

**DATE PRESENTING CLINICAL SIGNS**

4/13/22 Coughing, having trouble breathing. Went to cardiologist due to heart issues.

**PATIENT** Current Medications: Clavamox 125mg BID, Prednisone 5mg BID, Hydrocodone Bitartrate 5mg- ¼ every 8-12 hrs, Furosemide 20mg- ½ BID.

Kiki Tyler Lab Results: CBC: Hct 59.3 (H), WBC 22.9 (H), Neuts 17610 (H), Monos 1947 (H), Plt 434. CHEM: BUN 19, Creat 0.6, SDMA 17 (H), K 5.3, TP 2.5 (L), Alb 1.1 (L), Glob 1.4 (L), ALT 43, ALP 16. UA: USG 1.022, pH 6.5, quiet (cardiologist labwork)

**SPECIES** Radiographs: Normal cardiac size and shape; normal peripheral pulmonary vessels; normal pulmonary pattern in visible lung parenchyma; mild pleural effusion; normal mediastinum; trachea is patent. Pleural effusion.

Canine

**BREED**

Date of Previous IntraPet Ultrasound: No previous.

Yorkie X Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**SEX**

Spayed Female

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

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

8/25/11

**WEIGHT**

The left kidney has a normal shape and size (4.08 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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.

9.62 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The right kidney has a normal shape and size (3.9 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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.

**IMAGING PERFORMED BY****Adrenal Glands**

Rachel Brilhart RDMS

The left adrenal gland is normal in size measuring 0.60 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**

Taylorsville VC

The right adrenal gland is normal in size measuring 0.48 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****Spleen**

Dr. Lucas

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**INVOICE****Liver**

36874

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 gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. 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 thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measured 0.45 cm. Jejunum wall measured 0.37 cm. There is diffuse mucosal fogging and mucosal speckling evident. 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 normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

There is scant free fluid. No lymphadenopathy present. The omentum is generally of increased echogenicity.

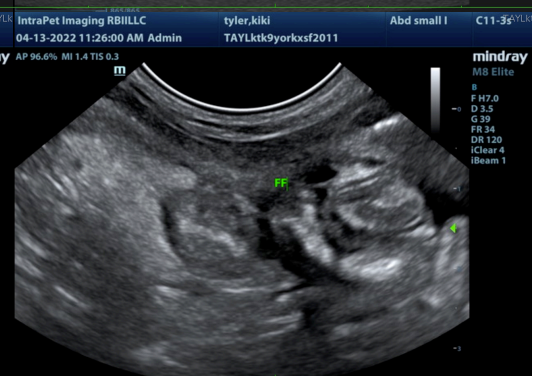
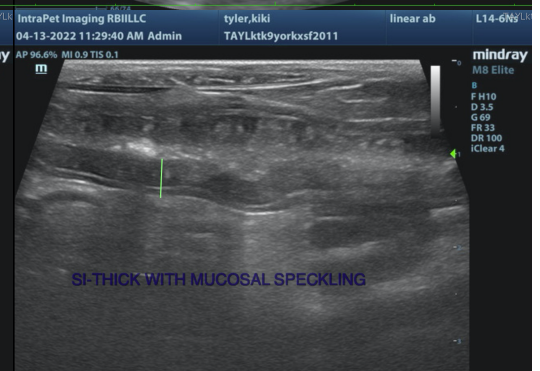
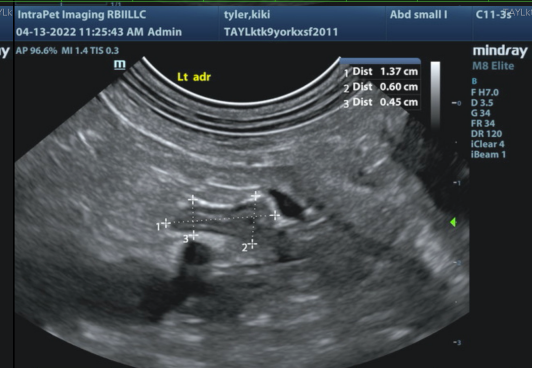
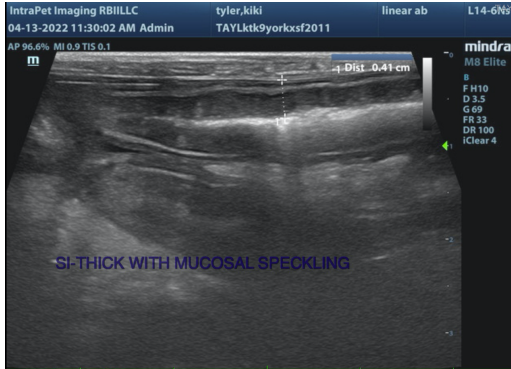
## **ULTRASONOGRAPHIC FINDINGS**

