

# VETERINARY TECHNICAL DATASHEET

Musladin-Lueke Syndrome, (MLS)



Mutation Found In :Beagle

## Disorder Type

- Skeletal

## Disease Severity

- Moderate

## Background

Musladin-Lueke syndrome (MLS) is a hereditary disorder affecting the development and structure of connective tissue in Beagles. MLS is a multi-systemic condition characterized by stiff joints, an abnormal facial expression, and thick, tight skin.

## Key Signs

- Thick tight skin
- Stiff joints
- Broad skull
- Slanted eyes

## Clinical Description

Clinical signs of this disorder are present from birth. Affected dogs are smaller in size than their littermates. Affected dogs also have a broad skull, wide-set slanted eyes, and skin that appears thick and tight. The disorder is characterized by extremely limited joint mobility and short digits that causes the dogs to walk upright, often on their tip-toes. Other characteristics of the disorder include a high-pitched bark and an exceptionally exuberant temperament. Dogs with MLS typically have a normal life span, but commonly develop painful arthritis. The clinical signs usually stabilize by 1 year of age.

## Mode of Inheritance

- autosomal recessive

## Gene Name

- ADAMTSL2

## Next Steps

Treatment is pain management, supportive care, and symptomatic depending on the severity of the dog's clinical signs.

## References

Bader HL, Ruhe AL, Wang LW, Wong AK, Walsh KF, Packer RA, Mitelman J, Robertson KR, O'Brien DP, Broman KW, Shelton GD, Apte SS, Neff MW An ADAMTSL2 founder mutation causes Musladin-Lueke Syndrome, a heritable disorder of beagle dogs, featuring stiff skin and joint contractures. PLoS One. 17;5(9) e12871, 2010.