



**PATIENT PRESENTING CLINICAL SIGNS**

Kiki Rutherford Butorphanol sedation- Poor appetite and daily vomiting for about 7 days.  
Abnormal PE/Chem/CBC/UA Results: None provided

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Feline **Urinary System**

**BREED** 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.

DLH

**SEX**

Spayed Female

**AGE**

20 Years

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 3.18 cm. The right kidney measures 3.32 cm. Multiple small cortical cysts noted in the left kidney as well as a larger, approximately 1.0 cm in diameter, cortical cyst in the cranial pole of the left kidney.

**Adrenal Glands**

**WEIGHT**

2.8 kg

Adrenal glands are bilaterally uniformly plump egg-shaped adrenals, hypoechoic in echogenicity. This is most likely a benign age-related change. This change can be caused by chronic stress/disease, so investigation for/management of other disease (chronic kidney disease, hyperthyroidism, etc.) is recommended. The left adrenal gland measures 0.52 cm. The right adrenal gland measures 0.53 cm at the cranial pole and 0.52 cm at the caudal pole.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Spleen**

Spleen is subjectively large in size with subtly scalloped or undulating capsular contour. Parenchyma is normal in echogenicity with a mildly coarse/heterogenous echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

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Loetitia Saint-Jacques,  
LVT

**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.

**HOSPITAL NAME**

Pine Creek VC

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.

**REFERRING VET**

Dr. Dayna Mills

**Gastrointestinal**

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The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is moderately distended with fluid as well as echogenic non-shadowing luminal contents and gas, consistent with normal ingesta/chyme, as well as some subtly shadowing contents. There is no evidence of infiltrative disease, and the pyloric outflow tract appears patent. Non-obstructive or partially obstructive foreign material can't be definitively ruled out.

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Diffusely, the visible small intestines are normal in wall thickness and layering. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The



**PATIENT**

Kiki Rutherford

lumen is empty with no evidence of obstruction or foreign material. Focally, in the cranial abdomen, believed to be the cranial or proximal duodenum, there are bright echogenic luminal contents, consistent with ingesta/chyme and gas. However, some acoustic shadowing is concerning for foreign material, especially given the mild gastric distention.

**SPECIES**

Feline

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

**BREED**

***Pancreas***

DLH

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

**SEX**

Spayed Female

***Free Abdomen***

**AGE**

20 Years

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

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.

**WEIGHT**

2.8 kg

**PRIMARY FINDINGS**

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- Mucosal speckling – Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.
- The proximal duodenal shadowing and the gastric distention are somewhat concerning for at least partial obstruction by potential foreign material. The change is subtle, however, and normal gas and ingesta can occasionally mimic subtle foreign material. Therefore, this finding should be interpreted in combination with improvement/progression following supportive/symptomatic medical management.
- Pancreatic age-related remodeling/chronic pancreatitis – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- Scalloped spleen – can be associated with benign or malignant infiltrative disease. Common causes include a reactive spleen secondary to immune stimulus or early infiltrative round cell neoplasia such as lymphoma or mast cell tumor.
- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

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**SECONDARY FINDINGS**

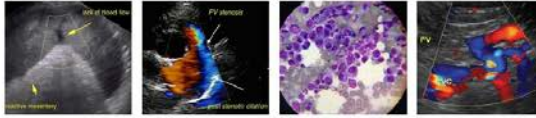
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- Mild age related adrenomegaly
- Age related kidney changes with a large cortical cyst in the left kidney

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

If not recently evaluated, a general metabolic health screen is recommended to include CBC/Chem panel, electrolyte, a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

T4 and free T4 are recommended.

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.

A fine needle aspirate of the spleen could be considered if patient's coagulation status is appropriate.

In the meantime, while awaiting results, supportive/symptomatic medical management of clinical signs is recommended in the form of antiemetics, gastroprotectants, fluid therapy if indicated, etc., with an additional 12-24 hours of fasting and recheck imaging of that proximal duodenal shadowing at that time if vomiting has persisted.

If not, appetite stimulants can be added to the empirical therapeutic recommendations and feeding can be resumed while monitoring for recurrence of vomiting.

Ultimately, biopsies of the gastrointestinal tract may be necessary for definitive diagnosis of the suspected underlying infiltrative/inflammatory bowel disease.

