

# IT'S YOUR CASE

Species: Canine Breed: Crossbreed, medium Sex: Female Neutered Age: 15 years

## **Clinical History:**

Acute onset seizures. Screening radiographs.

# Details of study and technical comments:

A radiographic study of the thorax is presented for evaluation. The study consists of right and left lateral views as well as a ventrodorsal view.

# Diagnostic interpretation:

#### THORAX:

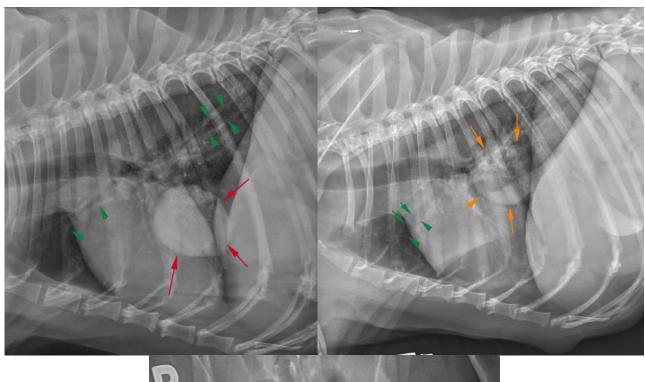
In the ventrolateral aspect of the left caudal lung lobe, a smoothly marginated soft tissue opaque mass spans three intercostal spaces on the ventrodorsal view and is approximately 25% of the thoracic height on the lateral views (red arrows). It is sharply delineated on the right lateral view and less discreetly defined on the left lateral view (orange arrows). At the lateral margins, there is an acute angle with the thoracic wall (yellow arrows).

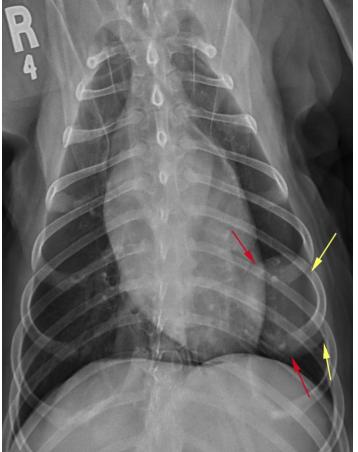
Diffusely distributed through the pulmonary parenchyma is a well-defined thin walled bronchial pattern (green arrowheads). There are a few osteomas.

The cardiac silhouette is normal in size and position; there is no specific chamber enlargement. The pulmonary vasculature is normal in diameter and tapers as it extends to the periphery. The trachea and mainstem bronchi are patent. The pleural space and mediastinum are unremarkable.

The thoracic vertebral column and remaining musculoskeletal structures are unremarkable. In the included portion of the cranial abdomen, most seen on the L lateral view, there is a mineral opaque feature which is round ventrally superimposed on the liver. The body wall/skin contours are bumpy implying subcutaneous masses (such as lipomas, please correlate with palpation and consider sampling).







# **Conclusions:**



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Left caudal lung mass. Primary differentials are neoplastic (i.e. pulmonary carcinoma, histiocytic sarcoma) versus, less likely granuloma or abscess.

The mild bronchial lung pattern is consistent with mild mineralization, an incidental age related change.

Mild biliary sediment.

Incidental ossifying pulmonary metaplasia (osteomas).

#### Additional comments:

The left caudal thoracic mass is readily defined within the pulmonary parenchyma due to a number of characteristics. The sharp distinction of margins between lateral views suggests that the mass is adjacent to air-filled lung. When the affected lung lobe is dependent on the L lateral view, there is decreased expansion of lung volume (i.e. mild atelectasis) and the margins of the lung lobe are less sharp.

The acute angles of the mass at the margin of the thoracic wall indicate that the origin is within the pulmonary tissue and is round along the peripheral margin. Extrapleural masses have less defined angles with the thoracic wall or may be obtuse.

Pulmonary masses may result in cough or maybe subclinical. If the mass is slowly progressive, the patient can compensate and clinical symptoms are frequently mitigated.

The bronchial pattern in this patient is well defined and likely represents mild mineral. This is a common finding in mature patients and is rarely associated with clinical symptoms. It may be indicative of chronic environmental irritant exposure.

## Trick of the trade:

The bronchial pattern in this patient is sharply marginated and demonstrates the relationship of lobar arteries and veins with the principal bronchi. There is close approximation of the pulmonary artery with the boundary of the bronchial wall while there is mild separation from the pulmonary vein. In the patient without bronchial changes, the airway is defined by the vasculature by default. In patients with pulmonary venous distention, this distinction of the airway wall from vessel margin is less apparent.

