

# DERMATOLOGY OF THE SPHYNX CAT: A REVIEW AND STUDY OF THE INCIDENCE OF DERMATOLOGIC PROBLEMS IN HCV-UAB

## BACKGROUND & OBJECTIVES

**Sphynx** cat has become a very popular breed for its appearance and affable behaviour. It has also been recommended to allergic people.



### HYPOTHESIS

The special dermal conformation of sphynx cat involves dermatologic problems and specific disease onsets.

1

#### Exhaustive bibliographical review

- ✓ Origin
- ✓ Genetics
- ✓ Dermal structure
- ✓ Dermal diseases



2

#### Case review

- ✓ HCV medical records (2011-2020)

3

#### Recommendations

- ✓ Skin care
- ✓ Dermal diseases prevention

## ORIGIN & GENETICS

### BREEDING

- ✓ Year 1996 in Canada
- ✓ Spontaneous mutation
- ✓ Inbreeding depression
- ✓ Devon Rex and Cornish Rex cross

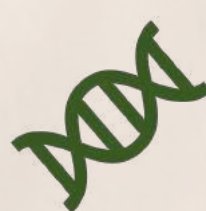


### MUTATION

G/A substitution in the **KRT71** intron 4  
↓  
Alternative splicing  
↓  
Abnormal protein  
↓  
**Alopecia**

