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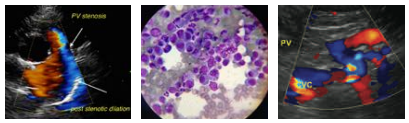

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
6/28/22

PATIENT
JuJuBee Feagans

SPECIES
Feline

BREED
Sphynx

SEX
Spayed Female

AGE
5.14 lbs

WEIGHT
5.14 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

HOSPITAL NAME
Fullerton AH

REFERRING VET
Dr. Unger

INVOICE
31299

PRESENTING CLINICAL SIGNS

Patient presented for exam. Weight loss noted. Pet also has a history of pancreatitis in the past. Also has persistent Eosinophilia on bloodwork. Currently on Hills Science Diet Digestive Health. On exam few scratches on face and yeast otitis notified.
Current Medications: Animax AU bid x 7 days, Zyrtec 1/4 to 1/2 of 10 mg tab sid prn itch.
Lab Results: Eosinophilia 2304 (0-1000).
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. A trivial amount of free floating sediment is present, however, there is no evidence of cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 2.73 cm (3.80-4.40 cm). The kidney is rounded, however, the capsule is smooth. The cortex is hyperechoic, i.e., it is hyperechoic to the spleen. A loss of the normal definition of the cortico-medullary junction is present. Blood flow is within normal limits, despite the abnormalities observed. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is markedly hyperechoic, however, the latter does not appear to be associated with the kidney.

The **right** kidney measures 3.55 cm (3.80-4.40 cm). Findings are similar to the left kidney (the cortex is hyperechoic to the liver).

Aortic bifurcation/trifurcation
No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.52 cm. Subjectively, the gland is “plump” and hypoechoic. Its echotexture is within normal limits. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.41 cm in diameter x 071 cm in length. Subjectively, the gland is “plump” and hypoechoic. Its echotexture is within normal limits. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is at the high end of the normal reference range in size 9.96 mm (normal = 10 mm). It is within normal limits in echotexture and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Mild hepatomegaly is suspected, however, this is better characterized at the time of the ultrasound or radiographically. The liver’s borders are smooth and vary between sharp to very mildly rounded. The liver’s echotexture is homogeneous, however, ill-defined hyperechoic areas, as well as pinpoint hyperechoic foci are

noted throughout the liver. Although the liver is hypoechoic to the falciform fat and surrounding mesentery, subjectively, it appears diffusely hyperechoic. No abnormalities are observed with the hepatic vessels. The mesentery surrounding the liver and stomach is severely hyperechoic.

The gallbladder (GB) wall is mildly thickened (1.3 mm) and hyperechoic. A moderate amount of echogenic material (sludge) is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction. The parenchyma surrounding the GB is not hyperechoic.

Gastrointestinal

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 mesentery surrounding the liver and stomach is severely hyperechoic, however, the latter appears to be associated with the pancreas.

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved, however, fogging of the mucosa and a prominent submucosa are observed. No abnormalities are observed with the ileo-cecal-colic junction. A large amount of gas is present within the GI tract, however, abnormally dilated loops of bowel are not observed.

Gas and ingesta are present within the transverse colon.

The colonic wall is not thickened and mural detail is considered normal.

Pancreas

The left and right limbs and body of the pancreas are markedly enlarged, with irregular contours. They are diffusely and severely hypoechoic. The surrounding mesentery is moderately to severely hyperechoic, i.e., consistent with active pancreatitis. Obvious signs of neoplasia are not appreciated.

Other

Lymph nodes
No abnormalities are observed.

Mesentery
The mesentery in the cranial abdominal quadrants, including the liver, stomach and pancreas, is severely hyperechoic.

Abdominal effusion is not visualized.

Heart
No obvious abnormalities are observed. Pericardial and pleural effusion are not identified.

ULTRASONOGRAPHIC FINDINGS

- Pancreas: High index of suspicion of pancreatitis. Obvious signs of neoplasia are not appreciated.

- **Mesentery**: The mesentery is diffusely hyperechoic, which is suggestive of inflammation, for example, pancreatitis, inflammatory bowel disease (IBD) and possibly underlying cholangitis/cholangiohepatitis.

- **Liver** and **Gallbladder (GB):** Cholangitis/cholangiohepatitis, cholestasis, as well as hepatic lipidosis due to secondary to pancreatitis cannot be excluded. Cholecystitis with a secondary bacterial infection may be present.

- **Gastrointestinal tract**: The intestinal abnormalities are mild, but suggestive of inflammation, such as inflammatory bowel disease, including, eosinophilic inflammatory bowel disease, dysbiosis, etc. Obvious signs of infiltrative disease, such as lymphoma or other round cell tumour, are not evident, however, biopsies may be required to exclude a diagnosis of neoplasia.

