# CANINE ATOPY

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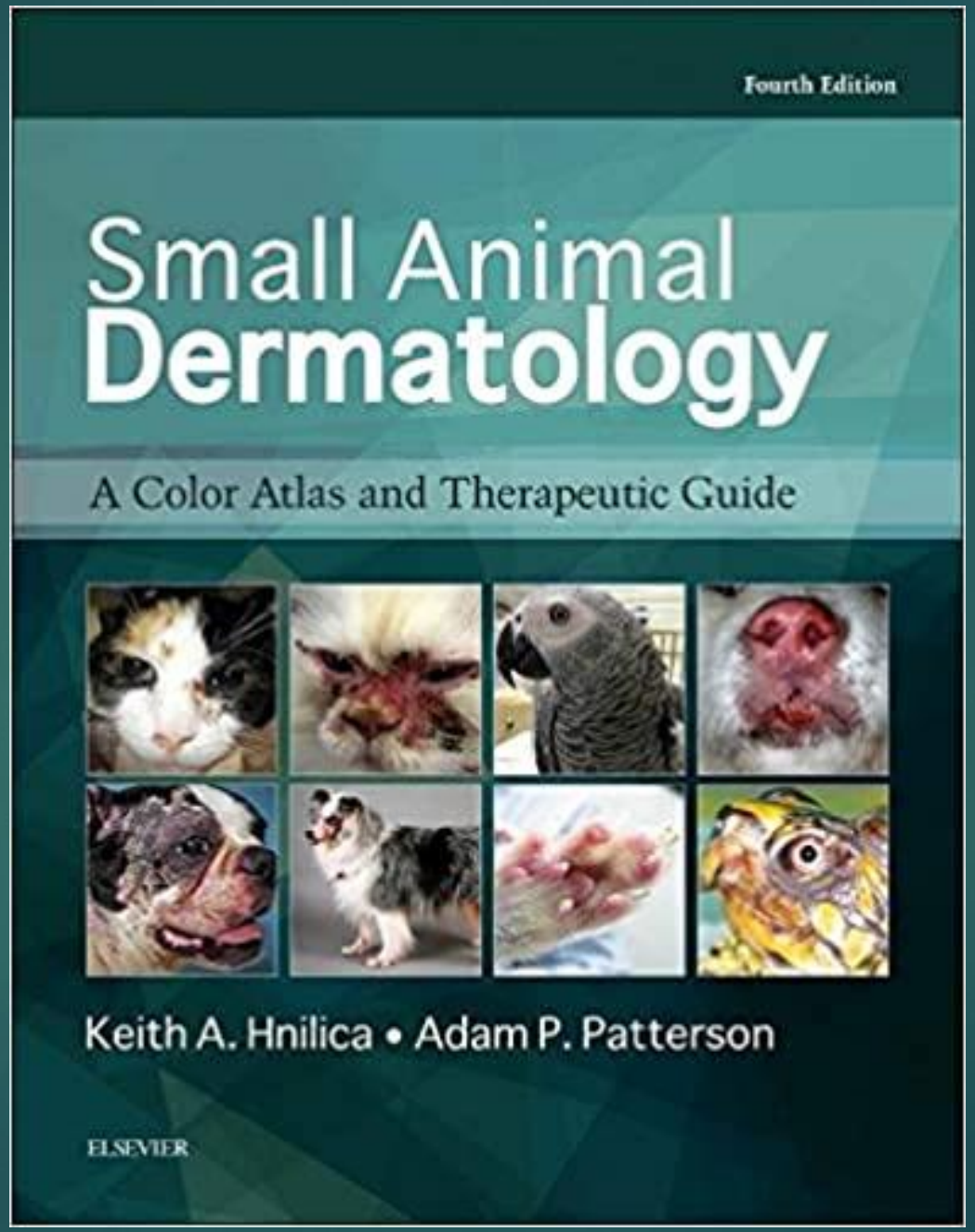
Fourth Edition
Small Animal
Dermatology
A Color Atlas and Therapeutic Guide
Keith A. Hnilica • Adam P. Patterson
ELSEVIER

# Introduction

1. Dysfunction of skin barrier is the main cause of this disease.
2. Reaction to environmental antigen (Inhalation or cutaneously)
3. Genetically predisposed
4. Age – 6M to 6Y (typically 1Y-3Y)
5. Lifelong disease

# Symptoms

1. Typically begin as skin erythema & pruritus
2. Pruritus may be seasonal  or non-seasonal
3. Pruritus leads to licking, chewing, rubbing & scratching
4. Self trauma may result in secondary skin lesions (crust, hyperpigmentation, lichenification)

**FIGURE 7-1 Canine Atopy.** Subtle symptoms, including alopecia, erythema, and excoriations on the face, extremities, and flank of an adult Shar pei.

