

**PATIENT PRESENTING CLINICAL SIGNS**

Gabe Harper PUPD, lethargic, losing weight, early CKD meds: prednisolone.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Feline

**Urinary System**

**BREED**

DMH

The urinary bladder is minimally 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.

**SEX**

Neutered Male

The left kidney is normal in size (2.98 cm) but irregular in shape. 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.

**AGE**

17 Years

The right kidney has a normal shape and size (3.42 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.

**WEIGHT**

4.76 kg

**Adrenal Glands**

**INTERPRETED BY**

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

The left adrenal gland is normal in size measuring 0.21 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 0.27 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.

**IMAGING PERFORMED BY**

Kelly Reschny

**Spleen**

**HOSPITAL NAME**

Buck Animal Hospital

The spleen is subjectively normal in size (0.58 cm), 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.

**REFERRING VET**

Dr. MacFarlane

**Liver**

The liver is large with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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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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4/5/23

**Gastrointestinal**

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 normal to slightly increased. Bowel loops follow a typical curvilinear path



**PATIENT**

Gabe Harper

with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.42 cm. Jejunum wall measures 0.36 cm. Visualized peristalsis appears appropriate. The bowel appears diffusely thickened with slightly reduced detail of wall layering. The duodenum in particular appears somewhat corrugated with reduced detail of wall layering.

**SPECIES**

Feline

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.

**BREED**

DMH

**Pancreas**

**SEX**

Neutered Male

The area of 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**

**AGE**

17 Years

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are numerous irregular hypoechoic nodules visualized in the omentum/tissue adjacent to the duodenum in the region of the right limb of the pancreas. Examples of these omental nodule measure at 0.96, 0.46, 0.97, and 0.32 cm. The pancreas itself is challenging to visualize. The omentum generally appears somewhat heterogeneous and almost nodular in some areas.

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**ULTRASONOGRAPHIC FINDINGS**

**INTERPRETED BY**

Kathleen Sennello DVM,  
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(Small Animal Internal  
Medicine)

- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Large hyperechoic liver – Hepatic changes are non-specific and could be consistent with hepatic lipidosis, inflammatory/infectious disease, infiltrative neoplasia, or other hepatopathy.
- Subjectively thickened small intestine with mild corrugation in some areas and mildly reduced detail of wall layering – Findings could be consistent with diffuse enteritis, infiltrative disease, other.
- Hypoechoic irregular omental nodules visualized in the region of the right limb of the pancreas – The significance of this is unclear. These could represent omental nodules, less likely lymph nodes, or pancreatic nodules.

**IMAGING PERFORMED BY**

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**HOSPITAL NAME**

Buck Animal Hospital

**REFERRING VET**

Dr. MacFarlane

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The abdomen appears abnormal in that it is slightly hyperechoic with irregular heterogeneous, almost nodular omentum and some lack of detail in the abdomen. The bowel appears diffusely thickened with a somewhat prominent muscularis layer, and in some areas (the duodenum) there is corrugation and further reduction in detail of wall layering. The significance of this is uncertain. Primary differentials would be infiltrative disease or severe enteritis.

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Additionally, there are some somewhat ill-defined irregular hypoechoic nodules in the omentum in the region of the right limb of the pancreas. The significance of this is unclear. If there is a window for aspiration of one of these larger nodules, this could be considered. The appearance of these nodules is concerning for omental nodules (carcinomatosis) or possibly pancreatic nodules, although the pancreas itself is challenging to clearly visualize.

The liver appears hyperechoic and somewhat large. The significance of this with normal liver enzymes is uncertain. Additionally, the kidneys appear slightly irregular with decreased corticomedullary



**PATIENT**

distinction. Recommend a blood pressure, urinalysis and culture to obtain baseline.

Gabe Harper

The source for the omental inflammation, etc. is uncertain. If sampling of a nodule is not possible, you could further investigate the changes to the small intestine by performing a GI panel to Texas A&M for a qualitative fPLI, TLI, cobalamin and folate. If there are changes on this panel consistent with primary gastrointestinal disease, you could consider obtaining GI biopsies, omental biopsies, etc. Additionally, consider 3-view thoracic radiographs.

