



**PATIENT NAME:** Whiskey Huber  
**SPECIMEN ID:** 480245  
**SPECIES:** Canine  
**GENDER:** Male Neutered  
**AGE:** 11.8  
**WEIGHT:** 63 lb  
**BREED:** Terrier

**MRN:** 1102164  
**DRAW DATE:** 27-Feb-23  
**RECEIVED DATE:** 6-Mar-23  
**REPORT DATE:** 6-Mar-23  
**SAMPLE TYPE:** Dried Serum - 2

**VETERINARIAN:**  
**FACILITY:**  
  
**PH:**  
**FAX:**

## Wellness Dashboard

<p><b>Vitamin D</b></p> <p>Insufficient</p> <p><b>99.8</b></p> <p>Sufficiency: 100-150 ng/mL</p>	<p><b>B12</b></p> <p>Normal</p> <p><b>882.1</b></p> <p>Normal: 220-1080 pg/mL</p>	<p><b>Magnesium</b></p> <p>Low Normal</p> <p><b>2.1</b></p> <p>Normal: 1.7-2.9 mg/dL</p> <p>supplementation when below 2.2mg/dL</p>	<p><b>tCa</b></p> <p>Normal: 8.5 - 12.0 mg/dL</p>
<p><b>PTH<sup>1-84</sup></b></p> <p>Normal: 4 - 38 pg/mL</p>	<p><b>Folate</b></p> <p>High</p> <p><b>26.2</b></p> <p>Normal: 4.3 - 21.0 ng/mL</p>		

<p><b>Inflammation (CRP)</b></p> <p>Optimal</p> <p><b>0.8</b></p> <p>Optimal: ≤ 2.0 Normal: ≤ 3.9 Mild Inflammation: 4 - 9.9 Moderate Inflammation: 10 - 39.9 High Inflammation: ≥ 40 (mg/L)</p> <p>Patient's inflammatory state is at an optimal level.</p>	<p><b>Previous</b></p> <p></p>	<p><b>Chemistries</b></p> <p>Albumin Normal</p> <p><b>CAR: 0.2</b></p> <p>Patient CRP/Albumin Ratio (CAR) is within normal limits.</p>
--	--------------------------------	--

## Additional Tests

<p><b>Cancer Risk</b></p> <p>Very Low</p> <p><b>2.1</b></p> <p>Very Low Risk: ≤ 2.1 Low Risk: 2.2 - 5.2 Elevated Risk: 5.3 - 8.9 Highly Elevated Risk: ≥ 9.0</p> <p>Patient's CRA score is low with an unlikely chance of occult cancer.</p>	<p><b>Previous</b></p> <p></p>	<p><b>Osteoarthritis (HA)</b></p> <p>Positive</p> <p><b>43.3</b></p> <p>Normal: ≤ 20 Positive: &gt; 20 (ng/mL)</p> <p>Hyaluronic acid is above the reference interval and is indicative of degenerative joint disease, however, severe liver disease can elevate hyaluronic acid. Evaluate liver function.</p>	<p><b>Previous</b></p> <p></p>
--	--------------------------------	--	--------------------------------

# Differential List



**VDI Lab Services**  
4685 Runway St. Ste K Simi Valley, CA 93063  
ph: 805-577-6742 fax: 805-426-8115

**PATIENT NAME:** Whiskey Huber  
**SPECIMEN ID:** 480245  
**SPECIES:** Canine  
**GENDER:** Male Neutered  
**AGE:** 11.8  
**WEIGHT:** 63 lb  
**BREED:** Terrier

**MRN:** 1102164  
**DRAW DATE:** 27-Feb-23  
**RECEIVED DATE:** 6-Mar-23  
**REPORT DATE:** 6-Mar-23  
**SAMPLE TYPE:** Dried Serum - 2

**VETERINARIAN:**

## The following differential list is modified based on:

- Outside Ref Interval       Within Ref Interval       Not Performed       Impacts List

### Specialty

- Cancer Risk
- CRP
- HPT
- HA
- B12
- Folate
- PTH 1-84

### Chemistries

- ALB
- ALT
- ALP
- BUN
- Creatinine
- Glucose
- Total Protein
- Globulin
- AG Ratio
- Calcium
- BUN/Creat Ratio
- Total Bili

### Other Modifiers

- Age
- Breed
- Medication

**CAR Ratio**  
0.2

The list of possible sources are common inflammatory diseases that correspond to the level of inflammation in this patient. Potential actions below may aid in further differential diagnosis. **BASED UPON CLINICAL PRESENTATION, SOME SOURCES CAN BE IMMEDIATELY EXCLUDED.**

