

## The Complete Allergy Offering From IDEXX Reference Laboratories

Introducing the new Aller-g-detect™ Allergen Preliminary Panel and GREER® Aller-g-complete® Drops. The GREER® Aller-g-complete® system from IDEXX now has more options to effectively test and treat your atopic patients.

### Background

Atopic dermatitis is a chronic pruritic skin disease, which is often frustrating to manage for both pet owners and veterinarians. There are an estimated 2.1–10.8 million allergic dogs in the United States, and skin allergies are among the top 10 reasons dog (#2) and cat (#5) owners visit their veterinarians.<sup>1–3</sup>

Despite this, a recent study has highlighted that 90% of dogs that could benefit from immunotherapy aren't receiving it.<sup>4</sup> With the introduction of the Aller-g-detect™ Allergen Preliminary Panel and sublingual immunotherapy with GREER® Aller-g-complete® Drops, we're making testing more accessible and treatment more convenient by allowing the pet owner to choose the method that best fits their lifestyle.

The diagnosis of atopy is based on a suggestive history, typical clinical signs and ruling out differential diagnoses, including external parasites, infections and food allergy. Atopy is caused by IgE-mediated type I (immediate) hypersensitivity reactions to environmental allergens. Once the diagnosis of atopy has been made, testing can be performed to determine allergen selection for allergen-specific immunotherapy (ASIT) or for avoidance.

Serum allergy testing is a convenient and accurate method to determine these specific allergens by performing a simple blood test. Intradermal skin testing (IDT) is an alternative method to identify reactive allergens but typically requires referral to a dermatologist. Recent studies reflect a positive response to ASIT using allergens selected based on either IDT or serologic tests with no clear superiority noted between tests.<sup>5, 6</sup>

Once a patient's specific environmental allergens have been identified, then ASIT can be used to hyposensitize the pet. Currently, ASIT is the only available therapy that has the potential to change the long-term course of the disease by reducing symptoms and drug dependency, and ASIT should be offered to clients when feasible.

**GREER® is recognized as one of the premium providers of extracts worldwide and is the most-accepted provider of allergen-specific immunotherapy in North America.**

The GREER® Aller-g-complete® system from IDEXX provides accurate, timely and reproducible animal allergy test results. The system offers IgE-specific testing for canine, feline and equine

patients. The canine monoclonal antibody cocktail-based ELISA (macELISA) utilizes three monoclonal antibodies specific to the Fc region to detect allergen-specific IgE. GREER's unique testing methodology features 8 regionally specific standard panels, which include 48 allergens with specific pollens, molds and mites that are common to those geographic regions. The macELISA results are reproducible and have been demonstrated to be comparable to the high-affinity IgE receptor-based ELISA results in a recent study.<sup>7</sup>

### Diagnosing atopy

#### Clinical signs

Pets with atopic dermatitis have a history of pruritus, which can be mild to severe, seasonal or nonseasonal. Pruritus of the face, feet and ventral trunk is common and can occur with or without recurrent ear and skin infections (bacterial and/or yeast). Some patients will also exhibit concurrent allergic conjunctivitis and rhinitis. Primary lesions of atopic dermatitis are erythematous macules, papules and patches along with the lesions of self-trauma (excoriations, self-induced alopecia, lichenification and hyperpigmentation). Commonly affected sites are the face, concave ear pinnae, ventral neck, axillae, ventral trunk, feet (interdigital and flexural surfaces) and ventral tail.

