



Lab Report For:

PATIENT NAME: MacKenzie Wilson

VETERINARIAN: Dr. Whitney Engstrom

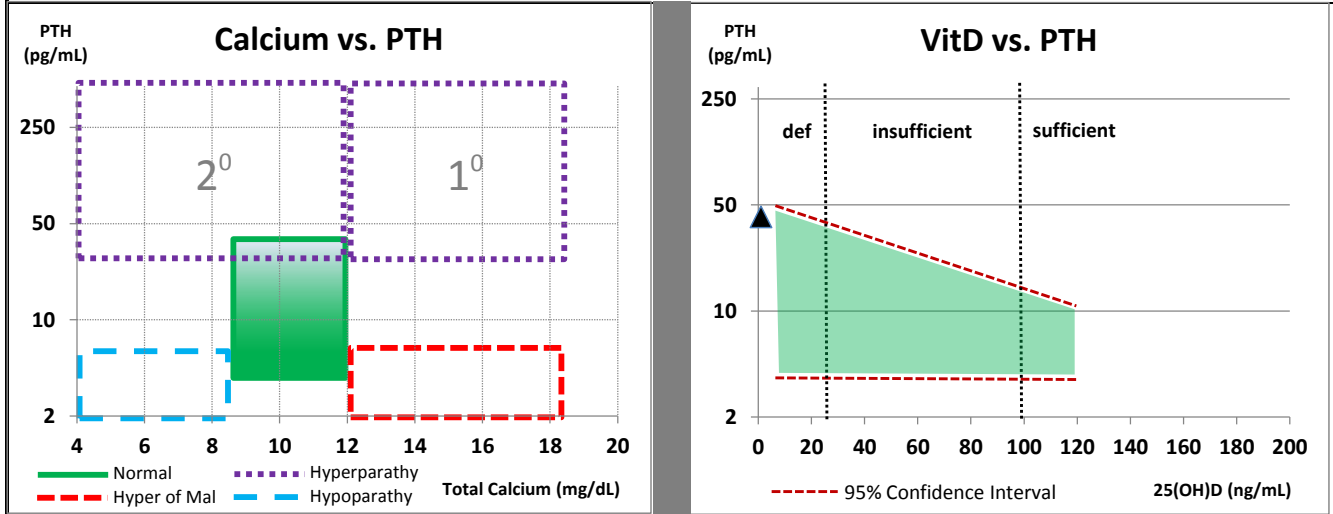
SPECIMEN ID #: 847778 DRAW DATE: 1-Oct-14  
SPECIES: Canine RECEIVED DATE: 2-Oct-14  
GENDER: Female Spayed SAMPLE TYPE: Serum  
BREED: American Dingo COMMENTS: none  
AGE: 3.5 PATIENT STAGE: unknown  
WEIGHT: 45.2 lb TREATMENT: Not Treated

FACILITY: Any Name Clinic  
123 Main Street  
Small Town, CA 55555  
PH: 805-555-5555  
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PTH 1-84 CANINE CALCEMIA PANEL

REPORT DATE: 2-Oct-2014

TEST NAME	RESULT	UNITS	FLAG	REFERENCE INTERVAL
<b>PTH 1-84</b> 1-84 parathyroid hormone	<b>41.7</b>	pg/mL	<b>H</b>	Normal: 4 - 38 Normal w/ Suff VitD: 4 - 15 High (H): ≥ 38.1
<b>VitD</b> 25 hydroxy-vitamin D	<b>Not Performed</b>	ng/mL		Deficient (Def): ≤ 24.9 Insufficient (Insuff): 25.0 - 99.9 Sufficient: 100 - 120
<b>Calcium</b> total calcium	<b>Not Performed</b>	mg/dL		Low (L): <8.5 Normal: 8.5 - 12.0 High (H): ≥ 12.1



Interpretive Comment

PTH 1-84 CANINE CALCEMIA PANEL is a diagnostic tool to assist in the workup of hyper and hypo calcemia and includes PTH 1-84 which measures the complete PTH peptide sequence and is unaffected by PTH fragments; a particular problem in renal disease. To maintain calcium homeostasis, PTH and VitD work in concert to increase or decrease calcium absorption and/or resorption. PTH and VitD are inversely related; as VitD increases, PTH decreases.

Calcium vs. PTH

**Normal:** Population based reference interval. The darker shaded area represents where the majority of healthy dogs should plot.  
**Hypercalcemia of Malignancy:** This area reflects PTH-independent hypercalcemia for which malignant neoplasia is often suspect. Other conditions includes certain granulomatous diseases, Addison's disease, hyperthyroidism and vitamin D intoxication.  
**Primary (1) Hyperparathyroidism:** This area reflects PTH-dependent hypercalcemia and due to an over-production of PTH - typically caused by a benign or malignant parathyroid tumor and in some instances 25(OH)D deficiency.  
**Secondary (2) Hyperparathyroidism:** This area reflects PTH-independent normo/hypocalcemia. Conditions causing secondary hyperparathyroidism includes 25(OH)D deficiency and kidney disease.  
**Hypoparathyroidism:** This area reflects PTH-dependent hypocalcemia and caused by insufficient amounts of PTH. Causes include damage to the parathyroid gland (trauma, chemo drugs, infection) and in certain autoimmune disorders.

VitD vs. PTH

There is a normal inverse relationship between 25(OH)D and PTH; the shaded area represents the 95% confidence interval. The normal range of PTH tightens as VitD sufficiency is attained. The two graphs are useful in diagnostic workup. **Call VDI for consultation.**

Interpretive comments are general in nature and in absence of detailed knowledge of patient status or treatment. For more information on specific cases, please contact VDI.

Tech: RR