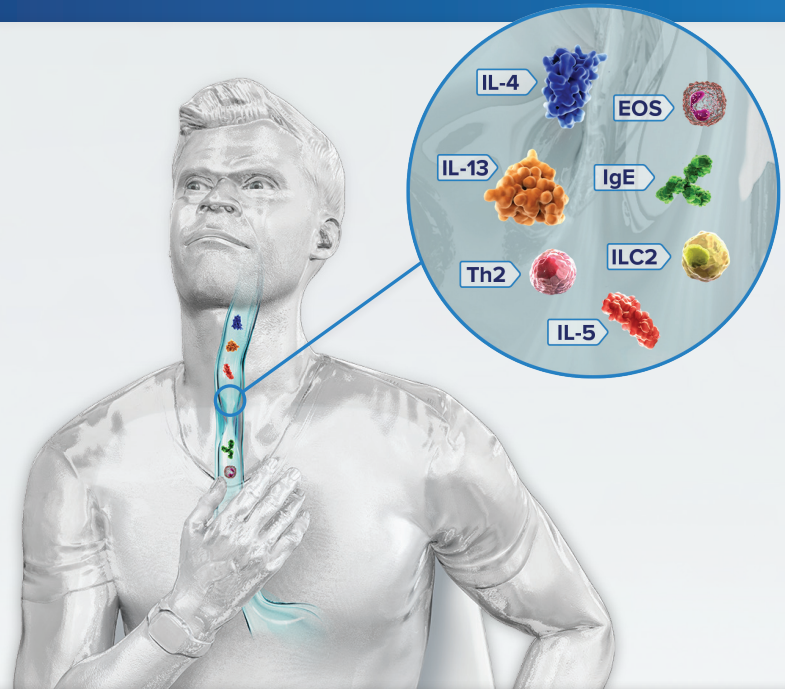


EOSINOPHILIC ESOPHAGITIS (EoE) IS A CHRONIC INFLAMMATORY DISEASE¹

DISCOVER THE SCIENCE

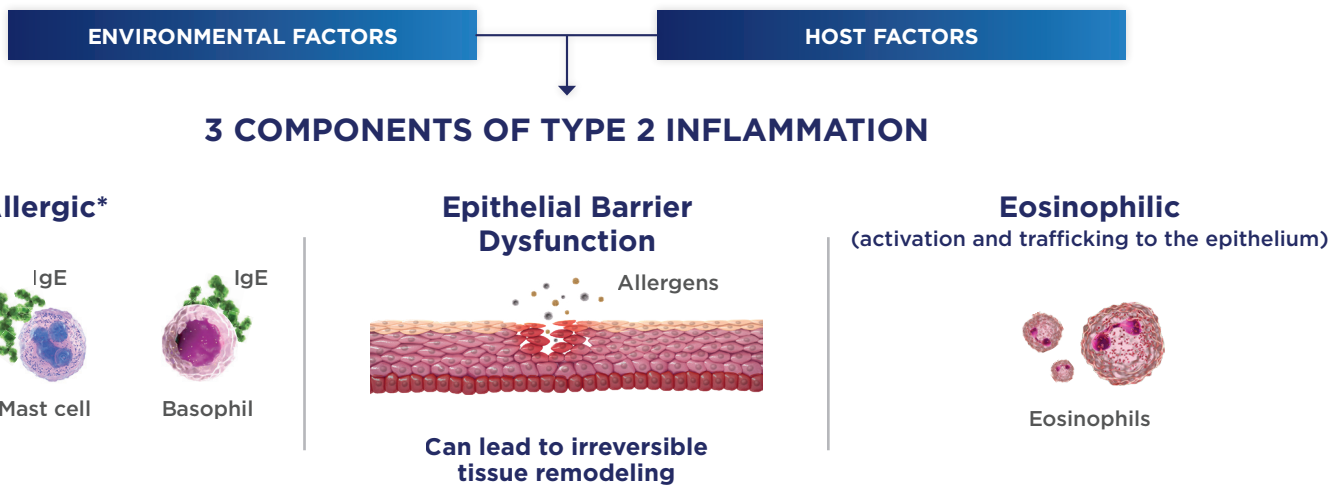


Eosinophilic esophagitis is driven primarily by Type 2 inflammation, characterized by epithelial barrier dysfunction and immune dysregulation¹⁻³

TYPE 2 INFLAMMATION IN EOSINOPHILIC ESOPHAGITIS ENCOMPASSES⁴:

