



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT**  
Olive Janes

**SPECIES**  
Canine

**BREED**  
Leonberger

**SEX**  
F

**AGE**  
10 Years, 9 Months

**INTERPRETED BY**  
Sebastian Schaub, DVM  
Dr. med. vet. DipECVDI

**HOSPITAL NAME**  
Animal Health Partners

**REFERRING VET**  
Dr. Lea Mehrkens

**INVOICE**  
52302

**DATE**  
6-3-22

Olive, a 10 year 9 month old Female Leonberger, was presented to the Toronto Animal Health Partners Surgery Service for evaluation of a right thoracic limb lameness. The lameness was initially noticed March 2022 with no known trauma. Olive has had difficulty getting up and jumping into car. Lameness is gradually worsening. Normal EDUD History: Previously diagnosed lumbosacral degeneration (mild) and iliopsoas sprain. Owner pursued medical management. Doing okay since previous visits, but possible slight deterioration. Video: 2-3 weeks ago P was dramatically limping on right forelimb Activity: - Often swims at cottage - 2-3 walks per day; 30-45 minutes each - slowly decreasing activity

Abnormal PE/Chem/CBC/UA Results: PE of forelimbs: right side: \*Pain on shoulder flexion and extension, growled and vocalized. Swelling of proximal humerus at region where humerus meets thorax\* No digital crepitus or pain. No carpal effusion, normal range of motion. Full range of motion of elbow, no pain on coronoid palpation. No pain on shoulder extension or flexion on left.

**COMPUTED TOMOGRAPHY OF THE THORAX AND FRONT LIMBS**

A high resolution pre- and post-contrast CT study of the thorax and front limbs is provided for review.

**COMPUTED TOMOGRAPHIC FINDINGS**

Thorax

Multifocal mild spondylosis formation is seen along the thoracic spine.

The cranial mediastinal lymph nodes are moderately enlarged, rounded and have a heterogeneous contrast enhancement pattern.

The right subclavian vein presents with a central filling defect, occupying approximately up to 50% of the cross-sectional area.

The bronchial tree presents with regular branching and tapers uniformly towards the periphery as expected, the bronchial walls are thin and smooth. The bronchus-to-artery ratio is within normal limits.

Multifocal throughout the lung parenchyma, randomly distributed, variable sized, well-defined, nodular lesions, measuring up to 20 mm in size are visible – some of the nodular lesions form confluent cluster.

Small incidental gas pockets are seen within the esophageal lumen, there is no evidence of abnormal dilation.

The included parts of the liver present multiple roundish, mild ill-defined, mild hypoattenuating and mild heterogeneous contrast enhancing roundish masses, measuring up to 3 cm in diameter.

Front limbs

The proximal third of the right humerus presents an ill-defined zone with permeative osteolytic lesions with endosteal scalloping and multifocal perforation of the cortex. Mild spiculated periosteal new bone formation is appreciated along the right proximal humeral metaphysis. Post contrast administration, a heterogeneous contrast enhancing, ill-defined soft tissue swelling is surrounding the most proximal aspect of the right humerus.

The right axillary lymph nodes and right superficial cervical lymph node are moderately enlarged,



**PATIENT** rounded and has a heterogeneous contrast enhancement pattern.

Olive Janes Advanced spondylosis formation is seen along the cervical spine. The dural tube level C1 and C2 presents irregular moderate peripheral mineralization.

**SPECIES** Moderate mineralization of the walls of both external ear canals are appreciated.

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**COMPUTED TOMOGRAPHIC DIAGNOSIS**

- Monostotic aggressive predominant osteolytic lesion proximal right humerus with associated circumferential soft tissue mass
- Lymphadenopathy right superficial cervical lymph node, right axillary lymph node with dystrophic mineralization
- Lymphadenopathy cranial mediastinal lymph nodes
- Structured nodular interstitial lung pattern
- Multiple hepatic parenchymal nodular lesions
- Thrombus right subclavian vein – paraneoplastic
- Dural mineralization cranial cervical spine
- Dystrophic mineralization external ear canals
- Spondylosis deformans

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The findings are consistent with disseminated neoplastic disease affecting the right proximal humerus, tributary lymph nodes, lung and liver. Due to the multiple lesion, the top differentia is round cell tumor (such as histiocytic sarcoma), carcinomatosis, hemangiosarcoma. Other differentials include osteosarcoma, chondrosarcoma, fibrosarcoma. FNA sampling of the right humeral mass can be used as advanced minimally invasive diagnostic test.