**FIGURE 7-2 Canine Atopy.** Alopecia with erythema and hyperpigmentation on the ventrum of an atopic dog, demonstrating typical lesion distribution for atopy. Note the similarity in distribution with *Malassezia* dermatitis.

**FIGURE 7-3 Canine Atopy.** Generalized alopecia and hyperpigmentation in a severely pruritic Labrador. The lesions are especially noticeable on the face, axilla, and flank.

**FIGURE 7-4 Canine Atopy.** Close-up of the dog in Figure 7-3. The periocular alopecia and hyperpigmentation caused by facial pruritus are typical of allergic disease.

**FIGURE 7-7 Canine Atopy.** Pododermatitis demonstrating the salivary staining caused by chronic licking.

**FIGURE 7-8 Canine Atopy.** Pododermatitis with alopecia and erythema affecting the interdigital tissue between the central pad and digits. Pododermatitis and foot pruritus are some of the most consistent findings of atopy.

**FIGURE 7-9 Canine Atopy.** Pododermatitis demonstrating alopecia, erythema, hyperpigmentation, and lichenification caused by a secondary yeast infection associated with underlying allergic disease.

**FIGURE 7-10 Canine Atopy.** Alopecia and erythema on the caudal aspect of the distal extremities just proximal to the central footpad is a common finding in allergic dogs.

# Differential Diagnosis

1. Food Allergy
2. Scabies
3. Malassezia
4. Bacterial Pyoderma

# Diagnosis

1. Seasonal Foot Licking
2. Allergy Testing

**FIGURE 7-19 Canine Atopy.** This intradermal allergy test (IDAT) demonstrates positive reactions with classic erythematous, well-demarcated, raised reactions.

**FIGURE 7-20 Canine Atopy.** Same patient as in Figure 7-19. This intradermal allergy test (IDAT) demonstrates positive reactions with classic erythematous, well-demarcated, raised reactions. Note the difference between negative and positive reactions.

# Treatment – Step 1

1. Control of secondary infection (bacterial & fungal)

# Treatment – Step 2

1. Getting rid of environmental antigen load – **Bathing** in every 2-7 days
2. Systemic **anti-histaminics** (can be combined with glucocorticoids & EFAs)
3. **Essential Fatty Acid** supplementation. Beneficial effects are seen after 8-12 weeks (2-3 months)
4. **Dextromethorphan** @2mg/Kg PO BD. Beneficial effects are seen within 2 weeks
5. Systemic **Glucocorticoids** – Prednisolone @0.25-1mg/Kg q24-48hr & Methylprednisolone @0.2-0.8mg/Kg q24-48hr for 3-7 days(avoid long acting steroids and dosage should be tapered)
6. **Temaril – P** (Trimeperazine + Prednisolone) @1tab/10-20Kg PO q24-48hr

## TABLE 7-1 Antihistamine Therapy in Dogs*

| Antihistamine | Dose |
|---|---|
| Chlorpheniramine | 0.2–3 mg/kg PO q 8–12 hours |
| **Diphenhydramine** | 1–4 mg/kg PO q 8 hours |
| Hydroxyzine | 3–7 mg/kg PO q 8 hours |
| **Amitriptyline** | 1–2 mg/kg PO q 12 hours |
| Cyproheptadine | 0.1–2 mg/kg PO q 8–12 hours |
| Trimeprazine | 0.5–5 mg/kg PO q 8–12 hours |
| Brompheniramine | 0.5–2 mg/kg PO q 12 hours |
| **Clemastine** | 0.05–1.5 mg/kg PO q 12 hours |
| Terfenadine | 0.25–1.5 mg/kg PO q 12–24 hours |
| Astemizole | 1 mg/kg PO q 12–24 hours |
| Promethazine | 1–2.5 mg/kg PO q 12 hours |
| Loratadine | 0.5 mg/kg PO q 24 hours |
| Cetirizine | 0.5–1 mg/kg PO q 24 hours |
| Doxepin | 0.5–1 mg/kg PO q 8–12 hours |
| Dimenhydrinate | 8 mg/kg PO q 8 hours |
| Tripelennamine | 1 mg/kg PO q 12 hours |
| Clomipramine | 1–3 mg/kg PO q 24 hours |

***Antihistamines in bold are preferred by the author.***

# Treatment – Step 3

1. Installation of Air Filter & Dehumidifier
2. Acaricide treatment (for dust mite) – Once a month for 3 months, then every 3 months
3. Cyclosporine @5mg/Kg PO OD. Beneficial effects are seen after 4-6 weeks (1-1.5 months). Dosage should be tapered down to 48-72hr dose frequency.
4. Immunotherapy (Allergy vaccine) – good to excellent response. Clinical improvement is seen after 3-5 months. It may take upto 12 months in some dogs.

