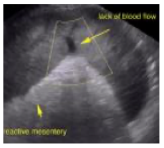
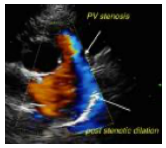
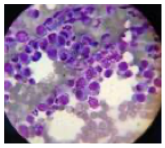
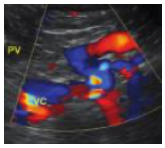
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
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PATIENT
Jersey Hryckowian

SPECIES
Canine

BREED
Yorkshire Terrier

SEX
Spayed Female

AGE
16 years

WEIGHT
5 lbs

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

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
Animal General on Hudson

REFERRING VET
Dr. William Freedman

INVOICE
12472

DATE
3.22.23

PRESENTING CLINICAL SIGNS

History: Patient presents for weight loss, vomiting, and decreased appetite.

Abnormal PE/Chem/CBC/UA Results: BUN 103, ALT 979, Alk. Phos. 1836, amylase 2260, lipase 5671, Na 103.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is mildly distended. The wall is appropriate thickness for the level of repletion. The mucosal surface is slightly irregular. There is questionable mineralized debris within the lumen. The region of the trigone is normal. Where the ureters enter at the serosal surface, the wall is prominent. The visualized portion of the proximal urethra is normal.

The left kidney is small in size (2.43 cm in length) with an irregular shape. The cortex is variably thickened with poor corticomedullary distinction. There is loss of the normal renal medullary architecture. Small foci of mineralization are visualized. Trace pyelectasia is present. There is no evidence hydroureter. Renal vasculature is normal.

The right kidney is normal in size (3.73 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size (0.39 cm at cranial pole) (0.40 cm at caudal pole) (1.18 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is in normal size (0.52 cm at cranial pole) (0.35 cm at caudal pole) (1.24 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (0.81 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly mottled in appearance. On the right side, a 2.65 cm ill-defined hypoechoic area is observed near the diaphragm. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

Within the gastric lumen, a 1.76 cm shadowing structure is visualized. The lumen is otherwise empty. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The ill-defined hypoechoic area in the liver could be consistent with inflammatory disease, an emerging tumor, area of necrosis, regenerative nodule, other. The diffuse hepatic parenchymal changes are nonspecific and could be secondary to vacuolar hepatopathy, regenerative nodular hyperplasia, diffuse inflammatory disease or other hepatopathy.

- Gall bladder debris - incidental

Secondary Findings

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- The shadowing structure within the gastric lumen may represent foreign material or artifact. There is no obvious evidence of an outflow tract obstruction.

- Bilateral chronic renal changes with nonobstructive nephrolithiasis. The renal changes are more pronounced in the left kidney.

