English Cocker Spaniel	and the second se

Ocular disorders known or presumed to be inherited (published)

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
Α	Keratoconjuncti- vitis sicca		Unknown	NO	2,15
в	Glaucoma		Unknown	NO	1,2,4,5
с	Cataract	1.posterior cortical 2.nuclear fibrillar	Unknown	NO	1,2,3,6,7,16
D	Progressive Retinal Atrophy (PRA)		Autosomal recessive	prcd	1,2,8,9,10,1 1,12,13
E	Retinal dysplasia -folds -total	Three related male ECS reported to be congenitally blind (complete retinal detachment)	Unknown X-linked	NO NDP	2 17
F	Retinal Pigment Epithelial Dystrophy (RPED)		Unknown	NO	1,2,14

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

	Diagnosis	Source			
Α	Distichiasis	ACVO genetics committee			
В	Atresia of lacrimal punctum	ACVO genetics committee			
С	Ectropion	ACVO genetics committee			
D	Corneal dystrophy -epithelial/stromal	ACVO genetics committee			
E	Persistent pupillary membranes -iris to iris -iris to cornea -iris to lens	ACVO genetics committee			
F	Microphthalmia	French National Panel			
G	Entropion	French National Panel			

Other ocular disorders (reported)

References

- 1. Rubin Lionel F., Inherited Eye Diseases in Purebred Dogs, Baltimore: Williams & Wilkins, 1989;116-122.
- 2. Chaudieu G. ChahoryS.Affectionsoculaireshéréditairesou à predisposition raciale chez le chien.2nd ed. Ed. Du Point Vétérinaire, 2013; 389-395.

- 3. Strande A, Nicolaissen B, Bjerkas I: Persistent pupillary membrane and congenital cataract in a litter of English cocker spaniels. J Small Anim Pract 29:257, 1988.
- 4. Bedford PGC: A gonioscopic study of the iridocorneal angle in the English and American breeds of Cocker spaniel and the Basset Hound. J Small Anim Pract 18:631, 1977.
- 5. Bedford PGC: The aetiology of primary glaucoma in the dog. J Small Anim Pract 16:217, 1975.
- 6. Oleson HP et al: Congenital hereditary cataract in cocker spaniels. J Small Anim Pract 15:741, 1974.
- 7. Barnett KC: The diagnosis and differential diagnosis of cataract in the dog. J Small Anim Pract 26:305, 1985.
- 8. Aguirre GD, Acland GM: Progressive retinal atrophy in the English cocker spaniel. Trans Am Coll Vet Ophthalmol 14:104, 1983.
- 9. Aguirre GD, Acland GM: Variation in retinal degeneration phenotype inherited at the prcd locus. Exp Eye Res 46:663, 1988.
- 10. Gould DJ, et al: Cloning of canine rom-l and its investigation as a candidate gene for generalized progressive retinal atrophies in dogs. Anim Genetics 28:391, 1997.
- 11. Acland GM, Ray K, Mellersh CS, Gu W, Langston AA, Rine J, Ostrander EA, Aguirre GD. Linkage analysis and comparative mapping of canine progressive rod-cone degeneration (prcd) establishes potential locus homology with retinitis pigmentosa (RP17) in humans. Proceeding of the Natlional Academy of Sciences of the United States of America (1998): 95, 3048–3053.
- 12. Acland GM, Ray K, Mellersh CS, Landston AA, Rine J, Ostrander EA, Aguirre GD. A novel retinal degeneration locus identified by linkage and comparative mapping of canine early retinal degeneration. Genomics (1999) 59, 134–142.
- 13. Zangerl B, Goldstein O, Philp AR, Lindauer SJ, Pearce-Kelling SE, Mullins RF, Graphodatsky AS, Ripoll D, Felix JS, Stone EM, Acland GM, Aguirre GD. Identical mutation in a novel retinal gene causes progressive rod-cone degeneration in dogs and retinitis pigmentosa in humans.Genomics (2006) 88(5):551-63.
- 14. McLellan GJ, Watson P, et al: Vitamin E deficiency in canine retinal pigment epithelial dystrophy (central progressive retinal atrophy). Proceedings American College of Veterinary Ophthalmologists 27:38, 1997.

- 15. Sanchez RF, Innocent G, Mould J, Billson FM: Canine keratoconjunctivitis sicca: disease trends in a review. J Small Anim Pract 48:211-217, 2007.
- 16. Engelhardt A, Stock KF, HamannH, Brahm, R, et. Al.: A retrospective study on the prevalence of primary cataracts in two pedigrees from the German population of English Cocker Spaniels. Vet Ophthalmol 11(4):215-221,2008
- 17. Joyce H, Burmeister L, Wright H, Fleming L, Oliver J, Mellersh C. Identification of a variant in NDP associated with X-linkedretinaldysplasia in the English Cocker Spaniel dog. ECVO Conference 2021 (online) p. 69