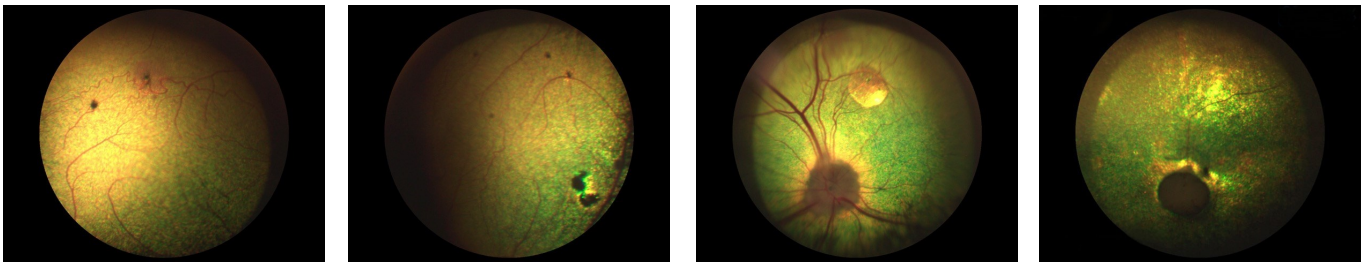
BORDER COLLIE/NEW ZEALAND SHEEP DOG

Chorioretinopathy; secondary retinal disease with genetic predisposition



Photos by courtesy of Lena Karlstam

Clinical description

Typical findings in affected dogs, of variable ages (age 2-9 years), are focal or multifocal areas of tapetal hyperreflectivity, often with a central dark, pigmented area. Non-tapetal area may have depigmented spots or larger decolored areas. Usually retinal vasculature is normal in younger animals but become attenuated when there are more wide-spread neuroretinal changes. Marked progression is often prevalent with significant changes indicative of posterior segment inflammatory responses that primarily affect the retina but in some cases also the vitreous body and cause vitreal haze. Approximately half of the cases observed have shown bilateral funduscopic changes.

New data

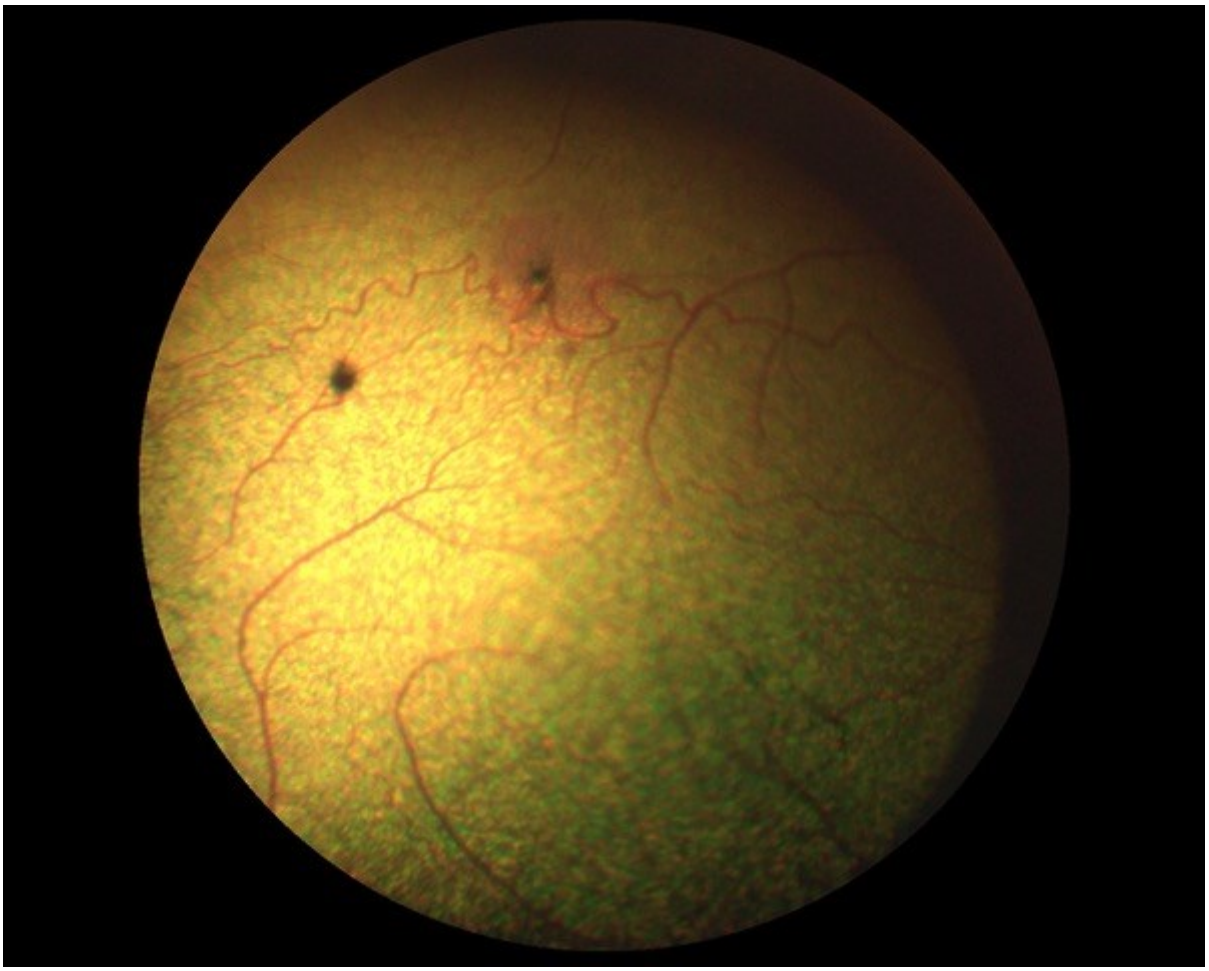
There is strong genetic support for an XLPRA in the described chorioretinopathy of Border collies. However, when studying gender distribution of retinopathies it has been shown that all have a preponderance of affected males over females. It has therefore been proposed that there may be genetic modifiers in the X-chromosome that either favor development of the disease in males or actually protects females.

