

CORRESPONDENCE

Value-added reporting of specific IgE

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To the editor,

In a recent position paper on the interpretation of IgE sensitization tests, Roberts et al. (1) comprehensively discuss the ways specific IgE values can be reported and interpreted and propose approaches to maximize diagnostic information of specific IgE test results. For example, they (i) suggest that specific IgE values should be regarded as continuous measures rather than as dichotomized measures (a single cut-off) and (ii) argue that the interpretation of allergy test results can be refined by modelling the probability of clinical allergy (1). In that respect, they propose to integrate patient, environmental and allergen factors and to use likelihood ratios (LR) to estimate the (post-test) probability of clinical allergy (1). They, however, acknowledge that almost no data on LRs are available (especially for aeroallergens) (1).

We recently reported specific IgE test result interval-specific LRs for clinical allergy to birch and grass pollen (2). The LR (95% confidence interval) of specific IgE to birch pollen was 0.0 (0.00–0.07), 0.1 (0.01–0.75), 4.2 (0.44–40.09), 6.3 (2.19–18.24) and very high (∞) (17.82– ∞) for a result of <0.1, 0.1–0.35, 0.35–0.7, 0.7–3.5 and >3.5 kU/l, respectively. Based on LR, the post-test probability as a function of the pretest probability can be calculated (3). The higher the specific IgE, the higher the post-test probability. Based on the clinical presentation, environmental exposure, patient history, physical examination and other relevant data, clinicians will estimate the pretest probability. For example, an allergologist can, based on his experience, estimate the pretest probability for grass pollen allergy of a 50-year-old patient presenting with a 3-year history of perennial rhinitis that exacerbates in spring, and no personal or familial history of atopy to be 30%. In this patient, the derived post-test probability will be 9% for specific IgE of 0.2 kU/l and 100% for specific IgE of 5 kU/l. Figure 1 illustrates the post-test probability as a function of the pretest probability and the specific IgE test result. We previously showed that such graphical representation is a convenient way to convey diagnostic information to clinicians (4). Future studies are needed to further establish the test result interval-specific LRs for other allergens and to define criteria to estimate pretest probability.

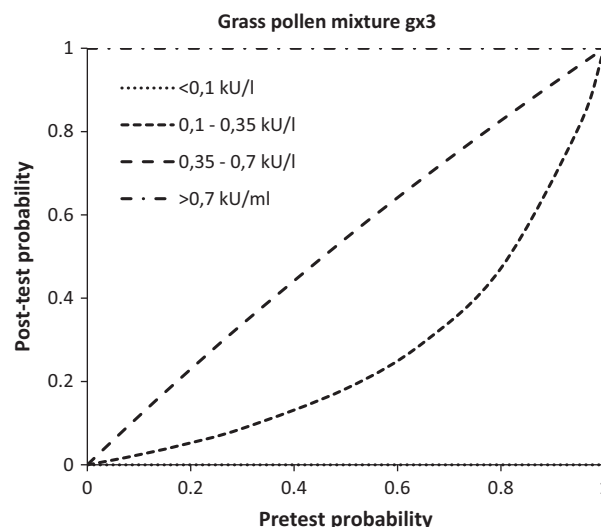


Figure 1 Post-test probability for reactivity to grass pollen mix (gx3) as a function of pretest probability and of specific IgE test result [<0.1 kU/l, between 0.1 and 0.35 kU/l, between 0.35 and 0.7 kU/l, and >0.7]. The figure is reproduced from (2), with permission of the publisher (Elsevier).

In conclusion, we illustrated the value-added reporting of specific IgE and thereby endorse the concepts on improved interpretation of IgE tests proposed in a recent position paper (1).

Conflicts of interest

The authors declare no conflict of interest.

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