

NINA ARDOLINO

PET OWNER: **ARDOLINO**
 SPECIES: Canine
 BREED:
 GENDER: Female
 AGE: 10 Years
 PATIENT ID: 27651

PASCO Veterinary Med. Ctr
 4575 Pet Lane
 Lutz, FL 33549
 813-973-2929
 ACCOUNT #: 12599
 ATTENDING VET: Alyssa Siegel

LAB ID: 4404270668
 ORDER ID: 172860954
 COLLECTION DATE: **3/24/22**
 DATE OF RECEIPT: **3/26/22**
 DATE OF RESULT: **3/26/22**

 IDEXX Services: **Urinalysis Completion**
Urinalysis


3/26/22 (Order Received)
3/26/22 4:30 AM (Last Updated)

3/16/22

TEST	RESULT	REFERENCE VALUE	
Collection	FREECATCH		CYSTOCE...
Color	Yellow		
Clarity	CLEAR		
Specific Gravity	1.025		
pH	7.0		
Urine Protein	NEGATIVE		
Glucose	NEGATIVE		
Ketones	NEGATIVE		
Blood / Hemoglobin	NEGATIVE		
Bilirubin	NEGATIVE		
Urobilinogen	NORMAL		
White Blood Cells	NONE SEEN	0 - 5 HPF	
Red Blood Cells	NONE SEEN	HPF	
Bacteria	NONE SEEN		
Epithelial Cells	1+ (1-2)/HPF		
Mucus	NONE SEEN		
Casts	NONE SEEN		
Crystals	NONE SEEN		

NINA ARDOLINO

PET OWNER: **ARDOLINO**
 SPECIES: Canine
 BREED: Doberman Pinscher
 GENDER: Female
 AGE: 10 Years
 PATIENT ID:

PASCO Veterinary Med. Ctr
 4575 Pet Lane
 Lutz, FL 33549
 813-973-2929
 ACCOUNT #: 12599
 ATTENDING VET: NOT GIVEN

LAB ID: 4404273714
 ORDER ID: TR2036981684900034
 COLLECTION DATE: **3/17/22**
 DATE OF RECEIPT: **3/18/22**
 DATE OF RESULT: **3/24/22**

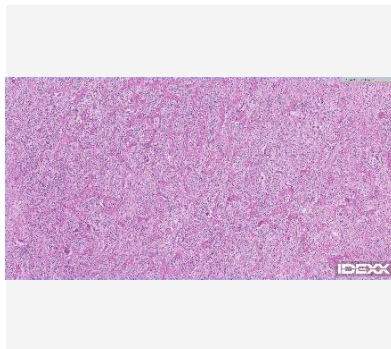
IDEXX Services: **Complex Biopsy**

Pathology

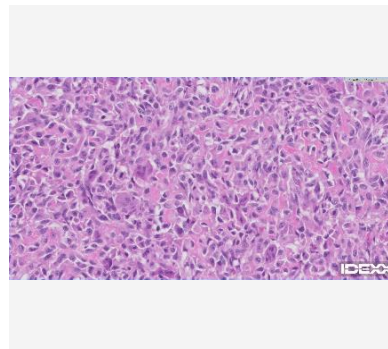


3/18/22 (Order Received)
3/24/22 7:41 AM (Last Updated)

Images



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Biopsy Source: R arm amputation. Source as indicated on diagram.

Clinical History: 21 months tumor has been growing. X-rays show total bone destruction.

Pathologist's Report

MICROSCOPIC DESCRIPTION:

The periosteum, cortical bone and medullary bone of the distal 2/3 of the radius and lesser the distal ulna are severely infiltrated, expanded and effaced by a highly cellular mesenchymal neoplasm. Neoplastic cells are polygonal and arranged in dense, highly cellular bundles and sheets, admixed with dense irregular thin trabecular deposits of brightly eosinophilic material (osteoid) and mineralized bone. Neoplastic cells have moderate amounts of eosinophilic cytoplasm. Their nuclei are irregularly oval to indented with coarsely stippled chromatin and distinct nucleoli. Anisocytosis and anisokaryosis are moderate, and there are occasional multinucleated neoplastic cells. Multifocal areas of necrosis and hemorrhage are multifocally present throughout the neoplasm.

MICROSCOPIC INTERPRETATION:

Right distal radius: Osteosarcoma
 Mitotic count: 33 mitoses per ten HPFs
 Margins: Excision is complete with 90+ mm margins.

COMMENTS:

Microscopic features in the bone are consistent with osteosarcoma, which is an aggressive, osteolytic, malignant neoplasm.