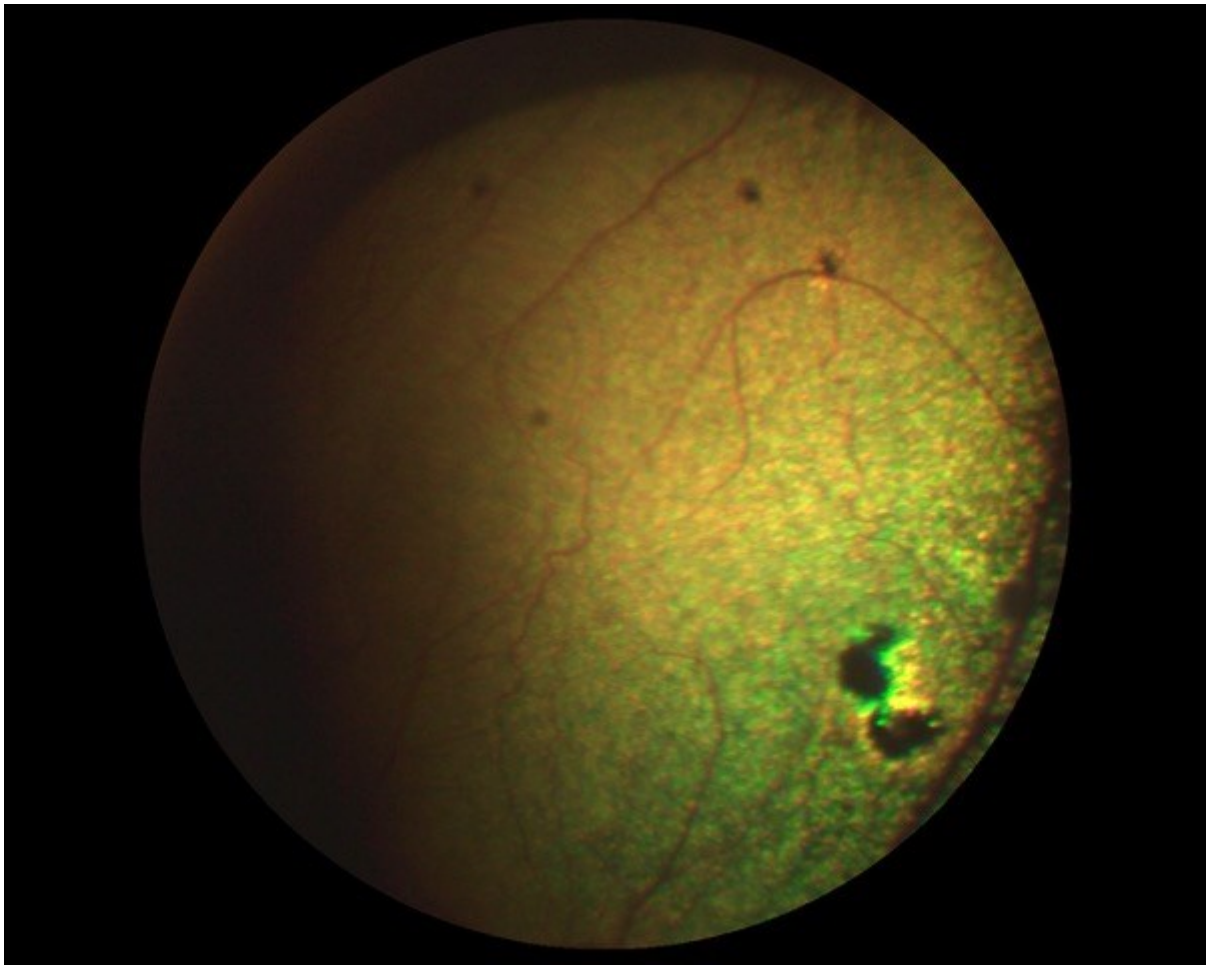
Therefore, it was proposed to include the observed retinal disease in the ECVO manual for specific canine breeds in which similar disease processes have been observed. This disease that can be caused by Ocular Larvae Migrans (OLM) is categorized as being a secondary chorioretinopathy and has also been called multifocal retinitis or ”working dog retinopathy”.

