



**PATIENT PRESENTING CLINICAL SIGNS**

Lea Clark HM periodically heard, gr 2/6, coughing, pre-op BW showed elevated liver values, abnormal electrolytes, repeat BW normal. Requires anaesthetic for dental.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: please see attached labs

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Miniature Pinscher

**SEX**

FS

**AGE**

16yr

**WEIGHT**

7.48kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

East Credit VH

**REFERRING VET**

Webster

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13655ag

**DATE**

04/26/2023

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. A small left kidney cortical cyst was present. The left kidney measured 4.6 cm in length. The right kidney measured 5.2 cm in length.

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The left adrenal was normal in size; the right adrenal gland was mildly enlarged in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 1.8 cm length and 0.51 cm width in the caudal pole. The right adrenal gland measured 2.3 cm length and 1.47 cm width in the caudal pole.

**Spleen**

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.

**Liver/Gallbladder**

The liver presented mild to moderately enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. Normal hepatic vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and mild non-organized echogenic debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

**Gastrointestinal**

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.

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.



**PATIENT** Normal visible colon wall layers were present with apparent formed feces in lumen.

Lea Clark **Pancreas**

**SPECIES** The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Canine **Free Abdomen**

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

**BREED** **ULTRASONOGRAPHIC FINDINGS**

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- Hepatopathy-subjectively benign, vacuolar hepatopathy, chronic low grade inflammatory disease, hematopoiesis, hyperplasia, fibrosis or other hepatopathy possible. Neoplastic criteria considered less likely.
- Gallbladder debris (non-mucocele).
- Mildly enlarged non-homogenous irregular right adrenal gland-adenomatous change, benign hyperplasia, potential for emerging neoplasia i.e., pheochromocytoma possible.
- Minor pancreatic remodeling.
- Moderate chronic renal changes with small left kidney cortical cyst.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

7.48kg

Assuming normal clotting status, a hepatic FNA for screening cytology is warranted for further assessment to assess for and identify inflammatory cell type. Hepatosupportive medications such as Denamarin and Ursodiol may prove beneficial. No evidence of intrahepatic or extrahepatic macroscopic shunt was visualized.

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A screening BP is advised to assess for evidence of hypertension which may allude to emerging right adrenal neoplastic criteria i.e., pheochromocytoma. If hypertension is documented, a urine catecholamine level may be considered. The right adrenal gland is nonspecific and serial sonographic monitoring pending additional diagnostics for evidence of progressive enlargement or parenchymal changes is advised.

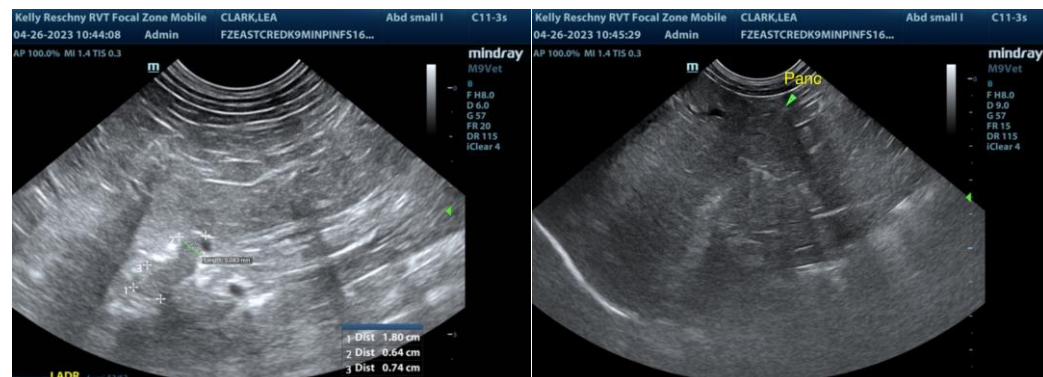
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Anesthetic risk is considered mild given evidence of adequate hepatic function i.e., normal GLU, BUN, CHOL and ALB and assuming no evidence of hypertension.

