



**PATIENT NAME:** Shiloh Simpson  
**SPECIMEN ID:** 479729  
**SPECIES:** Canine  
**GENDER:** Female Spayed  
**AGE:** 5.9  
**WEIGHT:** 71.8 lb  
**BREED:** German Shepherd

**MRN:** 1048038  
**DRAW DATE:** 2-Mar-23  
**RECEIVED DATE:** 6-Mar-23  
**REPORT DATE:** 9-Mar-23  
**SAMPLE TYPE:** Dried Serum - 2

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

## Wellness Dashboard

<p><b>Vitamin D</b></p> <p>Sufficient</p> <p><b>102.1</b></p> <p>Sufficiency: 100-150 ng/mL</p>	<p><b>B12</b></p> <p>Low Normal</p> <p><b>248.2</b></p> <p>Normal: 220-1080 pg/mL</p>	<p><b>Magnesium</b></p> <p>Normal: 1.7-2.9 mg/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>Normal: 4.3 - 21.0 ng/mL</p>		

<p><b>Inflammation (CRP)</b></p> <p>Optimal</p> <p><b>&lt;0.5</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><b>Previous</b></p> <p><b>1.4</b></p>	<p><b>Chemistries</b></p> <p>Albumin Normal</p>
<p>● <b>CAR: 0.1</b></p>		
<p>Patient's inflammatory state is at an optimal level.</p>		<p>Patient CRP/Albumin Ratio (CAR) is within normal limits.</p>

## Additional Tests

<p><b>Cancer Risk</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><b>Previous</b></p>	<p><b>Osteoarthritis (HA)</b></p> <p>Normal</p> <p><b>13.1</b></p> <p>Normal: ≤ 20              Positive: &gt; 20 (ng/mL)</p>	<p><b>Previous</b></p> <p><b>83.49</b></p>
<p>Hyaluronic acid is within the reference interval and not indicative of degenerative joint disease.</p>			

# Differential List



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

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## 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**  
0.1

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)

Normal

## Potential Action based on clinical relevance

Actions are organized by least invasive/expensive first

→ Everything is within reference intervals.  
Routine measurement of inflammation is the most sensitive method to rule-out occult disease. Recommend annual rechecks during wellness visits.

Potential Action

code 121

- 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 B12 levels according the recommendations on the Vitamin B12 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

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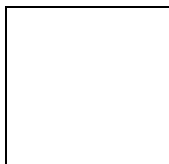
**VETERINARIAN:**  
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### Hyaluronic Acid (ng/mL)

<b>Normal</b>
<b>13.1</b>

Normal: ≤20  
Positive: >20

Change from Previous



### Patient History

ID	Date	Result ng/mL
450071	10/4/2021	83.5

### Interpretive Comments - need consult? email [consult@vdilab.com](mailto:consult@vdilab.com)

Hyaluronic acid is within the reference interval and not indicative of degenerative joint disease.

\*In cases of Severe DJD, chondrocyte death will lead to low levels of sHA since the joint is no longer producing HA.

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>not required</b>	<b>not required</b>
<b>Trixsyn® Canine Performance</b>	Sodium Hyaluronate Astaxanthin	<b>13mg/pump 1mg/pump</b>	<b>not required</b>	<b>not required</b>
<b>Other</b>				

# Vitamin D Report

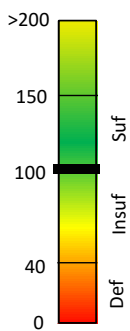


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## 25(OH)D (ng/mL)

**Sufficient**

**102.1**

Deficient:  $\leq 40.0$   
Insufficient: 40.1 - 99.9  
Sufficient: 100 - 150  
Elevated:  $\geq 150$

Dose at time of draw:

0 IU/day

Change dose by

0 IU/day



## New Recommended Dose Range

Low End Sufficiency (~100 ng/mL)

High End Sufficiency (~130 ng/mL)

Not Required

1500 IU/day

For most patients without underlying conditions, or taking corticosteroids

For patients that warrant a higher VitD level and/or those on corticosteroids.

### Patient History

ID	Date	Result ng/mL	Known Dose iu/day
417631	10/24/2019	67.7	0
424509	5/4/2020	70.9	0
441596	5/4/2021	128.4	3000

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

Your patient is found to be sufficient. Continue on the same diet and retest in 1 year unless one of the conditions below is met.

#### 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

1500 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"/> 0.5 mL/day
<b>RxD3 Forte</b> <i>Rx Vitamins</i>	500 IU/ drop	Liquid Drops <i>Applied to food</i>	<input type="checkbox"/>	<input type="checkbox"/> 3 drops/day

# B12 (Cobalamin) Report

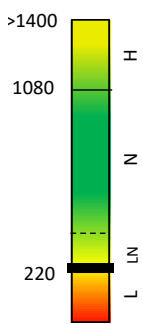


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## Cobalamin

(pg/mL)  
**Low Normal**  
**248.2**

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:**

**Not Provided**

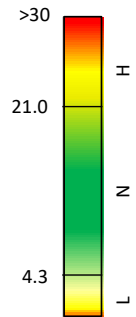
**Increase B12 dose by:**

**462 mcg/day**



## New Recommended B12 Dose

<b>Fasted Sample?</b>	<b>unknown</b>
<b>462 mcg/day</b>	
B12 dosing recommendations are for daily supplementation. Continue indefinitely unless changes in health or diet require modification.	



## Folate

(ng/mL)

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
417631	10/24/2019	290.2		0

### Folate vs Cobalamin Plot

Folate	High	SIBO Excess Dietary Folate		Excess Supplementation
	Normal	Low Dietary B12 CP / EPI / IBD / LSA Distal SI Damage	Normal	Excess Supplementation Cholangitis
	Low	Small Intestinal Damage CP / EPI / IBD / LSA	Proximal SI Damage Dysbiosis Antibiotics	Proximal SI Damage Antibiotics / LSA / Cholangitis
		Low		High

**Cobalamin**  
chart assumes unsupplemented patient

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

### Comments

Patient has low normal B12 levels. Recommend supplementing as indicated to raise B12 levels higher in the normal range. Retest in 8-10 weeks if supplementation is prescribed.

## Total B12 Dose Recommended:

**462 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"/> use mL dose	<input type="checkbox"/> 1.75 mL/day
<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"/> use mL dose	<input type="checkbox"/> 0.5 mL/day

\*Choose only one product for supplementation

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