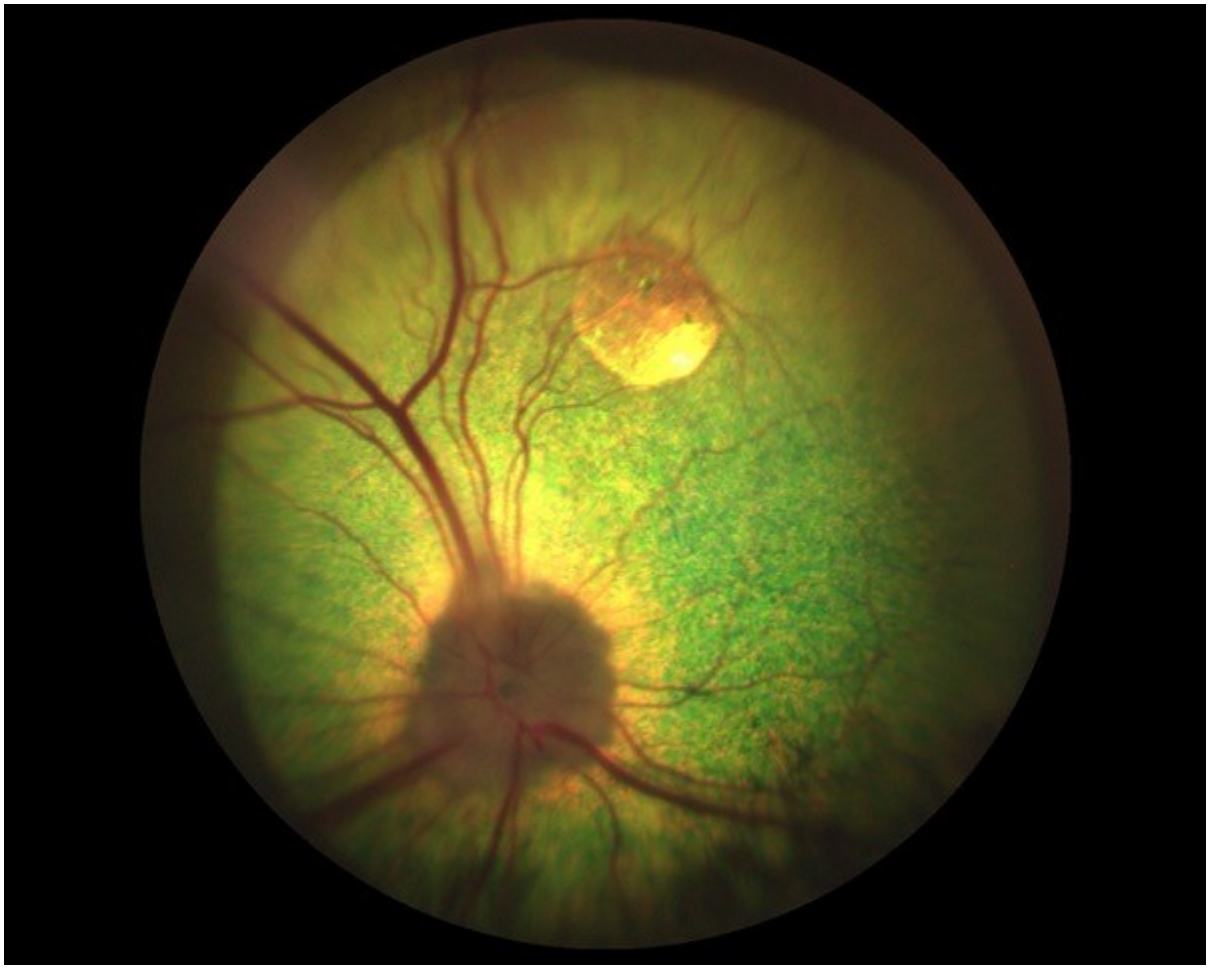
See Ch 9 (point G) for further information and Ch 8 for veterinary advice

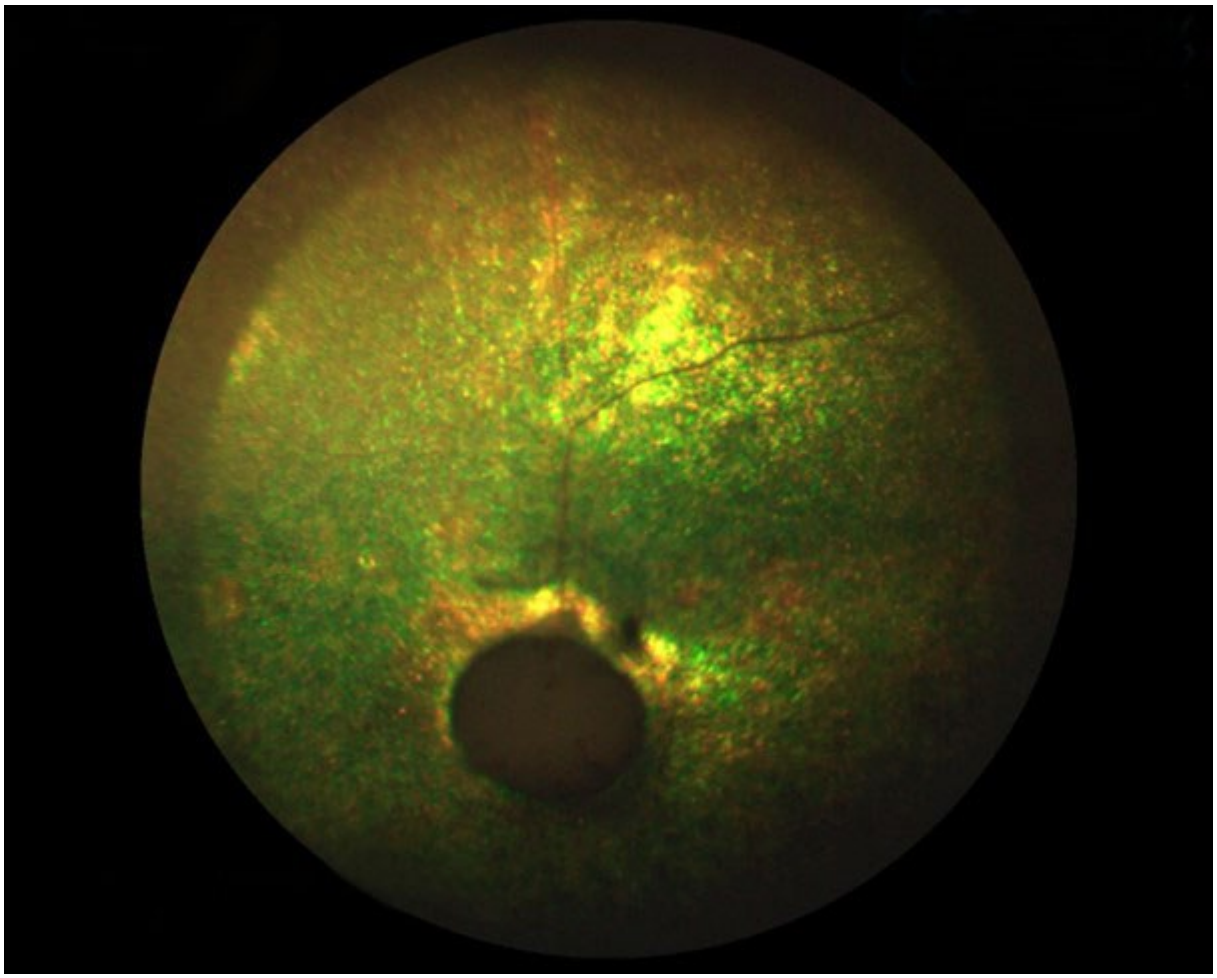
New references

Aguirre G D, Kazacos K R. Is it canine DUSN? Another view of retinopathies, some acquired, and others possibly “inherited”. Vet Ophthalmol 2022 Mar;25(2):96-108.



