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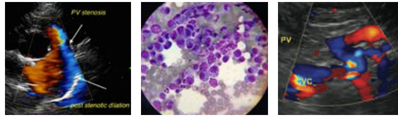

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
6/13/22

PATIENT
Jasmine Lucadamo

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed Female

AGE
4/1/11

WEIGHT
8.4 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

HOSPITAL NAME
North Laurel AH

REFERRING VET
Dr. Steere

INVOICE
30984

PRESENTING CLINICAL SIGNS

Chronic vomiting.
Lab Results: CBC/Chem/T4 March 2022- unremarkable.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Pearce RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is well distended. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra. There is no evidence of sediment, cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 3.24 cm (3.80-4.40 cm), decreased in size. The capsule is smooth. The definition of the cortico-medullary junction is preserved. Very mild mineralization of the pelvis is present, without signs of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 3.58 cm (3.80-4.40 cm); decreased in size. The capsule is smooth. The definition of the cortico-medullary junction is preserved. Mineralization of the pelvis is present, without signs of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.37 cm. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.30 cm No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size 7.1 mm (normal = 10 mm), echotexture, and echogenicity. The capsule is smooth. Presence of a hypoechoic nodule (0.50 cm x 0.35 cm). The nodule has a mildly echogenic centre and hypoechoic periphery. A few other, smaller hypoechoic nodules (1 mm x 1 mm; 3 mm x 3 mm). None of the nodules disrupt the integrity of the splenic capsule. The nodule is not vascularized. No abnormalities are observed with the vasculature of the spleen, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly. The liver's borders are smooth and sharp. It is homogeneous and mildly hyperechoic, i.e., it is isoechoic to the falciform fat. No focal lesions are visualized. The hepatic vessels are within normal limits.

The gallbladder (GB) wall is within normal limits in thickness. Subjectively, it is mildly hyperechoic. A small to moderate amount of inspissated and free floating echogenic material is present within the GB. The cystic duct is mildly tortuous, but not dilated. The portion of the common bile duct observed is not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

A small amount of ingesta, liquid and gas are present in the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

The small intestinal wall thickness varies between the normal reference range to mildly thickened (0.27 cm). The definition of wall layers is preserved, however, the submucosa and muscularis are more prominent than normal, and both fogging and stippling of the mucosa are present. Abnormally dilated loops of bowel are not observed. No abnormalities are noted with the ileocecal colic junction.

The transverse colon is filled with gas.

The colonic wall is not thickened and mural detail is considered normal. Formed stools and gas are present in the colon.

Pancreas

The **left limb** is not enlarged, but mildly hypoechoic. Its contours are smooth. The surrounding mesentery is mildly to moderately hyperechoic. Mild active or a smoldering pancreatitis is suspected.

No obvious abnormalities are observed with the architecture, contours, echogenicity or echotexture of the right limb. There is no evidence of hyperechogenicity of the surrounding mesentery.

Other

Lymph nodes

Mesenteric lymph nodes in the region of the ICCJ are not enlarged, but mildly prominent and hypoechoic. The surrounding mesentery is mildly hyperechoic.

Abdominal effusion is not visualized.

Heart

No obvious cardiac abnormalities are observed. Pulmonary edema, pericardial and pleural effusion are absent.

ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal (GI) tract:** Changes are suggestive of inflammation, such as a chronic enteropathy, for example, inflammatory bowel disease. There are no obvious signs of neoplasia, however, biopsies would be required to exclude it definitively.

- **Mesenteric lymph nodes:** Very mild reactive hyperplasia is suspected.

- **Liver**: *Subclinical cholestasis*, *cholangitis/cholangiohepatitis* cannot be excluded.

- **Gallbladder**: Gallbladder **sludge** is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. Furthermore, (*suppurative) cholecystitis* cannot be

excluded despite the absence of sonographic abnormalities. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or a proton pump inhibitor may be required.

- **Pancreas**: **Left limb**: Subtle changes suggestive of mild inflammation are present. *Smoldering pancreatitis or intermittent bouts of pancreatitis* are suspected.

- *Triaditis* cannot be excluded.

- **Spleen:** Although nodular or lymphoid hyperplasia and extramedullary hematopoiesis are suspected when evaluated with the convex probe, the main nodule has more of a "target lesion" with the linear probe. Therefore, neoplasia cannot be excluded.