Major differentials that must be ruled out prior to diagnosis of atopy

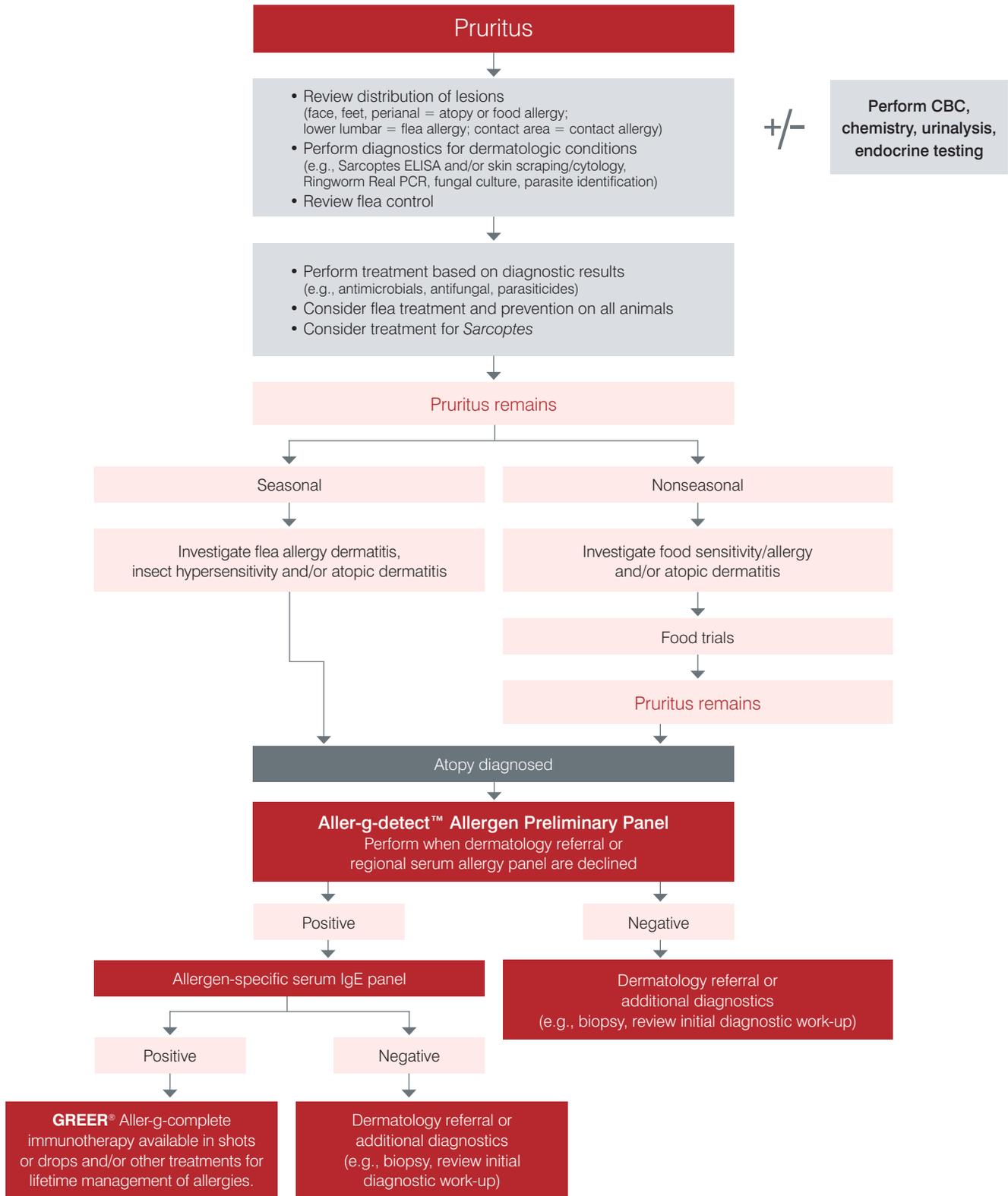
- Flea allergy dermatitis: Consider flea treatment and preventive in all allergic patients.
- Food sensitivity/allergy: Perform strict hypoallergenic dietary trial for at least 8–12 weeks.
- Parasitic dermatoses: Perform skin scrapings and tape prep with cytology. Consider treatment for scabies if suspicion remains.
- Allergic contact dermatitis (rare): Evaluate for eruption restricted to contact areas.

#### Managing infections

Perform cytology (impression smears, tape preps and/or ear cytology) to assess for superficial pyoderma, *Malassezia* dermatitis and/or otitis externa. In some cases, bacterial and fungal culture may also be indicated. Treat appropriately based on cytology and/or culture results.

