

PATIENT PRESENTING CLINICAL SIGNS

Boe Fritz History: Early kidney disease, recent severe cystitis, chronic weight loss.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Feline **Urinary System**

BREED

Domestic Shorthair

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

SEX

Neutered Male

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. The left kidney measured 3.04 cm. The right kidney revealed minor infarcts and mineralization. The right kidney measured 3.54 cm.

AGE

2004

Adrenal Glands

WEIGHT

12.8 lbs

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient.

INTERPRETED BY

Eric Lindquist, DMV
 DABVP, Cert. IVUSS

Spleen

IMAGING PERFORMED BY

Rebekah Jakum, CVT
 ARDMS/RVT

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

HOSPITAL NAME

Rush VC

Liver

REFERRING VET

Dr. Millot

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 hypoechoic nodule was noted in the left liver and measured 0.5 cm. This should be monitored. 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.

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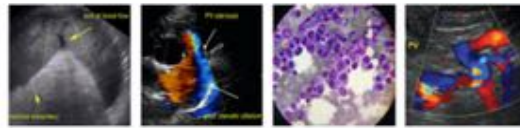
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Gastrointestinal

DATE

6/27/23

The **gastric** wall is slightly thickened and mildly irregular. There was no overt loss of mural detail. There were areas of "ropey" small intestinal wall. The muscularis layer was hypertrophied inverting the normal ratio (1:3). The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low



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grade, chronic inflammation. No evidence of obstruction was present. Soft stool was noted in the colon. Chronic inflammatory bowel disease is probable with a low possibility of an early neoplastic event such as lymphoma or, less likely, dry form FIP can at times be found on biopsy of these presentations. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule more significant disease than IBD. The mesenteric lymph node was reactive and measured up to 1.0 x 2.0 cm.

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

Diffuse intestinal thickening with muscularis hypertrophy.

Hypoechoic hepatic nodule.

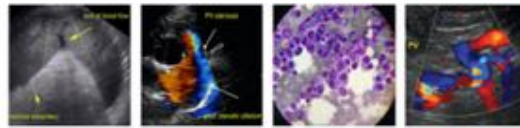
Mild to moderate renal dystrophy with infarcts and mineralization. The kidneys do not appear end stage.

Reactive mesenteric lymph node.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no overt neoplastic criteria; however, I cannot rule out an early pre-neoplastic state. Full thickness intestinal biopsies would be ideal in this patient. The passage of calculi and acute on chronic events are likely the cause of the patient's history given the pancreatic and intestinal changes. This is likely prerenal disease playing a periodic role. Given the weight loss full thickness intestinal biopsies are indicated +/- pancreatic and hepatic biopsies. Chronic triad disease with malassimilation of nutrients is a strong potential; however, emerging round cell neoplasia is a potential in this patient as well especially given the liver nodules. FNA of the liver nodules can also be justified especially if liver enzymes begin to rise. Subxiphoid palpation is recommended to assess for any discomfort in the region of the pancreas.

Maldigestion panel, three view chest radiographs and full CNS examination is recommended to examine for occult disease that could be responsible for the weight loss. Evaluation for competitive eating environments should also be considered.



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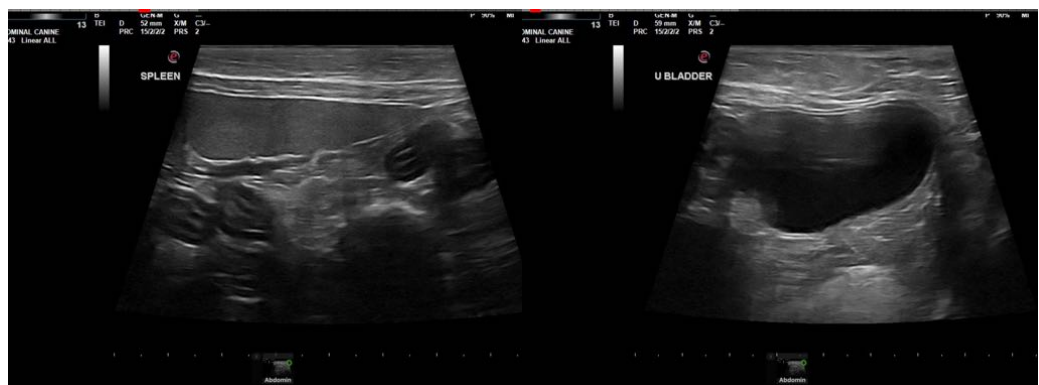
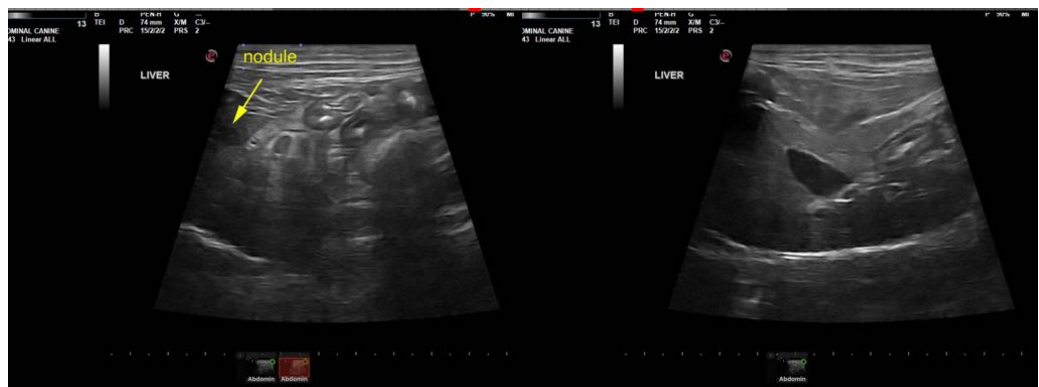
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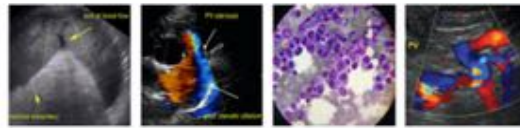
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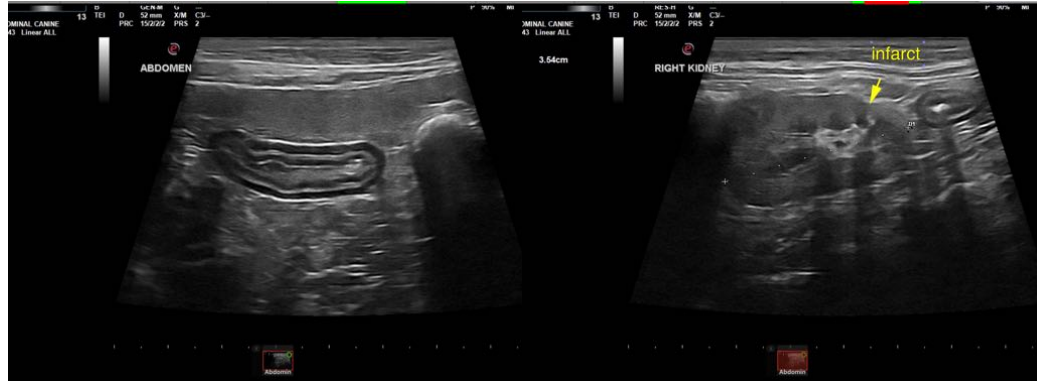
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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