

**DATE PRESENTING CLINICAL SIGNS**

4/19/23 Came in for limping. X-rays done which were cause for another concern.

PATIENT Current Medications: Gabapentin 100mg SID.

Lab Results: See attached.

Bubba Janeczek

Radiographs: Cavitated soft tissue opaque mass in the left caudal lung lobe. Most likely bronchoalveolar carcinoma.

SPECIES Date of Previous IntraPet Ultrasound: No previous.

Sedation: DKT IM prior to sonographer arrival.

Feline

Stat Report: Requested/Approved.

Imaging Performed By: Stephanie Warga RDCS, RVT.

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

DSH

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

SEX

Neutered Male

AGE

8/6/10

The right kidney is normal in size (4.23 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

WEIGHT

8.02 kg

The left kidney is normal in size (3.89 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

The right adrenal gland is normal in size (0.47 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME

The left adrenal gland is normal in size (0.50 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Cat Hospital at Towson

Spleen**REFERRING VET**

Dr. Slaughter

Spleen is mildly large, measuring just over 1.0 cm thick, with a normal shape and smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

INVOICE

46731

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions 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 visibly tortuous in appearance but not pathologically distended, which is often a normal anatomic variant in senior cats. However, chronic cholangitis cannot be definitively ruled out, and this finding should be interpreted in combination with clinical signs and/or laboratory changes that support cholangitis/cholangiohepatitis.

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 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

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. 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.

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

A mildly enlarged lymph node is noted near the pylorus that measures 0.40 cm x 0.70 cm in size.

There is no evidence of heart base or pericardial pathology noted in these images at this time. If cardiac function evaluation is desired a full echocardiogram is recommended.

In the left caudal thorax, adjacent to the diaphragm, there is a 2.3 cm x 2.8 cm mixed cavitated, vascular, suspect pulmonary mass.

ULTRASONOGRAPHIC FINDINGS

- **Left caudal suspect pulmonary mass** – concerning for carcinoma, as was reportedly suspected radiographically. Other consolidation including abscess, etc. can't be ruled out but is considered less likely.
- **Splenic micronodular hyperplasia pattern** – This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.
- **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.
- **Reactive mesenteric and pancreaticoduodenal lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

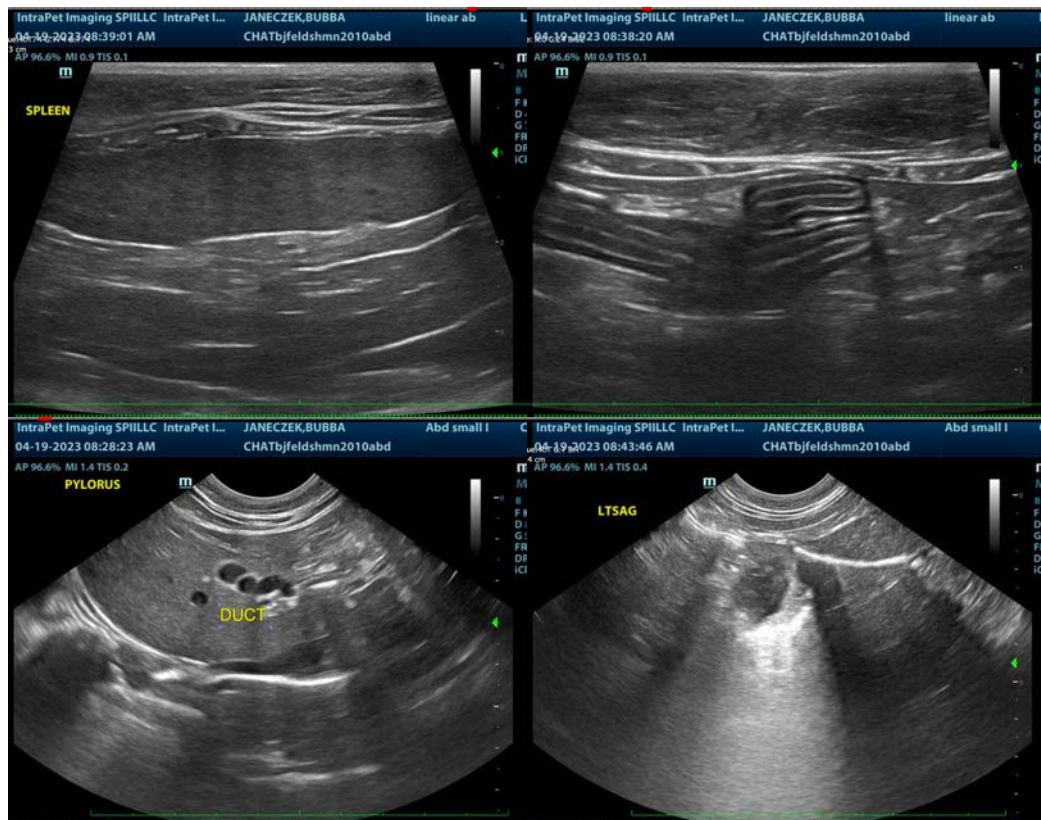
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