Pathology (continued)

Appendicular osteosarcomas (OSA) have very strong site preferences. The forelimbs are affected approximately twice as often as the hindlimbs. The majority occur within the distal radius, proximal humerus, proximal tibia and distal femur. Metastasis is very common and arises early in the course of the disease, although usually subclinically. Although less than 15% of dogs have radiographically detectable pulmonary or osseous metastasis at presentation, approximately 90% will die with metastatic disease, usually to the lungs, within one year when amputation is the only treatment. Metastasis via the hematogenous route is most common. OSA arising from the digits, metatarsal and metacarpal bones in dogs is rare and may carry a better prognosis compared with other appendicular locations, according to one study of 15 cases. Although the lung is the most commonly reported site for metastasis, tumor spread to bones or other soft tissue sites occurs with some frequency. Elevated serum alkaline phosphatase (ALP) has been associated with a poorer prognosis for dogs with appendicular OSA. A preoperative elevation of ALP is associated with a shorter disease-free interval and survival. Additionally, dogs that have elevated preoperative ALP values that do not return to normal within 40 days following surgical removal of the primary lesion also fail earlier from metastasis.

If clinically appropriate for your patient: DNA sequencing of the tumor tissue through FidoCure may provide additional treatment guidance (specifically mutations in DMD gene; and/or genes related the MAPK and PI3K/mTOR signaling pathways) and/or prognostic information (specifically mutations in TP53 tumor suppressor gene) for canine patients with osteosarcoma. Please visit www.fidocure.com to learn more. You can order FidoCure testing by contacting Customer Support.

Reference:

Withrow and MacEwen's Small Animal Clinical Oncology, 5th Ed., 2013, pp 463-503; Thompson KG, Pool RR. Tumors in Domestic Animals, 4th Ed., 2002, pp 266-283.
Tremolada G., et al. Biologic behavior of primary osteosarcoma of the digits, metacarpal and metatarsal bones in dogs. Vet Comp Oncol. 2020.

Internal Interpretation ID: IXD21.1

For lab use only: Fidocure testing, block A, US code 8978; Canada code FIDO

PATHOLOGIST:

Danielle R. Desjardins, DVM, MS
Diplomate, American College of Veterinary Pathologists
Direct: 916-267-2550
1-800-551-0998, option 1; x72550
E-mail: Danielle-Desjardins@idexx.com

The patient clinical history provided on the submitted requisition was reported. Veterinarians, please contact the pathologist with any questions. Pet owners need to contact their veterinarian for case advice.

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PASCO Veterinary Med. Ctr
 4575 Pet Lane
 Lutz, FL 33549
 813-973-2929
 ACCOUNT #: 12599
 ATTENDING VET: Alyssa Siegel

LAB ID: 4404267052
 ORDER ID: 172128148
 COLLECTION DATE: **3/14/22**
 DATE OF RECEIPT: **3/16/22**
 DATE OF RESULT: **3/16/22**

IDEXX Services: **Senior Profile with Mg, Osmolality, Triglycerides, and Heartworm, SAMPLE/TEST INFO NEEDED**

Hematology



3/16/22 (Order Received)
3/16/22 5:37 AM (Last Updated)

TEST	RESULT	REFERENCE VALUE	
RBC	7.05	5.39 - 8.70 M/ μ L	
Hematocrit	50.9	38.3 - 56.5 %	
Hemoglobin	16.5	13.4 - 20.7 g/dL	
MCV	72	59 - 76 fL	
MCH	23.4	21.9 - 26.1 pg	
MCHC	32.4	32.6 - 39.2 g/dL	L
% Reticulocyte	2.1	%	
Reticulocytes	^a 148	10 - 110 K/μL	H
Reticulocyte Hemoglobin	23.7	24.5 - 31.8 pg	L
WBC	6.5	4.9 - 17.6 K/ μ L	
% Neutrophils	68.9	%	
% Lymphocytes	14.3	%	
% Monocytes	7.4	%	
% Eosinophils	9.4	%	
% Basophils	0.0	%	
Neutrophils	4.479	2.94 - 12.67 K/ μ L	
Lymphocytes	0.93	1.06 - 4.95 K/μL	L
Monocytes	0.481	0.13 - 1.15 K/ μ L	
Eosinophils	0.611	0.07 - 1.49 K/ μ L	
Basophils	^b 0	0 - 0.1 K/ μ L	
Platelets	366	143 - 448 K/ μ L	

^a The appropriateness of the regenerative response should be evaluated considering the degree of anemia and reticulocytosis (see guidelines below).

