IMAGING PERFORMED BY

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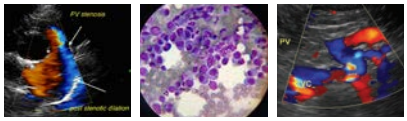

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

7/5/23

PATIENT

Phoenix Jennings

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

7/5/07

WEIGHT

10.2 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Kalwa

INVOICE

43776

PRESENTING CLINICAL SIGNS

PC: - Vomiting + blood 2x - some grass - Indoor/ outdoor- previously outdoor - Eating, drinking, using litterbox - Diet: Wet and dry food. Dry 7+ purina and variety of wet food. - He Has A Sore Left Shoulder/Leg. Has An Appointment With His Regular Vet - Hx heart murmur ATO in room: - Found P vomiting near litterbox in laundry room- O took a picture of it. Dark blood + grass. - Has appt for limping left forelimb/ shoulder with rDVM - 3 digits left forelimb- cellulitis- no wounds found recently - Hx of skin condition- black heads - Hx of frequent vomiting- 1-2x / week for ~the past 2 years - Hx of sneezing attacks long time, "boogers" - Hx of heart murmur - Last time at rDVM ~1 yr ago diagnosed with murmur- Os do not recall any bloodwork. Did not see cardiology. Last there on 7/21/22 - Highest weight 18lbs. Os unsure weight last year- feel he has lost more weight - Previously outdoor cat --> Os obtained him had leg fixed- toes amputated, neutered and FELV/FIV negative- since then mostly indoor- only goes outside when supervised ie on harness.

Current Medications: Ampicillin, Pantoprazole, Sucralfate Susp, Maropitant, Vitamin B12, Oral Buprenorphine ,Gabapentin.
Lab Results: PCV 29 (30-45), TS 9.4 (5.0-8.0), Blood pressure 118mmHg.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with incidental suspended lipid in a cat, possibly combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia or infarcts observed. The left kidney measures 4.08 cm. A non-obstructive nephrolith is noted in the left kidney. The right kidney measures 4.08 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.58 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.39 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. The cystic and common bile duct are tortuous in appearance without pathologic distention, which is often a normal anatomic variant in a senior cat. This finding should be interpreted in combination with clinical signs and/or laboratory changes that suggest otherwise.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of mildly/subtly thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

Pancreas is prominent in size with swollen irregular contour. Parenchyma is heterogenous characterized by hyperechoic tissue remodeling intermixed with ill-defined hypoechoic nodules. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

An enlarged, slightly heterogeneous, primarily hypoechoic pancreaticoduodenal lymph node is noted and measures 0.30 cm x 0.40 cm in size.

Mesenteric lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape). Nodes are hypoechoic with loss of normal parenchymal detail.

PRIMARY FINDINGS

- **Pancreatic nodular hyperplasia –** Infiltrative neoplasia cannot be ruled out but is considered less likely. Concurrent low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.

- **Pancreaticoduodenal lymphadenopathy –** Both reactive lymphadenopathy as well as infiltrative neoplasia are differentials that cannot be differentiated without tissue sampling.

- **Aggressive mesenteric lymph nodes –** most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.

- **Hypoechoic hepatomegaly** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.

- **Mild/subtle Inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.

SECONDARY FINDINGS

- Age related kidney changes with a non-obstructive nephrolith in the left kidney
- Urinary bladder debris

