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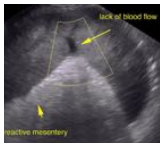
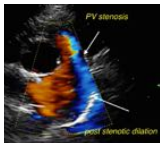
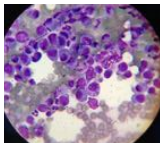
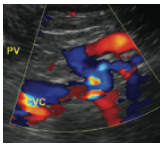
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Baxter Femino

SPECIES
Canine

BREED
Beagle

SEX
Neutered male

AGE
13 years

WEIGHT
48 lbs

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Valeryia Shumskaya

HOSPITAL NAME
Ridge Road AH

REFERRING VET
Dr. Pathak

INVOICE
42405

DATE
12/29/22

PRESENTING CLINICAL SIGNS

History: Chronic hematuria last few months, multiple episodes of vomiting for 2 weeks. Was on cefpodoxime for uti - that was resolved
Abnormal PE/Chem/CBC/UA Results: Elevated ALP 752, ALt 136, GGT 14 Protein: 1+ SG: 1.017

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** presented a relatively uniform thickening of the cranioventral and craniodorsal mucosae with micropolypoid mucosal changes without involvement of the submucosae. The urine presented some echogenicity consistent with suspended debris. No evidence of urethral pathology was present. This presentation is most consistent with chronic cystitis. Technically transitional cell carcinoma cannot be ruled out with=out histopathological review but is not overtly suspected based on this pattern. Cystocentesis and urine culture +/- pathological review of urine cytology would be warranted. No overt calculi were present at this time.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Microcystic cortical renal changes were also noted. The left kidney measured 5.75 cm. The right kidney measured 4.96 cm.

Adrenal Glands

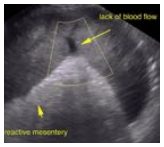
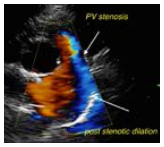
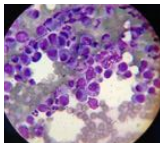
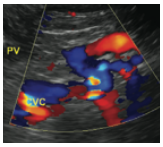
Both **adrenal glands** were slightly enlarged. The right adrenal gland was heterogenous with nodular changes. There was no evidence of capsular escape or vascular invasion. The right adrenal gland measured 2.87 x 1.46 cm at the cranial pole and 0.9 cm at the caudal pole. The cranial pole of the left adrenal gland was slightly swollen. The left adrenal gland measured 2.14 x 1.03 cm at the cranial pole and 0.38 cm at the caudal pole.

Spleen

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-related alteration. Hyperechoic lipogranulomatous changes were noted. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. A hyperechoic, left cranial nodule was noted and measured 1.62 cm. The nodule was non-disruptive and consistent with lipogranuloma. There is a minor potential for

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emerging neoplasia. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

Left cranial liver nodule. Lipogranuloma versus carcinoma.

Nodular adrenal glands.

Otherwise, age related abdominal changes with mild chronic cystitis pattern.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Ultrasound-guided FNA is indicated. Treatment for chronic cystitis with Enrofloxacin over a 4-6 week period given the chronic bladder changes. FNA of the general liver and liver nodule is all indicated. The cause of vomiting does not have structural cause as the upper gastrointestinal tract is unremarkable. A clinical trial of the following may prove effective. Blood pressure measurements are warranted. If the patient appears Cushingoid then work-up for adrenal dependent or pituitary dependent Cushing's could be justified with the adrenal presentation.

Helicobacter/Gastritis protocol
A clinical trial of **Zithromax (*Dogs:*** 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment)**, Metronidazole** (10-20 mg/kg p.o. b.i.d.), **Pepcid** (0.5-1 mg/kg s.i.d.) and **Sucralfate** (0.5-2 g/dog PO) or **Omeprazole** (1 mg/kg p.o. s.i.d.) over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.