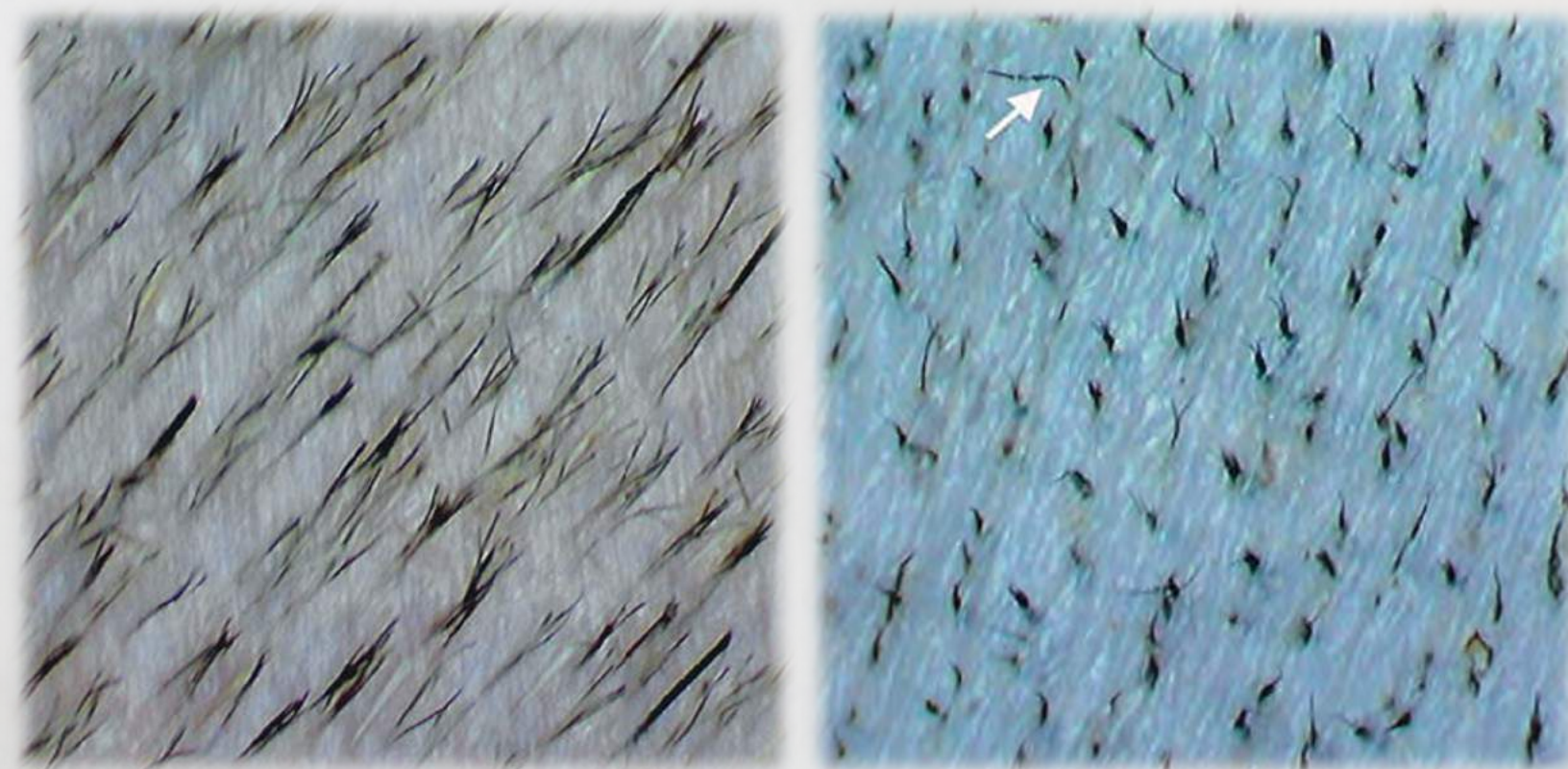
### HEREDITY

- ✓ Autosomal recessive
- ✓ Most are homozygote
- ✓ Heterozygotes with the same phenotype



## DERMAL STRUCTURE

- ✓ Follicular dysplasia
- ✓ Faulty hair (breakable and short)
- ✓ Follicular density similar to other breeds
- ✓ Oily skin (seborrheic material)
- ✓ Skin adnexa with no alterations



Figures 1 and 2. Dermoscopic images from lateral thorax of a cat with normal coat (left) and a sphynx cat (right)<sup>1</sup>.

