



PATIENT

Pico Granger

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Neutered Male

AGE

4 Years

WEIGHT

2.73 kg

INTERPRETED BY

Eric Lindquist, DMV,
DABVP(CFM), Cert.
IVUSS

IMAGING PERFORMED BY

Carlie Koltek RVT

HOSPITAL NAME

Tuxedo Animal
Hospital

REFERRING VET

Dr. Valencia (St.
Norbert AH)

INVOICE

13759

DATE

02/13/26

PRESENTING CLINICAL SIGNS

- Seizures - bloodwork prior to starting phenobarbital showed abnormalities

Abnormal PE/Chem/CBC/UA Results: Mildly elevated ALT in 2021 and 2022 (126u/L). CBC: WBC 4.74 (5.05 - 16.76 x10⁹/L) Neut 2.22 (2.95 - 11.64 x10⁹/L) CHEM: BUN 10 (2.5 - 9.6 mmol/L) ALT 188 (10 - 125 U/L) AMYL 459 (500 - 1500 U/L) Bile acids pre - 42 umol/L (0 - 5) Bile acids post - 95 umol/L (0-15)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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 were noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 3.19 cm in length. The right kidney measured 3.6 cm in length.

Adrenal Glands

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. The left adrenal gland measured 0.44 cm width at the caudal pole and 0.49 cm width at the cranial pole. The right adrenal gland measured 0.32 cm width at the cranial pole and 0.35 cm width at the caudal pole.

Spleen

The **spleen** revealed a mixed hypoechoic nodule measuring 1.24 cm deriving from the cranial pole. The splenic lesion appeared to be isolated, however, it does meet neoplastic criteria with disruption of architecture.

Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident. Intrahepatic vascular volume appeared to be adequate. No evidence of portosystemic shunting. The portal vein was followed to its bifurcation and presented with normal volume. Portal vein measured 0.50 cm. The vena cava: aortic ratio is 1:1.

Gastrointestinal



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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. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS

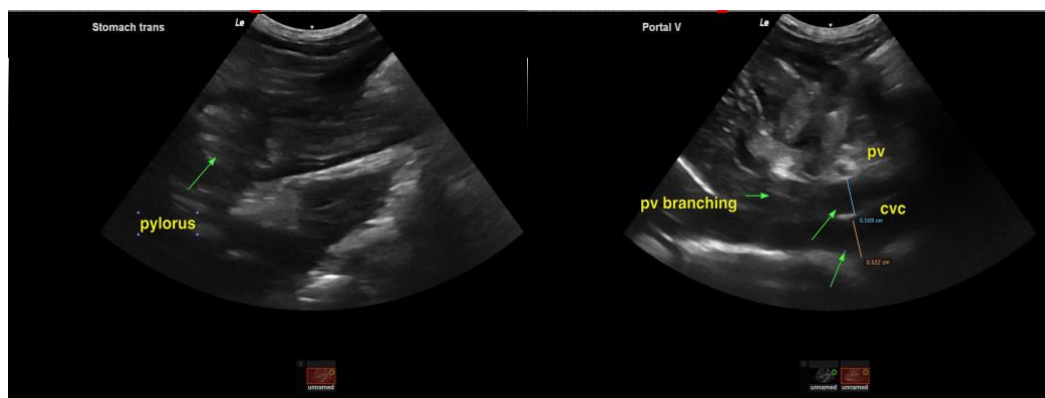
- Splenic nodule/mass- incidental and concerning for a neoplastic event.
- Reactive hepatopathy or low-grade inflammatory hepatopathy- likely underlying portal vein hypoplasia/microvascular dysplasia. No evidence of macroscopic shunting was present.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend chest radiographs and echocardiogram as a metastatic screening followed by splenectomy and liver inspection/biopsy given the bile acid elevation.

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, **Lactulose** (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt or cheddar cheese**. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. **Ursodiol** (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.





