

Persian Cat	 <p>F.Lhonoré/LOOF©</p>
-------------	---

**Ocular disorders known or presumed to be inherited (published)**

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
A	Eyelid aplasia	Mostly upper eyelids	Unknown	NO	1, 2
B	Entropion	Medial canthal (associated with brachycephalic morphology)	Unknown	NO	3-5
C	Apocrine hydro-cystomas		Unknown	NO	6-8
D	Prolapsed gland of the nictitating membrane		Unknown	NO	9
E	Corneal sequestrae		Unknown	NO	10-12
F	Nonhealing corneal ulcers		Unknown	NO	13
G	Microcornea	Associated with microphthalmia	Unknown	NO	14
H	Corneal dystrophy, endothelial		Unknown	NO	14
I	Uveal cyst		Unknown	NO	15
J	Persistent pupillary membrane		Unknown	NO	14

K	Primary glaucoma		Unknown	NO	2, 16, 17
L	Kerato-lenticular dysgenesis		Unknown	NO	18
M	Cataract	Congenital (Posterior nuclear is described)	Unknown (autosomal dominant has been suggested)	NO	19, 20
		Presumed inherited	Unknown	NO	20
N	Retinal degeneration (Persian-derived)	Early onset uncoordinated eye movement is often observed	Autosomal recessive	YES	21-23, 30
O	Multiple colobomatous anomalies		Unknown	NO	1
P	Lacrimal punctum atresia		Unknown	NO	29
Q	Entropion		Unknown	NO	29

**The ECVO's advice relating to hereditary eye disease control**

Please see ECVO Manual chapter 8: VET Advice

**Recommendations regarding age and frequency for eye examinations**

Please see ECVO Manual chapter 7: ECVO Age and Frequency recommendations

**Other diseases with ocular involvement**

	Diagnosis	Source
A	Chediak-Higashi Syndrome	24
B	Alfa-Mannosidosis	25-29

### References

1. Bellhorn RW et al. Ocular colobomas in domestic cats. *J Am Vet Med Ass*; 159: 1015-1021, 1971.
2. Glaze MB. Congenital and hereditary ocular abnormalities in cats. *Clin Tech Small Anim Pract*; 20 (2):74-82, 2005.
3. Roberts SR, Lipton DE. The eye. In: *Feline Medicine and Surgery* (ed. Catcott, E.J.), pp. 485-518. Santa Barbara, CA: American Veterinary Publishing. Williams, 1975.
4. Williams DL, Kim JY. Feline entropion: a case series of 50 affected animals (2003–2008). *Veterinary Ophthalmology*;12: 221-226, 2009.
5. McDonald JE, Knollinger AM. The use of hyaluronic acid subdermal filler for entropion in canines and felines: 40 cases. *Vet Ophthalmol*. 2018. doi: 10.1111/vop.12566. [Epub ahead of print]
6. Chaltman J et al. Multiple eyelid cysts resembling apocrine hidrocystomas in three Persian cats and one Himalayan cat. *Veterinary Pathology*; 36: 474–476, 1999.
7. Cantaloube B et al. Multiple eyelid apocrine hidrocystomas in two Persian cats. *Veterinary Ophthalmology*; 7: 121-125, 2004.
8. Giudice C et al. Eyelid multiple cysts of the apocrine gland of Moll in Persian cats. *J Feline Med Surg*;1 1(6): 487-91, 2009.
9. Chahory S et al. Three cases of prolapse of the nictitans gland in cats. *Veterinary Ophthalmology*; 7: 417-419, 2004.
10. Featherstone HJ, Sansom J. Feline corneal sequestra: a review of 64 cases (80 eyes) from 1993 to 2000. *Vet Ophthalmol*; 7(4): 213-27, 2004.
11. Laguna F et al. Corneal grafting for the treatment of feline corneal sequestrum: a retrospective study of 18 eyes (13 cats). *Vet Ophthalmol*; 18(4) :291-6, 2015.
12. Graham KL et al. Feline corneal sequestra: outcome of corneoconjunctival trans-

