2	40/2	37/5	38/4	38/4	38/4	38/4

Dellon ES et al. N Engl J Med 2022.

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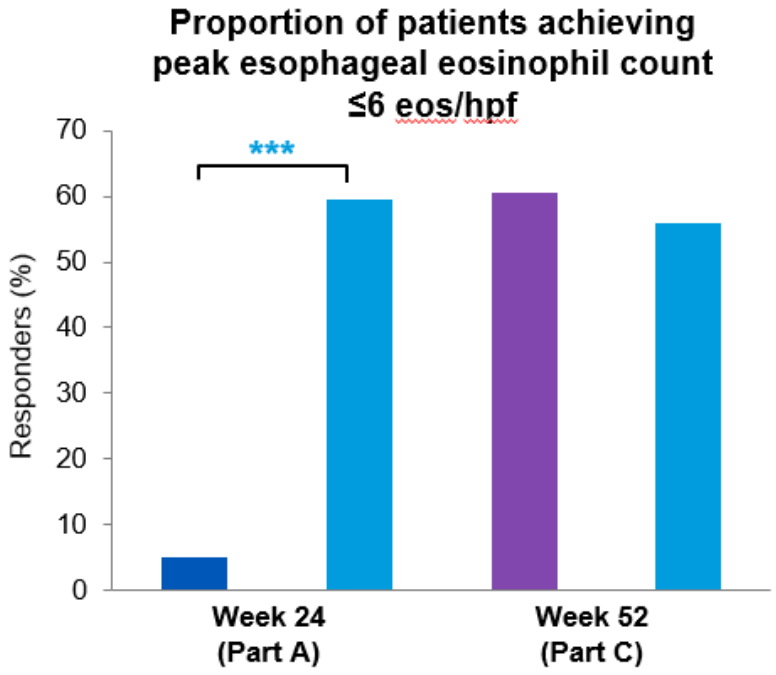
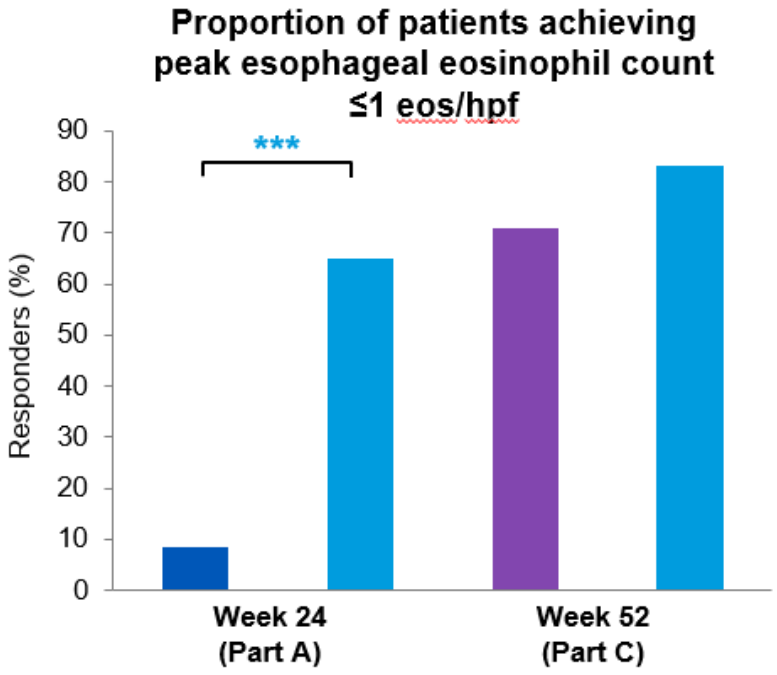
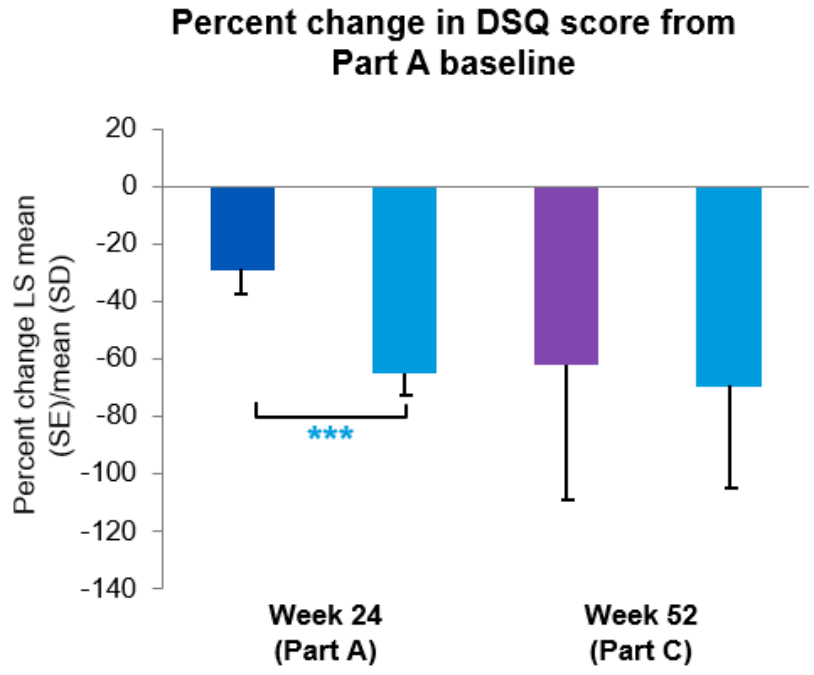
Dupilumab – Liberty TREET phase 3



