



**PATIENT PRESENTING CLINICAL SIGNS**

**Patient** Patriot Carbone  
Presented to internist due to progressive liver enzyme elevation. U/S revealed right liver mass and right adrenal mass. No systemic signs have been noted.

**SPECIES COMPUTED TOMOGRAPHIC STUDY OF THE ABDOMEN AND THORAX**

**Canine** A pre- and post-contrast CT study of the abdomen and thorax are provided for review. A total of 4 series, One pre-contrast series of the abdomen. One post-contrast series of the abdomen immediate post-contrast and delay contrast series are evaluated. One post-contrast series of the thorax.

**BREED COMPUTED TOMOGRAPHIC FINDINGS**

**Boston Terrier ABDOMEN**

**SEX** There is a large, multilobular mass affecting the hepatic parenchyma. The mass is amorphous in shape with irregular contour, and heterogeneously attenuating enhanced areas, as well as persistent hypoattenuating and non-enhancing nodular lesions even in the arterial/portal and delayed post-contrast series. The mass occupies predominantly the quadrate liver lobe and left medial lobe of the liver. Due to the characteristics of the mass, it is difficult to make a precise measurement; however, the most persistent hypoattenuating lesion measures approximately 11.2cm x 8.2cm x 9.0cm. The parenchyma is diffusely enlarged, and other multifocal nodular irregularly enhancing lesions are seen; these lesion change the attenuation of the papillary process of the caudate lobe and left lateral lobe of the liver. The right lateral and medial lobes of the liver are the most normal in shape, contour, and attenuation. Part of the irrigation of the mass is attributed to the hepatic artery; however, the left branch of the portal vein is also correlated to the irrigation. The gallbladder is moderately filled with hypoattenuating fluid and ventral-dependent more dense material, and part of the mass is contiguous to this structure. No evidence of cystic duct dilatation or biliary common duct dilatation. The mass effect in the liver displaces and causes mild compression at the hepatic caudal vena cava; however, no filling defect is seen.

**Neutered Male**

**AGE**  
11 Years

**INTERPRETED BY**

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

The hepatic lymph nodes are unremarkable.

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On the right side at the cranial retroperitoneal space, an amorphous in shape, ill-defined, irregular in contour, heterogeneously enhancing mass is seen. The mass is also contiguous to the caudal vena cava, on the pre-hepatic portion, and causes mild displacement. However, no filling defect is seen.

**REFERRING VET**

Meaux

The right adrenal gland is also contiguous to the retroperitoneal mass, however a major portion of the gland presents normal shape and contour. The gland measure approximately 0.9cm thickened. The left adrenal gland is normal in contour and shape, measures approximately 0.9cm thickened.

**INVOICE**

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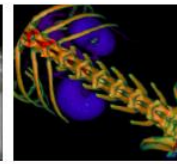
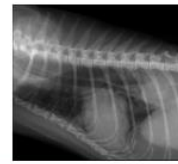
The spleen is diffusely enlarged, mildly heterogeneously enhancing in attenuating, with normal shape, convex borders.

The renal silhouettes are normal in size, shape, contour, and attenuation. The renal length is 4.5cm in the right kidney and 5.0cm in the left kidney. A few small hypoattenuating cysts are seen at the cortex, bilaterally.

**DATE**

3-23-23

The stomach is mildly filled with gas and homogeneous soft tissue fluid material, and caudally dislocated because of the liver.  
The duodenum and small intestine are nondilated and contain a small amount of fluid and gas.



**PATIENT** The colon contains gas admixed with heterogeneous soft tissue attenuating fecal material.

Patriot Carbone The mesenteric and retroperitoneal fat is normal.  
The pancreas is unremarkable, also caudally dislocated.

**SPECIES** Other abdominal lymph nodes are unremarkable.

Canine The urinary bladder is moderately filled, with the apex in the plane of L5, is homogeneously soft tissue opaque.

**BREED** The prostate is reduced in size, hypoplastic.

Boston Terrier

**THORAX**

**SEX** The trachea is normal.

Neutered Male The lumen of the lobar bronchus to the left cranial lung lobe is mildly reduced, collapse (grade 1/3). A mild ground glass attenuation is seen on the peripheral border of the left cranial lung lobe associated with reduced lung lobe expansion. A few multifocal hyperattenuating foci are noted in the subpleural lung fields. The remainder of the pulmonary parenchyma is normal in attenuation. No pulmonary nodules are seen.

**AGE**

11 Years The cardiac silhouette and pulmonary vasculature are normal.

The pleural space and mediastinum are unremarkable. No evidence of enlarged mediastinal lymph nodes.

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**COMPUTED TOMOGRAPHIC DIAGNOSIS**

- Large multilobular heterogeneous hepatic mass with multifocal hepatic nodules, different attenuation; however, the significant mass presents predominately hypoattenuating characteristics. The most severe damage is seen at the quadrate lobe, left medial lobe, & left lateral lobe. Differential diagnosis includes malignant hepatic neoplasia.
- Multiple rounded multifocal hypoattenuating nodular lesions; differential diagnosis includes metastatic nodules, regenerative, or hyperplastic nodules.
- Right sided cranial retroperitoneal mass, contiguous with the right adrenal gland; however, major part of the gland is normal in shape, equivocal adrenal gland mass.
- Diffuse splenomegaly, differential diagnosis includes metastatic infiltration, lymphoid hyperplasia, extramedullary hematopoiesis, and correlated to anesthesia.
- Few multifocal degenerative cysts in the renal cortex.
- Mild bronchial collapse, bronchomalacia of the lobar bronchus to the left cranial lung lobe, with passive atelectasis.
- No pulmonary metastatic disease or mediastinal lymph node enlargement.

