



**PATIENT**

Cara Stevens

**PRESENTING CLINICAL SIGNS**

History: Increasing ALT and ALP even on Denamarin. Bile acids of pre and post were elevated. Always been a big drinker since adopting at 9yrs old. Severe anxiety.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Jack Russell Terrier

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 was noted. Ureteral papillae were normal.

**SEX**

Female

**AGE**

14 years

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Pelvic and corticomedullary mineralization was noted. The left kidney measured 4.0 cm with a minor indentation of the dorsal cortex. This is likely owing to microinfarct.

**WEIGHT**

12.4 lbs

**Adrenal Glands**

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

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.

**IMAGING PERFORMED BY**

Sammy Burmeister

**Spleen**

**HOSPITAL NAME**

Faith Animal Care

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 was noted.

**REFERRING VET**

Dr. Faith

**Liver**

**INVOICE**

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The **liver** revealed coarse architecture with mildly increased portal markings and slight irregular contour. The liver was relatively normal in size. There was no evidence of intrahepatic or extrahepatic shunting. Occasional hypoechoic nodular changes were noted and non-disruptive. Intrahepatic vascular volume appeared normal. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal.

**DATE**

12/16/21



**PATIENT**

**Gastrointestinal**

Cara Stevens

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.

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Jack Russell Terrier

**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.

**SEX**

Female

**ULTRASONOGRAPHIC FINDINGS**

Non specific chronic inflammatory hepatopathy.

**AGE**

14 years

Minor renal mineralization.

**WEIGHT**

12.4 lbs

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There was no evidence or suspicion of intrahepatic or extrahepatic shunting. If adrenal disease is suspected further imaging under sedation may be necessary.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy**

**IMAGING PERFORMED BY**

Sammy Burmeister

**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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Faith Animal Care

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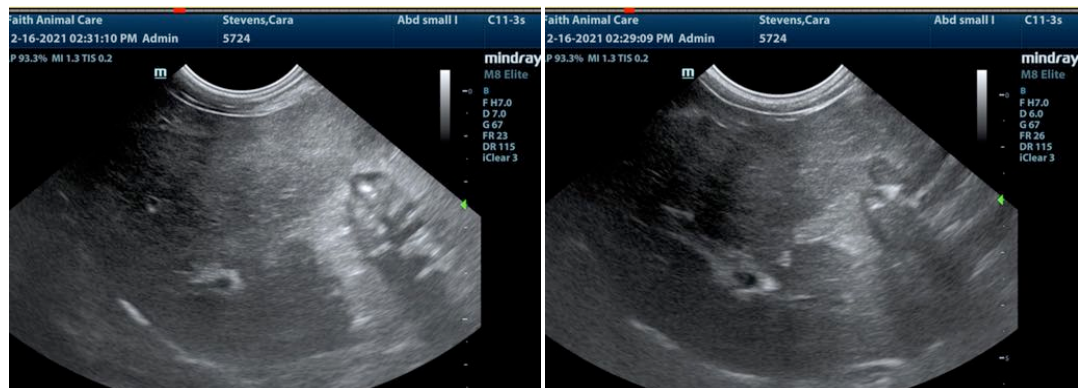
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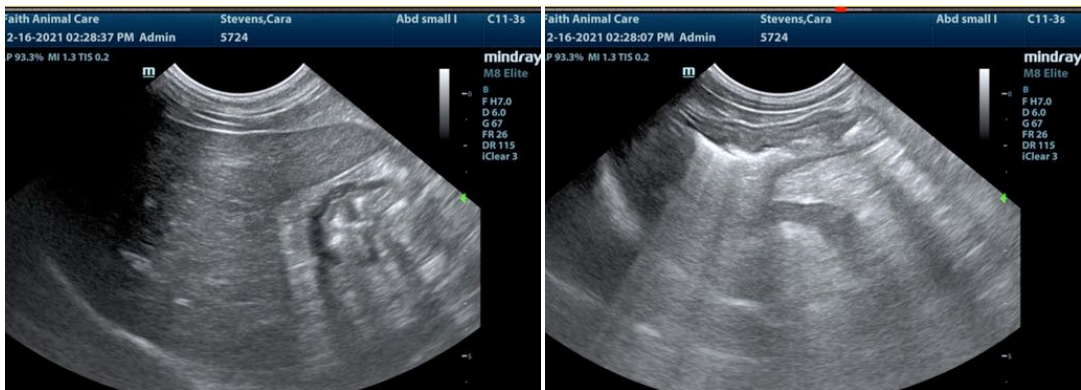
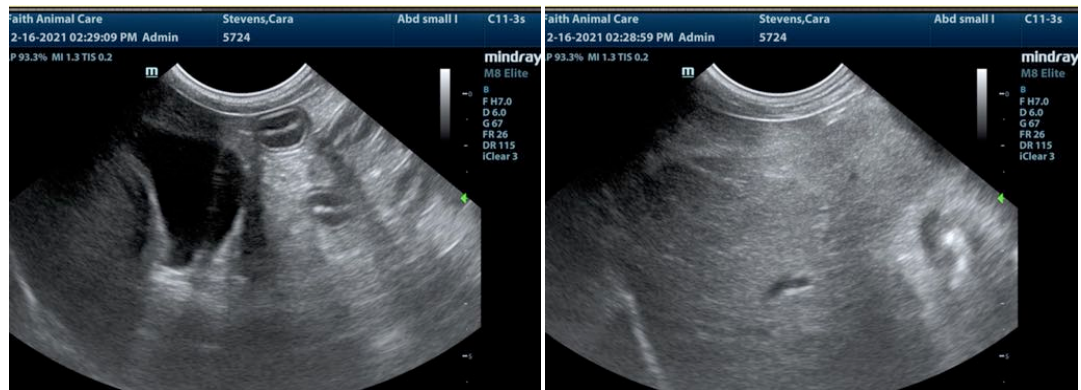
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**AGE**

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The information and recommendations provided are based on the images presented by the referring veterinarian. 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.



**PATIENT**

**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**  
info@SonoPath.com

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Jack Russell Terrier

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