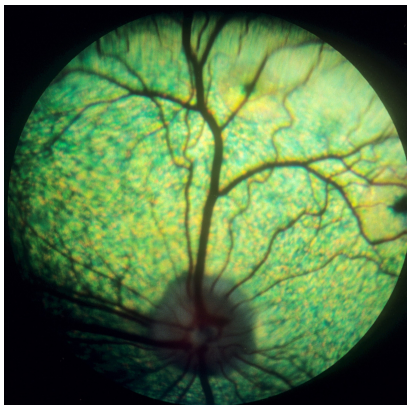




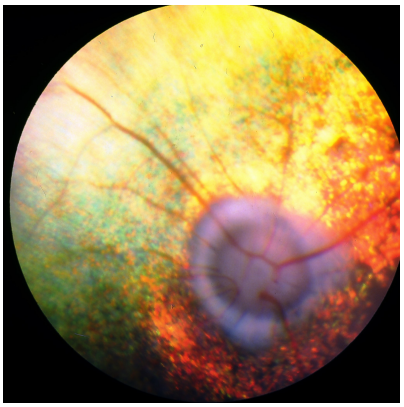


BORZOI

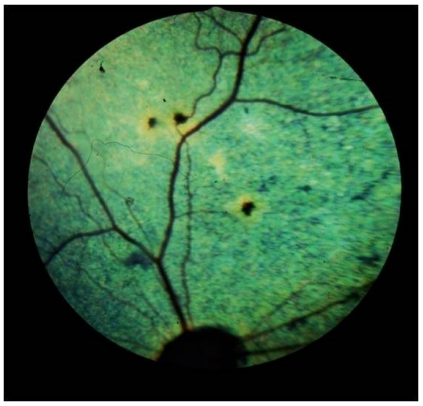
Chorioretinopathy, secondary retinal disease



4 years old



5 years old



3 years old

Photos by courtesy of Gilles Chaudieu

Clinical description

Single or multiple focal, often peripheral, tapetal lesions have been described. Acute lesions manifested as focal pale areas. Chronic lesions appeared as a well circumscribed area of hyperreflectivity with pigment proliferation and clumping frequently seen within the borders of the retinal lesion.
Lesions were uni- or bilateral and were up to 2 times the diameter of the optic disk.

A wide variety in age of diagnosis is reported, 6 months to several years. Progression varies from none to diffuse advanced retinal degeneration. Male dogs are affected more often than female.

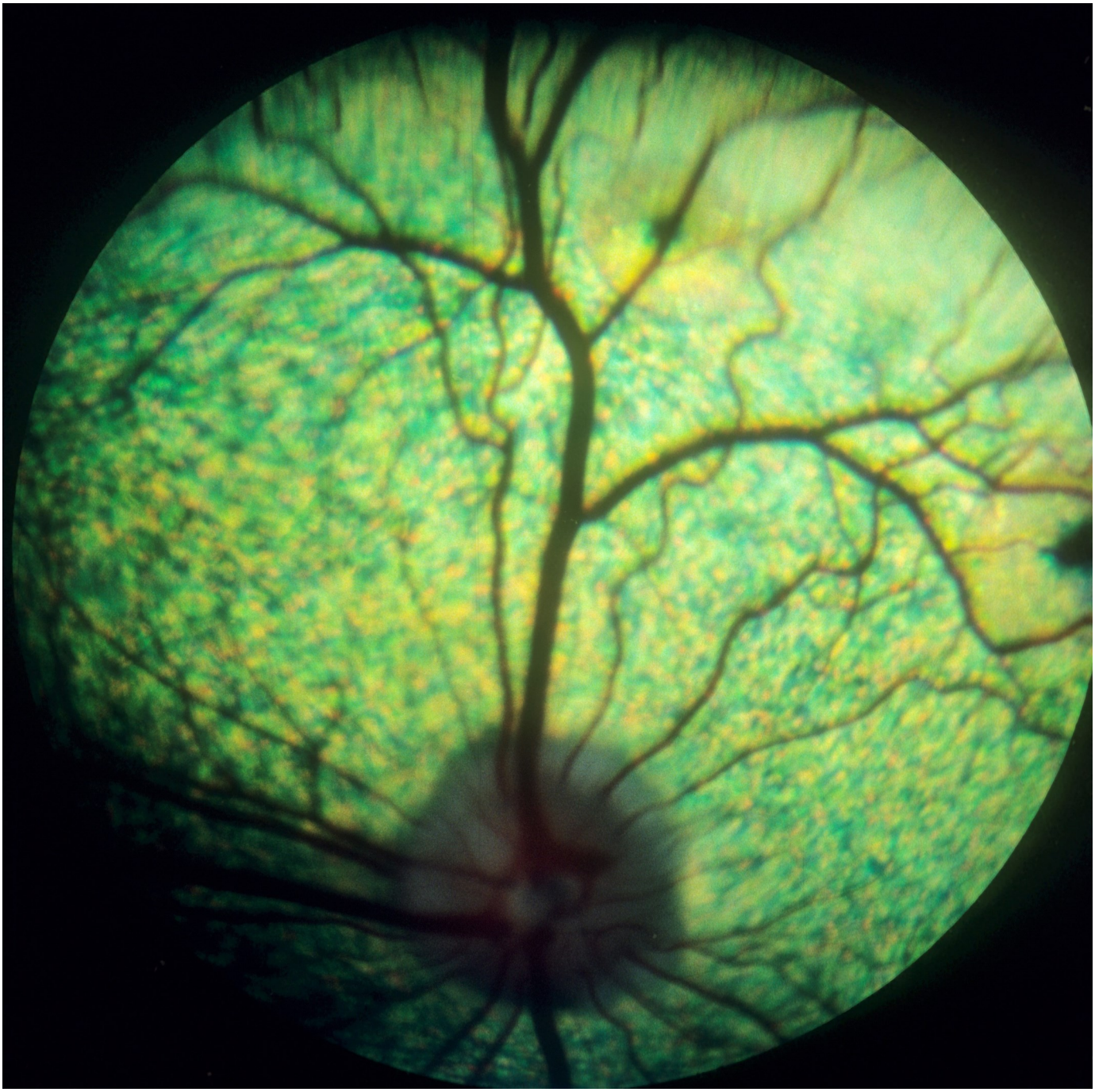
The retinal findings are proposed to be acquired, caused by migrating nematode larva, but with a genetic or gender modifier (Aguirre, 2021).

