



**PATIENT PRESENTING CLINICAL SIGNS**

Sherlock Koch History of vomiting 2-4x weekly for the past 3-4 months, in the past 3 days as been unable to hold down food or water. Physical exam on admit was mild dehydration and nervous, otherwise normal.  
Abnormal PE/Chem/CBC/UA Results: Please see attached BW

**SPECIES**

Canine

**BREED**

Doodle

**SEX**

Neutered Male

**AGE**

1 Year

**WEIGHT**

15 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Niagara Vet  
Emergency Clinic

**REFERRING VET**

Dr. Lawton

**INVOICE**

35671

**DATE**

2/16/22

**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 prostate is normal in size (0.80 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.8 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (4.84 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.46 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 0.44 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 normal/small in size, with normal echogenicity and 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 gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.



**PATIENT**

**Gastrointestinal**

Sherlock Koch

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.

**SPECIES**

Canine

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 measured 0.28 cm.

**BREED**

Doodle

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SEX**

Neutered Male

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.

**AGE**

1 Year

**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.

**WEIGHT**

15 kg

**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.

**ULTRASONOGRAPHIC FINDINGS**

- Borderline small liver – Correlate findings with abdominal radiographs, as this gives a better estimate of true hepatic size. If it appears small, consider a liver function test.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No focal lesions were visualized today involving the GI tract or pancreas. An obvious cause for the reported vomiting was not visualized. Unfortunately, there are many causes of chronic vomiting that cannot be diagnosed by ultrasound alone.

**IMAGING PERFORMED BY**

Kelly Reschny

- Consider metabolic causes. Recommend full bloodwork including electrolytes, testing for Addison's disease, a liver function test, and a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to look for evidence of pancreatic or small intestinal disease.

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- If metabolic causes are thought unlikely, then consider primary GI causes such as dietary intolerance/food allergy, GI parasites, dietary indiscretion, dysbiosis, and much less likely intestinal neoplasia. Additionally, consider the differential of regurgitation and confirm that this is true vomiting.

**REFERRING VET**

Dr. Lawton

I would consider starting with screening and deworming protocols, changing to a hydrolyzed or novel protein diet, adding in a probiotic, and submitting any additional diagnostics such as a Stim and liver function test, etc. If there is no response to this, and additional diagnostics are not helpful, I would consider obtaining GI biopsies.

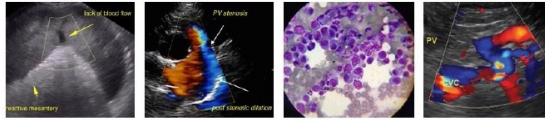
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Recommend 3-view thoracic radiographs to look for concurrent intrathoracic disease and to evaluate the esophagus.

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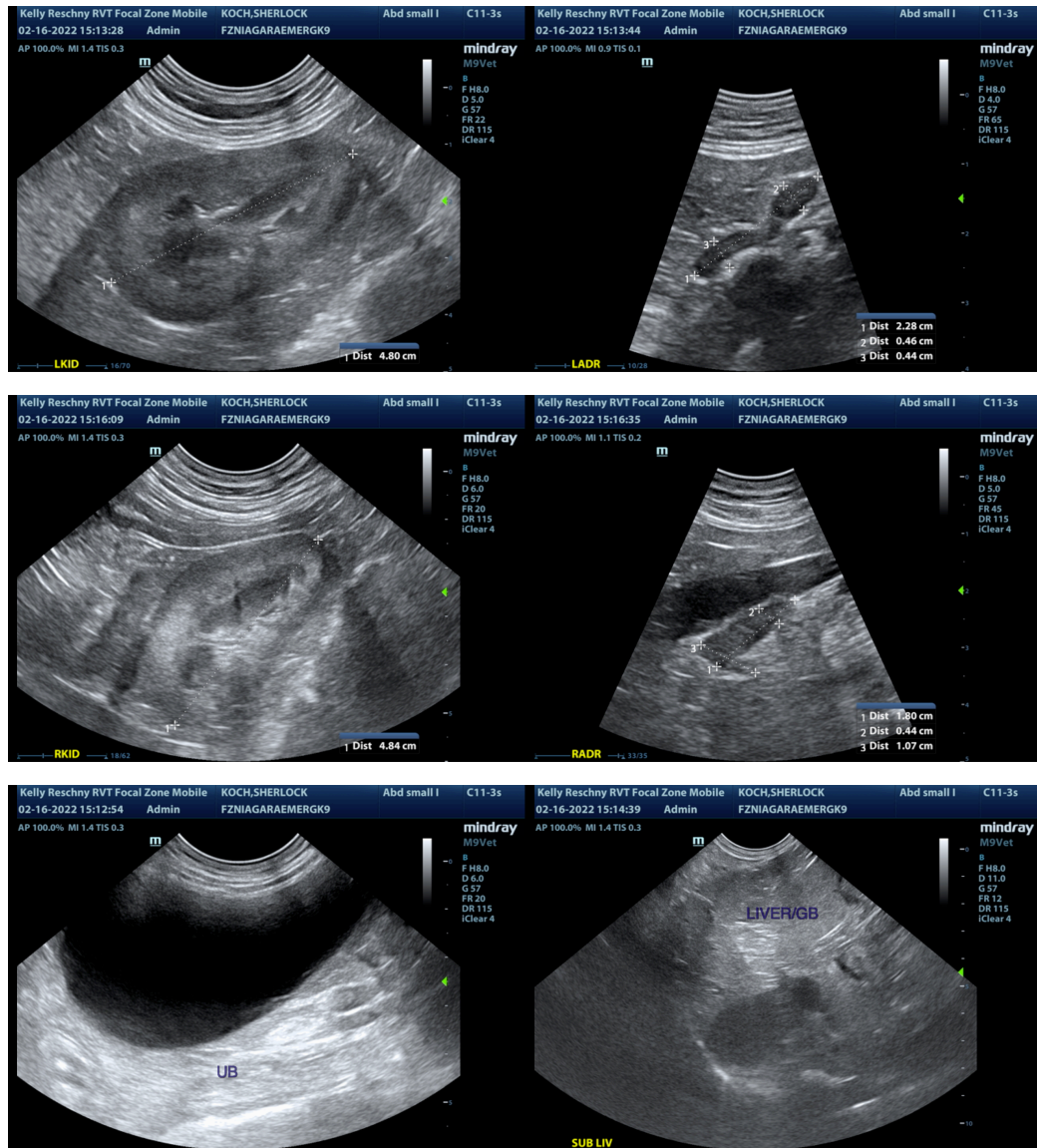
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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