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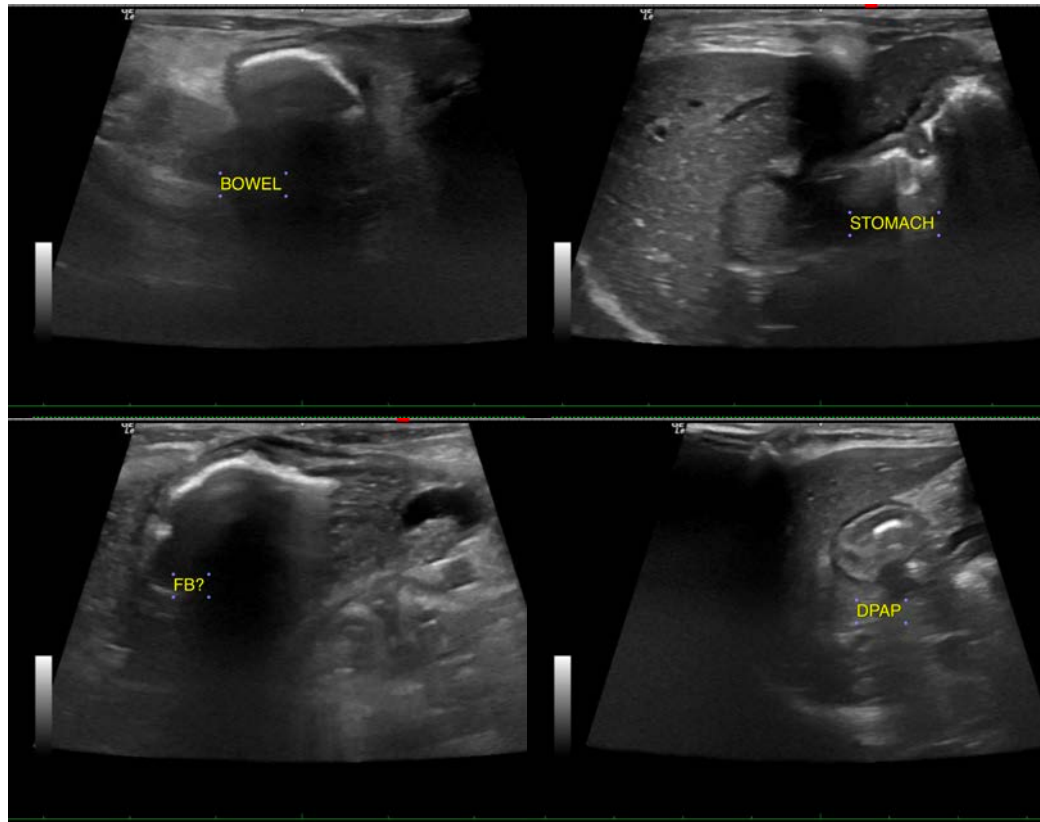
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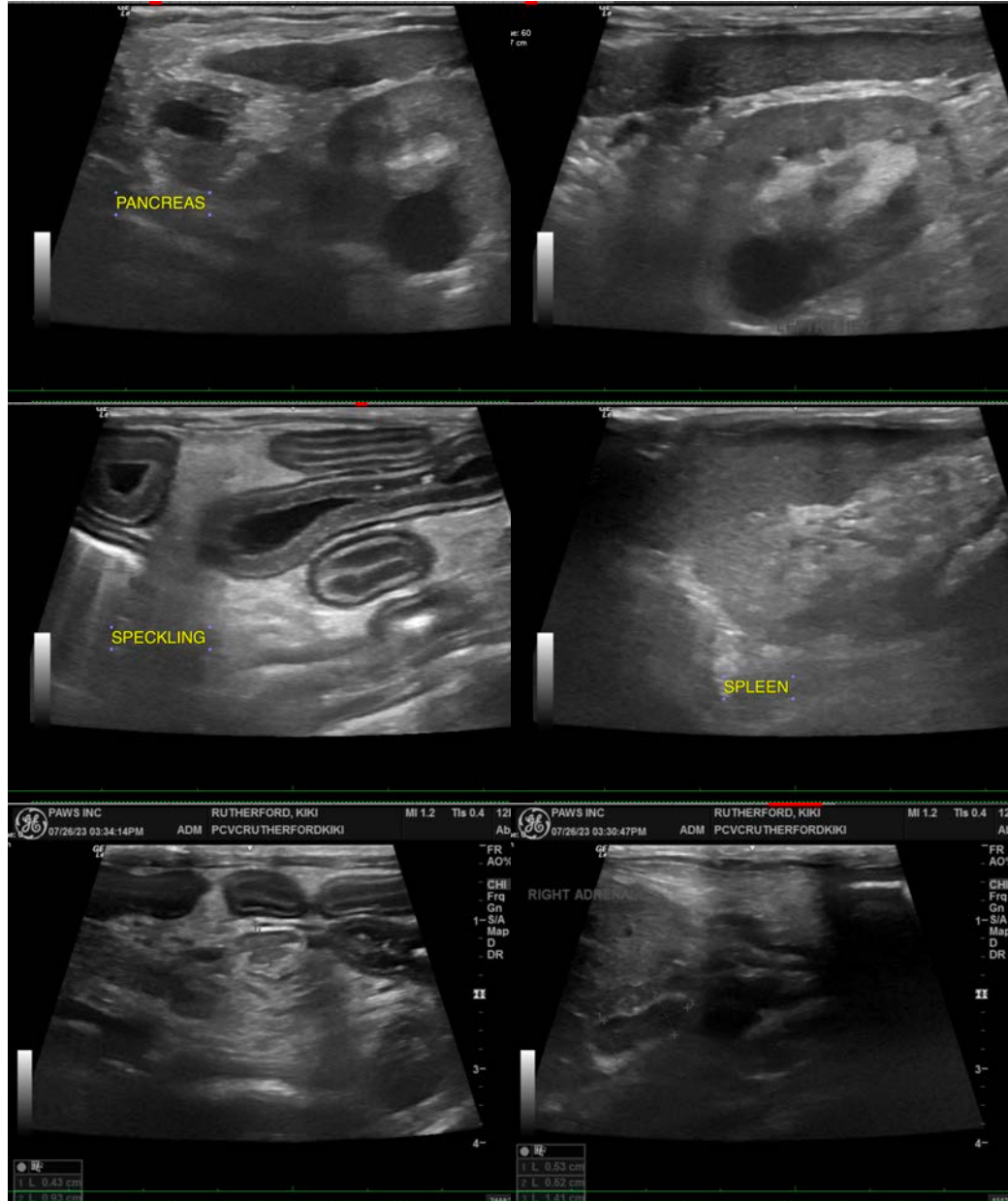
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