**PATIENT**

Riley Shakeshaft

SPECIES

Canine

BREEDMiniature Australian
Shepherd**SEX**

MN

AGE

15 yr, 8 mo

WEIGHT

26 lbs.

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

Rachel Runnells, RVT

HOSPITAL NAMESVS Imaging Kansas
City**REFERRING VET**

Dr. Mindy Shrout

INVOICE

15267

DATE

10/26/22

PRESENTING CLINICAL SIGNS

Have been monitoring liver values for last few years since this dog has arthritis and was on NSAIDS. In past alp had started to elevate and alt had mildly-stopped nsaid and switched to tramadol for pain control and in past liver values came back down to normal. In July this year we rechecked senior bloodwork and all liver values were elevated again. Put him on denamarin and antibiotic trial with amoxicillin and metronidazole. REchecked bloodwork again this week and no change in liver values (alp went up higher). Did radiographs and liver lobe appeared enlarged. Last few months has had some on/off issues with diarrhea.

Abnormal PE/Chem/CBC/UA Results: Lab work-ALT this week was 235 (in July was 230-normal range between 18-121), AST this week was 78 (In July was 78 too normal range between 16-55), ALP this week was 912 (was 557 In July normal range between 5-160), GGT was 27 this week (in July was 25 normal range between 0-13)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm 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.

The area of the residual prostate was free of overt pathology.

The area of the aortic trifurcation was free of pathology.

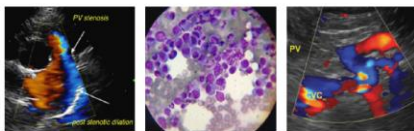
Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Right kidney small lateral cortical cyst was present. The left kidney measured 5.8 cm in length. The right kidney measured 5.3 cm in length.

Adrenal Glands

The left and right adrenal glands exhibited mild prominent size based on caudal pole width measurement and in light of body weight. Mild parenchyma heterogeneity and mild capsule asymmetry was present in both kidneys without suspicion for overt neoplasia. The left adrenal gland measured 2.4 cm length x 0.74 cm width at the caudal pole. The right adrenal gland measured 2.3 cm length x 0.57 cm width at the caudal pole.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

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Liver/ Gallbladder

The liver exhibited generalized enlargement with subjective variable lobar swelling. Heterogeneous nonuniform parenchyma was noted diffusely, exhibiting discrete intraparenchymal nodular changes. A solitary, indistinct, isoechoic, mildly nonhomogeneous mass was present in the ventral liver measuring approximately 8.0 cm in diameter. The isoechoic mass did not overtly appear to significantly distort the hepatic capsule. The gallbladder was non distended in size with echogenic, nonmineralized, non-dependent biliary sludge. The biliary sludge was non organized with a hypoechoic to anechoic, irregular to interrupted rim visible between the nondependent sludge and inner wall. No signs of peripheral gallbladder inflammation.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. Minor non shadowing chyme along with luminal gas was present.

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.

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

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Heterogeneous irregular liver exhibiting subjective lobar swelling, indistinct isoechoic ventral intraparenchymal mass - nonspecific, vacuolar hepatopathy, inflammatory / immune mediated disease, hyperplasia, hematopoiesis, fibrosis, infiltrative neoplasia, all potentials
- Early, non-inflamed gallbladder mucocele
- Borderline mildly prominent bilateral adrenal glands
- Mild chronic renal changes with small right kidney cyst
- Heterogeneous pancreas - parenchymal remodeling associated with age or previous inflammatory episode, low-grade to chronic pancreatitis possible

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status, FNA cytology of the hepatic parenchyma, as well as the ventral mass, is recommended for screening cytology and further assessment. A hepatic core surgical biopsy may be required for a definitive diagnosis.

Full adrenal workup with LDDST or ACTH Stimulation test may be considered if clinical signs consistent with Cushing's Syndrome are present. Spec cPL could be considered for further assessment of the pancreas if clinical signs suggestive of chronic pancreatitis are present or arise.



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Empirically, continued hepatosupportive medications including Denamarin and Ursodiol with monitoring for evidence of increasing cholestasis and potential sonographic reassessment of the gallbladder would be reasonable.