## PREDISPOSITION TO SKIN PROBLEMS

### Cutaneous mastocytosis

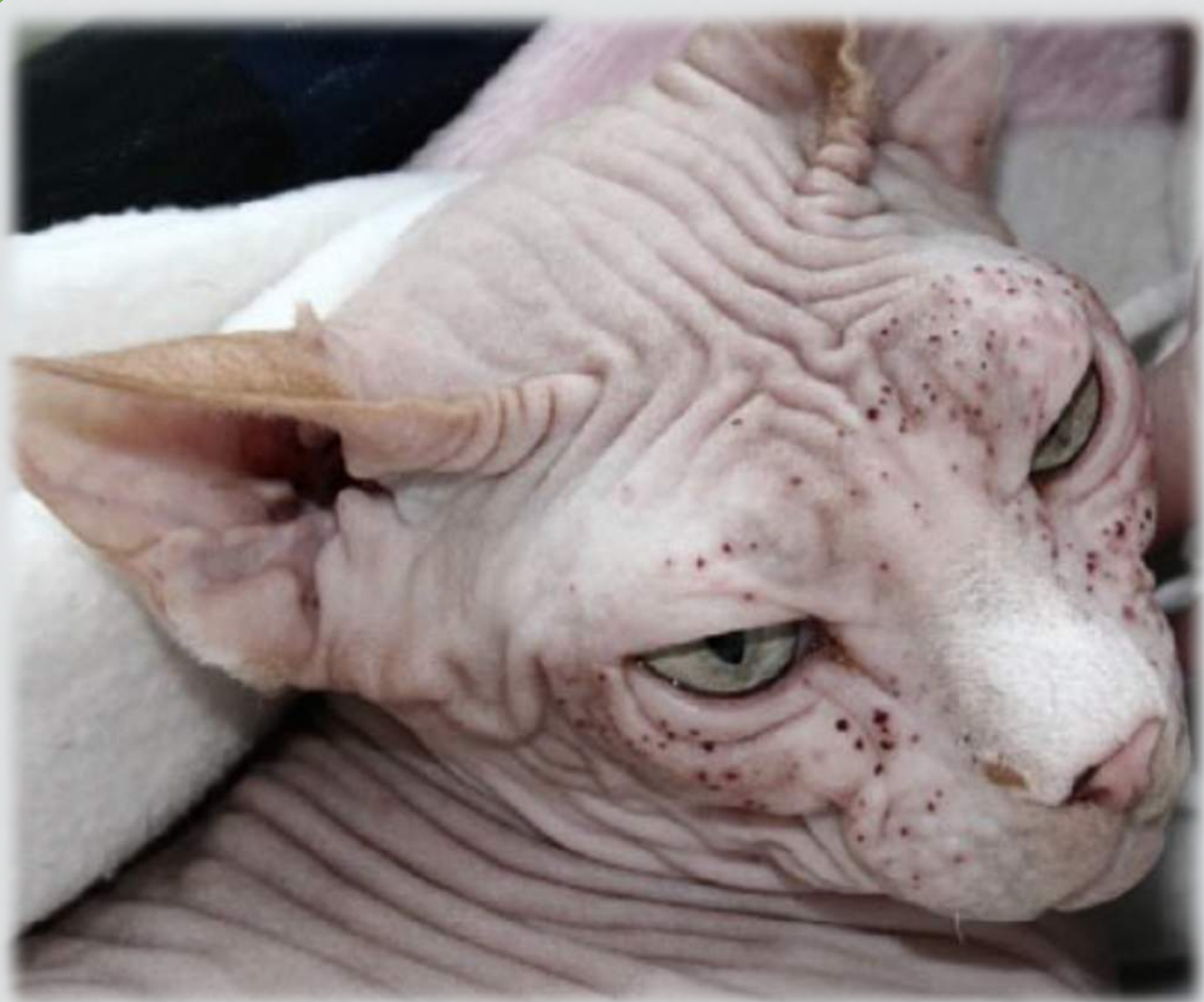


Figure 3. Monomorphic form of the disease includes papules and crusts on the face<sup>2</sup>.

### Bowenoid *in situ* carcinoma



Figure 4. Ulcerative and crusty lesions around the cervical area. (Courtesy of the Dermatology Service of HCV, UAB).

### Seborrheic dermatitis associated with *Malassezia* overgrowth



Figures 5 and 6. Greasy exudate in palmar interdigital web (left) and around the claws (right)<sup>3</sup>.

## DATA COLLECTION

**Retrospective study:**  
2011-2020  
**99 cases**

**Inclusion criteria:**  
sphynx with  
dermatologic problems  
**23 cases**

**Data tabulation:**  
diagnose,  
treatment and  
evolution



## RESULTS

### Reported dermatologic problems

- ✓ **3 years old** → average age of presentation of clinical signs.
- ✓ **Allergic dermatitis** → 3/10 patients diagnosed with feline atopic skin syndrome. In others the cause is to be determined. According to literature it cannot be related with breed predisposition.
- ✓ **Neoplasms** → 1 lipoma, 1 cutaneous mastocytoma (unusual case) and 3 bowenoid *in situ* carcinomas.
- ✓ **Otic secretion** → appears in 13/15 patients in conjunction with the main dermatologic problem.
- ✓ **MOG** → appears in conjunction with other dermatologic problems, which is why it cannot be attributed solely to the sphynxes' own tendency to suffer from this proliferation.

