

**Ocular disorders**

	Diagnosis	Description and comments specific to the breeds	Inheritance	Gene/marker test	References
A	Glaucoma	Goniodysgenesis (increase in extent with aging, narrow and closed angle, predominance of females, prevalence increase with age (initial presentation $6,33 \pm 1,3$ years))	Unknown	None	3-21
B	Ectropion		Unknown	None	22
C	Cataract		Unknown	None	22
D	Persistent hyperplastic tunica vasculosa lentis, persistent hyperplastic primary vitreous (PHTVL/PHPV)		Unknown	None	1, 2
E	Progressive Retinal Atrophy		Unknown	None	23

The ECVO's advice relating to hereditary eye disease control

A	Glaucoma	NO BREEDING from the affected animal
B	Ectropion	OPTIONAL
C	Cataract	NO BREEDING from the affected animal
D	PHTVL/PHPV	-Grade 1 OPTIONAL -Grade 2-6 NO BREEDING from the affected animal
E	Progressive Retinal Atrophy	NO BREEDING from the affected animal, its parents or offspring

Recommendations regarding age and frequency for eye examinations

As for all other breeds (see part 7)

References

- 1- Verbruggen AM , Boroffka SA, Boevé MH, Stades FC. Persistent hyperplastic tunica vasculosa lentis and persistent hyaloid artery in a 2-year-old basset hound. *Vet Q.* 1999;21(2):63-5.
- 2- Boroffka SA, Verbruggen AM, Boevé MH, Stades FC. Ultrasonographic diagnosis of persistent hyperplastic tunica vasculosa lentis/persistent hyperplastic primary vitreous in two dogs. *Vet Radiol Ultrasound.* 1998;39(5):440-4.
- 3- Bedford PG. A gonioscopic study of the iridocorneal angle in the English and American breeds of Cocker Spaniel and the Basset Hound. *J Small Anim Pract.* 1977;18(10):631-42.
- 4- Slater MR, Erb HN. Effects of risk factors and prophylactic treatment on primary glaucoma in the dog. *J Am Vet Med Assoc.* 1986;188(9):1028-30.
- 5- Wyman M, Ketring K. Congenital glaucoma in the basset hound: a biologic model. *Trans Sect Ophthalmol Am Acad Ophthalmol Otolaryngol.* 1976;81(4):645-52.
- 6- Martin CL, Wyman M. Glaucoma in the Basset Hound. *J Am Vet Med Assoc.* 1968 15;153(10):1320-7.
- 7- Gelatt KN, MacKay EO. Prevalence of the breed-related glaucomas in pure-bred dogs in North America. *Vet Ophthalmol.* 2004;7(2):97-111.
- 8- Boevé MH, Stades FC. Glaucoma in dogs and cats. Review and retrospective evaluation of 421 patients. I. Pathobiological background, classification and breed predisposition. *Tijdschr Diergeneeskd.* 1985;110(6):219-27.
- 9- Gelatt KN, Mackay EO. Prevalence of primary breed-related cataracts in the dog in North America. *Vet Ophthalmol.* 2005;8(2):101-11.
- 10- Bedford PGC. The aetiology of primary glaucoma in the dog. *J Small Anim Pract* 1975;16:217.
- 11- Smith RIE, Peiffer RL, et al. Some aspects of the pathology of canine glaucoma. *Prog Vet Comp Ophthal* 1993(3):16.
- 12- MacKay EO, Kallberg ME, Barrie KP, Miller W, Sapienza JS, Denis H, Ollivier FJ, Plummer C, Rinkoski T, Scotty N, Gelatt KN. Myocilin protein levels in the aqueous humor of the glaucomas in selected canine breeds. *Vet Ophthalmol* 2008;11(4):234–241.
- 13- Weinstein WL, Dietrich UM, Sapienza JS, Carmichael KP, Moore PA, Krunkosky TM. Identification of ocular matrix metalloproteinases present within the aqueous humor and iridocorneal drainage angle tissue of normal and glaucomatous canine eyes. *Vet Ophthalmol* 2007;10(Supl1):108-116.
- 14- Gelatt KN. Prevalence of the breed-related primary glaucomas in purebred dogs in North America. Abstracts: 34th Annual Meeting of the American College of Veterinary Ophthalmologists, Coeur D'Alene, ID, USA. *Vet Ophthalmol.* 2003;6(4):351-366.
- 15- Hassel B, Samuelson DA, Lewis PA, Gelatt KN. Immunocytochemical localization of smooth muscle actin-containing cells in the trabecular meshwork of glaucomatous and nonglaucomatous dogs. *Vet Ophthalmol.* 2007;10(Supl1):38-45
- 16- Mangan BG, Al-Yahya K, Chen C-T, Gionfriddo JR, Powell CC, Dubielzig RR, Ehrhart EJ, Madl JE. Retinal pigment epithelial damage, breakdown of the blood–retinal barrier, and retinal inflammation in dogs with primary glaucoma. *Vety Ophthalmol.* 2007;10(Supl1):117-124.
- 17- Reilly CM, Morris R, Dubielzig RR. Canine goniodysgenesis-related glaucoma: a morphological review of 100 cases looking at acute inflammation and pigment dispersion. Abstracts: 35th Annual Meeting of the American College of Veterinary Ophthalmologists, Washington, DC, USA. *Vet Ophthalmol* 2004;7(6):437–453.

- 18- Pizzirani S, Carroll V, Pirie C, Keating J, Dubielzig R. Pathological factors involved with the late onset of canine glaucoma associated with goniodysgenesis: preliminary study. Abstracts: 35th Annual Meeting of the American College of Veterinary Ophthalmologists, Washington, DC, USA. *Vet Ophthalmol* 2004;7(6):437–453.
- 19- Hardman C and Stanley RG. Diode laser transscleral cyclophotocoagulation for the treatment of primary glaucoma in 18 dogs: a retrospective study. *Vet Ophthalmol* 2001;4(3):209-215.
- 20- Gelatt KN. Prevalence of the breed-related primary glaucomas in purebred dogs in North America. Abstracts: 34th Annual Meeting of the American College of Veterinary Ophthalmologists, Coeur D'Alene, ID, USA. *Vet Ophthalmol* 2003;6(4) :351-366.
- 21- Whiteman AL, et al. Progressive retinal degeneration in spontaneous canine primary glaucoma during the seven days following the onset of clinical disease in Cocker Spaniels and Basset Hounds. *ACVO Proceedings* 1999.
- 22- Priester WA. Congenital ocular defects in cattle, horses, cats and dogs. *J Am Vet Med Assoc* 1972;160:1504.
- 23- Priester WA. Canine progressive retinal atrophy. Occurrence by age, breed and sex. *Am J Vet Res* 1974;35:571.