

**DATE PRESENTING CLINICAL SIGNS**

7/10/23

History: Dog has history of drinking a lot of water. and distended abdomen. liver values elevated on blood work last week; alk phos and GGT.

PATIENT

Lucy Morgan

Current Medications: no meds- on and off vetprofen.

Lab Results: alk phos 818, GGT 24. u/a sg 1012, protein +2, rest of sediment inactive.

Date of Previous IntraPet Ultrasound: No previous.

SPECIES

Canine

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

BREED

Yorkshire Terrier

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes or echogenic sediment are observed. A 0.47 cm in diameter cystolith is noted along the dependent wall. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

7/6/12

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. Left kidney measures 4.06 cm. Right kidney measures 4.49 cm. Tiny bilateral cortical cysts and nonobstructive dystrophic mineralization is noted bilaterally.

WEIGHT

9.5 Pounds

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. Left adrenal gland measures 0.86 cm at cranial pole and 0.83 cm at caudal pole. Right adrenal gland measures 0.89 cm at cranial pole and 0.85 cm at caudal pole.

INTERPRETED BYBeth Johnson, DVM
DACVIM**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). No focal nodules or masses are observed. Splenic vasculature appears normal.

HOSPITAL NAME

PetVet of Clarksville

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Additionally, there are several cystic lesions throughout the parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

REFERRING VET

Dr. Martof

INVOICE

23306

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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. 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 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

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- 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.
- 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.

Secondary Findings

- Age-related kidney changes with tiny cortical cysts and nonobstructive dystrophic mineralization
- A small urinary bladder cystolith, which is likely small enough to pass on its own.

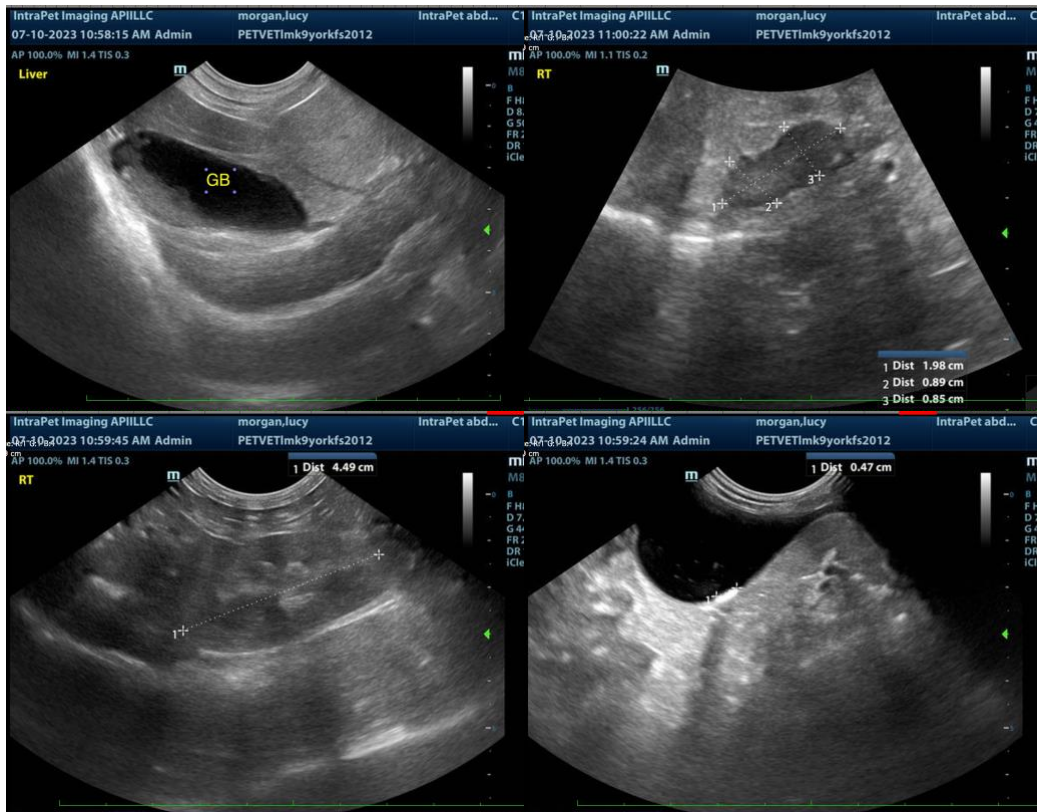
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

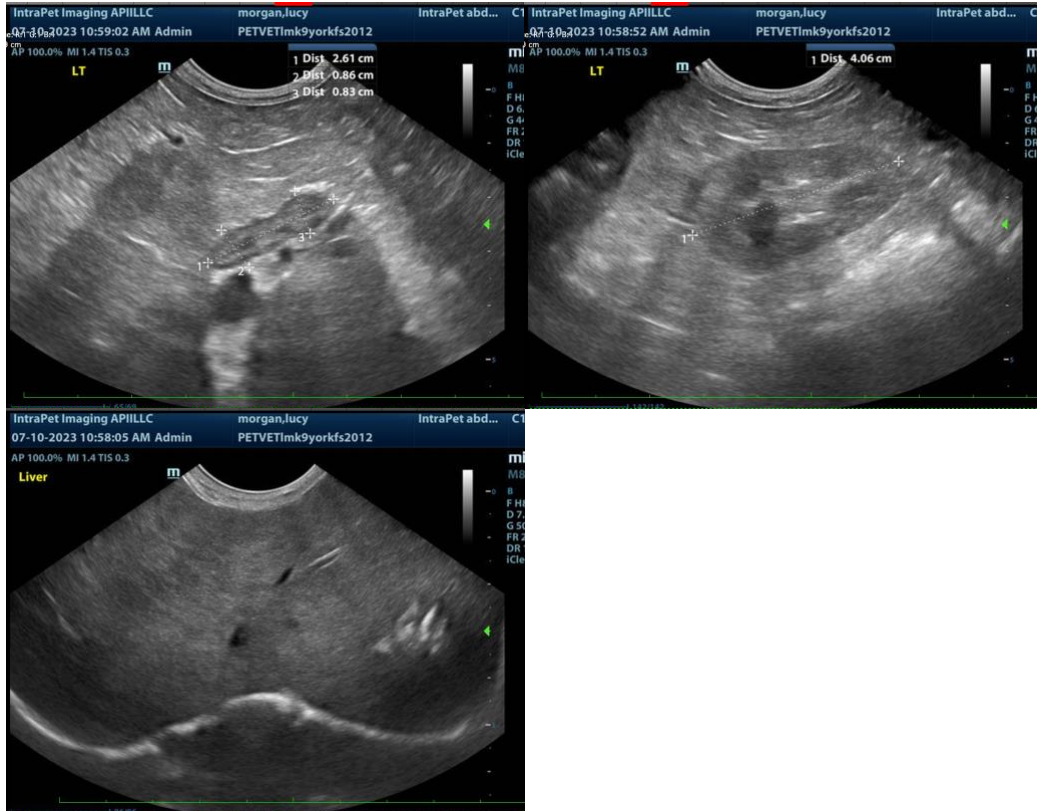
The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. Given the reported clinical signs also suggestive of hyperadrenocorticism, further testing is recommended: A LDDS test is warranted.

If a LDDS test has been evaluated with a normal result, investigation of possible atypical hyperadrenocorticism with a full ACTH stimulation adrenal panel to the University of Tennessee could be considered.

If not recently evaluated, blood pressure is recommended.

Additionally, if not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture is also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.





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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