

# VETERINARY TECHNICAL DATASHEET

Long QT Syndrome



Mutation Found In :English Springer Spaniel

## Disorder Type

- Heart

## Disease Severity

- Moderate/severe

## Background

Long QT syndrome is a rare cardiac disease associated with sudden death. The disease predisposes to fatal ventricular arrhythmias. Affected dogs exhibit no other cardiac symptoms before death. The disease has been reported in the English Springer Spaniel. The mode of inheritance is most likely autosomal dominant.

## Key Signs

- Prolonged QT interval
- Biphasic T-wave
- Sudden death

## Clinical Description

Affected dogs are presented with an abnormally long QT-interval in the ECG. Affected dogs have no other clinical signs but have a very high tendency for sudden death during activity. Sudden death is most likely due to acute ventricular fibrillation. Some affected dogs may have a systolic murmur or increased heart rate on physical examination and some may show an abnormal biphasic T-wave on ECG. There is no curative treatment for the disease.

## Mode of Inheritance

- autosomal dominant

## Gene Name

- KCNQ1

## Next Steps

Beta blockers and avoidance of strenuous activity and excitement are commonly used for treatment but do not diminish the risk of sudden cardiac death.

## References

Ware W, Reina-Doreste Y, Stern J, Meurs K. Sudden Death Associated with QT Interval Prolongation and KCNQ1 Gene Mutation in a Family of English Springer Spaniels. J Vet Intern Med;29:561-568, 2015.