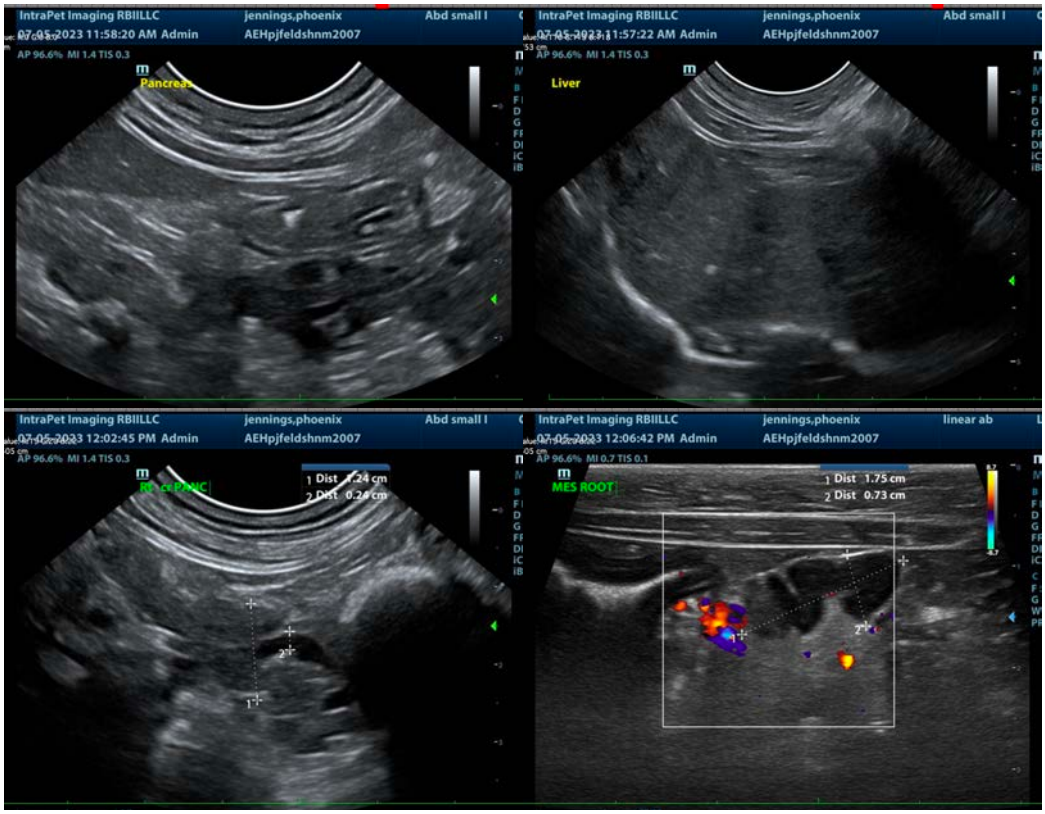
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

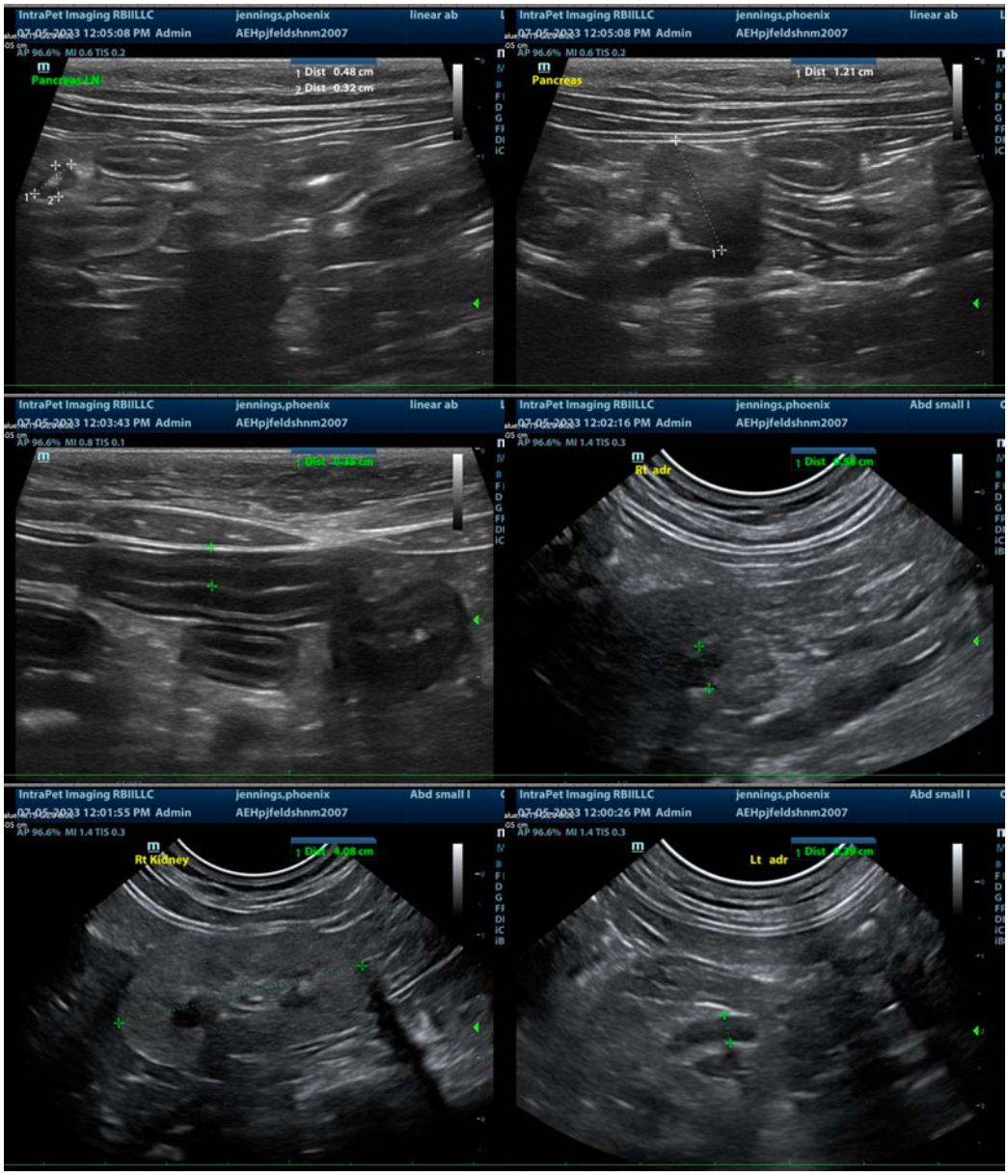
Fine needle aspirates of the liver, pancreas, and the mesenteric lymph nodes could be considered if patient's coagulation status is appropriate.

