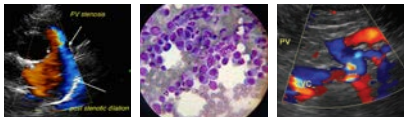
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

1/19/23

PATIENT

Finice Bradley

SPECIES

Canine

BREED

Hound X

SEX

Spayed Female

AGE

6/20/10

WEIGHT

56.4 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Bay Country VH

REFERRING VET

Dr. McLean

INVOICE

44377

PRESENTING CLINICAL SIGNS

1-19-23 – Bay Country Veterinary Hospital – Dr. McLean.
Finice Bradley
Canine Hound Mix 56.4lbs FS 6/20/2010.

Mildly elevated ALKP for years. This year jumped to 781. Newly elevated calcium. PU/PD and losing hair per O.

Current Medications: Occasional use of RImadyl 50mg.
Lab Results: ALP 781 (5-160), Ca 13 (8.4-11.8) (No ionized calcium performed yet due to financial constraints.)
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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.

The right kidney is normal in size (5.54 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.

The left kidney is normal in size (6.12 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.

Adrenal Glands

The right adrenal gland is normal in size (2.08 cm long x 0.82 cm at the cranial pole and 0.73 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is plump/swollen in size (3.14 cm long x 1.27 cm at the cranial pole and 1.24 cm at the caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. However, some parenchymal heterogenicity is present. This change can be normal for this age patient. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size with normal smooth margins. Parenchyma is normal in echogenicity with a coarse/heterogenous echotexture. An approximately 1.0 cm non-capsule disrupting, hypo- to anechoic nodule is noted near the head of the spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as moderate suspended and gravity dependent echogenic debris. 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 free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

No evidence of pericardial effusion or heart base nodules in these images.

ULTRASONOGRAPHIC FINDINGS

- **Left adrenomegaly** – This may represent adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism, or even an adenoma. However, stress versus normal variant cannot be ruled out. A more concerning adenocarcinoma, pheochromocytoma, etc. are possible but considered less likely.

- **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

- **Moderate 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.

- **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.

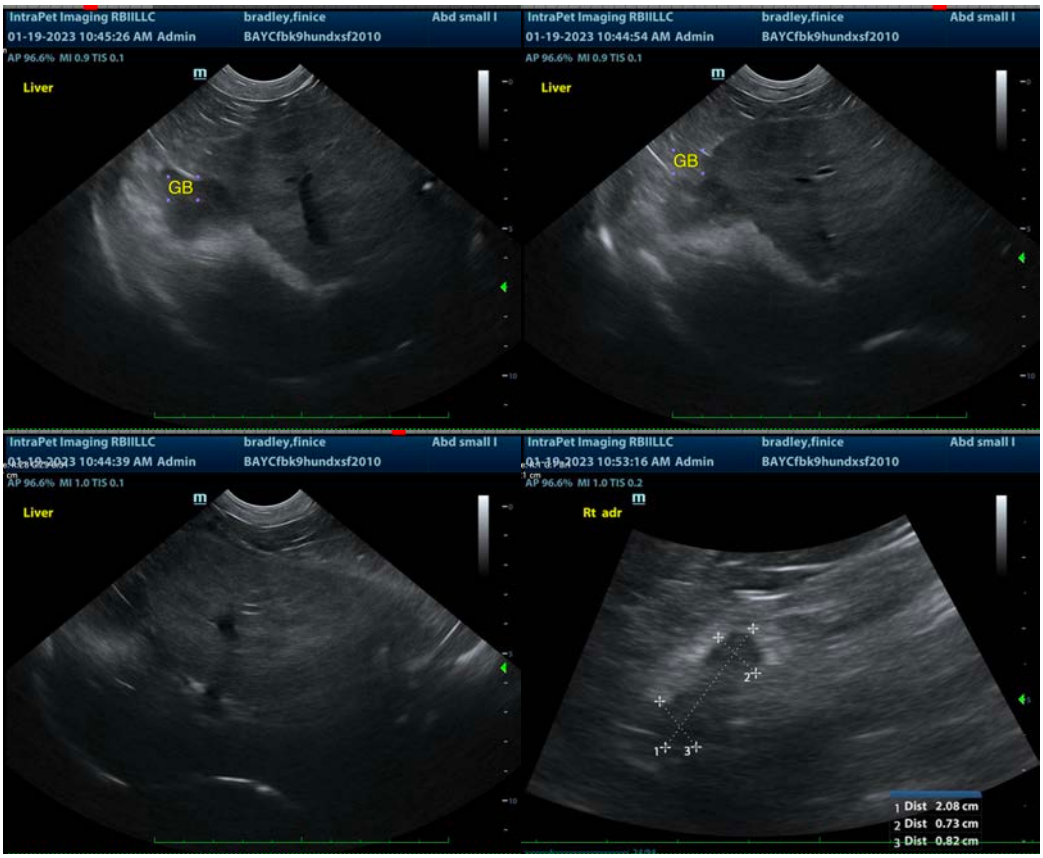
- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

