

Evaluation of Correlation Between BIONOTE Vcheck T4 and IMMULITE T4

Key words: Bionote Vcheck, T4, Canine hypothyroidism, Feline hyperthyroidism

Introduction

T4 is a thyroid hormone that is likely the primary determinant of basal metabolism. Canine hypothyroidism is a commonly occurring endocrinopathy caused by decreased production of thyroid hormone. Feline hyperthyroidism is the most common endocrinopathy of older cats. It is important for clinician to screen patients with suspected thyroid disease because thyroid disease respond well to treatment.

Function of thyroid gland is typically assessed by measuring serum thyroid hormone concentration. Total T4 concentration is verified to diagnose thyroid disease and monitor medical treatment of these disease.

The BioNote Vcheck T4 is an in vitro immunoassay test kit for the quantitative measurement of canine or feline total T4 concentration in serum.

Since the kit provides quantitative measurement of total T4 levels, BioNote Vcheck T4 can be tested to diagnose canine hypothyroidism or feline hyperthyroidism.

Purpose

The objective of this test was to conduct comparison of T4 concentrations determined by the Vcheck T4 test with T4 concentrations determined by the IMMULITE® (Siemens Healthcare Diagnostics, Deerfield, IL, USA) used at veterinary reference laboratories.

Materials and Methods

Total 92 (58 canine sera, 34 feline sera) sera samples were provided from animal hospital and university in Korea.

Tests were performed using Vcheck T4 and IMMULITE T4 according to the manufacturer's instruction.

Results

The test results for the correlation between BioNote Vcheck T4 and IMMULITE T4 were described in figure 1 and figure 2. These samples had various T4 concentrations.

Conclusion

Through this study, it was revealed that the Vcheck T4 shows good concordance rate with IMMULITE T4 (canine R^2 0.9814; feline R^2 0.9843).

Based on these results, the Vcheck T4 provides accurate and reliable T4 analysis in serum samples from dogs and cats, as compared to a reference method.

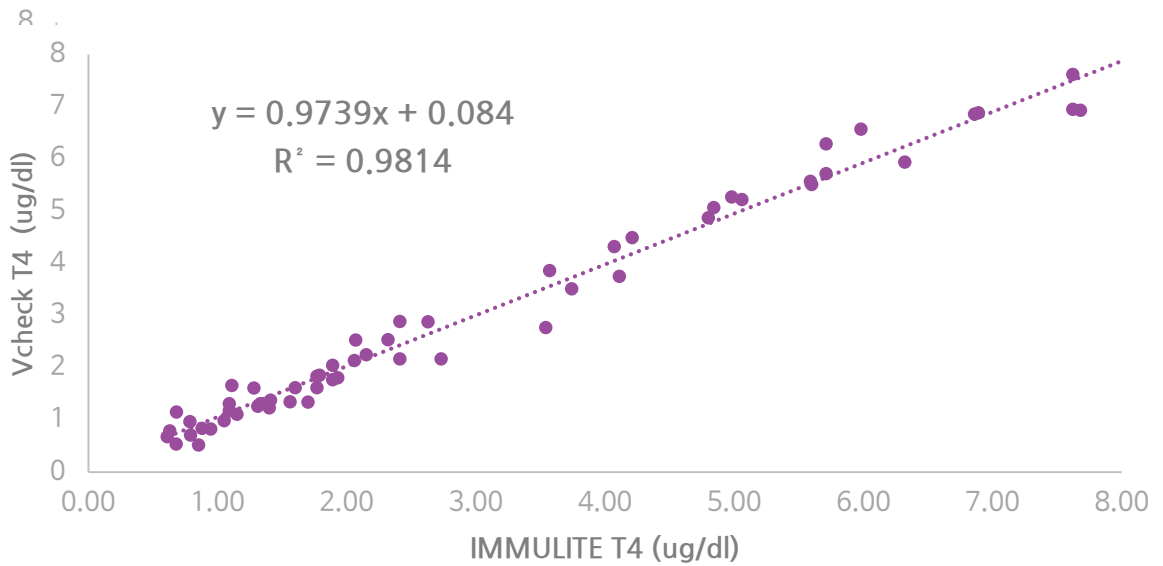


Figure 1. Correlation between the results of Vcheck T4 and IMMULITE T4 in canine samples (n=58)

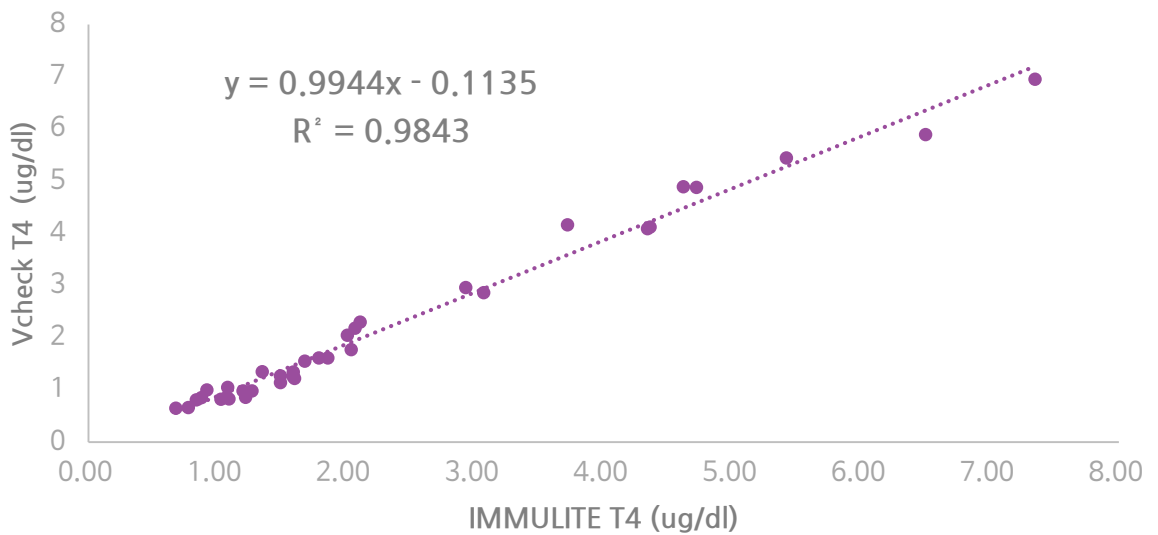


Figure 2. Correlation between the results of Vcheck T4 and IMMULITE T4 in feline samples (n=34)