Canine Wellness Report

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

PATIENT NAME:	**Proton Lau**	**MRN:**	**1075823**	**VETERINARIAN:**	
SPECIMEN ID:	**479481**	DRAW DATE:	23-Jan-23	FACILITY:	
SPECIES:	Canine	RECEIVED DATE:	31-Jan-23		
GENDER:	Female Spayed	REPORT DATE:	31-Jan-23		
AGE:	8.0	SAMPLE TYPE:	Dried Serum - 3	PH:	
WEIGHT:	24 lb			FAX:	
BREED:	English Field Spaniel				

Wellness Dashboard

Vitamin D
Sufficient
147.2
Sufficiency: 100-150 ng/mL

B12
Low Normal
294.5
Normal: 220-1080 pg/mL

Magnesium
Low Normal
1.7
Normal: 1.7-2.9 mg/dL
supplementation when below 2.2mg/dL

tCa
Normal: 8.5 - 12.0 mg/dL

PTH 1-84
Normal: 4 - 38 pg/mL

Folate
Normal
14.3
Normal: 4.3 - 21.0 ng/mL

Inflammation (CRP)
Optimal
1.8
Optimal: ≤ 2.0 Normal: ≤ 3.9
Mild Inflam: 4 - 9.9
Mod Inflam: 10 - 39.9
High Inflam: ≥ 40
(mg/L)

Previous
0.9

Patient's inflammatory state is at an optimal level.

Chemistries
Albumin Normal

CAR: 0.5

Patient CRP/Albumin Ratio (CAR) is within normal limits.

3.5

Additional Tests

Cancer Risk
Low
4.2
Very Low Risk: ≤ 2.1
Low Risk: 2.2 - 5.2
Elevated Risk: 5.3 - 8.9
Highly Elevated Risk: ≥ 9.0

Previous

Patient's CRA score is low with an unlikely chance of occult cancer however other conditions may be present - see differential list.

Osteoarthritis (HA)
Positive
40.9
Normal: ≤20
Positive: >20
(ng/mL)

Previous

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.

12.6 2110

need consult? email consult@vdilab.com

Differential List

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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
0.5

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)	Potential Action based on clinical relevance (Actions are organized by least invasive/expensive first)
Severe Degen Joint Disease	imaging, synovial fluid analysis, sfLDH
Liver disease (non cancer)	liver function tests, imaging
Vector-borne	serological panel

Potential Action **code 2121**

1) CRA score should be considered low risk for cancer provided the patient is NOT on anti-inflammatory medication (eg, corticosteriods, NSAIDS).
2) CRA testing profile can be associated with the low cobalamin levels in this patient.
3) 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

VDI Lab Services
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Hyaluronic Acid (ng/mL)

Positive

40.9

Normal: ≤20
Positive: >20

Change from Previous

Patient History

ID	Date	*Result* *n* g/mL

Interpretive Comments - need consult? email consult@vdilab.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.	HA: sHA above positive cutoff. HA is being produced but early degeneration allows some HA to leak into peripheral blood.	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.	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: Typically absent, except in IMPA	CRP: Typically absent, except in IMPA.	CRP: Mild inflammation may be present in moderate OA,IVDD, due to mechanical damage inside the joint. IMPA presents with elevated CRP.	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 rigidness. 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**
Trixsyn® Canine Hyaluronan	Sodium Hyaluronate	**13mg/pump**	**1 pump, twice per day**	**N/A**
Trixsyn® Canine Performance	Sodium Hyaluronate Astaxanthin	**13mg/pump** **1mg/pump**	**1 pump, twice per day**	**1 pump, twice per day**
Other				

Vitamin D Report

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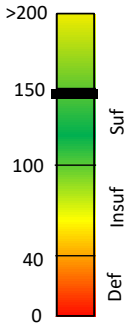
AGE:	8.0	REPORT DATE:	31-Jan-23	PH:	
WEIGHT:	24 lb	SAMPLE TYPE:	Dried Serum - 3	FAX:	
BREED:	English Field Spaniel				



25(OH)D

(ng/mL)

Sufficient

147.2

Deficient: ≤ 40.0
Insufficient: 40.1 - 99.9
Sufficient: 100 - 150
Elevated: ≥ 150

Patient History

ID	Date	*Result* ng/mL	Known Dose iu/day
454805	12/6/2021	99.8	0

Dose at time of draw: Not Provided

Change dose by 0 IU/day

New Recommended Dose Range

Low End Sufficiency (~100 ng/mL)	High End Sufficiency (~130 ng/mL)
Not Required	**Not Required**
For most patients without underlying conditions, or taking corticosteroids	For patients that warrant a higher VitD level and/or those on corticosteroids.

