

**DATE**

9/21/21

**PRESENTING CLINICAL SIGNS**

History: 8/28/21 Urinating in home, vomiting, gurgling noises from stomach, sometimes slow to eat in AM, sometimes has bilious vomiting treating for UTI with Clavamox, also Cerenia. 9/21/21 Not eating, stomach still growling, never stopped. Still history of waiting to eat some mornings until much later in the day, bilious vomiting occurring, grunting on palpation of abdomen.

**PATIENT**

Maggie Tyler

Current Medications: 9/21 Cerenia, Buprenorphine both injectable  
TGH Cerenia and Gabapentin tablets, Fortiflora.

Lab Results: 8/28/21: General Health Profile -ALB 4.0, CHOL 346, LIPASE 3777, CBC NSF, cPL Normal.

Radiographs: Not provided by the veterinarian.

**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: not needed

Stat Report: not requested

**BREED**

West Highland Terrier

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder is moderately distended with anechoic urine. The bladder wall appears diffusely, mildly thickened and irregular measuring 0.46 cm. The urethra and ureteral papilla appear normal with no evidence of masses or cystic calculi.

**SEX**

Spayed female

**AGE**

3/9/12

The left kidney has a normal shape and size (4.7 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

18.6 lbs

The right kidney has a normal shape and size (5.2 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello  
DVM, MS, Diplomate  
ACVIM (Small Animal  
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**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.58 cm at the caudal pole It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**HOSPITAL NAME**

Jacksonville VC

The right adrenal gland is normal in size measuring 0.47 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**REFERRING VET**

Dr. Kablis

**Spleen**

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

**INVOICE**

91890

**Liver**

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal

nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. The duodenum measured 0.42 cm and the jejunum measured 0.35 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

### **PRIMARY FINDINGS:**

- Diffusely, mildly thickened/irregular urinary bladder wall. The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.
- Prominent, mottled pancreas. The pancreatic changes are most consistent with mild pancreatitis/pancreatic infiltration. I recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider FNA if not improving.
- Mild gallbladder sludge. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Subjective, small intestinal wall thickening. The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The ultrasonographic changes observed are relatively mild. Unfortunately sometimes the ultrasonographic changes do not always correlate with the severity of clinical symptoms noted. Consider a GI panel with

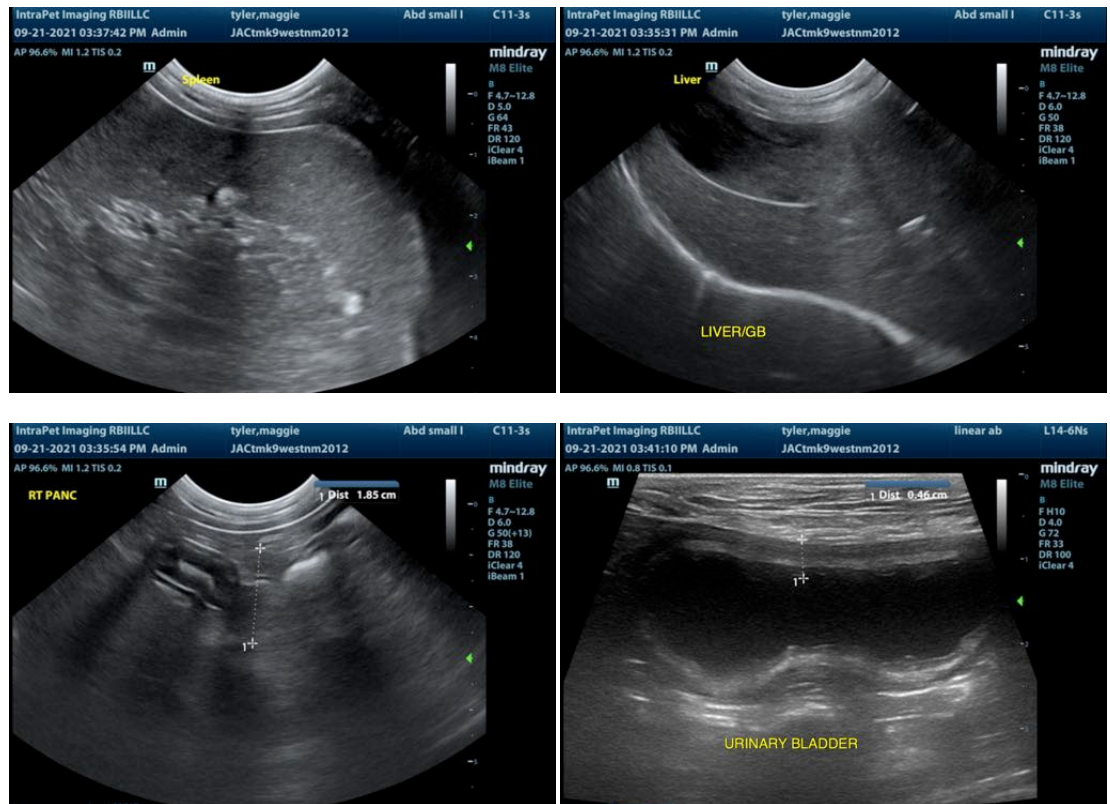
quantitative PLI, B12 and folate to further evaluate for small intestinal disease.

