

Utility of the Ratio of specific IgE/total IgE in Oral Immunotherapy for Food Allergy

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RATIONALE

- OIT remains under investigation for food allergy
- Tests to predict adverse reaction during OIT are limited

OBJECTIVE: To describe associations between OIT adverse reactions, specific IgE alone, and ratio of specific IgE/total IgE

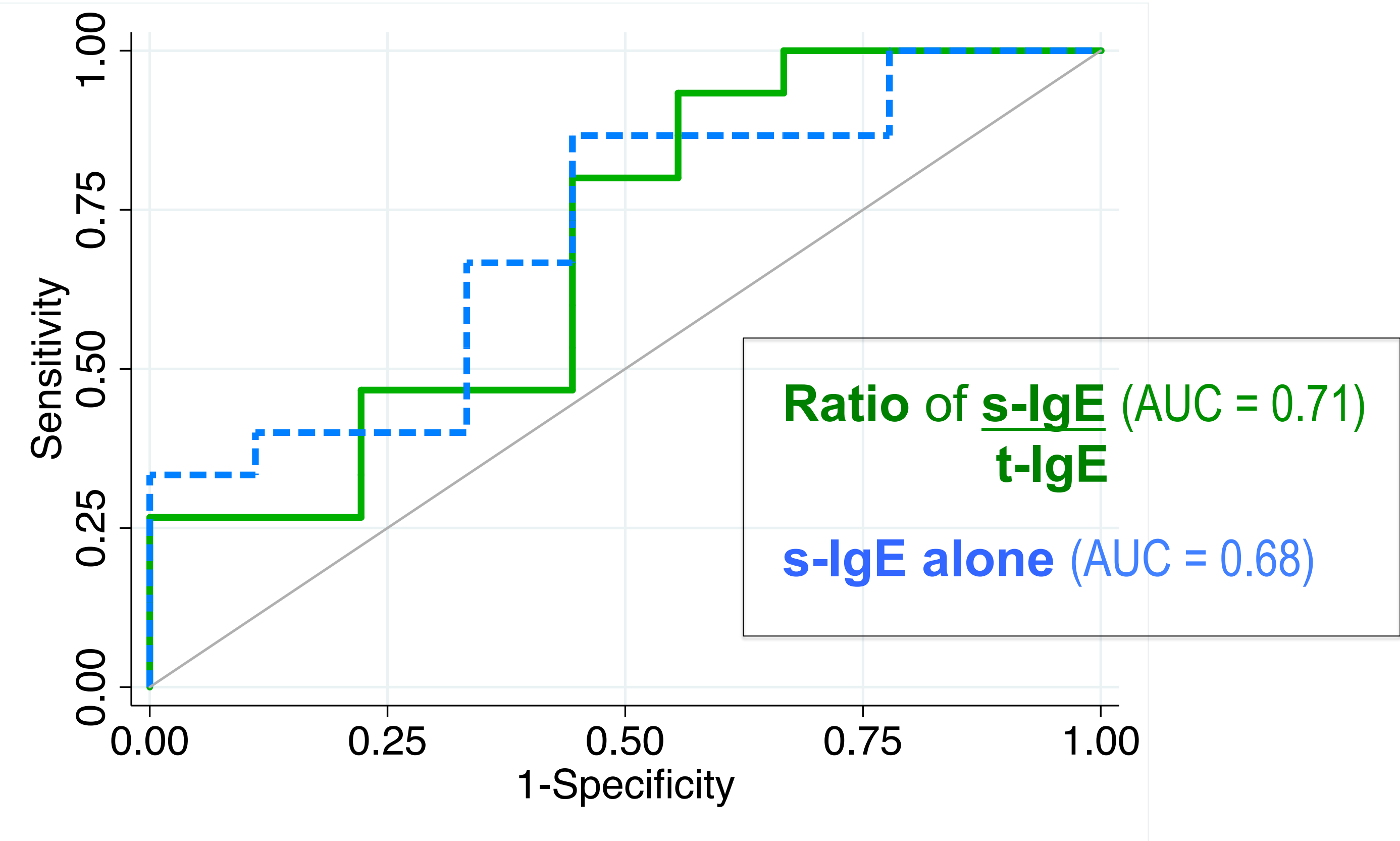
METHODS

- Reviewed charts of 20 children undergoing 24 OIT trials
- Statistical analysis using t-tests and ROC curves

RESULTS

	Adverse rx	No reaction	<i>P value</i>
Ratio of <u>s-IgE</u> t-IgE	3.1%	0.7%	.019
s-IgE alone	5.0 kU/L	2.2 kU/L	.052

ROC curve



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**RATIO of Specific IgE
Total IgE**
is more accurate than s-IgE alone
in predicting success of
oral immunotherapy
in children with food allergy

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SUPPLEMENTAL RESULTS

- 55% of children had a reaction during food OIT:
 - Mouth/throat itching/tingling
 - Abdominal pain
 - Nausea and emesis
 - Hives
 - Worsening of eczema
- Food allergen: peanut (n=10), cashew (n=5), almond, pistachio, milk, egg, wheat, sesame
- Age range: 4 to 14 years
- Female: 40%
- Total IgE range: 16 to 2483 kU/L
- Specific IgE range: 0.16 to >100 kU/L
- Ratio range: 0.3% to 38.7%

SUPPLEMENTAL TABLE: Performance characteristics of various potential decision points for the ratio of s-IgE/t-IgE

	Predictive thresholds for rx		
	Ratio of 0.5%	1.0%	2.0%
Sensitivity	87%	73%	67%
Specificity	33%	56%	67%
PPV	68%	73%	77%
NPV	60%	56%	55%

SUPPLEMENTAL ROC curve: Peanut and treenut only (n=20)

