



**PATIENT**

Piper White

**SPECIES**

Canine

**BREED**

Boxer

**SEX**

Spayed Female

**AGE**

1 Year 5 Months

**WEIGHT**

60 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Newton Vet Hospital

**REFERRING VET**

Dr. Verhalen

**INVOICE**

25121

**DATE**

9/1/21

**PRESENTING CLINICAL SIGNS**

Grade I/VI murmur, episodes of collapsing after running around. No current meds. Elevated kidney values.

Abnormal PE/Chem/CBC/UA Results: BUN 106, Creat 4.7

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm 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.

Both kidneys exhibited normal to potential mild subnormal size given the breed and size of the patient. Asymmetrical renal margination was present in both kidneys with both kidneys exhibiting mild asymmetrical cortical hypertrophy along with cortical cysts and suspected mild subcapsular fluid accumulation with potential for minor retroperitoneal free fluid. Both kidneys exhibited mild pyelectasia without evidence of concurrent left or right ureter dilation. The left kidney measured 6.6 cm. The right kidney measured 6.0 cm.

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.3 cm length x 0.64 cm at the caudal pole. The left adrenal gland measured 2.1 cm length x 0.64 cm at 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**

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. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. 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 contained mild echogenic, nonshadowing ingesta most consistent with post prandial presentation without 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.

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



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**Pancreas**

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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.

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Canine

**ULTRASONOGRAPHIC FINDINGS**

- Bilateral nephropathy with cortical cysts, mild pyelectasia, and suspect mild subcapsular fluid accumulation versus minor retroperitoneal free fluid
- Mild gastric ingesta – likely consistent with recent meal ingestion/post-prandial presentation

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Boxer

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SEX**

Spayed Female

The appearance of the bilateral kidneys is most suggestive of chronic nephropathy or nephrosis as opposed to acute kidney injury or acute nephropathy. Bilateral renal dysplasia with cortical cysts and minor subcapsular fluid accumulation may be considered a primary differential diagnosis given the patient's young age. However, possible non-specific chronic nephritis or potential bilateral renal neoplasia such as renal lymphoma cannot be definitively excluded. However, the subjective lack of renomegaly suggests that renal neoplasia may be considered less likely.

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Renal biopsies would be required for definitive diagnosis, yet this may potentially further exacerbate renal dysfunction. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Empirical essential therapy for chronic renal disease would be appropriate, yet guarded prognosis is warranted given the current degree of azotemia and sonographic appearance of the bilateral kidneys. Sonographic monitoring of the kidneys for evidence of progressive degenerative changes is recommended.

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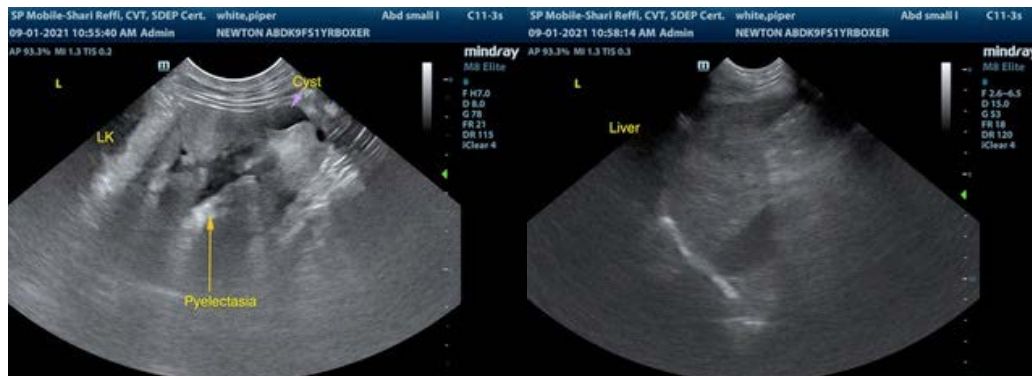
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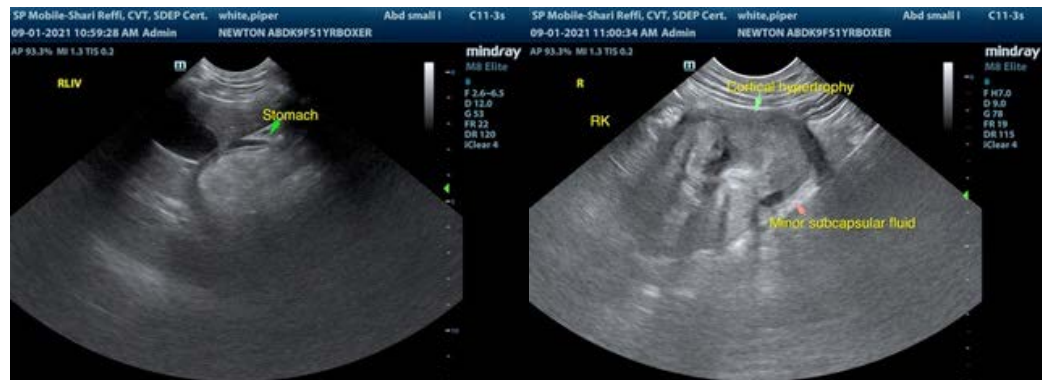
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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