



**PATIENT**

Farra Moore

**SPECIES**

Feline

**BREED**

Maine Coon mix

**SEX**

Female, spayed

**AGE**

7 Yrs. 5 months

**WEIGHT**

9.4 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Newton VH

**REFERRING VET**

Dr. Verhalen

**INVOICE**

13205

**DATE**

4/18/22

**PRESENTING CLINICAL SIGNS**

History: Peritoneal effusion on radiographs, presented for vomiting, anorexia Current meds: unasyn, metronidazole, ondansetron, denamarin, mirtazapine  
Abnormal PE/Chem/CBC/UA Results: WBC 4.06, PLT 49- slow blood draw. TP 8.9, Albumin 3.6, Glob 5.3, ALT >1000 1508 diluted, T. bili 1.4, FPL normal

**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 distended. A small to moderate amount of suspended echogenic debris is observed within the lumen. 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 (4.46 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.75 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 in size (0.32 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal in size (0.35 cm length). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

*Spleen*

The spleen is subjectively normal in size (0.91 cm in width at the level of the hilus) with slightly irregular peripheral contour. The parenchyma is subjectively hypoechoic with a normal echotexture. A 0.41 x 0.31 cm isoechoic to hypoechoic nodule is observed adjacent to +/- arising from the caudomedial aspect. Splenic vasculature is normal with no evidence of thrombosis.

*Liver*

The liver is normal to slightly prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen. A 1.90 cm ill-defined heterogeneous area is observed on the right side, adjacent to the gallbladder. The remaining parenchyma is homogeneous. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated echogenic mostly gravity-dependent debris is observed within the lumen. The cystic and common bile ducts are normal. The common bile duct measures up to 0.22 cm in diameter. There is no obvious evidence of an intraluminal obstruction.

*Gastrointestinal*



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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not 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 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. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

**Pancreas**

The pancreas is diffusely visible/prominent with minimal deviation from the normal peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The pancreatic duct is dilated (up to 0.29 cm in diameter).

**Free Abdomen**

Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

**Other**

A brief echocardiogram reveals no evidence of pericardial effusion. However, there is some concern for left atrial enlargement.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

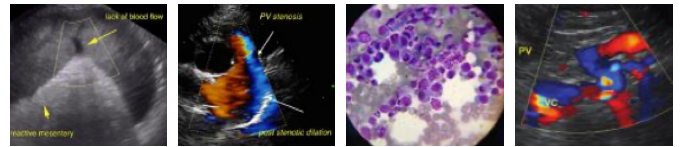
- Based on the patient's bloodwork, a diffuse hepatopathy is likely. Top differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, lymphoplasmacytic hepatitis), infiltrative neoplasia (i.e., lymphoma) +/- early hepatic lipidosis.
- The pancreatic changes are consistent with chronic pancreatitis.
- Bowel pattern suggestive of inflammatory bowel disease. Emerging lymphoma is possible but considered less likely at this time.
- Trace ascites.

**Secondary Findings:**

- Bilateral, non-specific age-related renal changes.
- Urinary bladder debris.
- The splenic nodule trends toward the benign (i.e., extra-splenic tissue, focus of lymphoid hyperplasia, extramedullary hematopoiesis or splenitis) with a lower possibility of emerging neoplasia.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Hepatic tissue sampling (i.e., fine needle aspiration or surgical biopsy) would be necessary to get a definitive diagnosis. Surgical biopsies would be ideal in that they are likely to be representative of global organ pathology. If biopsies are pursued, aerobic and anaerobic bile cultures are also recommended. Also consider further testing for toxoplasmosis (i.e., IgM, IgG).



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- Additional diagnostic considerations include a GI panel (i.e., serum cobalamin, folate, TLI and PLI) and serum protein electrophoresis.
- While awaiting test results, continued supportive care for an inflammatory hepatopathy (i.e., broad spectrum antibiotics, hepatic antioxidants, fluid therapy, antiemetics, gastric protectants and appetite stimulants as needed) is recommended. Also consider nutritional support (i.e., via temporary feeding tube) to help prevent/treat hepatic lipidosis.
- Given the potential for left atrial enlargement, a full echocardiogram should be considered.