- **Kidneys**: The hyperechoic cortices are suggestive may be due to age-related changes. *Glomerulonephritis (GN) or interstitial nephritis (systemic inflammation)*. There are no obvious signs of *pyelonephritis*.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended
A fine needle aspirate of the splenic nodule is suggested. If this is not possible, another option is to recheck the spleen sonographically in 4 to 6 weeks to monitor its evolution. Nodular or lymphoid hyperplasia and extramedullary hematopoiesis often resolve after a few weeks.

Endoscopy and biopsies of the stomach, and both the small and large intestines, even if no history of diarrhea.

A urinalysis to complete the minimum data base.

If negative, consider urine protein: creatinine ratio to exclude proteinuria due to GN.

A TT4, if not performed in March.
A TLI, vitamin B12, and folate may be performed as cats suffering from weight loss, IBD or pancreatitis may suffer from cobalamin deficiencies and exocrine pancreatic insufficiency (EPI). If cost prohibitive, supplementation with vitamin B12 is suggested. However, EPI will not be addressed with supplementation of vitamin B 12 alone

+/- spec fPL to exclude pancreatitis, although it will not change treatment

Analgesia (buprenorphine (0.005-0.01 mg/kg, sublingually, every 8-12 hours) with or without gabapentin. Continue for 3-4 weeks, or longer, as needed.
Treatment of nausea/anti-emetics, whether maropitant (Cerenia), metoclopramide or ondansetron

Small, frequent meals

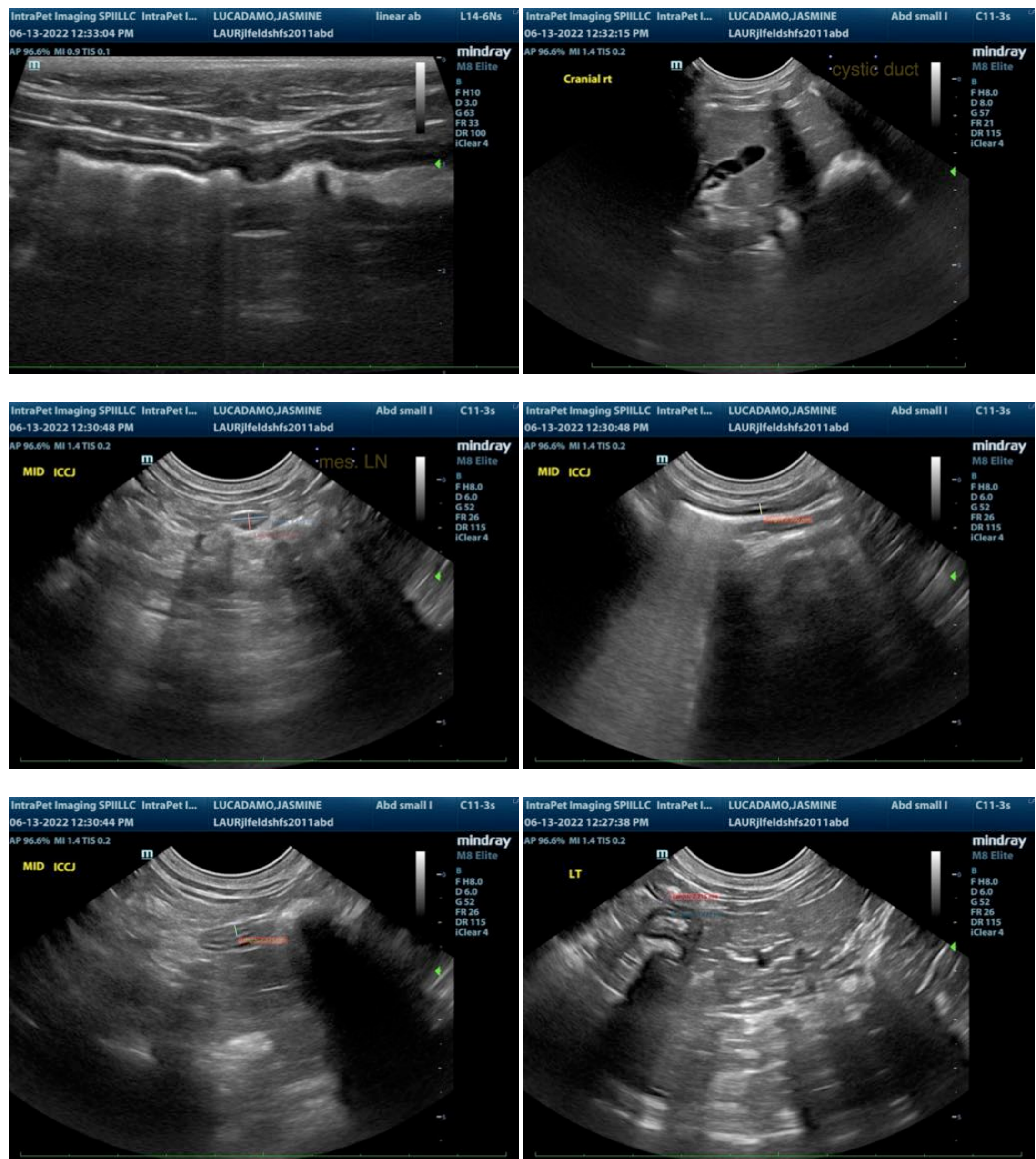
Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor, may be required depending on the history (famotidine or omeprazole (0.7-1 mg/kg PO q12h)).

