



PATIENT

Kaly Marrero

SPECIES

Canine

BREED

Mix

SEX

FS

AGE

6yr

WEIGHT

11.4lb

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Dr. Gabriel Ferrer

HOSPITAL NAME

Pulse Pet Ultrasound
Services

REFERRING VET

Dr. Jose Carrasquillo

INVOICE

24838

DATE

05/13/2026

PRESENTING CLINICAL SIGNS

Px presented as a referral for an abdominal ultrasound due to Hx of elevated hepatic enzymes. Px originally visited rDVM due to lethargy, and Hx of jaundice which was never Tx w/ Mx. Bloodwork was performed, showed elevated hepatic enzyme values, and Px was put on the following Mx: Ursodiol, Denamarin, and Metronidazole. Owner reports that Px is doing better now as no inappetence, coughing, lethargy, vomiting, or diarrhea are reported at the moment. No PU/PD/PP reported. Sample of Liver and Lymph node were acquired via Fine Needle Aspiration (FNA), results are currently pending.

Abnormal PE/Chem/CBC/UA Results: Bloodwork and radiographs attached below for your reference.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of urine/lumen sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. A mild irregular hyperechoic corticomedullary band, consistent with a medullary rim sign, was present. This is a nonspecific finding seen in both normal and abnormal kidneys. It may be associated with interstitial renal disease, hypercalcemia, tubular necrosis, lymphoma, and Leptospirosis. However, it is a nonspecific finding. The right kidney measured 4.7 cm in length. The left kidney measured 4.6 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.34 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.31 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.

Liver/Gallbladder

Generalized mild hepatomegaly with rounded capsule contour and areas of mild capsule asymmetry. Heterogeneous to mixed echogenic parenchyma exhibiting variable coarse echotexture and parenchymal remodeling. Indistinct portal vascular borders. No visualized masses or nodules were present. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. 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 small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material.

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 was evident.

Free Abdomen

No evidence of peritoneal effusion was present.

Intermittent mild to variably enlarged, mild to non-homogenous mesenteric and medial iliac lymph nodes were present. An example of a lymph node measured 2.2 by 0.9 cm.

ULTRASONOGRAPHIC FINDINGS

Primary

- Enlarged non-homogenous liver
- Normal gallbladder
- Sonographically normal gastrointestinal tract / pancreas
- Bilateral nonspecific renal medullary rim sign
- Primarily mild mesenteric / medial iliac lymphadenopathy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The nonspecific liver is most consistent with chronic likely benign hepatopathy with considerations including infectious, inflammatory or immune mediated disease, hepatotoxicosis i.e. copper or other inflammatory hepatopathy, vacuolar/ cholestatic hepatopathy, hyperplasia, fibrosis or other with neoplasia thought less likely. Likewise, the lymph nodes may indicate reactive hyperplasia, lymphadenitis or early metastasis. Correlation with pending hepatic and lymph node cytology recommended. Biopsies may be required for definitive diagnosis.

Continued hepatosupportive medications given improvement in hepatic parameters and clinical signs with monitoring would be more reasonable. Leptospirosis titer / PCR may be considered if clinically indicated. As needed gastrointestinal support is recommended. No evidence of post-hepatic obstruction.