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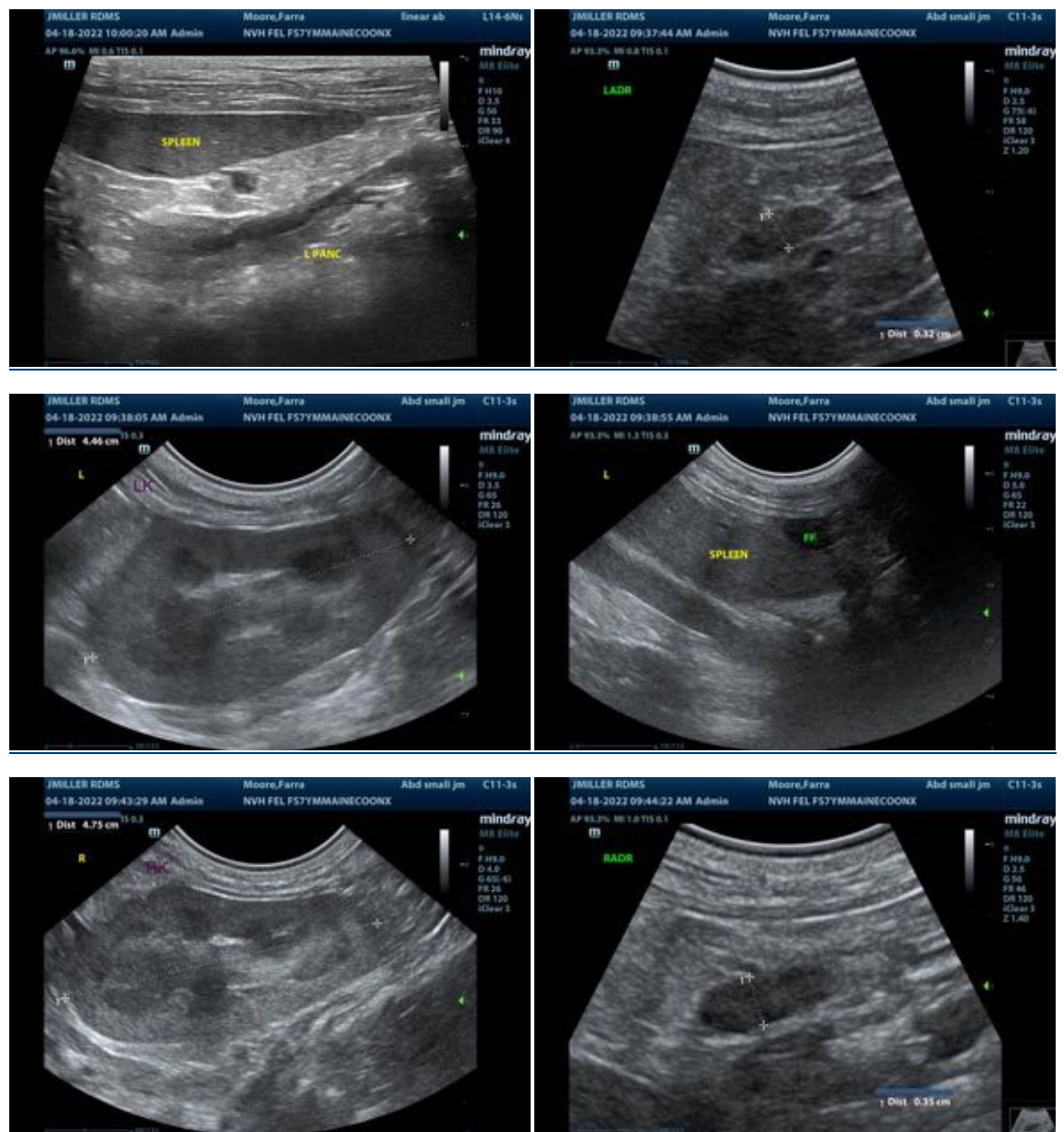
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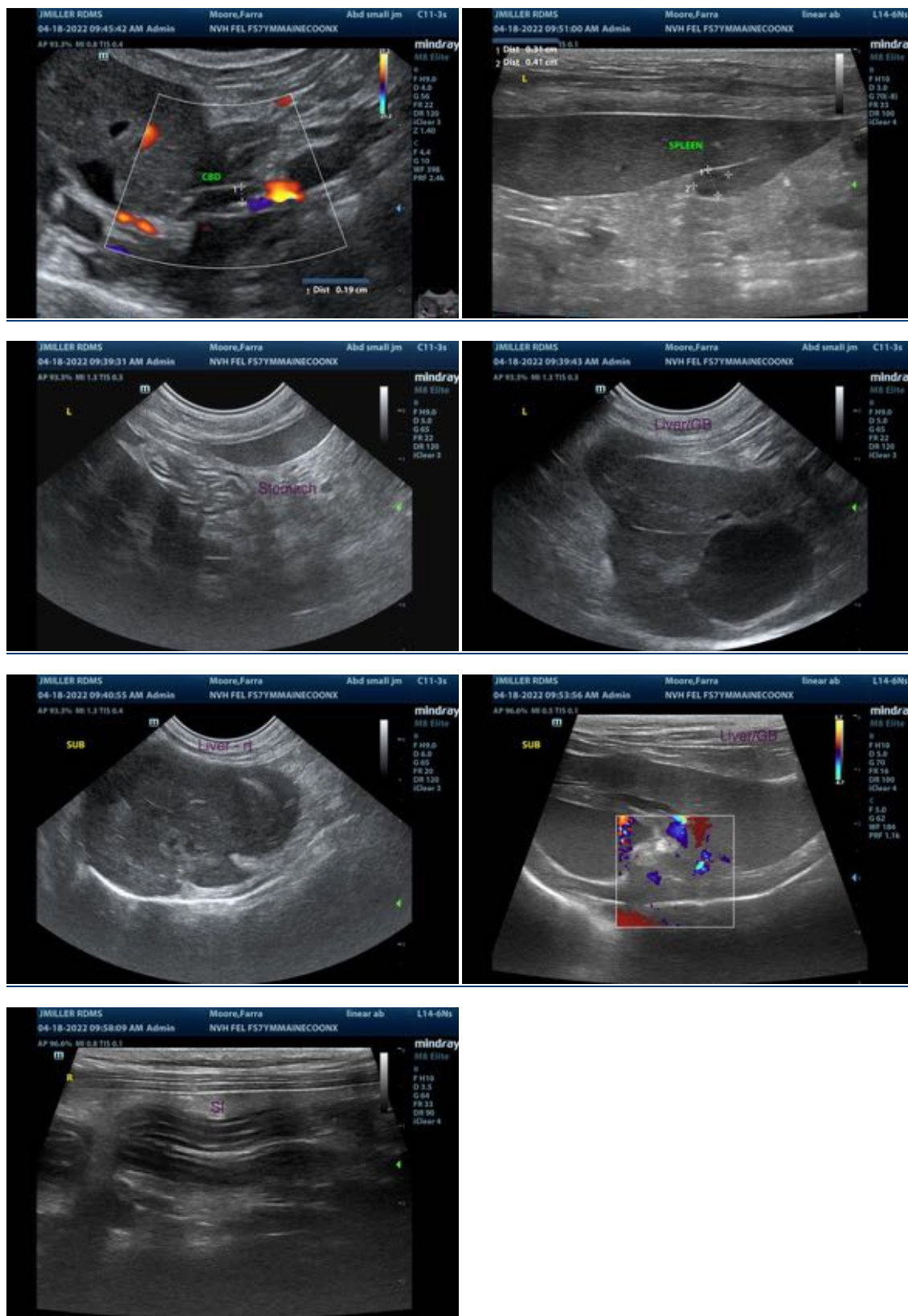
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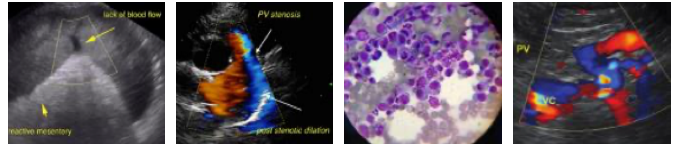
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The information and recommendations provided are based on the images presented by the referring



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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.

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