

Scratch that! Approach to Feline Allergic Skin Disease

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IDEXX

Disclosure Ariane:

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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 exam and presentation, and laboratory data. With respect to any drug therapy or monitoring program, you should refer to a product insert, for complete description of dosage, indications, interactions, and cautions. Diagnosis, treatment, and monitoring should be patient specific and is the responsibility of the veterinarian providing primary care.



Cats: definitively not just small dogs!!!

<https://icatcare.org/veterinary/resources/>



Today's LOs

Q1

Learning Outcomes

Q2

To Recognize Feline Cutaneous Reaction Patterns

Q3

To Identify the best Approach to Itchy Cats

Q4

To Understand Species Differences of Pruritus and its Therapy in the Dog and Cat

Scratch that! Approach to Feline Allergic Skin Disease

- + Cutaneous reaction patterns
- + Terminology (feline allergic skin disease)
- + Differential diagnoses for feline pruritus
- + Approach to feline pruritus
- + Treatment



Scratch that! Approach to Feline Allergic Skin Disease

+ Cutaneous reaction patterns



Feline Cutaneous Reaction Patterns

- + Self-induced Alopecia
- + Face, Head & Neck Pruritus
- + Miliary Dermatitis
- + Eosinophilic Granuloma Complex
 - + Eosinophilic Plaques
 - + Eosinophilic Granuloma
 - + Linear Granuloma
 - + Indolent Ulcer
 - + Fat Chin



Self-induced Alopecia



Self-induced Alopecia

- + Complaint
 - + Over grooming, nibbling, pulling hair, hair balls (V)
 - + Sometimes o do not notice
- + Clincial signs
 - + Barbered hair
 - + Skin often NAD
- + Trichogramm: split ends
- + Easily epilated? Hair falling out???



Self-induced Alopecia

- + Differential diagnoses
- + Secondary
 - + Allergy
 - + Ectoparasites
 - + Folliculitis
 - + Dermatophytosis
 - + Pain (cystitis)
 - + Psychogenic alopecia
- + Primary
 - + Dermatophytosis
 - + Paraneoplastic alopecia
 - + Telogen effluvium
 - + Diabetes mellitus
 - + HAC



Head & Neck Pruritus



Head & Neck Pruritus

- + Pruritus+++
- + Automutilation
- + Erythema
- + Alopecia
- + Erosions / Ulcerations
- + Crusts
- + Intermittent bleeding



Head & Neck Pruritus

- + Differential diagnoses
 - + Allergy
 - + Ectoparasites
 - + Dermatophytosis
 - + Pyoderma
 - + Viral (FeLV, Herpes, Calici, Pox, Papiloma)
 - + PF/DLE
 - + Neoplasia (Lymphoma, SCC, MCT)
 - + Idiopathic feline ulcerative dermatitis
 - + Feline oral pain syndrome
 - + Idiopathic facial dermatitis Persian cat



Miliary Dermatitis

- + Papules
- + Crusts
- + Hypotrichia/Alopecia
- + Self-induced
- + Dorsum
- + Generalised
- + Variable pruritus



Miliary Dermatitis

- + Differential diagnoses
 - + Allergy
 - + Ectoparasites
 - + Dermatophytosis
 - + Pyoderma
 - + Cow pox
 - + PF
 - + Drug reaction



