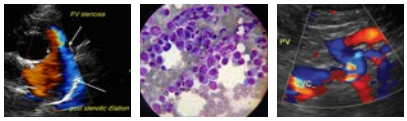
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

DATE

7/13/22

PATIENT

Cody Grabill

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

6/1/07

WEIGHT

10.68 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Westminster VH

REFERRING VET

Dr. Hall

INVOICE

39473

PRESENTING CLINICAL SIGNS

Pet diagnosed with diabetes 4/28/22. At that time pet was experiencing weight loss, PU/PD and a plantigrade stance in the hindlimbs. Owner opted to start with diet at first but switched to diet and insulin 6/13/22 when pet continued to show no improvement. Since then pet has continued to have uncontrolled diabetes and continues with weight loss. fPL received 7/10/22 stating pancreatic inflammation. Patient started on supportive care for this.

Current Medications: Lantus Insulin 2.5 Units SQ BID started 06/2022. Gabapentin 50mg upon arrival.
Lab Results: 07/10/22: fPL: 5.7ug/L (0-3.5). 7/6/22: CBC: RBC: 6.76M/uL (7.12-11.46); Glucose: 205mg/dL (72-175); 06/14-06/28: CGM readings--BG consistently in the 400-500s throughout the day
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is moderately distended. It has a normal uniform wall thickness (<0.2 cm). Contents include primarily anechoic fluid combined with suspended echogenic non-shadowing debris within the fluid. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.38 cm) 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 echogenicity and mild loss of corticomedullary distinction. There is no evidence of mineral or infarcts observed. Mild pyelectasia is noted.

The left kidney is normal in size (4.24 cm) 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 echogenicity and mild loss of corticomedullary distinction. There is no evidence of mineral or infarcts observed. Mild pyelectasia is noted.

Adrenal Glands

The right adrenal gland is normal in size (0.41 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.38 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The 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.

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.

The 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. The gallbladder is bilobed, which is an incidental anatomic variant.

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 intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty without evidence of obstruction or foreign material.

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.

PRIMARY FINDINGS

- 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 without tissue sampling.

- Hyperechoic hepatomegaly – consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.

- Gallbladder debris – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness, however, it can also be associated with hepatobiliary disease in cats 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 mild bilateral pyelectasia

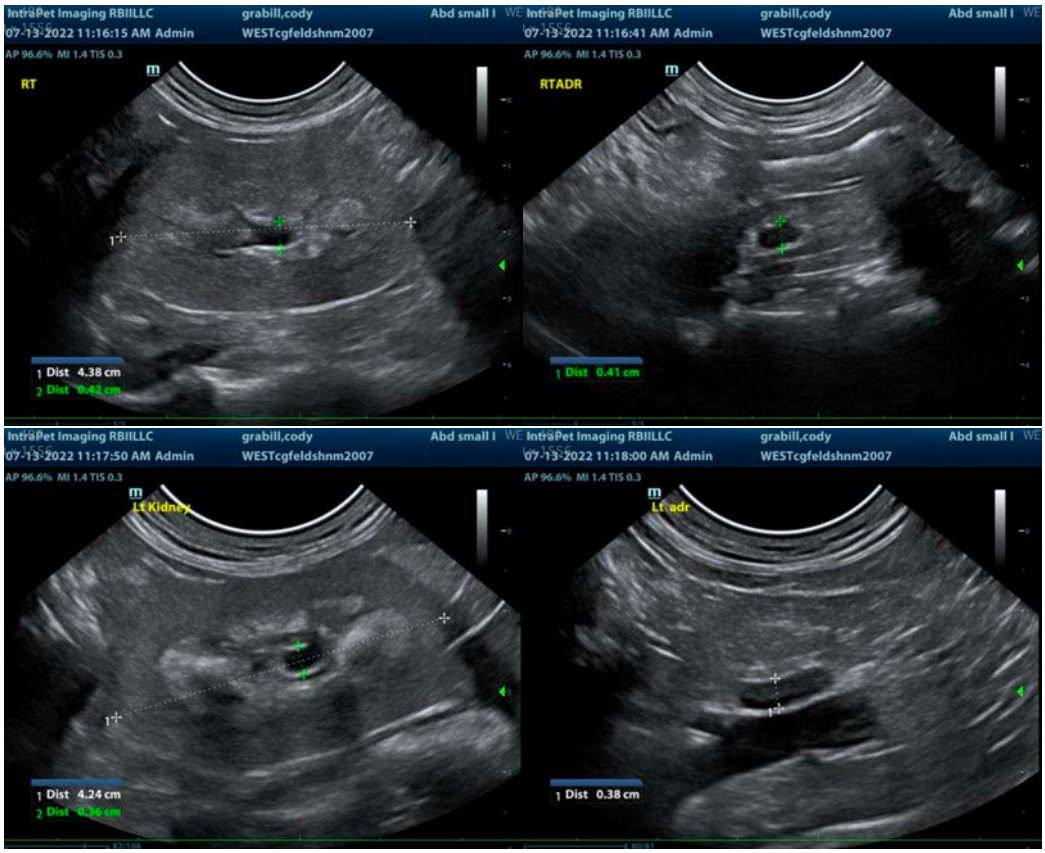
- Urinary bladder debris.

