**DATE PRESENTING CLINICAL SIGNS**

8/23/23 Worsening PU/PD, now hyposthenuria, with proteinuria. Hypothyroidism. Lethargy. Increasing weight gain.

PATIENT

Bear DiCarlo

Current Medications: METRONIDAZOLE 100MG/ML 1OZ ORA 6/30/2023, Cerenia Injection 10mg/ml 6/30/2023, Thyroxine 0.1mg tablet 6/29/2023, Interceptor Plus 8-25 LBS (6ct) 3/6/2023, NEXGARD 04-10 LBS ORG 3 MONTH 3/6/2023, Meloxicam 1.5mg/ml per ml 3/6/2023, Buprenorphine 0.5mg/ml (per ml) 3/6/2023

SPECIES

Canine

Lab Results: Mild increase ALT/ALP, Low urine specific gravity with UP:C of 3.3, Increase PLT, Increase Chole

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Stephanie Warga RDCS, RVT.

BREED

Mixed

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

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.

AGE

2/16/16

The right kidney is normal in size (3.73 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

10.13 Pounds

The left kidney is normal in size (3.77 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

Adrenal glands are mildly plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measures 0.68 cm at the cranial pole and 0.72 cm at the caudal pole. The right adrenal gland measures 0.53 cm at the cranial pole and 0.57 cm at the caudal pole.

HOSPITAL NAME

Everhart Vet Hospital
Cross Keys

Spleen

Spleen is subjectively large 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). No focal nodules or masses are observed. Splenic vasculature appears normal. The spleen is folded upon itself, which is a positional non-pathologic variant.

REFERRING VET

Dr. Maxson

Liver**INVOICE**

44886

Liver is subjectively enlarged (swollen contour) without disruption of architecture. 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 and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as 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.

In the caudal left abdomen, just dorsal to the urinary bladder, there is a 1.0 cm x 0.68 cm homogeneous, iso- to slightly hyperechoic structure.

