**PATIENT**

Copper Ritter

SPECIES

Canine

BREED

Hound Mix

SEX

MN

AGE

14 years

WEIGHT

46 lbs.

INTERPRETED BYR. McKenzie Daniel,
DVM, DABVP (Canine
and Feline)**IMAGING
PERFORMED BY**

Rachel Runnells, RVT

HOSPITAL NAMESVS Imaging Kansas
City**REFERRING VET**

Dr. Jonathon Renfro

INVOICE

13402

DATE

2/23/22

PRESENTING CLINICAL SIGNS

Hx of GI issues. Has been pretty regularly having issues with not eating well, sometimes vomiting and diarrhea for couple years. Over time has been on famotidine, omeprazole, and more recently pantoprazole. Seems to get worse on NSAIDs. Has not ate well in 2 weeks. Has mass on a carnassial and wanting to see if any other reason for not eating well.

Abnormal PE/Chem/CBC/UA Results: Mild elevation in ALP. 10/21/21 - fecal negative, given metronidazole.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

No overt pathology was noted in the area of the residual prostate.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.7 cm in length. The right kidney measured 6.9 cm in length.

Adrenal Glands

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.76 cm width in the cranial pole and 0.74 cm width in the caudal pole. The right adrenal gland measured 0.95 cm width in the cranial pole and 0.68 cm width in the caudal pole. No evidence of adrenal hyperplasia or tumors was noted.

Spleen

The spleen was normal in size and contour with subtle splenic parenchyma heterogeneity. A well-demarcated, uniformly hyperechoic nodule adjacent to the splenic hilus was present. A concurrent, subtly expansive, hypoechoic nodule was noted in the mid-lateral splenic parenchyma measuring 0.63 cm diameter.

Liver/ Gallbladder

The liver presented subjective mild generalized enlargement with diffuse, nonuniform, echogenic hepatic parenchyma exhibiting discreet hypoechoic nodular changes. The gallbladder was non-distended in size with mild gallbladder debris. The cystic and common bile ducts were normal.

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall width measured 0.46 cm.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. The jejunum wall width measured 0.33 cm.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS***Primary Findings***

- Nonuniformly echogenic to discretely nodular liver
- Mild gallbladder debris (non-mucocele)
- Nonspecific, variably echogenic splenic nodules
- Overtly normal gastrointestinal tract
- Mild age-related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The hyperechoic splenic nodule was most consistent with benign myelolipoma. The hypoechoic splenic nodule was more nonspecific with considerations including focal lymphoid hyperplasia, hematopoiesis, hematoma, acute infarction, focal splenitis with potential for neoplasia.

The presentation of the liver may indicate vacuolar hepatitis, chronic active hepatitis, cholangiohepatitis, early fibrosis / cirrhosis or other hepatopathy. Neoplasia considered a less likely differential diagnosis yet cannot be excluded.

Assuming normal clotting status and using a 25-gauge needle, ultrasound-guided FNA of the hypoechoic splenic nodule, as well as liver parenchyma, is warranted for screening cytology. Hepatosupportive medications may prove beneficial. Sonographic monitoring of both the liver and spleen for evidence of progressive change with initial recheck in 4-6 weeks would be a more conservative approach.



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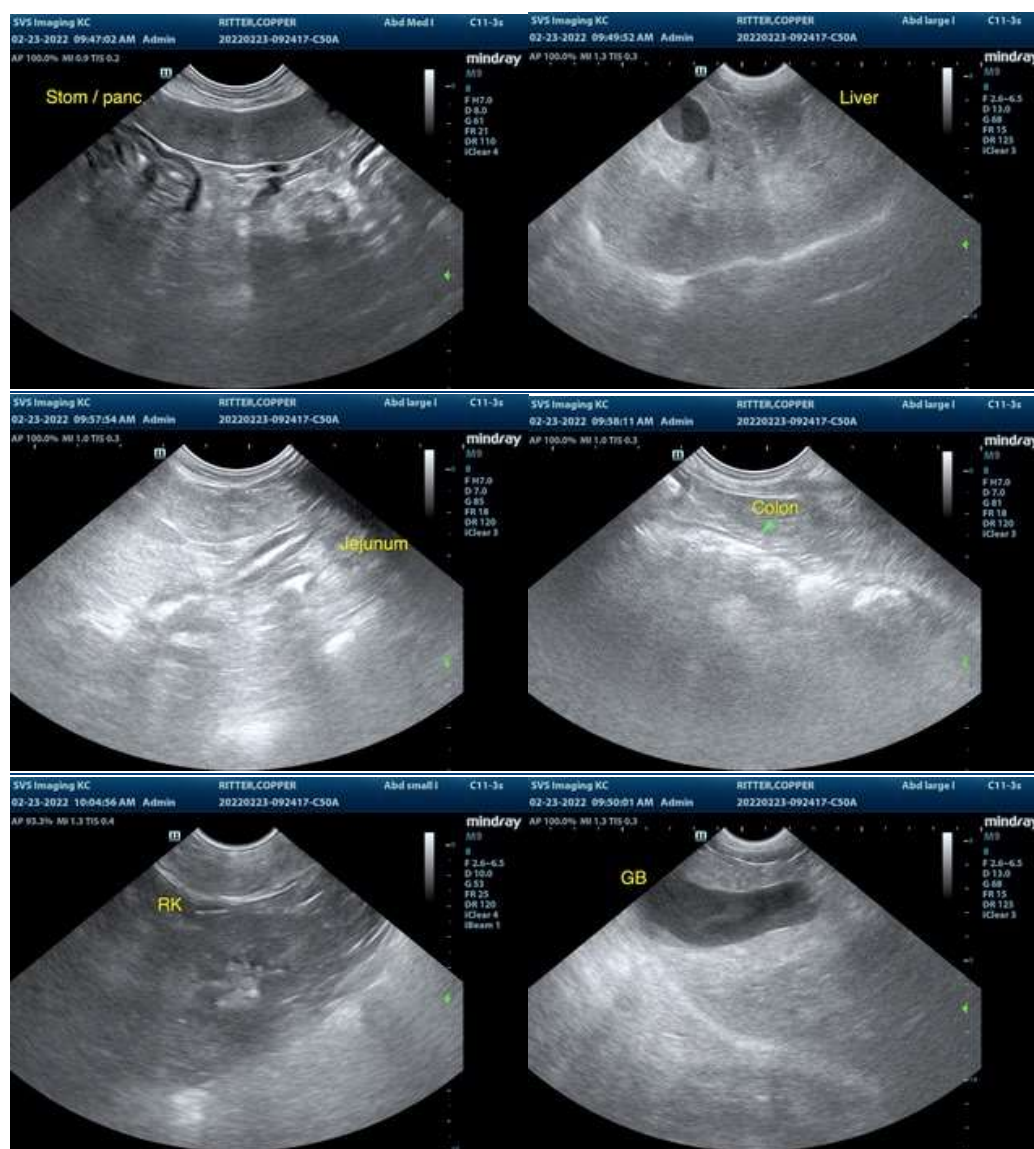
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In patients with chronic GI signs even without evidence of structural gastrointestinal pathology, potential considerations may include mild to chronic pancreatitis, structurally insignificant inflammatory bowel disease, dysbiosis, food hypersensitivity / dietary intolerance, or less likely intestinal neoplasia. Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate. Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), antibiotic trial and as needed gastrointestinal support with assessment of clinical response may prove beneficial. Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.