No. of pts	39	42	30	34
No. of Responders (%)	2 (5.1)	25 (59.5)	18 (60.0)	19 (55.9)



No. of pts	39	42	30	34
No. of Responders (%)	3 (7.7)	27 (64.3)	1 (70.0)	28 (82.4)



No. of pts	28/11	38/4	23	29
Mean	-31.7	-69.2	-65.9	-75.9
(SD)	(8.09)	(7.35)	(49.71)	(36.89)

Placebo | Dupilumab | Placebo/dupilumab

60-80% response rate at 12 weeks

Redrawn from: Dellon ES et al.

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CME

ACG Clinical Guideline: Diagnosis and Management of Eosinophilic Esophagitis

Evan S. Dellon, MD, MPH, FACG[1], Amanda B. Muir, MD[2,3,4], David A. Katzka, MD, FACG[5], Shailja C. Shah, MD, MPH[6,7], Bryan G. Sauer, MD, MSc, FACG[8], Seema S. Aceves, MD, PhD[9,10], Glenn T. Furuta, MD[11,12], Nirmala Gonsalves, MD, FACG[13,*] and Ikuo Hirano, MD, FACG[13,*†]

Eosinophilic esophagitis (EoE) is a chronic immune-mediated disease of the esophagus. It is diagnosed in the setting of symptoms of esophageal dysfunction and an eosinophilic predominant infiltrate in the esophagus. The condition is rapidly increasing in incidence and prevalence and is commonly encountered in gastroenterology and allergy practices, emergency departments, and primary care settings. Over the past decade, there have been paradigm shifts in disease diagnosis and management, increases in knowledge about EoE risk factors, natural history, and pathogenesis, and development of validated outcome metrics. This updated American College of Gastroenterology Clinical Guideline uses Grading of Recommendations, Assessment, Development, and Evaluation methodology to make recommendations across domains of diagnosis, treatment, monitoring and assessment of response, and pediatric-specific considerations. Proton pump inhibitors, topical steroids, empiric diet elimination, a biologic, and esophageal dilation are all recommended treatments; feeding therapy is used adjunctively in children with food aversion or feeding dysfunction. Monitoring with clinical, endoscopic, and histologic assessments is recommended to assess for treatment response and follow patients over time with maintenance therapy. When evaluating and following patients with EoE, consideration should be given to assessing and controlling both the inflammatory and fibrostenotic aspects of disease.

