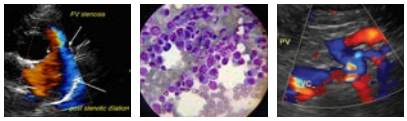
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

8/3/22

PATIENT

Kiwi Thomas

SPECIES

Feline

BREED

Mixed

SEX

Intact Male

AGE

8/1/10

WEIGHT

5.84 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Claws N Paws AH

REFERRING VET

Dr. Singh

INVOICE

40124

PRESENTING CLINICAL SIGNS

Diarrhea and vomiting, voracious appetite, weight loss.

Current Medications: Maropitant 10mg/mL 0.3mL SID #30mL, Cobalequin for cats/sm dogs SID.
Lab Results: Slight elevation in cardiopet and liver enzymes 4/2/22.
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

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size (3.9 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.16 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.29 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.35 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is distended with anechoic intraluminal material. The wall of the gall bladder appears relatively normal. The bile duct is visualized and appears somewhat dilated and tortuous, measuring at approximately 0.35 cm.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal/moderate fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.35, 0.41, 0.31 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a small to moderate amount of anechoic free fluid. There are prominent mesenteric lymph nodes visualized throughout the abdomen. Examples of these measure at 0.53 cm and 0.45 cm. The omentum is diffusely mildly hyperechoic.

ULTRASONOGRAPHIC FINDINGS

- Echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Large, heterogeneous liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Mildly tortuous/dilated bile duct – Dilation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other).
- Subjectively thickened small intestine with prominent muscularis layer – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.
- Small to moderate amount of free abdominal fluid.
- Mildly enlarged mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

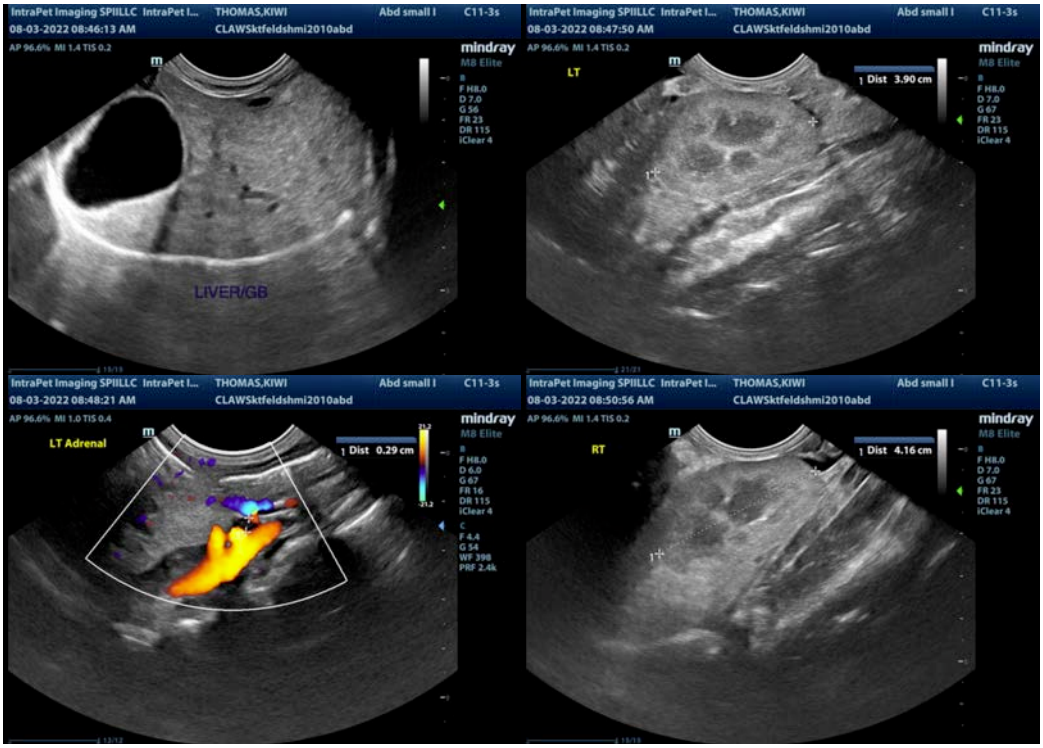
No focal lesions are visualized associated with the liver or gastrointestinal tract. The liver is large and heterogeneous. This is a non-specific finding. Consider a liver function test and a fine needle aspirate of the liver provided coagulation parameters are within normal limits.

