



**PATIENT**

Jake Earnst

**SPECIES**

Canine

**BREED**

Mixed

**SEX**

Neutered Male

**AGE**

2 Years

**WEIGHT**

50.3 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Ellen Puthoff

**HOSPITAL NAME**

Kings Vet Hospital

**REFERRING VET**

Dr. Ellen Puthoff

**INVOICE**

46769

**DATE**

4/19/23

**PRESENTING CLINICAL SIGNS**

Adopted from a shelter in early March. Presented 3/7 for diarrhea and vomiting - PE revealed mildly underweight; Rads - unremarkable, fecal - positive for hookworms. Treated with two rounds of panacur and short course of metronidazole. Diarrhea improved and vomiting resolved but recurred shortly after finishing first round of Panacur. Recheck fecal exam negative. Treated with tylen powder + probiotic + fiber - diarrhea again resolved but once ran out of tylen powder, diarrhea recurred. CBC/Chemistry revealed mild eosinophilia, otherwise unremarkable. GI panel pending.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (5.98 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (6.05 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**Adrenal Glands**

The adrenal glands are unable to be well visualized in these images.

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.



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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

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**Pancreas**

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

**SEX**

Neutered Male

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**AGE**

2 Years

**ULTRASONOGRAPHIC FINDINGS**

- **Reactive mesenteric lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

**WEIGHT**

50.3 Pounds

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

As is reportedly already pending for this patient, a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

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A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact Texas A& GI Laboratory for recommendations about how long to discontinue antibiotics prior to submission of a stool sample for the PCR panel.

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Pending results, and given this patient's eosinophilia, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

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In the meantime, in addition to empirical deworming with a 5-day course of Panacur (which has reportedly already been performed), a probiotic such as Visbiome or Provable is recommended, as is transition in diet, beginning with a hydrolyzed protein diet. Some patients respond better to one brand or version of hydrolyzed protein diet versus another, so sometimes several trials based on trial-and-error response are necessary.

**REFERRING VET**

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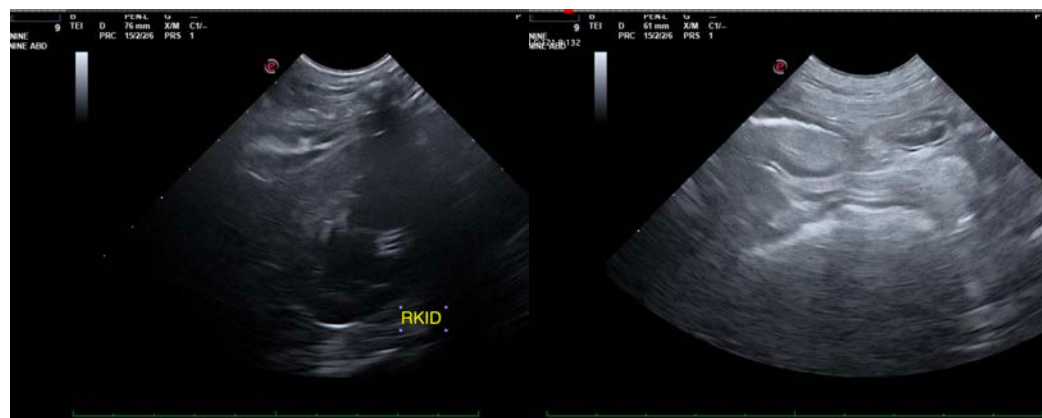
Ultimately, if clinical signs persist and a diagnosis is not obtained, further evaluation of the gastrointestinal tract via endoscopy/colonoscopy for visual evaluation and biopsies may be warranted.

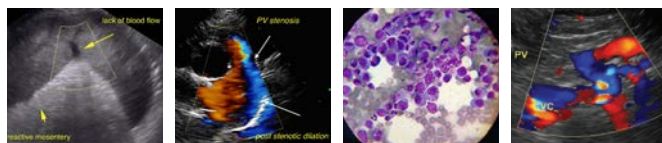
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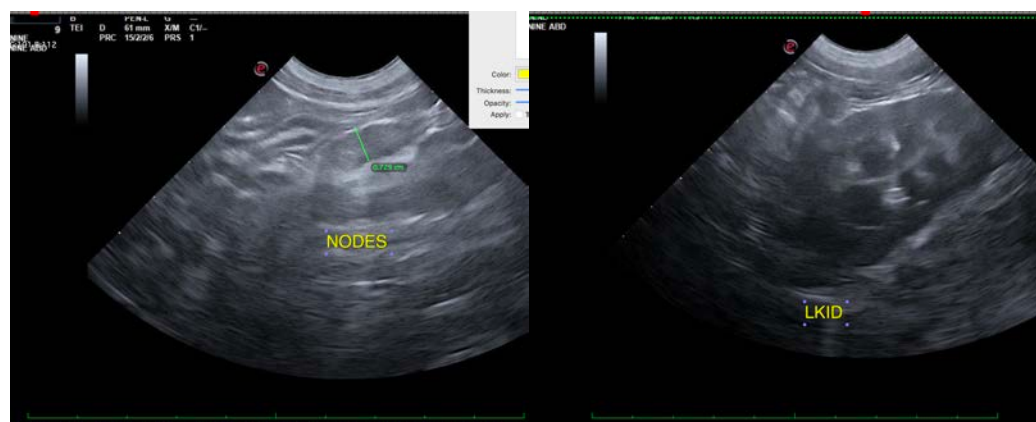
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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