values (PPV, NPV) were calculated across 2.0-350.0 kU/L ranges. Adjusted odds ratios were computed for each allergen. This study was IRB exempt.
Results: Non-atopic samples (26.1%) showed age- and sex-dependent tIgE variations in upper limits: lowest in infants (females: 57.2 kU/L, males: 78.9) and highest in older adult males (280.1 kU/L) and elderly females (264.6 kU/L). Across age groups, the tIgE upper limit from non-atopic samples showed high PPV (94.0-98.8%) for predicting atopy from sIgE testing, but low NPV (26-53.7%) for ruling out atopy. Highest tIgE levels were in patients with combined food/respiratory sensitization. Males showed increased odds for all allergens (OR 1.06-1.83). Infants demonstrated higher food allergen associations (egg white OR = 6.46, milk OR = 3.53); respiratory allergen sensitivity increased through adolescence. Lowest allergen associations were in rural and Midwest US regions.
Conclusions: Age-specific tIgE reference ranges improve diagnostic accuracy, but high PPV with low NPV requires combining tIgE screening with sIgE testing based on demographic factors.

R051

KIDNEY TRANSPLANT RECIPIENTS HAVE HIGHER BASELINE SERUM TRYPTASE LEVELS

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Introduction: Baseline serum tryptase (BST) is an established marker of mast-cell burden, but its determinants in kidney transplant recipients are not well characterized. We investigated whether kidney transplantation is associated with elevated BST among patients with advanced kidney disease.
Methods: We retrospectively reviewed adults with chronic kidney disease (CKD) or end-stage kidney disease (ESKD) who underwent baseline BST testing during drug-allergy evaluation at a northern New Jersey center from 2016 to 2025. Patients with acute allergic symptoms were excluded. Collected data included demographics, transplant status, creatinine, immunoglobulin E (IgE), and histamine. BST distributions were compared between transplant and non-transplant groups using the Mann-Whitney U test. Multivariable linear regression adjusted for age, sex, height, weight, creatinine, IgE, and histamine.
Results: Twenty-three patients (median age 39 years; 70% female) were included, with five (22%) having a functioning renal graft. Median BST was significantly higher in transplant recipients compared to non-transplant patients (21.7 ng/mL vs 11.1 ng/mL; $p = 0.023$). IgE levels did not differ significantly between transplant and non-transplant groups (median 39.0 vs 77.0 IU/mL; $p = 0.68$). In the adjusted model ($R^2 = 0.62$), transplant status was the strongest predictor of BST ($\beta = 7.0$ ng/mL, 95% CI 0.9–13.1, $p = 0.031$), while creatinine and other variables were not significant predictors.
Conclusion: Kidney transplant recipients have higher baseline BST than non-transplant CKD/ESKD patients, independent of renal function and allergic biomarkers. Awareness of this association may improve interpretation of BST in post-transplant allergy evaluations and should be further studied in larger cohorts.

R052

UNDERSTANDING PREFERENCES WITH ALLERGY IMMUNOTHERAPY

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Introduction: A common treatment for allergic rhinitis is allergy immunotherapy (AIT). Due to the high volume of physical appointments required, a high level of noncompliance towards AIT has been previously reported. To improve compliance and optimize healthcare, the preferences and opinions of those undergoing AIT should be better understood. We hypothesize there are distinct preferences of individuals on AIT that can be used to shape/improve clinical experiences.
Methods: Preferences were collected and ranked based on five factors: number of physical visits, treatment expenses, anaphylaxis risk, local side-effects, and therapy administration site. The distribution of ranks was summarized using descriptive statistics, such as median and interquartile range (IQR). A Friedman Test was employed to identify variations in the components' ranks. A significance level of $p < 0.05$ was used.
Results: Nearly equal numbers of men (n=31) and women (n=36) participated. A significant difference in respondents' rankings of the five treatment criteria was found ($p<0.001$). Treatment costs had the highest median rank (IQR) of 2.0 (1.0-5.0) with 34% of participants ranking it as the most important element. Physical visits, local side-effects, and anaphylaxis risk were moderately important (median rank of 3.0). Sixty-four percent of respondents ranked site of treatment administration as the least significant element.
Conclusion: Treatment costs were perceived as the most important aspect of AIT care that patients wanted to prioritize. Healthcare professionals can benefit from these insights, which highlight the necessity of putting affordability first and reducing treatment burden to improve patient satisfaction and AIT adherence.

R053

KIWI AS A PRIMARY ELICITOR OF NSLTP-SYNDROME IN MUGWORT-ALLERGIC PATIENTS

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Introduction: Non-specific lipid transfer protein (nsLTP) syndrome is caused by resilient plant-derived proteins capable of triggering systemic allergic reactions. The primary elicitor is typically a food allergen, with peach a leading trigger. A prior case in a 27-year-old Ukrainian man had symptoms and highest specific IgE (sIgE) levels to kiwi allergen Act d 10, sensitized to nsLTPs only, with kiwi the primary elicitor. A broader sample of ragweed- and mugwort-allergic individuals was assessed.
Methods: Data from 6,778 patients sensitized to ragweed and/or mugwort was assessed using the ALEX multiplex allergy test. Agglomerative clustering was applied to identify common patterns of allergen sensitization. Bayesian analysis was then used to infer potential hierarchies among the allergens within clusters, aiming to identify the most probable primary elicitor of sensitization.
Results: The largest identified cluster, comprising at least 141 patients, included only nsLTP allergens: Art v 3 (mugwort), Act d 10 (kiwi), Ara h 9 (peanut), Cor a 8 (hazelnut), Mal d 3 (apple), Pla a 3 (plane tree), Pru p 3 (peach), and Zea m 14 (maize). Although Art v 3 was set as the key node in Bayesian clustering, Act d 10 was the most probable primary sensitizer within this group. Pru p 3 was ranked third, similar to the case reported with sIgE levels to Pru p 3 ranking tenth.
Conclusion: Mugwort-sensitized individuals are more likely to develop nsLTP syndrome compared to those sensitized to ragweed alone. Kiwi Act d 10, represents a primary elicitor of nsLTP sensitization in mugwort/ragweed-sensitized populations.

R054

BIOLOGIC USE FOR ATOPIC DISORDERS AND PREGNANCY: VARIABILITY IN REAL-WORLD TREATMENT PATTERNS

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Introduction: Biologic use during pregnancy is not well characterized in real-world settings. We assessed treatment patterns around