



<b>PATIENT</b>	<b>PRESENTING CLINICAL SIGNS</b>
Riley Smith	Concerns about elevated liver enzymes. No clinical signs. PE unremarkable. Has been on Levetiracetam, Pimobendan and ZentoniL.
<b>SPECIES</b>	Abnormal PE/Chem/CBC/UA Results: CBC normal other than Platelets low 51(143-448) Chem ALT 473(18-121) AST 108(16-55) ALP 559 (5-160) Cholesterol 9.4(3.4-8.9)Lipase 508(0-250) Creatine Kinase 513(10-200)4DX negative T4 normal
Canine	
<b>BREED</b>	<b>ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN</b>
Cavalier King Charles Spaniel	<b>Urinary System</b>
<b>SEX</b>	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with focal areas of mild primarily dependent luminal mineral were noted. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.
M/N	
<b>AGE</b>	The residual prostate was free of pathology.
8 years	The area of the aortic trifurcation was free of pathology.
<b>WEIGHT</b>	Normal size and margination were 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 or pyelectasia. Discrete areas of potential medullary mineral were noted. The left kidney measured 5.8 cm in length. The right kidney measured 5.6 cm in length.
16.4 kg	
<b>INTERPRETED BY</b>	<b>Adrenal Glands</b>
R. McKenzie Daniel, DVM, DABVP	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.54 cm width at the caudal pole and 0.55 cm width at the cranial pole. The right adrenal gland was indistinctly visualized yet overtly normal in size, position, and shape measuring 0.55 cm width at the caudal pole.
<b>IMAGING PERFORMED BY</b>	<b>Spleen</b>
Crystal Hill	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.
<b>HOSPITAL NAME</b>	<b>Liver/ Gallbladder</b>
East Plains AH	The liver exhibited normal to possible borderline subnormal size yet maintained a symmetrical capsule contour. Generalized mild increased parenchyma echogenicity compared to the spleen exhibiting moderate coarse echotexture and evidence of subjective mild parenchymal remodeling. Subjective adequate hepatic vascular volume was noted. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
<b>REFERRING VET</b>	
Dr. Boyer	
<b>INVOICE</b>	
16428	
<b>DATE</b>	
3/22/23	



**PATIENT**

***Gastrointestinal***

Riley Smith

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.

**SPECIES**

Canine

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.

**BREED**

Cavalier King Charles  
Spaniel

***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 were evident.

**SEX**

M/N

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**AGE**

8 years

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

16.4 kg

- Nonspecific yet subjective chronic, benign hepatopathy, potential for borderline subjective subnormal hepatic size
- Normal gallbladder
- Discrete bilateral renal medullary mineral
- Mild dependent urinary bladder luminal mineral

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The overall liver was nonspecific without overt evidence of neoplastic criteria. Considerations may include nonspecific chronic inflammatory parenchymal disease, vacuolar hepatopathy, hyperplasia, hematopoiesis, fibrosis, toxic hepatopathy i.e., copper or other hepatopathy.

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

East Plains AH

Given that the patient is non-clinical, a non-visualized macroscopic shunt is considered unlikely. Further clarification and definitive diagnosis would require core surgical biopsies for histopathology. Hepatic functionality is likely normal / adequate assuming normal albumin, glucose, BUN, and cholesterol levels. Bile acid testing and urine C/S if evidence of inflammatory sediment on urinalysis, could be considered. Hepatosupportive medications and monitoring of hepatic response would be a more conservative approach.

