



**PATIENT**

Taz Huber

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

MN

**AGE**

14 years

**WEIGHT**

7.8

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Kim

**HOSPITAL NAME**

Ridgefield Park AH

**REFERRING VET**

Dr. Kim

**INVOICE**

16356

**DATE**

3/14/23

**PRESENTING CLINICAL SIGNS**

Patient presented to the hospital due to liquid/ bloody diarrhea for 4 days. Patient stopped eating the last day but behavior is the same. This is the second time the patient shows these signs. Owner also mentioned that before this episode, patient was drinking a little more water and urinating more frequently. Patient has lost 1.2 pounds in 6 months.

**The submitted study contained 31 still images and 9 videos for review.**

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder was mildly subnormal in size owing to a lack of urine distention. No overt pathology was noted. Mild anechoic urine was present in the urinary bladder. No sediment or calculi was noted. Suspect pinpoint to minor dependent luminal mineral was present.

The residual prostate was free of pathology measuring 0.9 cm in diameter.

The area of the aortic trifurcation was free of pathology.

Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. Mild medullary mineral was present. Mild bilateral pyelectasia was present. The left kidney measured 2.9 cm in length. The right kidney measured 2.6 cm in length.

**Adrenal Glands**

The bilateral adrenal glands were borderline prominent in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. No overt adrenal pathology was noted. The left adrenal gland measured 0.59 cm width in the cranial pole and 0.55 cm width in the caudal pole. The right adrenal gland measured 0.54 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 was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with moderate, non-dependent, mildly inspissated yet subjective mobile gallbladder debris. No evidence of gallbladder or peripheral gallbladder inflammation was noted. The cystic and common bile ducts were normal.



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***Gastrointestinal***

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained variably echogenic, focally shadowing ingesta without signs of obstruction or foreign material. No evidence of mechanical pyloric outflow obstruction was noted.

**SPECIES**

Canine

The small intestine presented intact wall layering and maintained a 1:3 muscularis/mucosa ratio with mild nonspecific segmental duodenojejunal mucosal speckling. No obstructive pattern was noted.

**BREED**

Yorkshire Terrier

The colon walls presented intact yet mild to moderate prominent wall layering with mild thickened to echogenic submucosa. The colon was primarily empty.

**SEX**

***Pancreas***

MN

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, consistent with age-related pancreatic remodeling. No signs of active inflammation or neoplasia.

**AGE**

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***Free Abdomen***

**WEIGHT**

No overt lymphadenopathy or peritoneal effusion was present.

7.8

**ULTRASONOGRAPHIC FINDINGS**

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- Suspect minor dependent urinary bladder luminal mineral
- Chronic renal changes with minor medullary mineral and pyelectasia
- Gastric ingesta
- Enterocolitis pattern - suspect inflammatory bowel
- Mild hepatic parenchymal remodeling - benign
- Gallbladder debris - not overtly consistent with mucocele criteria
- Heterogeneous pancreas - suspect age-related pancreatic changes and incidental, potential for low-grade / chronic pancreatitis possible

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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This patient is suspected to be passing small amounts of mineral from the kidneys into the urinary bladder, likely resulting in minor pelvic scarring, as no overt pyelonephritis. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

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Empirically, hospitalization with rehydration protocol, electrolyte supplementation if clinically indicated, and empirical therapy for hemorrhagic gastroenteritis with an assessment of clinical response would be reasonable. However, if recurrent gastrointestinal signs, hydrolyzed diet trial with likely long-term dietary therapy, high colony count probiotic such as Provable, empirical deworming even if fecal testing is negative, +/- antibiotic therapy may be indicated. A GI panel to include PLI/TLI/Cobalamin/Folate for further assessment of the intestine, as well as three view chest radiographs to rule out occult thoracic pathology, given the patient's weight loss, are warranted. Ursodiol therapy is suggested if evidence of cholestasis.