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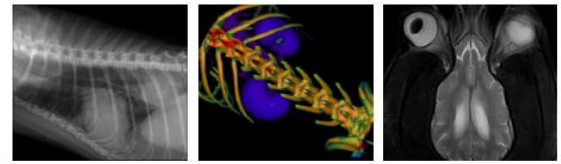
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The differential diagnosis for hepatic neoplasia includes hepatocellular carcinoma, cholangiocarcinoma, round cell neoplasm, or hemangiosarcoma. Less likely benign neoplasm, such as hepatic adenoma, severe hyperplastic lesion. A correlation with the hepatic and retroperitoneal mass is possible; if so, a retroperitoneal hemangiosarcoma or other sarcoma is considered—equivocal correlation with the retroperitoneal mass and the right adrenal gland.

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**PATIENT** No evidence of peritoneal effusion. A fine needle aspiration and/or biopsy is required for diagnosis. The position of the larger liver mass could affect the resectability.

Patriot Carbone

**SPECIES**

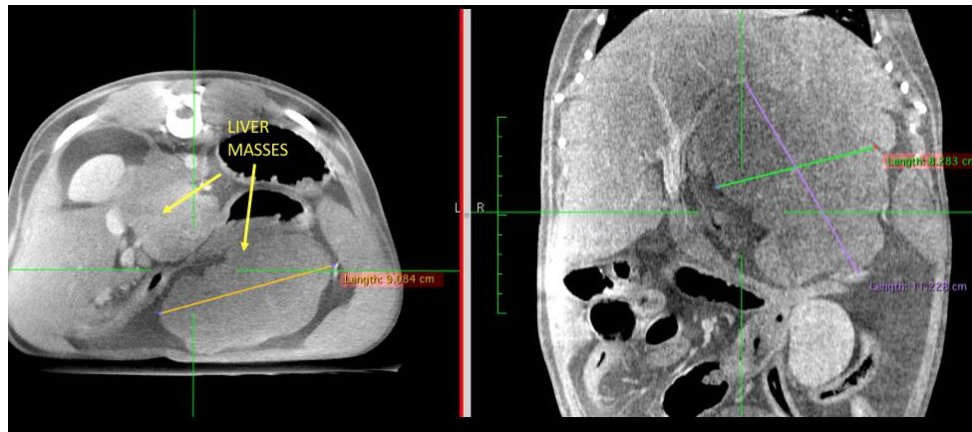
Canine

**BREED**

Boston Terrier

**SEX**

Neutered Male

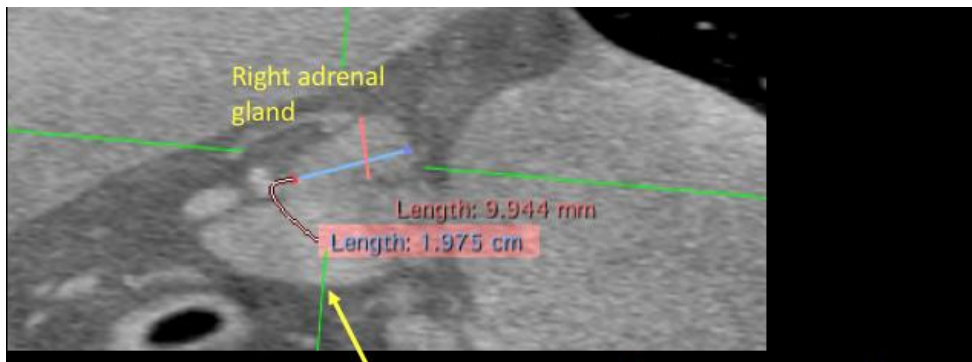


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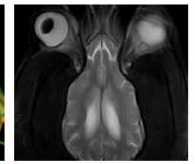
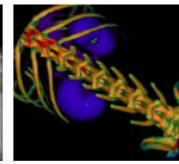


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**PATIENT**

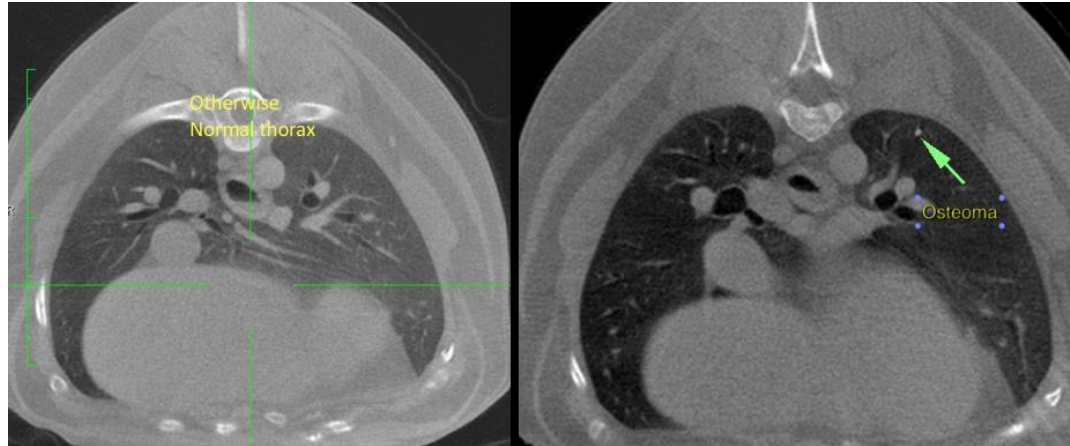
Patriot Carbone

**SPECIES**

Canine

**BREED**

Boston Terrier



**SEX**

Neutered Male

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.

**AGE**

11 Years

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.

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