So where are we with the data sets, with the clinical studies and clinical experience with dupilumab in the pediatric age group, in our adolescents and younger individuals? We know the drug was initially studied in 18-plus, in adults. And then we had studies in 12 to 18. And there were really two sets of studies that were done. There was this pharmacokinetics study where doses were given and then time passed over a few weeks, and then doses were given again. And then those patients were put into an open label study.

Then there was, essentially, a smaller study that was a sort of a tough love study, placebo-controlled study of patients who received dupilumab or the blank shots, and then were followed over the 16-week time period. And so the short-term studies showed a robust clinical response with dupilumab, very little response with the placebo.

The overall clearer-- almost clear rate in that 16 weeks, a little bit lower than adults. But the difference between the placebo rate and the clear, almost clear rate with dupilumab was about the same as the adults.

And then we had a read on the data set of that initial study with one year of use, which was really nice because that goes along with some of our clinical experiences in pediatric dermatology. Some of the kids with dupilumab take a little longer to really get clear.

And in that one-year study, we had very, very robust changes within the high 70s percent decrease, an EASI score percentage of patients who made it clear, almost clear being much higher than in then the 16-week clinical trials, but also, an extended time period to look for any safety changes with the punch line being that the side effect profile and the rates of side effects was essentially no different in the one year of use as it was in the four months of use.

So that's sort of the core data of 12-year-olds to 18-year-olds. Conjunctivitis rates, about the same as adults, no seeming differences in terms of the side effect profile as compared to the adults. So there actually wasn't even a change in the formal labeling in terms of the side effect profile with the adolescent data. It stayed with the adult prescribing information in relationship to that as well.

And then, of course, we have a lot of clinical experience now with that drug having been approved in adolescents. And we have, essentially, the same side effect profile and an increasing evidence of its utility in more and more patients as we've gone on and used the drug.

Now, the younger than age 12, there are several papers that have been published that I've talked about off-label utilization of dupilumab, a very nice data at different dosages that have come out into the literature, and then also formal trials of six to 12-year-olds, which will be either-- which has either led to approval or leading most likely to approval, depending at the time that you're accessing this educational program.

So the feeling, it seems to be even though the data is not yet published in print, that the six to 12-year-olds are responding at about the same rate as we saw with the adolescents and adults without a different side effect profile. We can speak to this more when papers get published.

But the assumption is that the drug will be used in this age group with it being really more interesting as we hit these younger children-- I said more interesting, but rather interesting-- as we hit these younger age patients with systemic-- and treat them with systemic therapy, it'll be really interesting to see what happens in terms of the course of their disease.

And then we've already seen data on pharmacokinetics at different weight-based dosing in children two to six years of age. And that's going to be another thing that's interesting in the pediatric age group, which is that, you know, how do we dose according to weight? And do we do loading doses? Or do we do Q2 week or Q4 week doses? And is there enough of a difference between Q2 and Q4 week doses at different milligrams or milligrams per kilogram that it can make it either more cost effective, or to do it with less frequent dosing, or whether we keep a standard Q2 dosing, which is what we're using in our adolescents and adults to try to have the greatest efficacy?

These are unanswered questions right now but very interesting questions for us, for anyone who's really taking care of patients with moderate severe atopic dermatitis in the pediatric age group.