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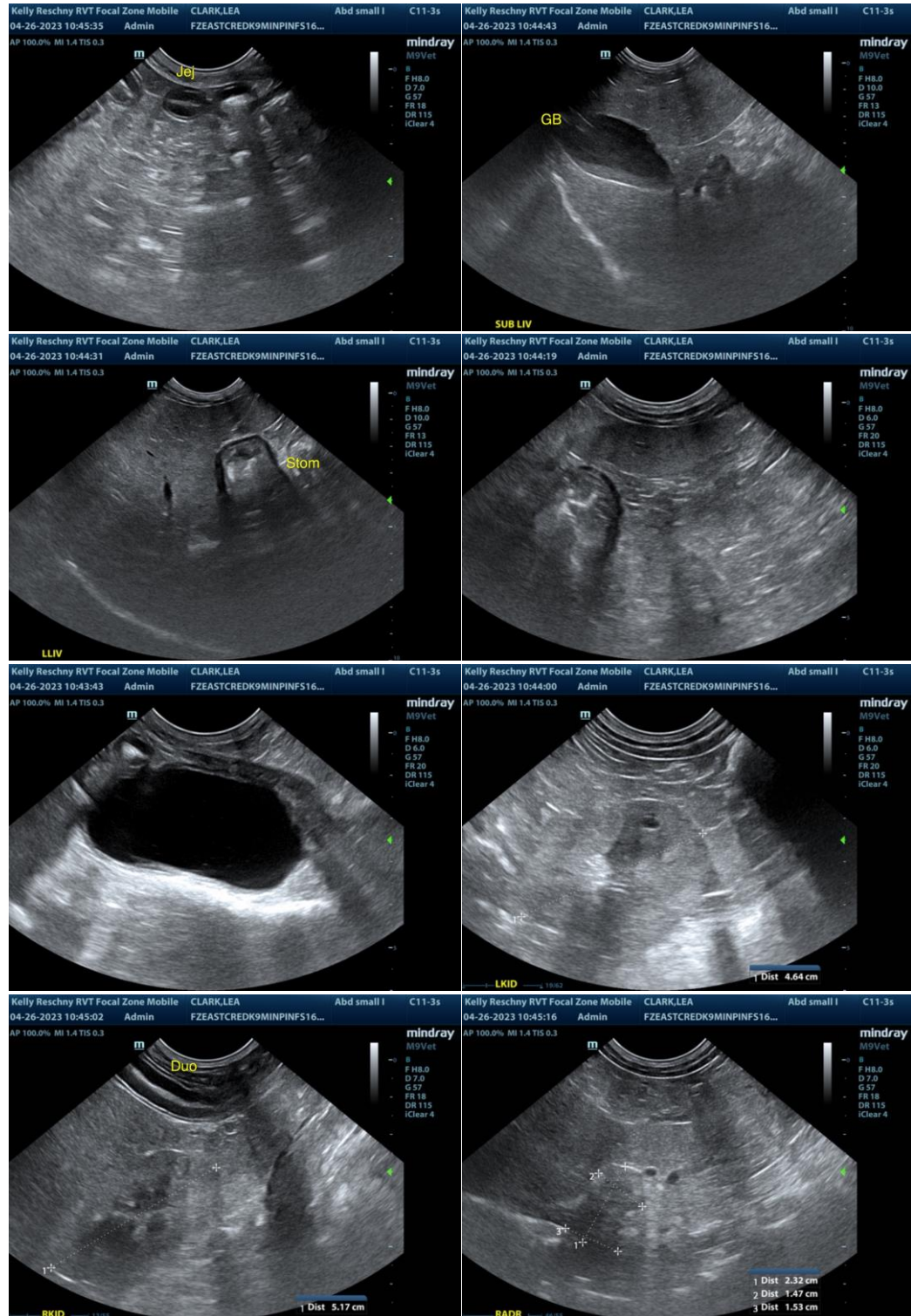
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



**PATIENT**

Lea Clark

can be of any further assistance please contact me.

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

info@SonoPath.com

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