The small intestine appears generally mildly fluid distended with a somewhat thickened wall and a prominent muscularis layer. Given the chronic diarrhea, this could be indicative of a primary gastrointestinal issue. Consider such differentials as food allergy/dietary intolerance, dysbiosis, chronic pancreatitis, IBD, and less likely intestinal neoplasia.

- Recommend a novel protein/hydrolyzed protein prescription diet.
- Recommend chronic probiotic therapy.
- Consider a GI panel to Texas A&M for a qualitative fPLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.
- Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.
- If GI signs persist, consider obtaining GI biopsies.

It is unclear if this patient's albumin levels are normal, as there is a small to moderate amount of free abdominal fluid. If low albumin levels are present, recommend the aforementioned liver function test and screening the urine for excess proteinuria, but this would likely be GI in origin. If albumin levels are normal, consider cardiac evaluation.

There are prominent mesenteric lymph nodes visualized throughout the abdomen. This could be a reflection of generalized inflammation, but a fine needle aspirate could be considered to try and rule out round cell neoplasia.

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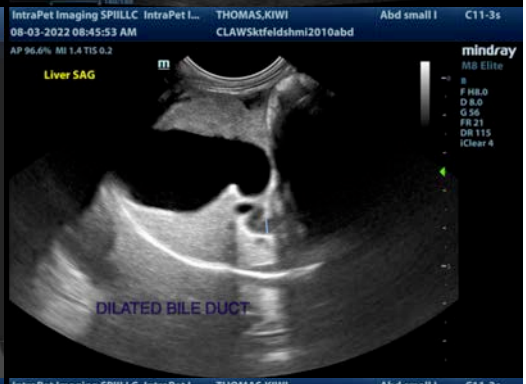
08-03-2022 08:51:27 AM CLAWSktfeldshmi2010abd
RT Adrenal
1 Dist 0.35 cm
mindray M8 Elite

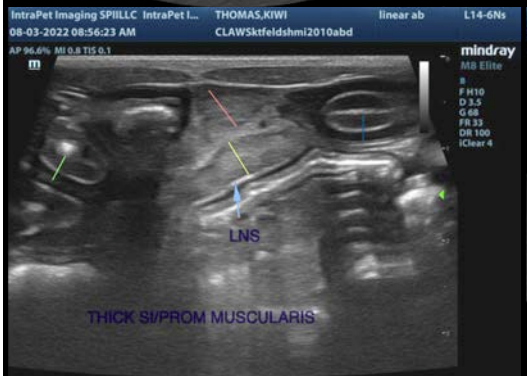

IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI linear ab L14-6Ns
08-03-2022 08:56:23 AM CLAWSktfeldshmi2010abd
1 Dist 1.85 cm
2 Dist 1.11 cm
MES LNS
mindray M8 Elite

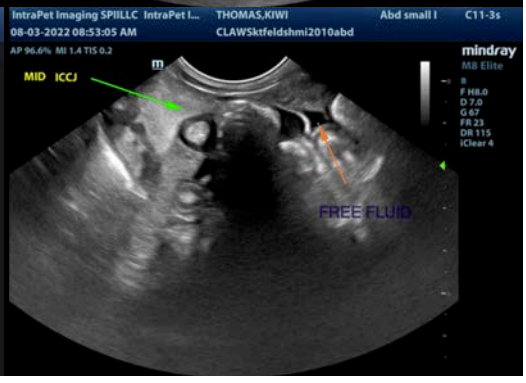

IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI linear ab L14-6Ns
08-03-2022 08:57:16 AM CLAWSktfeldshmi2010abd
1 Dist 0.41 cm
SI-PROM MUSCULARIS
mindray M8 Elite


IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI Abd small I C11-3s
08-03-2022 08:45:53 AM CLAWSktfeldshmi2010abd
Liver SAG
DILATED BILE DUCT
mindray M8 Elite


IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI Abd small I C11-3s
08-03-2022 08:47:35 AM CLAWSktfeldshmi2010abd
Spleen
mindray M8 Elite


IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI Abd small I C11-3s
08-03-2022 08:49:52 AM CLAWSktfeldshmi2010abd
Bladder
mindray M8 Elite


IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI linear ab L14-6Ns
08-03-2022 08:56:23 AM CLAWSktfeldshmi2010abd
LNS
THICK SI/PROM MUSCULARIS
mindray M8 Elite


IntraPet Imaging SPIILLC IntraPet I... THOMAS,KIWI Abd small I C11-3s
08-03-2022 08:53:05 AM CLAWSktfeldshmi2010abd
MID ICCJ
FREE FLUID
mindray M8 Elite

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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