KEYWORDS: eosinophilic esophagitis; eosinophilic oesophagitis; treatment; monitoring; pediatrics; maintenance thearpy; diet elimination; proton pump inhibitors; topical steroids; biologics; dilation

SUPPLEMENTARY MATERIAL accompanies this paper at http://links.lww.com/AJG/D461

Am J Gastroenterol 2025;120:31–59. https://doi.org/10.14309/ajg.0000000000003194; published online January 2, 2025

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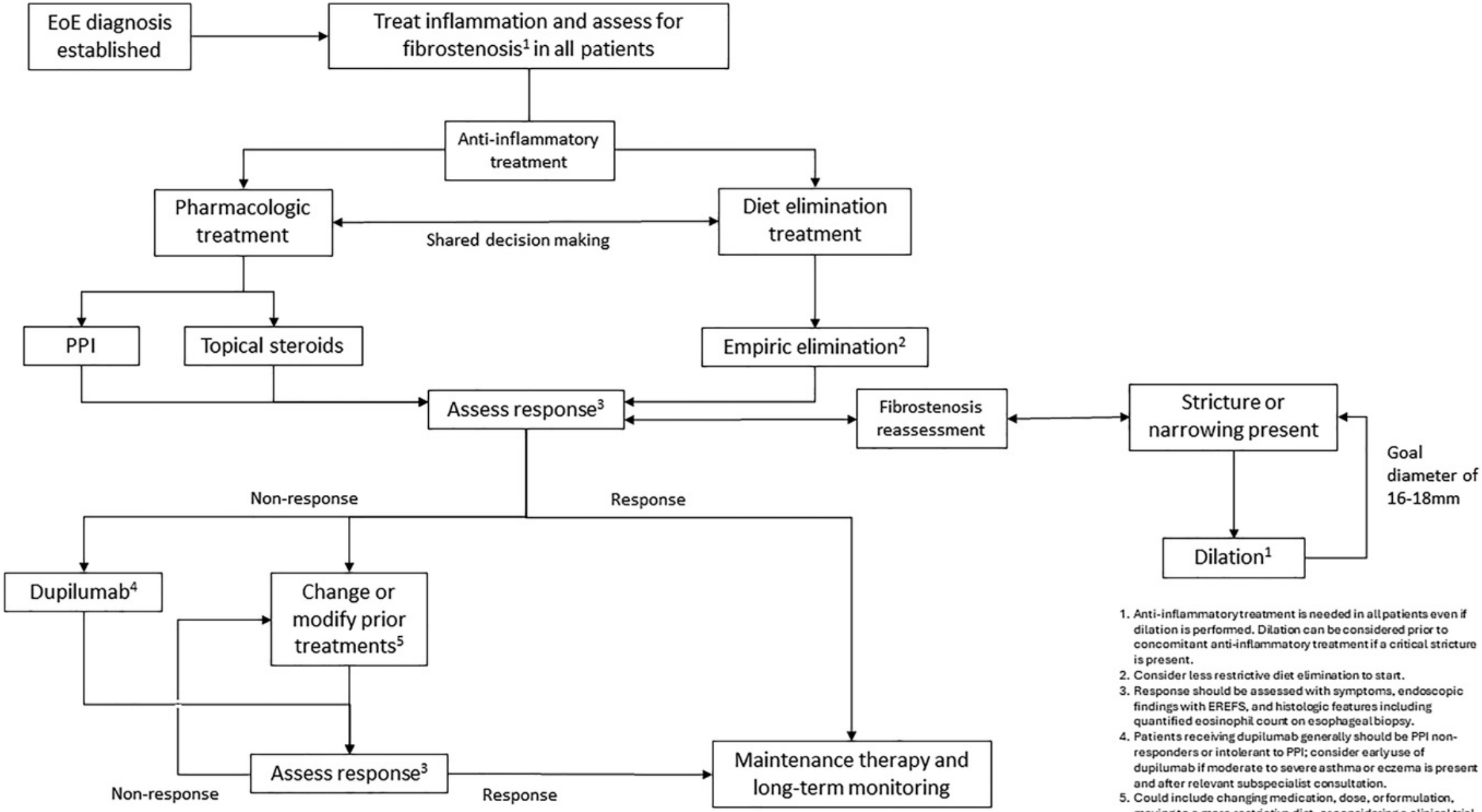

