

**DATE PRESENTING CLINICAL SIGNS**

11/21/22

History: Diarrhea. Weight loss. Hepatomegaly. Decreased muscle.

PATIENT

Dixie Girl Davis

Current Medications: 11/17 Panacur 6g SID x 5 d, Provable 1 cap SID
Metronidazole 250mg PO BID, Hills i/dLab Results: eos 1778, basophils 381, globulin 3.7, ALT 281, ALP 263
Amylase 1353, O+P none seen**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

BREED

Mixed

Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris in addition to mineral/sand debris and possibly dependent pile of small cystoliths, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

12/28/11

WEIGHT

52 Pounds

Left kidney is normal is size (6.01 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, or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted.

INTERPRETED BYBeth Johnson, DVM
DACVIM

Right kidney is normal is size (6.21 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, or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted.

HOSPITAL NAME

Jacksonville AH

Adrenal Glands

Left adrenal gland is normal in size (2.71 cm long x 0.7 cm at cranial pole and 0.65 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

REFERRING VET

Dr. Burk

The right adrenal gland is plump/swollen in size (2.53 cm long x 1.1 cm at cranial pole and 1.27 cm at caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

INVOICE

18172

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Several slightly <1.0 cm in diameter non-capsule-disrupting hypoechoic nodules are noted. Splenic vasculature appears normal.

Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. A large 10+ x 14+ cm heterogenous, primarily hyperechoic mass is noted in the caudal left liver. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are diffusely mildly thick and demonstrate areas of subjectively thick muscularis layer relative to the mucosa. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

A scant amount of anechoic free fluid is noted near the liver mass. There is no apparent lymphadenopathy.

Other

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Mild right adrenomegaly- consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- Left caudal liver mass concerning for infiltrative neoplasia including round cell neoplasia versus primary hepatocellular carcinoma versus sarcoma. A benign hepatoma/adenoma, marked nodular hyperplasia, etc. can't be ruled out but is considered slightly less likely.
- Inflammatory bowel disease (IBD) pattern - Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out, especially given the concurrent liver changes without tissue sampling.

Secondary Findings

- Urinary bladder debris with mineral/sand
- Nonobstructive nephroliths bilaterally

- Hypo to anechoic splenic nodules – 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

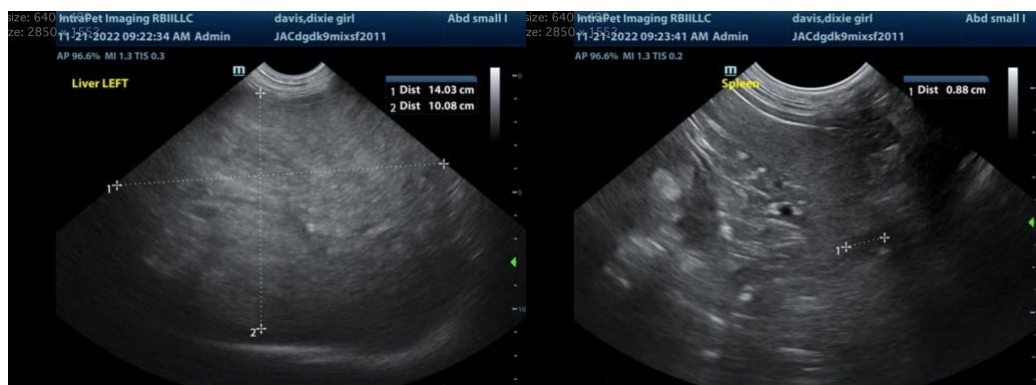
While the liver pathology is significant, the change most likely causing this patient's reported clinical signs of weight loss and diarrhea is the small bowel pathology described above, especially given the concurrent eosinophilia.

