



**PATIENT**

Emmy Deans

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Spayed Female

**AGE**

13 Years

**WEIGHT**

10.3 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Diane McFadden

**HOSPITAL NAME**

Newton Vet Hospital

**REFERRING VET**

N/A

**INVOICE**

43234

**DATE**

12/6/22

**PRESENTING CLINICAL SIGNS**

recurrent vomiting, bloody diarrhea. On tylan powder and cerenia.  
Abnormal PE/Chem/CBC/UA Results: cbc 11/28 nsf. chem 12/5: ALKP 185 otherwise nsf. CPL normal on 11/25/22.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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.

The left kidney has a normal shape and size (4.23 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.0 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.52 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.

The right adrenal gland is normal in size measuring 0.62 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.

**Spleen**

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.

**Liver**

The liver is large and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous abnormal areas of liver that are hyperechoic and cystic. These regions appear to coalesce into a large mass effect (or multiple adjacent masses) visualized primarily towards the left side of the liver, measuring approximately 6.5 cm x 5.2 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.



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***Gastrointestinal***

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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.

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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.36 cm. Jejunum wall measures 0.24 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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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.

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***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.

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***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.

**WEIGHT**

10.3 Pounds

**ULTRASONOGRAPHIC FINDINGS**

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- Large, multilobulated, hyperechoic, cystic liver mass – This could represent a large multilobulated mass or multiple masses. The hyperechoic appearance trends towards a more benign etiology, but there is a significant bulk of mass tissue here.
- Decreased corticomedullary distinction in both kidneys with numerous small cortical cysts – The bilateral renal findings are consistent with age-related change.

**IMAGING PERFORMED BY**

Diane McFadden

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is a large lesion visualized in the liver that appears to either be a multilobulated hyperechoic cystic hepatic mass or multiple adjacent hepatic masses. It is possible that this is an incidental finding and not associated with the GI signs reports. Options moving forward regarding the hepatic masses would include a contrast CT scan to better determine if surgical resection is possible. If this is a primary hepatic mass and is limited to primarily one liver lobe, a surgical outcome could be good. I suspect this mass lesion is primarily situated on the left side, but as it can be seen in the right side, it may be present in multiple locations.

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Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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No focal bowel lesions are observed. The pancreas appears slightly prominent but not overtly inflamed. Correlate these findings with a quantitative CPL level.

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Consider such differentials as food allergy/dietary intolerance, GI parasitism, pancreatitis, dysbiosis, recurrent dietary indiscretion, IBD and less likely neoplasia, etc. The bloody diarrhea reported also points to possible colonic involvement.



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- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks).
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.

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- Recommend chronic probiotic therapy.
- If symptoms are persisting, you may want to consider obtaining biopsies of the small and large intestine.

