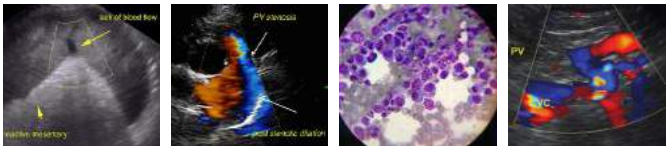
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**
Azula Williams

**SPECIES**
Feline

**BREED**
Domestic shorthair

**SEX**
Female spayed

**AGE**
8 Years

**WEIGHT**
7.2 lbs.

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

**IMAGING PERFORMED BY**
Dr. Wepprich

**HOSPITAL NAME**
Willamette VH

**REFERRING VET**
Dr. Wepprich

**INVOICE**
11674kk

**DATE**
8/19/21

## PRESENTING CLINICAL SIGNS

History: Vomiting, hematochezia, painful abdomen, fever Choledocholiths - r/o incidental vs obstructive chronic vomiting - r/o IBD vs LSA

Abnormal PE/Chem/CBC/UA Results: CBC - 20k neutrophilia, mild monocytosis, hct 36% chem17, lytes - ALT 491, rest nsf fPL abnormal UA - USG >1.050 otherwise nsf.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder, trigone, and pelvic urethra are 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 (3.18 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (3.58 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal size (0.31 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The region of the right adrenal gland is evaluated. No obvious pathology is observed.

### *Spleen*

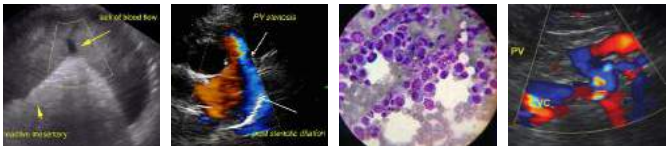
The spleen is normal in size (0.77 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

### *Liver*

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and overall homogeneous. No distinct focal lesions are observed. There is an increase in portal markings. A few intrahepatic biliary stones are visualized. Hepatic vasculature is of normal volume with no evidence of congestion. The gall bladder is distended. The wall is normal in thickness. Luminal contents are anechoic. The cystic and common bile ducts are tortuous and dilated. The common bile duct can be followed to the level of the duodenal papilla at which point it measures 0.33 cm in diameter. A 0.25 cm hyperechoic to mineralized focus is observed at the level of the duodenal papilla. The duodenal papilla itself is thickened at 0.59 cm.

### *Gastrointestinal*

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly fluid-distended. 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



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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 slight thickening of the submucosal layer in some regions. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

### *Pancreas*

The left and right limbs of the pancreas are prominent in size with minimal deviation from the normal peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat. No focal lesions are observed. The pancreatic duct is visible but not overtly dilated (0.21 cm in diameter). The mesentery effacing the serosal surface is hyperechoic.

### *Free Abdomen*

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. At least one prominent lymph node measuring 1.35 cm in length is observed in the mid-abdominal cavity.

## ULTRASONOGRAPHIC FINDINGS

**Primary Findings:**

- Diffuse hepatopathy, consistent with inflammatory/immune-mediated disease, hepatic lipidosis, or less likely infiltrative neoplasia. Intrahepatic biliary stones – incidental.
- Possible distal choledocolith
- Bowel pattern consistent with inflammatory bowel disease with potential for emerging lymphoma.
- The pancreatic changes are consistent with acute or chronic active pancreatitis.

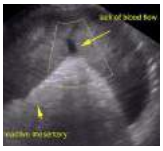
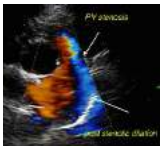
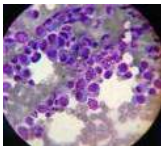
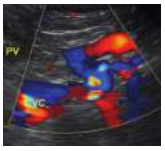
**Secondary Findings:**

- The prominent abdominal lymph node is most likely reactive.