Degree of bone marrow response (reticulocytes K/uL):
 Mild 110-150
 Moderate 150-300
 Marked >300

Hematology (continued)

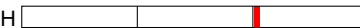












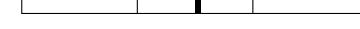









View the VetConnect Plus Differentials for additional information.

b AUTOMATED CBC

Chemistry



3/16/22 (Order Received)
3/16/22 5:37 AM (Last Updated)

TEST	RESULT	REFERENCE VALUE	
Glucose	125	63 - 114 mg/dL	H 
IDEXX SDMA	^a 8	0 - 14 µg/dL	
Creatinine	0.8	0.5 - 1.5 mg/dL	
BUN	17	9 - 31 mg/dL	
BUN: Creatinine Ratio	21.3		
Phosphorus	3.5	2.5 - 6.1 mg/dL	
Calcium	9.5	8.4 - 11.8 mg/dL	
Magnesium	2.6	1.8 - 2.4 mg/dL	H 
Sodium	152	142 - 152 mmol/L	
Potassium	4.0	4.0 - 5.4 mmol/L	
Na: K Ratio	38	28 - 37	H 
Chloride	116	108 - 119 mmol/L	
TCO2 (Bicarbonate)	17	13 - 27 mmol/L	
Anion Gap	23	11 - 26 mmol/L	
Total Protein	6.5	5.5 - 7.5 g/dL	
Albumin	2.9	2.7 - 3.9 g/dL	
Globulin	3.6	2.4 - 4.0 g/dL	
Albumin: Globulin Ratio	0.8	0.7 - 1.5	
ALT	16	18 - 121 U/L	L 
AST	26	16 - 55 U/L	
ALP	168	5 - 160 U/L	H 
GGT	3	0 - 13 U/L	
Bilirubin - Total	0.1	0.0 - 0.3 mg/dL	
Bilirubin - Unconjugated	0.0	0.0 - 0.2 mg/dL	

Chemistry (continued)

TEST	RESULT	REFERENCE VALUE	
Bilirubin - Conjugated	<0.1	0.0 - 0.1 mg/dL	
Cholesterol	205	131 - 345 mg/dL	
Triglyceride	115	20 - 150 mg/dL	
Amylase	1,464	337 - 1,469 U/L	
Lipase	^b 509	0 - 250 U/L	H
Creatine Kinase	133	10 - 200 U/L	
Osmolality	325	302 - 330 mmol/kg	
Hemolysis Index	^c N		
Lipemia Index	^d 1+		

^a SDMA and creatinine are within the reference interval: impairment of GFR is unlikely. Recommended next step: evaluate complete urinalysis.

^b Please note: the canine and feline reference intervals for lipase have been updated effective May 26, 2020 to reflect current IDEXX testing.

^c Index of N, 1+, 2+ exhibits no significant effect on chemistry values.

^d Index of N, 1+, 2+ exhibits no significant effect on chemistry values.

Urinalysis



3/16/22 (Order Received)
3/16/22 5:37 AM (Last Updated)

TEST	RESULT
Collection	CYSTOCENTESIS
Color	
Clarity	
Specific Gravity	
pH	
Urine Protein	
Glucose	
Ketones	

Urinalysis (continued)

TEST	RESULT
Blood / Hemoglobin	
Bilirubin	
Urobilinogen	
White Blood Cells	
Red Blood Cells	
Bacteria	
Epithelial Cells	
Mucus	
Casts	
Crystals	

Endocrinology 

3/16/22 (Order Received)
3/16/22 5:37 AM (Last Updated)

TEST	RESULT	REFERENCE VALUE	
Total T4	^a 1.0	1.0 - 4.0 µg/dL	<div style="border: 1px solid black; width: 100px; height: 15px; position: relative;"><div style="position: absolute; left: 50%; top: -50%; transform: translate(-50%, -50%); width: 10px; height: 10px; background-color: black;"></div></div>

^a Dogs with no clinical signs of hypothyroidism and results within the reference interval are likely euthyroid. Occasionally, hypothyroid dogs can have a low normal T4 (1-2 ug/dL). Hypothyroidism may be further assessed in these dogs by adding a free T4 and canine TSH. For dogs on thyroid supplement, recommended therapeutic levels are 2.1-5.4 ug/dL. If this sample was drawn 4-6 hours post-pill in a dog on thyroid supplement, a low normal T4 suggests inadequate supplementation.

Serology 

3/16/22 (Order Received)
3/16/22 5:37 AM (Last Updated)

TEST	RESULT
Heartworm Antigen by ELISA	^a NEGATIVE

Serology (continued)

- ^a The American Heartworm Society recommends that a confirmatory test be run on all positive antigen test results prior to therapy, especially when a positive test result is unexpected. Confirmation of a positive test result is accomplished when combining the results of the Heartworm Antigen by ELISA with results from the Lab 4DX Plus (test code 7244), SNAP Heartworm RT, or SNAP 4Dx Plus performed on a separate sample.

Other**3/16/22** (Order Received)**3/16/22 5:37 AM** (Last Updated)

TEST

RESULT

More Information
Needed

A urine sample was not received. The remainder of requested testing has been performed. Thank you.