Eosinophilic Granuloma Complex



Eosinophilic Granuloma Complex

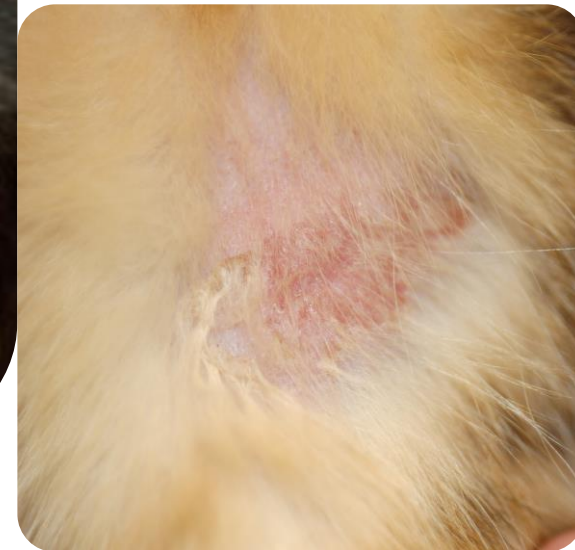
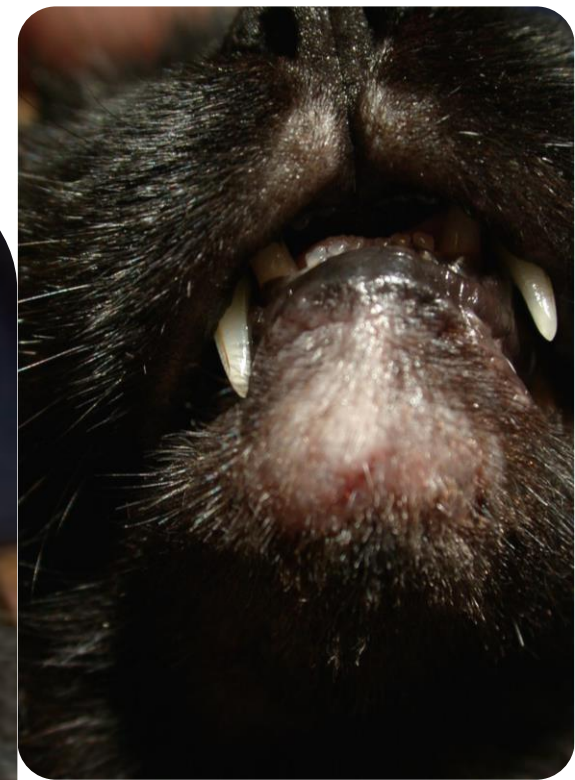
- + Indolent Ulcer
 - + Pruritus variable
- + Eosinophilic Plaques
 - + Pruritus+++
- + Eosinophilic granuloma
 - + Pruritus variable
 - + Linear granuloma
 - + Fat chin



Eosinophilic Granuloma Complex

+ Differential diagnoses

- + Allergy
- + FAD, even with indolent ulcer
- + Ectoparasites
- + Dermatophytosis
- + Pyoderma
- + Neoplasia
- + Rare infections (Mycobacteria, Nocardia)



Rarer causes...

- + Pox
- + Dermatophytosis
- + Nocardia
- + Mycobacteria



Scratch that! Approach to Feline Allergic Skin Disease

- + Terminology & Comparison to Canine Atopic Dermatitis



Feline literature: Veterinary Dermatology 2021

Halliwell, R., Pucheu-Haston, C.M., Olivry, T., Prost, C., Jackson, H., Banovic, F., Nuttall, T., Santoro, D., Bizikova, P. and Mueller, R.S. (2021), Feline allergic diseases: introduction and proposed nomenclature. *Vet Dermatol*, 32: 8-e2. <https://doi.org/10.1111/vde.12899>

Halliwell, R., Banovic, F., Mueller, R.S. and Olivry, T. (2021), Immunopathogenesis of the feline atopic syndrome. *Vet Dermatol*, 32: 13-e4. <https://doi.org/10.1111/vde.12928>

Santoro, D., Pucheu-Haston, C.M., Prost, C., Mueller, R.S. and Jackson, H. (2021), Clinical signs and diagnosis of feline atopic syndrome: detailed guidelines for a correct diagnosis. *Vet Dermatol*, 32: 26-e6. <https://doi.org/10.1111/vde.12935>

Mueller, R.S., Nuttall, T., Prost, C., Schulz, B. and Bizikova, P. (2021), Treatment of the feline atopic syndrome – a systematic review. *Vet Dermatol*, 32: 43-e8. <https://doi.org/10.1111/vde.12933>



Feline allergic Syndrom (FAS)

Halliwell, R., Pucheu-Haston, C.M., Olivry, T., Prost, C., Jackson, H., Banovic, F., Nuttall, T., Santoro, D., Bizikova, P. and Mueller, R.S. (2021), Feline allergic diseases: introduction and proposed nomenclature. *Vet Dermatol*, 32: 8-e2. <https://doi.org/10.1111/vde.12899>

- + Cutaneous:
 - + Flea allergic dermatitis (FAD)
 - + Feline atopic skin syndrome (FASS)
 - + Feline food allergy (FFA)
 -
 - + Feline cutaneous reaction patterns (FCRP)
 - + Miliary dermatitis (MD)
 - + Self induced alopecia (SIA)
 - + Face, head & neck pruritus (FHN)
 - + Eosinophilic granuloma complex (EGC)
- + Gastro-intestinal
 - + Vomiting, diarrhoea, weight loss, poor appetite
 - + Can also cause FCRP
- + Respiratory



Definition of Canine vs Feline Atopic Dermatitis

- + Canine atopic dermatitis (CAD) is a common, genetically predisposed, inflammatory and pruritic skin disease, which is usually associated with allergen-specific IgE.
- + Cats: Inflammatory, pruritic dermatitis -> non pathognomonic reaction patterns
- + IgE link less well demonstrated in cats
- + Genetic involvement
 - + not as clear cut as in dogs



