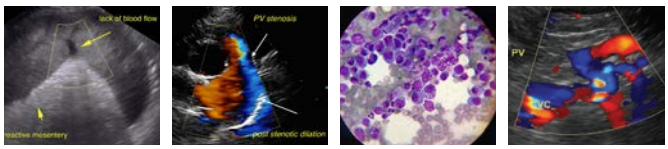
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

**PATIENT**

Amber Parker

**SPECIES**

Canine

**BREED**

Great Pyrenees

**SEX**

Spayed Female

**AGE**

11 Years 4 Months

**WEIGHT**

86.8 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Amy Priest

**HOSPITAL NAME**

Long Valley AH

**REFERRING VET**

Dr. Russell Earl

**INVOICE**

43879

**DATE**

7/11/23

## PRESENTING CLINICAL SIGNS

Chronic diarrhea + weight loss. Hyporexia. Pet has been on Fluoxetine long-term for anxiety. No improvement in clinical signs with a decrease in Fluoxetine dose. No other meds.

Abnormal PE/Chem/CBC/UA Results: CBC: WNL Chem: ALP =254 Lipase = 458 T4 = 1.6 (N)

## 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 (6.61 cm). Overall echogenicity is normal with adequate 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 (7.15 cm). Overall echogenicity is normal with adequate 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 mildly enlarged and irregular in shape, measuring 1.32 cm at the cranial pole and 0.68 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is somewhat abnormal in appearance in that the cranial pole appears slightly enlarged and hyperechoic, possibly consistent with an adrenal nodule. No evidence of vascular invasion is visualized.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

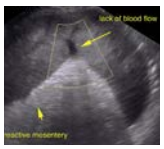
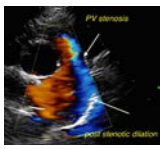
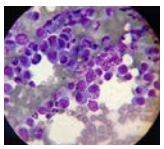
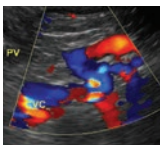
### *Spleen*

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 is a very small, ill-defined, hypoechoic nodule visualized in the parenchyma measuring 0.80 cm in diameter.

### *Liver*

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. 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 mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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## *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. On the early left lateral views the stomach appears normal, but there is questionable pyloric thickening when the right cranial abdomen is imaged.

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. Jejunum wall measures 0.35 cm. The duodenum at the level of the right kidney measures approximately 0.68 cm. Visualized peristalsis appears appropriate. There is a focal area of bowel that appears thickened with significant reduction in the detail of wall layering. In this area the wall thickness measures at approximately 1.1 cm. The exact location of this abnormal section of bowel is difficult to definitively determine, but I'm concerned this could involve the pyloric region in the right cranial abdomen.

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 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*

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 mesentery is hyperechoic around the thickened area of bowel.

## *Other*

There is a small, hypoechoic structure surrounded by hyperechoic mesentery visualized just caudal to the left kidney, measuring approximately 2.04 cm x 1.0 cm, possibly consistent with a lymph node.

## ULTRASONOGRAPHIC FINDINGS

- Hyperechoic nodule visualized on the cranial pole of the left adrenal gland – This has the appearance most consistent with a benign nodule (hyperplasia, adenoma, etc.). An early neoplastic lesion cannot be ruled out.
- Small, hypoechoic nodule visualized associated with the spleen – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Mildly heterogeneous liver – The hepatic changes are consistent with age-related parenchymal remodeling and are not considered clinically significant at this time.
- Focal section of bowel with significant thickening and loss of layering – Findings are concerning for possible infiltrative disease or severe inflammatory disease, edema, etc.
- Small hypoechoic structure surrounded by hyperechoic mesentery caudal to the left kidney – The nature of this lesion is uncertain. This could represent a lymph node.

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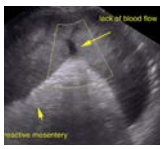
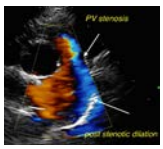
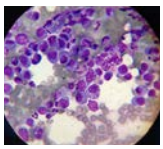
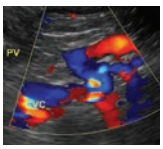

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a severely thickened section of bowel with greatly reduced detail of wall layering and surrounding hyperechoic mesentery. This appears to be imaged in the right cranial abdomen and is suspicious for the pyloric region. A fine needle aspirate of the bowel wall could be considered. Likely differentials would include round cell neoplasia, carcinoma, severe inflammatory disease, edema, etc.

