

**PATIENT**

Brogan McCormick

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

6.5 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Tam Mengine

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Dr. Tam Mengine

**INVOICE**

35499

**DATE**

2/8/22

**PRESENTING CLINICAL SIGNS**

Presented 1/25/22 for inappetence and congestion. Chronic hx of rhinitis that historically responded to convenia. Also previously dx'd with hyperthyroidism (on methimazole) and Iris Stage 2 renal dz. (Creat 2.0). CBC/ Chem / T4 performed - CBC unremarkable, Chem - BUN24, Creat 1.3, SDMA 17, Alb 2.5, else unremarkable. U/A pending. Suspect normal creat due to loss of muscle mass relative to last labwork. Received convenia and started on mirtazapine, chlorpheniramine. No reponse in 4 days, so added veraflox and cerenia. No response, so rechecked on 2/4/22 - switched to azithromycin and received 10mg depo-medrol. Went to ER 2/6/22 for lack of improvement - recheck bloodwork unremarkable, sent home. Presented to me today for AUS

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.0), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is mildly enlarged (upper end of normal limit for cat kidneys) and 4.56 cm. The right kidney is normal in size at 4.0 cm. Increased cortical echogenicity noted bilaterally. Normal smooth peripheral margination and shape are maintained in both kidneys. However, there is decreased corticomedullary distinction and poor visualization/loss of normal internal architecture. No pyelectasia is noted. However, non-obstructive areas of mineralization/nephroliths with acoustic shadowing are noted bilaterally.

**Adrenal Glands**

The right adrenal gland is normal in size (0.37 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.37 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

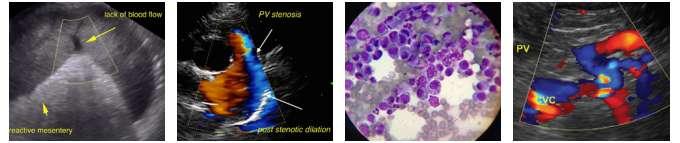
**Spleen**

The spleen is enlarged in size with rounded margins, but an intact capsule. Parenchyma is homogeneously coarse/mottled/speckled in echotexture, characterized by an overall hypoechoic echogenicity with multifocal, poorly circumscribed, hyperechoic nodules throughout. The splenic vasculature

**Liver**

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.



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**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

**Pancreas**

The pancreas is visible due to mild hypoechogenicity to surrounding tissue. However, the visible capsule is smooth and normal in contour. There is no pancreatic duct dilation and no evidence active peripancreatic inflammation. This is considered a normal variant for a cat.

**Free Abdomen**

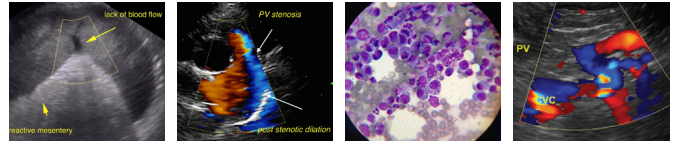
There is no evidence of peritoneal effusion. Mesenteric lymph nodes are round, irregular and hypoechoic. Pancreaticoduodenal lymph nodes are also notably enlarged and hypoechoic.