New data

New references

Aguirre G D, Kazacos K R. Is it canine DUSN? Another view of retinopathies, some acquired, and others possibly “inherited”. Vet Ophthalmol 2022 Mar;25(2):96-108.

See Ch 9 (point E and F) for further information and Ch 8 for veterinary advice



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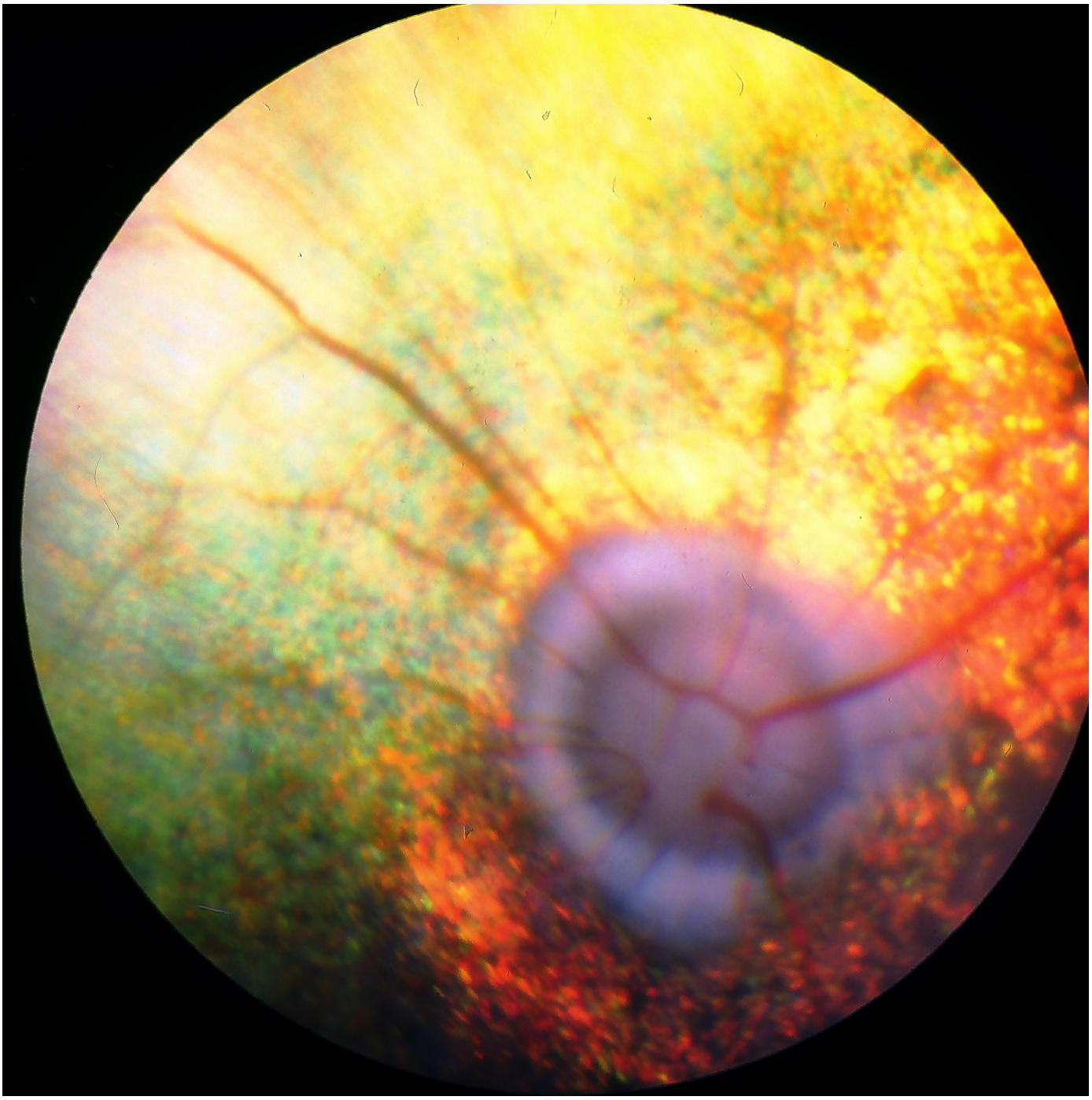

