



CANINE ALLERGY TESTING – AN EVIDENCE BASED SOLUTION

CANINE ENVIRONMENTAL ALLERGY TESTING

Atopic dermatitis is very common affecting around 10-30% of the canine population.¹ In 2017, it was found to be the 3rd most prevalent canine health disorder,² with another study finding it represented up to 58% of dogs affected with skin disease coming into practice.³ **It is also a life-long condition, an ongoing potential welfare issue to the patient and a common reason for clients to seek a second opinion. Optimal management of these cases is therefore critical.**

WHY STILL TEST IN LIGHT OF NEW THERAPIES?

Enables additional management and therapeutic options

Allergen identification allows for both strategic allergen avoidance and allergen-specific immunotherapy (ASIT) to be considered as part of an effective, long-term management programme. ASIT has been found to be beneficial in 50-80% of dogs⁴⁻⁷ and **remains the only therapy capable of modifying the natural course of a pre-existing hypersensitivity, resulting in the establishment of long-term clinical tolerance.**^{8,9}

Evidence-based treatment modality

The most recent ICADA (International Committee on Allergic Diseases of Animals) consensus and guideline paper on the treatment of canine atopic dermatitis, recommends both serological testing and ASIT.¹⁰ Allergen identification and ASIT remain key foundations to the gold-standard work-up and management of allergic cases.^{11,12}

One solution will not fit all cases

There is no magic bullet;¹³ management should incorporate both therapies which are likely to prevent or delay flare-ups (e.g., ASIT to address the hypersensitivity response and the proactive use of topical corticosteroids) and symptomatic treatment to reduce itch and inflammation (e.g., oclacitinib, corticosteroids and lokivetmab).^{10,14} Reduction of flare-ups (clinical remission) is also critical for antimicrobial stewardship, as recurrent staphylococcal infections are common;¹⁴ strategic use of topical antibacterial/antifungal therapies is also often beneficial. Many factors affect management choices: the disease severity, seasonality, patient compliance and owner expectation, time and budget.⁴ A multi-modal approach optimises the chances of success and **only by identifying relevant allergens are you able to offer all long-term solutions**

IS SEROLOGICAL TESTING AS GOOD AS INTRADERMAL TESTING (IDT)?

No clinical difference in the end result

The provisional diagnosis of allergy must be made before either allergen identification test is used, through the systematic rule out of other conditions. Results from either test must then always be interpreted alongside the clinical history. Recent peer-reviewed publications advocate that **either IDT or serum IgE detection can be used to select allergens for immunotherapy;** with similar sensitivity and specificity demonstrated between the two testing methods.¹⁵ Furthermore, it has been shown that the method used makes no difference to the clinical response to ASIT; both tests are equally effective.¹⁶

Client convenience and reduced expense

The advantages of serological testing over IDT were summarised at the 2017 European Congress of Veterinary Dermatology; “no patient risk (no sedation required), less traumatic (no repeat injections required), and more convenient (no clipping needed, less time consuming)”.¹⁷

What about reliability?

The reliability of IDT was found to be less than expected for a “gold-standard” technique with one of the criticisms being the lack of reproducibility.¹⁸ In contrast, our peer-reviewed publications have demonstrated high levels of reproducibility in our serological tests.

WHICH SEROLOGICAL TEST TO USE?

Antibody detection reagent used

Not all serological tests are equivalent. Nextmune Laboratories use a highly-specific anti-canine IgE monoclonal antibody, showing no cross-reactivity with canine IgG antibodies. This is advantageous over tests which either use polyclonal antibodies (as they often lack specificity) or antibodies and other detection reagents which are not species specific (e.g., human antibodies). We develop, manufacture and run these testing services from our UK laboratory, allowing for end-to-end control.

Native UK allergens on testing panel

Another important factor is the relevance of the allergens included on the testing panel. Nextmune Laboratories manufactures its own plates using UK relevant allergens. Correlating results appropriately with the clinical history is critical, so ensuring the right allergens are tested for is therefore imperative. Laboratory reputational and publication history Avacta Animal Health’s team of leading research and development scientists are highly regarded within the dermatology field, having submitted clinical papers to and presented at successive World Congresses of Veterinary Dermatology since 2008. We work alongside leading figures and companies in veterinary dermatology.

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