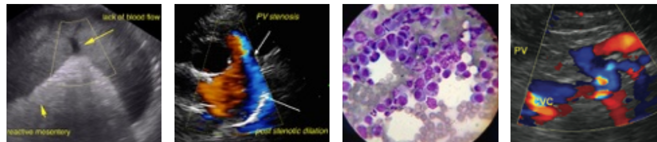


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Kooper Abramowitz

SPECIES

Canine

BREED

Morkie

SEX

Neutered Male

AGE

13yr

WEIGHT

9lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Elaina Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

Elaina Petrone

INVOICE

10409

DATE

8/10/23

PRESENTING CLINICAL SIGNS

Chronic vomiting, acutely increasing in frequency up to 3-4 times per week. History of CKD Stage2 recent renal values history of elevated ALT recent chemistry in June WNL USG consistently hyposthenuric owner reports PU/PD, Appointment set for LDDS Testing

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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (3.35 cm) with a thick hyperechoic band visualized between the cortex and medulla most consistent with medullary rim/band sign. 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 (3.96 cm) with a thick hyperechoic band visualized between the cortex and medulla most consistent with medullary rim/band sign. 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 0.68 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 0.74 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.

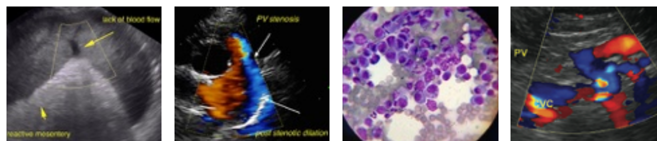
Spleen

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. There are numerous hyperechoic foci along the periphery of the spleen most consistent with benign myelolipomas. There is a similar appearing hyperechoic nodule within the parenchyma measuring 0.36 cm x 0.47 cm.

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 gall bladder lumen is moderately distended. The wall of the gall bladder 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.



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Gastrointestinal

The stomach contains moderate to large shadowing ingesta. 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 with mild mucosal speckling evident. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed. The duodenum measured 0.5 cm in diameter and the jejunum measured 0.32 cm in diameter.

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

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.

PRIMARY FINDINGS

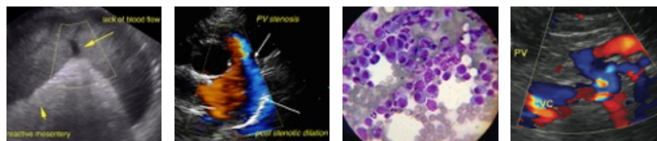
- Medullary rim/band sign visualized associated with both kidneys. Clinical significance uncertain, can be seen in normal patients and in cases of ethylene glycol toxicity, chronic interstitial nephritis, and leptospirosis.

- Hyperechoic foci/nodules visualized within the spleen. Findings are most consistent with benign myelolipomas. Recommend continued monitoring.

- Moderate gallbladder debris. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

- Large shadowing ingesta visualized within the gastric lumen. Correlate these findings with feeding history. If the patient was adequately fasted, then consider the possibility of delayed gastric emptying or partial out flow tract obstruction. (None clearly visualized but this cannot be ruled out.)

- Diffusely mildly thicken small intestine with mucosal speckling. Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc. in the mucosal crypts.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large amount of fluid/ingesta visualized in the gastric lumen. If the patient was adequately fasted this could be associated with delayed gastric emptying or a partial out flow tract obstruction, possibly indicative of a chronic gastroenteropathy. Additionally, the changes to the small bowel are relatively mild but could be seen with inflammatory disease, lymphangiectasia, less likely neoplastic change, etc.

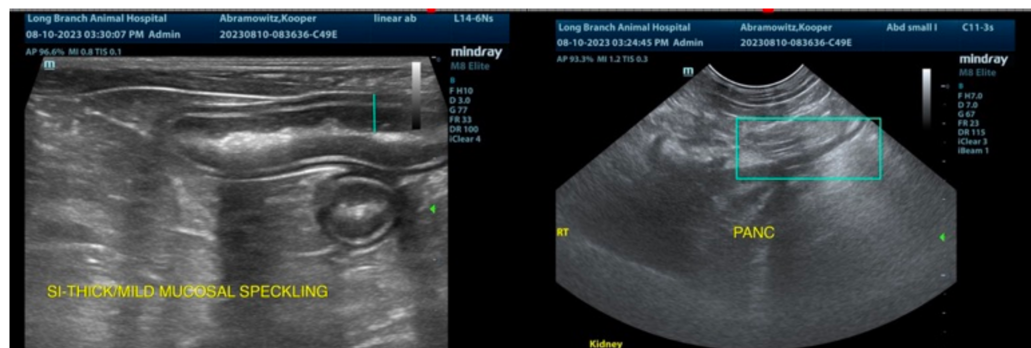
Consider such differentials as food allergy/dietary intolerance, GI parasitism, chronic pancreatitis, IBD and less likely neoplasia, etc.

- 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.
- Chronic probiotic therapy.

If symptoms are persistent recommend upper GI endoscopy or surgical evaluation to further evaluate pyloric region and to obtain GI biopsies

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

The changes visualized associated with the kidneys are non- specific and likely consistent with chronic renal disease. If not already done recommend a blood pressure, urine analysis, and culture as a base line. Additionally, you could consider leptospirosis screening due to the PU/PD reported.



