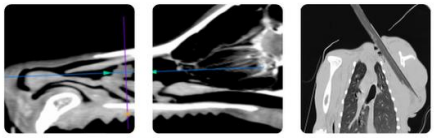


PATIENT

Rodimus Duncan

SPECIES

Canine

BREED

Dachshund X

SEX

MN

AGE

6Y, 8M

WEIGHT

17.6kg

INTERPRETED BY

Tilde Rodrigues Froes, DMV, MSc., Dr. Med Vet., Dipl. CBraRVet

IMAGING PERFORMED BY

Janice

HOSPITAL NAME

Bridgwater Veterinary Hospital and Wellness Centre

REFERRING VET

Dr. Ray Aslani

INVOICE

75188

DATE

5-28-26

PRESENTING CLINICAL SIGNS

Coughing & gaggping, producing white foam since May 19. Occasional vomiting, lethargy, low appetite. CT to determine if sx is an option.
Abnormal PE/Chem/CBC/UA Results: Low RBC, HCT, HGB anemia, elevated Ret Regenerative X-rays reveal soft tissue opacity mass in the cranial right lung lobe, pleural effusion. Radiologist ddx: carcinoma, torsion.

COMPUTED TOMOGRAPHIC STUDY OF THE THORAX

A pre- and post-contrast CT study of thorax are provided for review totaling 3 series. Two pre-contrast series of the thorax, soft tissue algorithm. One post-contrast series of the thorax, algorithm.

COMPUTED TOMOGRAPHIC FINDINGS

A large expansile and aggressive osseous mass arises from the right fourth rib dorsally, extending into the right hemithorax. The mass is characterized by extensive osteolysis, multifocal peripheral mineralized components, a large centrally hypoattenuating region, heterogeneous contrast enhancement, and partially ill-defined margins. The lesion measures approximately 7.0 × 6.5 × 7.3 cm.

The mass occupies a substantial portion of the right thoracic cavity and exerts marked mass effect, resulting in:

Severe compression and collapse of adjacent right pulmonary lobes, particularly the right cranial lung lobe and the right middle lung lobe. These lobes are reduced in volume, hyperattenuating, and demonstrate preserved contrast enhancement, consistent with compressive atelectasis.
Suspect of compression of the right mainstem bronchus.

Ventral and leftward displacement of the trachea with associated tracheal compression.
Leftward displacement of the cardiac silhouette and great vessels.

The accessory lung lobe is moderately expanded. The left lung lobes remain aerated but demonstrate multifocal regions of ground-glass pulmonary opacity and mildly reduced expansion, likely secondary to compressive and restrictive thoracic effects.

A moderate volume of bilateral pleural effusion is present, greater within the right hemithorax.

No pulmonary nodules or pulmonary masses are identified in the aerated portions of the lung fields.

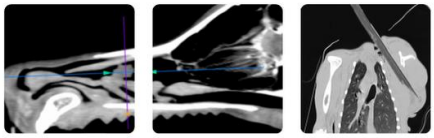
Mild enlargement of the cranial mediastinal and external thoracic lymph nodes is present.

The diaphragm remains intact.

Multifocal osteolytic lesions of varying size are identified throughout the skeleton, involving multiple thoracic and lumbar vertebral bodies, spinous processes, ventral vertebral elements, sternebrae, right scapula, and multiple ribs. Several lesions are associated with cortical disruption.

Additionally, a pathologic fracture is present in the left third rib and in the right sixth rib in association with an osteolytic lesion.

Incidental mineralization of the L6-L7 intervertebral disc is noted.



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The spleen is mildly heterogeneous. Within the splenic tail there is a well-defined hyperattenuating lesion measuring approximately 2.3 × 1.7 cm, containing a peripheral mineralized and/or rim-enhancing component.

COMPUTED TOMOGRAPHIC DIAGNOSIS

- A large, aggressive, expansile mass arises from the right fourth rib with marked intrathoracic extension. The mass is characterized by cortical osteolysis, peripheral mineralization, heterogeneous contrast enhancement, and a large central necrotic/cystic component.
- Multifocal osteolytic lesions are identified throughout the axial and appendicular skeleton, involving the vertebral column, ribs, sternebrae, and right scapula. A pathologic fracture of the left third rib and right sixth rib are noted, consistent with diffuse skeletal involvement.
- The constellation of imaging findings is most consistent with a plasma cell neoplasm, either a solitary plasmacytoma with multifocal osseous dissemination or multiple myeloma presenting with an atypically dominant thoracic wall mass. Primary malignant bone neoplasms, including osteosarcoma or chondrosarcoma with multifocal skeletal metastases, are considered less likely but cannot be excluded.
- Marked regional mass effect causing severe compression of the right lung, right mainstem bronchus, and trachea, with displacement of the heart and great vessels.
- Compressive atelectasis of the right cranial and right middle lung lobes.
- Moderate bilateral pleural effusion.
- Mild enlargement of cranial mediastinal and external thoracic lymph nodes; metastatic involvement cannot be excluded.
- Mild splenic heterogeneity with a 2.3 × 1.7 cm hyperattenuating splenic tail lesion containing peripheral mineralization and/or rim enhancement. Differential considerations include metastatic disease, splenic neoplasia, chronic hematoma, granuloma, or other focal splenic lesion.
- No CT evidence of pulmonary metastatic nodules within the aerated lung lobes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The CT findings demonstrate a large aggressive osseous mass arising from the right fourth rib, resulting in marked intrathoracic compression and secondary respiratory compromise. The associated multifocal osteolytic lesions affecting the vertebral column, ribs, sternebrae, and right scapula, together with the presence of a pathologic rib fractures, indicate a systemic skeletal disease process rather than an isolated primary thoracic wall neoplasm.

