

TABLE 1 Determining Cause of Pruritus in Cats

CATEGORY, DIAGNOSTIC TOOL	POSITIVE FINDINGS	COMMENTS	LIMITATIONS
INFECTON			
Wood's lamp examination	Bright "apple green" fluorescence of hairs infected with <i>Microsporum canis</i>	Other dermatophytes typically do not fluoresce	Crusts, lint, and discharge may fluoresce blue-white and may be confused with a true positive response
Dermatophyte culture	Fungal growth and identification	Demonstrates presence of live fungal elements	False-positive results are possible if the cat carries contaminated debris in its fur
Examination of plucked hairs	Hair distortion or fungal elements on hairs	Requires practice to obtain specific skill	
Fungal PCR	Amplified fungal DNA	Provides rapid results; can identify specific organism	Cannot distinguish between active infection and contamination with dead fungal elements
Skin cytology	Yeast or bacteria	More than an occasional bacterium or yeast per 100x is probably abnormal; concurrent presence of inflammation or phagocytosis supports clinical significance	
INFESTATION			
Direct visualization	Fleas	May be seen crawling through the fur, especially on the tailhead, perianal area, caudal thighs, ventrum, and sometimes head and neck	May be rapidly groomed off; consider evaluating in-contact cat(s)
	Lice	Adults are found on or close to skin surface, especially where the cat cannot reach. Nits may appear as specks clinging to the hair shaft.	
	<i>Lynxacarus</i>	Adult mites and nits are smaller than lice but with a magnifying glass may be seen clinging to hair shafts. In heavy infestations, fur may have a "salted" appearance. Frequently found on perineum, over tail, and on caudal thighs.	
	Chiggers (<i>Eutrombicula/Neotrombicula</i>)	Pinpoint orange or yellow mites, often tightly adhered to papules. Frequently found on pinnae (especially marginal pouch), head, legs, feet, and ventrum.	
	<i>Cheyletiella</i>	Typically located on the dorsum and associated with profuse dry scale; careful examination may demonstrate moving debris	May be difficult to see directly
Deep skin scraping	<i>Demodex cati</i>	Generally seen on scrapings; often associated with immunosuppression or significant systemic disease	
	Unnamed <i>Demodex</i> mite	Often associated with immunosuppression or significant systemic disease	
Superficial skin scraping	<i>Demodex gatoi</i>	Often difficult to demonstrate; empiric treatment may be required.	Consider sampling unaffected in-contact cats
	<i>Cheyletiella</i>		Examination of combed debris or tape impressions may be more fruitful
	Unnamed <i>Demodex</i> mite		
	<i>Lynxacarus</i>		Examination of plucked hairs may be more fruitful
	<i>Otodectes</i>	Mites can leave the ear canal and can occasionally infest other portions of the body; preparation and examination of otic debris may also be useful.	
	<i>Notoedres</i>	May be more easily demonstrated than canine scabies mites	
	<i>Chiggers (Eutrombicula/Neotrombicula)</i>		
Tape impression	Lice		
	<i>Cheyletiella</i>	May require multiple impressions if patient is very scaly	
	<i>Lynxacarus</i>		
	<i>Chiggers (Eutrombicula/Neotrombicula)</i>		
	<i>Notoedres</i>		
Examination of plucked hairs	<i>Demodex cati</i>	Are occasionally seen clinging to hair bulbs	
	Unnamed <i>Demodex</i> mite	May be seen clinging to proximal hairs	
	<i>Lynxacarus</i>	Mites and nits may be found clinging to hairs	
	Lice	Nits may be seen on hairs	
	Fungus (dermatophytosis)	Demonstration of hair distortion or fungal elements on hairs	Takes practice to obtain sufficient skill
Flea combing and debris examination	<i>Lynxacarus</i>	Mites may be seen in debris	
	<i>Cheyletiella</i>	Debris may be examined on a dark surface or combed into a petri dish and examined with a magnifying glass or microscope	
	Lice	Biting lice may be found on skin surface; nits may be found in hair	
	Fleas	May enhance visualization of fleas or flea feces	
Fecal exam	Mites (<i>Lynxacarus</i> , <i>Cheyletiella</i> , <i>Otodectes</i> , <i>D gatoi</i> , unnamed <i>Demodex</i> mite, <i>D cati</i> , <i>Notoedres</i> , <i>Eutrombicula/Neotrombicula</i>), lice, fleas	Mites/lice may be ingested during grooming and occasionally seen during fecal examination	
Empiric treatment (e.g., isoxazoline, ivermectin, moxidectin/imidacloprid, lime sulfur)	Clinical improvement	All in-contact animals must be treated; treatment must extend beyond the expected life cycle of the parasites (generally minimum of 4-6 weeks)	None of these agents are 100% effective, and resistance can and will eventually develop. Empiric treatment as a diagnostic tool is best performed only after a good faith effort has been made to demonstrate the parasites.
ALLERGY			
Aggressive flea control trial	Flea allergy	See text (todaysveterinarypractice.com/alopecia-diagnosis-cats)	
Food allergy elimination diet trial	Food allergy	See text (todaysveterinarypractice.com/alopecia-diagnosis-cats)	
Clinical diagnosis of exclusion	Atopic dermatitis/feline atopic skin syndrome	Serology or intradermal testing support a diagnosis but are not sufficient to make the diagnosis on their own	See text (todaysveterinarypractice.com/alopecia-diagnosis-cats)
MISCELLANEOUS			
Evaluation of serum total and free T4 levels	Hyperthyroidism	Hyperthyroidism should be considered as a differential for the development of pruritus in an older cat, especially if in conjunction with other compatible signs (e.g., weight loss)	
Skin biopsy	Epitheliotrophic lymphoma	Epitheliotrophic lymphoma should be considered as a differential for pruritic, scaling alopecia in older cats	