

Comparison of 2 assays for measuring serum troponin I in dogs

Key Words : Vcheck, Roche Elecsys, Troponin I, Cardiac injury

Introduction

Troponin consists of 3 subunits (troponin I, T, and C) which together function as a molecular switch of cardiomyocyte contraction. Among them, cardiac Troponin I (TnI) is a sensitive and specific circulating marker of cardiac injury for dogs. Vcheck Canine TnI was developed to measure TnI concentrations in canine serum samples, and this study reports the results of the comparison validation for this new method.

Purpose

The purpose of this study was to conduct a comparison of TnI concentrations measured between Vcheck and Roche Elecsys, using canine serum.

Materials and Methods

Total 156 samples were frozen immediately after serum collection in several animal hospitals in South Korea and shipped to the laboratory of Bionote (South Korea) on dry ice. The samples were analyzed with Vcheck Canine TnI and Roche Elecsys Troponin I STAT according to each manufacturer's instructions. Pearson correlation coefficient was performed to measure the strength of the association between the two variables.

Results

The test results for the correlation of the TnI measurement between Vcheck and Roche Elecsys are shown in **figure 1**. A strong correlation (slope 0.9379, $R^2=0.9203$) was found between the two test methods.

Conclusion

Results of the Vcheck Canine TnI test were comparable to those of the Roche Elecsys reference method, such that the Vcheck may be used as an alternative assay to evaluate serum troponin I concentration in canine patients for the screening of cardiac injury.

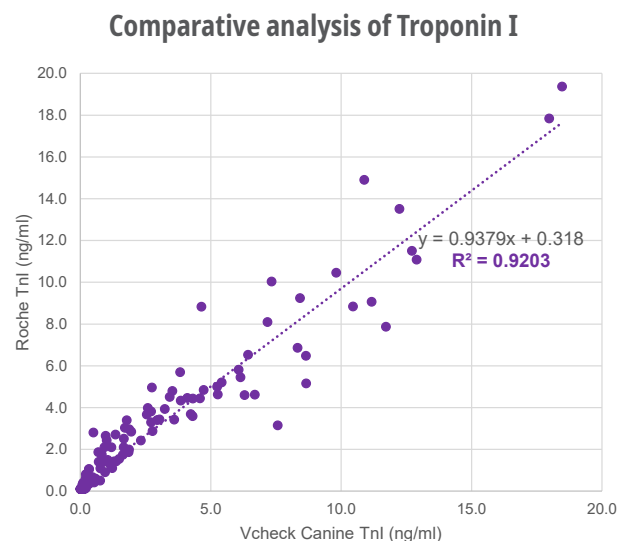


Figure 1. Correlation between the results of Vcheck and Roche TnI in 156 canine samples