

Position statement by Allergy Society of S.A. – May 2006

INTERPRETATION OF SPECIFIC IgE CONCENTRATIONS AND SKIN-PRICK TESTING IN THE EVALUATION OF FOOD ALLERGY.

- Clinical history is paramount in the evaluation of food allergy.
- Skin prick testing (SPT) and food-specific serum IgE concentrations(CAP RAST®) may add important information to clinical history.
- Cut-off values (decision point) for SPT. (*Table 1*) and specific IgE (*Table 2*) may be 90-100% predictive of a challenge positive result to the food allergen concerned but not necessarily for clinical sensitivity; although the out-off values are extremely useful, about 50% of cases of food allergy react to food challenges at concentrations below these values. Many patients, in fact, are dangerously sensitive to food allergens at levels below the cut-off values – therefore it is inappropriate to state that levels below the cut off values represents a “NEGATIVE” result. Thus, in patients with a strongly suggestive history of an IgE- mediated food allergic reaction, food challenge should be performed regardless of skin-prick test result or food-specific IgE value.
- For diagnosis of food allergies elimination-challenge testing (blinded or open) remains the final arbiter as to whether a patient is truly allergic or not.

Table 1 Food-Specific IgE Concentration (ku/L) Clinical Decision Points.

| | Egg | Milk | Peanut | Fish | Soy | Wheat |
|--|------------|-------------|---------------|-------------|------------|--------------|
| Reactive if \geq (no challenge needed) | 7 | 15 | 14 | 20 | 65 | 80 |
| Possibly reactive (physician challenge) | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| Unlikely reactive is less than (home challenged) | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 |

(From Sampson HA: J Allergy Clin Immunol 107:891-896, 2001)

Decision points for children < 2 years may be lower (due to the curves shown in Figures 1-4 being significantly shifted to the left) eg: for infants, a concentration equal to and over 2ku/L to egg and 5ku/L to milk is 95% predictive of a reaction.

Table 2 Predictive values for skin prick tests (Decision points).

Positive challenges of wheal (90 - 100% of predictive value)

| | Over 2 Years | Under 2 Years |
|------------|---------------------|----------------------|
| Cow's milk | > 8mm | > 6mm |
| Egg | > 7mm | > 6mm |
| Peanut | > 8mm | > 4mm |

(From: Sporik et al Clin Exp Allergy, 2002)

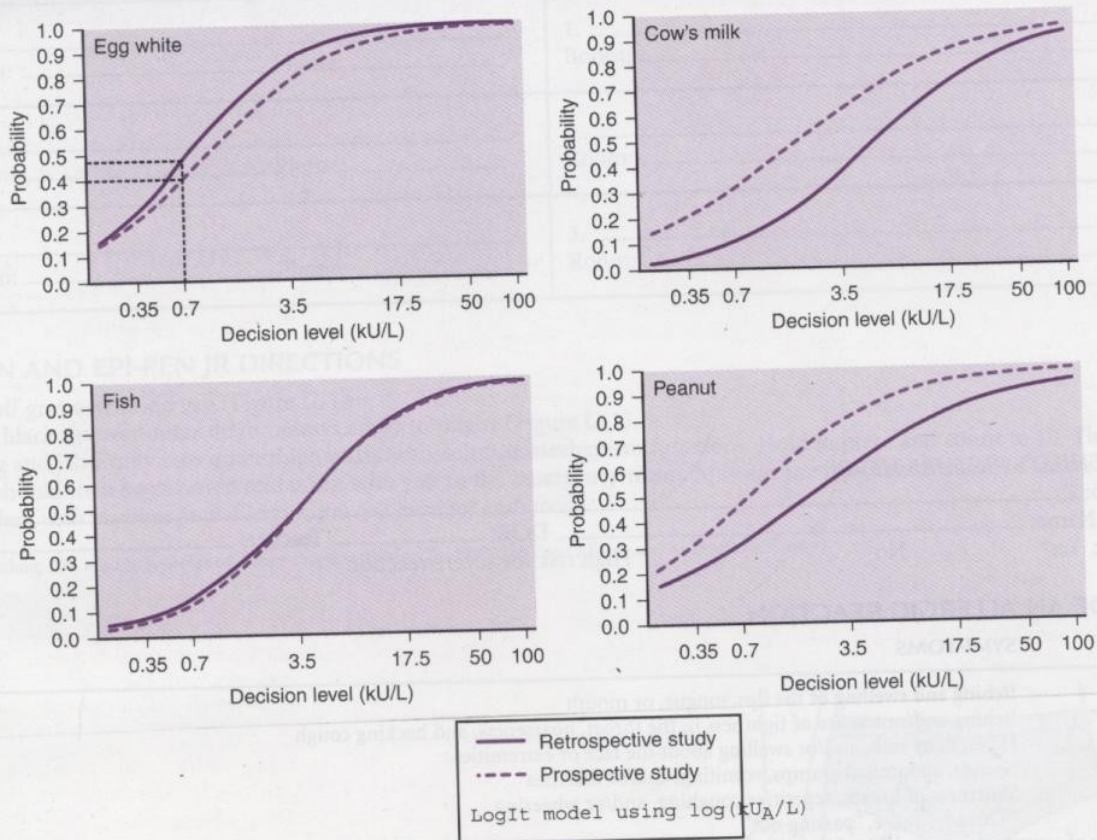


FIGURE F-1 Summary of the results of a retrospective ($N = 196$ children with a mean age of 5.2 years with atopic dermatitis) and prospective ($N = 100$ children with a median age of 3.8 years, 61% with atopic dermatitis) study correlating the chance of an IgE-mediated clinical reaction (based upon blinded oral food challenges or convincing history) to the concentration of food-specific IgE antibody (measured in kU/L using the Pharmacia CAP System FEIA, Pharmacia & UpJohn Diagnostics, Uppsala, Sweden) for four foods. (From Sampson HA: *J Allergy Clin Immunol* 107:891-896, 2001.)