



PATIENT	PRESENTING CLINICAL SIGNS
Lola Sorensen	Elevated liver values, p has no symptoms
SPECIES	Abnormal PE/Chem/CBC/UA Results: ALT and AST elevations 3-24-23 AST- 537 ALT-756 4-24-23 ASTO-605 ALT- 818
Canine	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
BREED	<i>Urinary System</i>
Miniature Pinscher	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with non-dependent particulate to hyperechoic sediment to micromineral. The sediment/micromineral appeared to extend into the area of the cystourethral junction and was visualized within the proximal urethra lumen. No evidence of macrocalculi or tumors.
SEX	
FS	
AGE	Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Pinpoint areas of mineral primarily in the lateral diverticuli. The left kidney measured 4.9 cm in length. The right kidney measured 5.7 cm in length.
8yr	
WEIGHT	The area of the aortic trifurcation was free of pathology.
15.0lb	
INTERPRETED BY	The area of the uterine remnant appeared normal and free of pathology.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	<i>Adrenal Glands</i>
	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.44 cm width at the caudal pole and 1.5 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.37 cm width at the caudal pole and 2.0 cm length.
IMAGING PERFORMED BY	<i>Spleen</i>
Jenna Walsh CVT	The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.
HOSPITAL NAME	<i>Liver/Gallbladder</i>
The Ark Veterinary Clinic	The liver exhibited generalized enlargement and non-homogenous hyperechoic parenchyma with moderate to marked coarse echotexture. Discrete micronodular parenchymal changes were present. Indistinct portal vascular borders were present. Normal hepatic vascular volume. The gallbladder was non-distended in size with thin walls and moderate inspissated hyperechoic debris and concurrent peripheral mucus. The cystic and common bile ducts were normal.
REFERRING VET	<i>Gastrointestinal</i>
Dr Mercer	
INVOICE	
13642ag	
DATE	
04/28/2023	



PATIENT	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.
Lola Sorensen	
SPECIES	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.
Canine	Normal visible colon wall layers were present with apparent formed feces in lumen.
BREED	Pancreas
Miniature Pinscher	The pancreas was mildly prominent in size with mild capsule asymmetry and isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
SEX	Free Abdomen
FS	General mild increased omental echogenicity with intermittent scant pocket of peri hepatic to peritoneal free fluid.
AGE	ULTRASONOGRAPHIC FINDINGS
8yr	<ul style="list-style-type: none">• Non-homogenous hyperechoic nodular liver.• Gallbladder mucocele.• Urinary bladder/proximal urethral sediment/microcalculi.• Mild non-obstructive bilateral renal medullary mineral.• Heterogenous mildly prominent pancreas.• Scant perihepatic/peritoneal free fluid.
WEIGHT	INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
15.0lb	The hepatic presentation was non-specific with considerations including suspected chronic inflammatory criteria i.e., chronic hepatitis or similar with the possibility of fibrosis, nodular hyperplasia, hematopoiesis, vacuolar hepatic changes, toxic hepatopathy i.e., copper or infiltrative neoplasia. Assuming normal clotting status a hepatic FNA for screening cytology could be considered for further assessment to identify inflammatory cell type. Given the presence of concurrent gallbladder mucocele, prophylactic cholecystectomy with hepatic biopsies should be a strong consideration in this case. No overt evidence of intra/extrahepatic macroscopic shunt. Concurrent low grade to chronic pancreatitis is possible if clinical signs consistent with pancreatitis are noted.
INTERPRETED BY	A full urinary workup including UA, C/S and baseline UPC level if evidence of proteinuria is suggested. This patient may be passing small amounts of mineral from the kidneys into the urinary bladder.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Empirically some or all of the following protocol may be considered.
IMAGING PERFORMED BY	Enrofloxacin 5 mg/kg SID PO & Metronidazole (10-20 mg/kg po bid) over 3 weeks, Ursodiol (10-15 mg/kg p.o. q24h) over 8 weeks and recheck sonogram. Monitor rapid rise in ALT, SAP, Bilirubin, bilirubinuria, leukocytosis, focal cranial abdominal subxyphoid discomfort or progressive anorexia. More information regarding clinical emerging mucocele issues may be found with our article and research at http://sonopath.com/resources/articles, <i>Defining a GB Mucocele</i> and <i>Clinical Parameters in Dogs with Sonographically Diagnosed Surgical Biliary Disease</i> from ECVIM 2009.
Jenna Walsh CVT	
HOSPITAL NAME	
The Ark Veterinary Clinic	
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PATIENT