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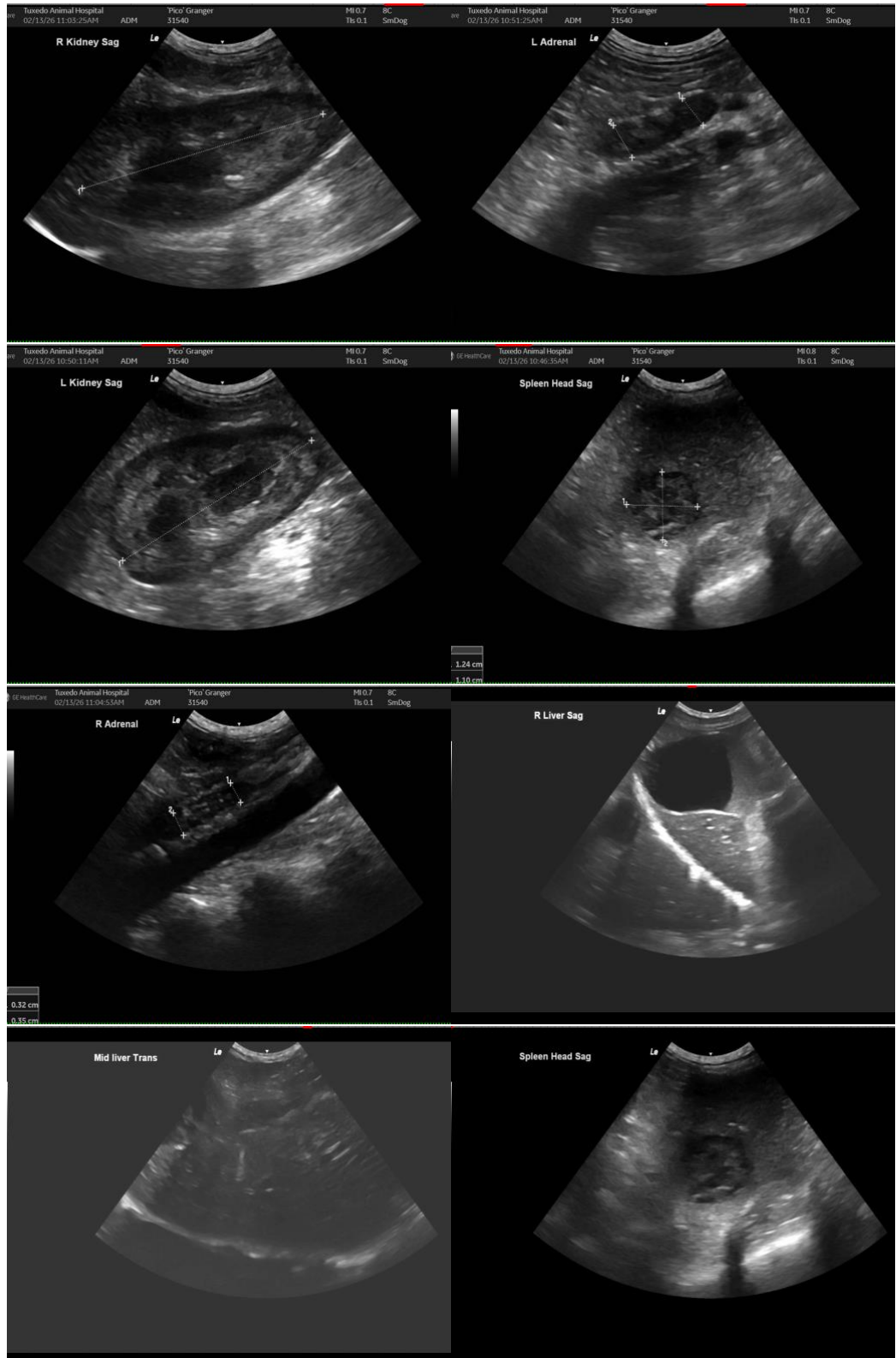
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,

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