**ULTRASONOGRAPHIC FINDINGS**

- Hyperechoic hepatomegaly – Differential include benign hepatic lipidosis as well as infiltrative disease such as infiltrative round cell neoplasia such as mast cell tumor or less likely lymphoma.
- Mottled splenomegaly – Concerning for infiltrative round cell neoplasia such as mast cell tumor. Benign conditions such as extramedullary hematopoiesis or lymphoid hyperplasia are also possible, but less likely given concurrent changes.
- Diffuse lymphadenopathy – Concerning for infiltrative neoplasia given the splenic and hepatic changes. Reactive lymph nodes are possible, but considered less likely.
- Hyperechoic kidneys with loss of normal architecture and non-obstructive nephrolithiasis. These changes can be seen with chronic glomerular or interstitial nephritis. Acute tubular necrosis or nephrosis or infiltrative neoplasia such as round cell disease should be considered. Given only the mild increase in size on the left, normal variant due to fat deposition in otherwise chronic kidneys disease is also possible.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Recommendations include a fine needle aspirate of the spleen and liver +/- the enlarged lymph nodes, if possible, if patient's coagulation status is appropriate. Recommendations are to pre-medicate with Diphenhydramine given the suspicion for possible mast cell tumor. Given the borderline hypoalbuminemia reported, if there is protein in the pending urinalysis and an otherwise quiet sediment, a urine protein/creatinine ratio should be assessed to further quantify possible protein loss. A blood pressure is also recommended if not already evaluated.



