



PATIENT	PRESENTING CLINICAL SIGNS
Willow Harrington	History: Chronic elevation in liver enzymes. 24-hour history of anorexia and abdominal pain. No V/D. Abnormal PE/Chem/CBC/UA Results:ALT 459 (0-120) ALKP 741 (0-140) GGT 15 (0-14)
SPECIES	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Canine	<i>Urinary System</i>
BREED	The urinary bladder was normal in size and tone with primarily anechoic content. Mild to moderate congealed nonspecific sediment to mucus was present, primarily in the dorsal urinary bladder lumen. This area of nonspecific sediment to mucus did not appear to originate from the adjacent urinary bladder wall, as well as did not exhibited vascularity on color doppler assessment. Area of congealed nonspecific sediment to mucus measured approximately 2.7 cm in length x 0.6 cm in width. The urethra was normal to a depth of 2.0 cm. Aortic trifurcation was normal.
Shih Tzu	
SEX	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 pyelectasia. The left kidney measured 3.7 cm in length. The right kidney measured 4.2 cm in length.
Spayed Female	
AGE	<i>Adrenal Glands</i>
5 Years	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 0.41 cm width at the cranial pole.
WEIGHT	The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.47 cm width at the caudal pole and 0.40 cm width at the cranial pole.
12.6 Lbs.	
INTERPRETED BY	<i>Spleen</i>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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.
IMAGING PERFORMED BY	<i>Liver</i>
Amy Mayhew, LVT	The liver exhibited subjective mild generalized enlargement with maintained symmetrical capsule contour. Mild generalized uniform increased hepatic parenchyma echogenicity compared to the falciform fat and spleen with similar hepatic parenchyma I echogenicity to the spleen. No evidence of hepatic masses or nodules noted.
HOSPITAL NAME	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
SVS Imaging MI	
REFERRING VET	<i>Gastrointestinal</i>
Family Pet Practice	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.
INVOICE	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.
13474	
DATE	Normal visible colon wall layers were present with apparent formed feces in lumen.
1/17/22	



PATIENT

Pancreas

Willow Harrington

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 was evident.

SPECIES

Canine

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

BREED

Shih Tzu

ULTRASONOGRAPHIC FINDINGS

- Mild to moderate congealed nonspecific urinary bladder sediment or mucus
- Nonspecific hepatopathy- subjectively benign
- Sonographically unremarkable gallbladder

SEX

Spayed Female

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

AGE

5 Years

Urinalysis via cystocentesis, ideally in the area of the nonspecific sediment to mucus, and urinalysis with potential for urine culture and sensitivity (if evidence of inflammatory cells) recommended.

WEIGHT

12.6 Lbs.

The overall appearance of the liver was nonspecific, yet consistent with benign hepatopathy. Considerations may include vacuolar hepatopathy and nonclinical cholestasis given the elevated ALP/GGT combination with potential for primary or concurrent nonspecific hepatitis (infectious, immune mediated, etc.) given the ALT elevation. Assuming normal clotting status, ultrasound guided FNA of the liver, using a 25-gauge needle, may be considered for screening cytology with potential identification of inflammatory cell type (if present). Hepatic biopsies are likely required for definitive histopathological diagnosis.

INTERPRETED BY

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

Possible acute structurally insignificant inflammatory bowel episode or low-grade to chronic pancreatitis, both of which may present sonographically normal may be possible yet not definitive.

IMAGING PERFORMED BY

Amy Mayhew, LVT

Empirically, hepatosupportive medications, including Denamarin and Ursodiol with as needed gastrointestinal support recommended. If evidence of inflammatory cells on hepatic sampling, empirical antibiotic protocol, initially for 2-weeks with reassessment of hepatic enzymes may be considered with discontinuation of antibiotics recommended, if no improvement in hepatic enzymes while 4-6 week antibiotic treatment would be suggested, if positive hepatic enzyme response.

