



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

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
<b>A</b>	Prolapsed gland of the nictitating membrane		Unknown	NO	1,2
<b>B</b>	Corneal dystrophy	1. Epithelial. Recurrent corneal erosions 2. Endothelial. 5-9 y.o. ; corneal edema in the lateral quadrant, progressing to the entire cornea.	Unknown	NO	1,2,3,4,12
<b>C</b>	Glaucoma		Unknown	NO	1,2,5,6
<b>D</b>	Iris cysts		Unknown	NO	1,2
<b>E</b>	Cataract	1. Early onset; before 6 months of age to complete opacity prior to 2 y.o. 2. Late onset; between 3-10 y.o.; anterior subcortical, wedge shaped	1. autosomal recessive 2. Unknown	1.HSF4-1	1,2,7,8,9,10, 11

<b>F</b>	Progressive Retinal Atrophy (PRA)		Presumed autosomal recessive	NO	1,2
<b>G</b>	Vitreous degeneration	Syneresis	Unknown	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)**

	<b>Diagnosis</b>	<b>Source</b>
<b>A</b>	Distichiasis	ACVO genetics committee
<b>B</b>	Atresia of lacrimal punctum	ACVO genetics committee
<b>C</b>	Persistent pupillary membranes	ACVO genetics committee

### **References**

1. Rubin LF. Inherited eye diseases in purebred dogs. Williams & Wilkins 1989;48-52.
2. Chaudieu G., Chahory S. Affections oculaires héréditaires ou à prédisposition raciale chez le chien. Ed. du Point Vétérinaire 2nd ed. 2013;466-468.
3. Kirschner SE et al. Idiopathic persistent corneal erosions: clinical and pathological findings in 18 dogs. J Am Anim Hosp Assoc. 1989;25;84-90

4. Martin CL, Dice PF: Corneal endothelial dystrophy in the dog. *J Am Anim Hosp Assoc* 18:327, 1982.
5. Slater, MR; Erb, HN: Effects of risk factors and prophylactic treatment on primary glaucoma in the dog. *J Amer Vet Med Assoc.* 188:1028, 1986.
6. Gelatt KN, Mackay FO: Prevalence of breed-related glaucomas in pure-bred dogs in North America. *Vet Ophthal.* 2:97, 2004.
7. Curtis R: Late onset cataract in the Boston terrier. *Vet Res* 115:755, 1984.
8. Barnett KC: The diagnosis and differential diagnosis of cataract in the dog. *J Small Anim Pract* 26:305, 1985.
9. Barnett KC: Hereditary cataract in the dog. *J Small Anim Pract* 19:109, 1978.
10. Mellersh CS, Pettitt L, Forman OP, et al: Identification of mutations in HSF4 in dogs of three different breeds with hereditary cataracts. *Vet Ophthalmol* 9:369-378, 2006.
11. Mellersh CS, Graves KT, McLaughlin B, et al: Mutation in HSF4 associated with early but not late-onset hereditary cataract in Boston terrier. *J Heredity* 98(5):531-533, 2007.
12. Thomasy SM, Cortes DE, Hooehn AL, Calderon AC, Li JY, Murphy CJ. In Vivo Imaging of Corneal Endothelial Dystrophy in Boston Terriers: A Spontaneous , Canine Model for Fuchs' Endothelial Corneal Dystrophy. *IOVS* 57(9):495-503, 2016.