**Given the sonographic changes and clinical history, triaditis is a consideration in this patient. Although a small distal choledocholith is possible in this patient, given that the total bilirubin is normal, surgical intervention is not recommended at this time.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Three-view thoracic radiographs are recommended to assess cardiopulmonary status.
2. Additional diagnostic considerations include the following:
    a. A malabsorption panel including serum cobalamin, folate, PLI and TLI.
    b. A fecal evaluation for ova/Giardia
    c. A fine needle aspirate of the liver (if clotting status is appropriate). A 25-guage needle should be used.
    d. A 6-week limited antigen diet trial to assess for food allergies
3. Consider empirical treatment for cholangiohepatitis/pancreatitis. If supportive care is ineffective, an abdominal exploratory with biopsies of liver, gastrointestinal tract, and pancreas may be warranted. Nutritional support (i.e., via temporary feeding tube) is strongly encouraged

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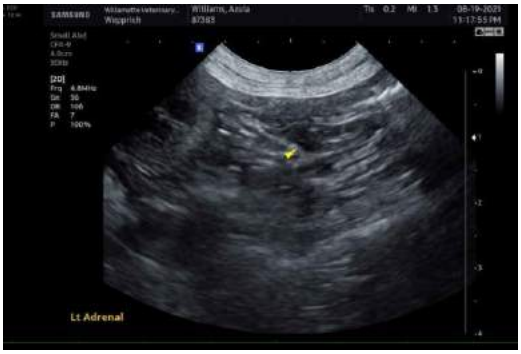
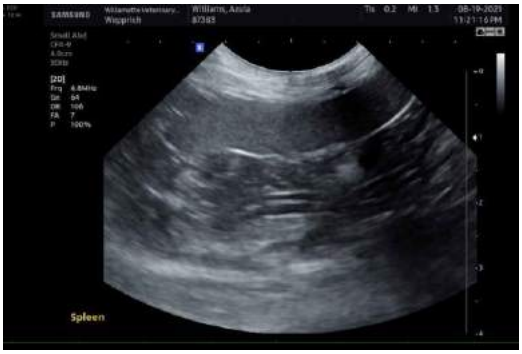
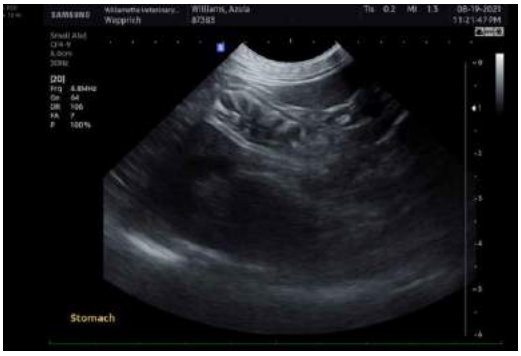
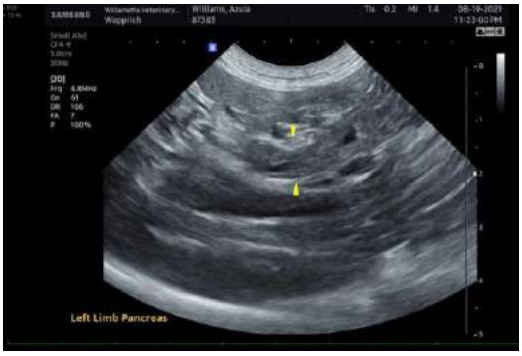
to help prevent/treat hepatic lipidosis.

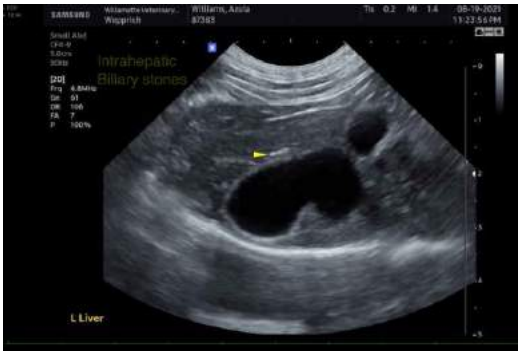
4. Consider repeat sonography of the gall bladder/bile ducts in 2-3 weeks to re-evaluate the possible distal choledocholith.