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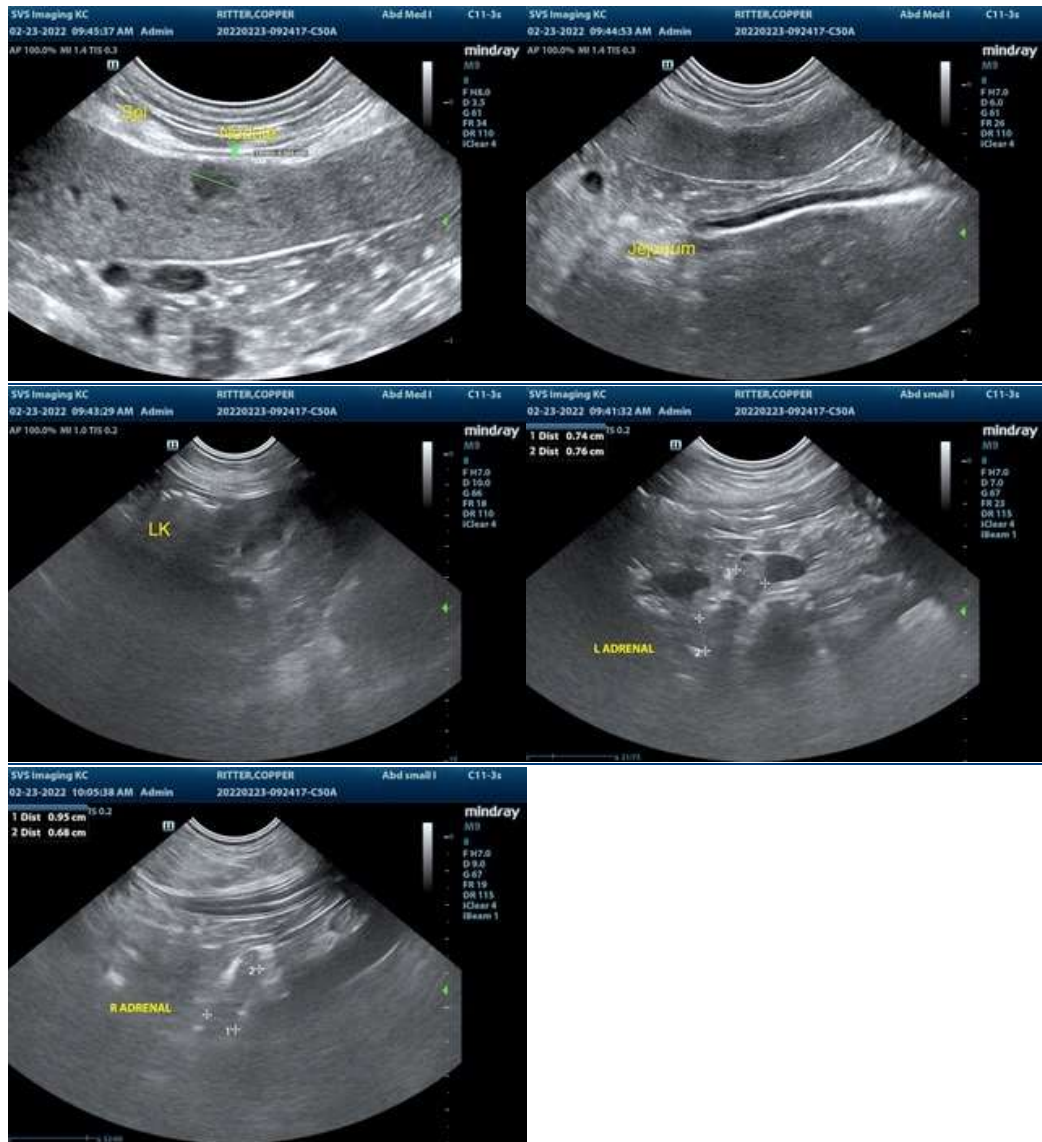
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com