

**DATE PRESENTING CLINICAL SIGNS**

10/26/22 Chronic atopy/skin disease. Significant weight loss.

PATIENT Current Medications: Revolution Plus, Atopica q48h.

Rookie Tereyla Lab Results: CBC WNL. Chem WNL. UA: USG 1.041, pH 6.0, 1+ protein, rare cocci/hpf, 1+ epi cells/hpf- suspect contaminant vs true UTI. Total T4 3.6 (0.8-4.7). Fecal negative.

Date of Previous IntraPet Ultrasound: 3/10/21. See attached.

SPECIES Sedation: IM sedation.

Stat Report: Not requested.

Feline

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED****Urinary System**

DLH

The urinary bladder is moderately distended with anechoic urine. 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 cystic calculi.

SEX

Spayed Female

The left kidney has a normal shape and size (3.4 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

AGE

8/13/14

WEIGHT

8.2 Pounds

The right kidney has a normal shape and size (3.49 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is normal in size measuring 0.48 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.

IMAGING PERFORMED BY

Rachel Brilhart RDMS

The right adrenal gland is normal in size measuring 0.45 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.

HOSPITAL NAME

Taylorsville VC

Spleen

The spleen is borderline large (1.1 cm in width at the level of the hilus) 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.

REFERRING VET

Dr. Peterson

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. There is an area of reverberation artifact suggestive of a small pocket of gas in the parenchyma adjacent to the gall bladder. The visible portions of the vasculature and biliary tract appear relatively normal. No focal nodules or cystic lesions are observed.

INVOICE

42354

The gallbladder lumen is moderately distended. The wall of the gall bladder appears somewhat prominent and hyperechoic, measuring 0.24 cm in thickness. It has a smooth mucosal surface. There is a mild amount of echogenic debris present. The cystic and common bile ducts are visible and mildly dilated. Proximally the cystic duct is measured at 0.24 cm. Distally at the duodenal papilla, the bile duct is measured at 0.38 cm, and some mucoid debris is visible.

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 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. Duodenum wall measures 0.35 cm. Jejunum wall measures 0.28 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 prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid. Prominent pancreatic duct noted at 0.23 cm.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a diffuse mesenteric lymphadenopathy present. A lymph node in the right cranial abdomen measures 0.62 cm in width, and mesenteric lymph nodes measure 0.41 cm and 0.47 cm in diameter. The omentum is generally of normal echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Borderline enlarged spleen – The parenchyma appears relatively normal and there is no focal lesions. This could be within normal limits for this individual.
- Mottled, prominent pancreas with prominent pancreatic duct – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Focal hyperechoic area with reverberation artifact adjacent to the gall bladder concerning for a possible intrahepatic gas-findings could be consistent with an early pocket of infection (gas producing bacteria).
- Hyperechoic, somewhat thickened gallbladder wall with a prominent, mildly dilated bile duct – Findings could be consistent with current cholecystitis or previous episodes of cholecystitis.
- Prominent muscularis layer to the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.

- Mild mesenteric lymphadenopathy – 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

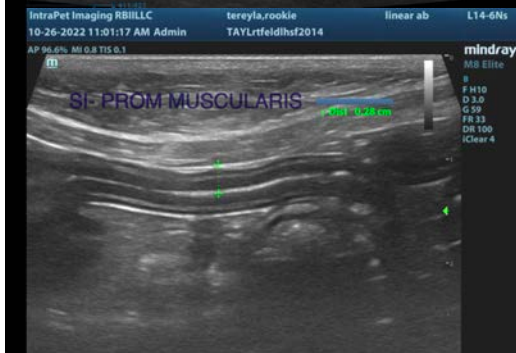
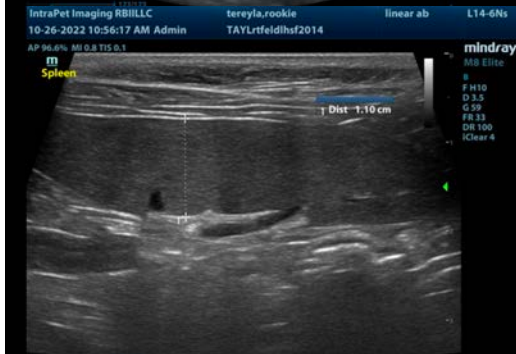
There are numerous mild lesions visualized on today's exam. Some of these may not be clinically relevant. For example, the spleen measures somewhat thickened on today's exam, but this was the case on the previous ultrasound from 3/21, and is likely normal for this individual.