The primary differential diagnoses include plasma cell neoplasm, including multiple myeloma (despite the atypical presentation with a dominant thoracic wall mass) or a plasmacytoma with multifocal osseous involvement. Primary malignant bone tumors such as osteosarcoma or chondrosarcoma with extensive skeletal dissemination are considered less likely differential diagnoses.

The moderate pleural effusion and severe compressive atelectasis of the right lung lobes are likely responsible for the patient's respiratory signs.

Further diagnostic investigation is recommended, including cytologic or histopathologic sampling of the rib mass, serum protein electrophoresis and immunofixation for detection of monoclonal gammopathy, urine protein electrophoresis (Bence Jones proteins), bone marrow aspiration and cytology, and correlation with clinical pathology findings.

Cytologic evaluation of the pleural effusion and fine-needle aspiration of the splenic lesion are recommended for additional staging information.

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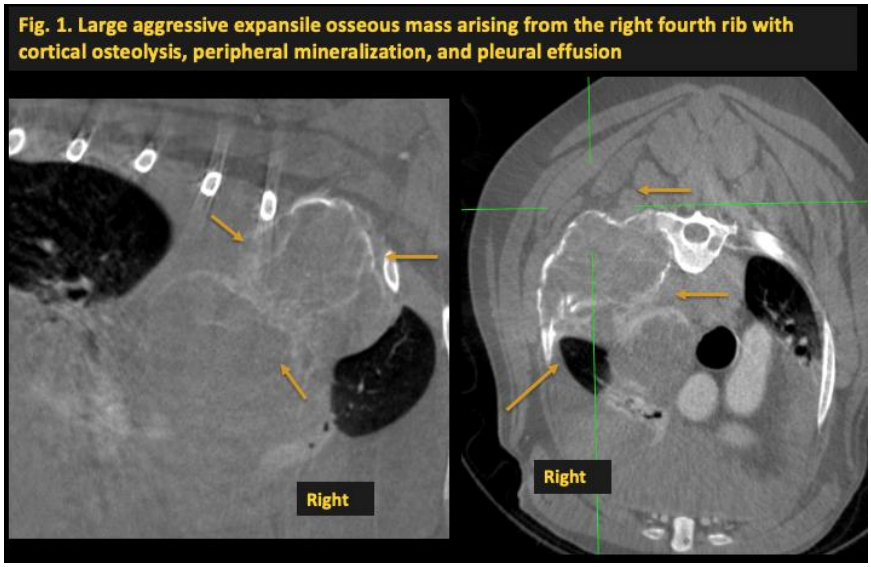

Fig. 1. Large aggressive expansile osseous mass arising from the right fourth rib with cortical osteolysis, peripheral mineralization, and pleural effusion

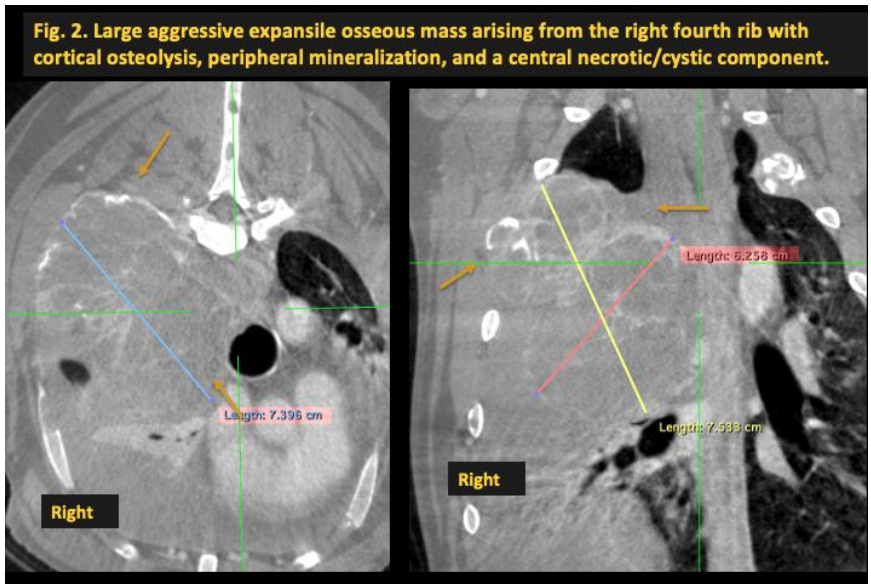

Fig. 2. Large aggressive expansile osseous mass arising from the right fourth rib with cortical osteolysis, peripheral mineralization, and a central necrotic/cystic component.

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Fig. 3. Multifocal skeletal involvement
Multiple osteolytic lesions affecting the vertebrae, and ribs, with a pathologic fracture of the left third rib.

The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

Tilde Rodrigues Froes, DMV, MSc., Dr. Med.Vet., Dipl.CBraRVet
info@sonopath.com