



Dupilumab Improved Pre-Bronchodilator FEV1 in Patients With Uncontrolled, Moderate-to-Severe Allergic Asthma

As background, dupilumab is a monoclonal antibody, directed against the shared receptor protein for both interleukin four and interleukin 13. In the phase three pivotal trial program, dupilumab was found to have a significant reduction in exacerbations, improvements in FEV1, and improvements in patient reported outcomes.

One of the questions is whether or not particular allergen sensitivities would either detract from or enhance the effects of dupilumab on improving one of these outcomes, including FEV1. In this post hoc analysis of the pivotal trial data, we did indeed look at the effects of dupilumab on FEV1 percent predicted, in patients who are allergic to a number of different allergens, including house dust mites, a number of mold species cockroach, and both cat and dog danders.

In the analysis, we were able to determine that irrespective of which allergen a patient reacted to, the effects on FEV1 were roughly equivalent, and statistically better than placebo in each case. Drawing from this information, clinicians can conclude that irrespective of what their patient reacts to allergenically, the drug will still have the same effect on FEV1 and perhaps other outcomes as well.

FEV1 is a very important measure of physiologic functioning in bronchial asthma. As such, what we've learned over the years is that patients with lower airway function may be more prone to exacerbations. And with each exacerbation, a patient experiences their FEV1 over time will ratchet downward, lower and lower. When a patient has a 100 ML improvement in FEV1, we consider this clinically meaningful, in that patients can feel the difference with regard to their daily activities of living.