Refer to algorithm on the next page for guidance on diagnosing and managing your pruritic patients.

## Clinical sign/presenting complaint: pruritic dermatitis



## When to perform serum allergy testing

Serum allergy testing should only be performed after the diagnosis of atopy has been made based on a detailed patient history and ruling out other pruritic skin diseases as outlined above. Serum allergy testing cannot be used to make the diagnosis of atopy; rather, it is used to identify appropriate environmental allergens for use in ASIT.

Serum allergy testing should only be performed after atopy has been diagnosed and when:

- A safe, effective therapy is desired to change the long-term course of the disease.
- The patient has nonseasonal disease or clinical signs for more than 3–4 months of the year.
- Nonglucocorticoid symptomatic therapies (e.g., antihistamines, topical treatments, shampoos, etc.) are ineffective.
- Cost and/or negative side effects often associated with alternative prolonged drug therapies (e.g., modified cyclosporine, glucocorticoid therapy) are undesirable.
- The owner is committed to long-term treatment of pet, understands and accepts the time and cost involved.

**Note:** Although serum allergy testing appears to be less influenced by medications (antihistamines, cyclosporine, anti-inflammatory alternate day dosing of glucocorticoids), in cases where it is medically feasible, it may be ideal for glucocorticoid therapy to be discontinued for at least 4 weeks prior to serum allergy testing when repositol glucocorticoid injections have been used.<sup>8</sup>

## Ordering serum allergy testing

When the full standard regional panel or a dermatology referral is declined, the Aller-g-detect™ Allergen Preliminary Panel may be another option for your atopic patients at a lower introductory cost. This new panel is a cost-effective way to quickly test appropriately diagnosed atopic patients for the presence of IgE antibodies against four common allergen groups: mites and mold, grasses, weeds, and trees.

- If there are positive results detecting IgE antibodies to one or more of the four allergen groups, then further evaluation using the GREER® Aller-g-complete® system from IDEXX can help determine specific allergens to include in immunotherapy.
- If there is a negative result for all four allergen groups, then consider additional diagnostics or referral to a dermatologist for further assessment.

For most atopic patients, ordering the standard regional allergen panel is indicated. These panels contain 48 environmental allergens specific to your region, including pollens (from weeds, trees and grasses), molds, and mites (including storage mites often found in pet food).

Additional panels that are less commonly indicated but can either be ordered alone or in combination with the standard regional allergen panel include an insect panel (for common household and biting insects) and farm and stable panels (for common farm allergens, such as alfalfa, oats, etc.). A *Malassezia* allergen panel is available as a stand-alone test if hypersensitivity to this yeast is clinically suspected. Food allergen panels are available, but only a strict hypoallergenic dietary trial should be performed to appropriately diagnose food sensitivity/allergy.

## Options for immunotherapy (ASIT)

Along with your patient's serum allergen-specific IgE panel results, you will be provided a letter with guidance and options for ordering the appropriate GREER® Aller-g-complete® immunotherapy based on the results and owner preference for delivery.

GREER Aller-g-complete from IDEXX now has two immunotherapy options for your atopic patients, either subcutaneous or sublingual. The new sublingual immunotherapy GREER® Aller-g-complete® Drops may help increase compliance for some pet owners because of the ease of oral administration. This therapy option is new to veterinary medicine and studies have shown that it is a safe alternative to subcutaneous immunotherapy.<sup>9</sup>

### Comparison of immunotherapy options

	Subcutaneous	Sublingual
Route	Injections	Oral drops
Build-up phase	3 months	21 days
Maintenance dose	2–3 times per month	Once daily
Strengths	10,000 or 20,000 PNU	20,000 PNU*
Refrigeration	Yes	Yes
Allergens per vial	Up to 12	Up to 12
Allergens per prescription	Up to 24†	Up to 12
Solution	Aqueous	Glycerin

\*Or strongest available

†2-vial set is required for prescriptions over 12 allergens.

