



PATIENT

Rocky Powell

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11 Years

WEIGHT

5.7 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Donna Markland

HOSPITAL NAME

Island Mobile Paws VS

REFERRING VET

Central Island Vet
Emergency Hospital

INVOICE

41632

DATE

9/23/22

PRESENTING CLINICAL SIGNS

Rocky presented on September 23 to his regular clinic for vomiting more than usual. He has been eating grass and vomiting more since about June. He vomited food on September 21 and has had a markedly reduced appetite and been progressively lethargic since then. Rocky is an indoor/outdoor cat that is regularly dewormed. He has been on Probiotic Calm since June. On PE, he was markedly dehydrated. Radiographs showed gallstones and a possible "suspicious" area of bowel in the mid-right abdomen. CBC/Chem/T4 was unremarkable with the exception of lymphopenia. He is FeLV/FIV negative. Rocky was transferred for therapy and further diagnostics on the evening of September 23. He has been on 2x maintenance fluids, gabapentin, mirtazapine, and cerenia. He did start to eat, but was NPO overnight for this scan.

Abnormal PE/Chem/CBC/UA Results: 9/23/22 Lymphocytes, 0.91 (1.5-7.00)

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.

Kidneys are normal in size with increased cortical echogenicity. Normal smooth peripheral margination and shape are maintained. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. Infiltrative disease (infectious, neoplastic, etc.) or nephritis cannot be ruled out but is considered less likely. The left kidney measures 4.53 cm. The right kidney measures 4.68 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.42 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.51 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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 moderately overdistended with a thick hyperechoic irregular wall and echogenic debris as well as a 0.86 cm gallstone within the lumen of the gallbladder and suspected mineral within the cystic duct. The cystic and common bile duct do not appear overdistended in these images at this time.



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Gastrointestinal

The visible stomach wall is normal in thickness and layering. fluid and chyme noted within the pylorus, likely residual normal meal. Mild delayed gastric emptying secondary to the other metabolic diseases noted cannot be ruled out. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

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

Pancreas

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Pancreatic duct dilation is noted. Enhanced hyperechoic ill-defined surrounding fat is noted.

Free Abdomen

A small amount of echogenic free fluid is noted in the cranial abdomen, primarily around the gallbladder.

Mesenteric lymphadenopathy is noted surrounded by enhanced hyperechoic fat. Medial iliac lymphadenopathy is also noted.

ULTRASONOGRAPHIC FINDINGS

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- **Cholecystic debris including a cholecystolith as well as mineral echogenic debris within the cystic duct** – suggestive of cholangitis/cholangiohepatitis and cholelithiasis. Free fluid around the gallbladder is suggestive of a focal peritonitis secondary to cholangitis.
- Acute pancreatitis, possibly acute on chronic smoldering pancreatitis.
- **Inflammatory bowel disease (IBD) pattern** – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- **Free fluid and lymphadenopathy**
- **Chyme within the pylorus** – suggestive of possible delayed gastric emptying secondary to the cholangitis, pancreatitis, etc. There is no evidence of an obstruction at this time.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

At this time, given this cat's reported normal lab work and the lack of biliary system distention, further diagnostics and medical management of cholangitis, pancreatitis, "Triaditis", etc. is warranted with close monitoring for progressive obstruction and/or laboratory changes, etc. that indicate a need for surgery to alleviate a biliary obstruction. Recommendations include:

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, followed by treatment



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with fluid therapy, antiemetics, gastroprotectants, broad-spectrum antibiotics, and pain management if necessary, based on physical exam, as well as nutritional support in the form of an appetite stimulant or even feeding tube place if necessary.

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If laboratory changes suggest a post-hepatic cholestasis and/or clinical signs do not resolve and/or progress, an exploratory laparotomy for a possible cholelithiasis removal, etc. may be necessary. If that happens, biopsies of the GI tract are recommended at the same time. Otherwise, after resolution of this acute illness, longer term plan may include biopsies of the GI tract, being sure to include ileum if possible to definitively diagnose and manage the suspected concurrent infiltrative bowel disease.

