Goals of Food Allergy Treatment

Jeffrey M Factor MD

Clinical Professor of Pediatrics

University of Connecticut School of Medicine

Medical Director

New England Food Allergy Treatment Center

Disclosures-None

Patient Goals

- Large majority of our patients at New England Food Allergy just want freedom to live a less restricted life, less anxiety, improved QOL
- Consequently, caregivers/patients desire protection against accidental ingestion, not necessarily free eating
- Particularly for PN, tree nuts and sesame OIT patents
- However, many milk, egg and wheat OIT patients want to be able to eat the food freely

Recognizing Goals and Motivations of Caregivers/Patients

1) Primary goal for OIT:

- 62% chose reducing the risk of a fatal food reaction
- 10.6% sought decreasing the hassle of strict avoidance
- Only 9% selected to incorporate the food into the diet normally

2) Parent definition of successful OIT:

- 65% agreed with the definition as avoiding the food, but having a lower rate of reaction than prior to treatment
- 19% agreed that success was eating the food but having a higher rate of reaction

Dunlap and Keet. J Allergy Clin Immunol Prac Feb 2019

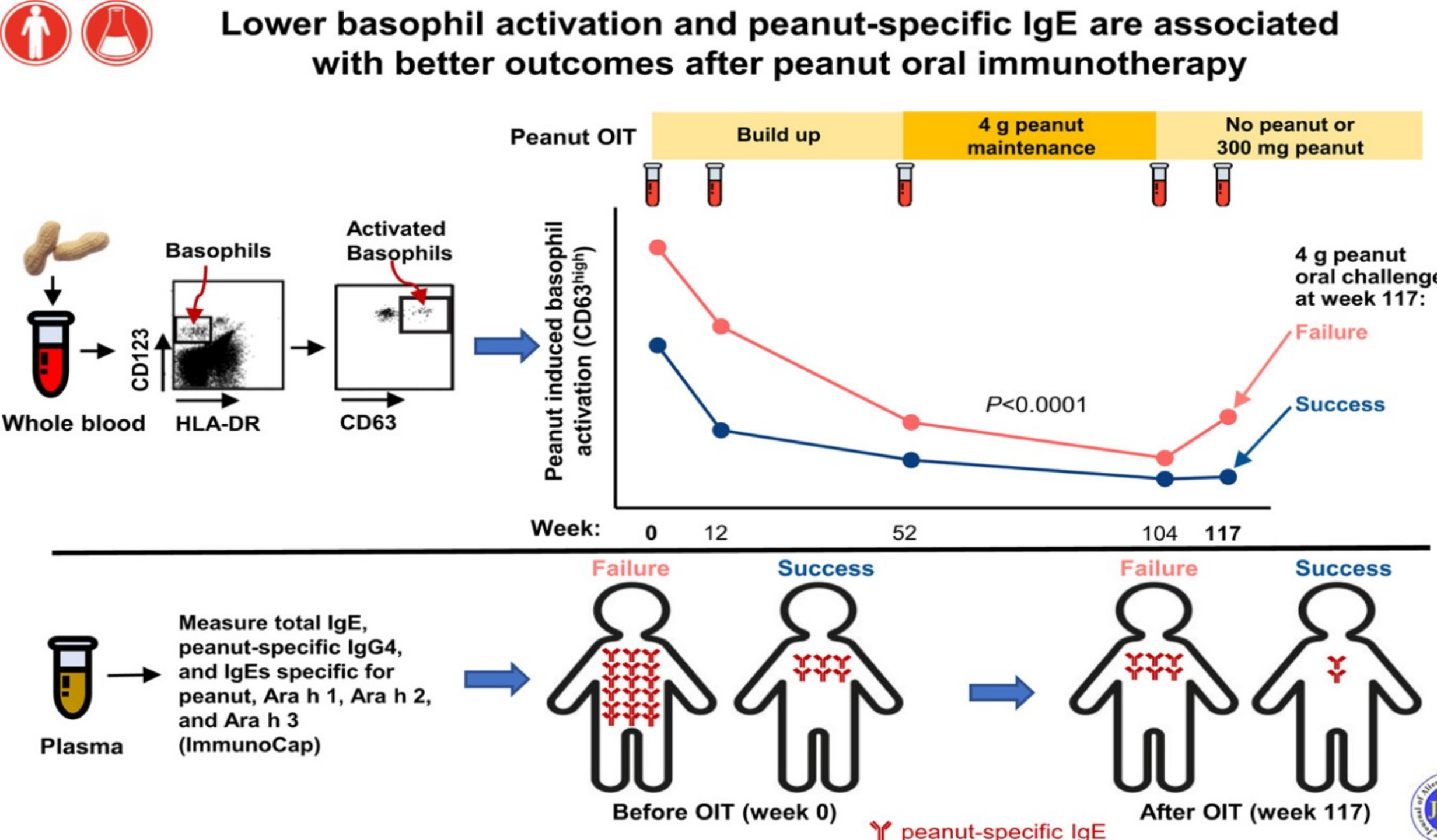
Provider Goals: Identifying Responders to OIT (Desensitization or Sustained Unresponsiveness)

- Phenotype of patient
- Severity of allergy
- Pre-treatment food sIgE levels
- Kinetics of serologic responses during OIT
- Concomitant allergic conditions

Peanut Phenotypes

- Large initial skin prick test size (SPT) and high PN specific/total IgE ratio=desensitization, but less likely to achieve SU
- Smaller baseline and post-treatment SPT, lower peanut IgE levels, lower Ara h 2 levels and lower PN specific/total IgE = more likely to achieve SU after 3-5 years of OIT
- Basophil activation test at outset = predictive of successful OIT … defined as desensitization vs SU (Tsai et al J Allergy Clin Immunol Dec. 2019)

Lower basophil activation and peanut-specific IgE are associated with better outcomes after peanut oral immunotherapy



Egg and Milk Phenotypes

- If reacts to a low dose of egg white protein on dose escalation = higher risk of adverse reactions during treatment
- Asthma diagnosis and high baseline egg white and ovomucoid IgE= more likely to fail OIT
- In contrast, low pretreatment egg white and ovomucoid IgE and increase egg white sIgG4, sIgA during treatment = associated with SU
- Large pretreatment PST to milk > 9mm or epinephrine administration during induction = more likely to fail OIT
- If tolerated starting dose of >30 mg of milk protein, not requiring epinephrine during induction/home treatment = more likely successful OIT

Definitions

- **Cross-contamination** refers to exposure to foods that may be present as a result of transfer of a food allergen from one source to another- such as “shared equipment” “manufactured in a facility” etc.
- **Bite-proof** is an ambiguous term, since a “bite” that does not contain PN as an ingredient is very different from a bite of confectionary item containing PN butter
- **Free-eating** refers to unrestricted consumption of the food, may require high dose OIT or alternatively passing an OFC on OIT