



PATIENT

Penny Lombardo

SPECIES

Canine

BREED

English Bull Dog

SEX

Female Spay

AGE

7

WEIGHT

25 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Belan

HOSPITAL NAME

Beddington Trail AH

REFERRING VET

Dr. Marok

INVOICE

14345

DATE

7/21/22

PRESENTING CLINICAL SIGNS

Hematuria and polyuria straining to urinate Attending concerned about renal disease and possible concurrent hepatic disease

Abnormal PE/Chem/CBC/UA Results: Blood work non diagnostic. UA 3 + protein with lots of WBC and RBC SG 1019 Both triple phosphate and ammonium biturate crystals seen. X rays pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder presented mildly prominent midventral apical to middorsal urinary bladder wall exhibiting subtle asymmetrical luminal surface contour. Anechoic urine was primarily present in the lumen with mild pinpoint to focal areas of primarily dependent mineral. No evidence of urinary bladder macro calculi was noted. The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal tone to a depth of 3.0 cm. The ureteral papillae were normal. The ureters were not visible which is normal.

The area of the aortic trifurcation was free of pathology.

Overtly normal size and contour was present in the left kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. Nonobstructive left kidney renoliths primarily in the medullar and area of the renal pelvis were present. An example of a left kidney renolith measured 2.0 cm in diameter. No evidence of pyelectasia was noted in the left kidney. The overall left kidney measured 6.9 cm in length.

Mild subnormal size compared to the left kidney and normal margination were present in the right kidney. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. Smaller focal to pinpoint areas of medullary mineral to concurrent small renoliths were present in the right kidney. No evidence of pyelectasia was noted in the right kidney. The right kidney measured 6.0 cm in length.

Adrenal Glands

The left bilateral adrenal glands exhibited mild irregular contour and subtle nonhomogeneous yet nonmineralized parenchyma. Subjective mild prominent bilateral adrenal size was noted. The left adrenal gland measured 0.42 cm width at the caudal pole and 0.63 cm width at the cranial pole. The right adrenal gland measured 0.59 cm width at the caudal pole and 0.73 cm width at the cranial 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 was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. Subjectively normal hepatic vascular volume was



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noted. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate ingesta/chyme exhibiting subtle progressive distal acoustic shadowing, likely consistent with recent meal ingestion.

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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.

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

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Pancreas

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 were evident.

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Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Cystitis pattern with mild primarily dependent pinpoint to focal mineral
- Nonobstructive bilateral renolithiasis more prominent in the left kidney
- Sonographically unremarkable liver exhibiting subjective normal hepatic vascular volume
- Minor irregular bilateral adrenal glands - nonspecific, likely patient variant given lack of clinical signs suggestive of Cushing's Syndrome and lack of hepatic enzyme elevation

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Urine C/S on sterile urine sample to rule out underlying infection is recommended. Potentially, this patient may be passing small amounts of mineral from the kidneys into the urinary bladder.

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Given the subjective normal hepatic vascular volume, no obvious evidence of a portosystemic shunt which is considered less likely differential diagnosis, if clinically indicated fasting and post prandial bile acids could be considered.

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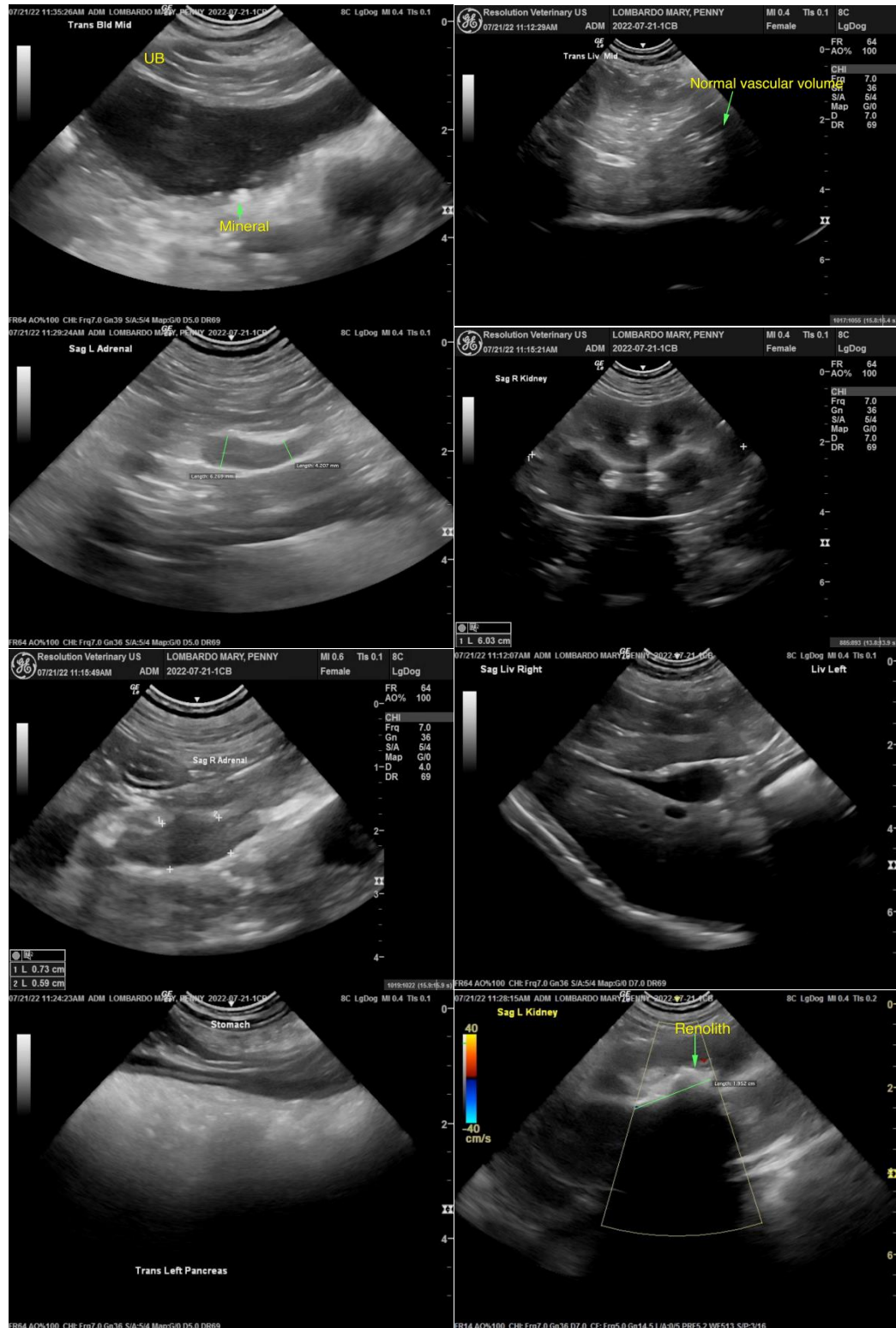
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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