



**PATIENT PRESENTING CLINICAL SIGNS**

Dusty Rowe History: Has had some vomiting. Otherwise feels fine. Recheck bloodwork and liver values are unchanged, so ultrasound is recommended.

**SPECIES** Abnormal lab-work values: Mildly elevated liver enzymes. ALT and ALP in 190s.

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED** The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is mildly to moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2-3 cm, are normal.

Terrier Mix

**SEX** The prostate is normal in size (0.61 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

Neutered Male

The left kidney is normal in size (4.76 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**AGE**

4 years The right kidney is normal in size (4.95 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

23.5 lbs The left adrenal gland is normal in size (0.48 cm at cranial pole) (0.51 cm at caudal pole) 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 are normal.

**Adrenal Glands**

**INTERPRETED BY**

Andrea Nicastro, DVM,  
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The right adrenal gland is in normal size (0.65 cm at cranial pole) (0.44 cm at caudal pole) 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 are normal.

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**Spleen**

The spleen is normal in size (1.87 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 is normal.

**HOSPITAL NAME**

West Ashley VC

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The portal vein to caudal vena cava ratio is approximately 1: 1.

**REFERRING VET**

Dr. Grayson Hudgins

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of gravity-dependent, hyperechoic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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**PATIENT** *Gastrointestinal*

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

**SPECIES**

Canine

*Pancreas*

**BREED**

Terrier Mix

*Free Abdomen*

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

**SEX**

Neutered Male

*Other*

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

**AGE**

4 years

**ULTRASONOGRAPHIC FINDINGS**

**Findings**

**WEIGHT**

23.5 lbs

- Unremarkable abdomen
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) cannot be excluded.

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**REFERRING VET**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

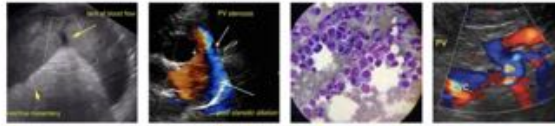
- Pre- and postprandial serum bile acids are recommended to assess hepatic function.
- Consider Leptospirosis testing (i.e., blood and urine PCR, serology)
- Cytologic evaluation of the liver can be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. It should be noted that cytologic evaluation of the liver often will miss certain diagnoses, such as chronic hepatitis and copper hepatotoxicity, which require larger tissue samples. If cytologic evaluation is inconclusive or if not performed, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis/Leptospirosis with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If values do improve, a 4-6-week course of treatment is recommended.

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Dusty Rowe

**SPECIES**

Canine

**BREED**

Terrier Mix

**SEX**

Neutered Male

**AGE**

4 years

**WEIGHT**

23.5 lbs

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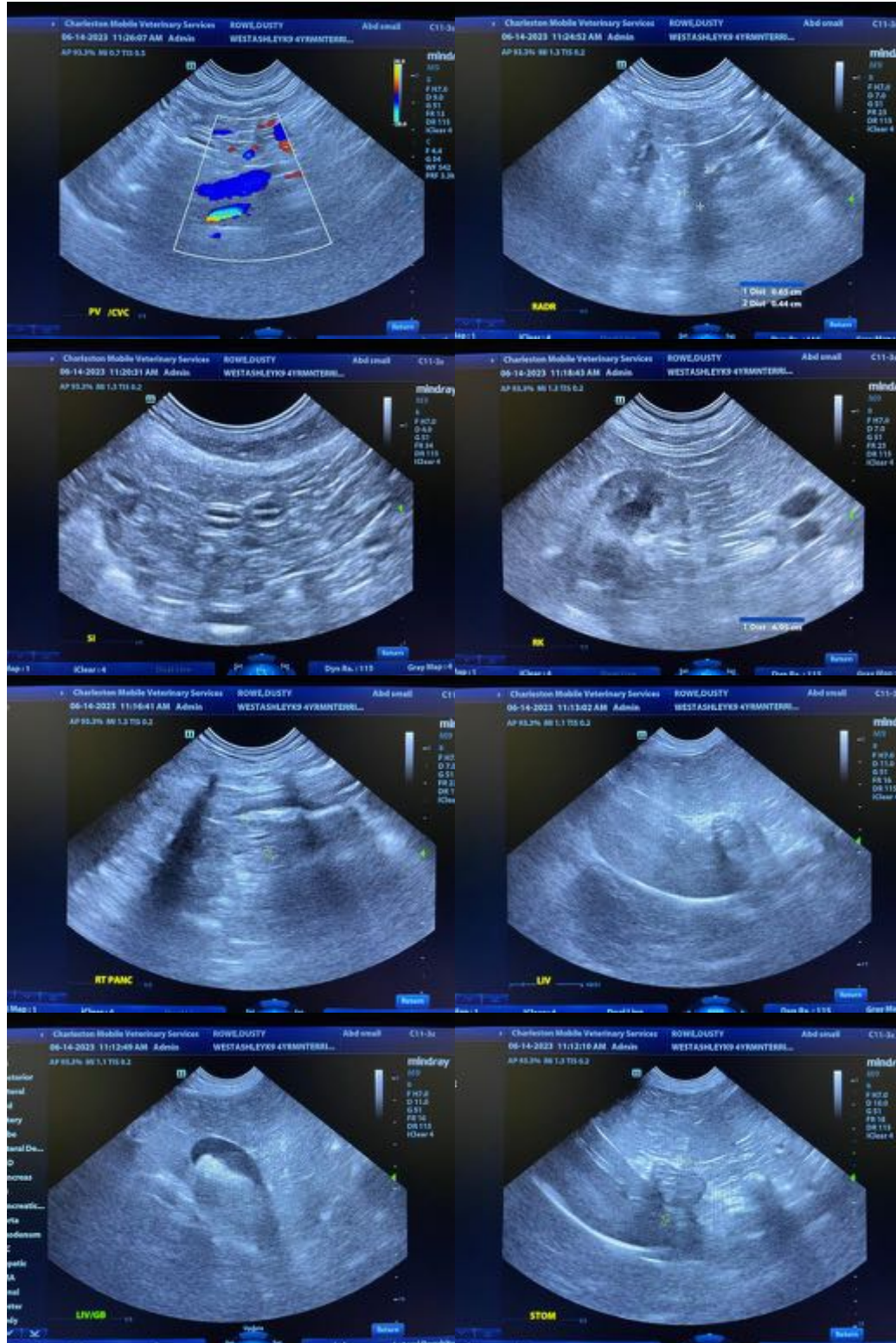
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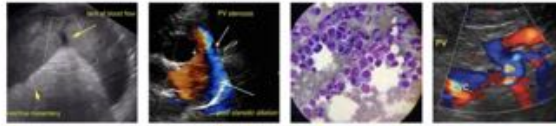
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Dusty Rowe

