



Ocular disorders known or presumed to be inherited (published)

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
A	Entropion		Unknown	NO	2
B	Ectropion	Often located in central portion of upper and lower eyelid in combination with macroblepharon and medial and lateral entropion.	Unknown	NO	1,2
C	Distichiasis		Unknown	NO	2
D	Macroblepharon		Unknown	NO	2
E	Persistent pupillary membranes (PPM)		Unknown	NO	1,2
F	Retinal dysplasia - folds		Unknown	NO	2
G	Multifocal retinopathy	CMR1	Autosomal recessive	BEST1 (VMD2)	2,3

H	Progressive Retinal Atrophy (Dominant PRA)	Onset, progression and severity are modulated by light exposure.	Autosomal dominant	Rhodopsin (RHO)	2,4,5,6,7
I	Prolapsed gland of the nictitating membrane		Unknown	NO	2
J	Eversion of the cartilage of the nictitating membrane		Unknown	NO	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
A	Corneal dystrophy -epithelial/stromal -endothelial	ACVO genetics committee
B	Cataract	ACVO genetics committee
C	Uveal cysts	ACVO genetics committee

References

1. Rubin LF, Inherited ocular diseases in purebred dogs. Williams & Wilkins, Baltimore, 1989 ; 199.
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3. Guziewicz KE, Zangerl B, Lindauer SJ, et al. Bestrophin gene mutations cause canine multifocal retinopathy : A novel animal model for Best disease. Invest. Ophthalmol. Vis. Sci., 2007 ; 48 : 1959-1967
4. Kijas JW, Cideciyan, AV, Alemansd TS, et al. Naturally occurring rhodopsin mutation in the dog causes retinal dysfunction and degeneration mimicking human dominant retinitis pigmentosa. Proc Natl Acad Sci U S A, 2002; 99: 6328-6323.
5. Kijas JW, Miller BJ, Pearce-Kelling SE, et al. Canine models of ocular disease: outcross breedings define a dominant disorder present in the English Mastiff and Bull Mastiff dog breeds, J. Hered, 2003; 94: 27-30.
6. Cideciyan AV, Jacobson, SG, Aleman TS, et al. In vivo dynamics of retinal injury and repair in the rhodopsin mutant dog model of human retinitis pigmentosa, Proc Natl Acad Sci U S A, 2005; 102: 5233-5238
7. Miyadera K, Acland GM and Aguirre GD. Genetic and phenotypic variations of inherited retinal diseases in dogs: the power of within- and across-breed studies. Mamm Genome. 2012 Feb;23:40-61.