

# Discover the connection

## ImmunoCAP™ Alpha-Gal Interpretation Guide

Test results should be interpreted in conjunction with patient history, symptoms and physical exam to assist in the formulation of a diagnosis and management plan.









<b>Step 1:</b>	Patients present with some or all of the following: urticaria, GI symptoms, anaphylaxis, angioedema <sup>5,6</sup>
<b>Step 2:</b>	Reaction time is unclear or delayed reaction suspected
<b>Step 3:</b>	Mammalian (red) meat or red meat byproducts consumption suspected
<b>Step 4:</b>	Order ImmunoCAP alpha-Gal profile (beef + lamb + pork + alpha-Gal) and ImmunoCAP Total IgE **
<b>Step 5:</b>	Consider the results interpretation shown here to determine next steps based on detected sensitizations (see page two for management consideration)

**Consider tryptase testing with severe reaction:** measure baseline tryptase to assess for potential of severe reactions and possible mastocytosis<sup>3,4</sup>


<p><b>Test Result<sup>1,2</sup></b></p> <p>⊕      ⊕</p> <p>α-Gal      Red Meat</p>	<p><b>If clinical symptoms are present,</b> consider IgE mediated mammalian (red) meat allergy to both alpha-Gal (α-Gal) and standard protein-mediated allergy</p>
<p><b>Test Result<sup>1,2</sup></b></p> <p>⊖      ⊕</p> <p>α-Gal      Red Meat</p>	<p><b>If clinical symptoms are present,</b> consider standard protein mediated meat allergy due to primary sensitization to one or more red meat allergens (beef, lamb, pork)</p>
<p><b>Test Result<sup>1,2</sup></b></p> <p>⊖      ⊖</p> <p>α-Gal      Red Meat</p>	<p><b>If there are no clinical symptoms</b> and no detection of standard protein-mediated or alpha-Gal sensitizations, consider other clinical factors or findings</p>

\*\* Measure to assess ratio of total to specific IgE  
Some experts recommend: If antibodies to alpha-Gal are greater than or equal to 2 kUjA/L or more than 2% of total IgE, this makes the diagnosis very likely<sup>1</sup>

## Management Considerations<sup>1-3</sup>

<p><b>Test Result</b></p> <p> </p> <p><b>α-Gal      Red Meat</b></p>	<ul style="list-style-type: none"> <li>• Avoidance of all mammalian (red) meats</li> <li>• Possible need to avoid milk, gelatin containing food and certain medications</li> <li>• Consider prescribing epinephrine auto injector</li> </ul>
<p><b>Test Result</b></p> <p> </p> <p><b>α-Gal      Red Meat</b></p>	<ul style="list-style-type: none"> <li>• Avoidance of specific sensitized mammalian meat</li> <li>• Consider prescribing epinephrine auto injector</li> <li>• May need to consider testing cross reactive proteins (e.g. milk, pork-cat syndrome)<sup>3</sup></li> </ul>
<p><b>Test Result</b></p> <p> </p> <p><b>α-Gal      Red Meat</b></p>	<ul style="list-style-type: none"> <li>• Consider other clinical factors or findings</li> <li>• Oral food challenge (OFC) with a specialist may be recommended. High likelihood that patient may pass OFC</li> </ul>

## Risk of reactions in the alpha-Gal syndrome<sup>1</sup>

 <p><b>Higher risk</b></p> <p>↑</p> <p><b>Lower risk</b></p>	<p><b>Food</b></p> <p>Beef, pork, lamb, innards</p> <p>Dairy</p> <p>Gelatin-containing foods</p>	<p><b>Medications/Biologic Therapies</b></p> <p>Cetuximab</p> <p>Gelatin plasma expanders</p> <p>Anti-venom (e.g. CroFab)</p> <p>Bovine/porcine heart valves</p> <p>Gelatin-containing vaccines (e.g. Zostavax, MMR)</p> <p>Pancreatic enzyme replacement (e.g. pancrelipase)</p> <p>Heparin</p> <p>Gelcaps</p>
---	--	---

Adapted from Platts-Mills Diagnosis and management of patients with alpha-Gal Syndrome JACI IP 2020. Journal of Allergy and Clinical Immunology: In Practice. 2020;8(1).

Find out more at [allergyaidiagnostics.com](http://allergyaidiagnostics.com)

1. Platts-Mills Diagnosis and management of patients with alpha-Gal Syndrome JACI IP 2020. Journal of Allergy and Clinical Immunology: In Practice. 2020;8(1).  
 2. Jackson WL. Mammalian meat allergy following a tick bite: a case report. Oxf Med Case Reports. 2018 Feb 21;2018(2):omx098. doi:10.1093/omcr/omx098. PMID: 29492269; PMCID: PMC5822700 3. Matricardi PM, et al EAAACI Molecular Allergology User's Guide. Pediatr Allergy Immunol 2016; 27: (suppl23): p117/118 2016 4. Carter M, Ruiz-Esteves K, Workman L, Lieberman P, Platts-Mills T, Metcalfe D. Identification of alpha-gal sensitivity in patients with a diagnosis of idiopathic anaphylaxis. Allergy. 2017;73(5):1131-1134. 5. Alpha-gal Allergy [Internet]. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention; 2019. Retrieved June 2020. <https://www.cdc.gov/ticks/alpha-gal/index.html> 6. Kennedy JL, Stallings AP, Platts-Mills TA, Oliveira WM, Workman L, James HR, et al. Galactose-alpha-1,3-galactose and delayed anaphylaxis, angioedema, and urticaria in children. Pediatrics. 2013 May;131(5):e1545-52.