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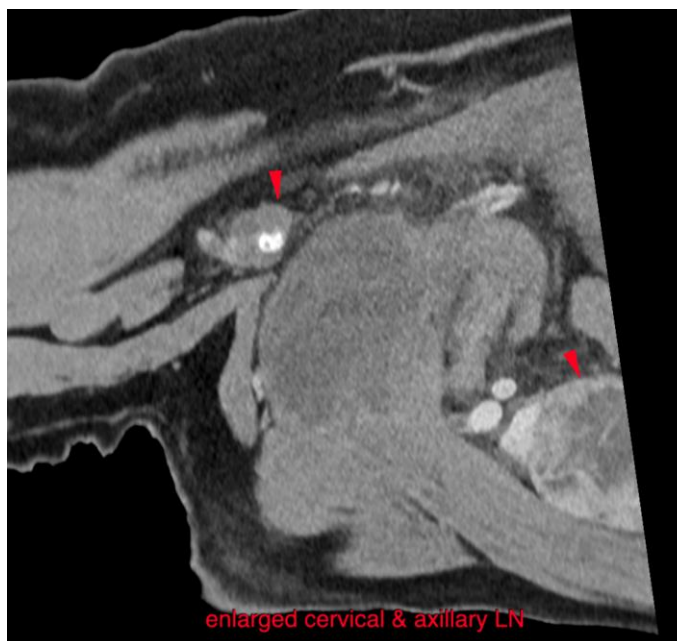
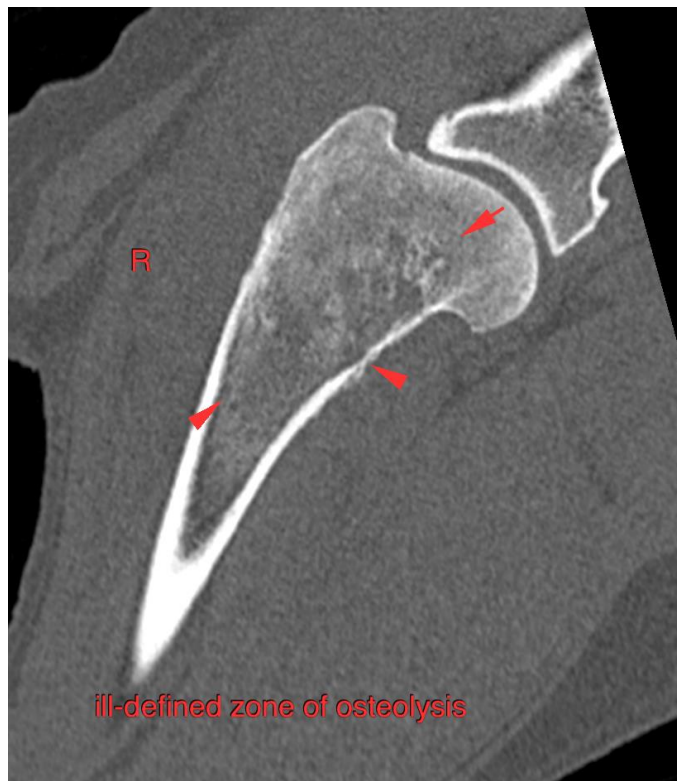
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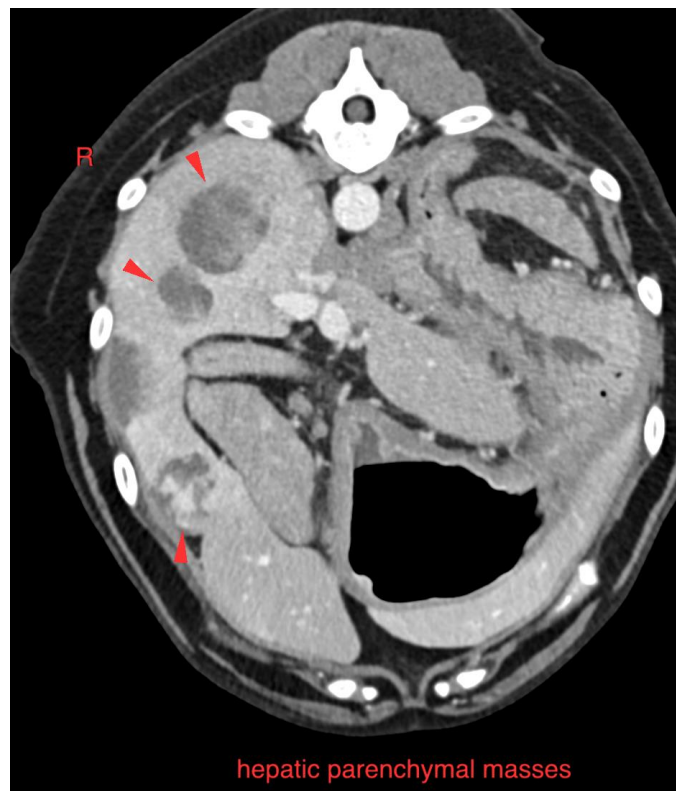
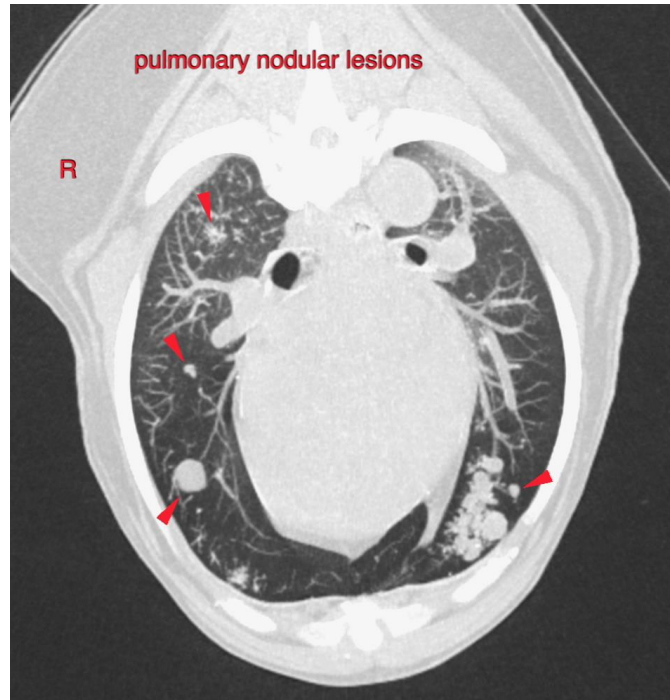
