VETERINARY TECHNICAL DATASHEET

Canine Multifocal Retinopathy 3, (CMR3); mutation originally found in Lapponian Herder

WISDOM HEALTH™

Mutation Found In :Lapponian Herder

Disorder Type

- Eye

Disease Severity

- Mild/moderate

Background

Canine multifocal retinopathy (CMR) is an inherited eye disease found in multiple breeds, with CMR3 noted in the Lapponian Herder. It is characterized by several localized, round, bullous alterations of variable size and location in the retina at the back of the eye that cause retinal decay.

Key Signs

- Retinal degeneration

Clinical Description

Typically, the first ocular fundus changes in CMR3 can be diagnosed by the age of four months. In many cases, the lesions may appear to heal or even go away, sometimes leaving no evidence or only a wrinkle at the site of the healed lesion. In almost all cases, lesions from CMR3 do not progress significantly over time, so there is generally no reduction in eyesight though more serious cases could exhibit vision impairment. Very seldom is the patient completely blinded.

Mode of Inheritance

- autosomal recessive

Gene Name

- BEST1

Next Steps

Monitor fundus changes for evidence of healing and monitor patient for any signs of visual impairment.

References

Guziewicz KE, Slavik J, Lindauer SJ, Aguirre GD, Zangerl B. Molecular Consequences of BEST1 Gene Mutations in Canine Multifocal Retinopathy Predict Functional Implications for Human Bestrophinopathies. Invest Ophthalmol Vis Sci 52:4497-505, 2011.

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Zangerl B, Wickström K, Slavik J, Lindauer SJ, Ahonen S, Schelling C, Lohi H, Cuziewicz KE, Aguirre GD. Assessment of canine BEST1 variations identifies new mutations and establishes an independent bestrophinopathy model (cmr3). Mol Vis 16:2791-2804, 2010.