HOSPITAL NAME

SVS Imaging MI

REFERRING VET

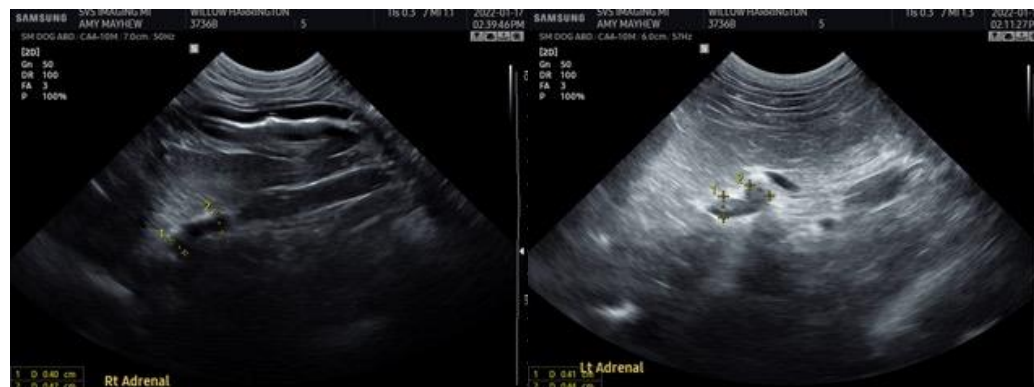
Family Pet Practice

INVOICE

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PATIENT

Willow Harrington

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

5 Years

WEIGHT

12.6 Lbs.

INTERPRETED BY

R. McKenzie Daniel,
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(Canine and Feline)

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

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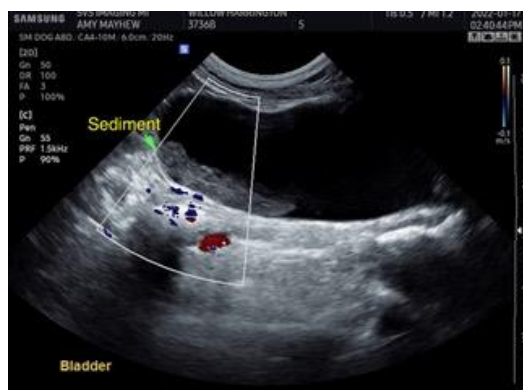
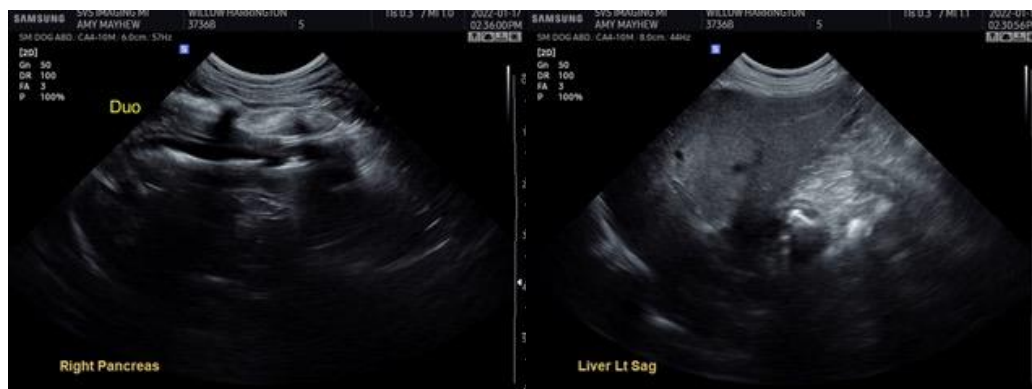
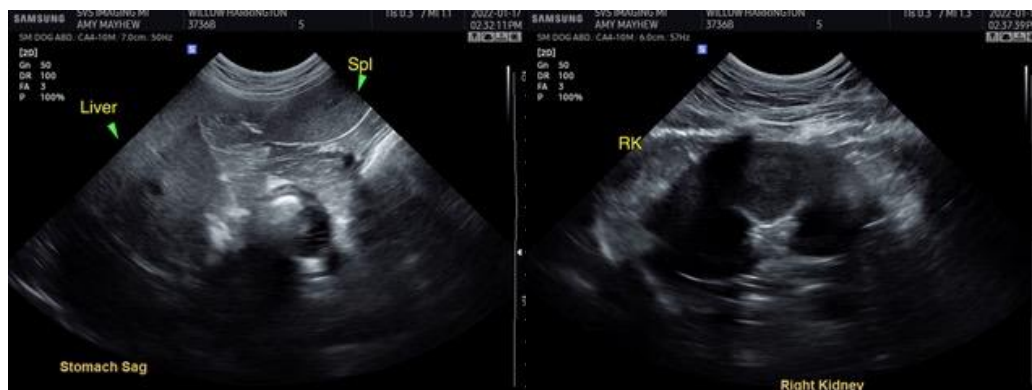
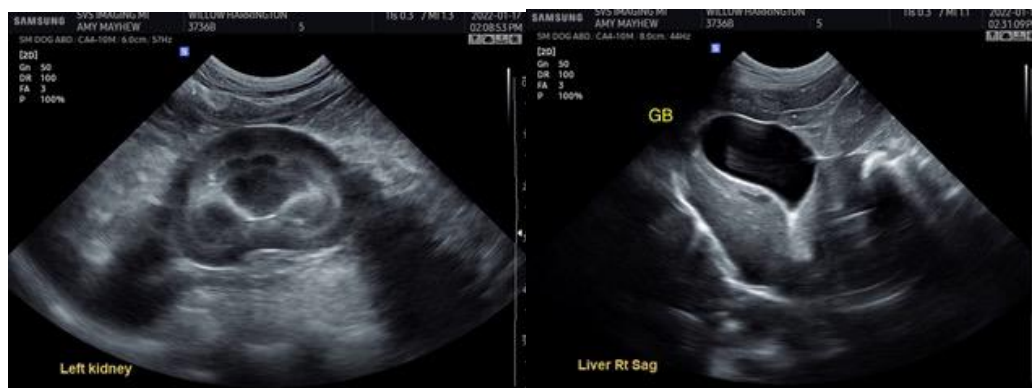
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The information and recommendations provided are based on the images presented by the referring



PATIENT

Willow Harrington

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.

SPECIES

Canine

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com

BREED

Shih Tzu

SEX

Spayed Female

AGE

5 Years

WEIGHT

12.6 Lbs.

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