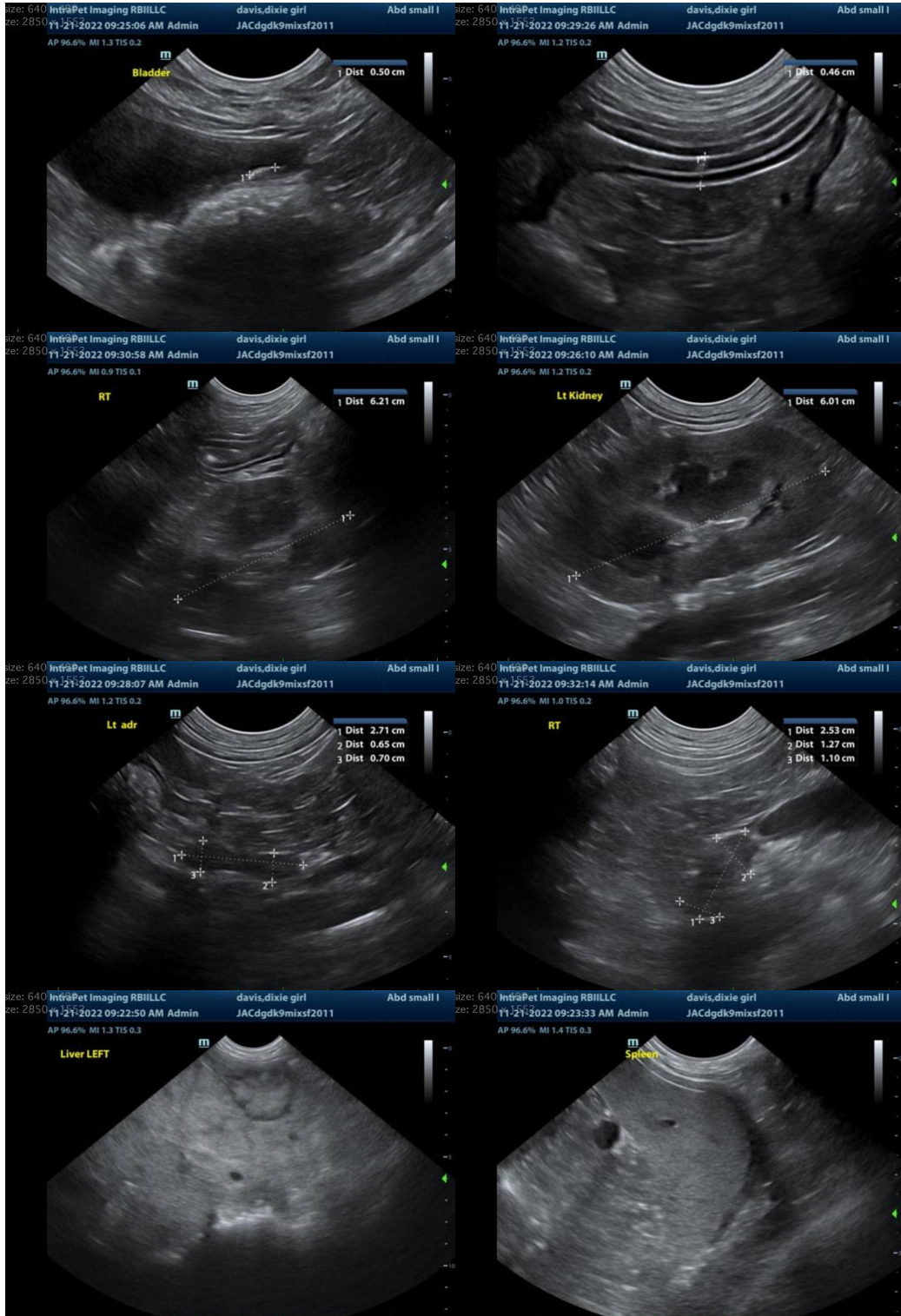
Recommendations include a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ultimately biopsies of the GI tract are recommended to definitively diagnose and therefore manage the infiltrative bowel disease. However, given the concurrent liver pathology, a fine needle aspirate of the liver is also recommended if patient's coagulation status is appropriate. If a diagnosis cannot be obtained cytologically and/or a more direct approach is elected immediately, an exploratory laparotomy could be considered for liver mass removal and full thickness bowel biopsies at the same time. Given the location of the liver mass, it appears resectable, however, given the size, resectability cannot be definitively guaranteed and a presurgical planning abdominal CT scan could be considered.

Prior to surgery (if elected) three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

In the meantime, empirical deworming with a 5-day course of Panacur, which is reportedly already in place, as well as Provable, which is reportedly already in place, as well as transition to a hydrolyzed protein diet could all be considered.





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.

Beth Johnson, DVM DACVIM

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