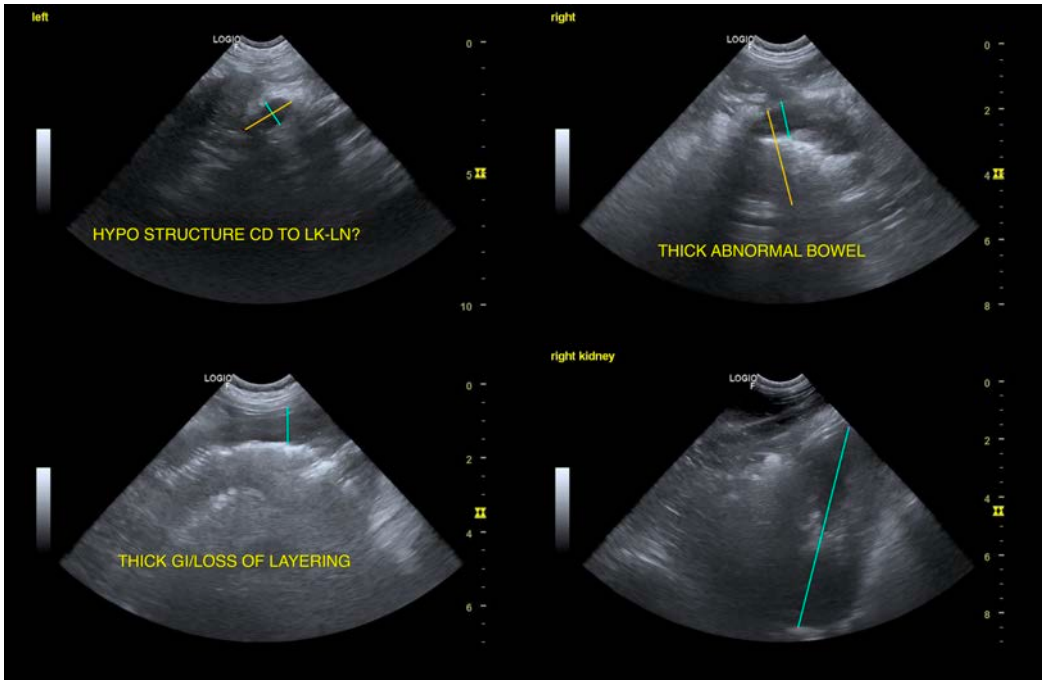
Additionally, the cranial pole of the left adrenal appears somewhat irregular and hyperechoic and may be slightly enlarged. This could be consistent with a benign area of hyperplasia, a small nodule, etc. Correlate with blood pressure evaluation. If hypertension is present, then consider measuring catecholamine levels. Otherwise, I would recommend continued monitoring with ultrasound.

Additionally, you could consider a contrast CT scan to both better evaluate the abnormal section of bowel and the left adrenal gland. There is a small hypoechoic structure caudal to the left kidney with some surrounding hyperechoic mesentery. The nature of this lesion is uncertain. At this time, a prominent lymph node seems most likely.

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

While considering options for further diagnostics, consider the following empirical treatment:

- 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.
- Recommend chronic probiotic therapy.



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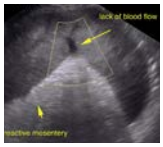
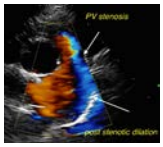
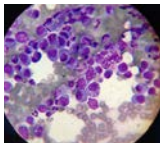
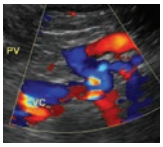

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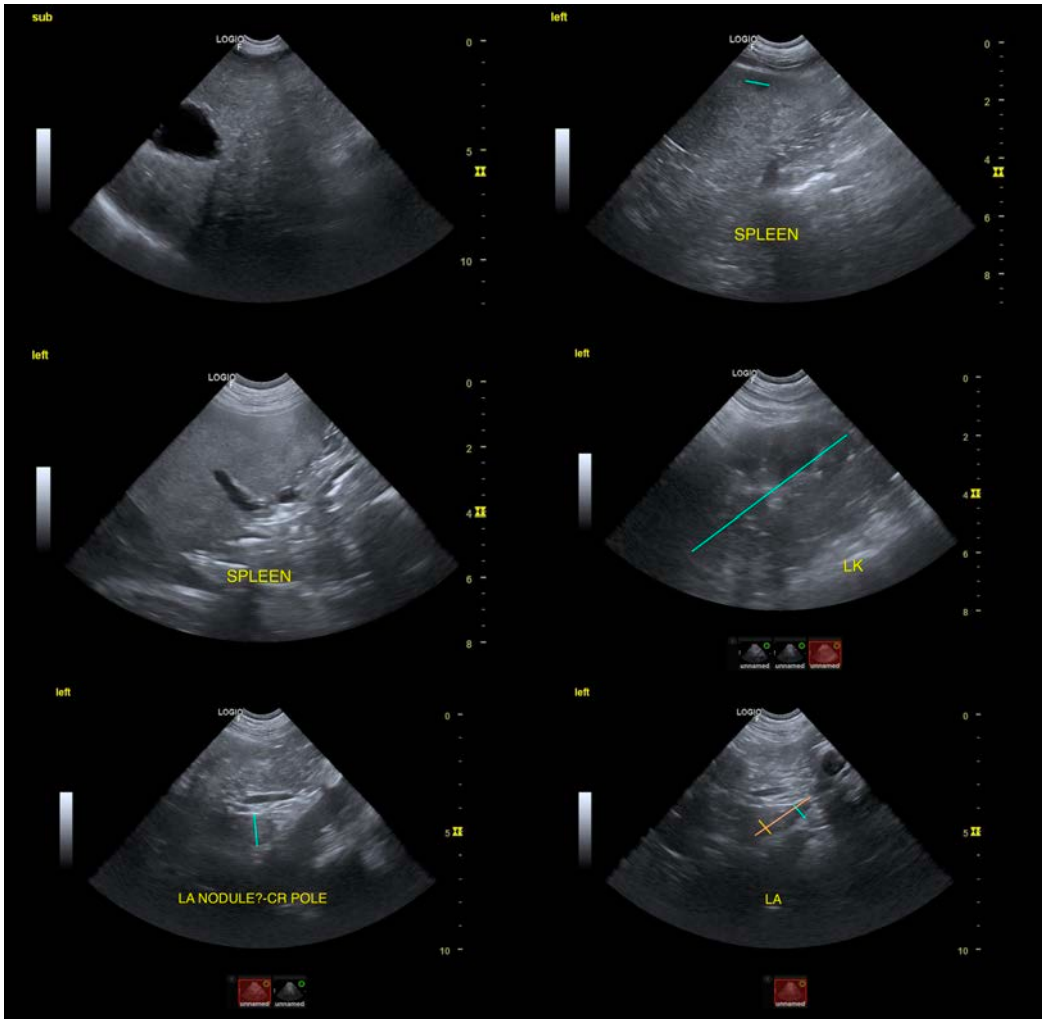


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)

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