SonoPath
Clinical Sonography & Telecytology
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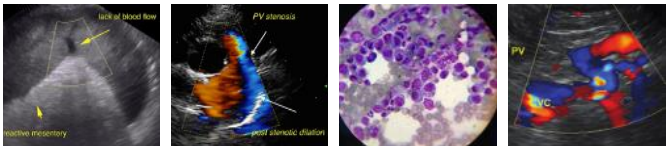

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Chloe Maun

SPECIES
Canine

BREED
Shih Tzu

SEX
Female Spayed

AGE
11 Years

WEIGHT
6.4kg

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Erin Wicks

HOSPITAL NAME
Shores Veterinary Emergency Center

REFERRING VET
Dr. Moser

INVOICE
50737

DATE
3-5-22

PRESENTING CLINICAL SIGNS

Presented at our hospital for transfer from Lambs gap; patient has elevated liver, kidney, and pancreatic enzymes; owner was originally here for for patient acting strange on 3/2; patient went for recheck at reg vet where they did bloodwork since patient was not improving; patient is not eating much and is still declining; reg vet did give cerenia and SQ fluids according to owner Previous Health Concerns: seizures Current Medications: Dasaquin; on meloxicam Wednesday and Thursday
Abnormal PE/Chem/CBC/UA Results: Abdominal: Distended abdomen, tense difficult to palpate – organomegaly (o states that pt has hepatomegaly – historical) Radiographs 3/2/22 – arthritic changes in forelimbs, more severe in left forelimb vs. right, deviation to trachea on lateral (positioning vs. mediastinal mass) Bloodwork (rdvm) Retic 132; Retic Hemo 20.0; LYM 1.034; PLT 134; ALT 2660; AST 519; ALP 1562; GGT 21; Chol 479; Lip 1518; Crea Kinase 9643; Crea 3.3; BUN 74; SDMA 17; Rads (rdvm) NSF, possible R kidney mass

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Primarily dependent nonmineralized sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

No evidence of pathology in the area of the aortic trifurcation.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Nonobstructive medullary to pelvic renoliths present. Example of left and right kidney renolith measured 1.0 cm diameter. No evidence of pelvic dilation was present. The left kidney measured 4.6 cm in length. The right kidney measured 4.4 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.73 cm width at the caudal pole and 0.62 cm width at the cranial pole.

The right adrenal gland was not definitively visualized.

Spleen

The spleen presented normal in size and contour with generalized mild parenchyma heterogeneity exhibiting indistinct areas of hyperechoic parenchyma primarily adjacent to the hilus and medial capsule. No splenic masses noted. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver / Gallbladder

The liver exhibited generalized enlargement with nonuniform increased hepatic parenchyma echogenicity exhibiting moderate coarse echotexture with multifocal discrete hypoechoic parenchyma nodules. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size with mild nondependent yet nonorganized gallbladder debris. The cystic duct and common bile ducts were normal without evidence of dilation.

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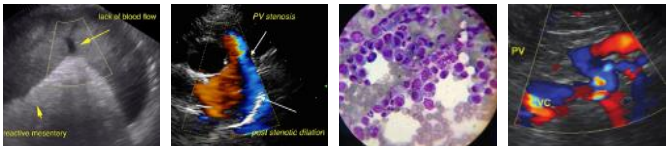

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

Large, nonhomogeneous to hypoechoic mass was present in the right cranial abdomen in the area of the caudate liver lobe, right adrenal, and dorsomedial to the duodenum. The mass measured approximately 6.0 cm in diameter. Regional reactive to inflamed mesentery was noted. Intermittent small pockets of scant peritoneal free fluid were present.

No overt lymphadenopathy was present.

ULTRASONOGRAPHIC FINDINGS

Primary

- Mild urinary bladder sediment.
- Bilateral chronic renal changes with nonobstructive renoliths.
- Hepatopathy exhibiting mild nonuniform hyperechoic parenchyma with multifocal discrete hypoechoic parenchymal nodules.
- Mild gallbladder debris (nonmucocele).
- Undifferentiated right cranial abdominal mass with regional reactive/inflamed mesentery.

Secondary

- Indistinct yet likely benign splenic nodules - consistent with probable indistinct myelolipomas, previous infarcts, or potential capsular fibrosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the size and location of the mass, hepatic, pancreatic, or potential right adrenal origin is possible. Neoplastic criteria is favored with nonneoplastic etiology i.e., abscess, necrosis, granuloma, or other considered less likely. The liver may indicate concurrent vacuolar hepatitis, chronic active hepatitis / cholangiohepatitis with areas of hematopoiesis, nodular to regenerative hyperplasia, while the possibility of hepatic/intrahepatic metastasis could be possible.

