

# Setting the Standard

**ImmunoCAP™ Tryptase**, as an aid in the diagnosis of systemic mastocytosis, may provide the information you need to identify patients who may be at risk for future reactions<sup>1</sup>

**Tryptase is a unique marker that can be used in addition to other clinical findings to help healthcare providers:<sup>2</sup>**



**Your patient experienced anaphylaxis... could it be more?**

As many as 1 in 10 patients with a history of anaphylaxis are at risk for systemic mastocytosis<sup>6,7</sup>



## Mastocytosis and anaphylaxis

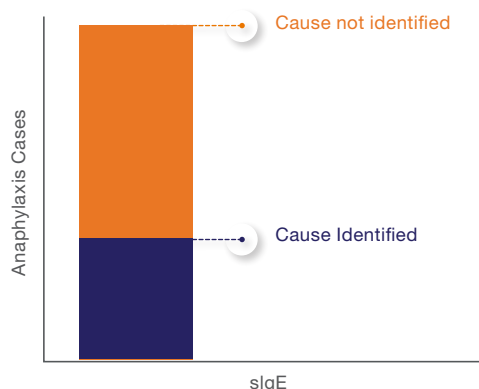
Patients with a history of mastocytosis are at an increased risk of anaphylaxis.<sup>4</sup>

Tryptase testing can measure the total level of tryptase released by mast cells into the circulation.<sup>1</sup> This enables a healthcare provider to evaluate a person's baseline tryptase level or any transient increases in the level of tryptase after a suspected allergic reaction.<sup>2</sup> This measure can help identify risk factors for repeated severe reactions to Hymenoptera insect stings and drugs, in conjunction with other clinical findings.<sup>3-5</sup>

Tryptase is a useful tool for confirming mast cell involvement.<sup>4</sup> Together with clinical findings, **Tryptase test results can help you rule in or rule out systemic mastocytosis.**

## Idiopathic anaphylaxis is common

Up to 60% of anaphylaxis cases appear to be idiopathic. Systemic mastocytosis should be considered in those cases.<sup>8</sup>



## Mastocytosis:

Refining differential diagnosis through testing

The most common physical symptoms of mastocytosis involve the skin, liver, spleen, and cardiovascular system.<sup>4,9</sup>

Patients that have mastocytosis may also have acute systemic symptoms, including:<sup>4</sup>

- Flushing
- Shortness of breath
- Palpitations
- Nausea
- Diarrhea
- Hypotension
- Syncope
- Lethargy
- Fatigue lasting several hours

### Common triggers of anaphylaxis in systemic mastocytosis:<sup>1,4,5,11</sup>



Hymenoptera Sting



Foods\*



Medications\*



Combination of multiple triggers

\*alpha-Gal present in products in this area

## The World Health Organization (WHO) diagnostic criteria.<sup>2,10</sup>

### Major Criteria

- Presence of 15 or more mast cells in clusters in bone marrow (biopsy)

### Minor Criteria

- Baseline Tryptase level >20 ug/l
- >25% of mast cells abnormally shaped
- Mutation in C-kit gene at Codon 816
- Presence of CD25 in mast cells

### Diagnosis of Systemic Mastocytosis

- At least one major criterion plus one minor criterion
- or**
- At least three minor criteria

## Management and care of patients with mastocytosis

Unfortunately for healthcare providers and patients, there is no one single treatment that can be used to address mastocytosis. The main strategy is avoidance of identified triggers and allergens, such as insect stings, temperature extremes, irritation, alcohol, or medications (e.g., aspirin, radiocontrast agents, certain anesthetic agents).<sup>4,5,9,12</sup>

 Learn more at [thermofisher.com/phadia](https://thermofisher.com/phadia)

### References:

1. [Internet]. Dfu.phadia.com. 2021 [cited 2021 May 19]. Available from: <https://dfu.phadia.com/Data/Pdf/5db0691d89c23208b8036f94.pdf>
2. Schwartz, L.B., Diagnostic value of tryptase in anaphylaxis and mastocytosis. *Immunol Allergy Clin North Am*, 2006. 26(3): p. 451-63.
3. Bonifazi, F., et al., Prevention and treatment of hymenoptera venom allergy: guidelines for clinical practice. *Allergy*, 2005. 60(12): p. 1459-70.
4. Brockow K, Metcalfe DD. Mastocytosis. *Chem Immunol Allergy*. 2010;95:110–24.
5. Simons, F.E., et al., 2015 update of the evidence base: World Allergy Organization anaphylaxis guidelines. *World Allergy Organ J*, 2015. 8(1): p. 32.
6. Bonadonna P, et al. How much specific is the association between hymenoptera venom allergy and mastocytosis? *Allergy* 2009;64:1379-1382.
7. Bonadonna, P, et al. Clonal mastcell disorders in patients with systemic reactions to Hymenoptera stings and increased serum tryptase levels. *Journal of Allergy & Clin Immuno*. [www.jacionline.org/article/S0091-6749\(08\)02211-2/fulltext](http://www.jacionline.org/article/S0091-6749(08)02211-2/fulltext). Accessed 1/21/13.
8. Gulen T, Akin C. Idiopathic Anaphylaxis: a Perplexing Diagnostic Challenge for Allergists. *Current Allergy and Asthma Reports*. 2021;21(2).
9. Castells, M, Metcalfe DD, and Escribano L. Guidelines for the Diagnosis and Treatment of Cutaneous Mastocytosis in Children. *Am J Clin Dermatol*. 2011;12(4):259-270.
10. Valent P, Akin C, Metcalfe DD. Mastocytosis: 2016 updated WHO classification and novel emerging treatment concepts. *Blood*. 2017 Mar 16;129(11):1420-1427.
11. Brockow K, et al. Anaphylaxis in patients with mastocytosis: a study on history, clinical features and risk factors in 120 patients. *Allergy* 2008;63:226-232.
12. Molderings GJ, Brettner S, Homann J, et al. Mast cell activation disease: a concise practical guide for diagnostic workup and therapeutic options. *J Hematol Oncol*. 2011;4:10.