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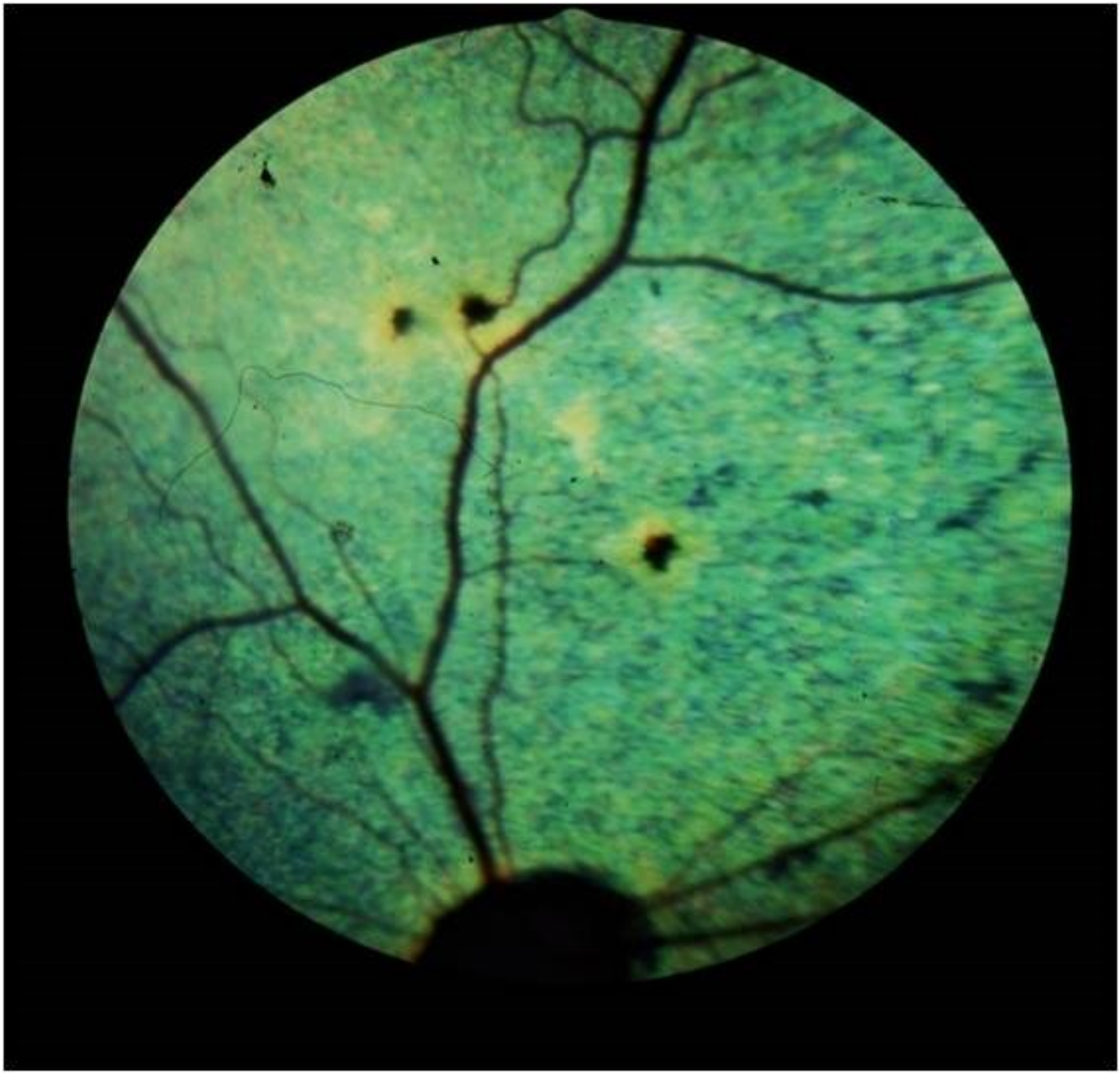
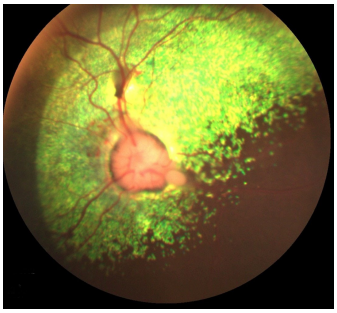


3 years old

FLAT COATED RETRIEVER

Chorioretinopathy; secondary retinal disease



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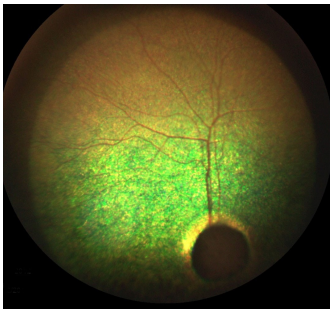
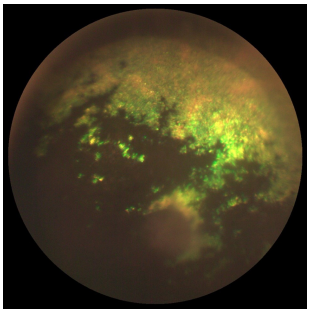


OS. Three years old



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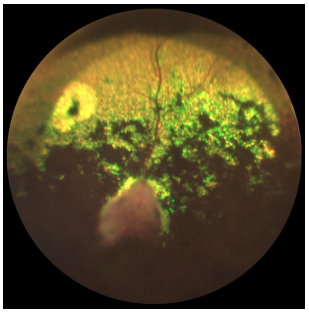


OS. Eight years old

Photos by courtesy of Kristina Narfström

Clinical description

There is a marked variation in age of onset, usually between age 2-10 years, with a high variability as to progression of disease. Unilateral areas of scarring with no visual deficits are found initially but in some cases these focal changes progress to end stage chorioretinopathy. Then generalized changes are observed with retinal atrophy including deep chorioretinal fibrosis, scarring and blindness. Functional and morphological studies have proven a great variation as to severity between eyes in the same dog.

New data

New data from the Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden, have shown in blood parameters of affected and unaffected individuals a preponderance of anti-retinal autoantibodies in the former group (10 of 11 affected dogs). Microscopically, in one case there was severe retinal atrophy characterized by complete absence of the neuroretina in the central portions of the globe. In these areas there was also choroidal fibrosis, characteristic for immune-mediated retinal disease. (Dr. Richard Dubielzig, personal communication, 2015).

