Boulder Community Health

Allergy

Setting the standard

ImmunoCAP™ Specific IgE blood test results:

Interpretation

When you receive your patient's ImmunoCAP Specific IgE blood test results from the lab after ordering a regional respiratory profile, use the test results in conjunction with patient history, symptoms of why you tested, and physical exam to help interpret the results and decide on a patient management plan.

Sample respiratory pathway

1 Step 1

Patients presenting with any of the following: nasal congestion, rhinorrhea, sneezing, itchy nose/eyes, coughing, wheezing, chest tightness, shortness of breath.

2 Step 2

Order an ImmunoCAP Specific IgE blood test respiratory profile as an aid in diagnosis of IgE-mediated diseases.[1]

3 Step 3

Use the steps shown here to determine next steps based on detected sensitizations. Typical results scenarios are shown on page 2.

Interpret Results*

<0.1 kU_A/l
Consider other causes

≥0.1 kU_A/l

- Categorize results ranked from highest to lowest specific IgE sensitizations
- Provide allergen avoidance plan to keep patient below symptom threshold[2]
  - –Consider reducing exposure to allergens with the highest specific IgE levels first
  - – Focus on indoor allergens since these may be easier to control[3]
- Prescribe appropriate medications, e.g. antihistamines[2]
- Follow up. If inadequate response, refer to specialist[2]

Establish an allergen avoidance and medication plan with your patient.

Regional profiles

Each region of the country has a different regional profile to account for different trees, weeds, and grasses. Perennial allergens (molds, dust mites, mouse urine, cockroach, dog and cat dander) are found year-round.

D = Dust mites
Dermatophagoides farina; Dermatophagoides pteronyssinus

E = Epidermal
Cat and dog dander; mouse urine

M = Molds
Alternaria alternata; Aspergillus fumigatus; Cladosporium herbarum; Penicillium chrysogenum

I = Insects
Cockroach

T = Trees
Alder, grey; Bayberry/sweet gale; Birch, common silver; Cedar, mountain; Cottonwood; Elm, american; Eucalyptus; Eucalyptus tree; Maple/box elder; Maple leaf; Mesquite tree; Mimosa/acacia; Mulberry, white; Olive tree; Palm, queen; Pecan, hickory; Pine, white; Sycamore; Walnut; White ash; White; Oak

W = Weeds
Mugwort; Nettle; Pigweed, common; Ragweed, short; Rough marshelder; Russian thistle; Sheep sorrel; Wall pellitory

G = Grasses
Bahia grass, bermuda grass; Johnson grass; Rye grass, perennial; Redtop, bentgrass; Timothy grass

*Measurement kU_A/l=kilo units of allergen per liter

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Respiratory profile result scenarios†

Specific IgE **normal** Total IgE **normal**

Birch, common silver	<0.10
Cedar, mountain	<0.10
Elm, american	<0.10
Maple/box elder	<0.10
Oak, white	<0.10
Pecan, hickory	<0.10
Nettle	<0.10
Pigweed, common	<0.10
Common ragweed (short)	<0.10
Sheep sorrel	<0.10
Bahia grass	<0.10
Bermuda grass	<0.10
Alternaria alternata	<0.10
Aspergillus fumigatus	<0.10
Cladosporium herbarum	<0.10
Penicillium chrysogenum	<0.10
Cat dander	<0.10
Cockroach, german	<0.10
D farinae	<0.10
D pteronyssinus	<0.10
Dog dander	<0.10
Mouse urine	<0.10
Total IgE	**10**

Consider patient management as if **non-allergic**

Specific IgE **elevated** Total IgE **normal**

Alternaria alternata	<0.10
Aspergillus fumigatus	<0.10
Bermuda grass	<0.10
Birch, common silver	<0.10
Cat dander	**4.01**
Cladosporium herbarum	<0.10
Cockroach, german	<0.10
Common ragweed (short)	**20.13**
D farinae	<0.10
D pteronyssinus	<0.10
Dog dander	<0.10
Elm, american	<0.10
Maple/box elder	<0.10
Cedar, mountain	<0.10
Mouse urine proteins	<0.10
Mulberry	<0.10
Oak, white	**9.27**
Pecan, hickory	<0.10
Penicillium chrysogenum	<0.10
Rough marsh elder	<0.10
Pigweed, common	<0.10
Timothy grass	<0.10
Walnut	<0.10
Total IgE	**20**

Consider patient management as if **allergic**

~30% present this way.[5] This is why it is not recommended to screen with Total IgE.[6]