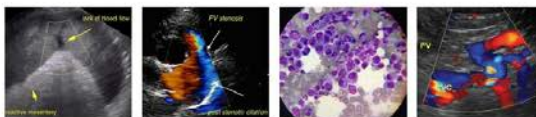
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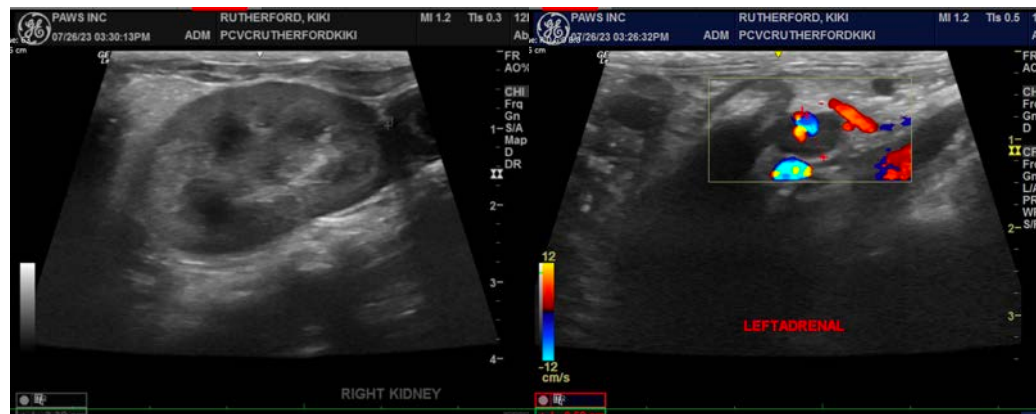
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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