Taken together with discussions in regards to acquired retinopathies the Flat Coated Retriever chorioretinopathy can be categorized as a secondary retinal disease and, in many cases, likely caused by ocular larvae migrans. Similarities to the disease in Border Collies have been noted and the expression ”working dog retinopathy” is sometimes used for the disease of both Border Collies and in affected Flat Coated Retrievers.

See Ch 9 (point F) for further information and Ch 8 for veterinary advice

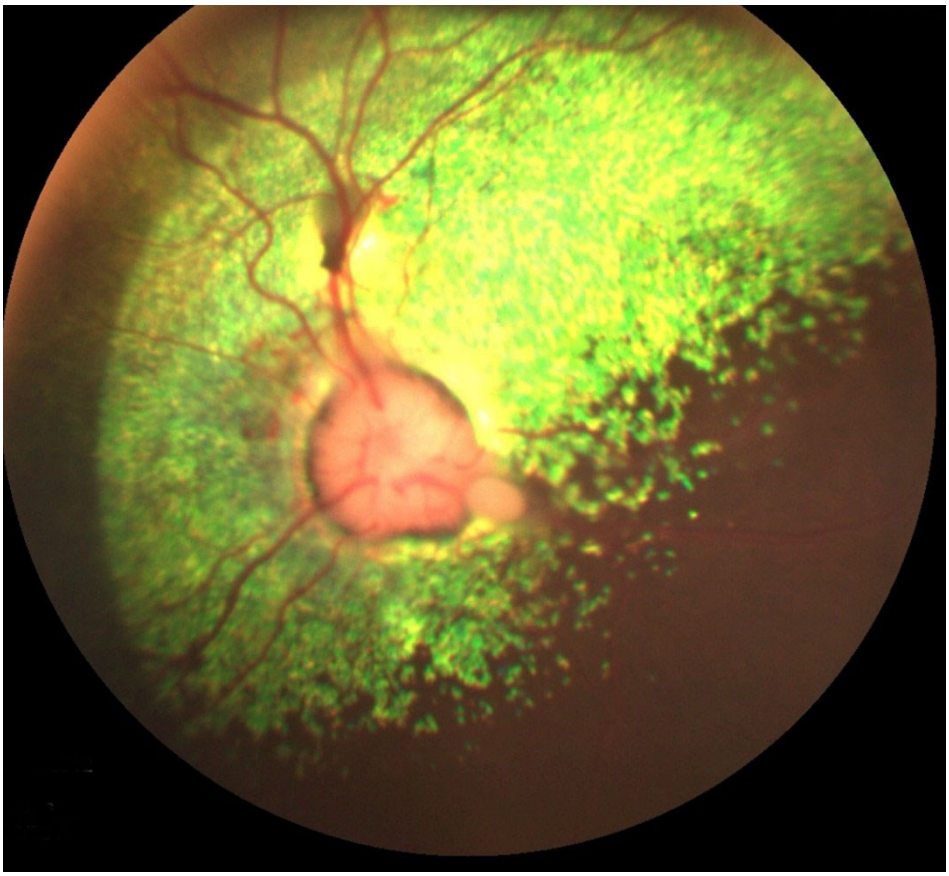
New references

Ekesten B, Adamus G, Ruotslainen-Ryökkynen L, Bergström T and Narfström K: Immune-mediated chorioretinopathy in the Flat Coated Retriever, ECVO abstract, Helsinki, Finland, 2015.

Shrestha M, Kiercak M, Wilbe M, Ekesten B, Kennedy L, Andersson G, Narfström K, Bergström T. Chorioretinopathy in Flat Coated Retriever – An inherited or parasitic disease? Abstract. Canine and Feline Genetics and Genomics. Visby, Sweden, 2012.

Shrestha M: SLU Master's project: Flat Coated Retriever chorioretinopathy. Master thesis, Swedish University of Agricultural Sciences, Uppsala, Sweden, 2012.

Aguirre G D, Kazacos K R. Is it canine DUSN? Another view of retinopathies, some acquired, and others possibly "inherited". Vet Ophthalmol 2022 Mar;25(2):96-108.



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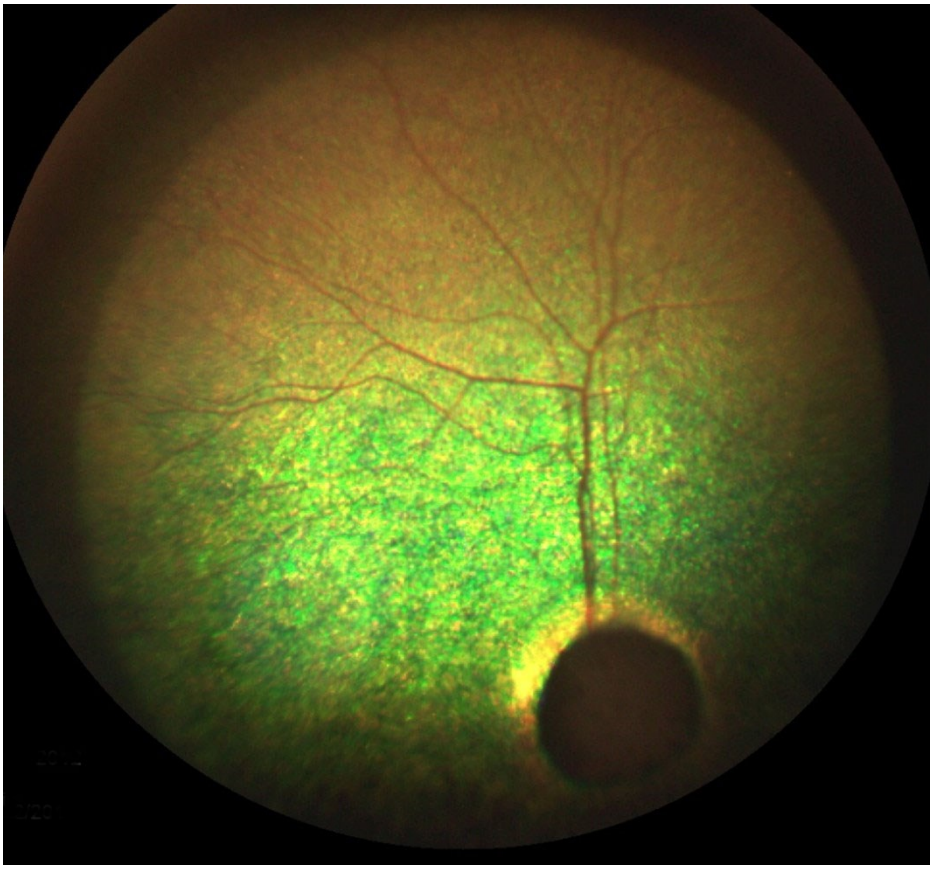

