

Research Note:

Canine Cytochrome B Blood Mutations

Mutations in *Babesia gibsoni* mitochondrial cytochrome b genes—specifically at the M128 position—are associated with resistance to atovaquone, which can lead to treatment failure. This study sought to determine M128 mutation prevalence in *B gibsoni* in blood from dogs in North America. The study also evaluated how many of these patients had wild-type cytochrome b in initial blood samples and M128 mutations in follow-up samples. Prevalence of the M128 mutation in the 173 dogs tested was 3.5%; incidence of new cytochrome b mutations in the 43 dogs with follow-up testing was 12.1%. American Staffordshire/American pit bull terriers comprised 74% of dogs infected with *B gibsoni* in this study. The authors concluded that the cytochrome b mutation is not common enough to warrant pretreatment mutation screening prior to therapy.

Source

Birkenheuer AJ, Marr HS, Wilson JM, Breitschwerdt EB, Qurollo BA. *Babesia gibsoni* cytochrome b mutations in canine blood samples submitted to a US veterinary diagnostic laboratory. *J Vet Intern Med*. 2018;32(6):1965-1969.

Research Note:

Feline Diffuse Iris Melanoma: A Diagnostic Dilemma

Feline diffuse iris melanoma (FDIM) accounts for ~50% of feline intraocular neoplasms and has a metastatic rate of 19% to 63%. Differential diagnoses include iris nevi, melanosis, and iridociliary cysts. FDIM, however, can only be diagnosed via histopathology, and because eyes in FDIM patients often remain visual, ophthalmologists may have to choose between enucleating an eye that may be healthy or monitoring a lesion that may metastasize. Circulating free nucleic acid (ie, cell-free DNA) has been shown to have potential diagnostic and prognostic value in some neoplastic diseases in dogs and humans. However, this study found no significant differences in cell-free DNA concentration and integrity among the FDIM, iris nevi, and control groups.

Source

Rushton J, Ertl R, Klein D, et al. Circulating cell-free DNA does not harbour a diagnostic benefit in cats with feline diffuse iris melanomas. *J Feline Med Surg*. 2019;21(2):124-132.