

Correspondence

How predictive are predictors of remission of peanut allergy?

To the Editor:

I read with interest the article by Ho et al¹ on evaluation of early clinical predictors of remission of peanut allergy. In his cohort of 267 children with peanut allergy, 2 statistically significant predictors of remission of peanut allergy were identified. These were skin prick test (SPT) diameter 6 mm or greater, and peanut-specific IgE level 3 kUA/L or greater. Patients with SPT ≥ 6 mm were approximately 2 times more likely to have persistent allergy than patients with SPT < 6 mm (reported hazard ratio, 2.16), and patients with peanut-specific IgE level ≥ 3 kUA/L were nearly 3 times more likely to have persistent allergy (hazard ratio, 2.74). However, practicing clinicians still do not know how to quantify the probability of remission and inform patients accurately and reliably. If the anxious parents of a child with peanut allergy ask about the chance of remission their child has by 3 or 5 years of age, we still cannot answer satisfactorily even if we have the SPT and IgE results, because we do not know exactly how predictive the predictors are. To translate the research findings to clinical practice for patient counseling, we need to know the positive and negative predictive values of the predictors. These values can inform us about the probability of remission and persistence of peanut allergy given a particular test result. However, predictive values can be generated from the results only if follow-up is complete—that is, when we have all the final outcomes to categorize all patients' remission status. Nevertheless, even if not all patients were followed up to 5 years, the authors should extract data on all patients who had completed 4 or 5 years of follow-up and tabulate the predictive values of the identified predictors so that readers

can have concrete figures to discuss with parents about the chance of remission. In addition, 95% CIs should accompany the estimates of the predictive values so that the reliability of the estimates can also be communicated. Because of large overlap in the SPT sizes and IgE levels of remitters and nonremitters in the author's cohort, the predictive values of these 2 "predictors" are unlikely to be entirely satisfactory. However, if we increase the cutoff, eg, SPT ≥ 8 mm, the predictive value for nonremission will probably be higher. Likewise, a lower cutoff of IgE level (eg, < 1 kUA/L) might have a higher predictive value for remission. The author is encouraged to work out the predictive values of different strata of cutoffs for readers to evaluate how predictive the 2 predictors are at different cutoff levels. These worthwhile efforts can let us predict with a certain degree of confidence the chance of remission of a particular patient on the basis of SPT results and IgE levels, instead of just telling parents that their child's chance of remission may be higher because the child has a low SPT size and IgE level. With reliable estimates of predictive values, the need for frequent reassessments of the patients by SPT, IgE levels, or food challenges may also be reduced.

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REFERENCE

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