- Questionable mineralized debris in the urinary bladder

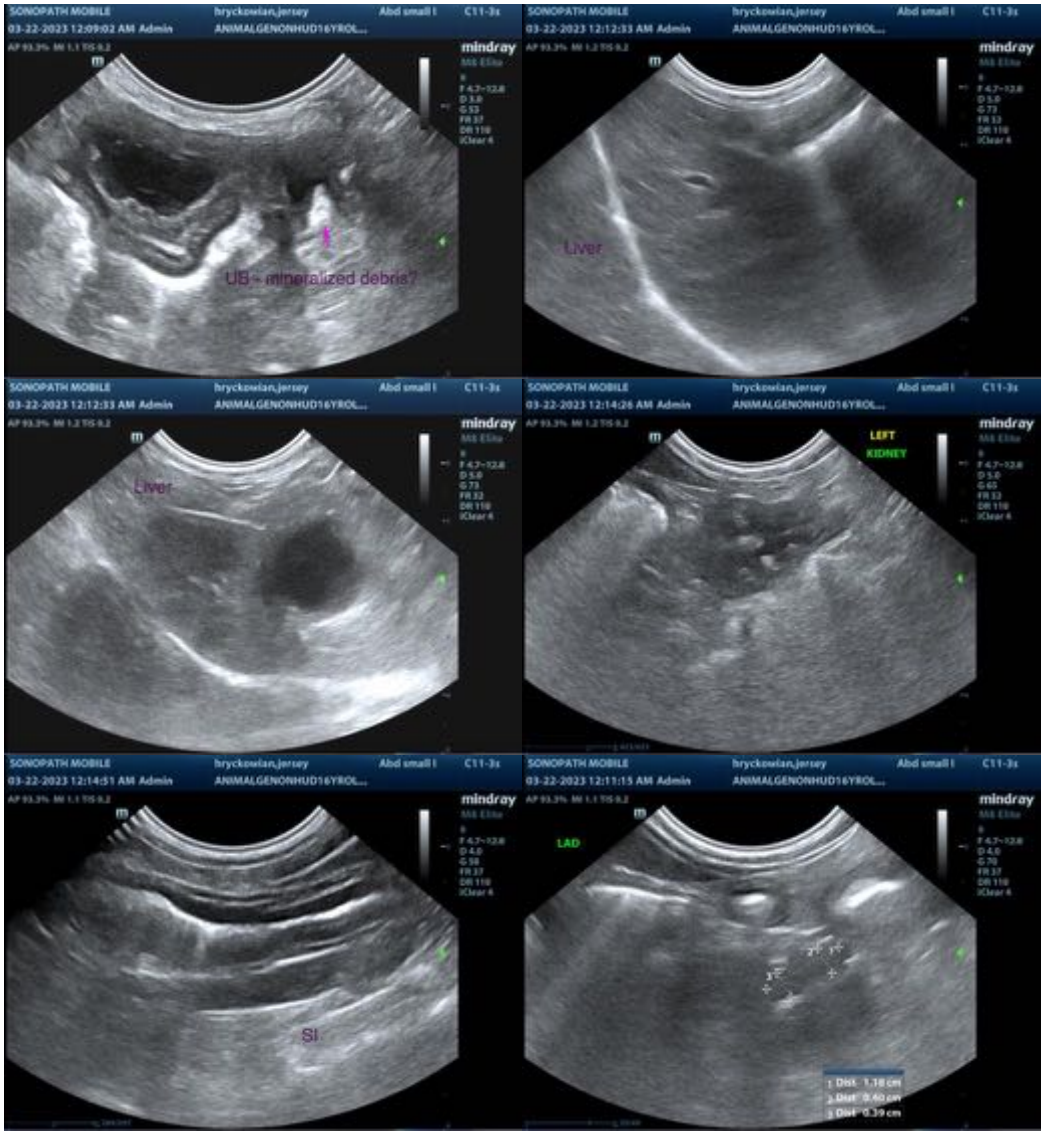
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