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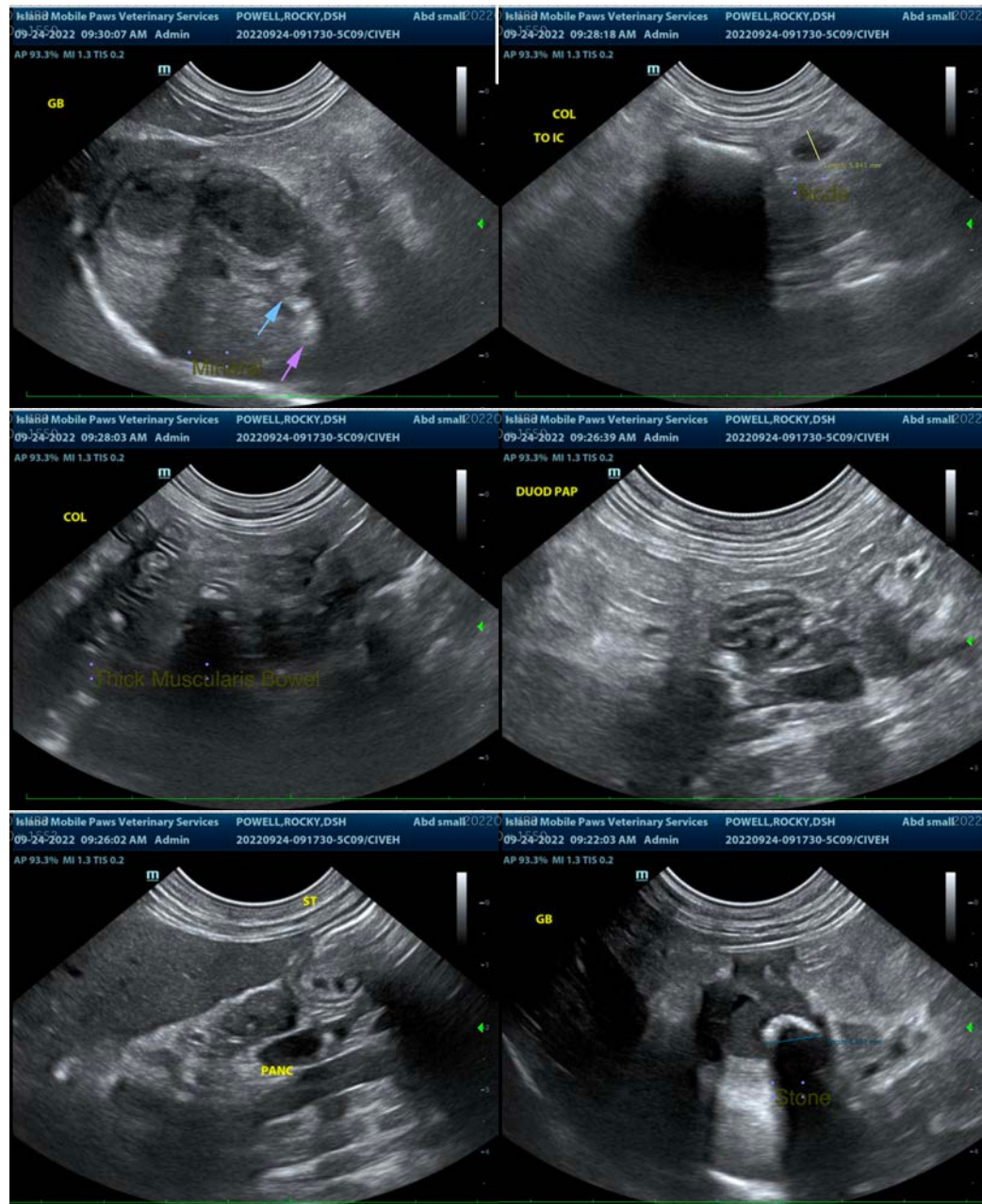
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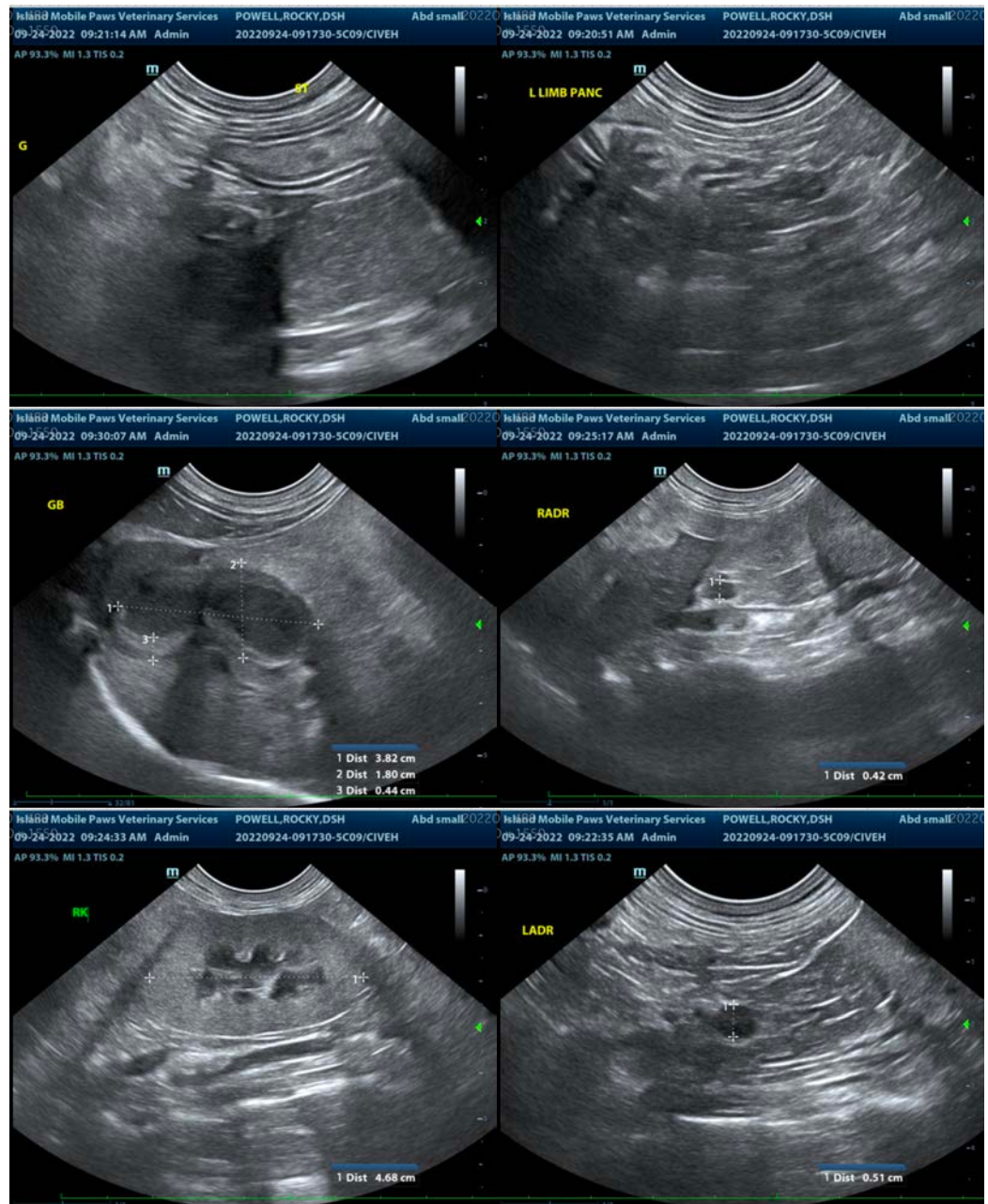
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