## Possible Source

(in decreasing probability)

Degenerative Joint Disease  
Liver disease (non cancer)



## Potential Action based on clinical relevance

Actions are organized by least invasive/expensive first

imaging, synovial fluid analysis, sLDH  
liver function tests, imaging

Potential Action

code 1112

- 1) Recheck intervals for high risk breeds and dogs over the age of 5 is every 6 months. For best outcomes, every 4 months.
- 2) Supplement Vitamin D levels according the recommendations on the Vitamin D report

Comments and recommendations are made in the absence of clinical background on the patient. The list of inflammatory diseases and diagnostic procedures are not exhaustive. For more detailed discussion regarding results, comments, or recommendations, please contact VDI at 805-577-6742.



## Hyaluronic Acid Report

**PATIENT NAME:** Whiskey Huber  
**SPECIMEN ID:** 480245  
**SPECIES:** Canine  
**GENDER:** Male Neutered  
**AGE:** 11.8  
**WEIGHT:** 63 lb  
**BREED:** Terrier

**MRN:** 1102164  
**DRAW DATE:** 27-Feb-23  
**RECEIVED DATE:** 6-Mar-23  
**REPORT DATE:** 6-Mar-23  
**SAMPLE TYPE:** Dried Serum - 2

**VETERINARIAN:**  
**FACILITY:**  
  
**PH:**  
**FAX:**

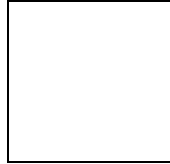
### Hyaluronic Acid (ng/mL)

**Positive**

**43.3**

Normal: ≤20  
Positive: >20

Change from Previous



### Patient History

ID	Date	Result ng/mL

### Interpretive Comments - need consult? email consult@vdi lab.com

Hyaluronic acid is above the reference interval and is indicative of degenerative joint disease, however, severe liver disease can elevate hyaluronic acid. Evaluate liver function. sHA may be elevated in wounds, ACL/CCL injury, severe liver disease, and in patients being treated with PSGAG (ie, Adequan) and oral HA supplement. Supplementing with oral HA has been shown to improve joint function. Follow recommendations below.

Phases of Degenerative Joint Disease			
Pre-/Early	Mild	Moderate	Severe
HA: Serum HA (sHA) below the positive cutoff. HA is being produced and maintained inside the joints.  CRP: Typically absent, except in IMPA	HA: sHA above positive cutoff. HA is being produced but early degeneration allows some HA to leak into peripheral blood.  CRP: Typically absent, except in IMPA.	HA: Moderate to high levels of sHA increasing with disease severity. HA is being produced but significant degeneration causes HA to leak into peripheral blood. Joint cushioning & lubrication is negatively affected.  CRP: Mild inflammation may be present in moderate OA, IVDD, due to mechanical damage inside the joint. IMPA presents with elevated CRP.	HA: High to declining sHA levels. In severe DJD, chondrocyte cell death limits the production of HA. HA that is produced is leaked into the peripheral blood. Joint cushioning & lubrication is severely affected.  CRP: Moderate to high inflammation may be present in OA, IVDD. Elevated CRP in IMPA.
No clinical signs present, but dog may be predisposed or at high risk of DJD.	Dog may begin showing some stiffness or rigidity. Doesn't interfere with day-to-day activity, but gait may change during exercise.	Dog may be showing noticeable pain, stiffness, lethargy with dog being uncomfortable, crying, or becoming increasingly reluctant to walk around.	Dog is typically reluctant to walk, go to the bathroom, or perform daily activities due to increased pain that has become unbearable.

### Supplementation Guide

Dosing Guidelines - Twice Per Day				
PRODUCT NAME	Active Ingredient	PRODUCT STRENGTH	# of Pumps	mL/Day
<b>Trixsyn® Canine Hyaluronan</b>	Sodium Hyaluronate	<b>13mg/pump</b>	<b>2 pumps, twice daily</b>	<b>N/A</b>
<b>Trixsyn® Canine Performance</b>	Sodium Hyaluronate Astaxanthin	<b>13mg/pump 1mg/pump</b>	<b>2 pumps, twice daily</b>	<b>2 pumps, twice daily</b>
<b>Other</b>	_____			

**Vitamin D Report**



VDI Lab Services  
4685 Runway St. Ste K Simi Valley, CA 93063  
ph: 805-577-6742 fax: 805-426-8115