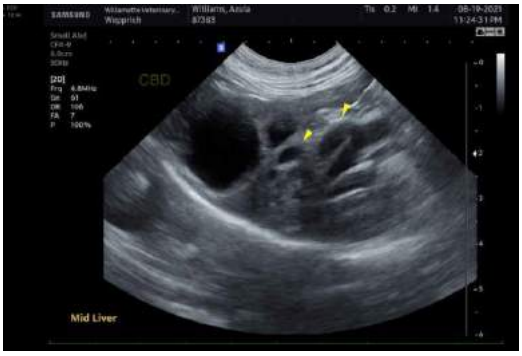


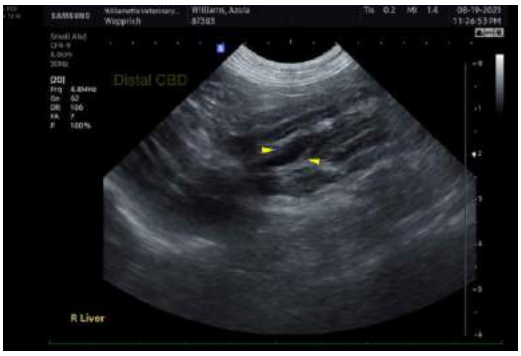



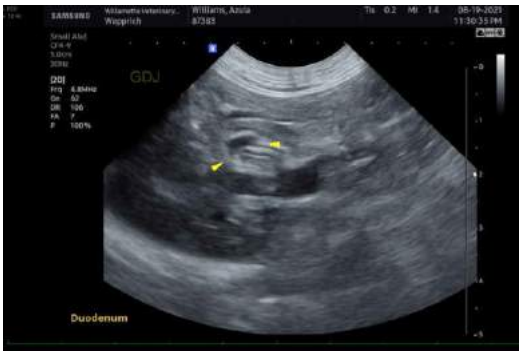



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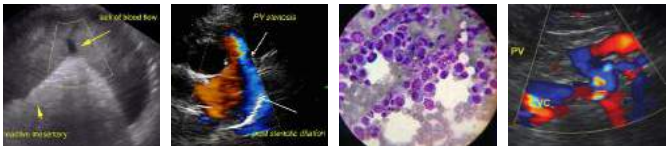

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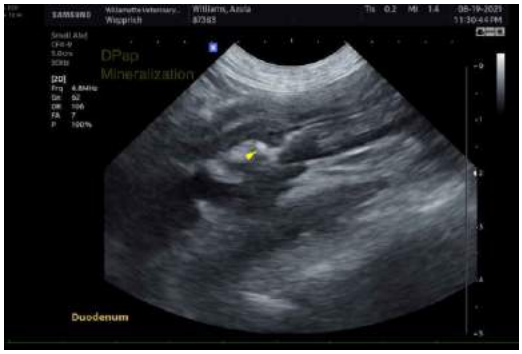


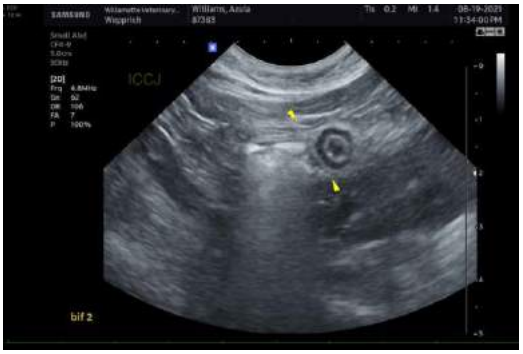


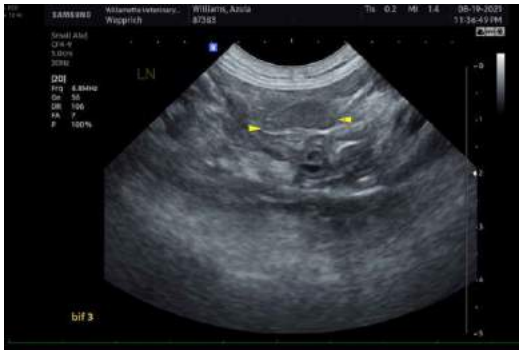


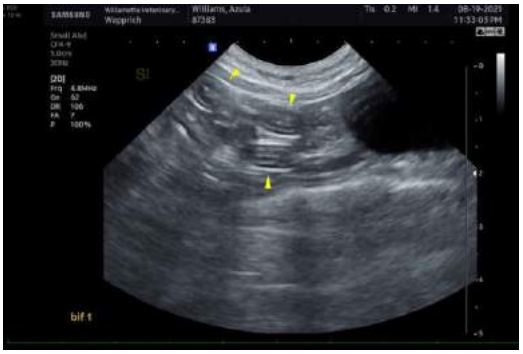


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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