Pending results, A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ideally, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic.

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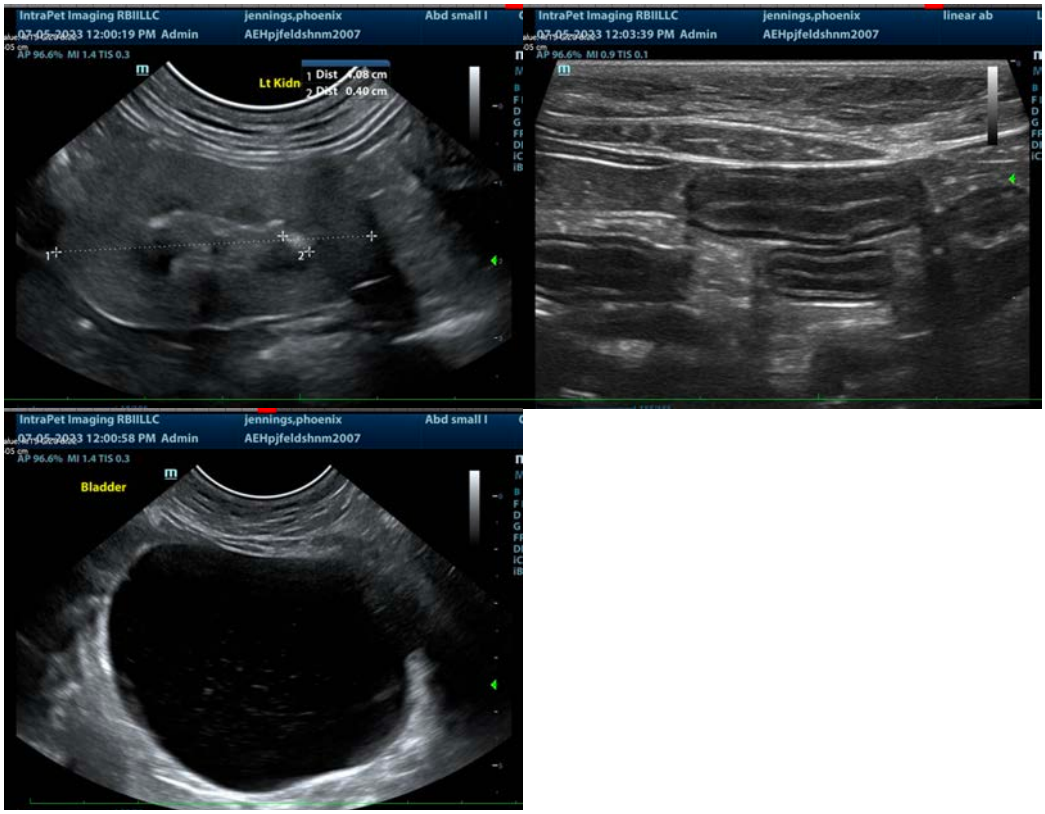

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
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