



**PATIENT PRESENTING CLINICAL SIGNS**

Thor Hill  
History: high triglycerides, lethargic  
Abnormal PE/Chem/CBC/UA Results: elevated spec cPL, triglycerides, ALT

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine

**Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone is normal.

**BREED**

Mini Schnauzer

The region of the prostate is not visualized due to its pelvic location.

**SEX**

Neutered Male

The left kidney is normal in size (5.73 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few small nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

**AGE**

8 years

The right kidney is normal in size (5.63 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

31 lbs

**Adrenal Glands**

The left adrenal gland is normal in size (0.70 cm at cranial pole) (0.43 cm at caudal pole) (1.70 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appears normal.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM (*Small  
Animal Internal Medicine*)

The right adrenal gland is mildly enlarged (1.67 cm at cranial pole) (0.72 cm at caudal pole) (2.72 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appears normal.

**IMAGING PERFORMED BY**

Kelly Reschny

**Spleen**

The spleen is normal in size (1.48 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature appears normal.

**HOSPITAL NAME**

Halton Peel AH

**Liver**

The liver is subjectively prominent to enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly mottled in appearance, with a few small, ill-defined hypoechoic nodules throughout the organ. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

**REFERRING VET**

Walters

**INVOICE**

12805

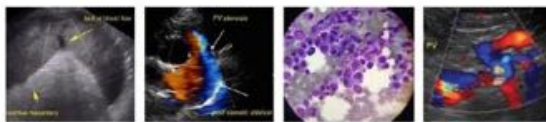
The gall bladder is distended. The wall is normal in thickness. A few polypoid-like lesions are arising from the luminal surface. A moderate amount of aggregated, echogenic, partially dependent to suspended sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**DATE**

4.20.23

**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small



**PATIENT** intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Thor Hill

**SPECIES** *Pancreas*  
 The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Canine

**BREED** *Free Abdomen*  
 The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Mini Schnauzer

### ULTRASONOGRAPHIC FINDINGS

#### SEX Primary Findings

- Neutered Male
- The hepatic parenchymal changes are nonspecific and could be secondary to inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), Leptospirosis, infiltrative neoplasia (less likely), hepatotoxicosis, regenerative nodular hyperplasia, vacuolar hepatopathy, other hepatopathy or some combination thereof.

#### AGE

8 years

#### Secondary Findings

#### WEIGHT

31 lbs

- The gall bladder sludge could be secondary to cholestasis, an emerging mucocele, or less likely, fasting.
- Mild right adrenomegaly
- Bilateral chronic renal changes with left nonobstructive nephrolithiasis

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### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the elevated ALT, consider the following:
  - Pre-and postprandial serum bile acids
  - Leptospirosis testing (i.e., blood and urine PCR, serology)
  - Hepatic tissue sampling (i.e., fine-needle aspirate or biopsies (i.e., laparoscopic, or surgical)). If biopsies are pursued, clotting times should be assessed prior to sampling.
  - Aerobic and anaerobic bile cultures should be obtained, and hepatic copper quantitation should be performed.
  - If hepatic tissue sampling is not pursued at this time, consider empirical treatment for bacterial cholangiohepatitis/Leptospirosis (i.e., amoxicillin-clavulanic acid, hepatic antioxidants) and other symptomatic measures. If liver values do not begin to improve within 7-10 days of initiating therapy, hepatic tissue sampling should be reconsidered.
- Regarding the hypertriglyceridemia, if the level was >500 mg/dL on a fasted sample, consider initiation of a prescription low-fat diet and omega 3 fatty acids. If the triglyceride level does not improve after 3-4 weeks of therapy, initiation of a fibric acid derivative (i.e., fenofibrate) may be warranted.