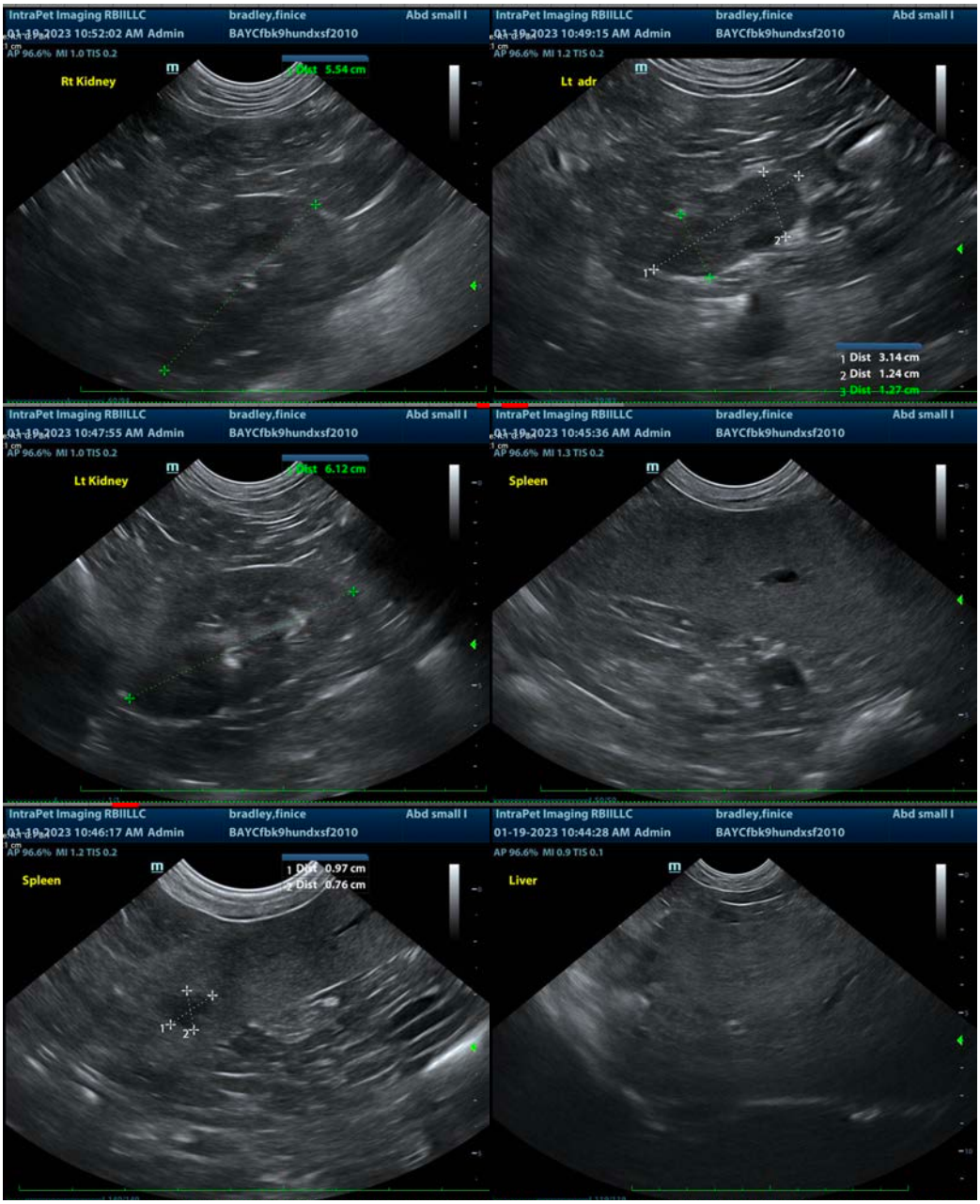
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes described above combined with this patient's historical increase in ALP certainly could represent hyperadrenocorticism. However, hyperadrenocorticism is not typically associated with hypercalcemia, which is likely the cause of the acute PU/PD. Therefore, recommendations include further evaluation of the hypercalcemia first, beginning with a malignancy panel to include PTH, PTHrP, and ionized calcium. After diagnosing the underlying cause and treating the hypercalcemia, if clinical signs of hyperadrenocorticism persist at that time, then testing in the form of a low-dose Dexamethasone suppression test could be considered.

In the meantime, a blood pressure is recommended, as is (if not recently evaluated) a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

The liver and splenic changes described above both trend in appearance toward benign. However, if the PTHrP is suggestive of hypercalcemia of malignancy, fine needle aspirates of both organs could be considered if patient's coagulation status is appropriate. Additionally, a thorough perianal and rectal examination is recommended to further evaluate possible causes of tumors associated with hypercalcemia of malignancy, as is lymph node palpation. At this stage, however, hyperparathyroidism is as likely a differential as hypercalcemia of malignancy.





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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com