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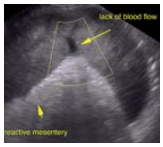
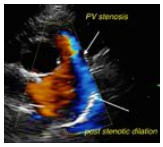
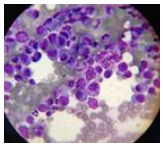
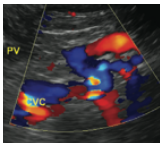

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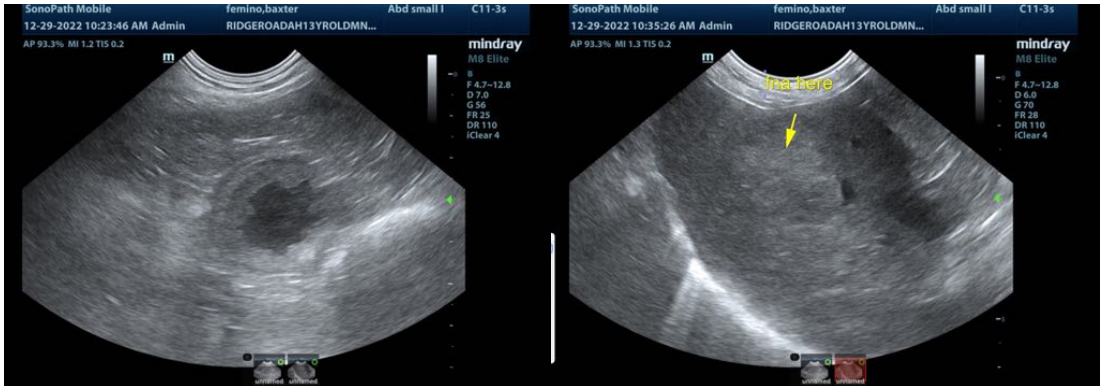