Favrot's Criteria

- + Affected ear pinnae (but not pinnal margins)
- + Affected front paws
- + Age of onset < 3years
- + Chronic or recurrent yeast infections
- + Corticosteroid-responsive pruritus
- + Mostly indoor lifestyle
- + Nonaffected dorsolumbar area
- + Pruritus without skin lesions at onset: pruritus sine materia

The sensitivity and specificity of these set of diagnostic criteria are reported to be 85% and 79%, respectively



Lesion distribution dog

Sarcoptes



Cheyletiella



Fleas/FAD



Demodex



Dog/ Cat Lesion Distribution

Hobi S, Linek M, Marignac G, et al. Clinical characteristics and causes of pruritus in cats: a multicentre study on feline hypersensitivity-associated dermatoses. *Veterinary Dermatology*. 2011 Oct;22(5):406-413. DOI: 10.1111/j.1365-3164.2011.00962.x. PMID: 21410570.

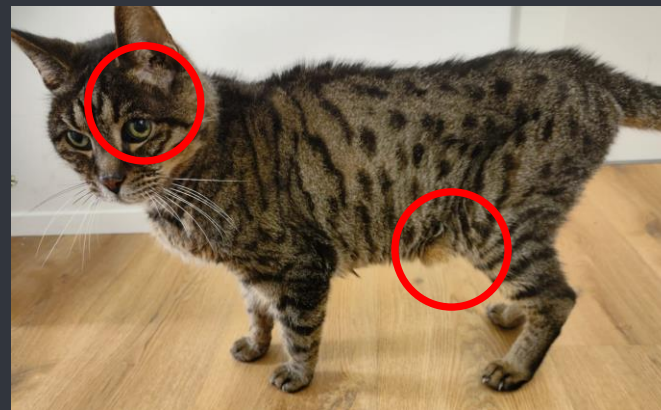
CAD/FIAD



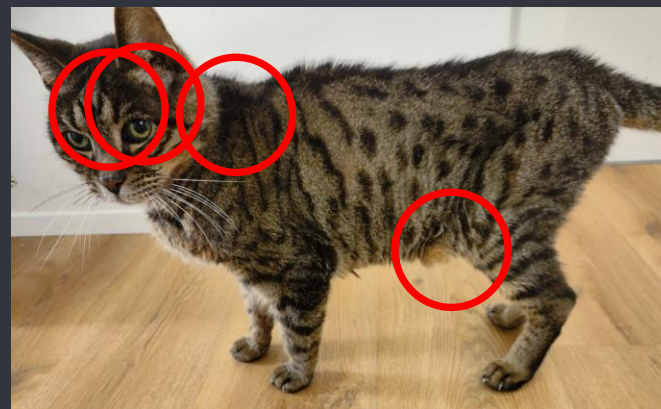
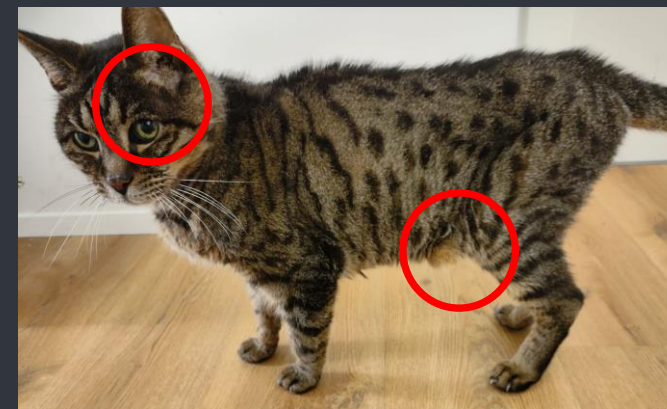
FAD



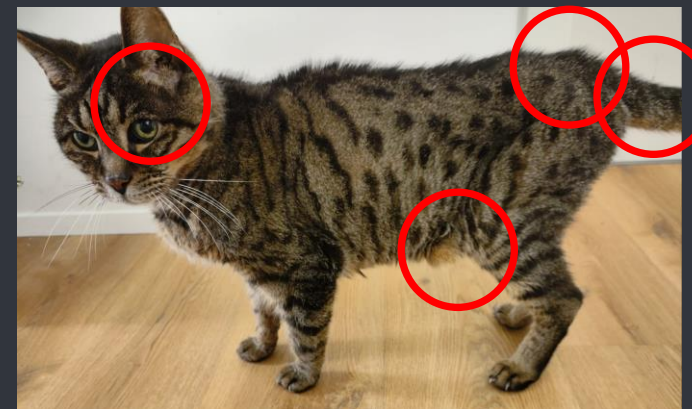
Food & FASS



FASS



Food



FAD

Scratch that! Approach to Feline Allergic Skin Disease

+ Differential diagnoses for feline pruritus



What makes cats scratch ?

