

**DATE PRESENTING CLINICAL SIGNS**

6/15/22 Has been panting a lot at home even when it's not hot outside. Has been ongoing a couple of weeks now. PE: C/L: wnl, slight potbelly appearance to abdomen, bilateral stifle crepitus. LDDS normal

PATIENT

Ash Stevens Current Medications: None.
Lab Results: 5/30/22: CBC- NSF. Chem 27: Ca (H) 11.9, TP (H) 7.7, Alb (H) 4.2, Alkp (H) 1,014. UA: Free catch, USG: 1.008, protein: 2+. 06/06
LDDS Pre cortisol 2, 4hr post cortisol 0.3, 8hr post cortisol 0.8
SPECIES Date of Previous IntraPet Ultrasound: No previous.
Canine Sedation: Oral Gabapentin and IV Torbugesic.
Stat Report: Not requested.

BREED**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Catahoula Leopard
Dog

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

SEX

Neutered Male

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

AGE

1/12/11

The right kidney is normal in size (7.88 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

WEIGHT

86 Pounds

The left kidney is normal in size (7.95 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

The right adrenal gland is mildly plump in size (3.55 cm long x 0.80 cm at the cranial pole and 0.88 cm at the caudal pole), shape and contour. A small hyperechoic nodule is noted in the cranial pole of the left adrenal gland and does not cause any capsular swelling or distortion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

IMAGING PERFORMED BY

Stephanie Pearce
RDCS, RVT

The left adrenal gland is normal in size (3.48 cm long x 0.83 cm at the cranial pole and 0.95 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Perry Hall AH

Spleen

Spleen is moderately to markedly enlarged in size with rounded margins but intact capsule. Parenchyma is homogeneously coarse/mottled in echotexture and normal to hypoechoic in echogenicity. No focal nodules or masses are observed. Splenic vasculature appears normal.

REFERRING VET

Dr. Baer

Liver

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

INVOICE

38698

GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy. No evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

- Coarse splenomegaly – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.
- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary depending hyperadrenocorticism vs normal variant.
- Small hyperechoic adrenal nodule in the cranial pole of the left adrenal gland - Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Lesions greater than 2 cm are generally primary adrenal neoplasia (benign or malignant) vs hyperplasia with lesions greater than 4 cm being more predictive of malignant neoplasia. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest hyperadrenocorticism) are most often incidental and should be monitored.
- Hyperechoic hepatomegaly – most consistent with benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible, but considered less likely.
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in

combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

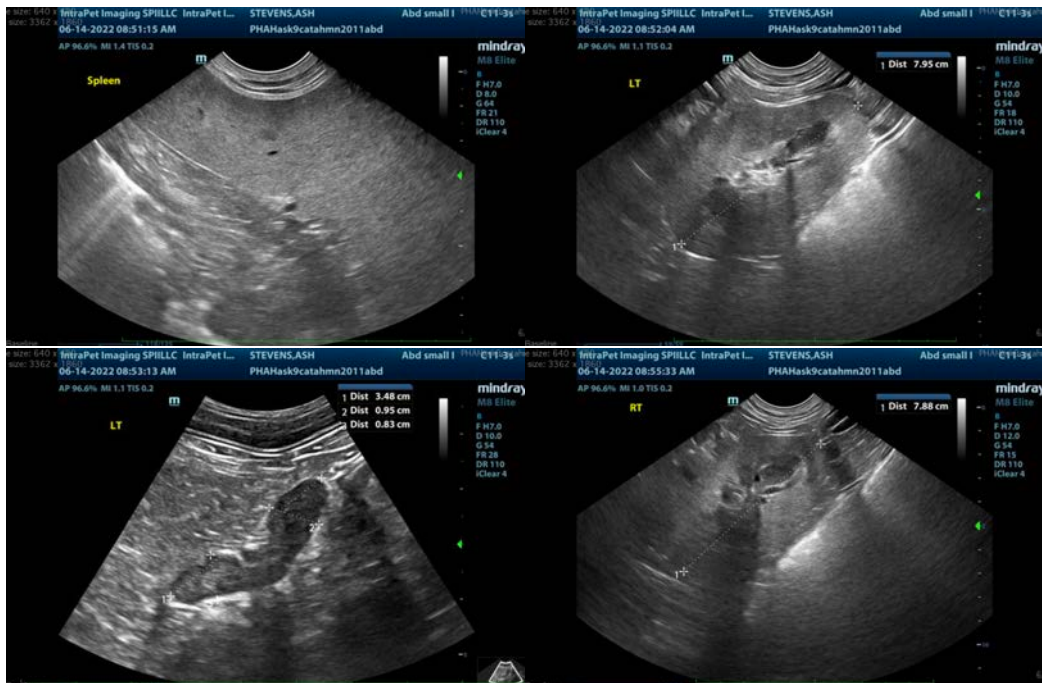
Recommendations are geared in two categories, one given the finding of splenomegaly, and the other towards the reported question of panting.