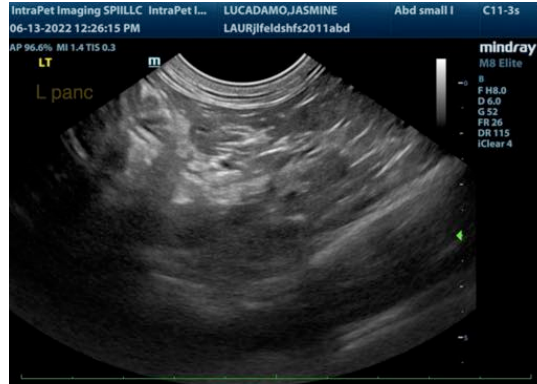
Deworm (if goes outdoors or lives with pets that go outdoors)

+/- diet change (ideally hypoallergenic and/or hydrolyzed). Monitor weight, body condition and muscle condition scores to avoid cachexia and sarcopenia.

Cholangitis/cholangiohepatitis and cholecystitis, including a secondary ascending bacterial infection, cannot be excluded. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic if an improvement is not observed with the above therapies.

If further diagnostics are not pursued, although not ideal, empirical treatment for severe inflammatory bowel disease (or lymphoma) is suggested. For example, prednisolone (1 mg/kg/day), and then tapered to the minimum effective dose.

