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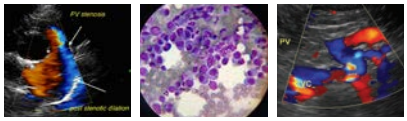

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

9/29/22

PATIENT

Milo Wade

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

5/26/12

WEIGHT

7.18 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Eastern AH

REFERRING VET

Dr. Massanett

INVOICE

41762

PRESENTING CLINICAL SIGNS

Four month history of waxing and waning diarrhea and vomiting. Bloodwork performed 4 months ago showed mild hyperglycemia, leukocytosis and increased SDMA. UA was normal at the time. No improvement on Hill's GI Biome. On PE performed on 9/24/22, patient was underconditioned, had generalized muscle atrophy, palpable gas in abdomen and was mildly dehydrated.

Current Medications: None.
Lab Results: Mild macrocytic normochromic regenerative anemia
Mild hyperglycemia, Moderate leukocytosis characterized by a neutrophilia and monocytosis.
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 adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with incidental suspended lipid in a cat, possibly combined 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.

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 or infarcts observed. The left kidney measures 3.22 cm. The right kidney measures 4.11 cm. Non-obstructive areas of mineralization/nephroliths are noted bilaterally.

Adrenal Glands

The right adrenal gland is normal in size (0.50 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.49 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 (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.

The gallbladder is contracted/small and contains echogenic debris and mineral/sand with a 0.50 cm cholecystolith noted near the neck of the gallbladder. The common bile duct is tortuous and mildly dilated, also contains echogenic debris, and is traced all the way to the level of the duodenal papillae.

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 with no 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

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

Free Abdomen

There is a scant amount of anechoic free fluid noted as well as enlarged mesenteric lymph nodes.

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.

- **Chronic active pancreatitis with some age related remodeling noted as well**

- Cholecystic debris including a cholecystolith and a mildly dilated common bile duct containing debris – consistent with chronic, maybe active acute on chronic cholangitis. This finding should be interpreted in combination with clinical signs and/or laboratory changes to support an active process.

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

- **Scant amount of anechoic free fluid and mesenteric lymphadenopathy** – Differentials include both reactive lymphadenopathy as well as infiltrative neoplasia and cannot be differentiated without tissue sampling.

SECONDARY FINDINGS

- Non-obstructive nephroliths bilaterally in the kidneys

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

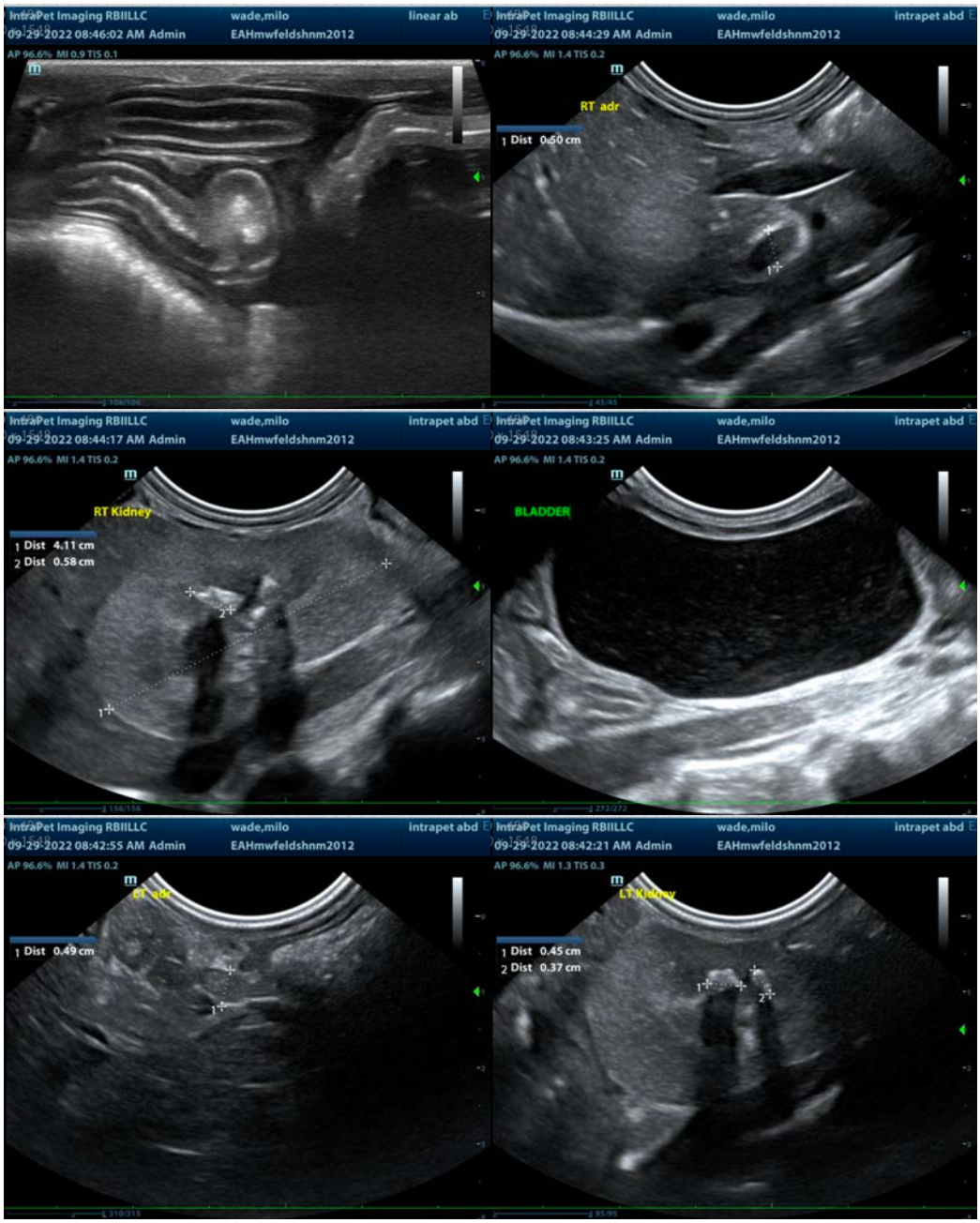
The appearance of this ultrasound is concerning for “Triaditis” involving the biliary system, the pancreas, and the bowel. Recommendations include:

