



Ocular disorders known or presumed to be inherited (published)

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
A	Microphthalmia		Unknown	NO	1
B	Multiple ocular anomalies/ retinal dysplasia/ oculo-skeletal dysplasia 2 (osd2)	Dwarfism associated with retinal dysplasia, also seen in Labrador retriever, possible other anomalies	Presumed Autosomal recessive	COL9A2	1, 2, 3
C	Entropion	Inferior lateral, spastic Inferior medial	Unknown	NO	1
D	Distichiasis		Unknown	NO	1
E	Corneal dystrophy 1. epithelial 2. stromal	1. Dogs > 4 y.o. 2. Young adults, microcrystalline	Unknown	NO	1, 4, 5
F	Uveo-dermatologic syndrome	1,5-4 y.o. dogs Granulomatous anterior uveitis, possible retinal detachment	Breed predisposition	NO	6

G	Persistent pupillary membranes	Iris-cornea not uncommon, iris-lens rare	Unknown	NO	1
H	Pectinate ligament anomaly	Both PLA and narrow/closed angle. Possible acute glaucoma in 2-3 y.o dogs; Iridocorneal angle width decreasing with age	Unknown	NO	1, 7, 8
I	Cataract	1. posterior cortical 6 m. to 2 y.o dogs, possibly progressive (blindness) between 2 and 3 y. of age 2. anterior subcapsular 4-5 y.o. dogs 3. fibrillar nuclear Dogs > 5 y.o.	1. Suspected autosomal recessive 2. Not defined 3. Not defined	NO	1, 3
J	Progressive Retinal Atrophy (PRA) XLPRA1		XLPRA	RPGR	9
K	Retinal dysplasia, multifocal	Possible vitreous degeneration (syneresis)	Presumed autosomal recessive	NO	1, 2

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 ocular disorders (reported)

	Diagnosis	Source
--	-----------	--------

References

1. Rubin LF (1989) Inherited eye diseases in purebred dogs. Williams & Wilkins, Baltimore, 250-255.
2. Acland GM, Aguirre GD (1991) Retinal dysplasia in the Samoyed dog is the heterozygous phenotype of the gene (drd) for short-limbed dwarfism and ocular defects. Trans Amer College Vet Ophthalmol : 22-44.
3. Goldstein O et al (2010) COL9A2 and COL9A3 mutations in canine autosomal recessive oculo-skeletal dysplasia. Mam Genome, 21, 398-408.
4. Chaudieu G, Chahory S (2013) Affections oculaires héréditaires ou à prédisposition héréditaire chez le chien. Rueil-Malmaison : Ed. du Point Vétérinaire, Wolters Kluwer France, 278-280.
5. Van der Woerdt A (2002) Corneal dystrophies. In : Small animal ophthalmology secrets. RC RIIS Edr, Hanley & Belfus, Philadelphia, 33-38.
6. Narfström K, Ekesten B (1999) Diseases of the canine fundus. In : Veterinary Ophthalmology. Third Edition (KN Gelatt Edr) Lippincott Williams & Wilkins, Philadelphia, 869-933.
7. Ekesten B, Narström K (1992) Age-related changes in intraocular pressure and iridocorneal angle in Samoyeds. Prog Vet Comp Ophthalmol 2 : 37-40.
8. Ekesten B, Narfstöm K (1991) Correlation of morphologic feature of iridocorneal angle to intraocular pressure in Samoyeds. Amer J Vet Res 52 : 1875-1878.
9. Zhang Q et al (2002) Different RPGR exon ORF 15 mutations in Canids provide insights into photoreceptor cell degeneration. Hum Mol Genet 11: 993-1003