



**PATIENT PRESENTING CLINICAL SIGNS**

Abby Mattheis

Presented last July 13, 2023 for Having trouble with rear right leg Won't bear any weight at all, when O got back last time it started No medications given Lets the O palpate the leg No previous history of any leg issues PE notes: BAR; friendly; p/m mm; CRT 1-2s; no mur/arrh; no abn lung sounds; no abd dist; no pain or abns on abd palp; lenticular sclerosis, ears, LNs WNL; RH- ACL tear, sl pain on hip; BCS-9/9; dent dz Meds: carprofen and gabapentin July 20, 2023- Doing okay at home Has not eaten or had any meds since 10pm last night

**SPECIES**

Canine

**BREED**

Chihuahua

Abnormal PE/Chem/CBC/UA Results: July 13, 2023: ALB 4.8 g/dL, ALP >2400 U/L, ALT 148 U/L, GLU 125 mg/dL, TP 8.5 g/dL

**SEX**

Spayed Female

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**AGE**

13 Years 5 Months

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses are observed. Several (2-3 suspected) cystoliths are noted, with the largest measuring 0.80 cm in diameter. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**WEIGHT**

15.4 Pounds

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia or infarcts observed. The left kidney measured 4.61 cm. The right kidney measured 5.12 cm. Punctate non-obstructive nephroliths are noted bilaterally.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

**IMAGING PERFORMED BY**

Dr. Jessie Evoniuk

The right adrenal gland is normal (mildly subjectively plump) in size (1.0 cm at the cranial pole and 0.78 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

State Ave Vet Clinic

The left adrenal gland is normal (mildly subjectively plump) in size (0.43 cm at the cranial and 0.74 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Jessie Evoniuk

**Spleen**

**INVOICE**

44163

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**DATE**

7/20/23

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.



<b>PATIENT</b>	<b><i>Gastrointestinal</i></b>
Abby Mattheis	The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta.
<b>SPECIES</b>	There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.
Canine	
<b>BREED</b>	The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.
Chihuahua	
<b>SEX</b>	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
Spayed Female	<b><i>Pancreas</i></b>
<b>AGE</b>	The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.
13 Years 5 Months	
<b>WEIGHT</b>	<b><i>Free Abdomen</i></b>
15.4 Pounds	There is no evidence of free peritoneal effusion noted in these images.
<b>INTERPRETED BY</b>	There is no apparent lymphadenopathy noted in these images.
Beth Johnson, DVM DACVIM	<b>PRIMARY FINDINGS</b>
<b>IMAGING PERFORMED BY</b>	<ul style="list-style-type: none"> <li>• Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.</li> <li>• Multiple urinary bladder cystoliths</li> <li>• Mildly plump adrenal glands noted bilaterally – This could be normal patient variant versus early mild or potentially emerging hyperadrenocorticism, likely pituitary dependent, and should be interpreted in combination with clinical signs that support hyperadrenocorticism and not necessarily pursued without supporting clinical signs.</li> </ul>
Dr. Jessie Evoniuk	
<b>HOSPITAL NAME</b>	<b>SECONDARY FINDINGS</b>
State Ave Vet Clinic	<ul style="list-style-type: none"> <li>• Age related kidney changes with non-obstructive nephrolithiasis noted bilaterally.</li> </ul>
<b>REFERRING VET</b>	
Dr. Jessie Evoniuk	<b>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</b>
<b>INVOICE</b>	If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.
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<b>DATE</b>	Differentials are vast and non-specific. Differentials include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal ultrasound, reactive or idiopathic/vacuolar hepatopathy, cholestasis and/or hyperadrenocorticism as well as many
7/20/23	



**PATIENT**

Abby Mattheis

chronic non-hepatobiliary diseases such as chronic infections/inflammation from dental disease, IBD, neoplasia, hyperlipidemia, hypothyroidism, chronic pancreatitis, chronic stress, etc.

**SPECIES**

Canine

There is no ultrasonographic evidence of cholestasis. Adrenocortical testing such as a low dose dexamethasone suppression test could be considered if clinical signs of hyperadrenocorticism are present. Ursodiol could be considered if gallbladder sludge is noted. A fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. Otherwise, recommendations include addressing any other concurrent disease and monitoring. If values are progressive, recheck imaging is recommended.