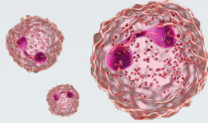
- Both adaptive and innate cell types
Th2 cells, ILC2 cells, mast cells, basophils, and eosinophils
- Key Type 2 cytokines
IL-4, IL-13, and IL-5

Type 2 inflammation in eosinophilic esophagitis is a result of interactions among triggers, the epithelium, and the immune system^{4,5}

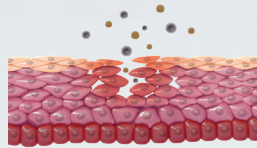


*EoE is primarily a non-IgE-mediated disease.⁶

Learn to recognize the signs of Type 2 inflammation in eosinophilic esophagitis^{2,7,8}



Eosinophil trafficking



Epithelial barrier dysfunction



Remodeling and fibrosis, such as strictures



Symptoms

Look for all the signs of eosinophilic esophagitis and coexisting Type 2 inflammatory diseases when evaluating your patients^{2,6,9-13}:



Symptoms

- Dysphagia
- Food impaction
- Chest pain (noncardiac)



Endoscopic findings

- Rings
- Exudates
- Furrows
- Edema
- Strictures



Histologic findings

- Eosinophilic count ≥ 15 EOS/HPF histology/HE stain



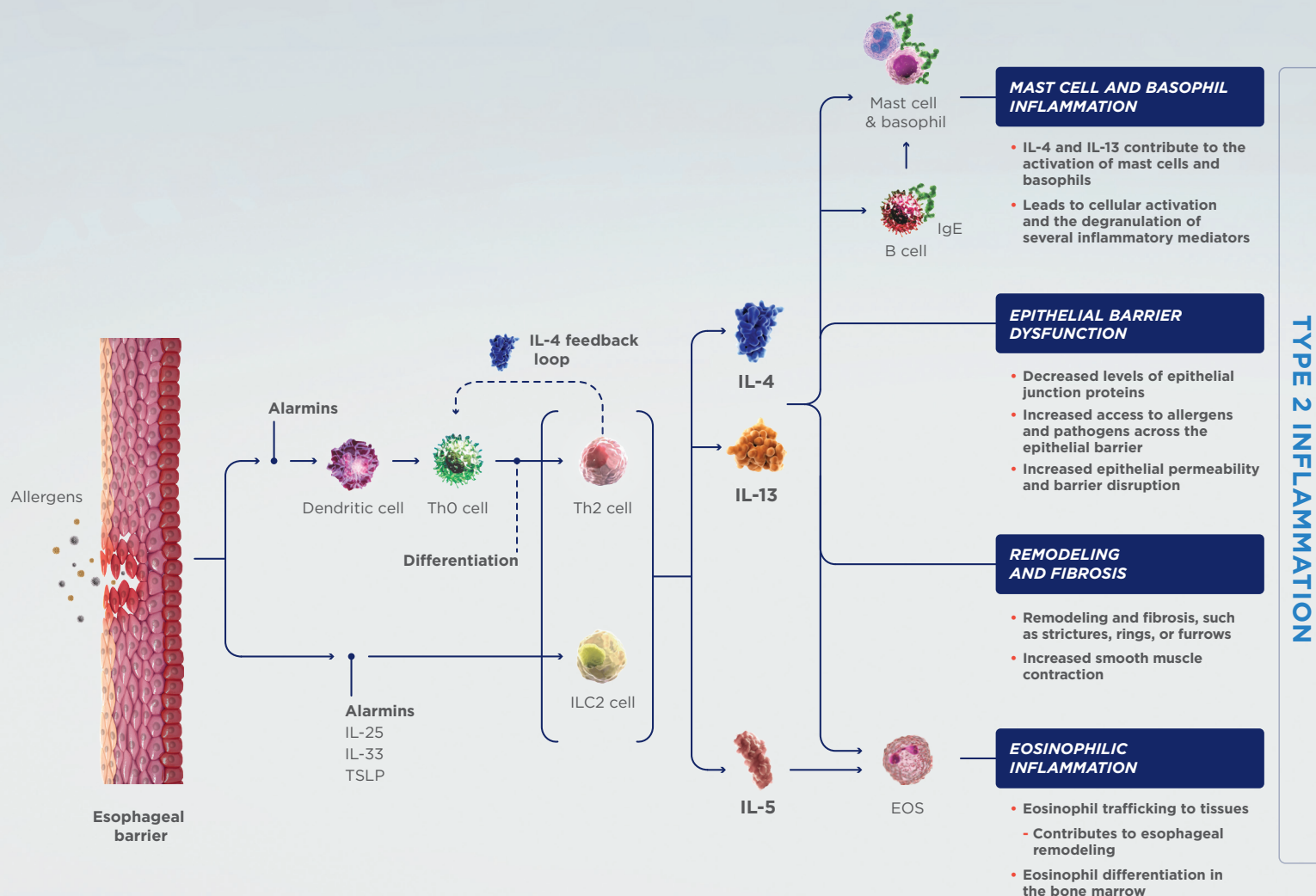
Coexisting Type 2 inflammatory disease (present in ~75% of patients with eosinophilic esophagitis)