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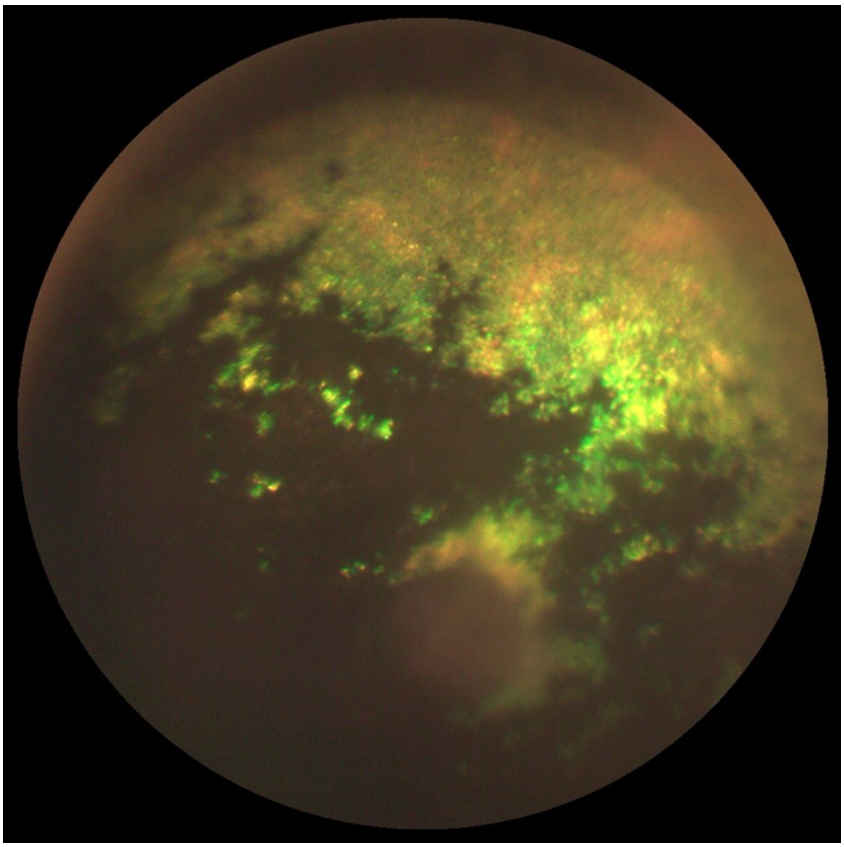

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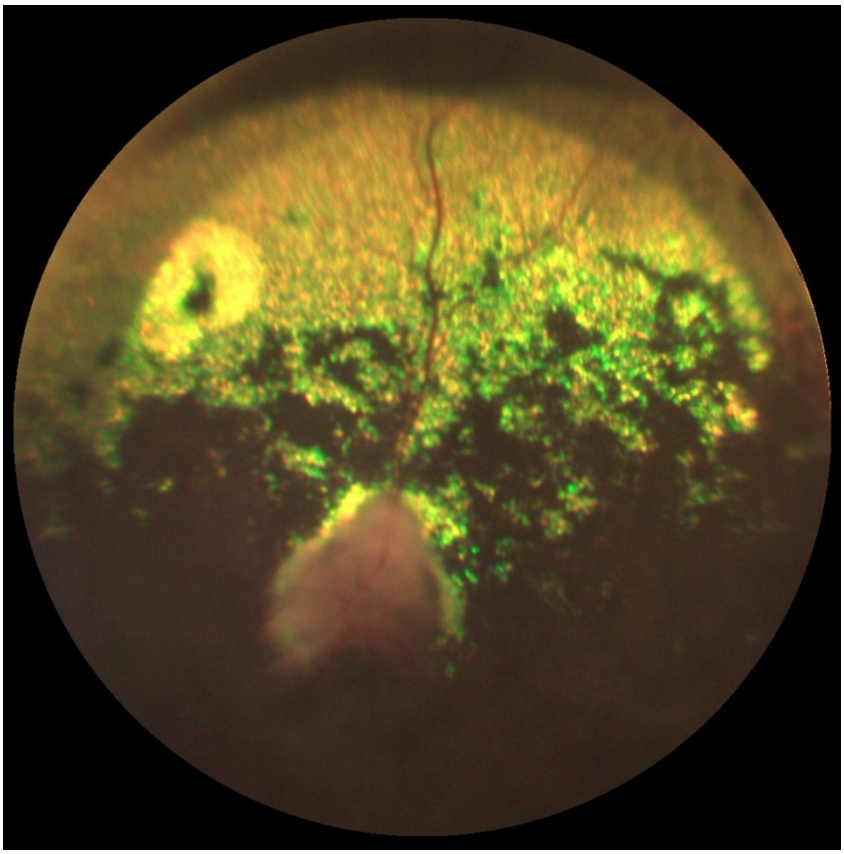

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