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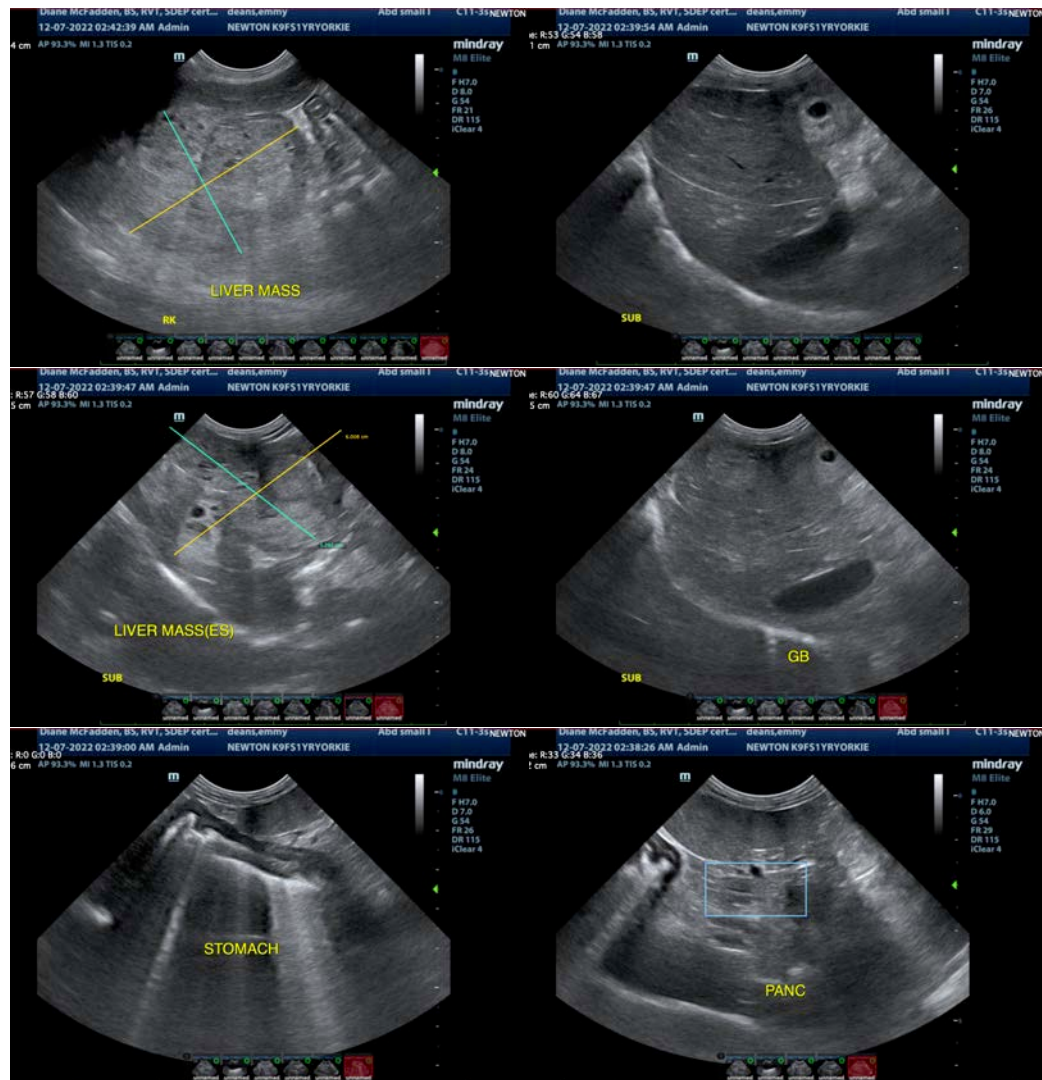
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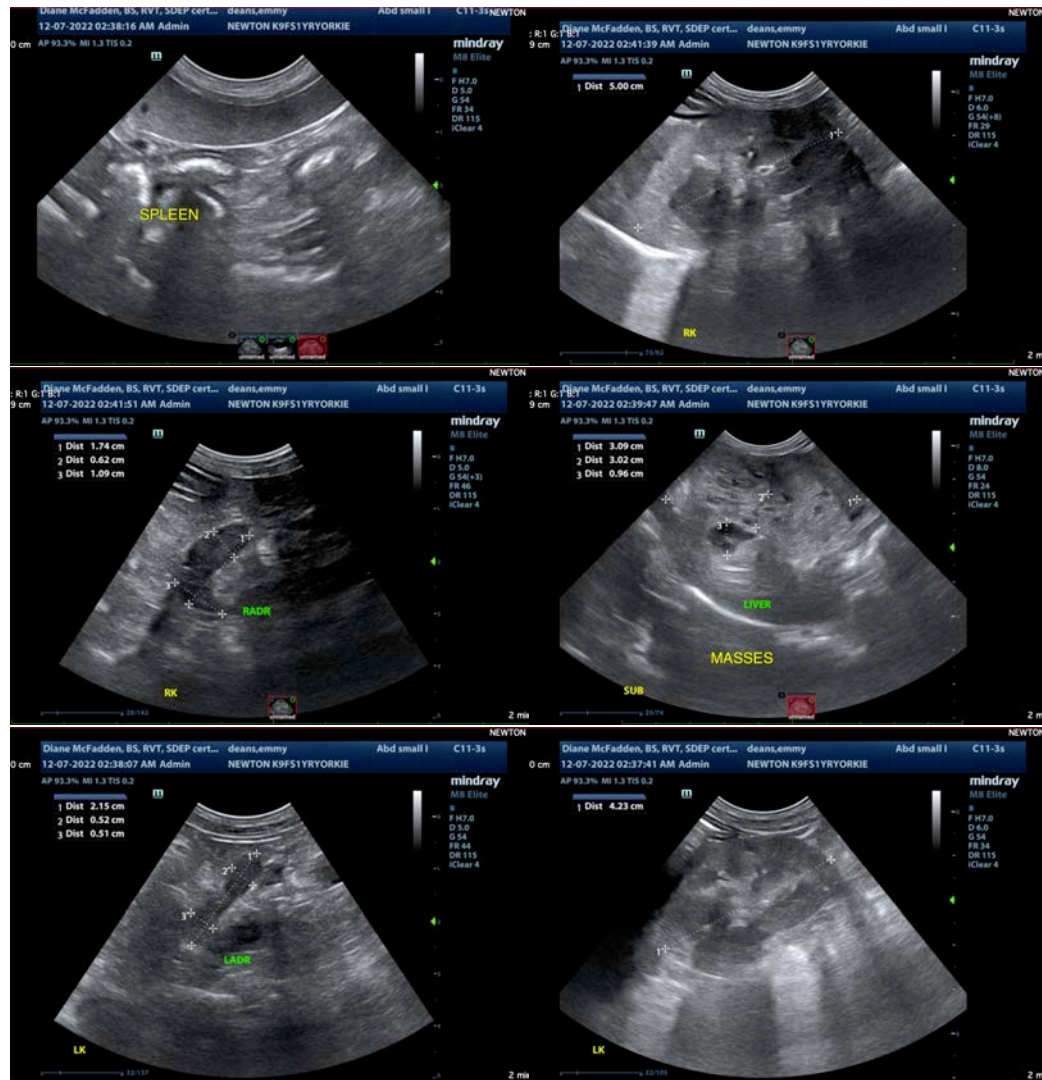
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com