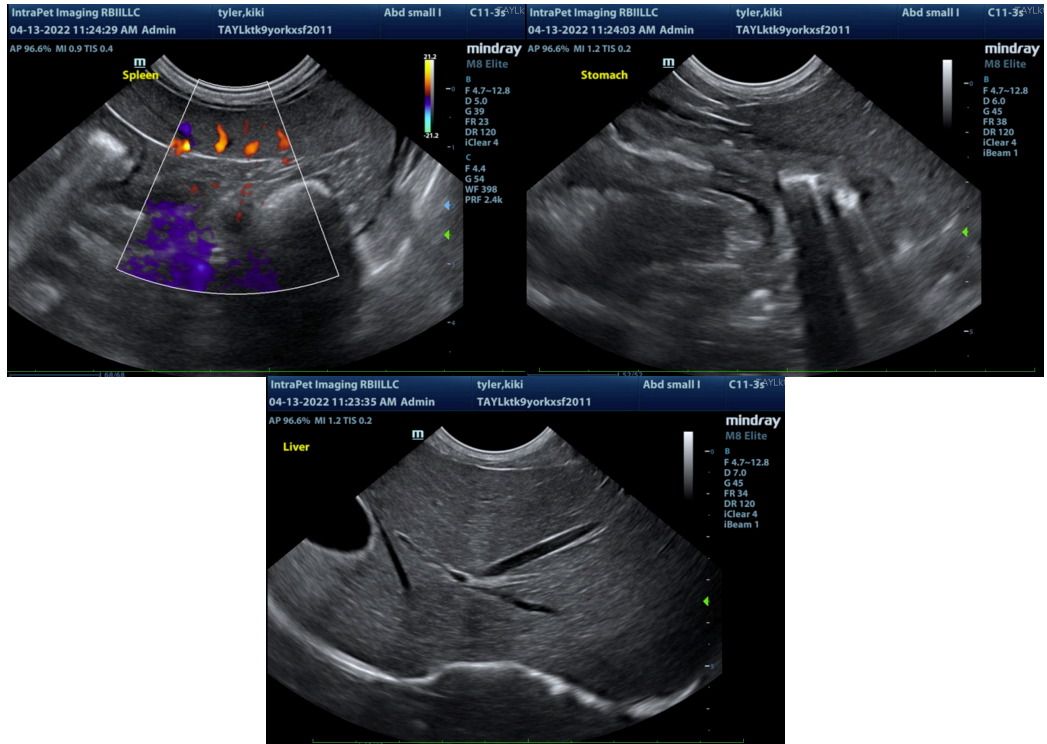
- Diffusely thickened small intestine with diffuse fogging and mucosal speckling – Findings are concerning for diffuse inflammatory infiltrative or neoplastic disease. Given the breed and the mucosal speckling, primary or secondary lymphangiectasia would be a concern.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Small volume free abdominal fluid

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

There are no focal lesions observed in the abdomen, but the small intestine is diffusely thickened with diffuse mucosal speckling and fogging. I suspect this is the source of the hypoalbuminemia reported (a protein losing enteropathy). Recommend liver function test and urine protein/creatinine ratio to confirm there is not protein loss from other sources.

- Recommend a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to look for concurrent B12 deficiency, dysbiosis, etc.
- Recommend referral for endoscopic GI biopsies to try and determine the specific cause of the protein losing enteropathy.
- Treatment recommendations will be pending a definitive diagnosis. Until then, recommend a low fat diet.





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.

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