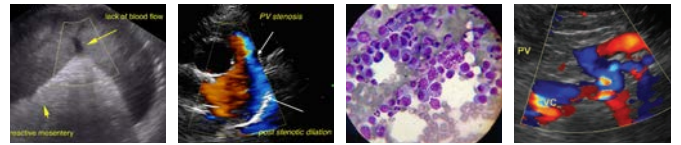
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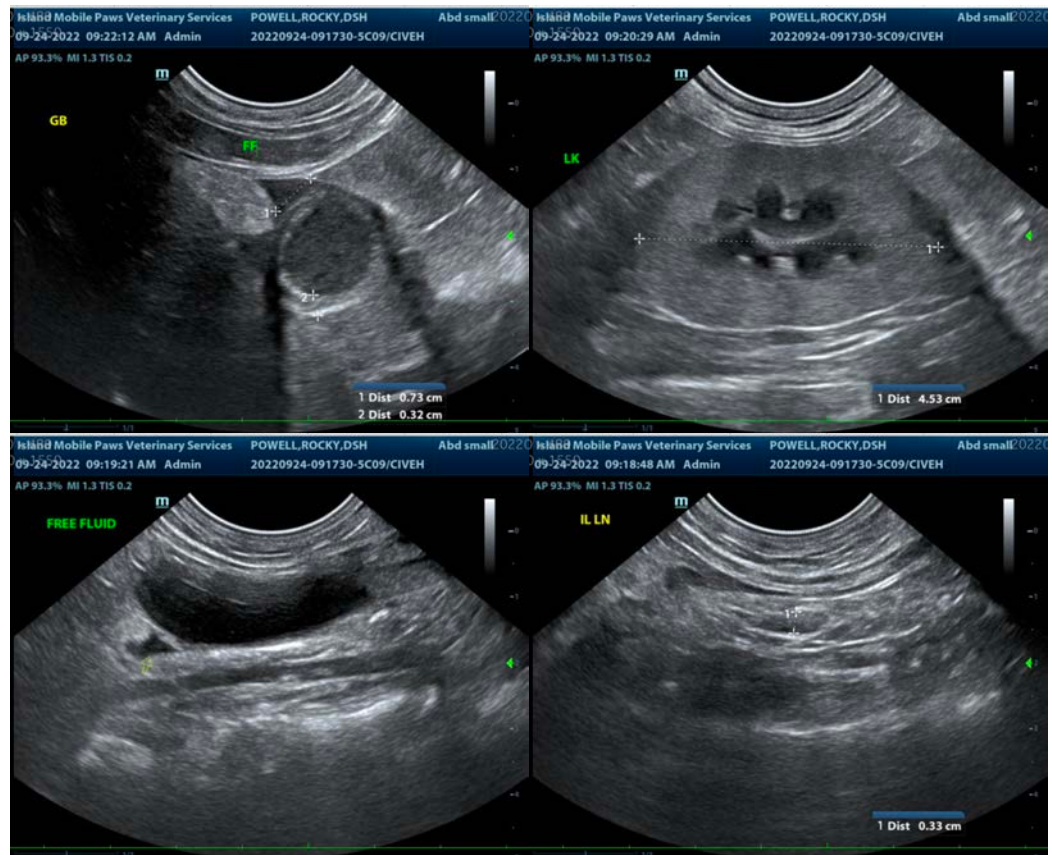
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
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