**SPECIES**

Canine

**BREED**

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**SEX**

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**AGE**

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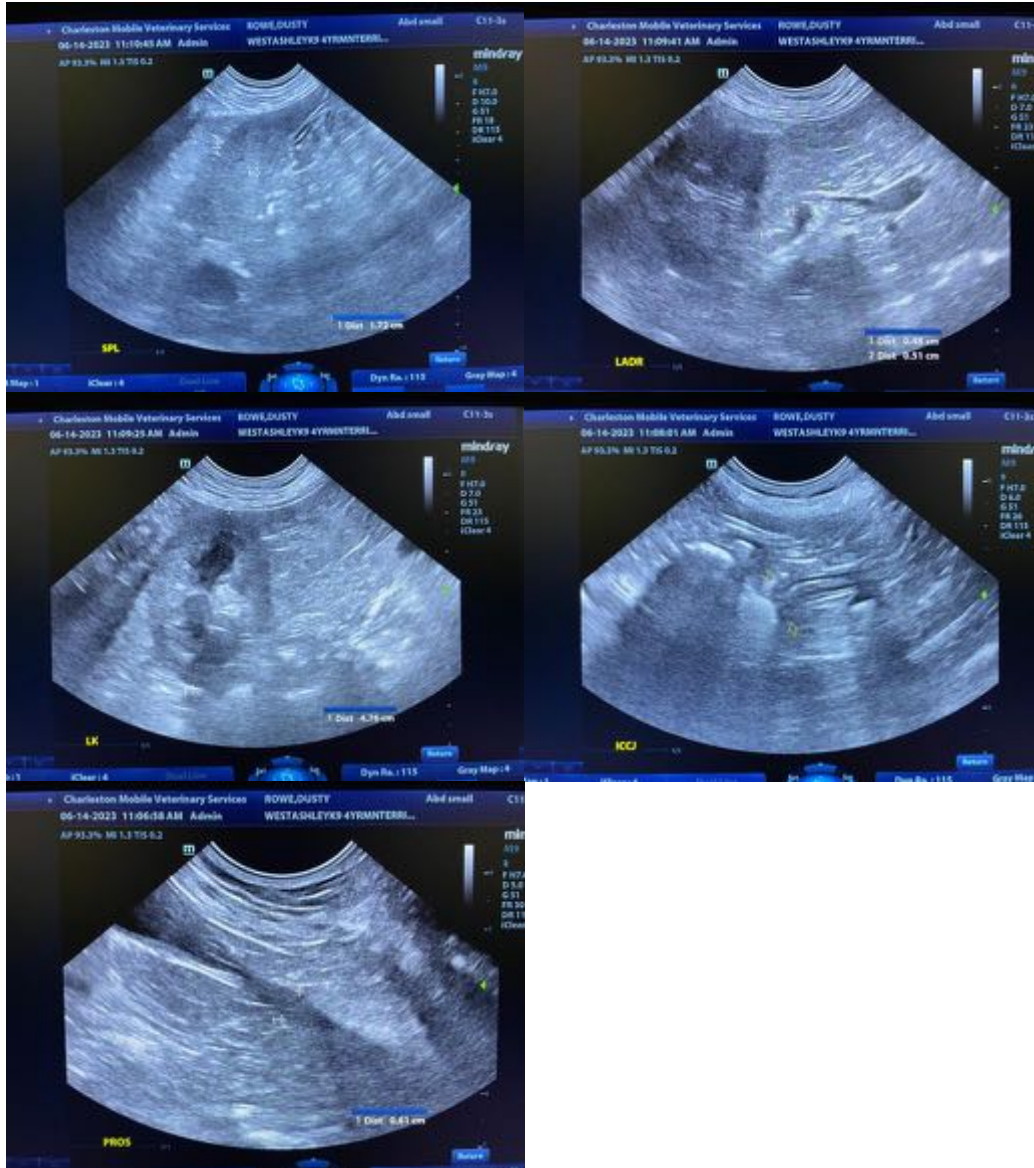
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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