1. Anti-inflammatory treatment is needed in all patients even if dilation is performed. Dilation can be considered prior to concomitant anti-inflammatory treatment if a critical stricture is present.
2. Consider less restrictive diet elimination to start.
3. Response should be assessed with symptoms, endoscopic findings with EREFS, and histologic features including quantified eosinophil count on esophageal biopsy.
4. Patients receiving dupilumab generally should be PPI non-responders or intolerant to PPI; consider early use of dupilumab if moderate to severe asthma or eczema is present and after relevant subspecialist consultation.
5. Could include changing medication, dose, or formulation, moving to a more restrictive diet, or considering a clinical trial.

EoE Management: Endoscopic Approach

Endoscopic dilation

- Can be considered for all patients with EoE and an esophageal stricture with dysphagia
- Different dilation techniques can be chosen on the basis of stricture characteristics
- Effective management of inflammation and dysphagia reduces the need for future dilation
- Can be done safely in patients with fibrostenosing EoE with inflammatory activity

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Innovations: Sedation Free Surveillance

Esophageal Monitoring-Sedation Free

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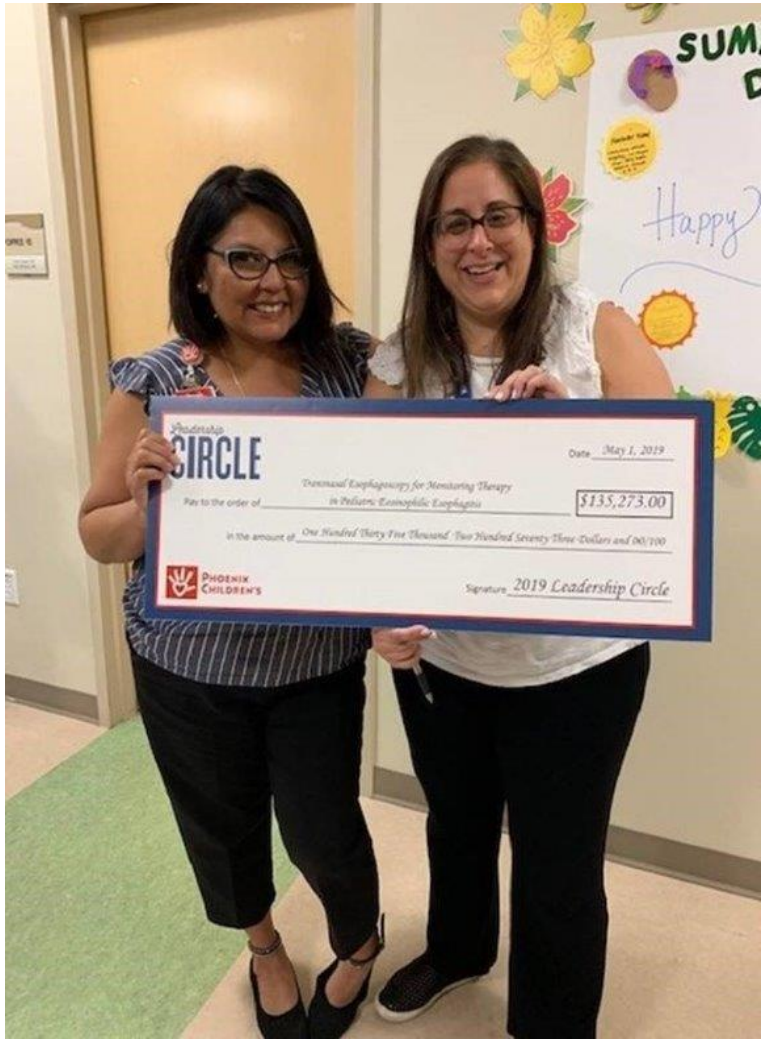
Interest, Training, Clinic Setup, Support

1. Leadership Circle Grant
2. Training in Denver November 2019
3. Clinic E Treatment Room
4. Support staff
5. Transition to disposable scopes
6. Trained 2 physicians
7. Other utilities for TNE- inpatient, EGDs



Who is a candidate for Less-Invasive Testing for EoE?