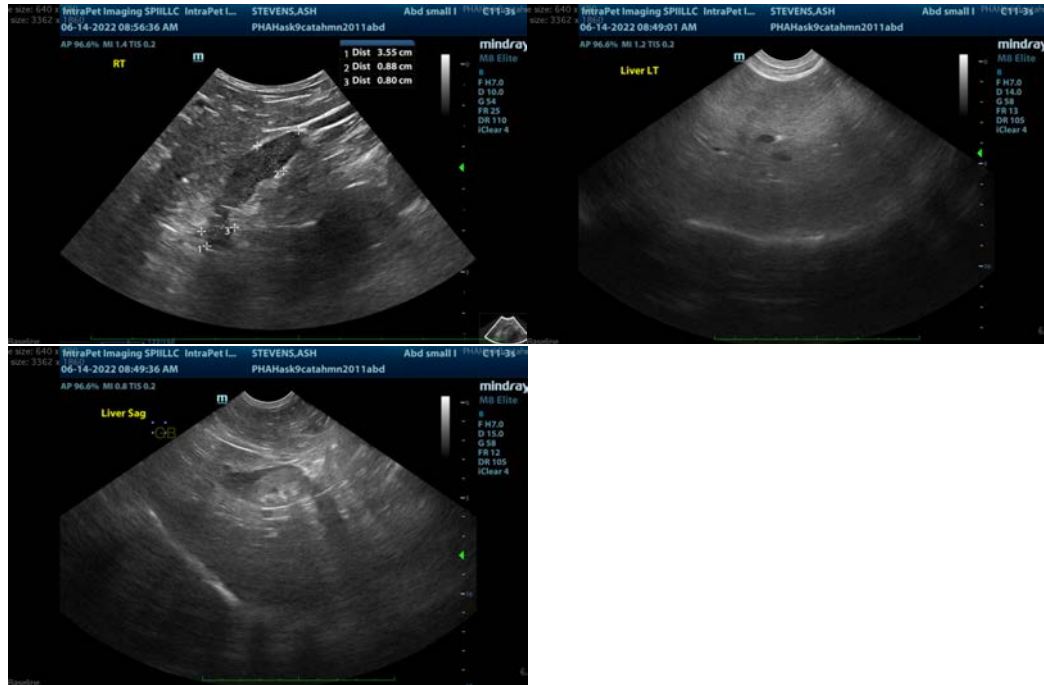
In terms of the splenomegaly, recommendations include 3-view thoracic radiographs for further evaluation of any metastatic disease, which also allows further evaluation of the respiratory tract, given the panting, as well as a fine needle aspirate of the spleen if patient's coagulation status is appropriate.

Given the mild hypercalcemia reported, if that is persistent, a malignancy panel to include PTH/PTHrP and ionized calcium would be recommended, in case this is a hypercalcemia of malignancy, secondary to infiltrative round cell neoplasia. etc.

Regarding the panting, this patient does have some ultrasound findings consistent with Cushing's disease including the bilateral adrenomegaly, the adrenal nodule, the large liver, and the gallbladder debris. Therefore, if there are other clinical signs of hyperadrenocorticism, testing for atypical hyperadrenocorticism with a full adrenal panel/ACTH stimulation test to the University of Tennessee could be considered. In the meantime, a blood pressure is recommended as well as a urine protein to creatinine ratio, given the reported proteinuria, as hypertension can result in panting.

Additionally, other causes of panting such as pain, laryngeal paralysis, etc. could be evaluated.





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.

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