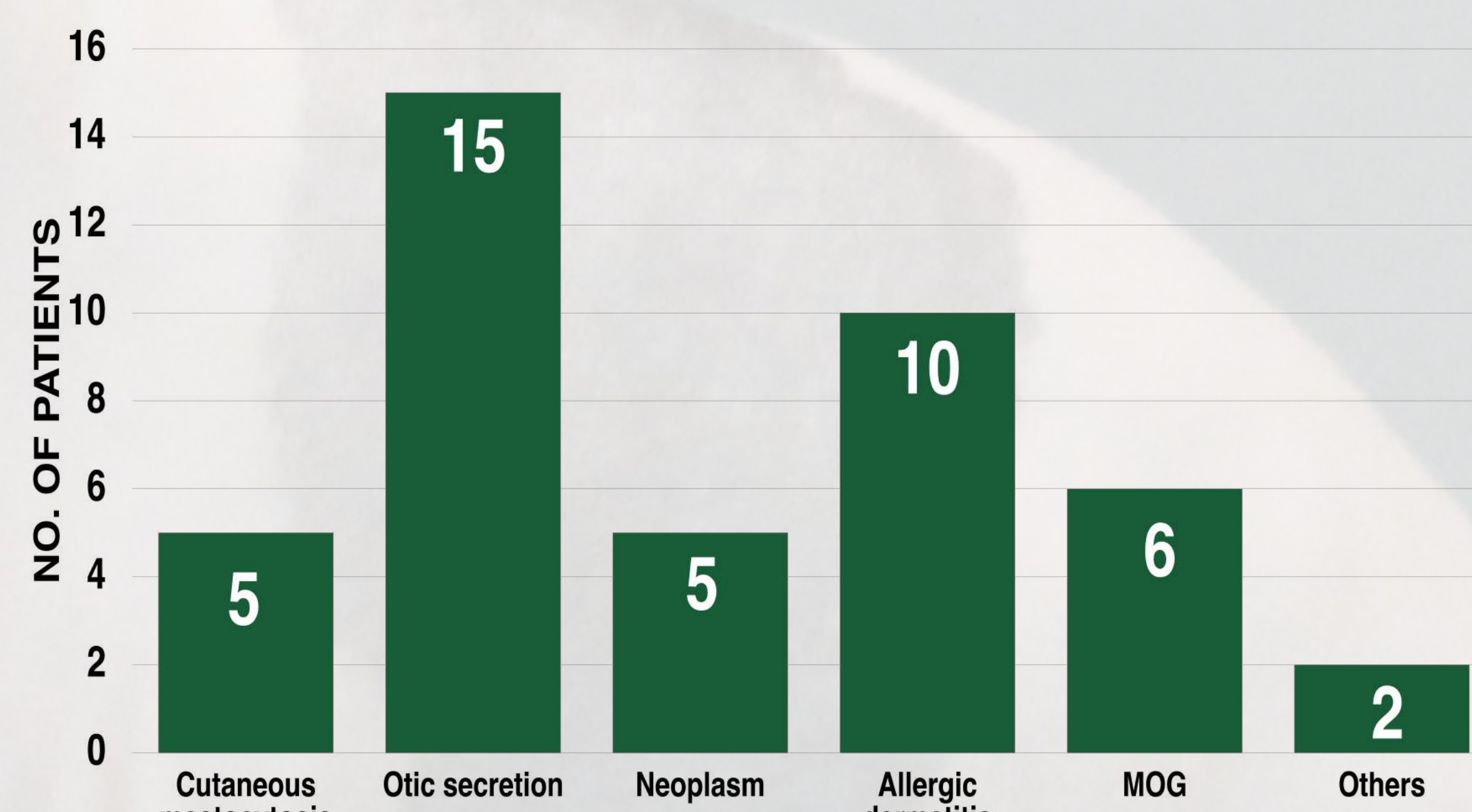


Figure 8. Incidence of dermatologic problems reported in the sphynx cats included in the study. **Allergic dermatitis:** it includes flea allergic dermatitis, feline atopic skin syndrome (FASS) and food allergy; **MOG:** *Malassezia* overgrowth.