- + Allergies
- + Parasites
- + Secondary infections

- + Viral diseases
- + Dermatophytosis
- + Neoplasia
- + Unusual infections



Feline Pruritus DD?

Hobi et al., Vet Derm 2011:

- + 502 cats
 - + FAD 29%
 - + FFH 12%
 - + FASS 20%
 - + Other 24%
- + 46% allergic cats --> 2 reaction patterns
- + Except FAD (28%)



Fleas

- + Unpleasant
- + Unwanted
- + Un-admittable;)
- + Cause pruritus
- + Vector diseases (e.g. Babesia)
- + *Dipylidium caninum*
- + Anaemia



Flea Infestation

- + Owners don't notice/don't want to know;)
- + Non allergic individuals can tolerate well
- + Fleas prefer pets to humans
- + High reproductive rate
- + 24 h post first blood meal: egg production, up to 50/d
- + Only 10% adult fleas



Diagnostics

- + See adult fleas
- + Flea comb
- + Wet paper test
- + ASE/IDAT: often false negative
- + Symptoms (dog): defined lesion distribution
- + Symptoms (cat): reaction patterns...any of them!
- + Integrated FLEA CONTROL!
 - + Response to Tx



FAD



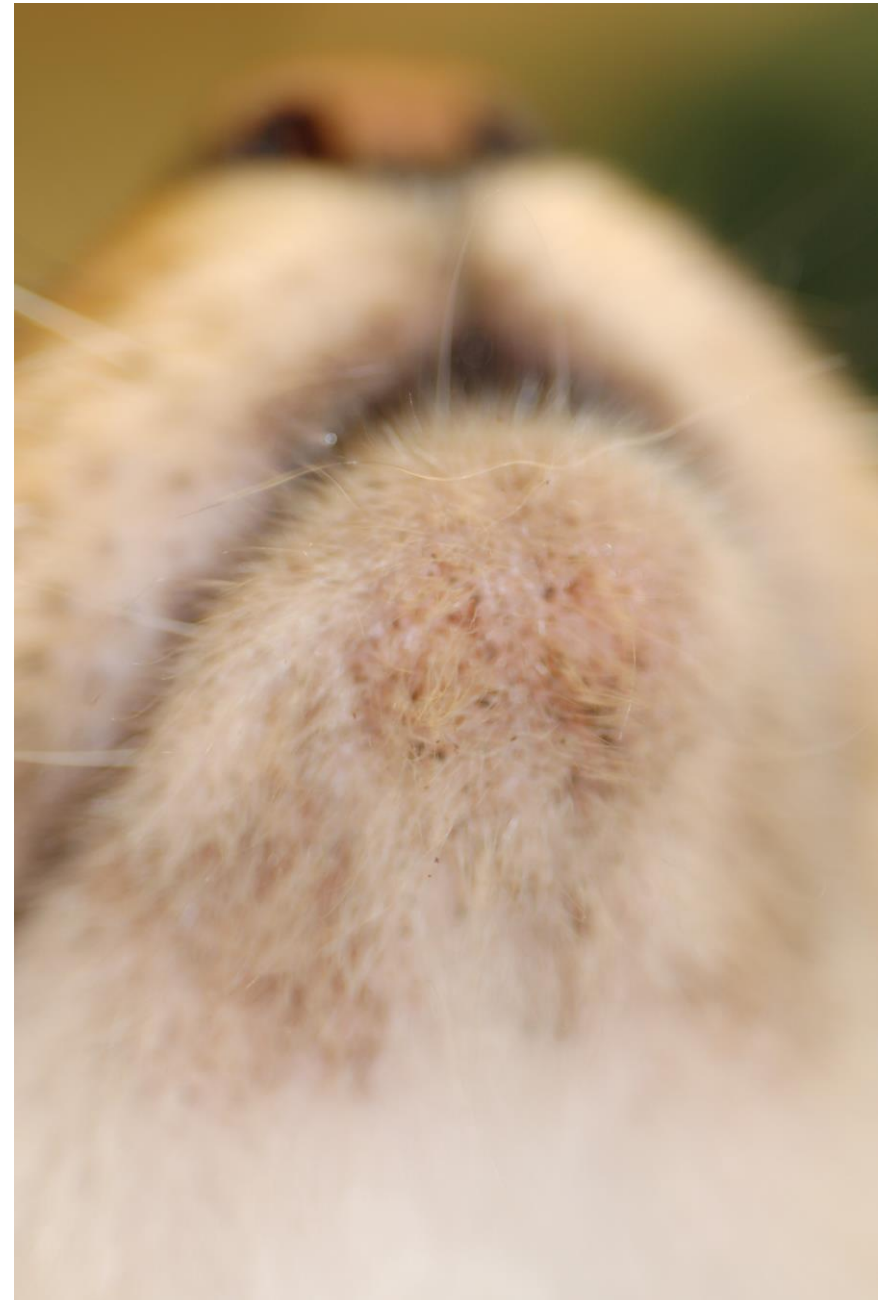
ACFR – adverse cutaneous food reaction feline food allergy

