



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT**  
Chuckie Kudeviz

**SPECIES**  
Canine

**BREED**  
Chihuahua

**SEX**  
Spayed Female

**AGE**  
4/9/2011

**WEIGHT**  
14.9 lbs

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

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

**HOSPITAL NAME**  
Brighton AH

**REFERRING VET**  
Dr. Sarah Schmitz

**INVOICE**  
10303

**DATE**  
2/10/22

**PRESENTING CLINICAL SIGNS**  
Clinical Exam Findings:  
P came in for not eating and uncomfortable.  
Current Medications: Doxycycline  
Fine Needle Aspirates  
Client did not approve sedation nor FNA

Additional history: hepatopathy. Reduced appetite the past few days. Severely elevated liver enzymes. Total bili 0.4. ALT 1671. Alk Foss 1987. The rest of the chemistry is unremarkable except GDT is 125. CBC is normal. In January, her ALT was 204, Alk Foss was 917, GDT 13, normal tbili.

**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 in size (4.41 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is minimal loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (4.91cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is minimal loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is mildly enlarged (0.60 cm at cranial pole) (0.59 cm at caudal pole) (1.45 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

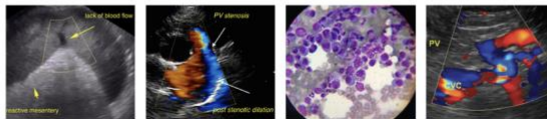
The right adrenal gland is borderline enlarged (0.67 cm at cranial pole) (0.56 cm at caudal pole) (2.15 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is normal in size (0.86 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 enlarged with irregular peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely mottled/irregular in appearance. No distinct focal lesions are observed. Hepatic



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vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gall bladder is distended. The wall is normal in thickness. Numerous choleliths are observed within the lumen, as well as a moderate amount of aggregated echogenic partially dependent to suspended sludge. One to two mineralizations are also observed in the gall bladder neck/proximal cystic duct. The cystic and common bile ducts are not dilated. There is no evidence of an intraluminal obstruction.

**Gastrointestinal**

The gastric lumen is moderately distended with ingesta. 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 segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

**Pancreas**

The base and limbs of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic 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**

- Non-specific diffuse hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (i.e., lymphoma), leptospirosis, other hepatopathy +/- concurrent age-related change (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia).
- Choleliths/gall bladder sludge without obvious evidence of a bile duct obstruction.

**Secondary Findings**

- Minor degenerative renal changes with dystrophic mineralization and right nonobstructive nephrolithiasis.
- Mild bilateral adrenomegaly.
- Age-related pancreatic remodeling



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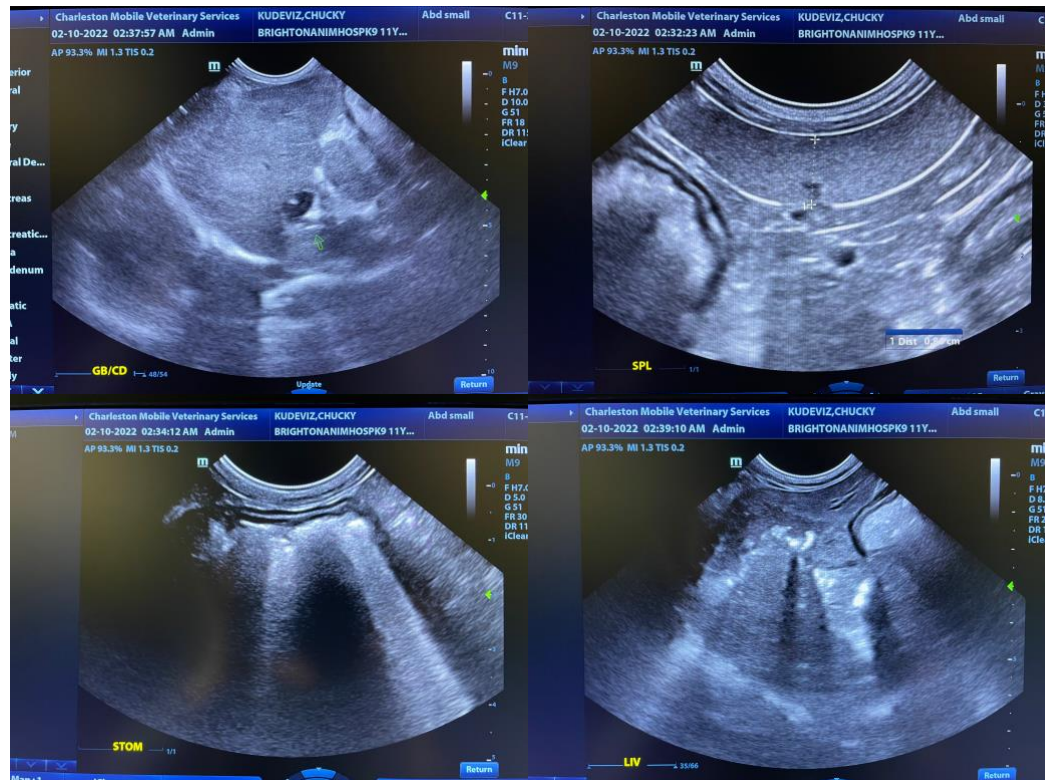
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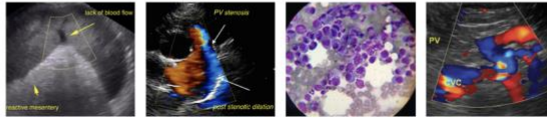
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid +/- metronidazole, Denamarin). If no improvement in the liver values is seen within 5-7 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
- Consider discontinuation of Ursodiol due to the concern that its choleric effects may cause a cholelith to enter into the cystic/common bile duct, resulting in an obstruction.
- Three-view thoracic radiographs are recommended prior to any anesthetic event.