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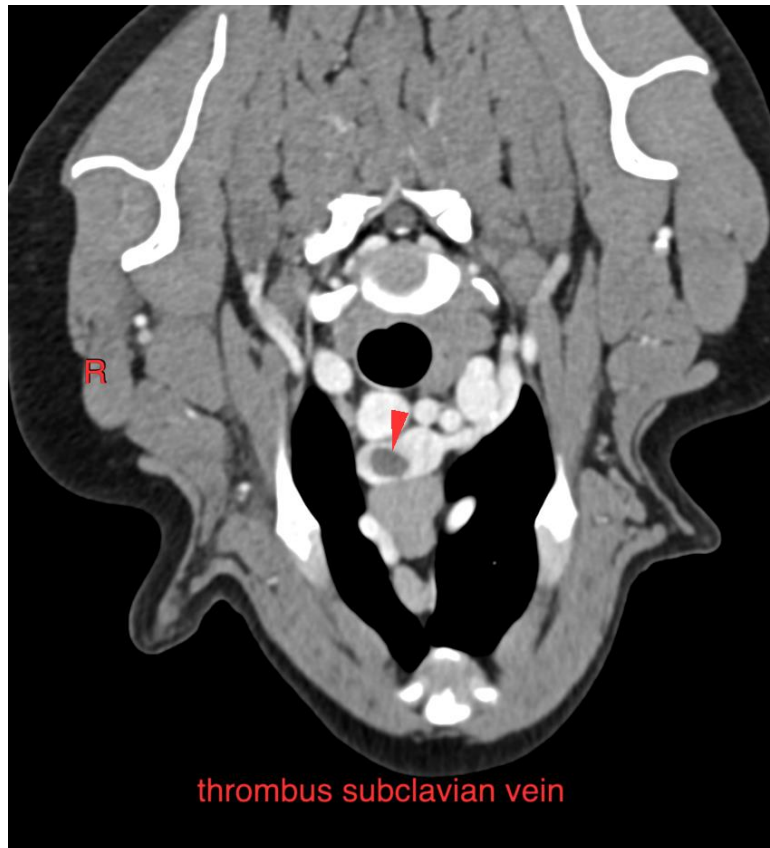
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**Sebastian Schaub**, Sebastian Schaub, DVM, Dr. med. vet. DipECVDI  
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