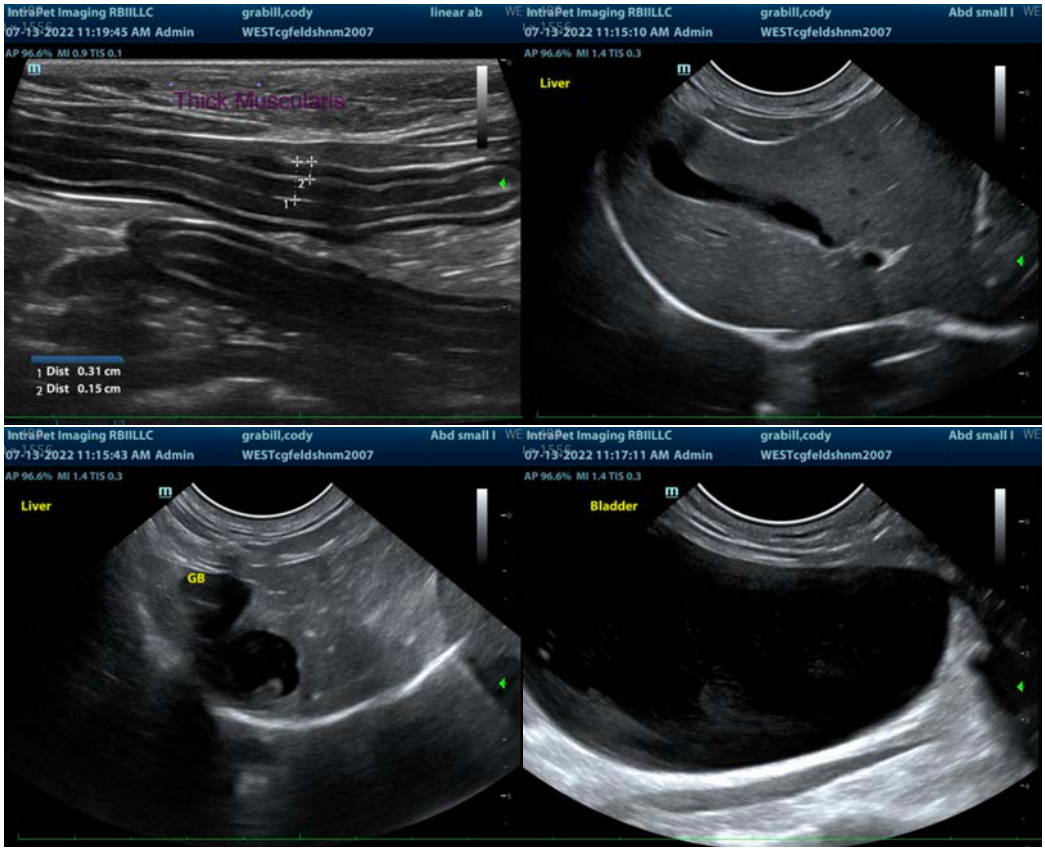
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no ultrasonographic evidence of pancreatitis in these images. However, mild or chronic smoldering pancreatitis can't be ruled out. Given the ongoing weight loss and gastrointestinal changes in these images, 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. Ideally, biopsies of the GI tract, being sure

to include ileum, if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease. Given this patient's concurrent diabetes mellitus, however, the addition of steroids to manage suspected inflammatory bowel disease could make the diabetes more challenging to regulate. Therefore, empirical diet change and/or increasing caloric intake (if tolerated by the patient), cobalamin supplementation, etc. could be considered first.

Urinary tract infection, potentially chronic pyelonephritis is considered differentials for insulin resistance as well, given the pyelectasia. Therefore, a urine culture is recommended, if not recently evaluated. Pyelonephritis can be present despite a negative culture from a cystocentesis. Therefore, empirical antibiotics could be considered despite culture results. Other than managing chronic infection such as a urinary tract infection/pyelonephritis, curing the comorbidities may not be possible, and co-managing them, increasing caloric intake as necessary, increasing insulin as necessary, may be the best management solution.





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