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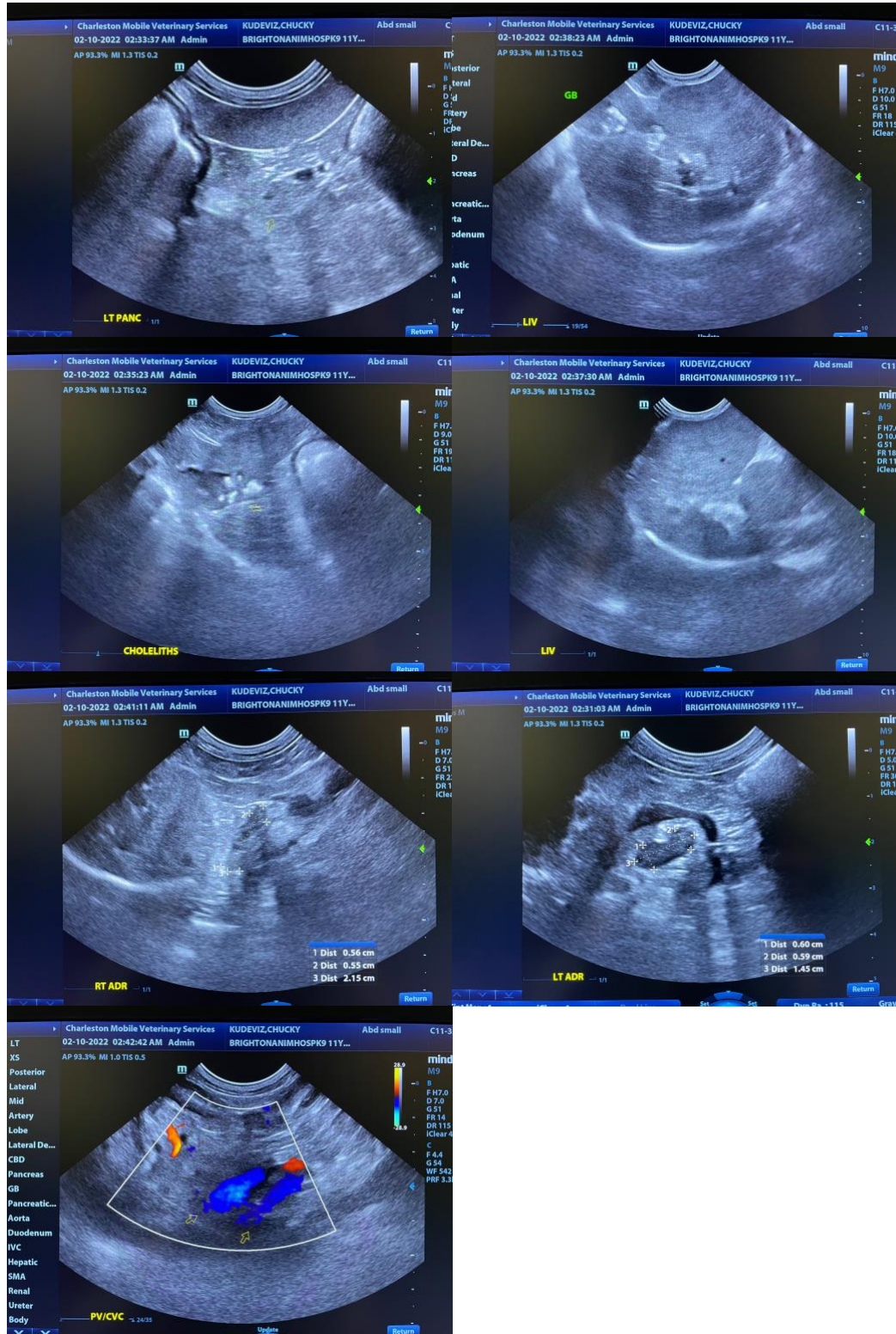
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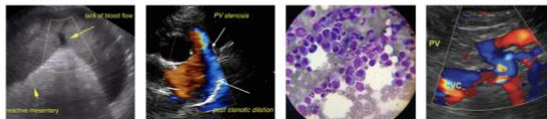
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

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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Chihuahua

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[info@SonoPath.com](mailto:info@SonoPath.com)

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