

**PATIENT PRESENTING CLINICAL SIGNS**

**Thomas Boulter**  
**SPECIES** Hyporexia. Severe azotemia, r/o acute on chronic kidney disease unveiled by treatment for hyperthyroidism (recently started methimazole at end of January), advancement of CKD, AKI, pyelonephritis, neoplasia, ureteral stone, other. Medications: Pantoprazole, Unasyn, Buprenorphine, Mirtazapine.  
 Feline Abnormal PE/Chem/CBC/UA Results: CBC - HCT 43.0; WBC 5.5; neuts 3.17; PLT 345. Chem - BUN 34; creat 1.6; SDMA 17; K 4.6; P 5.3; ALT 64; TP 7.3; alb 3.4; BG 97. T4 9.4

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**DSH *Urinary System***

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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.

**SEX**

Neutered Male

**AGE**

12 Years

**WEIGHT**

5.7 kg

The left kidney was mildly enlarged in size, measuring 5.3 cm. Mild to moderate pyelectasia noted in the right kidney, containing primarily anechoic fluid with evidence of mild cellular component. No evidence of concurrent left ureter dilation. The renal cortex presented uniformly increased in 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. Regional mild left retroperitonitis present, exhibited by increased retroperitoneal tissue echogenicity and scant retroperitoneal free fluid.

The right kidney was subnormal in size, measuring 2.5 cm in length. Asymmetrical contour noted with likely cortical infarcts. Moderate loss of corticomedullary border demarcation. No overt pyelectasia. Pinpoint to focal areas of likely non-obstructive dystrophic medullary mineral present.

**INTERPRETED BY**

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

The aortic trifurcation was unremarkable.

***Adrenal Glands***

**IMAGING PERFORMED BY**

Pamela Harrigan, RDACS

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.35 cm. No overt pathology in the area of the right adrenal gland.

***Spleen***

**HOSPITAL NAME**

New England AMC

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.

**REFERRING VET**

Dr. Katrina Damiani

***Liver***

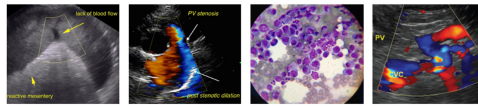
The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. Mild subjective prominent to congested hepatic veins noted. The gallbladder was non distended in size with mild echogenic, nonmineralized biliary sludge. Potential for very minor gallbladder wall edema possible, yet not definitive. The cystic duct and common bile ducts were normal without evidence of dilation.

**INVOICE**

35634

**DATE**

2/14/22



**PATIENT** *Gastrointestinal*

Thomas Boulter 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. Mild luminal gas present. Gastric body wall measured 0.24 cm.

**SPECIES**

Feline

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. Jejunum wall measured 0.26 cm. Ileocolic wall measured 0.30 cm.

**BREED**

DSH

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

**SEX**

Neutered Male

The pancreas was normal in size and contour with subtle heterogeneous to hypoechoic parenchyma and minor pancreatic duct dilation. Pancreatic duct measured 0.16 cm.

**ULTRASONOGRAPHIC FINDINGS**

- Left kidney mild renomegaly exhibiting cortical hypertrophy, mild to moderate pyelectasia, and concurrent mild left retroperitonitis.
- Right kidney subnormal size exhibiting moderate chronic degenerative changes and likely mild dystrophic medullary mineral.
- Mild gastroenteritis pattern
- Mildly heterogeneous to hypoechoic pancreas – non-specific, patient or age related variant suspected. Potential for low-grade concurrent inflammation possible.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Both kidneys exhibited primarily chronic renal changes as opposed to acute renal insult or injury, although possible acute on chronic kidney disease cannot be definitively excluded. Acute on chronic left kidney pyelonephritis, compensatory hypertrophy (given the subnormal right kidney size), interstitial nephritis, with less likely potential for early infiltrative neoplasia possible.

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 DABVP (Canine and Feline)

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Pamela Harrigan, RDCS

Full urinary workup including urinalysis, culture and sensitivity and baseline UPC on sterile urine sample along with assessment and monitoring of systemic blood pressure suggested. Assuming normal clotting status, ultrasound guided FNA of the left kidney cortex could be considered for screening cytology. Hospitalization with IV fluid therapy with monitoring of urine output, body weight, and renal response along with as needed gastrointestinal support recommended.