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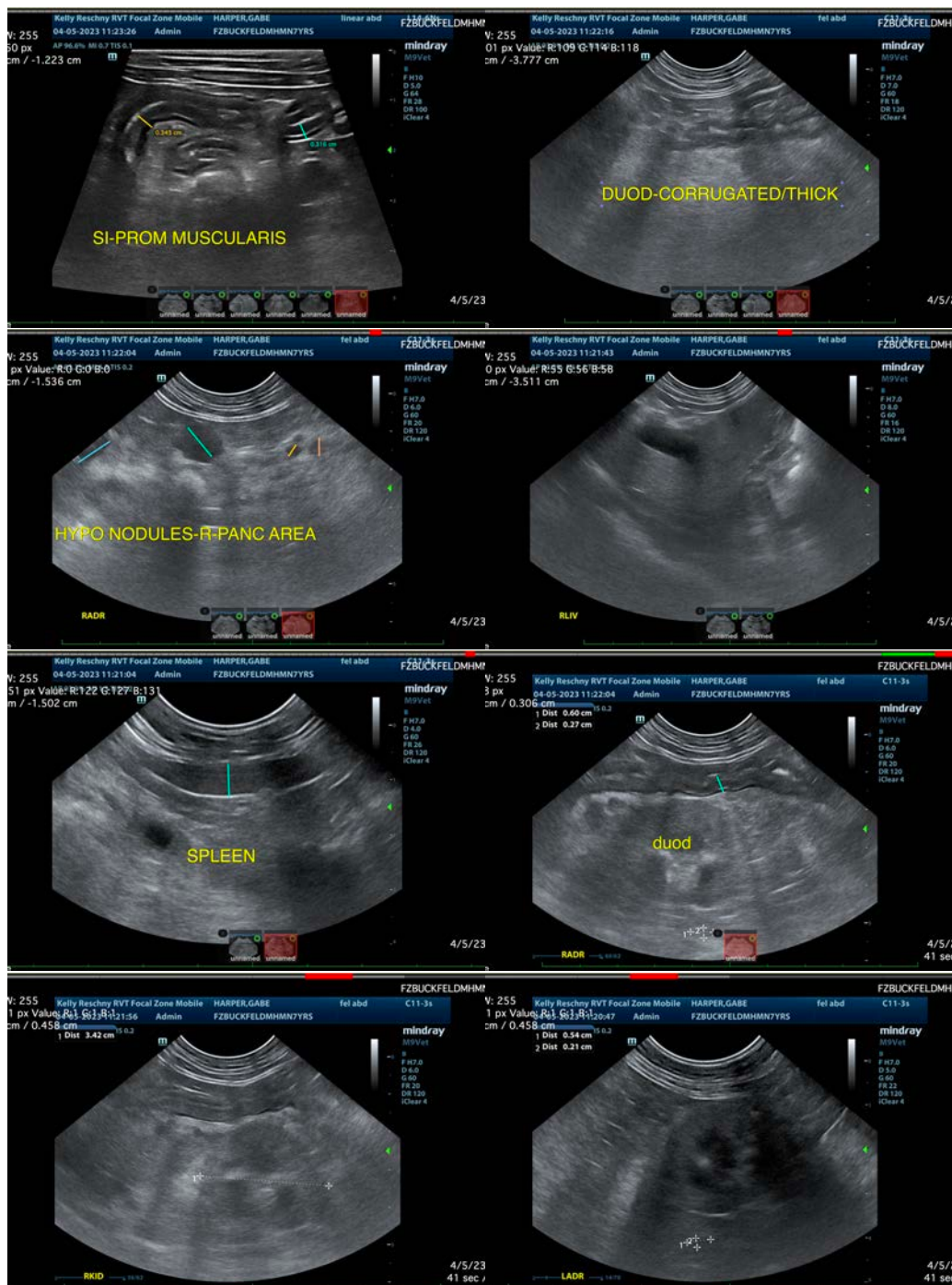
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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