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.

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.

If biopsies cannot be obtained, empirical therapies could include diet change to a hydrolyzed protein diet, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic.

Additionally, if acute or active cholangitis is suspected, empirical broad-spectrum antibiotics as well as hepatic nutraceuticals could be considered. However, if liver enzymes are normal and patient has a comfortable non-painful abdomen, this could be a chronic or incidental, potentially resolved diagnosis.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AP 96.6% MI 1.4 TIS 0.2
RT adr
1 Dist 0.50 cm
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intrapet abd
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AP 96.6% MI 1.4 TIS 0.2
RT Kidney
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2 Dist 0.58 cm
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intrapet abd
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BLADDER
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AP 96.6% MI 1.4 TIS 0.2
LT adr
1 Dist 0.49 cm
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wade,milo
intrapet abd
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AP 96.6% MI 1.3 TIS 0.3
LT Kidney
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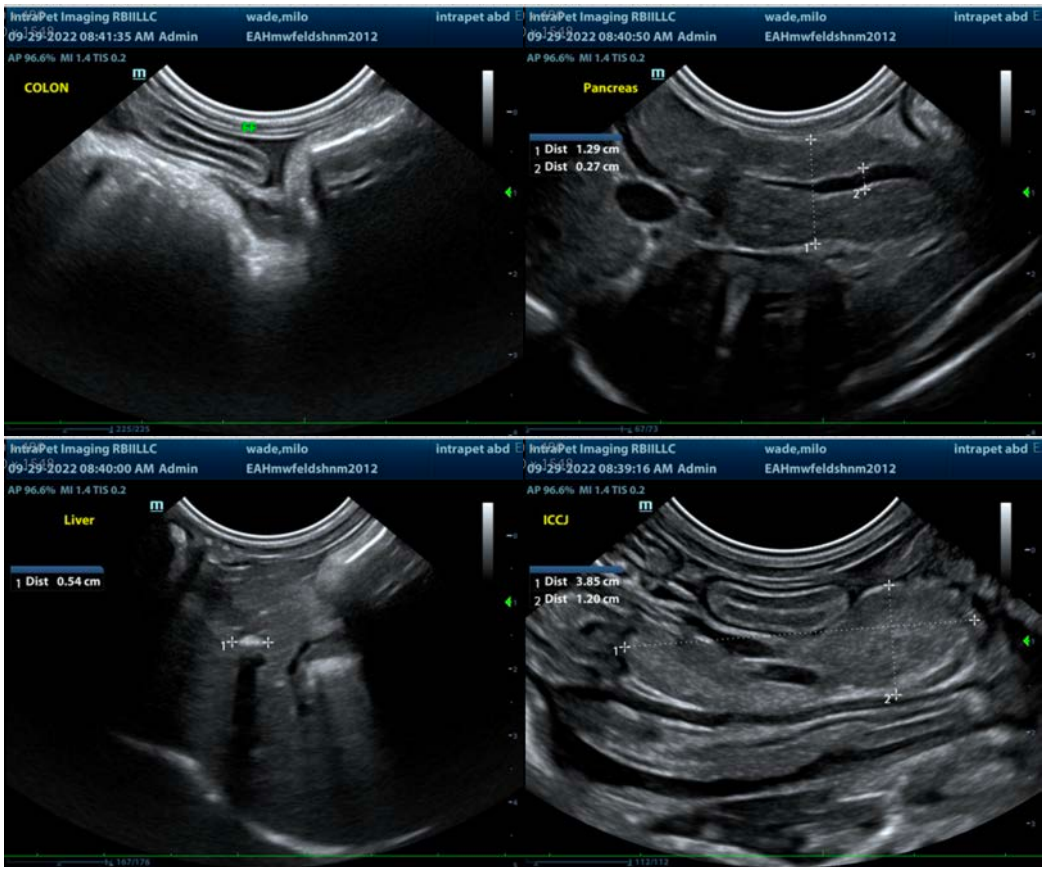
2 Dist 0.37 cm



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.

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