Specific IgE **elevated** Total IgE **elevated**

Cedar, mountain	**0.12**
Cottonwood	**0.20**
Elm, american	<0.10
Oak, white	<0.10
Olive tree	<0.10
Mugwort	**40.34**
Pigweed, common	<0.10
Common ragweed (short)	<0.10
Sheep sorrel	<0.10
Thistle, russian	**>100**
Bermuda grass	<0.10
Bahia grass	<0.10
Rye grass, perennial	<0.10
Alternaria alternata	<0.10
Aspergillus fumigatus	**25.25**
Cladosporium herbarum	**21.85**
Penicillium chrysogenum	**35.15**
Cat dander	<0.10
Cockroach, german	<0.10
D farinae	<0.10
D pteronyssinus	<0.10
Dog dander	**11.25**
Mouse urine	<0.10
Total IgE	**210**

Consider patient management as if **allergic**

Specific IgE **normal** Total IgE **elevated**

Alder, grey	<0.10
Birch, common silver	<0.10
Cedar, mountain	<0.10
Cottonwood	<0.10
Elm, american	<0.10
Maple/box elder	<0.10
Oak, white	<0.10
Mugwort	<0.10
Pigweed, common	<0.10
Sheep sorrel	<0.10
Thistle, russian	<0.10
Timothy grass	<0.10
Alternaria alternata	<0.10
Aspergillus fumigatus	<0.10
Cladosporium herbarum	<0.10
Penicillium chrysogenum	<0.10
Cat dander	<0.10
Cockroach, german	<0.10
D farinae	<0.10
D pteronyssinus	<0.10
Dog dander	<0.10
Mouse urine	<0.10
Total IgE	**380**

Consider additional patient **follow up**

Reconsider profile, geography, other exposures like furry/feathered animals, medications, or comorbid conditions.

*ImmunoCAP Specific IgE blood test results are quantitative. Results **above 0.1 kU_A/l** are indicative of an allergen-specific IgE sensitization.[1]*

Total IgE reference ranges reported in kU/l are dependent on age. Use your lab's reference range for Total IgE located on the results report.[4]

Levels of sIgE are relative to an individual patient. Some patients may have low levels of sIgE yet experience severe reactions. As in all diagnostic testing, any diagnosis or treatment plan must be made by the clinician based on test results, patient history, and knowledge of the patient.

†Official product names mentioned within this document: ImmunoCAP Allergen d1, House dust mite, ImmunoCAP Allergen d2, House dust mite, ImmunoCAP Allergen e1, Cat dander, ImmunoCAP Allergen e5, Dog dander, ImmunoCAP Allergen e72, Mouse urine proteins, ImmunoCAP Allergen g17, Bahia grass, ImmunoCAP Allergen g2, Bermuda grass, ImmunoCAP Allergen g5, Rye-grass, ImmunoCAP Allergen g6, Timothy, ImmunoCAP Allergen i6, Cockroach, German, ImmunoCAP Allergen m1, Penicillium chrysogenum, ImmunoCAP Allergen m2, Cladosporium herbarum, ImmunoCAP Allergen m3, Aspergillus fumigatus, ImmunoCAP Allergen m6, Alternaria alternata, ImmunoCAP Allergen t10, Walnut, ImmunoCAP Allergen t14, Cottonwood, ImmunoCAP Allergen t2, Grey alder, ImmunoCAP Allergen t212, Cedar, ImmunoCAP Allergen t22, Pecan, Hickory, ImmunoCAP Allergen t3, Common silver birch, ImmunoCAP Allergen t7, Oak, ImmunoCAP Allergen t70, Mulberry, ImmunoCAP Allergen t8, Elm, ImmunoCAP Allergen t1, Box-elder, ImmunoCAP Allergen t9, Olive, ImmunoCAP Allergen w1, Common ragweed, ImmunoCAP Allergen w11, Saltwort (prickly), Russian thistle, ImmunoCAP Allergen w14, Common pigweed, ImmunoCAP Allergen w16, Rough marshelder, ImmunoCAP Allergen w18, Sheep sorrel, ImmunoCAP Allergen w20, Nettle, ImmunoCAP Allergen w6, Mugwort, ImmunoCAP Total IgE

References

1. Phadia™ ImmunoCAP™ Specific IgE 0-100 Directions for Use for the Phadia 250 Laboratory System. Published 2019-10-24.

2. Papadopoulos, et al. Phenotypes and endotypes or rhinitis and their impact on management: a PRACTALL report. Allergy. 2015; 70; 474-494.

3. Matsui, E, et al. Indoor environmental control practices and asthma management. American academy of pediatrics. 2016.

4. Phadia™ ImmunoCAP™ Total IgE Directions for Use. Published 2019-10-29.

5. Data source on file.

6. Bernstein, L, et al. Allergy Diagnostic Testing: An Updated Practice Parameter. Annals of Allergy, Asthma, and Immunology. 2008. 100.S1-S148.

Learn more at **thermofisher.com/ImmunoCAPsIgE**

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