- + Allergic vs non allergic reactions
- + Cutaneous vs. GI signs
- + Canine: identical to CAD
- + Feline: cutaneous reaction pattern
- + Otitis, fat chin
- + Conjunctivitis, V/D, flatulence, respiratory signs



Environmental Allergy FASS

- + Diagnosis of exclusion
- + DD for ALL cutaneous reaction patterns
- + Logical approach...
- + age:
 - + 72% < 3 Jahre
 - + 12% > 6 Jahre (Hobi, 2011)
 - + > 7 Jahre 12% (Ravens 2014)
- + 75% non-saisonal



Scratch that! Approach to Feline Allergic Skin Disease

+ Approach to feline pruritus

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Approach

Important:

- + Detailed Hx
- + Thorough CE:
 - + General
 - + Dermatological
- + Problem list
- + List of DD



Approach

Rule out

- + Parasites
- + Dermatophytes
- + (pox & other viral diseases)
- + Food allergy
- + FASS: Exclusion diagnosis!



Approach: Exclude Fleas

Thorough integrated flea control!

- + Isoxazoline
- + Spot on vs tablet?
- + Environmental flea burden
- + Environmental flea control
- + In contact animals



Approach: Diet Trial

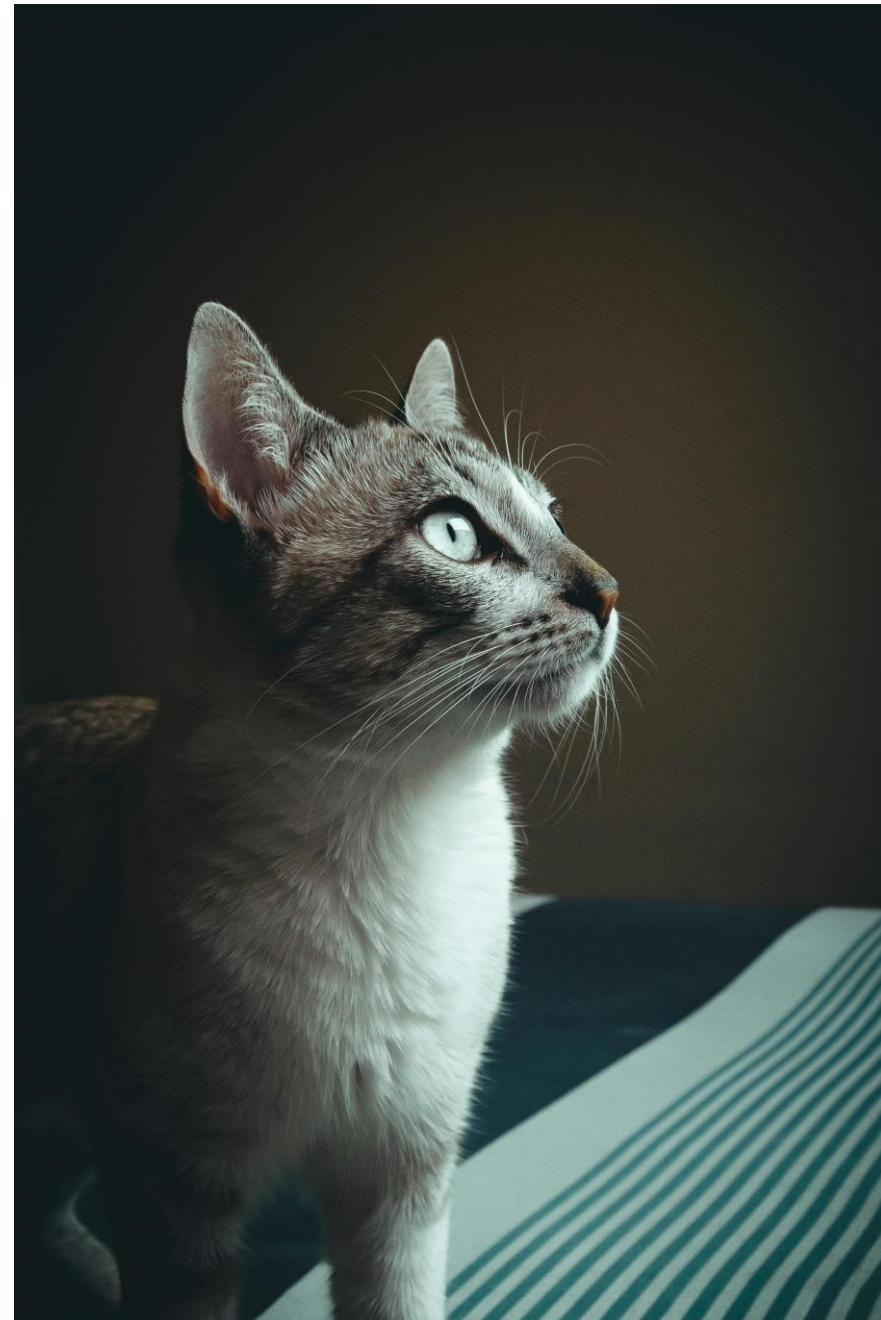
- + Cave: hepatic lipidosis
- + Choice of protein
- + No need for carbohydrate for cats
- + Palatability ?
- + Stick with type of food (tinned, dry, BARF) for acceptance
- + Rotation?