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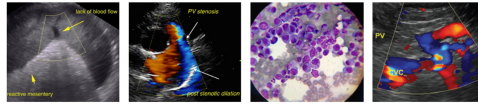
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**PATIENT**

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**SPECIES**

Feline

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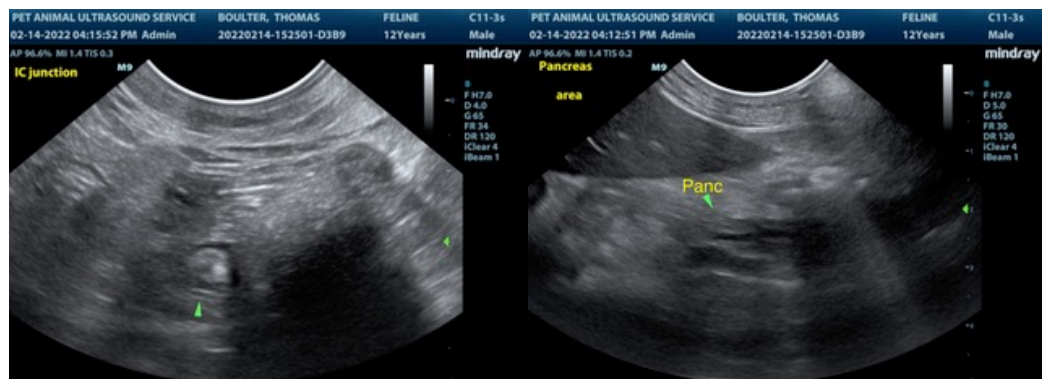
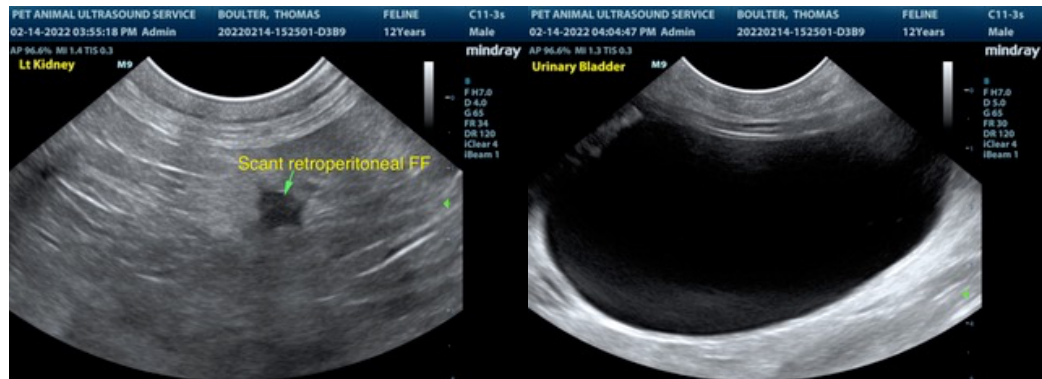
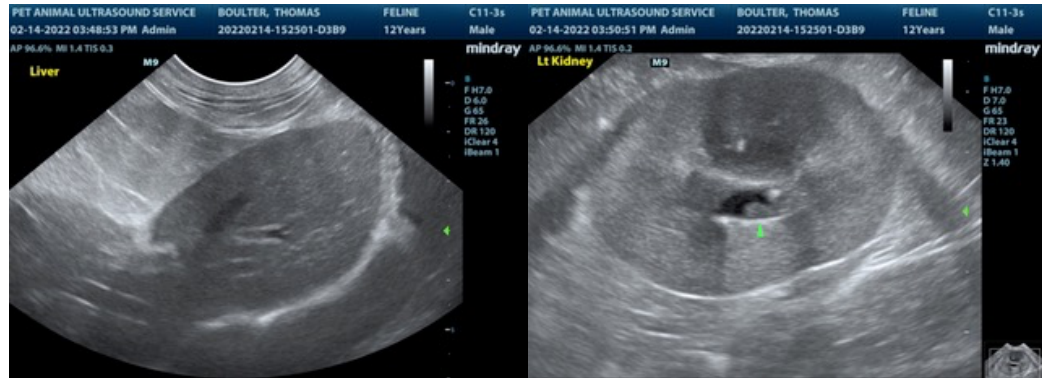
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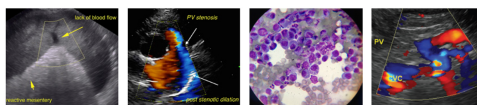
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**PATIENT**

Thomas Boulter

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.

**SPECIES**

Feline

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.

**BREED**

DSH

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com

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