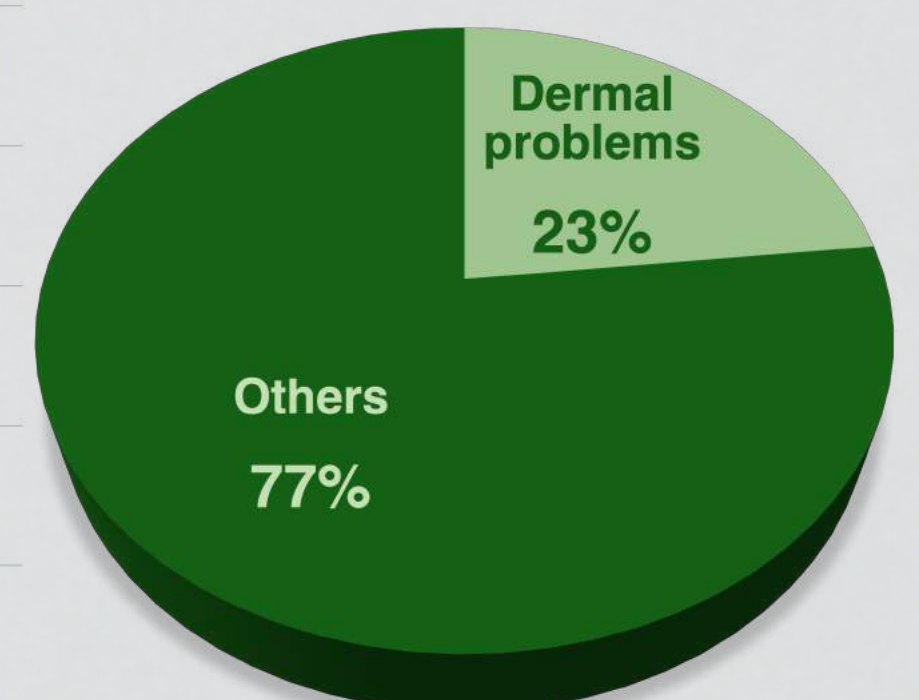
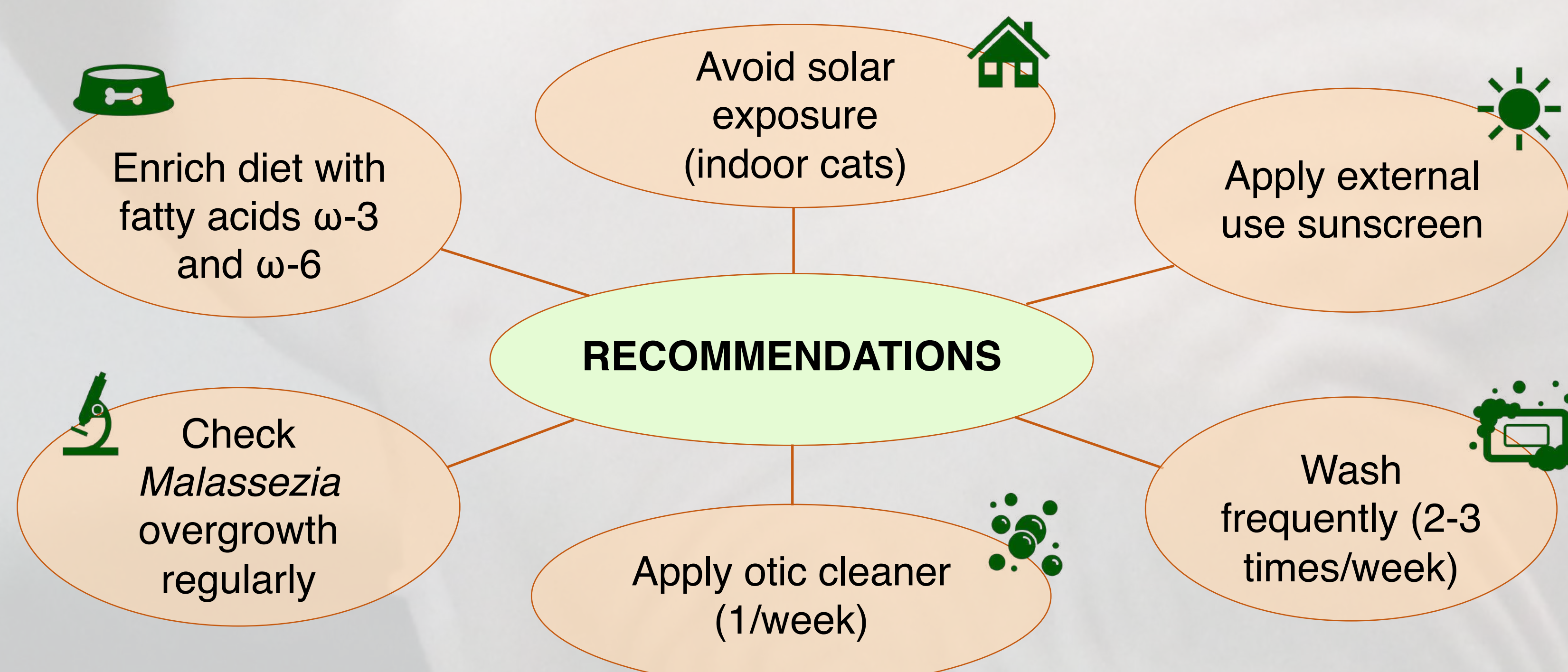


Figure 7. Reason for consultation of sphynx cats treated in HCV.

## CONCLUSIONS

- ✓ More studies are needed to fully identify the genetic mechanism causing alopecia.
- ✓ Cats treated in HCV tend to suffer from dermatologic problems at an early age, corresponding with the ones already described in literature. These also show a predisposition to suffer from allergic problems.
- ✓ It is unknown whether this predisposition is due to a compromised immune response or the dermal conformation of the sphynxes themselves. More studies are needed to identify the true causal factor.
- ✓ Sphynx are not hypoallergenic cats, but they can cause milder allergic manifestations.
- ✓ Need special care and attention to dermatologic problems.



## REFERENCES

1. Genovese DW, Johnson TL, Lamb KE, Gram WD. Histological and dermoscopic description of sphynx cat skin. *Vet Dermatol.* 2014;25(6):523-529. doi:10.1111/vde.12162
2. Ngo J, Morren MA, Bodemer C, Heimann M, Fontaine J. Feline maculopapular cutaneous mastocytosis: a retrospective study of 13 cases and proposal for a new classification. *J Feline Med Surg.* 2018;21(4):394-404. doi:10.1177/1098612X18776141
3. Åhman SE, Bergström KE. Cutaneous carriage of *Malassezia* species in healthy and seborrheic Sphynx cats and a comparison to carriage in Devon Rex cats. *J Feline Med Surg.* 2009;11(12):970-976. doi:10.1016/j.jfms.2009.04.011