Hepatic Lipidosis

- + Cats graze all-day
- + If starved (>24/48 h): liver issues
- + Obese cats at risk
- + Life threatening!

- + Monitor carefully
- + Give in...
- + Slow change
- + <https://catfriendlyclinic.org/app/uploads/2021/07/EnglishClientLeaflet.pdf>



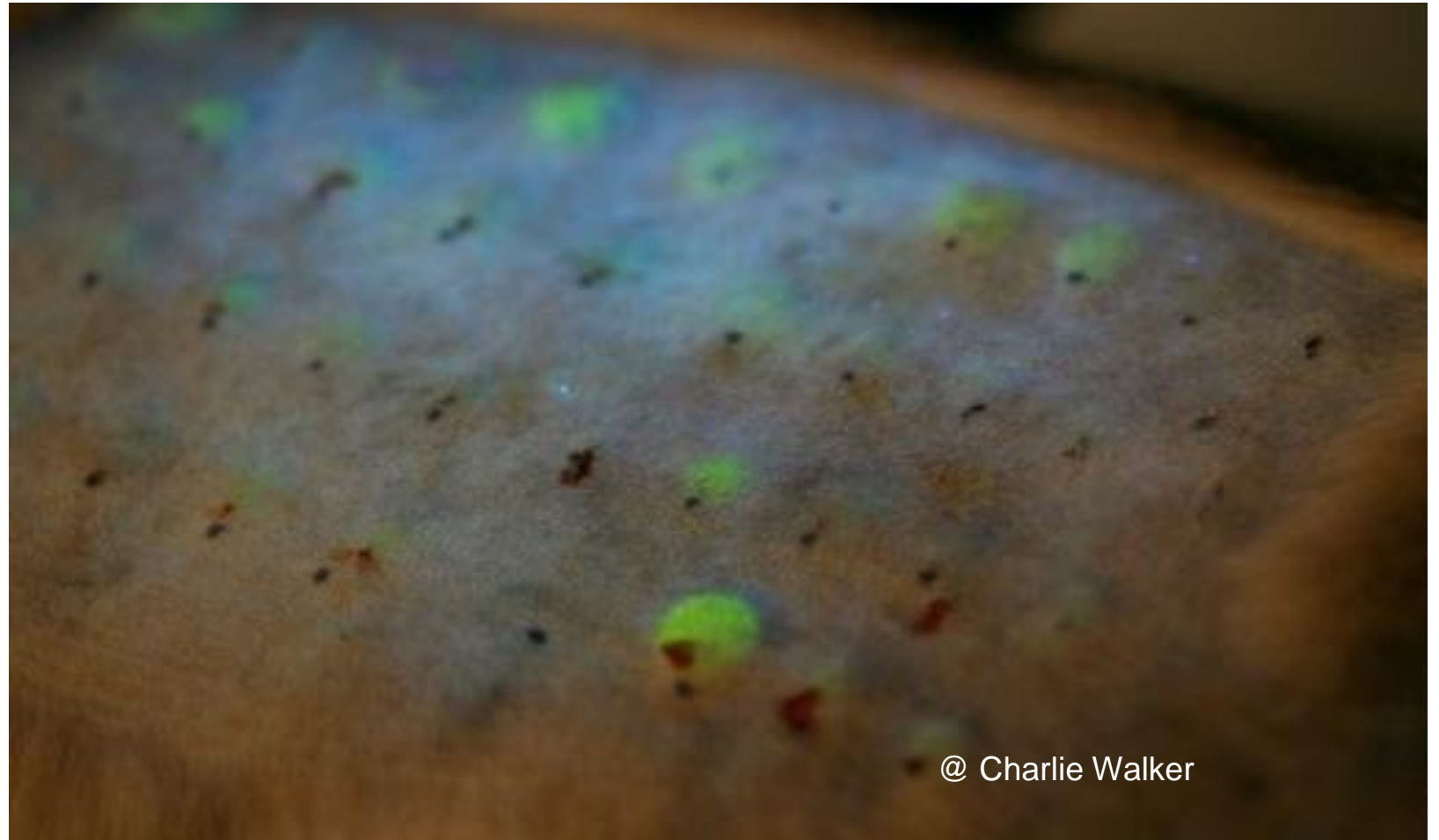
Allergy Tests Environmental Allergies

- + Not yes/no!
- + ONLY to identify allergens
- + Once diagnosis has been made
- + IDAT: IgE/reaction in the skin
- + Serum test (ASE): serum IgE
- + Test that allows formulation of allergen-specific immunotherapy