## Veterinary and pet-owner resources provided

A veterinary reference guide will be provided to all of our customers and will allow for quick and easy access to specific information regarding the management of your atopic patients receiving immunotherapy. Included in the guide are the necessary test codes, modified and lapsed dosing schedules and maintenance guide.

A GREER Aller-g-complete kit is sent along with each initial prescription. This thermal bag includes virtually everything the pet owner needs to administer their pet's immunotherapy. The comprehensive guide provides the pet owner with an overview of why immunotherapy has been prescribed, instructions on how to administer injections or oral drops, as well as a dosing schedule and diary. In addition, the guide includes information on controlling allergens in the pet's environment and answers to some frequently asked questions.

Additional pet owner resources are available on the Pet Health Network at [pethealthnetwork.com](http://pethealthnetwork.com).

## Turnaround time

The IDEXX nationwide network of reference laboratories provides daily courier service or IDEXX-Direct® service to pick up your specimens. Allergy panels are run daily, Monday–Friday. Specimens received on Saturday or Sunday are processed on Monday. You can expect results within 2–4 working days.

## Contacting IDEXX

Laboratory Customer Support

If you have any questions regarding test codes, turnaround times or pricing, please contact Laboratory Customer Support at 1-888-433-9987.

Expert feedback when you need it

To help you successfully manage your patients with atopic dermatitis, IDEXX offers complimentary dermatology consultations that provide assistance with serum allergy testing and immunotherapy. Please call 1-888-433-9987 if you have questions.

## References

1. Market research statistics: U.S. pet ownership—2007. American Veterinary Medical Association website. [www.avma.org/reference/marketstats/ownership.asp](http://www.avma.org/reference/marketstats/ownership.asp). Accessed February 21, 2012.
2. Hillier A, Griffin CE. The ACVD task force on canine atopic dermatitis (I): incidence and prevalence. *Vet Immunol Immunopathol*. 2001;81(3–4):147–151.
3. Top 10 reasons pets visit vets. VPI Pet Insurance website. [www.petinsurance.com/healthzone/pet-articles/pet-health/Top-10-Reasons-Pets-Visit-Vets.aspx](http://www.petinsurance.com/healthzone/pet-articles/pet-health/Top-10-Reasons-Pets-Visit-Vets.aspx). Accessed July 10, 2013.
4. Data on file at IDEXX Laboratories, Inc. Westbrook, Maine USA.
5. Zur G, White SD, Ihrke PJ, Kass PH, Toebe N. Canine atopic dermatitis: a retrospective study of 169 cases examined at the University of California, Davis, 1992–1998. Part II. Response to hyposensitization. *Vet Dermatol*. 2002;13(2):103–111.
6. Schnabl B, Bettenay SV, Dow K, Mueller RS. Results of allergen-specific immunotherapy in 117 dogs with atopic dermatitis. *Vet Rec*. 2006;158(3):81–85.
7. Lee KW, Blankenship KD, McCurry ZM, Esch RE, DeBoer DJ, Marsella R. Performance characteristics of a monoclonal antibody cocktail-based ELISA for detection of allergen-specific IgE in dogs and comparison with a high affinity IgE receptor-based ELISA. *Vet Dermatol*. 2009;20(3):157–164.
8. Thierry O. Evidence-based guidelines for anti-allergic drug withdrawal times before allergen-specific intradermal and IgE serological tests in dogs. *Vet Dermatol*. 2013;24(2):225–e49.
9. Marcella R. Tolerability and clinical efficacy of oral immunotherapy with house dust mites in a model of canine atopic dermatitis: a pilot study. *Vet Dermatol*. 2010;21(6):566–571.

The information contained herein is intended to provide general guidance only. As with any diagnosis or treatment, you should use clinical discretion with each patient based on a complete evaluation of the patient, including history, physical presentation and complete laboratory data. With respect to any drug therapy or monitoring program, you should refer to product inserts for a complete description of dosages, indications, interactions and cautions.