- Allergic rhinitis
- Asthma
- Atopic dermatitis
- CRSwNP
- IgE-mediated food allergy

Understand the impact of Type 2 inflammation on symptoms of eosinophilic esophagitis

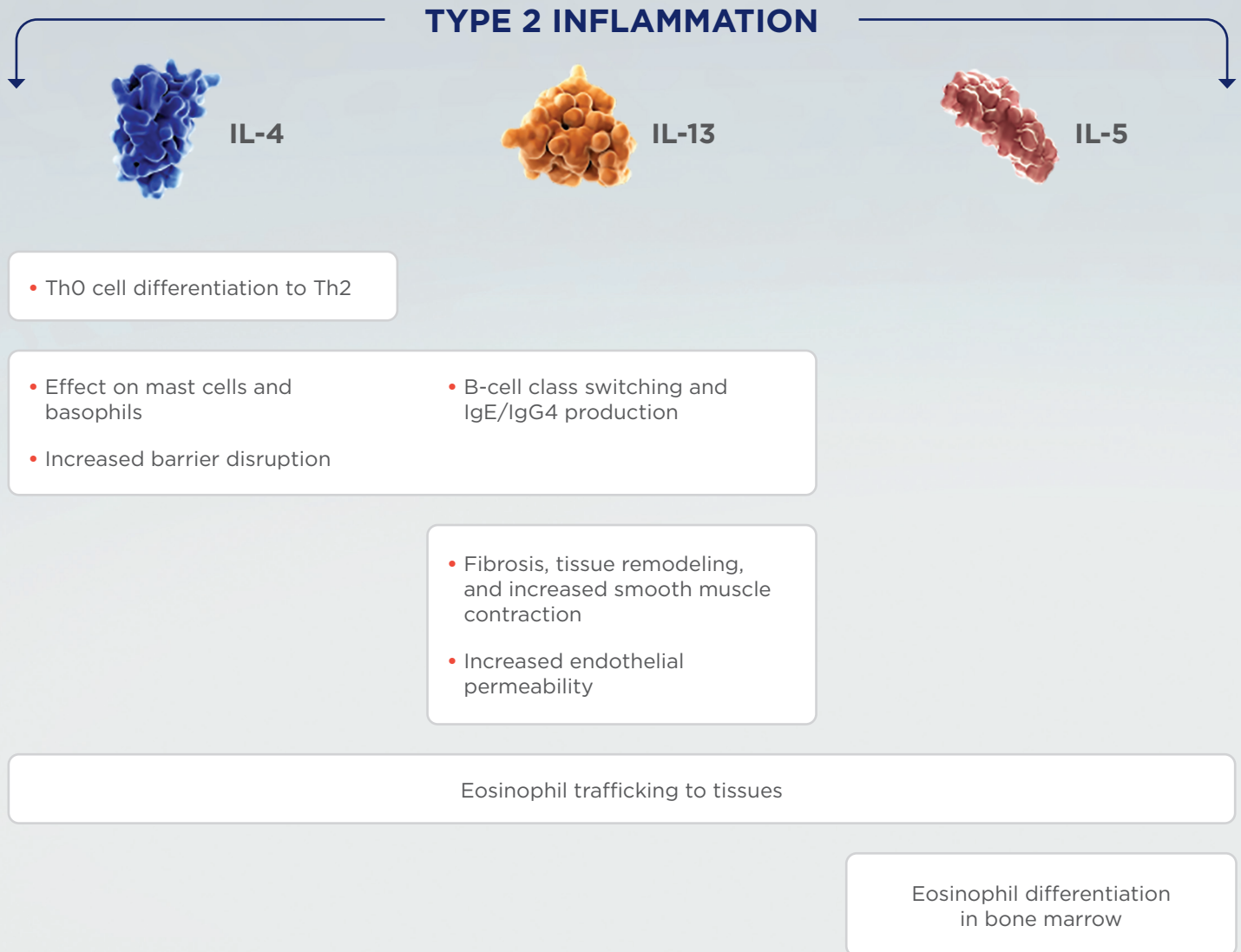
IL-4, IL-13, and IL-5 are key drivers of Type 2 inflammation in eosinophilic esophagitis^{4,7-9,14-16}