**PATIENT NAME:** Whiskey Huber

**VETERINARIAN:**

**SPECIMEN ID:** 480245

**MRN:** 1102164

**FACILITY:**

**SPECIES:** Canine

**DRAW DATE:** 27-Feb-23

**GENDER:** Male Neutered

**RECEIVED DATE:** 6-Mar-23

**AGE:** 11.8

**REPORT DATE:** 6-Mar-23

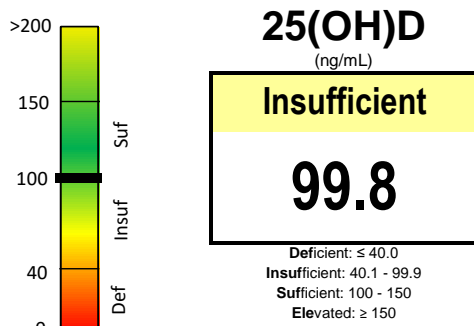
**PH:**

**WEIGHT:** 63 lb

**SAMPLE TYPE:** Dried Serum - 2

**FAX:**

**BREED:** Terrier



**Dose at time of draw:**

**0 IU/day**

**Increase dose by:**

**0 IU/day**



**New Recommended Dose Range**

<b>Low End Sufficiency</b> (~100 ng/mL)		<b>High End Sufficiency</b> (~130 ng/mL)
<b>Not Required</b>	↔	<b>1300 IU/day</b>
<small>For most patients without underlying conditions, or taking corticosteroids</small>		<small>For patients that warrant a higher VitD level and/or those on corticosteroids.</small>

**Patient History**

ID	Date	Result ng/mL	Known Dose iu/day

**Interpretive Comments - need consult? email consult@vdlab.com**

Your patient is found to be insufficient. Insufficiency increases risk of developing other serious diseases. Supplement with D3 per recommendations and retest in 8-10 weeks or 4 months for obese patients.

**If any of the following occur, wait 2 months from the date of change, then retest:**

- Major Diet Change
- Change in Health Status (eg PLE)
- Change of Vitamin D supplement or daily treats
- Supplementation is stopped for longer than 4 weeks
- Patient is put on Corticosteroids
- Patient is put on NSAIDS

**Supplementation Guide**

**Total Dose Recommended:** **Not Required** ↔ **1300 IU/day**

\*Choose only one product for supplementation

PRODUCT NAME	PRODUCT STRENGTH	PRODUCT FORMAT	Low End Dose	High End Dose
<b>RxD3</b> <i>Rx Vitamins</i>	100 IU/ drop	Liquid Drops <i>Applied to food</i>	<input type="checkbox"/>	<input type="checkbox"/> <b>13 drops/day</b>
<b>RxD3 Forte</b> <i>Rx Vitamins</i>	500 IU/ drop	Liquid Drops <i>Applied to food</i>	<input type="checkbox"/>	<input type="checkbox"/> <b>3 drops/day</b>

**Retest NO SOONER THAN: May 15, 2023**

# B12 (Cobalamin) Report

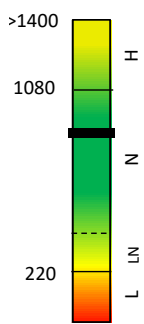


VDI Lab Services  
4685 Runway St. Ste K Simi Valley, CA 93063  
ph: 805-577-6742 fax: 805-426-8115

**PATIENT NAME:** Whiskey Huber  
**SPECIMEN ID:** 480245  
**SPECIES:** Canine  
**GENDER:** Male Neutered  
**AGE:** 11.8  
**WEIGHT:** 63 lb  
**BREED:** Terrier

**MRN:** 1102164  
**DRAW DATE:** 27-Feb-23  
**RECEIVED DATE:** 6-Mar-23  
**REPORT DATE:** 6-Mar-23  
**SAMPLE TYPE:** Dried Serum - 2

**VETERINARIAN:**  
**FACILITY:**  
**PH:**  
**FAX:**



## Cobalamin (pg/mL)

**Normal**  
**882.1**

Low (L): <220  
Low Normal (LN): 220 - 400  
Normal (N): 220 - 1080  
High (H): ≥1080

In unfasted patients, actual B12 values may be lower, which may impact dose recommendation.

B12 Dose at time of draw:

**0 mcg/day**

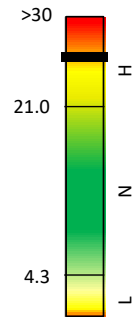
Increase B12 dose by:

**0 mcg/day**



## New Recommended B12 Dose

<b>Fasted Sample?</b>	<b>unknown</b>
<b>0 mcg/day</b>	
B12 dosing recommendations are for daily supplementation. Continue indefinitely unless changes in health or diet require modification.	