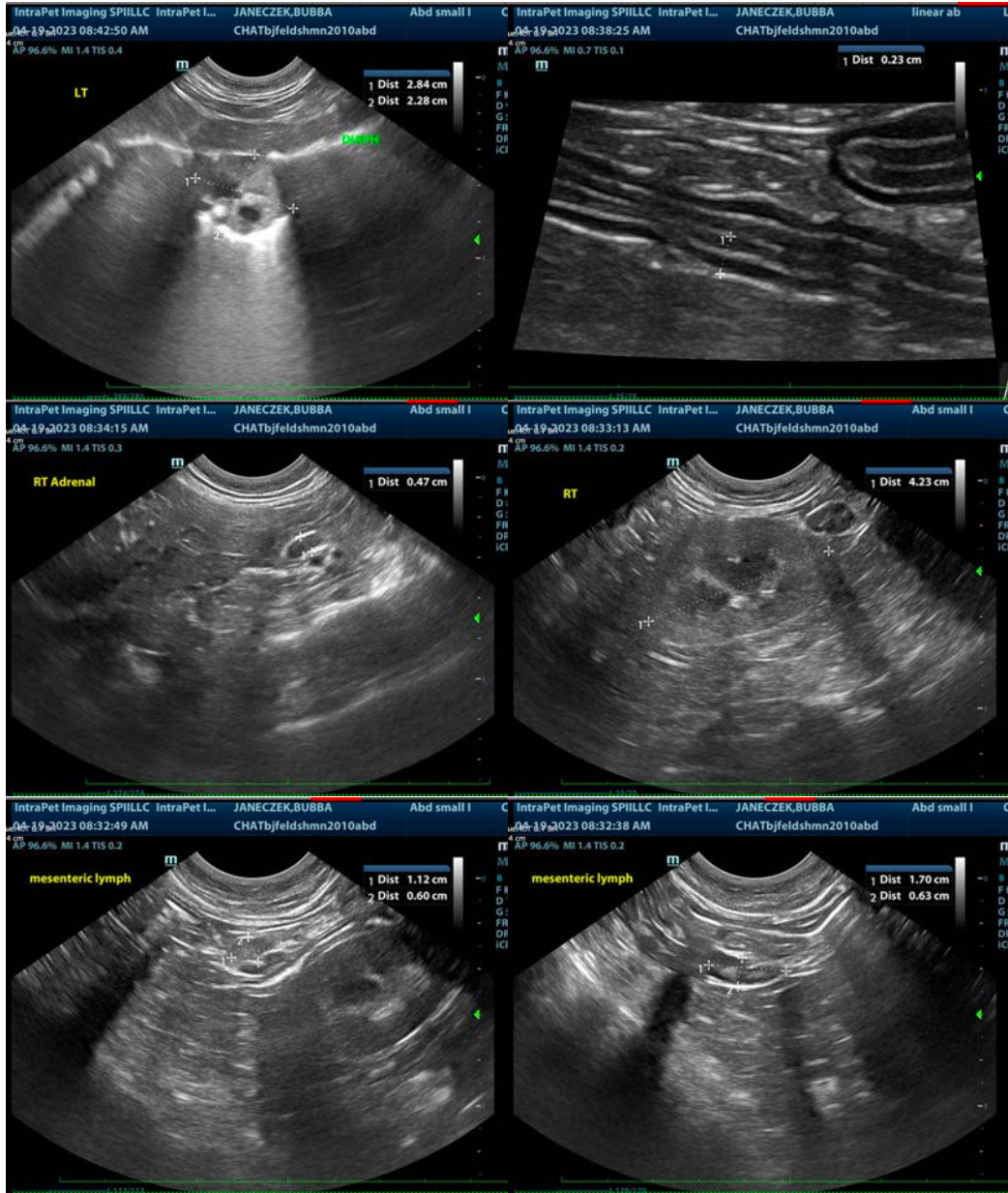
This patient has several different pathologies that are difficult to coordinate into one overall problem. Given the original presenting complaint of limping combined with the reportedly increased AST, a myopathy should be considered, and further evaluation of infectious and/or potentially neoplastic causes. Consultation with an orthopedic surgeon and/or neurologist may also be helpful. Having said that, the workup for the limp resulted in the discovery of the suspect pulmonary nodule/mass, which is likely of more clinical significance. Further diagnostic recommendations for the mass include a thoracic CT followed potentially by fine needle aspirate, if possible and if patient's coagulation status is appropriate.