**BREED**

Chihuahua

**SEX**

Spayed Female

**AGE**

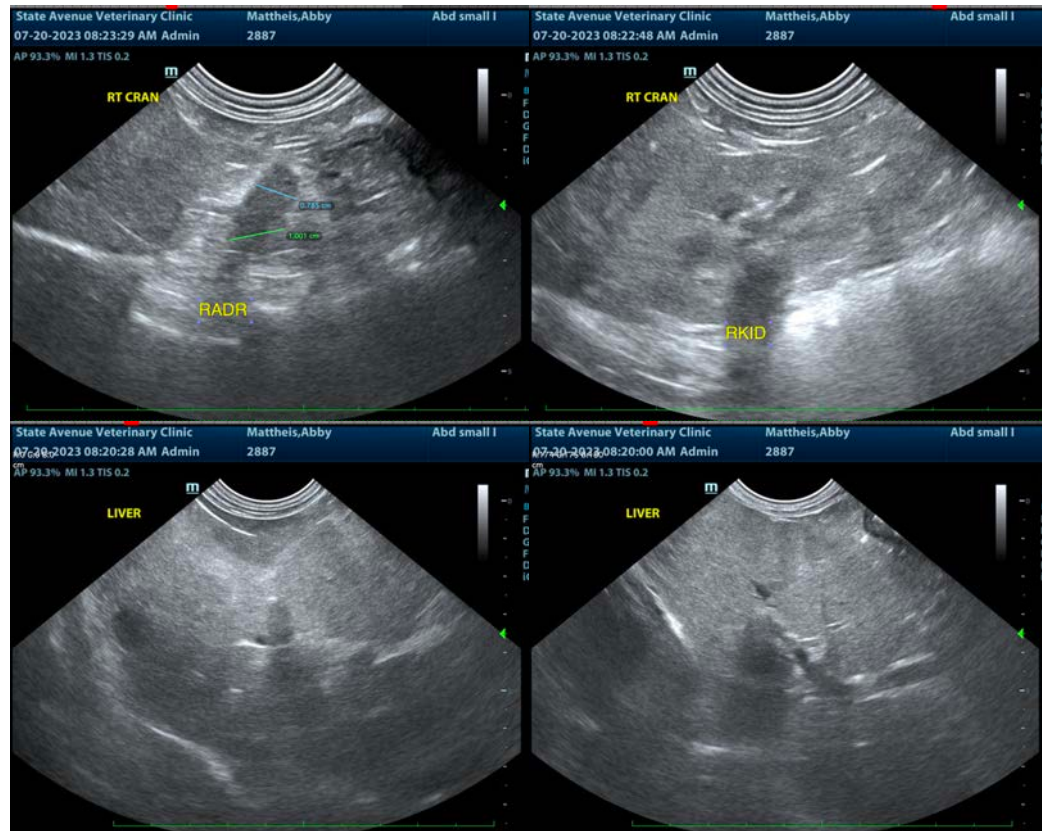
13 Years 5 Months

**WEIGHT**

15.4 Pounds

**INTERPRETED BY**

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**IMAGING PERFORMED BY**

Dr. Jessie Evoniuk

**HOSPITAL NAME**

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**REFERRING VET**

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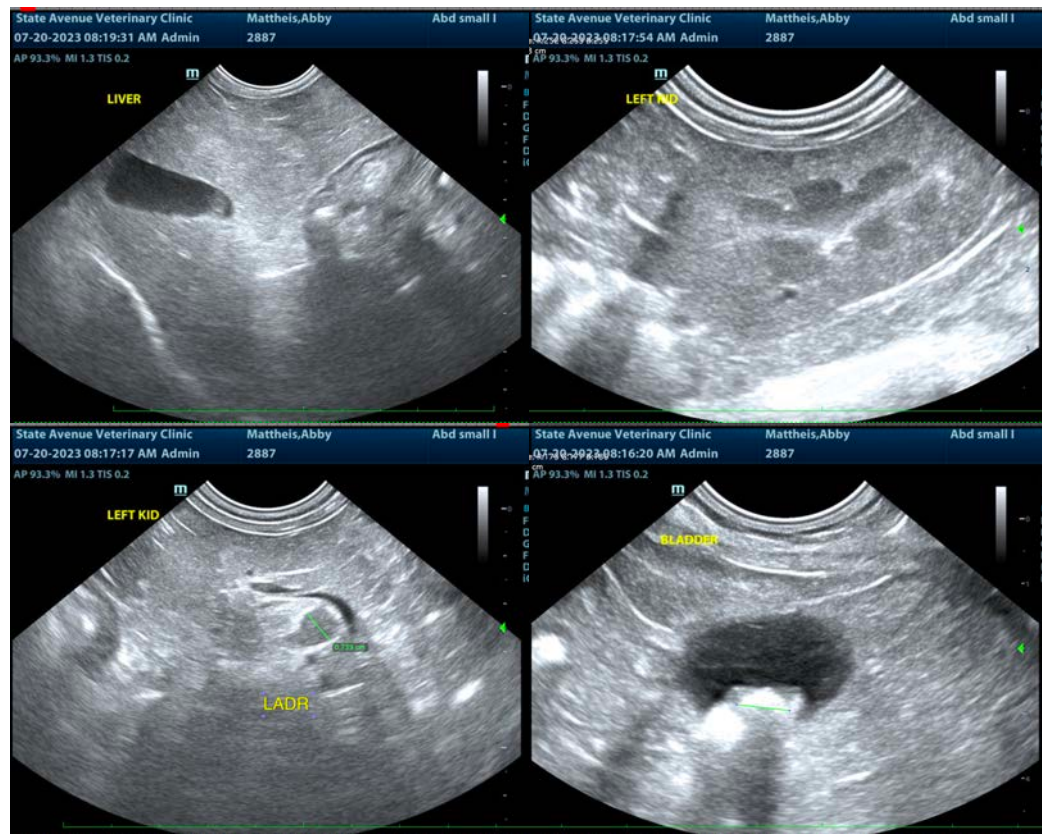
Dr. Jessie Evoniuk

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**DATE**

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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.

**Beth Johnson, DVM, DACVIM**  
info@sonopath.com