- EST: ? Can you swallow a pill?
- Have you already had a diagnostic esophagogastroduodenoscopy with biopsies?
- How are your symptoms?
- Are you consistent with your treatment?
- TNE: ? Are you ok with nasal sprays ?

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Video of TNE

Video of EST

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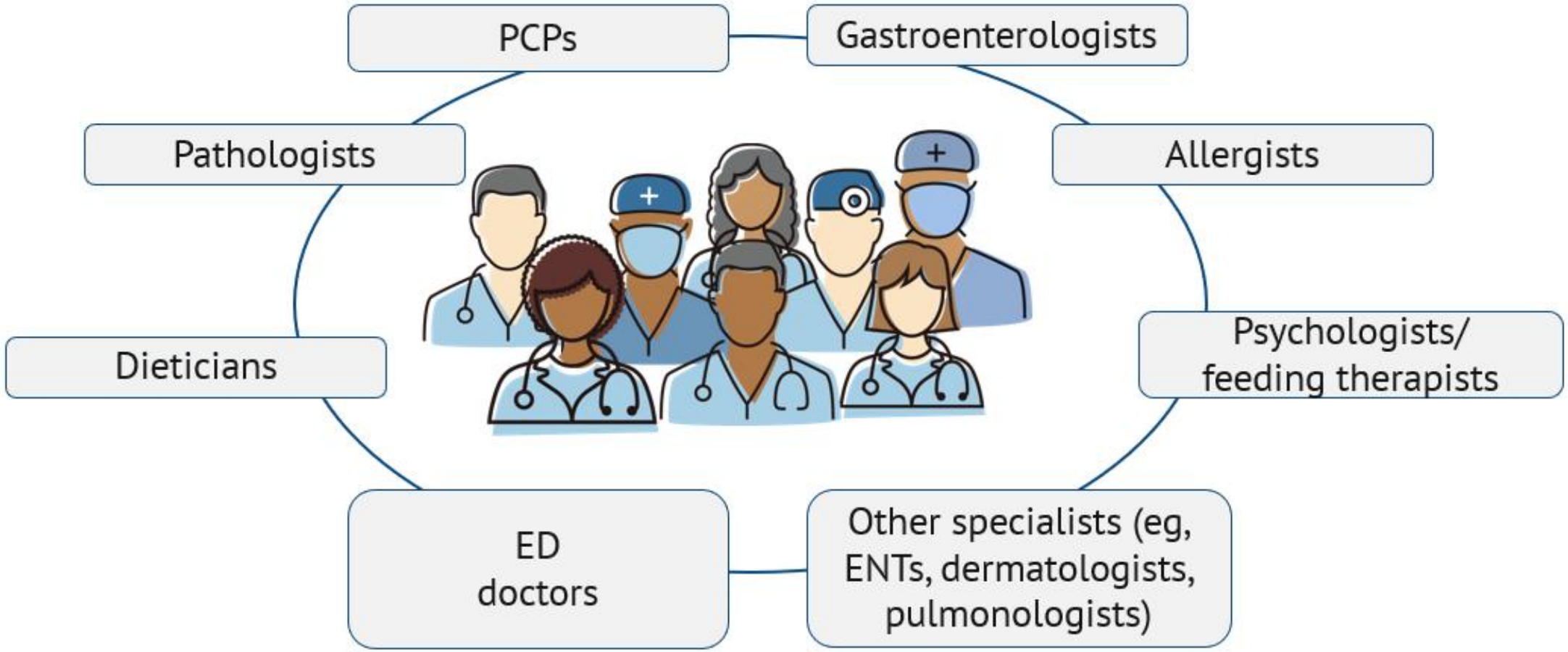
Need for a Multidisciplinary Approach to Optimize Long-Term EoE Care

Taking a Multidisciplinary Approach to EoE[1,2]



erences: 1. Sauer BG et al. *Clin Gastroenterol Hepatol.* 2021;19:2226-2229; 2. Muir AB et al. *Clin Exp Gastroenterol.* 2019;12:391-399.