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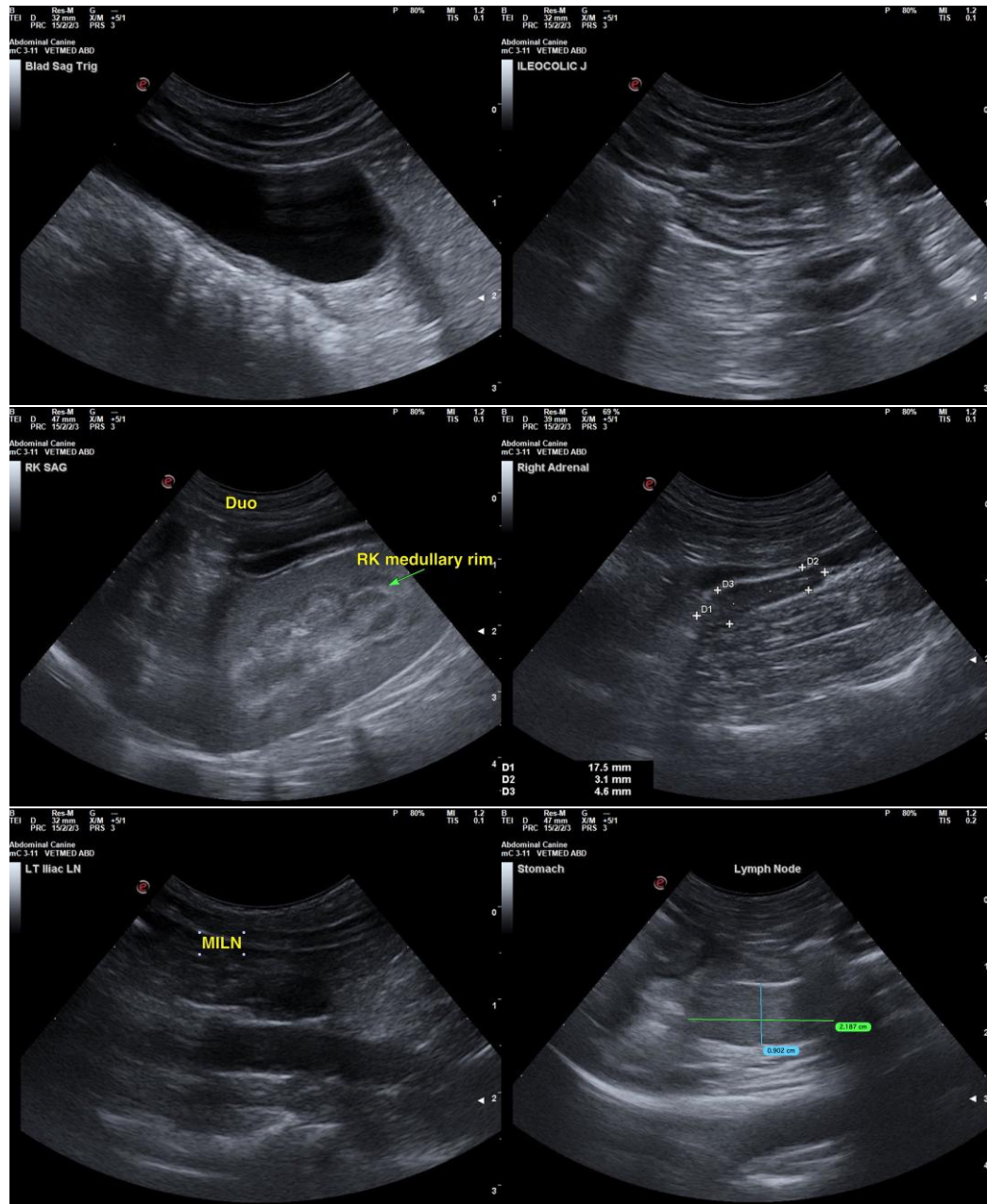
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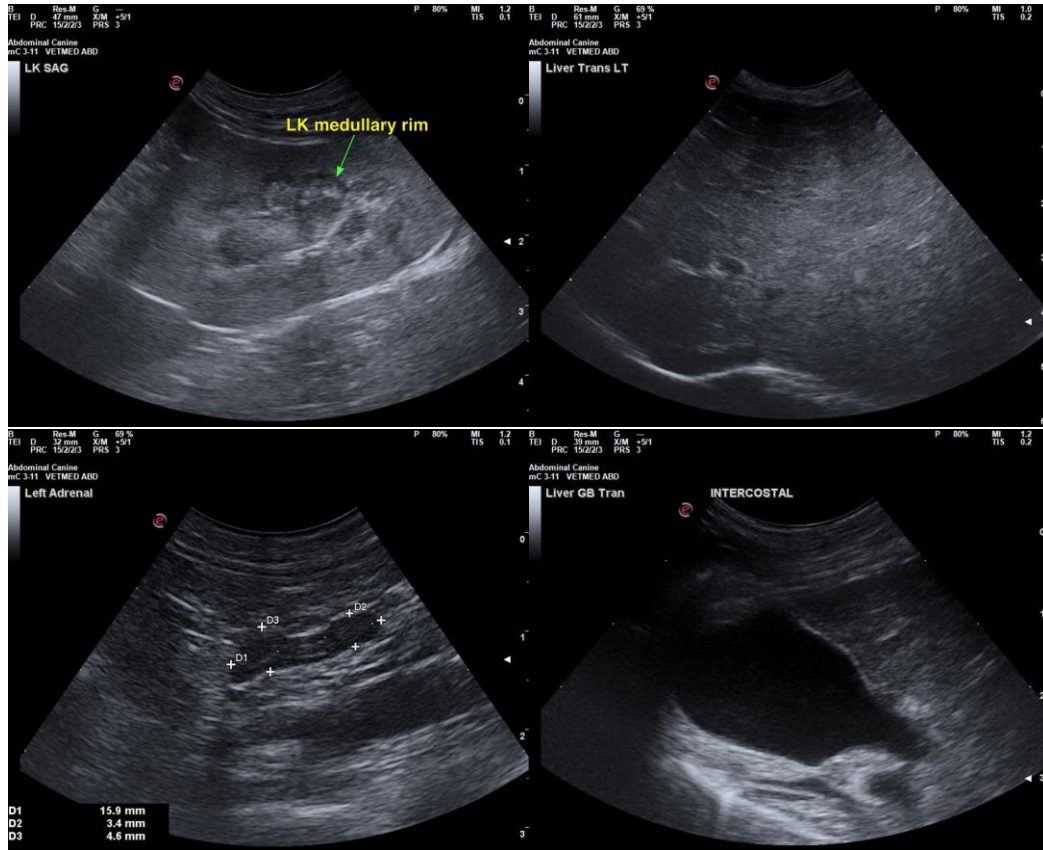
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@sonopath.com