- position in 97 cats (109 eyes). *J Feline Med Surg*;19(6):710-716, 2017.
13. La Croix NC et al. Nonhealing corneal ulcers in cats: 29 cases (1991-1999). *J Am Vet Med Assoc*; 218 (5):733-5, 2001.
  14. Chaudieu G, Bouhanna L. *Ophthalmologie Feline: Atlas & Manuel*. France: MED'COM ed; 2018.
  15. Blacklock BT et al. Uveal cysts in domestic cats: a retrospective evaluation of thirty-six cases. *Veterinary Ophthalmology*; 19(1): 56-60, 2016.
  16. Brooks D. Glaucoma in the dog and cat. *Vet Clin North Am*; 20: 775-797, 1990.
  17. Walde I, Rapp E. Glaucoma in cats: clinical and morphological aspects of 38 cases; das glaukom der katze-klinische und morphologische aspekte (retrospektive studien an 38 fallen). *Wiener Tierärztliche Monatsschrift*; 79: 309-314, 1992.
  18. Peiffer RL. Keratolenticular dysgenesis in a kitten. *J Am Vet Med Ass*; 182: 1242-1243, 1983.
  19. Peiffer RL., Gelatt KN. Congenital cataracts in a Persian kitten. *Vet Medicine, Small Animal Clinician*; 70: 1334-1335, 1975.
  20. Chaudieu G. Cataracte bilatérale primaire juvénile chez neuf chats persans. *Prat Méd Chir Anim Comp*; 41, 63-68, 2006
  21. Guyonnet A. Epidemiology and clinical presentation of feline cataracts in France: A retrospective study of 268 cases. *Vet Ophthalmol* 2018, DOI 10.1111/vop.12567
  22. Rah H et al. Early-onset, autosomal recessive, progressive retinal atrophy in Persian cats. *Invest Ophth and Visual Sciences* ; 46 (5): 1742-1747, 2005.
  23. Alhaddad H et al. Genome-wide association and linkage analyses localize a progressive retinal atrophy locus in Persian cats. *Mamm Genome*; 25 (7-8): 354-62, 2014.
  24. Kramer JW et al. The Chediak-Higashi syndrome of cats. *Lab Invest*; 36(5): 554-62, 1977.
  25. Vandeveld M et al. Hereditary neurovisceral mannosidosis associated with  $\alpha$ -mannosidase deficiency in a family of Persian cats. *Acta Neuropathologica*; 58: 64-68, 1982.
  26. Jezyk PF et al. Alpha mannosidosis in a Persian cat. *J Am Vet Med Ass*; 189: 1483-1485, 1986.

27. Maenhout T et al. Mannosidosis in a litter of Persian cats. *Vet Record*; 122: 351-354, 1988.
28. Alroy J et al. Clinical, neurophysiological, biochemical and morphological features of eyes in Persian cats with mannosidosis. *Virchows Archiv B Cell Pathology Including Molecular Pathology*; 60: 173-180, 1991.
29. Berg T et al. Purification of feline lysosomal alpha-mannosidase, determination of its cDNA sequence and identification of a mutation causing alphanmannosidosis in Persian cats. *The Biochemical Journal*; 328, 3: 863-870, 1997.
30. Katariina Vapalahti, Anna-Maija Virtala, Tara A. Joensuu, Katriina Tiira, Jaana Tähtinen, and Hannes Lohi, Health and Behavioral Survey of over 8000 Finnish Cats ; *Front Vet Sci.* 2016; 3: 70. Published online 2016 Aug 29.
31. Lyons LA, Creighton EK, Alhaddad H, Beale HC, Grahn RA, Rah H, Maggs DJ, Helps CR, Gandolfi B. Whole genome sequencing in cats, identifies new models for blindness in *AIPL1* and somite segmentation in *HES7*. *BMC Genomics.* 2016; 17: 265.