

**DATE PRESENTING CLINICAL SIGNS**

7.10.2022

Presenting Complaint: Icterus (Jaundice). Inappetence. Vomiting.

PATIENT

Milo Shiloh

History: Date: 07-09-2022 Notes: ATO: went to get boosters with rDVM, the next day stopped eating, hiding, and vomited (2 days ago). Went to the rdvm this am, now has jaundice, bw done. Indoor/outdoor. Vaccines were due in April, before this was UTD. No medications. Is on flea and tick preventatives. Unlikely he could have gotten into something. No feces in litter box today, but specks of feces on wall of box, and 2 small urinations Baby fox on property a few days ago, looked ill, animal control came and took care of him. Very unlikely that Milo interacted.

SPECIES

Feline

Assessment: Icterus. Anorexia.

BREED

DSH

Current Medications: Maropitant Citrate (Cerenia), Gabapentin, and Pantoprazole (Protonix).

SEX

Neutered Male

Lab Results: Attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

AGE

2013

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**WEIGHT**

17 lbs

Urinary System

The **urinary bladder** is normal in thickness and the mucosal surface is smooth. The bladder lumen is mildly distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 1-2 cm, are normal.

INTERPRETED BY

Andrea Nicastro,
DMV, Diplomate
DACVIM (Small
Animal
Internal Medicine)

The **left kidney** is normal size (4.68 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Mild pyelectasia is present (0.16 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The **right kidney** is normal size (5.44 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Mild pyelectasia is present (0.19 cm in the longitudinal plane). There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

HOSPITAL NAME

Animal Emergency
Hospital

Adrenal Glands

The **left adrenal gland** is normal size (0.49 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The **right adrenal gland** is normal size (0.42 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

REFERRING VET

Dr. Thompson

Spleen

The **spleen** is normal in size (0.87 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

INVOICE

11214

Liver

The **liver** is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative

pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

Gastrointestinal

The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal to mildly thickened (up to 0.27 cm), with a normal layering pattern and appropriate mural detail. There is disruption in the normal 1:3 muscularis: mucosal ratio in most segments. In addition, there is evidence of mucosal fogging in some segments. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

Trace free fluid is observed. A 0.73 cm gastric lymph node is visualized. In addition, several prominent hypoechoic, mesenteric lymph nodes are visualized, the largest measuring 1.22 cm in length. The mesentery surrounding all nodes is hyperechoic.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The prominent abdominal lymph nodes could be consistent with reactive lymphadenitis, lymphoid hyperplasia, or infiltrative neoplasia (i.e., lymphoma).
- The small intestinal wall changes are most consistent with inflammatory bowel disease. There is some potential, however, for emerging lymphoma.
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, lymphoplasmacytic hepatitis, hepatic lipidosis, infiltrative neoplasia (less likely), extrahepatic bile duct obstruction) cannot be excluded.

Secondary Findings

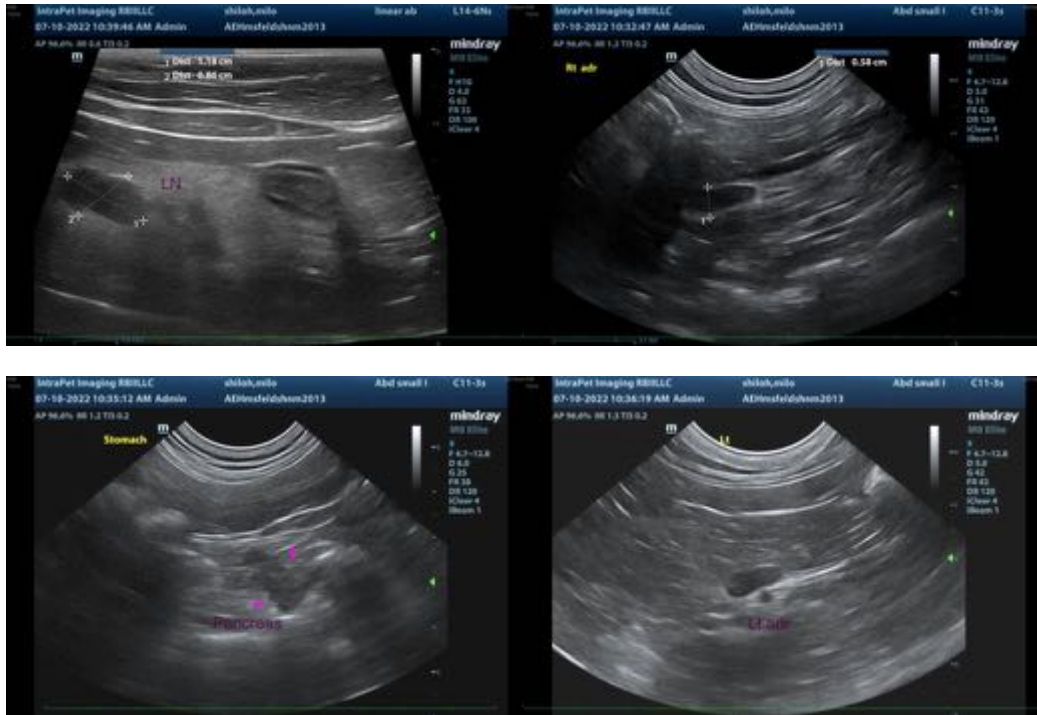
- The pancreatic changes are suggestive of age-related remodeling. Concurrent chronic pancreatitis is also a possibility. Correlation with the patient's clinical history is recommended.
- Bilateral, chronic, nonspecific age-related renal changes
- The pyelectasia may be secondary to age-related remodeling, pyelonephritis, fluid therapy (if applicable) or some combination thereof.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A GI panel (serum cobalamin and folate, TLI and PLI) is recommended.

- Consider a fine-needle aspirate of the liver. Cytologic evaluation of the liver is best for identifying hepatic lipidosis and lymphoma but may be less useful for other hepatopathies. If results are inconclusive, surgical biopsies along with aerobic and anaerobic bile cultures may be necessary to get a definitive diagnosis. If surgery is pursued, gastrointestinal and an abdominal lymph nodes biopsy should also be obtained.
- Fine-needle aspirates of the mesenteric lymph nodes can also be considered, if accessible. However, they may be too small for adequate sampling.
- While awaiting test results, supportive care, including broad-spectrum antibiotics, fluid therapy, gastric protectants (as empirical treatment for bacterial cholangiohepatitis), antiemetics, +/- pain medication (as needed) is recommended. Nutritional support is also recommended to help prevent/treat hepatic lipidosis.
- Also consider thoracic radiographs to assess for cardiopulmonary status, particularly if the patient is to undergo general anesthesia.





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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com