

VETERINARY TECHNICAL DATASHEET

Trapped Neutrophil Syndrome, (TNS)



Mutation Found In :Border Collie

Disorder Type

- Blood

Disease Severity

- Moderate

Background

Trapped neutrophil syndrome (TNS) is a severe blood disorder that has been found in the Border Collie. This disease results in a failure of the blood cell being released from the bone marrow. Trapped neutrophil syndrome is inherited in an autosomal recessive manner.

Key Signs

- Neutropenia
- Myeloid hyperplasia
- Chronic infections
- Abnormal craniofacial features
- Delayed development

Clinical Description

Clinical signs of TNS include an exceptional susceptibility to infections secondary to the low number of circulating neutrophils in the blood stream. Affected dogs also tend to suffer from chronic inflammatory conditions such as arthritis. Clinical signs are usually observed by 6 to 12 weeks of age and can include a smaller overall size as well as a ferret-like face due to abnormal craniofacial development leading to a narrowed, elongated skull shape. For some affected dogs, clinical signs can be mild and go unnoticed until adulthood. Nevertheless, TNS is a severe disease and affected dogs have a shorter life expectancy.

Mode of Inheritance

- autosomal recessive

Gene Name

- VPS13B

Next Steps

Therapy is limited to symptomatic treatments for resulting infections and general supportive care. There is no cure.

References

Shearman JR, Wilton AN. A canine model of Cohen syndrome: Trapped Neutrophil Syndrome. BMC Genomics 23:258, 2011.