## Folate (ng/mL)

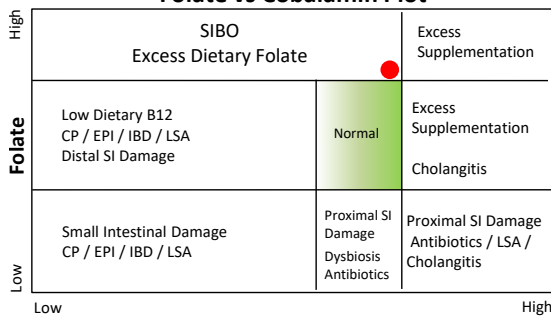
**High**  
**26.2**

Low (L): <4.3  
Normal (N): 4.3 - 21.0  
High (H): > 21.0

### Patient History

ID	Date	B12 pg/mL	Folate ng/mL	Known B12 Dose mcg/day

### Folate vs Cobalamin Plot



need consult? email [consult@vdiilab.com](mailto:consult@vdiilab.com)

### Comments

Patient has Normal B12 and High Folate. This may be due to excess dietary Folate or SIBO.

**Cobalamin**  
chart assumes unsupplemented patient

## Total B12 Dose Recommended:

**0 mcg/day**

PRODUCT NAME	PRODUCT STRENGTH	PRODUCT FORMAT	Drops Dose	mL Dose
<b>RxB12</b> <i>Rx Vitamins</i>	<b>250 mcg/mL</b> 6.5 mcg/drop	<b>Liquid Drops</b> <i>Applied to food</i>	<input type="checkbox"/>	<input type="checkbox"/>
<b>RxB12 Forte</b> <i>Rx Vitamins</i>	<b>1000 mcg/mL</b> 33 mcg/drop	<b>Liquid Drops</b> <i>Applied to food</i>	<input type="checkbox"/>	<input type="checkbox"/>

\*Choose only one product for supplementation

# Magnesium Report

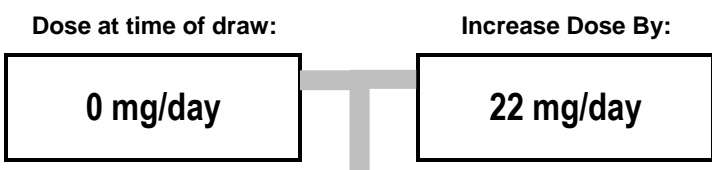
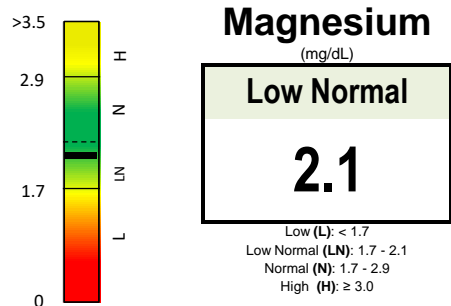


VDI Lab Services  
4685 Runway St. Ste K Simi Valley, CA 93063  
ph: 805-577-6742 fax: 805-426-8115

**PATIENT NAME:** Whiskey Huber  
**SPECIMEN ID:** 480245  
**SPECIES:** Canine  
**GENDER:** Male Neutered  
**AGE:** 11.8  
**WEIGHT:** 63 lb  
**BREED:** Terrier

**MRN:** 1102164  
**DRAW DATE:** 27-Feb-23  
**RECEIVED DATE:** 6-Mar-23  
**REPORT DATE:** 6-Mar-23  
**SAMPLE TYPE:** Dried Serum - 2

**VETERINARIAN:**  
**FACILITY:**  
**PH:**  
**FAX:**



**New Recommended Dose**

MagRatio	Not Available
<b>22 mg/day</b>	

Magnesium dosing recommendations are for daily supplementation. Continue indefinitely unless changes in health or diet require modification.

**Patient History**

ID	Date	Result mg/dL	Known Dose mg/day

**Interpretive Comments - need consult? email consult@vdlab.com** 214

Patient has low normal Magnesium levels. Supplement as indicated (Daily topical lotion is recommended). Restest in 90 days.

## Supplementation Guide

<b>Total Dose Recommended:</b>		<b>22 mg/day</b>		
PRODUCT NAME	PRODUCT STRENGTH	PUMP VOLUME	PRODUCT FORMAT	Dose
Magnesium Lotion for Pets <i>Magnum Solace</i>	50 mg/mL	0.23 mL/pump 11.5 mg/pump	Topical Lotion	<input type="checkbox"/> <b>2 pumps/day</b>
Other				<input type="checkbox"/>

Additional Reviewer Comments - need consult? email consult@vdlab.com

**Retest NO SOONER THAN: June 9, 2023**