- *Severe "triaditis" cannot be excluded.*

- **Kidneys**: Chronic renal disease may be present, in addition to age related degeneration. Pyelonephritis cannot be excluded. Other diseases that may cause severe hyperechogenicity of the cortices include glomerulonephritis and amyloidosis.

- **Urinary bladder**: The free floating sediment within the lumen of the urinary bladder is most likely composed of mucus, crystalline material and exfoliated cells. The debris is likely clinically insignificant given the lack of inflammatory changes to the bladder wall, however, findings should be correlated with clinical signs and a urinalysis. Furthermore, pyelonephritis must be excluded given the renal changes.

- **Adrenal glands**: Adrenal hyperplasia is the most likely cause of the changes observed, however, infiltrative disease, such as lymphoma, may also cause mildly enlarged adrenal glands in cats.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended

A urinalysis and urine culture and sensitivity to exclude pyelonephritis.

A spec fPL, serum cobalamin, and folate to exclude a cobalamin deficiency and/or dysbiosis.

Fine needle aspirates of the pancreas, liver and kidneys may be considered

Analgesia for visceral pain, such as buprenorphine (0.005-0.01 mg/kg sublingually every 8-12 hours) for 10-14 days. Continue for 4 weeks, minimum, if an improvement is noted. The dose and frequency may then be weaned to the minimum effective dose.

+/- gabapentin, in addition to buprenorphine, depending on response to buprenorphine alone.
If signs of gastro-esophageal reflux disease (GERD), consider 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO **q12h**)

Dietary trial (veterinary prescription brand hypoallergenic, i.e., hydrolyzed or novel protein). *Note, additional soluble source of fibre (psyllium) may be required, as hydrolyzed diets are often restricted in fibre.*