Assuming normal clotting status, ultrasound guided FNA of the mass as well as hepatic parenchyma using a 25g needle could be considered for screening cytology for further assessment. Alternatively, abdominal CT is likely ideal.

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

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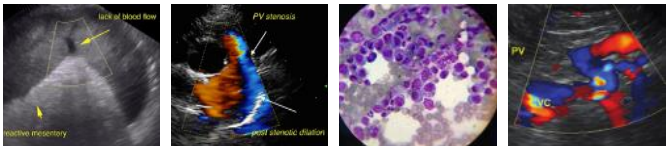

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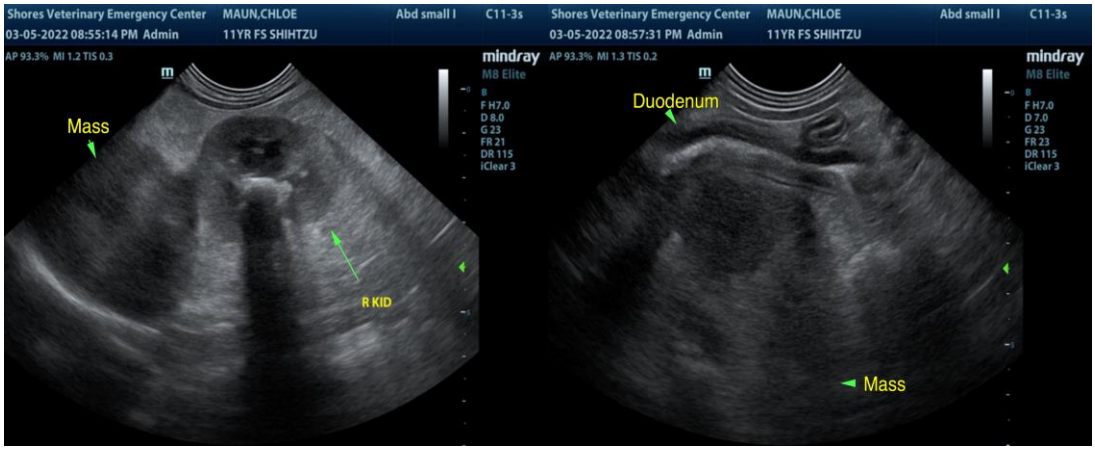
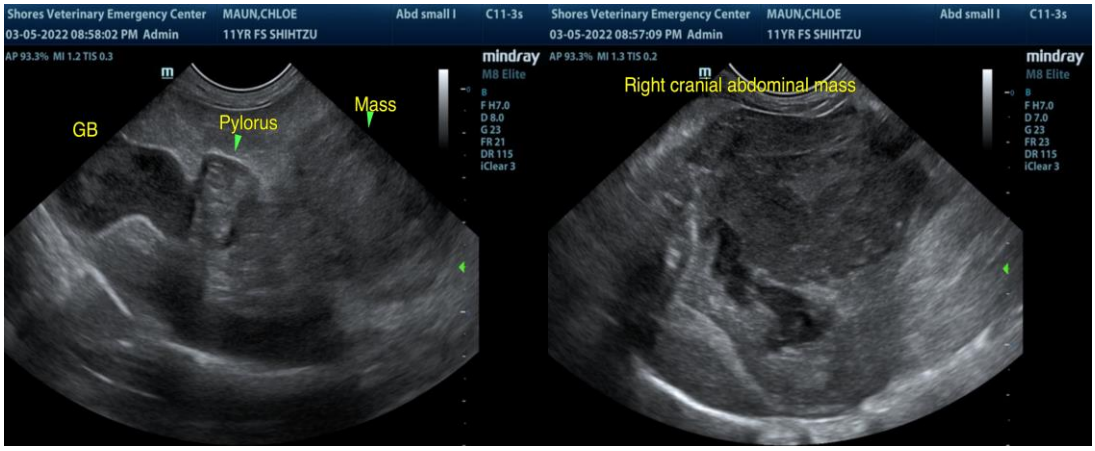
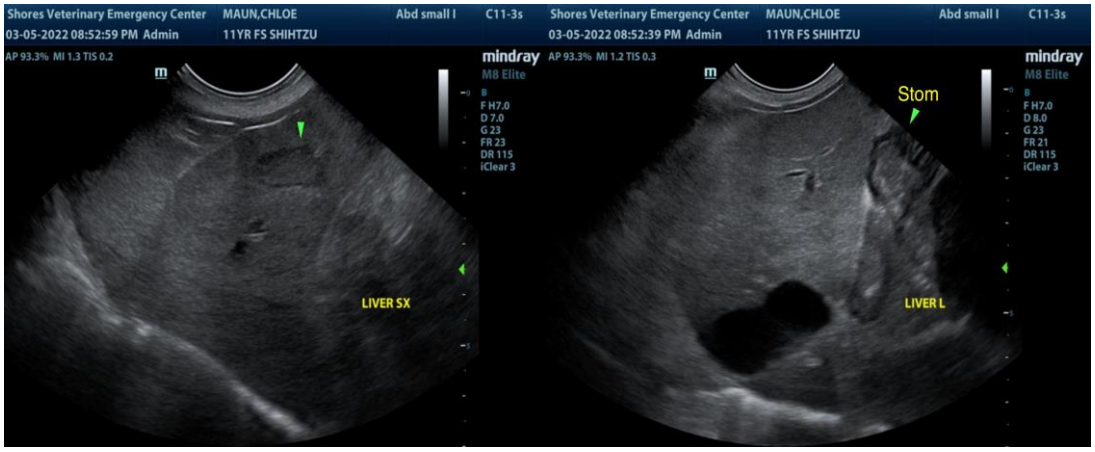
Screening blood pressure recommended.