ULTRASONOGRAPHIC FINDINGS

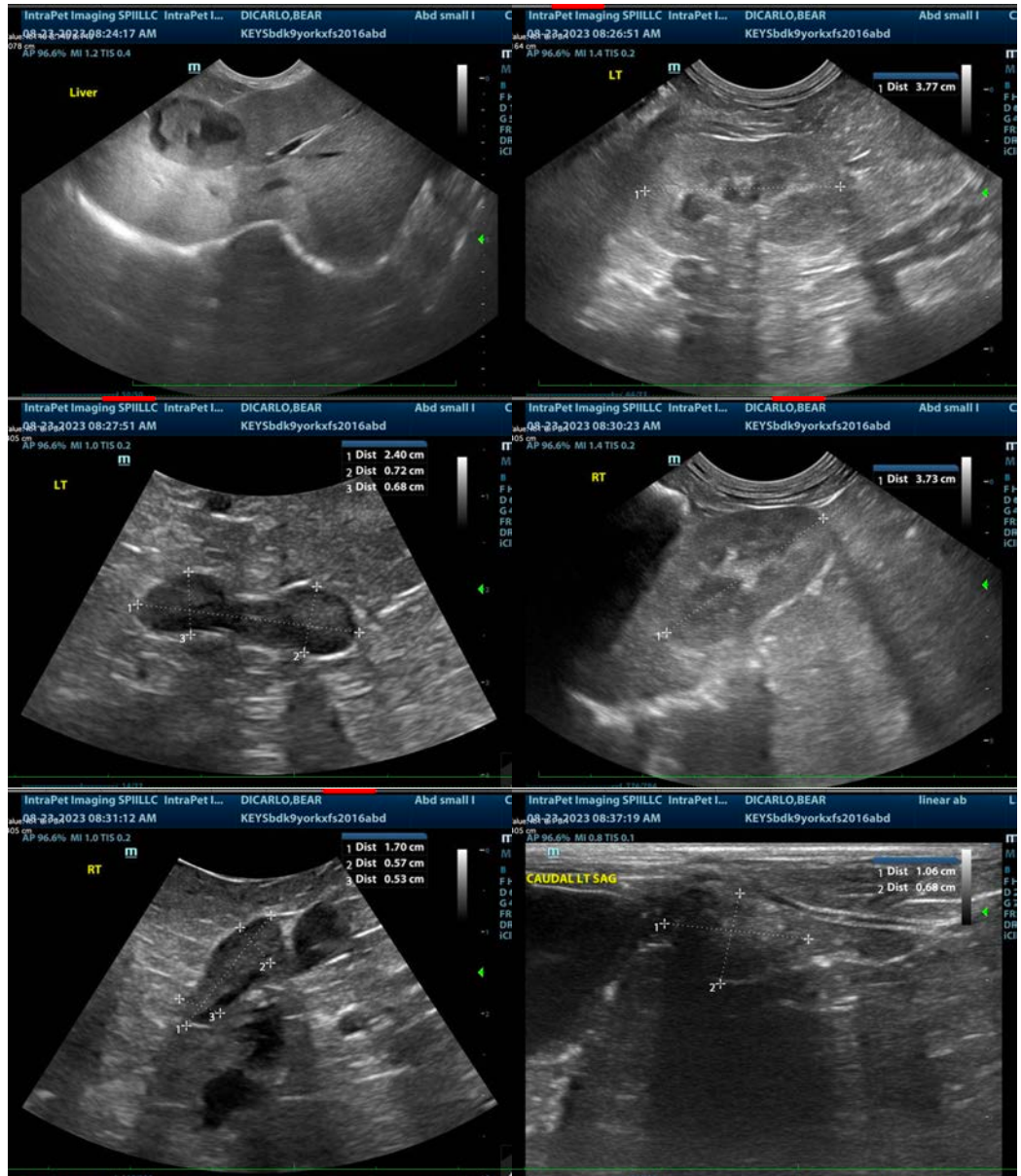
- **Mild bilateral adrenomegaly** – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **Mild 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.
- The structure in the caudal abdomen could be associated with the uterine stump and could represent a granuloma/lipogranuloma versus other likely benign inflammatory nodule. Infiltrative neoplasia is possible considered less likely. Alternatively, this structure could represent a lymph node.

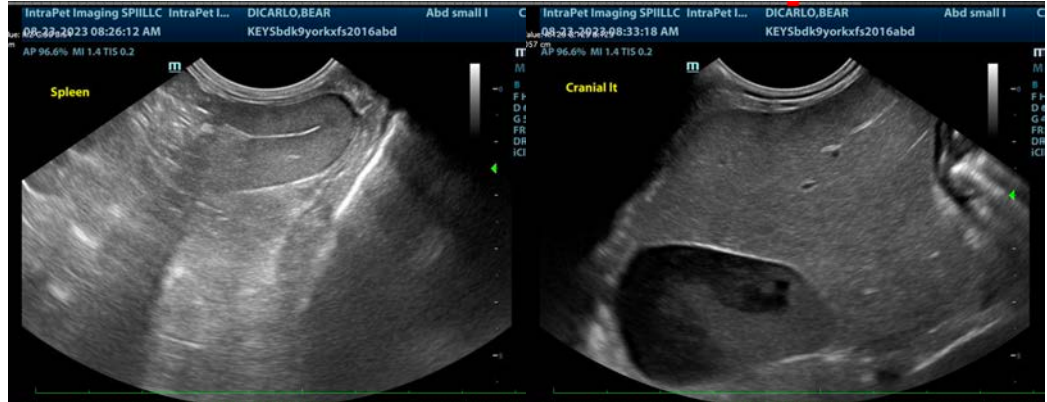
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's ultrasound changes, clinical signs, and the reportedly positive low-dose Dexamethasone suppression test, the adrenal gland changes are most consistent with hyperplasia secondary to pituitary dependent hyperadrenocorticism, and medical management could be considered.

Additionally, if not recently evaluated, a blood pressure is recommended.

Further evaluation of the caudal abdominal structure could include either a fine needle aspirate if patient's coagulation is appropriate or routine monitoring to help determine progression and future intervention if needed.





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
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