



Lab Report For:

PATIENT NAME: MacKenzie Wilson

VETERINARIAN: Dr. Whitney Engstrom

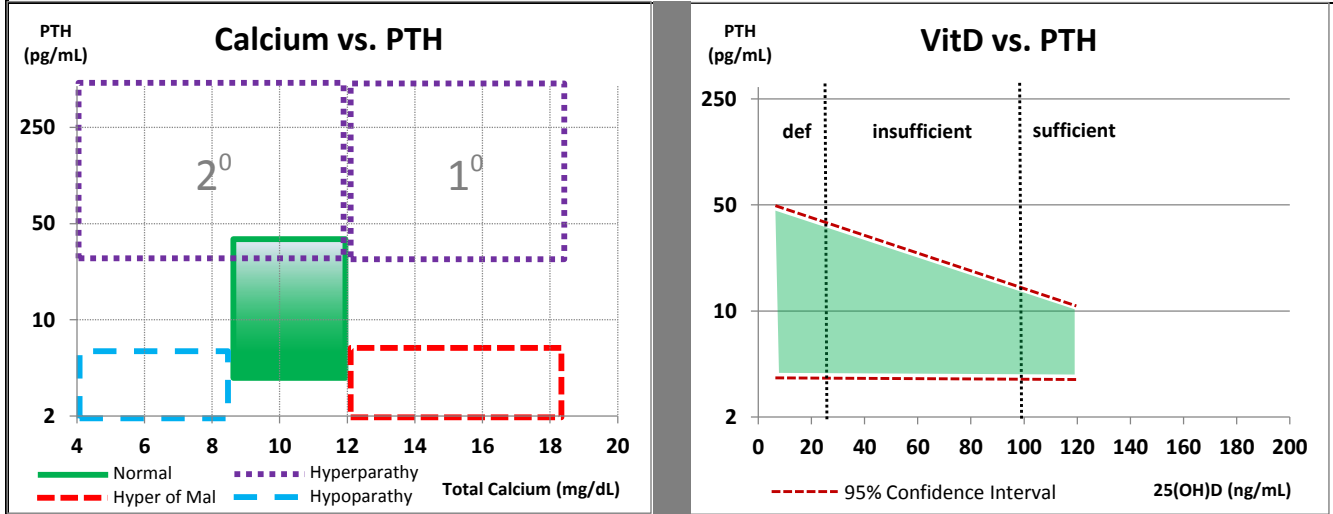
SPECIMEN ID #: 847778 DRAW DATE: 1-Oct-14  
SPECIES: Canine RECEIVED DATE: 2-Oct-14  
GENDER: Female Spayed SAMPLE TYPE: Serum  
BREED: American Dingo COMMENTS: none  
AGE: 3.5 PATIENT STAGE: unknown  
WEIGHT: 45 lb TREATMENT: Not Treated

FACILITY: Any Name Clinic  
123 Main Street  
Small Town, CA 55555  
PH: 805-555-5555  
FAX: 805-555-5556

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>Not Performed</b>	pg/mL		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>14.0</b>	mg/dL	<b>H</b>	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