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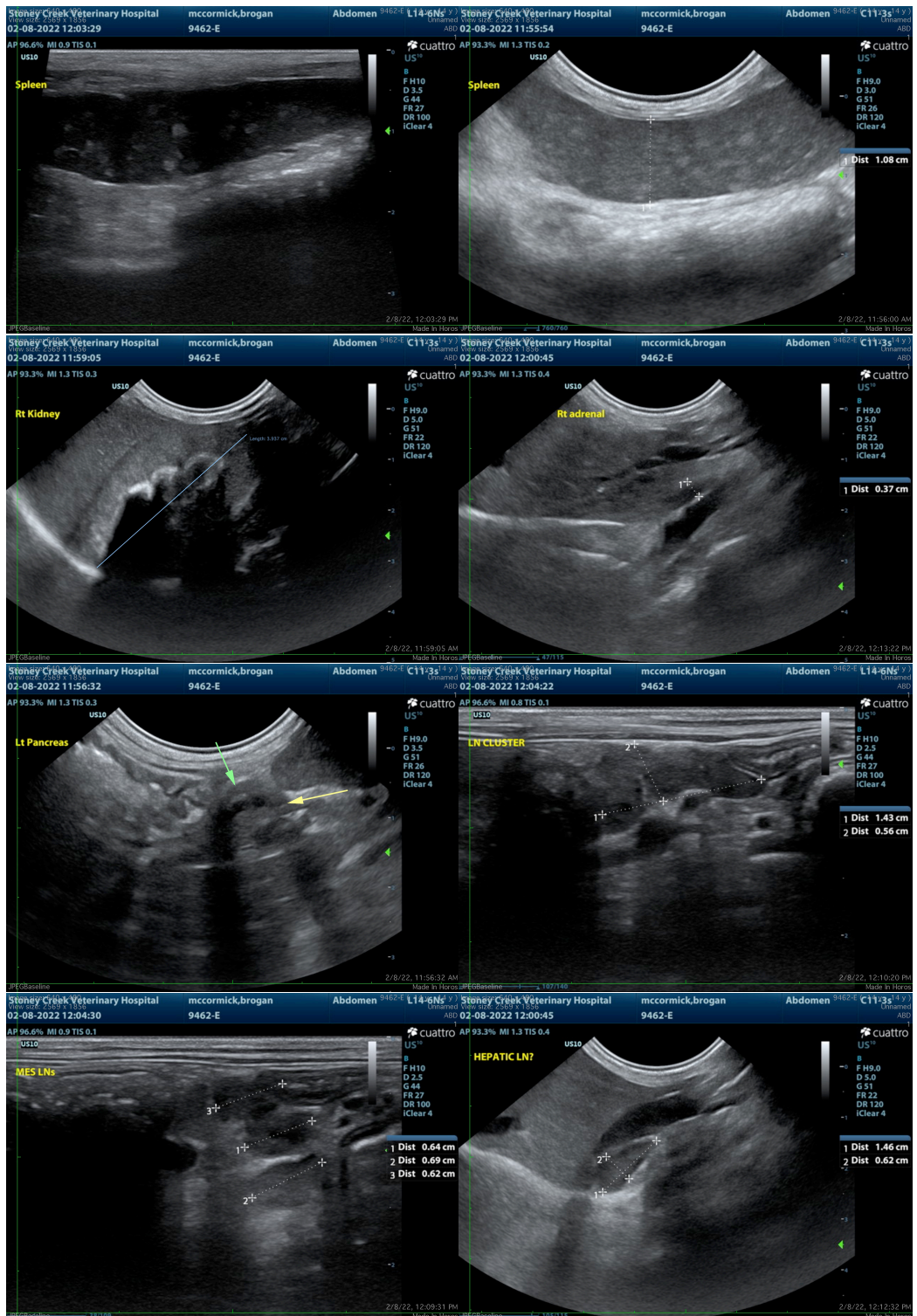
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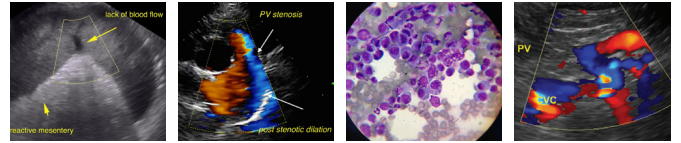
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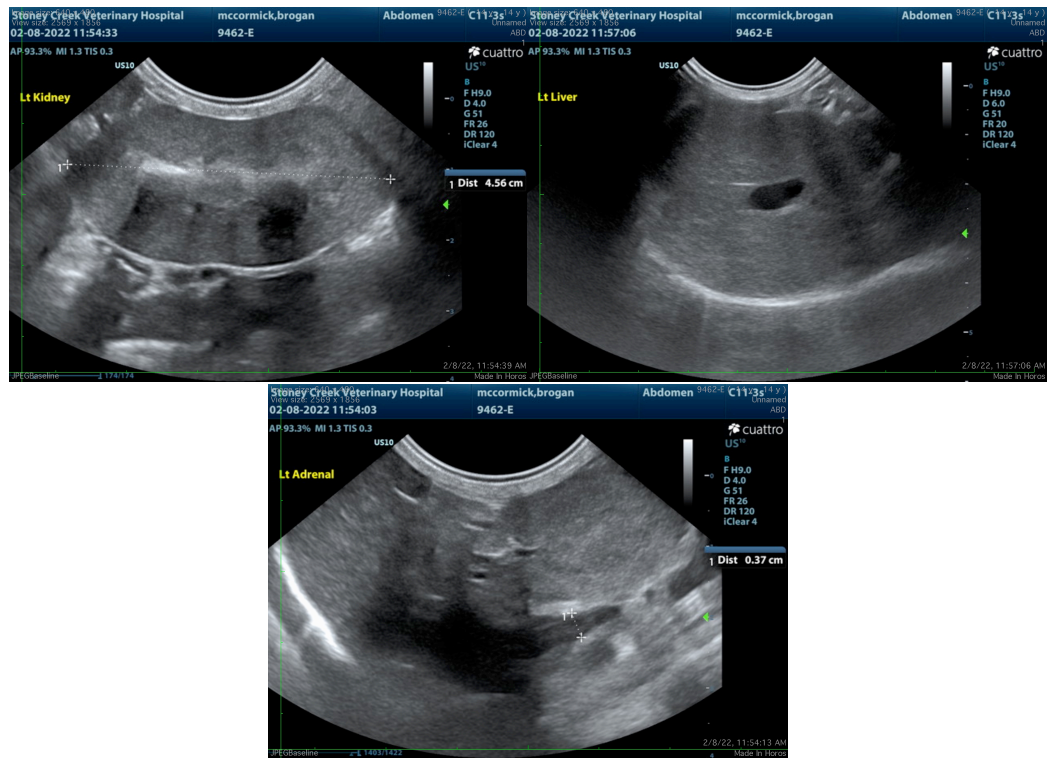
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
Beth.Johnson@sonopath.com