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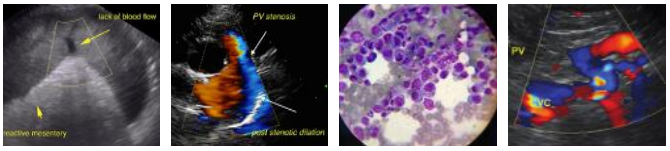

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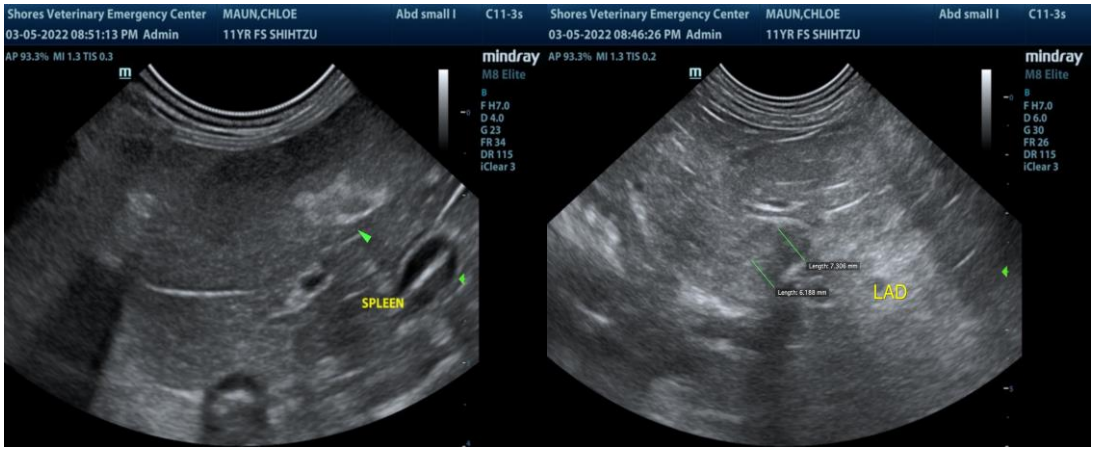

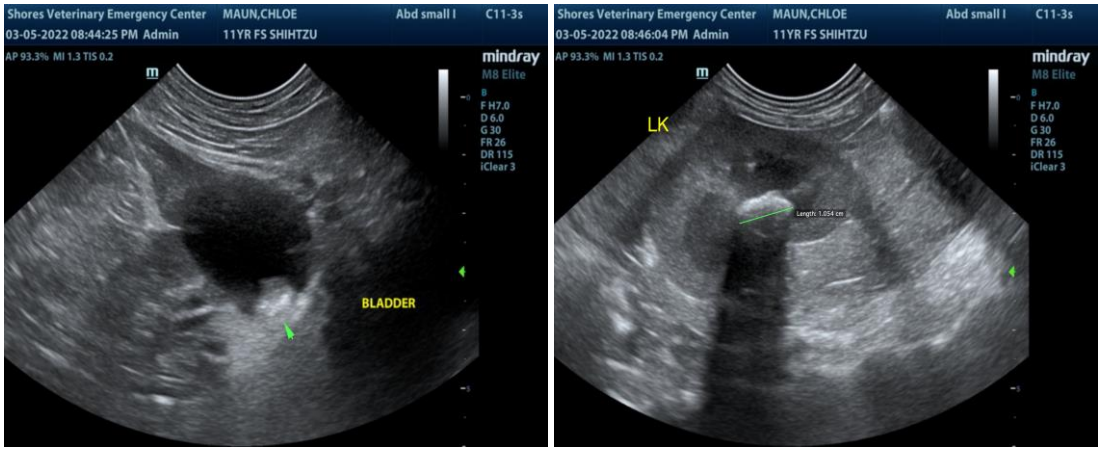

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com