

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**

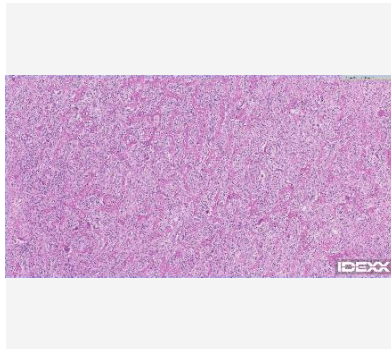
IDEXX Services: **Complex Biopsy**

Pathology

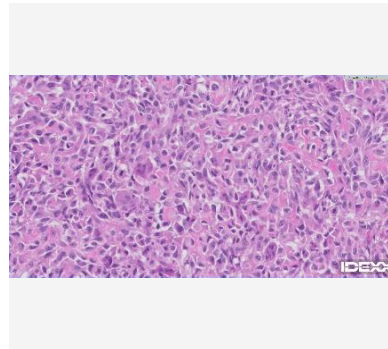


3/18/22 (Order Received)
3/24/22 7:41 AM (Last Updated)

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:

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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.