

**DATE**

7/29/22

**PRESENTING CLINICAL SIGNS**

Elevating liver enzymes- specifically ALKP, in spite of supportive therapy- Denamarin, Hill's RX Hepatic Diet.

**PATIENT**

Chewy Roberts

Current Medications: Denamarin & Hill's Hepatic diet.

Lab Results: ALKP 1976, elevated liver enzymes

Date of Previous IntraPet Ultrasound: 11/17/20. See attached.

Sedation: Torbugesic only.

Stat Report: Not requested.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED**

Shih Tzu

**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.

**SEX**

Neutered Male

The residual prostate measured 0.77 cm.

**AGE**

3/7/15

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 right kidney measured 3.5 cm.

**WEIGHT**

18.5 Pounds

**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 right adrenal gland measured 1.56 cm x 0.46 cm at the caudal pole and 0.45 cm at the cranial pole. The left adrenal gland measured 1.87 cm x 0.54 cm at the caudal pole and 0.40 cm at the cranial pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Spleen**

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 were noted.

**IMAGING PERFORMED BY**

Stephanie Warga  
RDCS, RVT

**HOSPITAL NAME**

Churchville Vet Clinic

**Liver**

The **liver** appeared structurally unremarkable with slight coarse architecture. The gallbladder presented minor debris, not overtly pathological. The portal vein was prominent. Portal vein to vena cava ratio was 1.2:1.0.

**REFERRING VET**

Dr. Brooks

**Gastrointestinal**

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.

**INVOICE**

39976

## Pancreas

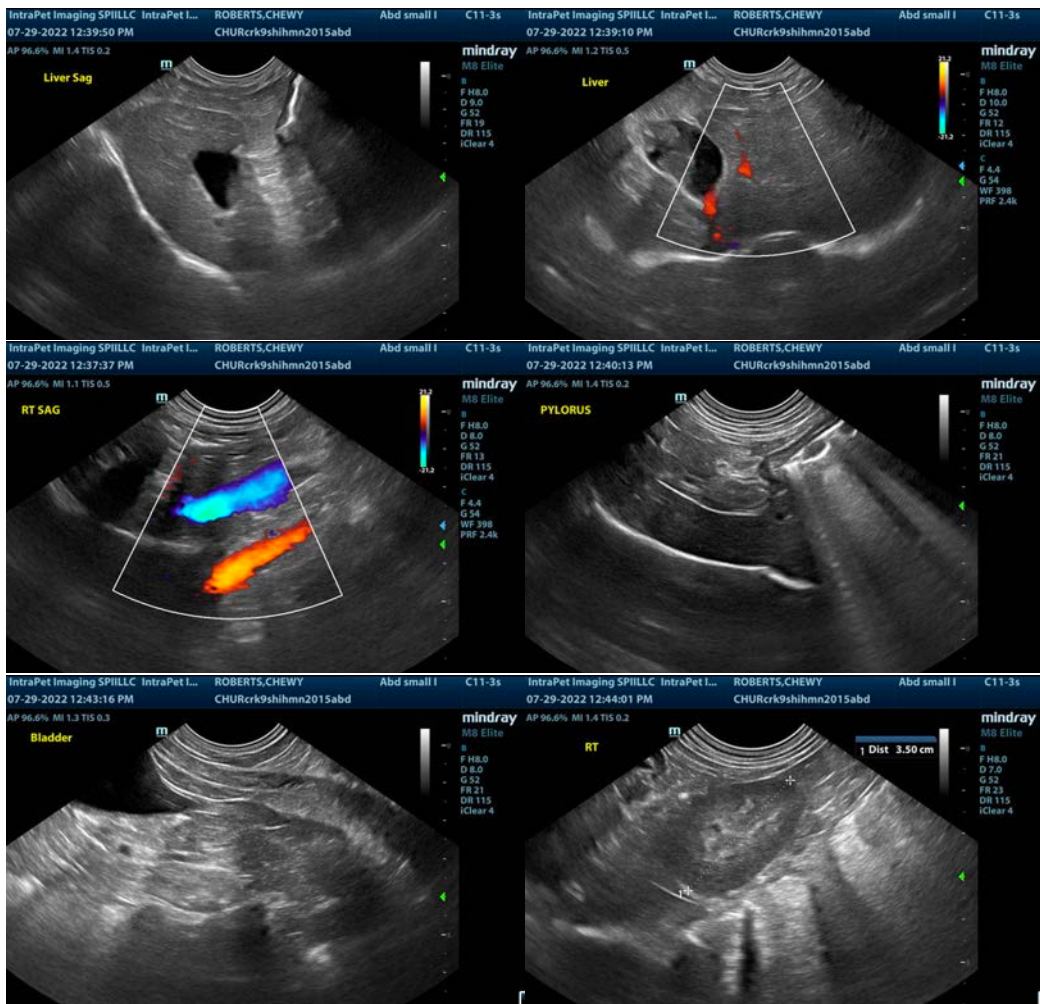
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

## ULTRASONOGRAPHIC FINDINGS

- Benign hepatopathy with prominent portal vein

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of intrahepatic or extrahepatic shunting. If bile acids are elevated, portal hypoplasia may be an issue. Possible breed deposition to Alk Phos elevations. Isoenzyme evaluation for the alkaline phosphatase could also be considered, as it may not be hepatic related. FNA of the liver could be considered for further definition. However, subjectively it appears benign.





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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