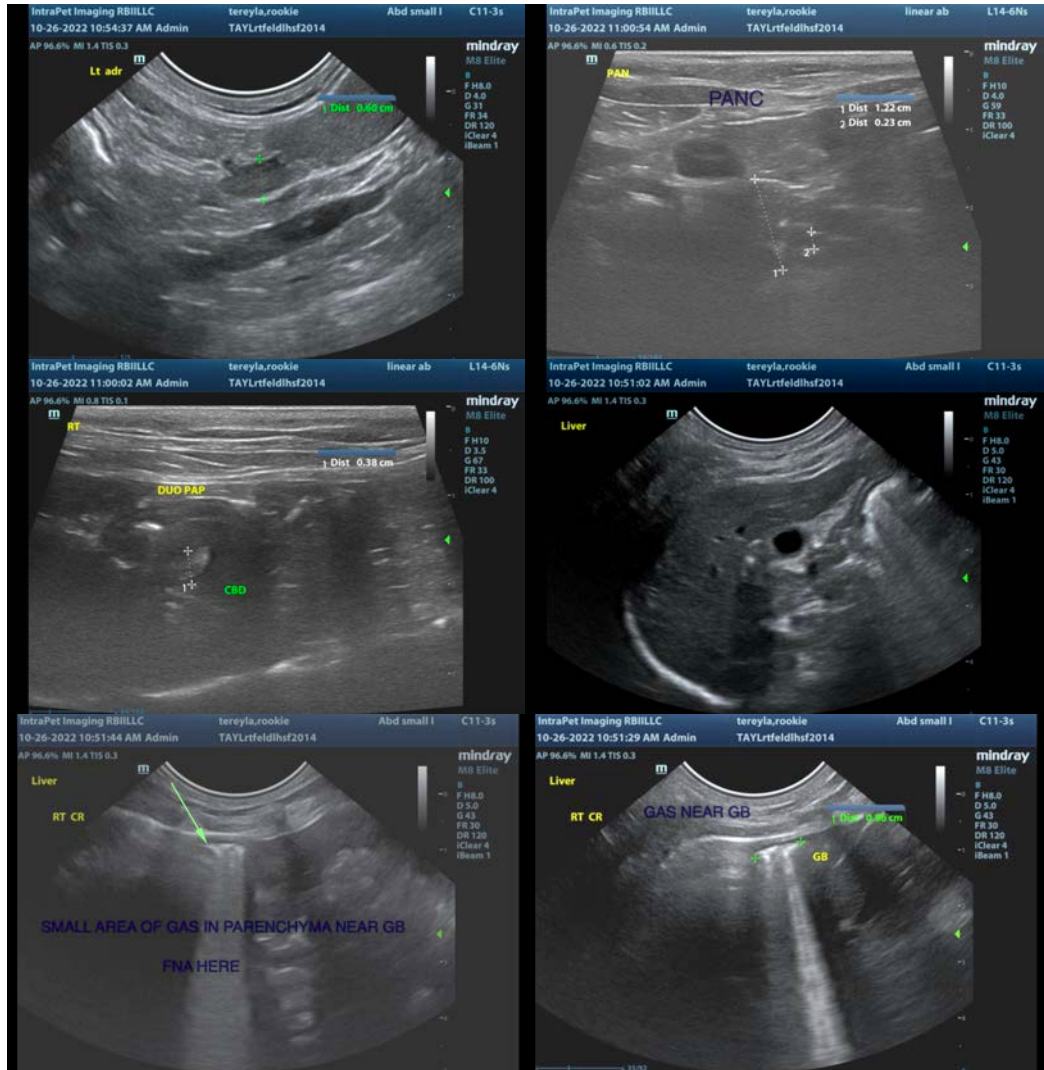
The pancreas appears somewhat mottled and prominent. This is most consistent with either previous remodeling secondary to previous episodes of pancreatic inflammation or due to mild chronic inflammation. Correlate these findings with a quantitative fPLI measurement.

The liver appears mildly heterogeneous and the gallbladder is prominent with a mildly thickened wall, there is an unusual small hyperechoic area adjacent to the gall bladder with reverberation artifact most consistent with trapped gas. This could indicate an early pocket of infection. Consider a fine needle aspiration of this area with sampling for aerobic and anaerobic cultures. The significance of these findings is uncertain, given there are no significant liver enzyme elevations. This could be consistent with cholecystitis, hepatitis etc.. The gas appears to be outside of the gall bladder. A contrast CT scan could be considered to evaluate this area more definitively.

There is a prominent muscularis layer of the small intestine and prominent mesenteric lymph nodes. This could indicate some level of underlying GI disease, which could be attributed to the weight loss. Consider such differentials as dietary intolerance/food allergy, dysbiosis, chronic pancreatitis, IBD, intestinal neoplasia, etc.

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Consider chronic probiotic therapy.
- Consider a fine needle aspirate of a mesenteric lymph node
- Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.
- If symptoms persist or progress and GI disease is thought likely, then consider obtaining GI biopsies.





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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