

Portuguese water dog	
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Ocular disorders known or presumed to be inherited (published)

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
A	Microphthalmia	Associated with multiple ocular anomalies (PPM, glaucoma, retinal degeneration and cataracts)	Unknown	NO	2, 5
B	Distichiasis		Autosomal dominant with strong penetrance suspected	NO	1
C	Persistent pupillary membranes - iris to iris		Unknown	NO	2
D	Cataract	Posterior cortical, young adults	Unknown	NO	1
E	Progressive Retinal Atrophy (PRA)	Clinical signs between 3 and 6 y. of age	Autosomal recessive	prcd	3

F	Early onset progressive retinal atrophy	Clinical signs between 2 and 3 y. of age	Autosomal recessive	CCDC66	4,6
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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	Retinal dysplasia Multifocal and geographical	ACVO genetics committee
B	Corneal dystrophy (epithelial/stromal)	ACVO genetics committee

References

1. Chaudieu G, Chahory S. 2013. Affections oculaires héréditaires ou à prédisposition héréditaire chez le chien. Rueil-Malmaison : Ed. du Point Vétérinaire, Wolters Kluwer France.
2. Rubin LF (1989) Inherited eye diseases in purebred dogs ; Williams & Wilkins, Baltimore, 241.
3. Zangerl B et al (2006) Identical mutation in a novel retinal gene cause progressive rod-cone degeneration in dogs and retinitis pigmentosa in humans. Genomics 88(5):551-63.

4. Miyadera K, Aguirre GD (2014) A new form of early-onset pra in Portuguese water dogs. Am Col Vet Ophthalmol, Abstract n°65, Vet Ophtalmol, 17, E16-E30.
5. Shaw GC, Tse MPY, Miller AD. Microphthalmia with Multiple Anterior Segment Defects in Portuguese Water Dogs. Vet Pathol. 2019 Mar;56(2):269-273.
6. Murgiano L et al. CCDC66 frameshift variant associated with a new form of early-onset progressive retinal atrophy in Portuguese Water Dogs. Sci Rep. 2020;10(1):21162