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**PATIENT**  
Riley Smith

**SPECIES**  
Canine

**BREED**  
Cavalier King Charles  
Spaniel

**SEX**  
M/N

**AGE**  
8 years

**WEIGHT**  
16.4 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

East Plains AH

**REFERRING VET**

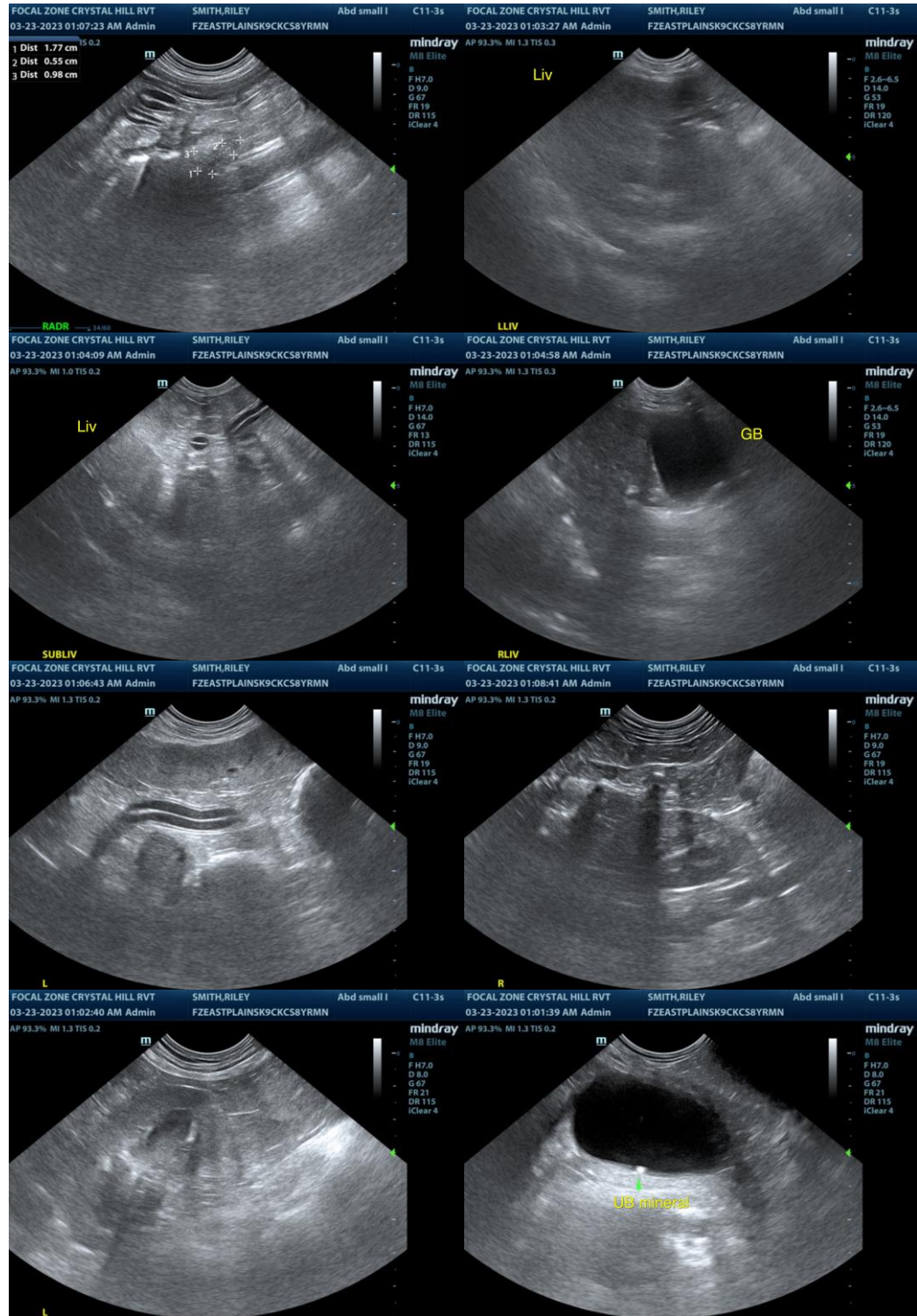
Dr. Boyer

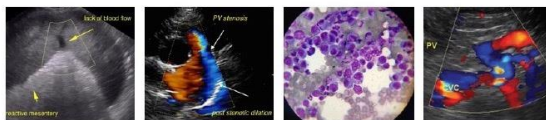
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**PATIENT**

Riley Smith

**SPECIES**

Canine

**BREED**

Cavalier King Charles  
Spaniel

**SEX**

M/N

**AGE**

8 years

**WEIGHT**

16.4 kg



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

**INTERPRETED BY**

R. McKenzie Daniel,  
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