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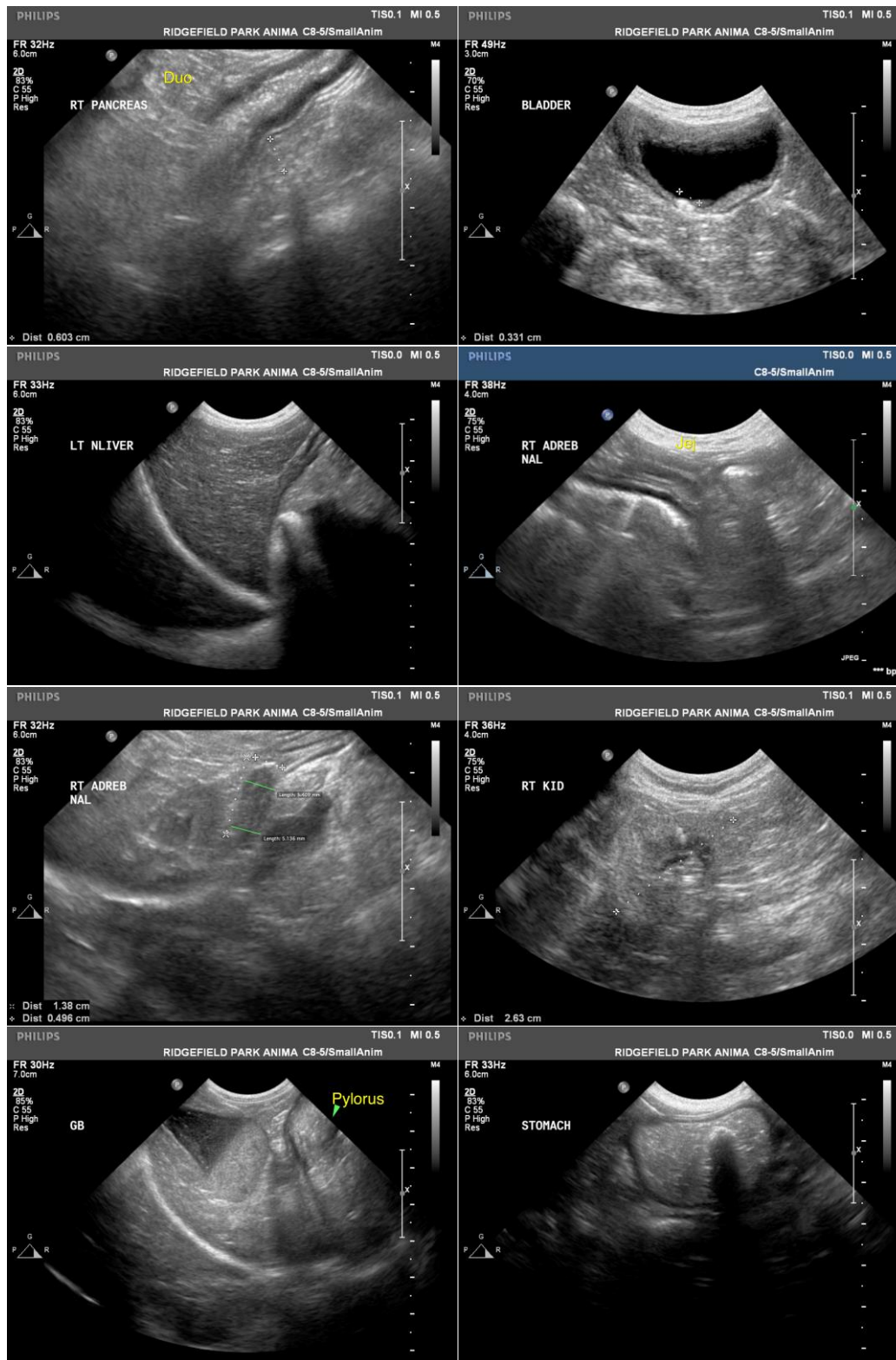
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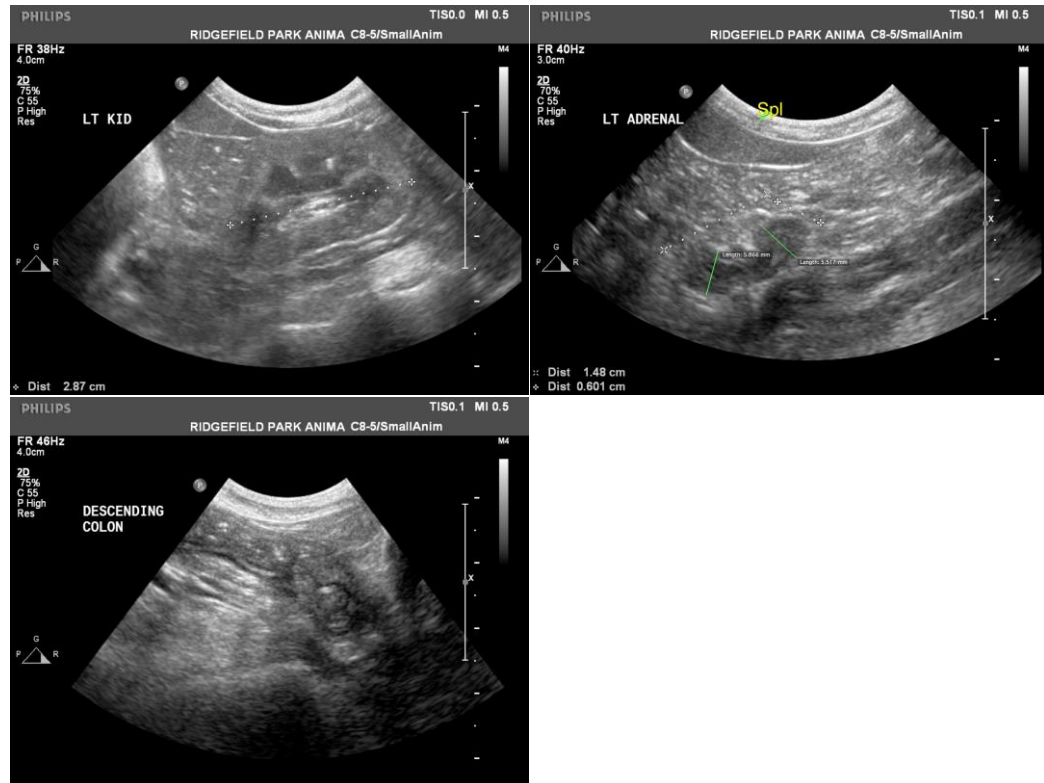
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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