IDAT cat: Fluoresceine

+ Intradermal allergy test



Allergen-Specific IgE testing

🚩 Dock / Sorrel (Rumex crispus / R acetosella)	24	0 - 150 EA	
🚩 English Plantain (Plantago lanceolata)	34	0 - 150 EA	
🚩 Lamb's Quarter	23	0 - 150 EA	
🚩 Mugwort	1	0 - 150 EA	
🚩 Nettle	6	0 - 150 EA	
🚩 Ragweed, Short	11	0 - 150 EA	
🚩 Wall Pellitory (Parietaria judaica)	16	0 - 150 EA	
🚩 Alternaria alternata	29	0 - 150 EA	
🚩 Aspergillus fumigatus	4	0 - 150 EA	
🚩 Cladosporium herbarum	17	0 - 150 EA	
🚩 Penicillium notatum	0	0 - 150 EA	
🚩 Cockroach (Blatella germanica)	24	0 - 150 EA	
🚩 Dermatophagoides farinae (Dust Mite)	312	0 - 150 EA	
🚩 Dermatophagoides pteronyssinus (Dust Mite)	84	0 - 150 EA	
🚩 Flea	37	0 - 150 EA	
🚩 Grain Mite (Lepidoglyphus)	54	0 - 150 EA	
🚩 Storage Mite (Acarus siro)	318	0 - 150 EA	
🚩 Storage Mite (Tyrophagus putrescentiae)	256	0 - 150 EA	

🚩 Dock / Sorrel (Rumex crispus / R acetosella)	114	0 - 150 EA	
🚩 English Plantain (Plantago lanceolata)	37	0 - 150 EA	
🚩 Lamb's Quarter	30	0 - 150 EA	
🚩 Mugwort	44	0 - 150 EA	
🚩 Nettle	0	0 - 150 EA	
🚩 Ragweed, Short	74	0 - 150 EA	
🚩 Wall Pellitory (Parietaria judaica)	6	0 - 150 EA	
🚩 Alternaria alternata	22	0 - 150 EA	
🚩 Aspergillus fumigatus	0	0 - 150 EA	
🚩 Cladosporium herbarum	40	0 - 150 EA	
🚩 Penicillium notatum	27	0 - 150 EA	
🚩 Cockroach (Blatella germanica)	24	0 - 150 EA	
🚩 Dermatophagoides farinae (Dust Mite)	503	0 - 150 EA	
🚩 Dermatophagoides pteronyssinus (Dust Mite)	93	0 - 150 EA	
🚩 Flea	786	0 - 150 EA	
🚩 Grain Mite (Lepidoglyphus)	0	0 - 150 EA	
🚩 Storage Mite (Acarus siro)	341	0 - 150 EA	
🚩 Storage Mite (Tyrophagus putrescentiae)	274	0 - 150 EA	

Scratch that! Approach to Feline Allergic Skin Disease

+ Treatment



Therapy: Good Evidence

- + Glucocorticoids
 - + Cats: side effects less common
 - + Avoid in DM
 - + Lowest possible dose! Minimise risk
 - + Skin fragility syndrome
 - + E.g. dexamethasone 0,1-0,2 mg/kg BIW
- + topical HAC
- + Ciclosporin 7 mg/kg
 - + Effektive (40-100%)
 - + >50% reduction dosing intervall (eod-BIW)
 - + Cave: FeLV, FIV, neoplasia, Toxoplasma, vaccination
 - + V/D, weight loss, anorexia, taste!

Mueller, R.S., Nuttall, T., Prost, C., Schulz, B. and Bizikova, P. (2021), Treatment of the feline atopic syndrome – a systematic review. *Vet Dermatol*, 32: 43-e8. <https://doi.org/10.1111/vde.12933>



Therapy: Moderate Evidence

- + ASIT
 - + IDAT, ASE
 - + 45-75% good improvement
 - + -> efficacy, few studies, side effects rare
 - + Only form of causal Tx!!!
- + Oclacitinib 1 mg/kg
 - + Higher dose than in dogs
 - + Off label!!!!
 - + Less safety margin!!!
 - + Monitor!!!