Correspondence | Open Access | Published: 16 August 2015

# Treatment of canine atopic dermatitis: 2015 updated guidelines from the International Committee on Allergic Diseases of Animals (ICADA)

Thierry Olivry, Douglas J. DeBoer, Claude Favrot, Hilary A. Jackson, Ralf S. Mueller, Tim Nuttall & Pascal Prélaud for the International Committee on Allergic Diseases of Animals

*BMC Veterinary Research* **11**, Article number: 210 (2015) | Cite this article



## Abstract

### Background

In 2010, the International Task Force on Canine Atopic Dermatitis (now International Committee on Allergic Diseases of Animals, ICADA) published the first consensus guidelines for the treatment of atopic dermatitis (AD) in dogs. This is the first 5-year minor update of

# 2015 - USA

1. **Oclacitinib** (Janus Kinase Inhibitor) @0.4-0.6mg/Kg PO BD. Do not combine with glucocorticoids.
2. **Recombinant Canine Interferon – gamma** @5000-10000U/Kg SC thrice a week for 4 weeks, then once weekly.
3. **Recombinant feline interferon - omega**

Veterinary Dermatology

Scientific Paper | Open Access

# A blinded, randomized clinical trial evaluating the efficacy and safety of lokivetmab compared to ciclosporin in client-owned dogs with atopic dermatitis

Hilde Moyaert, Leen Van Brussel, Stasia Borowski, Monica Escalada, Sean P. Mahabir, Rodney R. Walters, Michael R. Stegemann

First published: 14 September 2017 | https://doi.org/10.1111/vde.12478 | Citations: 54

**Source of funding:** This study was initiated and funded by Zoetis Inc, Parsipanny, NJ, USA. The test article (lokivetmab or ciclosporin) was provided at no cost to the clinic and clinicians were compensated for the costs associated with each dog's clinic visit.

**Conflict of interest:** All authors are employees of Zoetis Inc.




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# 2017 - Belgium

**Cyclosporine** @5mg/Kg PO OD for 3 months

Vs

**Lokivetmab** @1-3.3mg/Kg SC once a month for 3 months

Lokivetmab is non-inferior to cyclosporine in pruritus reduction

Review Article

# Update on pathogenesis, diagnosis, and treatment of atopic dermatitis in dogs

**Timothy J. Nuttall** BVSc, PhD
**Rosanna Marsella** DVM
**Michele R. Rosenbaum** VMD
**Andrea J. Gonzales** PhD
**Valerie A. Fadok** DVM, PhD

From the Royal (Dick) School of Veterinary Studies, Colleges of Medicine and Veterinary Medicine, University of Edinburgh, Midlothian, EH25 9RG, England (Nuttall); Department of Small Animal Clinical Sciences, College Veterinary Medicine, University of Florida, Gainesville, FL 32610 (Marsella); Veterinary Professional Services, Zoetis Inc, 10 Sylvan Way, Parsippany, NJ 07054 (Rosenbaum, Fadok); and Global Therapeutics Research, Zoetis Inc, 333 Portage St, Kalamazoo, MI 49007 (Gonzales).

Improved understanding of the pathogenesis of atopic dermatitis in dogs has led to more effective treatment plans, including skin barrier repair and new targeted treatments for management of allergy-associated itch and inflammation. The intent of this review article is to provide an update on the etiologic rationale behind current recommendations that emphasize a multimodal approach for the management of atopic dermatitis in dogs. Increasing knowledge of this complex disease process will help direct future treatment options.

# 2019 - England

4 step diagnostic process to identify atopic dermatitis

1. Step 1 – Encourage ectoparasite control
2. Step 2 – Topical treatment to control bacterial & yeast infections
3. Step 3 – Avoidance of food triggers (8 weeks of restricted diet, then back to original diet)
4. Step 4 – Diagnosis of atopic dermatitis

ELSEVIER

Veterinary Immunology and Immunopathology

Volume 258, April 2023, 110574

# Laboratory safety evaluation of lokivetmab, a canine anti-interleukin-31 monoclonal antibody, in dogs

Matthew Krautmann, Rodney R. Walters, Vickie L. King, Kevin Esch, Sean P. Mahabir, Andrea Gonzales, Paul J. Dominowski, Laurel Sly, Duncan Mwangi, Dennis L. Foss, Sharath Rai, James E. Messamore, Genevieve Gagnon, Adam Schoell, Steven A. Dunham, Olivier M. Martinon

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https://doi.org/10.1016/j.vetimm.2023.110574 ↗

# 2023 - USA

1. No hypersensitivity
2. Well tolerated by dog (3 times the recommended dose)
3. No effect on immune system

# THANK YOU