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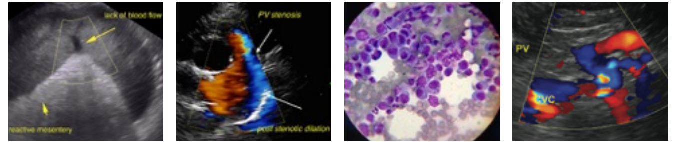

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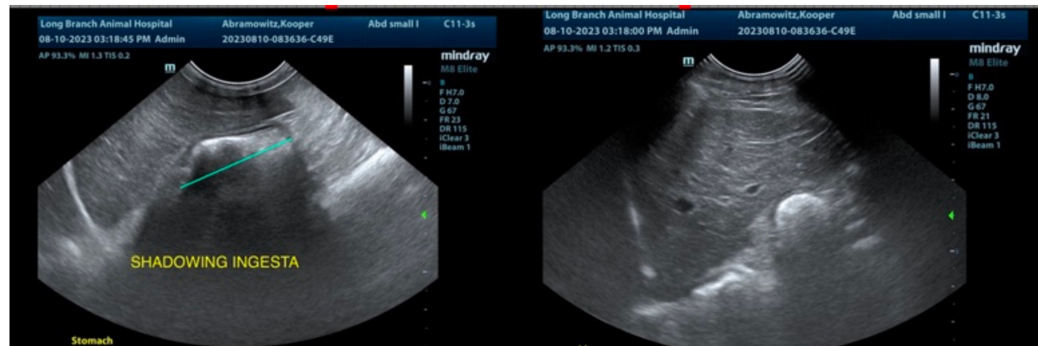
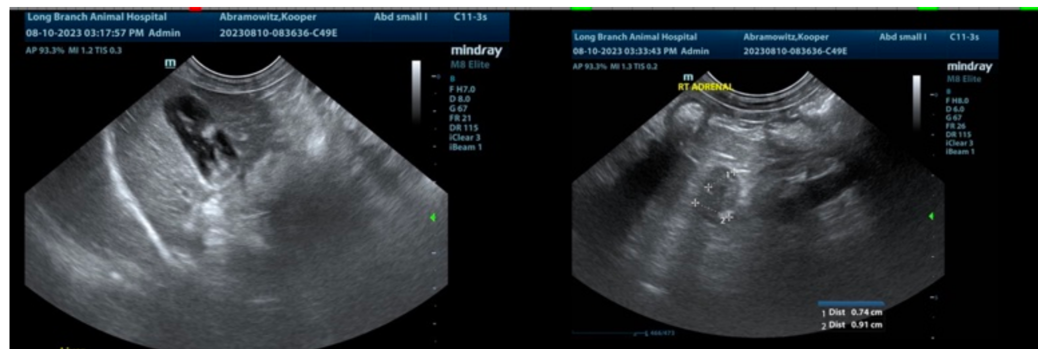
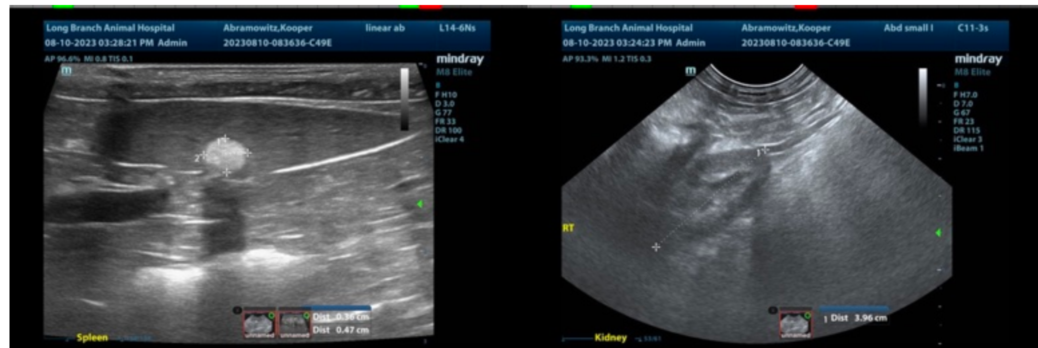
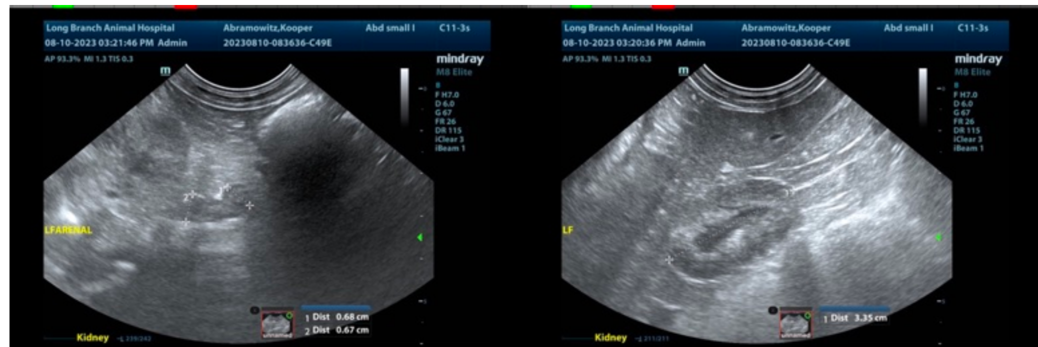


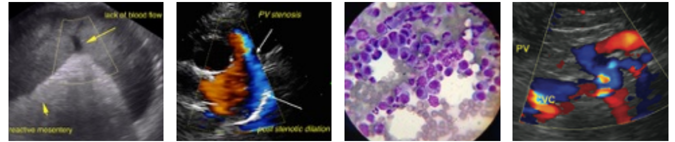






The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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