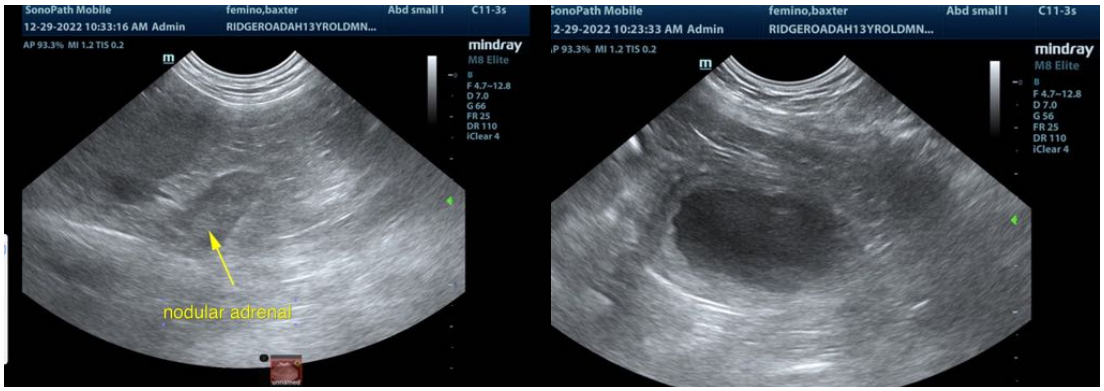

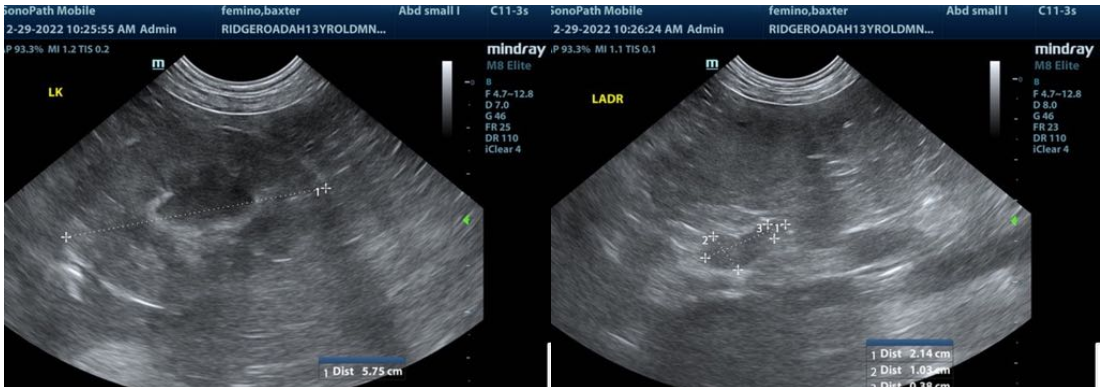

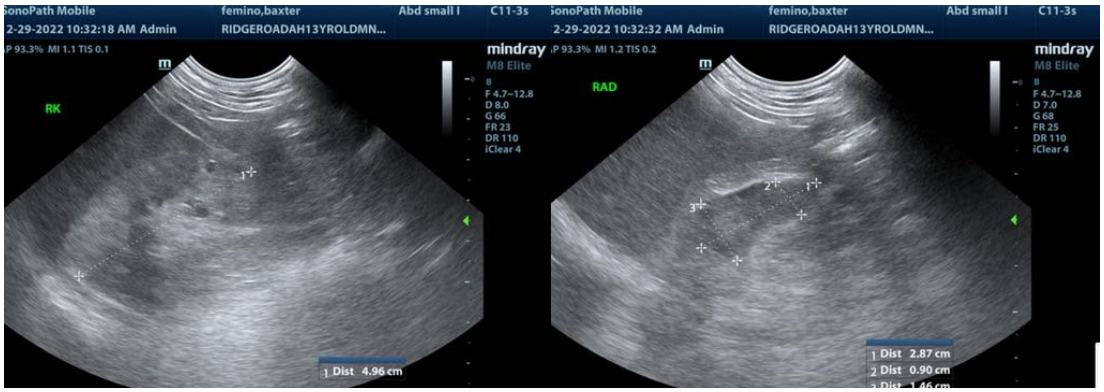

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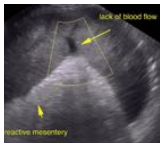
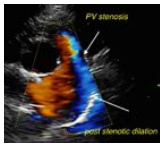
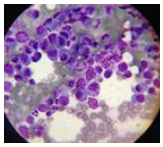
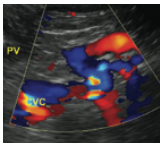

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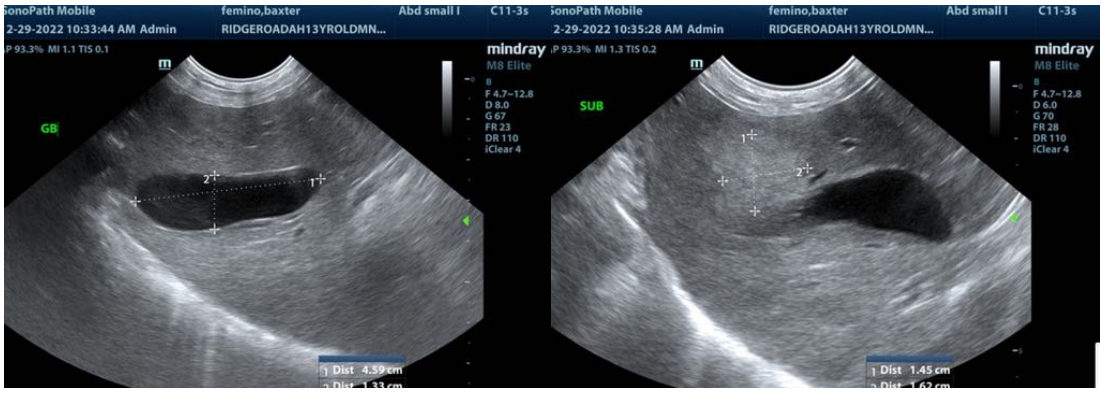

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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