Mueller, R.S., Nuttall, T., Prost, C., Schulz, B. and Bizikova, P. (2021), Treatment of the feline atopic syndrome – a systematic review. *Vet Dermatol*, 32: 43-e8. <https://doi.org/10.1111/vde.12933>



Therapy: Low Evidence

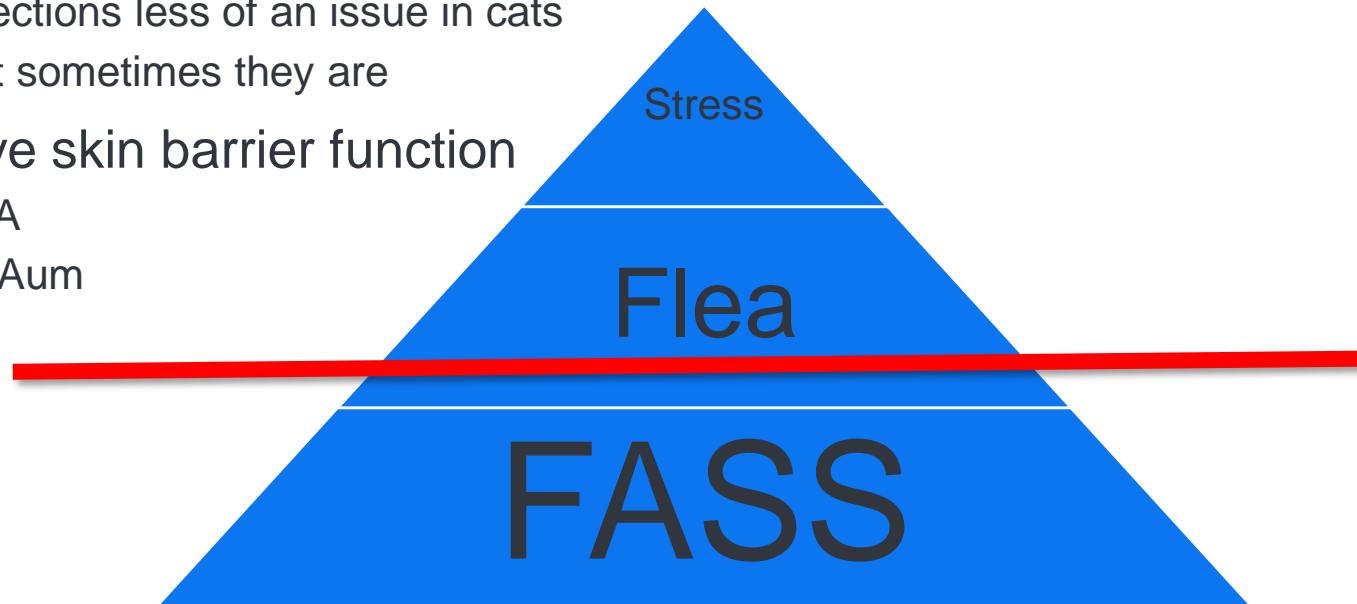
- + Antihistamines
 - + Chlorpheniramine best (70% better)
- + EFA
 - + Few studies, not standardised
 - + 50-80%
 - + Works best for miliary dermatitis
- + PEA (palmitoylethanolamide; Redonyl)
 - + Steroid-sparing
 - + Few studies
 - + Can be quite effective

Mueller, R.S., Nuttall, T., Prost, C., Schulz, B. and Bizikova, P. (2021), Treatment of the feline atopic syndrome – a systematic review. *Vet Dermatol*, 32: 43-e8. <https://doi.org/10.1111/vde.12933>



Therapy: Principles

- + Principles similar to CAD
 - + Anti-pruritic medication if needed, but less licensed...;(ul> - + Steroids...but side effects, or not?
 - + Ciclosporin...but taste?!?
- + Allergen specific immunotherapy, great if works!
 - + Monthly injections, often well tolerated
- + Control flare factors: infections, parasites, stress?!?
 - + Infections less of an issue in cats
 - + But sometimes they are
- + Improve skin barrier function
 - + EFA
 - + PEAum



Therapy: Issues

- + Medicating more problematic;(ul> - + https://www.youtube.com/watch?v=bHuDY_U5xww
 - + <https://www.youtube.com/watch?v=JxRY59U6Lt0>
 - + <https://www.youtube.com/watch?v=8udNhoxuqCE>
 - + <https://www.youtube.com/watch?v=i6Pi4dk5eg4>
- + Topical therapy more problematic;(
- + ...but in some cases do-able!



Summary

- + Feline cutaneous reaction patterns
- + Need to reach diagnosis for specific therapy, rule out DD
- + Flea control!
- + Individual therapy
- + Combination therapy





Thank You!



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