Lola Sorensen

SPECIES

Canine

BREED

Miniature Pinscher

SEX

FS

AGE

8yr

WEIGHT

15.0lb

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jenna Walsh CVT

HOSPITAL NAME

The Ark Veterinary
Clinic

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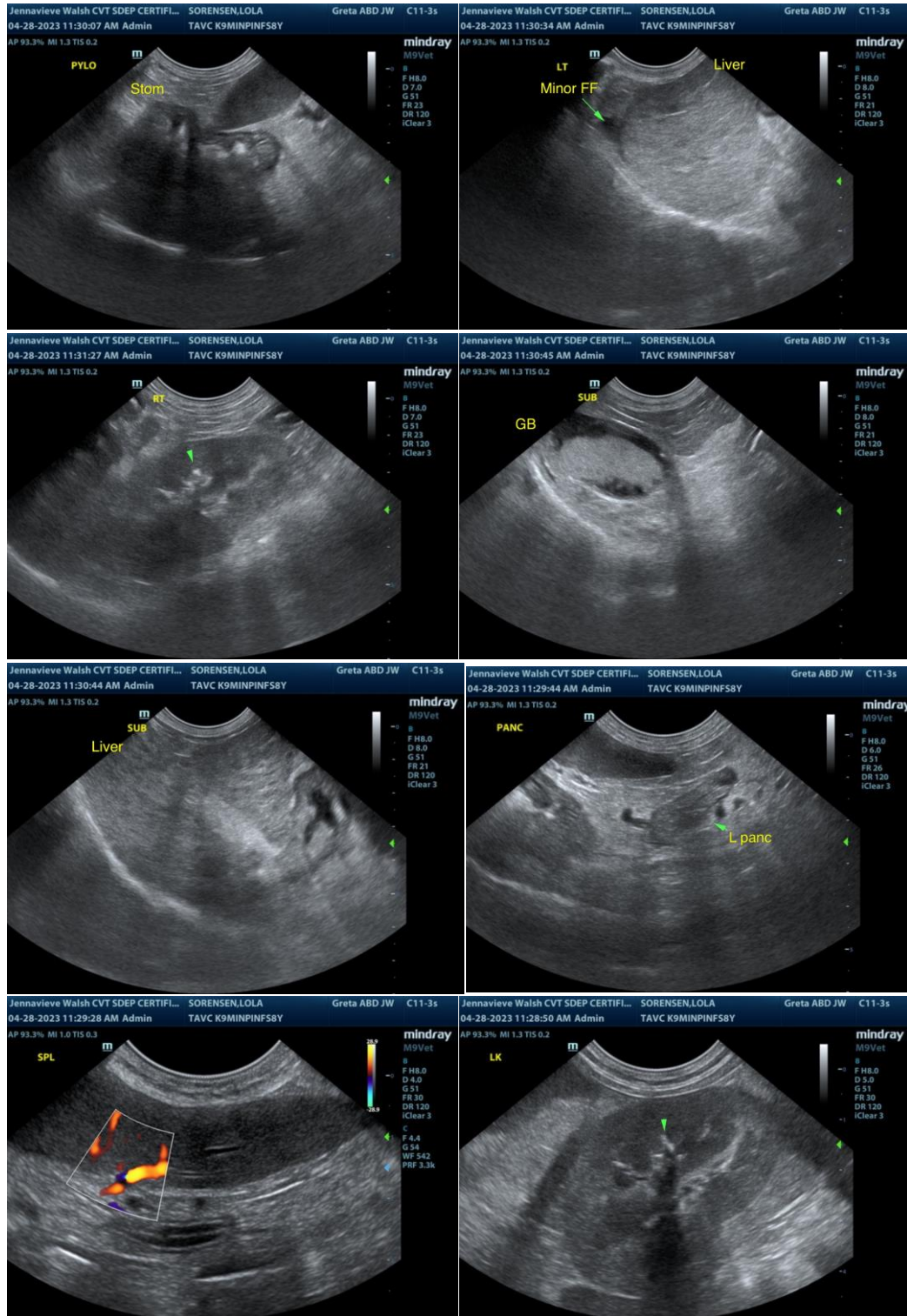
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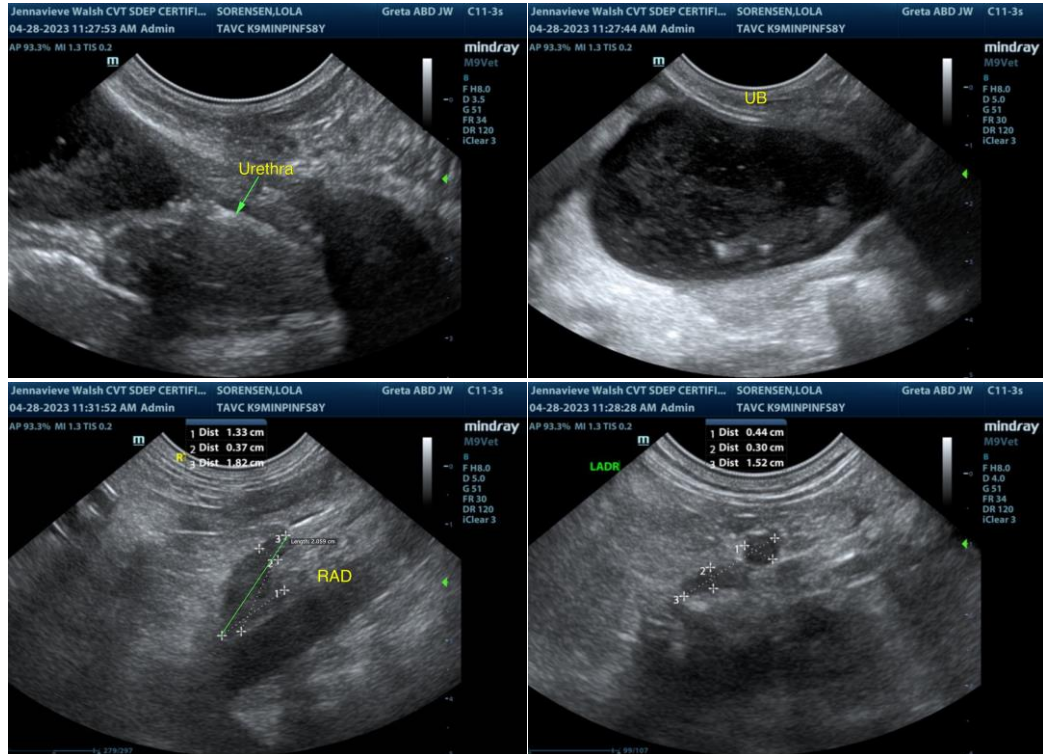
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com