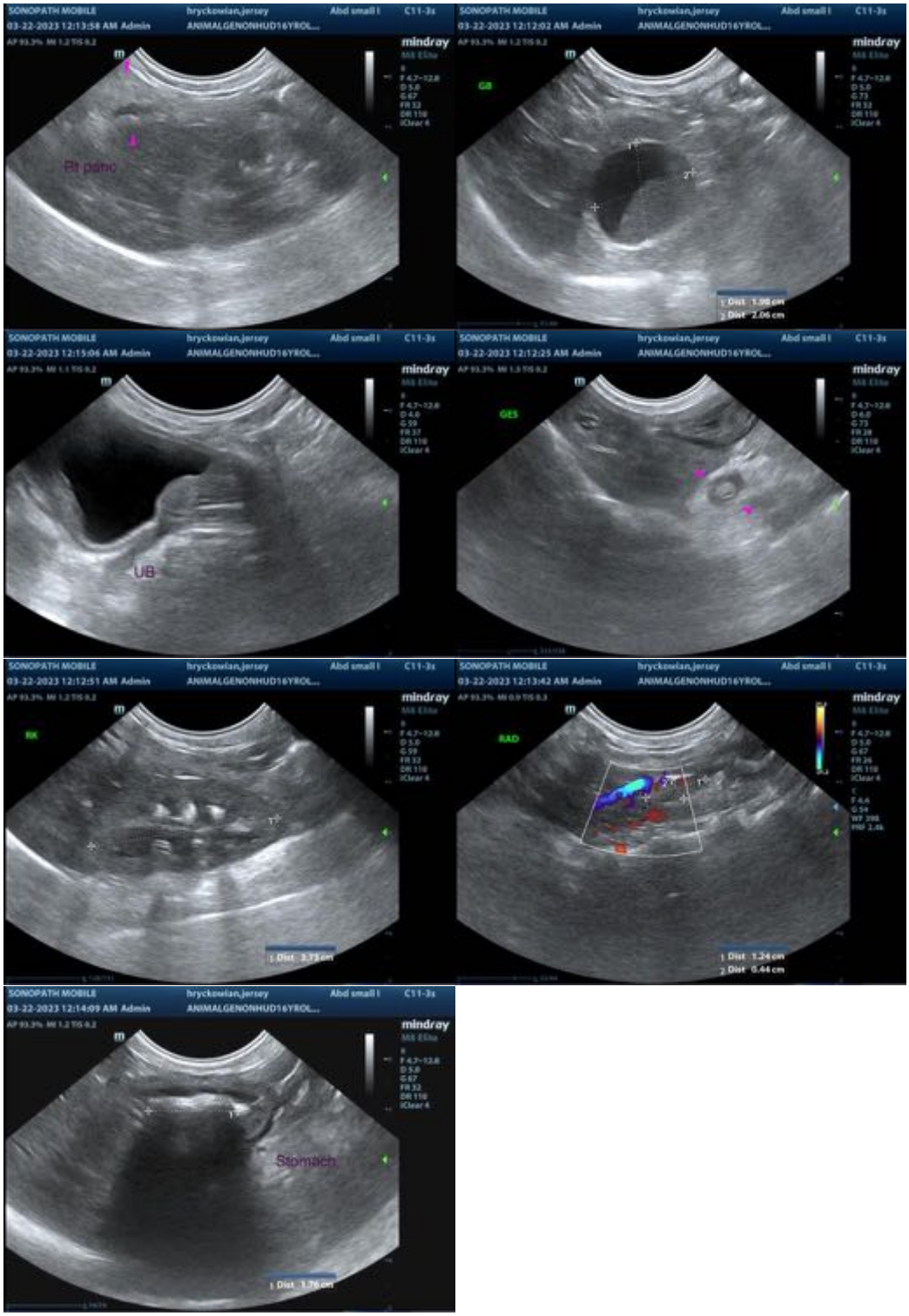
- Given the patient's severely elevated BUN, consider the following:

    1. Urinalysis
    2. Urine culture and sensitivity
    3. UPC (if proteinuria is present in the absence of infection)
    4. Baseline blood pressure measurement
    5. Given the severe BUN elevation in the face of a normal creatinine elevation, consider empirical treatment for gastric ulceration (i.e., proton pump inhibitor, sucralfate). Also consider abdominal radiographs to further assess for a gastric foreign body. If present, an upper GI endoscopy may be warranted.

- Regarding the elevated liver enzymes, the following diagnostics/therapeutics can be considered:

    1. Pre-and postprandial serum bile acids
    2. Leptospirosis testing (i.e., blood and urine PCR, serology)
    3. Hepatic tissue sampling (i.e., fine-needle aspirate or biopsy, if clotting status is appropriate). If biopsies are pursued, aerobic and anaerobic bile cultures are recommended along with hepatic copper quantitation. Samples should be obtained from multiple lobes, including the hypoechoic area on the right side. If biopsies are not pursued, consider empirical treatment for bacterial cholangiohepatitis (i.e., broad-spectrum antibiotic, hepatic antioxidants). If liver enzymes do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued and further work-up considered.





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)
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