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**SPECIES**

Canine

**BREED**

Mini Schnauzer

**SEX**

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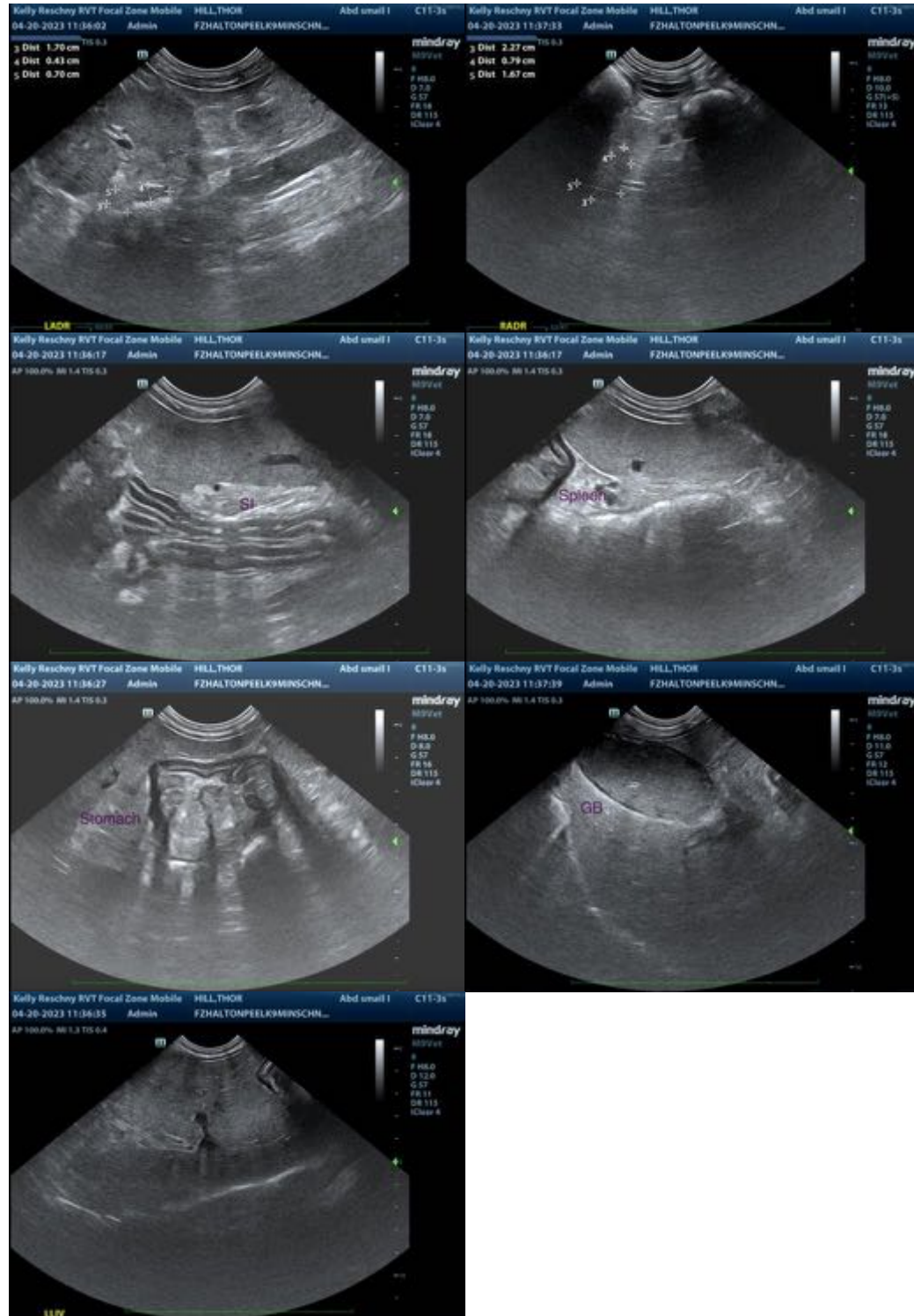
Walters

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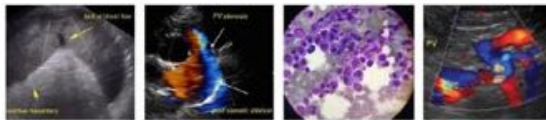
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



**PATIENT**

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.

Thor Hill

**Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
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**SPECIES**

Canine

**BREED**

Mini Schnauzer

**SEX**

Neutered Male

**AGE**

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