

## Ultra-Short-Course Seasonal Allergy Vaccine (Pollinex® Quattro)

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Specific subcutaneous immunotherapy (SCIT) is currently considered a major and cause-specific therapeutic option for a select, so far rather small, patient group with allergic airway disease, a condition affecting up to 40% of the total population and still increasing in prevalence. SCIT has been proven to have clinically relevant long-term effects on symptoms and medication scores, as well as immunological parameters, to prevent children with allergic rhinitis from developing co-morbid asthma disease, and to prevent new sensitisations. On the other hand, SCIT is still associated with a small risk of anaphylactic reactions and requires the application of a great number of injections.

Studies with Pollinex® Quattro have clearly shown that the therapeutic efficacy of immunotherapy is maintained, and tolerability is good. However, the number of injections is reduced to four, and the pre-season treatment period is just 3 weeks,

which would support compliance. The use of glutaraldehyde-modified allergens (allergoids) permits the administration of higher dosages in shorter time periods compared with native allergens, by modifying the protein structure of the allergens in such a way as to limit reactivity of the allergoids with IgE antibodies, while maintaining their immunogenic properties. Additionally, the MPL® adjuvant (monophosphoryl lipid A), which has already been used successfully in vaccines and antitumor drugs, exhibits strong T-helper type 1 (Th1) cell-stimulating effects and induces blocking IgG antibodies, probably by acting as a Toll-like receptor 4 agonist and thus affecting innate immunity.

It may be concluded that ultra-short-term immunotherapy comprising just four injections, as used with this vaccine, is an effective and well tolerated alternative to classical subcutaneous immunotherapy with its considerably longer treatment times and substantially greater number of injections. This short-term variant of SCIT should further enhance its acceptance among allergy patients, both adults and children. With only four injections it is easily manageable and the number of adverse events is reduced. ▲