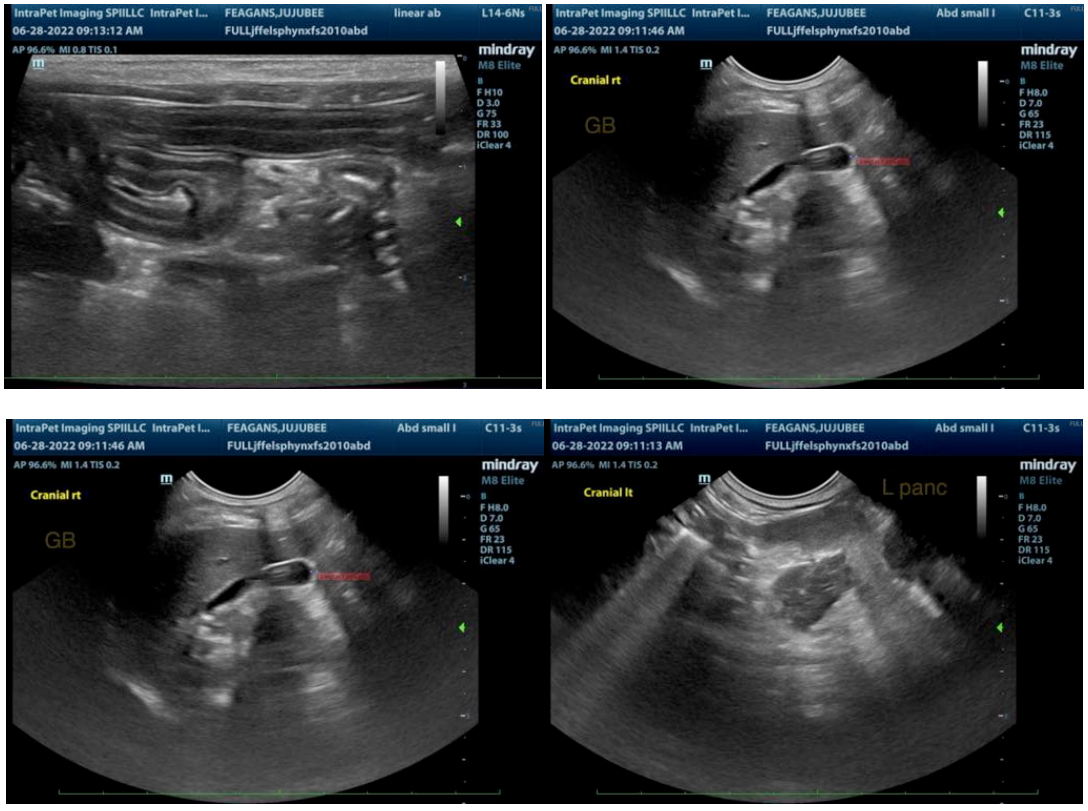
Small, frequent meals

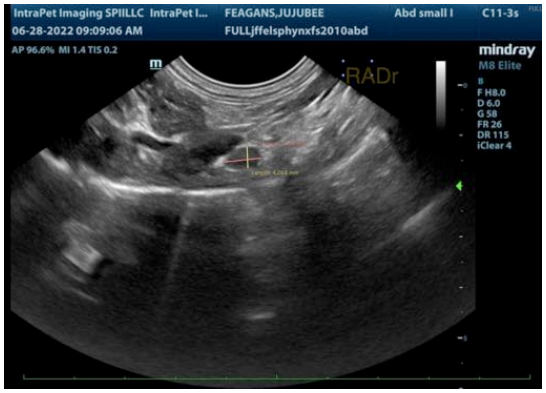
+/- Supplementation with cobalamin, if above tests are not performed.

Deworming with a broad spectrum dewormer, such as fenbendazole, is suggested if JuJuBee goes outdoors or if she lives with other pets that go outdoors.

Cholangitis/cholangiohepatitis and cholecystitis cannot be excluded, including a secondary ascending bacterial infection. 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. Biopsies of the GI tract, pancreas and liver may be considered, depending on JuJuBee's response to the above therapies.

Although not ideal, if further diagnostics are not pursued, empirical treatment with anti-inflammatory doses of corticosteroids (for pancreatitis, IBD, triaditis, etc.) may eventually be pursued depending on response to the above treatment suggestions. For example, a dose of prednisolone (1 mg/kg/day) may be administered for 2 weeks, and then tapered to the minimum effective dose.

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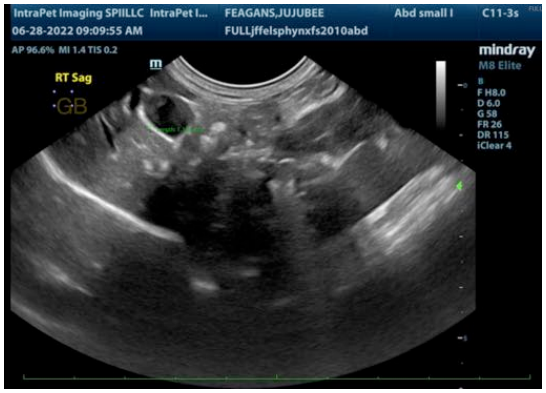
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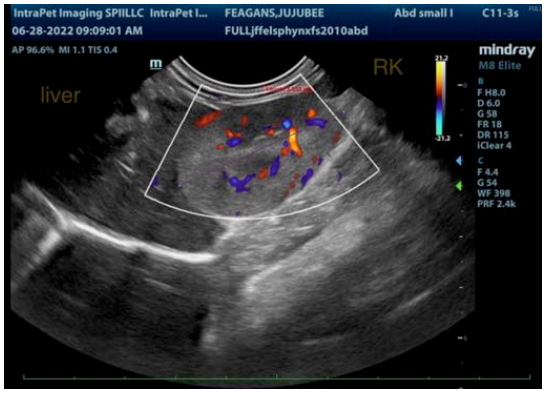
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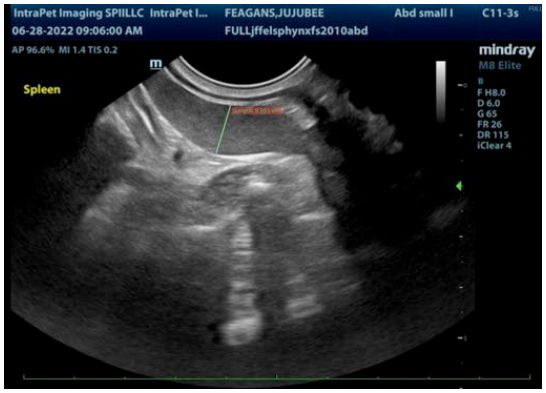
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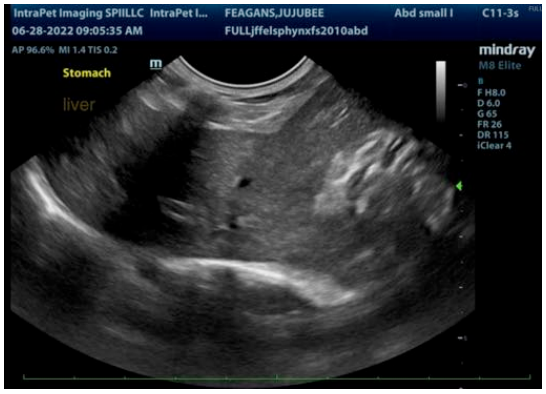
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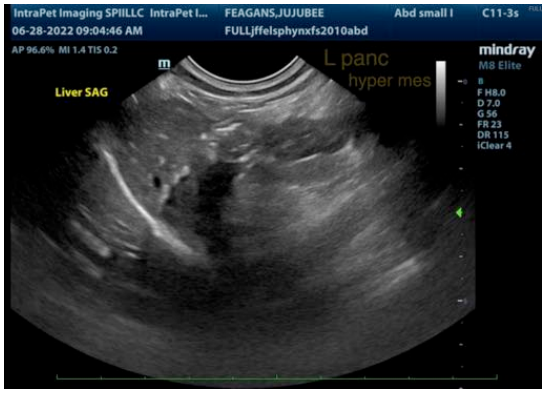
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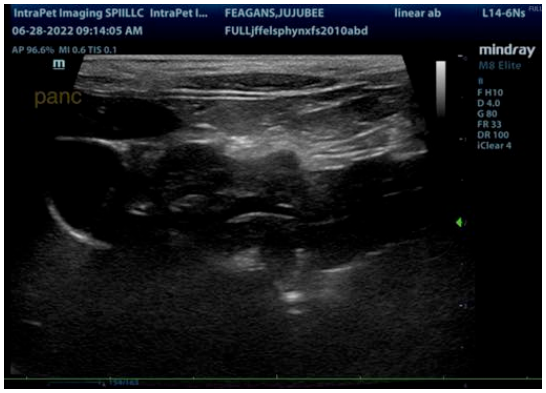

