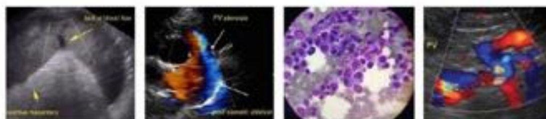


PATIENT

Ginger Urciuoli

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

18 years

WEIGHT

4.98 kg

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Beatties PH E Hamilton

REFERRING VET

Dr. Motallebi

INVOICE

11472

DATE

8.22.22

PRESENTING CLINICAL SIGNS

History: P dx with kidney dz and diabetes July 19 P has been vomiting brown bile and having diarrhea after finishing Cerenia BG has been 29-30mmol/L last few days P has been urinating a lot P ate well this morning but vomited after P has GRADE 2 heart murmur
Abnormal PE/Chem/CBC/UA Results: Please see attached lab results

7/19/22 bloodwork: Mild azotemia, hyperglycemia. ALP 173. USG 1.043. Trace proteinuria. 4+ glucosuria. Negative ketonuria. Normal T4. Mildly elevated fructosamine.

8/11/2022 Urinalysis: USG 1.027. No proteinuria. 4+ glucose. No ketones. Inactive sediment.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The **left kidney** is normal size (3.79 cm in length); with a slightly irregular shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The **right kidney** is small in size (2.41 cm in length); with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths or hydroureter. Renal vasculature appears normal.

Adrenal Glands

The **left adrenal gland** is normal size (0.88 cm length; 0.41 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The **right adrenal gland** is normal size (0.46 cm length; 0.32 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The **spleen** is normal in size (0.93 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance when using the high-frequency probe. A 0.24 cm ill-defined hyperechoic nodule is observed at the caudolateral aspect. Splenic vasculature is normal.

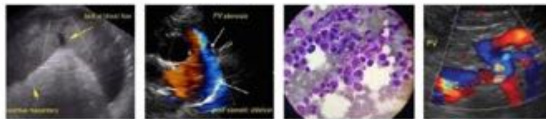
Liver

The **liver** is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is of appropriate echogenicity and is subtly mottled in appearance. A 1.28 x 0.77 cm irregular, multiseptated cystic lesion is observed on the left side. In addition, at least intrahepatic biliary stone is seen. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The **gall bladder** lumen is mildly distended. The wall is slightly thickened (up to 0.17 cm) and hyperechoic. A scant amount of echogenic debris is observed within the lumen. The cystic and common bile ducts are normal

Gastrointestinal

The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering



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pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. There is disruption in the normal 1:3 muscularis: mucosal ratio in some segments. There is also a subjective mld thickening of the submucosal layer in some regions. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The **pancreas** is diffusely visible/prominent with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The pancreatic duct is visible but not overtly dilated (0.20 cm in diameter).

Free Abdomen

The **peritoneal cavity** is normal. There is no evidence of inflammation or effusion. The abdominal **lymph nodes** are normal/not visible.

Other

A 1.07 x 1.36 cm echogenic nodule/area is observed in the right cranial quadrant, craniolateral to the right kidney.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral chronic, age-related degenerative renal changes, more pronounced on the left side.
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

Secondary Findings

- The small intestinal wall changes are suggestive of inflammatory bowel disease. However, Correlation with the patient's clinical history is recommended.
- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.
- The gall bladder wall changes may be artifactual due to lack of full repletion. Alternatively, cholecystitis or age-related hyperplasia may be present.
- The diffuse hepatic parenchymal changes are nonspecific and could be secondary to a diabetic hepatopathy, cholestatic liver disease, inflammatory disease (i.e., bacterial cholangiohepatitis, lymphoplasmacytic hepatitis), infiltrative neoplasia (less likely), other hepatopathy.
- The echogenic nodule/area observed in the right cranial quadrant may be artifactual or may represent a prominent lymph node, a portion of the pancreas, the liver, other. Additional images would be necessary for further evaluation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Regarding the azotemia and sonographic renal changes, consider the following:

1. Urine culture and sensitivity
2. UPC

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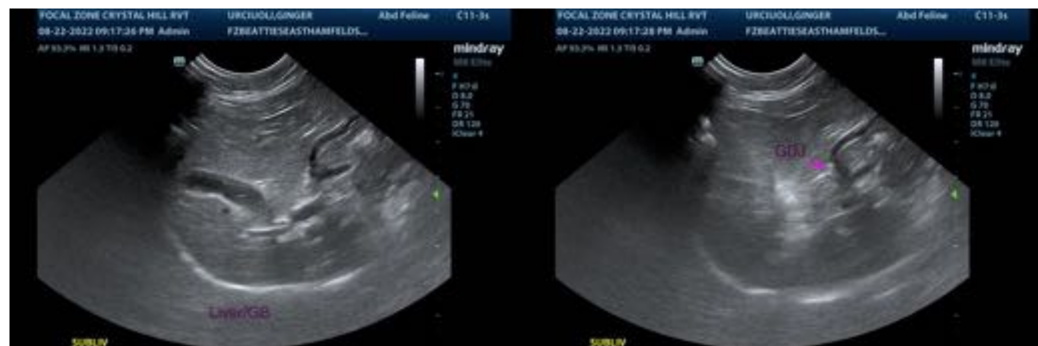
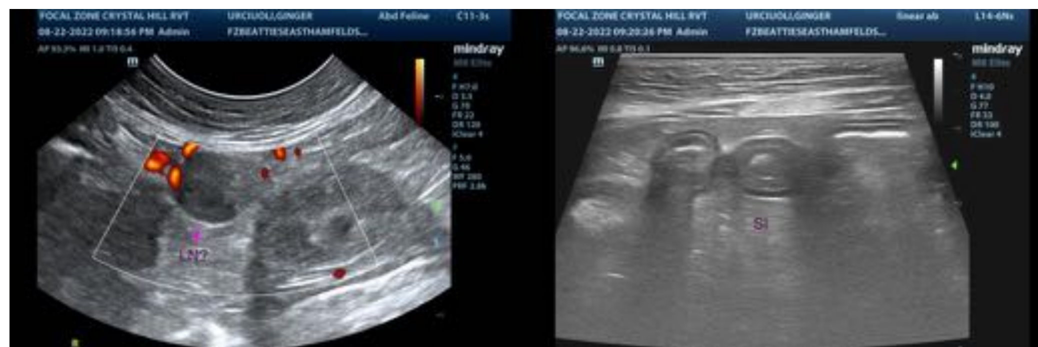
3. Baseline blood pressure measurement.
4. Fluid therapy as needed. Fluid use should be judicious given the heart murmur. Consider further cardiac workup (chest radiographs, echocardiogram) to determine if underlying cardiac disease is present.
5. Consider transitioning to a prescription renal diet when the patient's current GI signs have resolved.

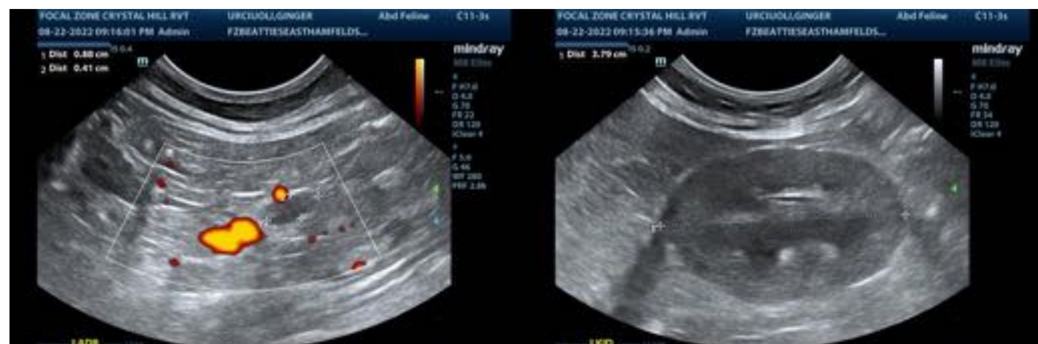
Regarding the bowel and pancreatic changes, consider the following:

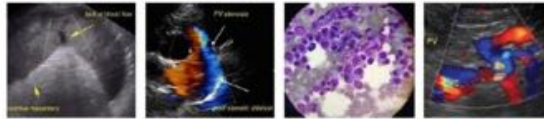
1. Malabsorption panel including serum cobalamin and folate, TLI and PLI
2. Fecal evaluation for ova and Giardia
3. Symptomatic care for vomiting and diarrhea. Consider initiation of a proton pump inhibitor and sucralfate as empirical treatment for GI ulceration (based on the character of the vomitus).
4. GI biopsies (i.e., endoscopic or surgical) may be necessary if symptoms do not resolve with medical management.