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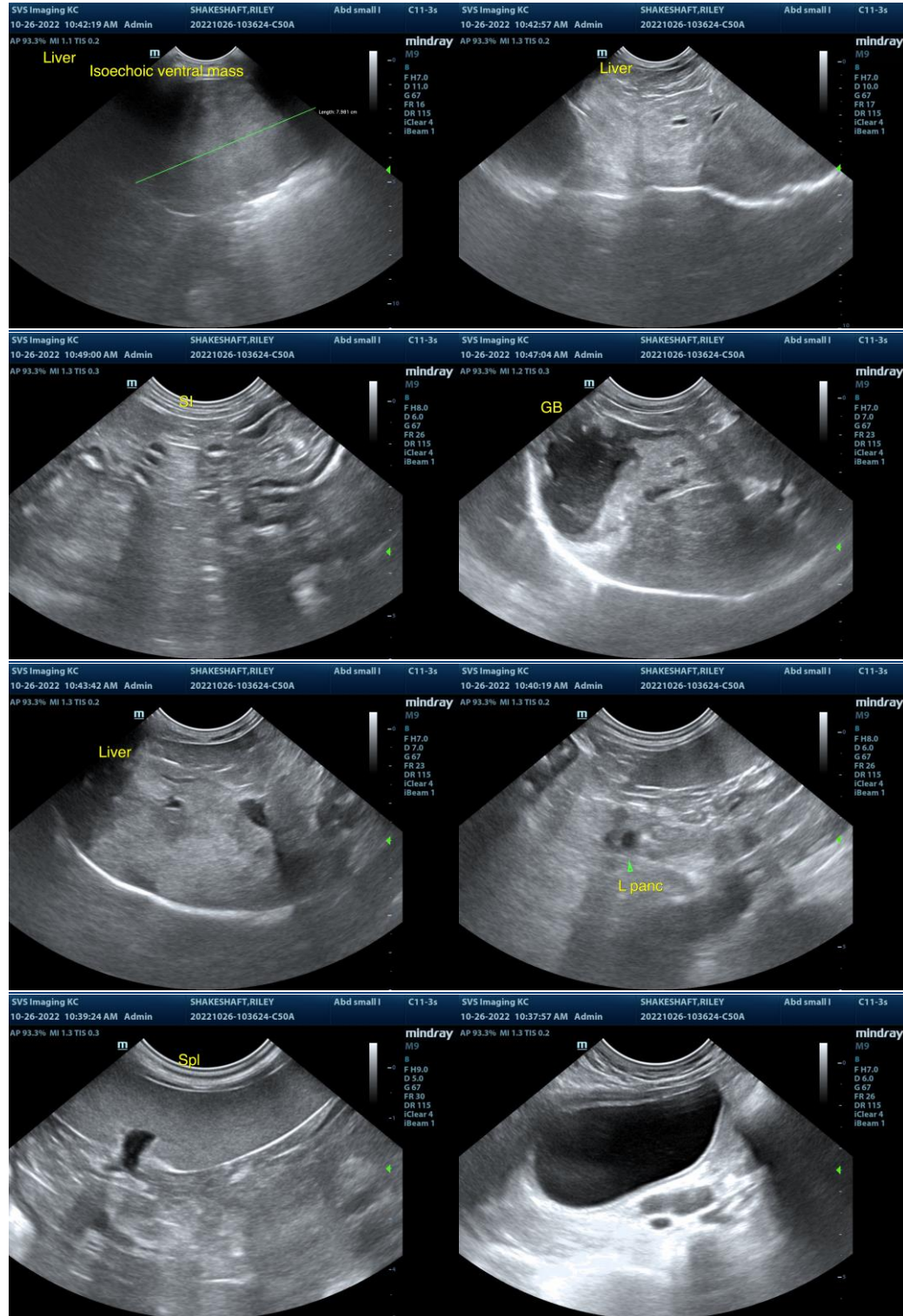
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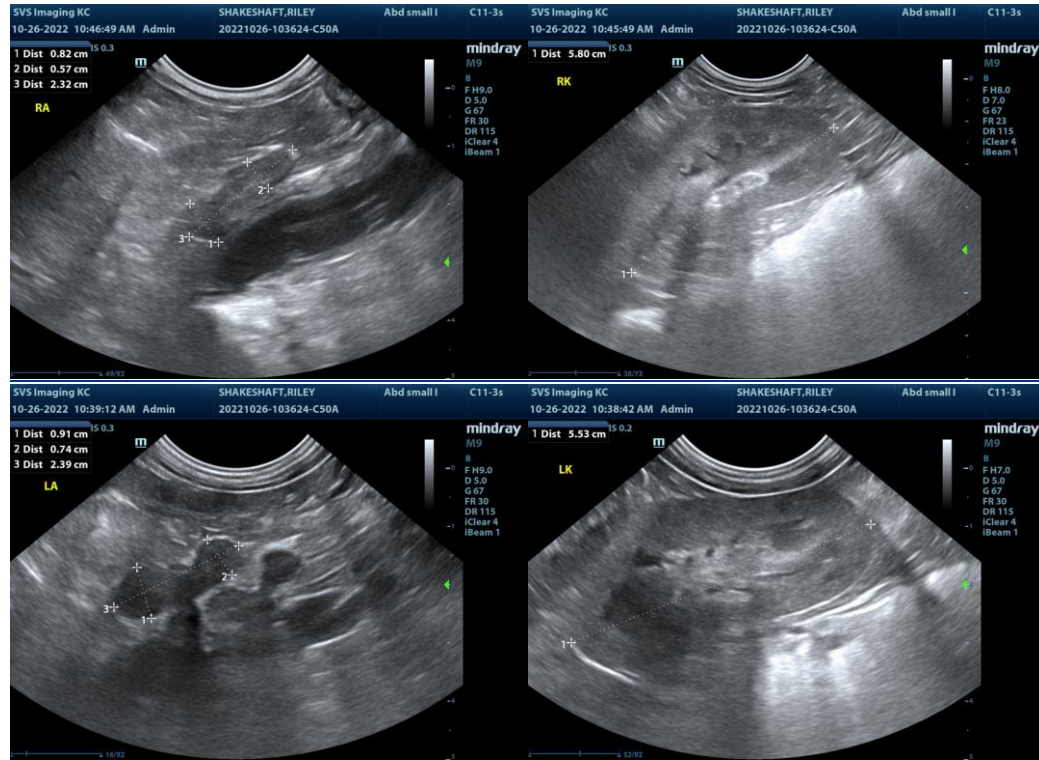
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
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