- Eosinophilic esophagitis is a heterogeneous disease with a complex pathophysiology
- Immune cells such as eosinophils, mast cells, basophils, and B cells also participate in the inflammatory response of eosinophilic esophagitis



Recognize the role of Type 2 inflammation as a driver of disease in patients with eosinophilic esophagitis

IL-4, IL-13, and IL-5 are key mediators of Type 2 inflammation in eosinophilic esophagitis^{4,7-9,14,17}



DISCOVER > RECOGNIZE > RETHINK EoE AND THE ROLE OF TYPE 2 INFLAMMATION IN ITS PATHOGENESIS

References: 1. Dellon ES, Hirano I. Epidemiology and natural history of eosinophilic esophagitis. *Gastroenterology*. 2018;154(2):319-332.e3. 2. Gomez Torrijos E, Gonzalez-Mendiola R, Alvarado M, et al. Eosinophilic esophagitis: review and update. *Front Med (Lausanne)*. 2018;5:247. 3. Bolton SM, Kagalwalla AF, Wechsler JB. Eosinophilic esophagitis in children: endoscopic findings at diagnosis and post-intervention. *Curr Gastroenterol Rep*. 2018;20(1):4. 4. Gandhi NA, Bennett BL, Graham NMH, Pirozzi G, Stahl N, Yancopoulos GD. Targeting key proximal drivers of type 2 inflammation in disease. *Nat Rev Drug Discov*. 2016;15(1):35-50. 5. Caminati M, Pham DL, Bagnasco D, Canonica GW. Type 2 immunity in asthma. *World Allergy Organ J*. 2018;11(1):13. 6. Gómez-Aldana A, Jaramillo-Santos M, Delgado A, et al. Eosinophilic esophagitis: current concepts in diagnosis and treatment. *World J Gastroenterol*. 2019;25(32):4598-4613. 7. Hill DA, Spergel JM. The immunologic mechanisms of eosinophilic esophagitis. *Curr Allergy Asthma Rep*. 2016;16(2):9. 8. Furuta GT, Katzka DA. Eosinophilic esophagitis. *N Engl J Med*. 2015;373(17):1640-1648. 9. D'Alessandro A, Esposito D, Pesce M, Cuomo R, De Palma GD, Sarnelli G. Eosinophilic esophagitis: from pathophysiology to treatment. *World J Gastrointest Pathophysiol*. 2015;6(4):150-158. 10. van Rhijn BD, Bredenoord AJ. Management of eosinophilic esophagitis based on pathophysiological evidence. *J Clin Gastroenterol*. 2017;51(8):659-668. 11. Jyonouchi S, Brown-Whitehorn TA, Spergel JM. Association of eosinophilic gastrointestinal disorders with other atopic disorders. *Immunol Allergy Clin North Am*. 2009;29(1):85-97. 12. Padia R, Curtin K, Peterson K, Orlandi RR, Alt J. Eosinophilic esophagitis strongly linked to chronic rhinosinusitis. *Laryngoscope*. 2016;126(6):1279-1283. 13. Chehade M, Jones SM, Pesek RD, et al. Phenotypic characterization of eosinophilic esophagitis in a large multicenter patient population from the Consortium for Food Allergy Research. *J Allergy Clin Immunol Pract*. 2018;6(5):1534-1544.e5. 14. Davis BP, Rothenberg ME. Mechanisms of disease of eosinophilic esophagitis. *Annu Rev Pathol*. 2016;11:365-393. 15. Siracusa MC, Kim BS, Spergel JM, Artis D. Basophils and allergic inflammation. *J Allergy Clin Immunol*. 2013;132(4):789-801. 16. Robinson D, Humbert M, Buhl R, et al. Revisiting type 2-high and type 2-low airway inflammation in asthma: current knowledge and therapeutic implications. *Clin Exp Allergy*. 2017;47(2):161-175. 17. Malhotra N, Levine J. Eosinophilic esophagitis: an autoimmune esophageal disorder. *Curr Probl Pediatr Adolesc Health Care*. 2014;44(11):335-340.