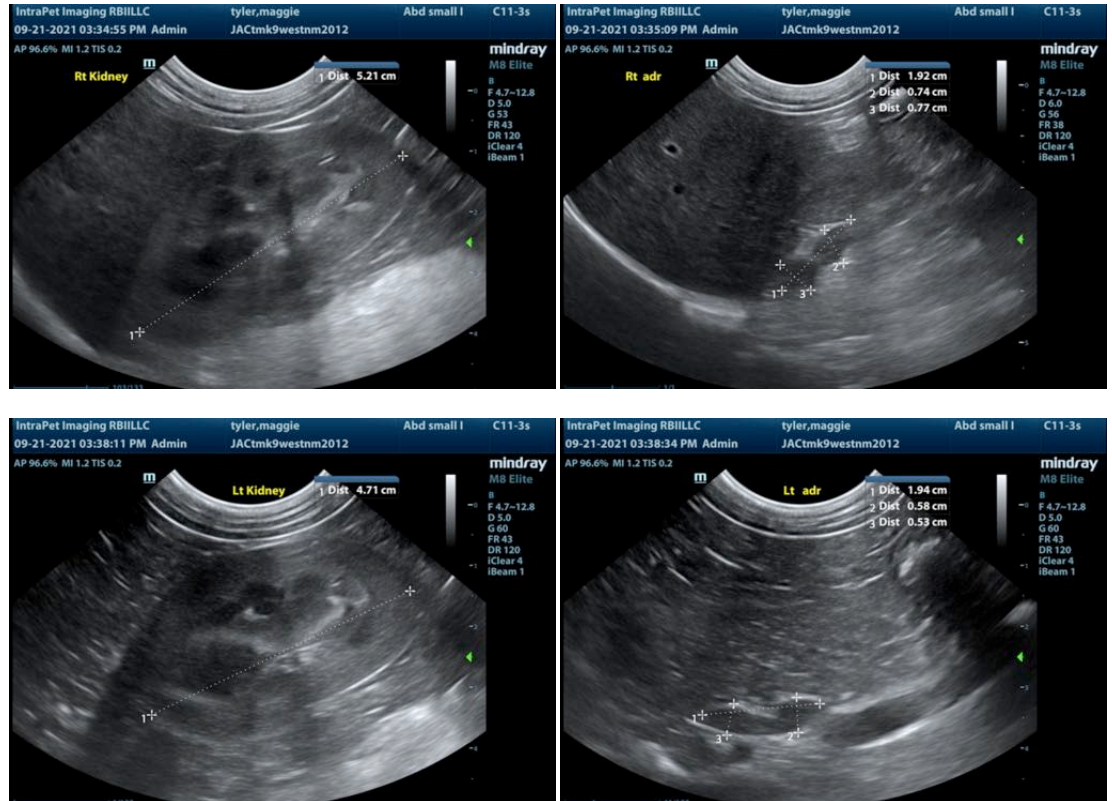
- Consider metabolic causes based on bloodwork, ACTH stim results, Liver function testing, GI panel (TLI/PLI, folate, cobalamin.)
- Consider primary GI causes: Gi parasitism, dietary indiscretion, mild pancreatitis, bacterial dysbiosis, food allergy, IBD and less likely intestinal neoplasia.

In older patients with more chronic symptoms, I would most strongly consider food allergy, IBD, and intestinal neoplasia.

- Recommend diet trial with a novel protein/hydrolyzed prescription diet
- Recommend Gi panel for evaluation of B12 levels etc.. (start empirical B12 while waiting for results)
- If symptoms are progressing consider obtaining GI biopsies

I recommend urinalysis and culture due to the slightly irregular urinary bladder wall observed. I recommend three view thoracic radiographs to look for any evidence of intrathoracic disease, aspiration pneumonia or esophageal abnormalities.





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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