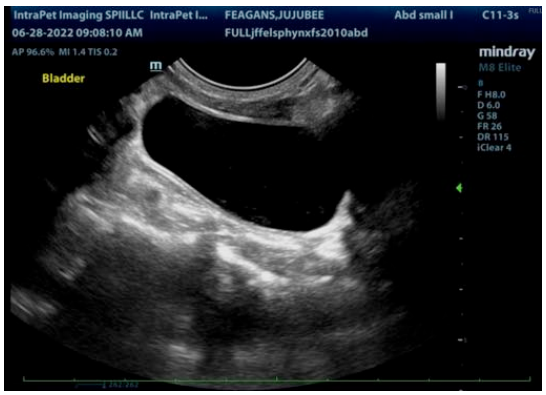

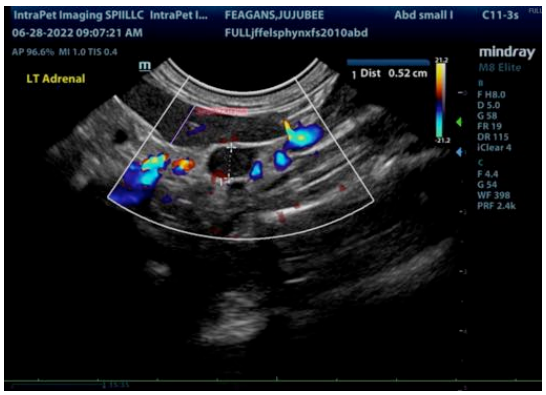

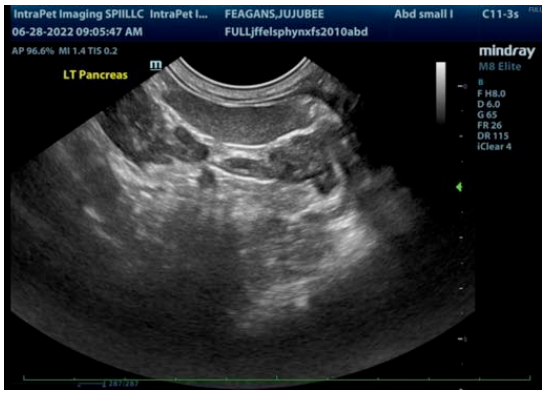

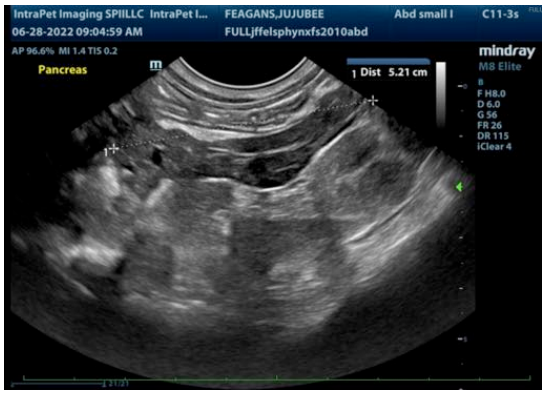

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM
Lisa.Carioto@sonopath.com