Given the hepatic changes and elevated ALP, consider pre-and postprandial serum bile acids to assess hepatic function.









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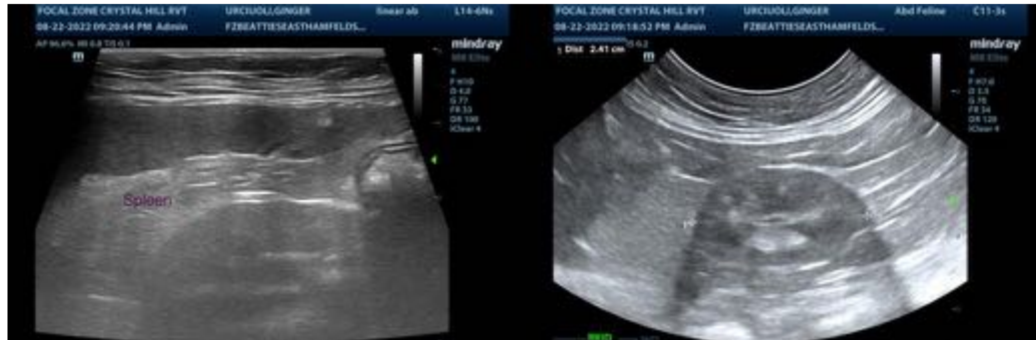

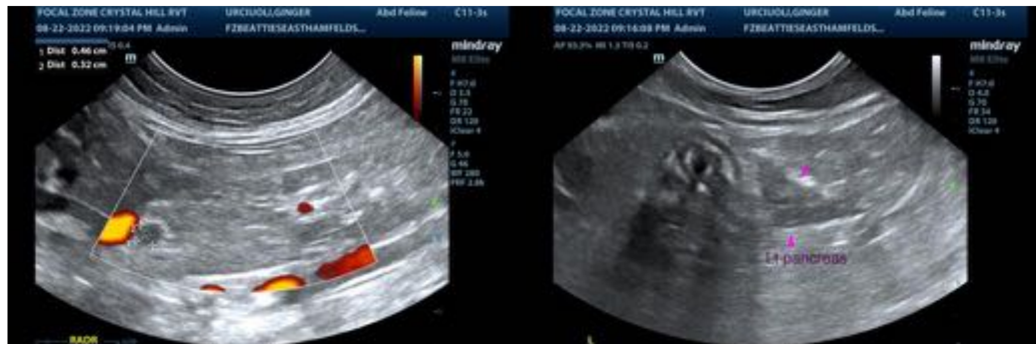

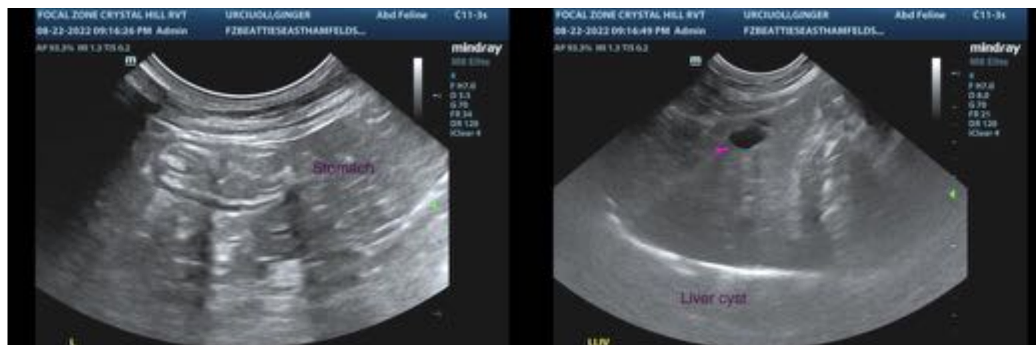

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com