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Optimizing Co-Management of EoE With PCPs

Patient-centered challenges

- Patients may not return for follow-ups
- Poor adherence
- Difficulty maintaining diet therapy

Referral challenges

- Symptoms can be ambiguous
- PCPs may not be able to independently refer patients for endoscopy

Long-term care challenges

- Routine endoscopy and sufficient biopsies required for monitoring
- Patient failing to return for follow-up

PCPs as an extension of specialist care:

- **Monitor prescriptions and feel comfortable refilling as needed**
- **Track symptoms and remind patients to visit specialist periodically**

Phoenix Children's EGID Clinic

Coordinator
Cinthya Perea, MA

GI Team
Dr. Schroeder (Medical Director)
Dr. Sharlin

Allergy Team
Dr. Bauer (Medical Director)
Dr. Wright
Dr. Krase
Dianna Queheillalt, NP

Registered Dieticians
Rachel Goodwin
Janet Iurilli
Molly Jepsen

Locations:
PCH Main
PCH Arrowhead
Virtual

Who to Refer:

- Any patient with diagnosed EGID is welcome
- Patients with refractory disease
- Patients with EGID + atopic conditions (asthma, seasonal allergies, food allergies eczema)*
- Any patient with non-EoE EGID*
- Any patient with OIT-induced EoE*

What does a typical visit look like?

- Education regarding EGID diagnosis, prognosis, treatment options, diet as treatment or otherwise
- Management tailored to specific patient
- Discussion of evaluative tools (EGD, TNE, string test)
- Diagnosis and management of co-morbid atopic conditions (typically driven by allergist; allergy testing and PFTs may be utilized)
- Follow up in EGID MDC is provided for patients with complicated disease and those who have yet to achieve disease remission

Extensions of Clinic:

- Sedation free clinic for community TNE, EST referrals
- TNE clinic
  (technician only unless pt is seen in EoE MDC)
- Esophageal string test clinic
  (technician only unless pt is seen in EoE MDC)
- Clinical Research
  (coordinator: Julia Loegering)
- EoE Support Group (Coming 2025!)

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Thank YOU!

Phoenix Children's EGID Group

GI- Dr. Colby Sharlin

Allergy- Drs. Cindy Bauer, Benjamin Wright, Ifrat Krase

RDs- Janet Iurilli, Molly Jepson, Rachel Goodwin

RN/NP- Nicole Sidebottom, Dianna Queheillalt

Cinthya Perea- EoE MA coordinator GI

Sedation Free Clinic

Drs. Colby Sharlin, Paul Tran

Cinthya Perea- EoE MA, Ellen Walden Landry RN

GI Fellows

Anita Husain MD, Grace Yoshiba MD

Evan Greenhall DO, Amanda Kuehn DO

Research Team

Emily Thompson, Dani Balitereez RCs GI

Cedria Wells, Melissa Pecak- RCs Allergy

Presentation Support

Jennifer Horsley Silva MD

Sedation Free Program at Phoenix Children's

Transnasal Endoscopy (Schroeder, Sharlin, Tran)

Indications: EoE, GERD, variceal surveillance, H Pylori

Ages > 8yo and cooperative ability

Involves administration of nasal spray

Can be successful in patients with mild anxiety, autism that are distractible

Visit EvoEndo.com for video

Esophageal String Test (Schroeder, Sharlin)

Indications: EoE – treatment/diet changes, surveillance

Age >6yr old and must be able to swallow pill (mike and ike size)

Lab based test "EoEscore" is 80% sensitive and specific for >15 eos/hpf

Visit Enterotrack.com for video and check out recent publications for more info!