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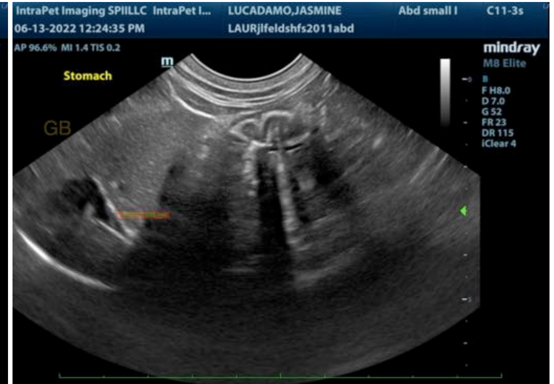
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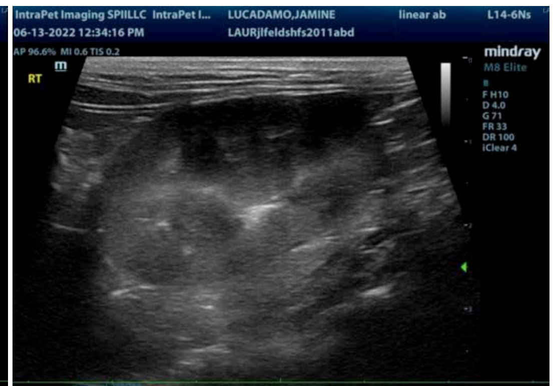
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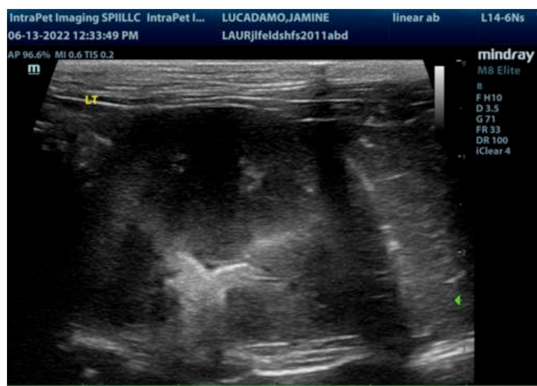
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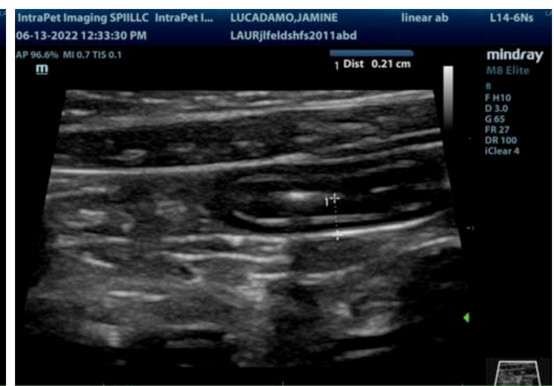
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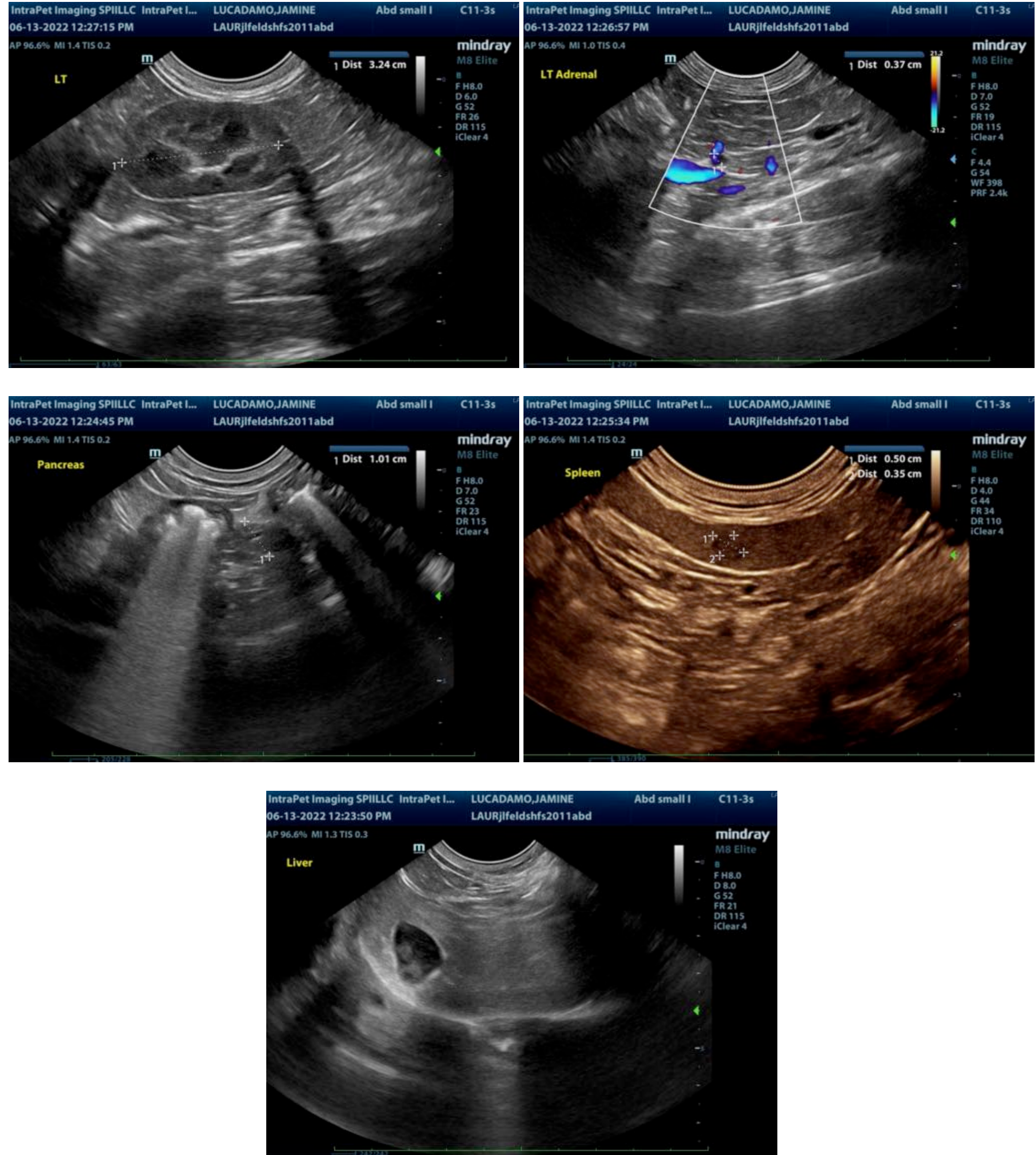

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

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