Interpretive Comments - need consult? email consult@vdilab.com

Your patient is found to be sufficient. Current supplementation was not provided, so continue on the same diet and supplementation (if any) 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*** ⟷ ***Not Required***

*Choose only one product for supplementation

PRODUCT NAME	PRODUCT STRENGTH	PRODUCT FORMAT	Low End Dose	High End Dose
RxD3 *Rx Vitamins*	**100 IU/ drop**	**Liquid Drops** *Applied to food*	☐	☐
RxD3 Forte *Rx Vitamins*	**500 IU/ drop**	**Liquid Drops** *Applied to food*	☐	☐

B12 (Cobalamin) Report

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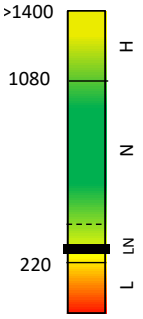


Cobalamin

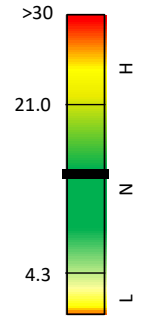
(pg/mL)

Low Normal

294.5

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.



Folate

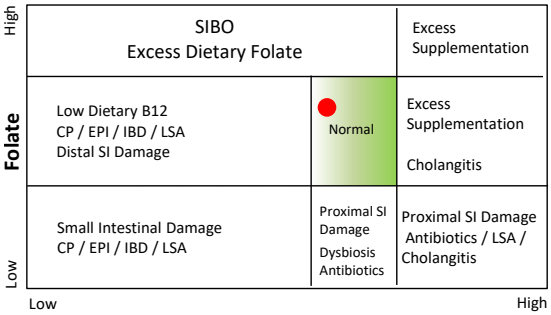
(ng/mL)

Normal

14.3

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

Folate vs Cobalamin Plot



Cobalamin
chart assumes unsupplemented patient

B12 Dose at time of draw: **Bolus**

Increase B12 dose by: **0 mcg/day**

New Recommended B12 Dose

Fasted Sample?	**Not Fasted**

See Comments

B12 dosing recommendations are for daily supplementation. Continue indefinitely unless changes in health or diet require modification.

Patient History

ID	Date	*B12* pg/mL	Folate ng/mL	Known B12 Dose mcg/day
454805	12/6/2021	710.0	12.489	0

need consult? email consult@vdilab.com

Comments

All dosing calculations are based upon oral supplementation; B12 injections are to be determined by the veterinarian. Please note, depending upon the timing of testing to last injection, B12 values will vary considerably with the highest value immediately after injection and lowest value just prior to injection. Please consider this variation when comparing patient values to reference intervals.

Total B12 Dose Recommended: *See Comments*

PRODUCT NAME	PRODUCT STRENGTH	PRODUCT FORMAT	Drops Dose	mL Dose
RxB12 *Rx Vitamins*	**250 mcg/mL** *6.5 mcg/drop*	**Liquid Drops** *Applied to food*	☐	☐
RxB12 Forte *Rx Vitamins*	**1000 mcg/mL** *33 mcg/drop*	**Liquid Drops** *Applied to food*	☐	☐

***Choose only one product for supplementation**

Retest NO SOONER THAN: April 11, 2023

Magnesium Report

VDI Lab Services
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SPECIES:	Canine	RECEIVED DATE:	31-Jan-23		
GENDER:	Female Spayed	REPORT DATE:	31-Jan-23		
AGE:	8.0	SAMPLE TYPE:	Dried Serum - 3	PH:	
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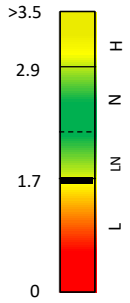

Magnesium

(mg/dL)

Low Normal

1.7

Low **(L)**: < 1.7
Low Normal **(LN)**: 1.7 - 2.1
Normal **(N)**: 1.7 - 2.9
High **(H)**: ≥ 3.0

Patient History

ID	Date	*Result* *m* g/dL	Known Dose mg/day
454805	12/6/2021	2.0	0

Dose at time of draw: **0 mg/day**

Increase Dose By: **14 mg/day**

New Recommended Dose

MagRatio	Not Available

14 mg/day

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

Interpretive Comments - need consult? email consult@vdilab.com 211

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

Supplementation Guide

Total Dose Recommended: ***14 mg/day***

PRODUCT NAME	PRODUCT STRENGTH	PUMP VOLUME	PRODUCT FORMAT	Dose
Magnesium Lotion for Pets *Magnum Solace*	**50 mg/mL**	**0.23 mL/pump** 11.5 mg/pump	**Topical Lotion**	☐ ***1 pumps/day***
Other				☐

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

Retest NO SOONER THAN: May 6, 2023