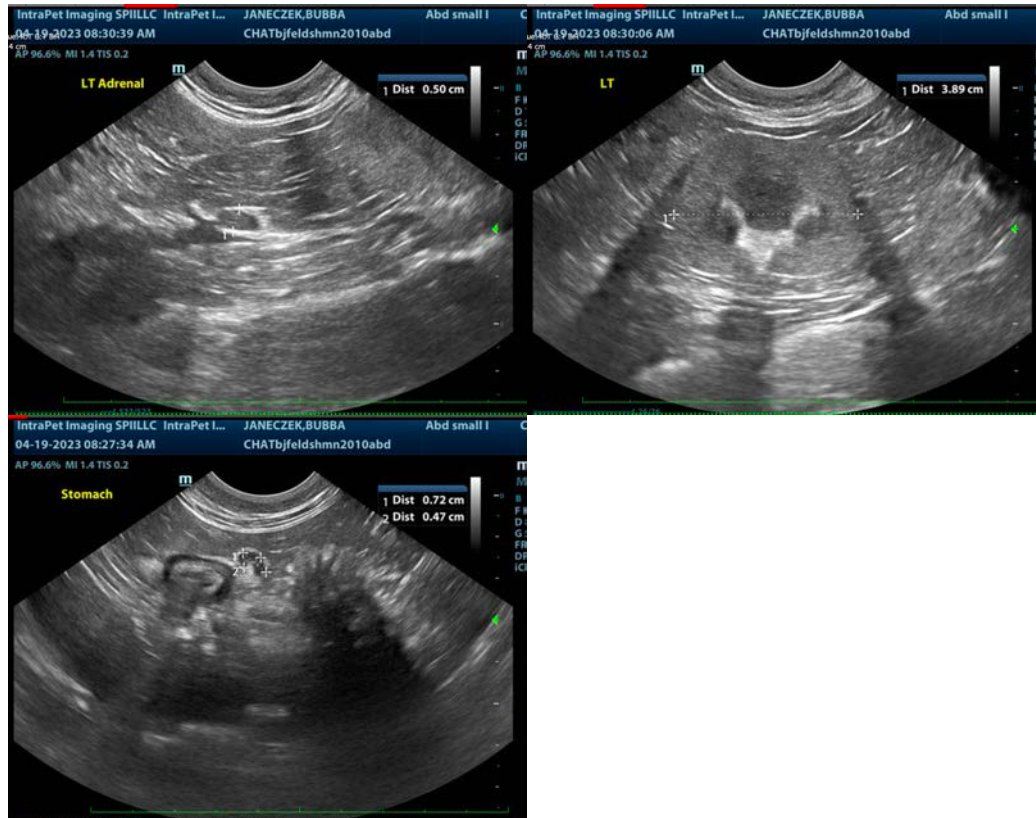
Additionally, these images are concerning for possible infiltrative bowel disease. Both benign inflammatory and/or infiltrative neoplastic (i.e., lymphoma) etiologies are differentials. If clinical signs are consistent with bowel disease including weight loss, intermittent diarrhea, vomiting, changes in appetite, etc., further evaluation of the GI tract may also be warranted, beginning with:

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, and ultimately progressing to biopsies of the bowel.

Prior to the more invasive diagnostics, additionally a fine needle aspirate of the spleen could be considered if patient's coagulation status is appropriate, to look for evidence of neoplasia that could potentially explain everything.







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
Beth.Johnson@sonopath.com