

**PATIENT**

Marcus Mitchell  
35535B

**SPECIES**

Feline

**BREED**

Domestic Shorthair

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

5.42 kg

**INTERPRETED BY**

Jessica Midence,  
DVM, DACVIM  
(SAIM)

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

Dr. Galvis

**INVOICE**

21143

**DATE**

2/17/23

**PRESENTING CLINICAL SIGNS**

History: Marcus, a 14 years old MN Domestic Short Hair was presented to the MVS Emergency Service on Feb 16, 202

3, at 5:45pm, for evaluation of inappetence. Inappetent since yesterday morning, decreased appetite for 2 days prior to that Usually very social and friendly, since yesterday has been very standoffish and hiding a lot. Owners have not seen him drink water or have a bowel movement for past 2 days, is still urinating Owners brought him to UW for evaluation- bloodwork ran and per owner found elevated bilirubin Transferred here for further care History of FIV +

Abnormal PE/Chem/CBC/UA Results: Abdomen: Moderately distended abdomen, tense and uncomfortable on palpation RBC 6.60 L x10<sup>6</sup>/uL 6.90 - 10.60 HGB 9.8 L g/dL 10.5 - 16.7 RBC HGB 10.0 L g/dL 10.2 - 16.3 HCT 27 L % 31 - 48 PCV 29 L % 31 - 51 WBC 11.4 x10<sup>3</sup>/uL 3.4 - 13.5 SEG 8.2 (72 %) x10<sup>3</sup>/uL 1.5 - 9.6 BAND 0.8 (7 %) H x10<sup>3</sup>/uL 0.0 - 0.1 LYMPH 1.7 (15 %) x10<sup>3</sup>/uL 0.6 - 7.0 MONO 0.7 (6 %) H x10<sup>3</sup>/uL 0.0 - 0.5 Reticulocytes: % Reticulocyte Advia 0.4 % Absolute Reticulocyte Advia 0.024 x10<sup>6</sup>/uL .000 - .052 RBC Morphology: Within normal limits WBC Morphology: Toxic 2+ Dohle Bodies 3+ Calcium 8.0 L mg/dL 9.0 - 11.7 Glucose 184 H mg/dL 75 - 134 Urea Nitrogen 14 L mg/dL 15 - 35 Globulin 4.0 H g/dL 2.3 - 3.8 AST 47 H U/L 6 - 44 Total Bilirubin 3.4 H mg/dL 0.1 - 0.4 Triglycerides 168 H mg/dL 21 - 81

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder mucosa, trigone, and visible urethra are normal in thickness and there is no evidence of mucosal irregularities. The urinary bladder was significantly distended with a large volume of urine that contains a small to moderate amount of suspended echogenic debris, which could be consistent with lipid. No masses, inflammatory changes or calculi are observed.

The left kidney is enlarged in size, measuring 4.59 cm. The right kidney is enlarged in size, measuring 4.7 cm. The kidneys are similar in appearance to one another with moderately decreased corticomedullary definition, hypoechoic renal cortices, and there is a slightly irregular/undulating peripheral contour, consistent with prior renal infarcts.

**Adrenal Glands**

The left adrenal gland is normal in size. The left adrenal gland has normal shape and it is normal in appearance and echogenicity.

The right adrenal gland is large in size at 0.62 cm, which could be consistent with physiologic stress. The right adrenal gland has normal shape and it is normal in echogenicity.

**Spleen**

The spleen is enlarged, measuring 1.25 cm with the tail of the spleen curving around. There is a slightly scalloped contour, as the parenchyma bulges the capsule at the level of the hilus. The spleen has a very slight coarse echotexture. The splenic vasculature is normal without signs of congestion or thrombosis.

**Liver**

The liver is subjectively enlarged with normal contour, structure and smooth peripheral margins. The echogenicity appears mildly hypoechoic with a coarse echotexture and prominent portal markings. The

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fat within the portohepatis is hyperechoic. The hepatic lymph nodes are enlarged, hypoechoic and surrounded by bright fat. The largest hepatic lymph node measures 2.44 cm x 0.64 cm.

The gallbladder lumen is moderately distended with anechoic bile. The wall is a normal thickness and the mucosal surface is smooth. Luminal contents are anechoic. The cystic duct is tortuous, surrounded by hyperechoic fat and there is mild dilation of the common bile duct, which measures 0.48 cm (normal is <0.4 cm). The wall of the common bile duct is also thick, measuring 0.125 cm (normal is <0.1 cm). The common bile duct can be seen entering the duodenal papilla.

***Gastrointestinal***

The gastric lumen is empty, measuring normal at 0.28 cm. The stomach wall is of normal wall thickness with some variability due to rugal folds. There is normal gastric wall layering. There are no masses or focal lesions observed and the pyloric outflow tract appears normal.

The visualized areas of duodenum, jejunum and ileum appear normal in thickness. The duodenum measures normal, but there is very slight corrugation towards the pyloroduodenal junction. Most loops of jejunum measure mildly thick, measuring 0.28 cm (normal is up to 0.25 cm) with distinct wall layering. The lumen for the majority of the jejunum is empty. The ileocolic junction was visualized and had normal intact wall layering and is normal thickness, although the ileocolic lymph nodes are prominent, measuring 0.28 cm x 0.4 cm.

The colon measures normal. There is no observed focal or generalized colon wall thickening or loss of layering. In the ascending colon/cecum, there is incompletely formed feces, consistent with diarrhea.

***Pancreas***

The pancreas is moderately enlarged with the left pancreas measuring up to 1.44 cm thick and the right pancreas measuring 0.82 cm thick. The pancreas is diffusely hypoechoic with a mottled echotexture and there is surrounding hyperechoic fat. There is an enlarged, rounded and hypoechoic pancreaticoduodenal lymph node, measuring 0.48 cm x 0.8 cm, surrounded by hyperechoic fat.

***Free Abdomen***

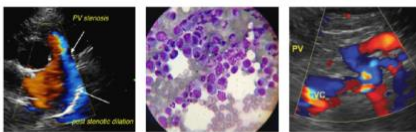
There is scant effusion caudal to the colon. There are numerous enlarged, mildly hypoechoic mesenteric lymph nodes surrounded by hyperechoic mesenteric fat. The largest lymph node measures 2.74 cm in length x 0.8 cm in width. The right medial iliac lymph node is also slightly enlarged and isoechoic to surrounding tissues, measuring 1.5 cm in length x 0.3 cm in width.

**ULTRASONOGRAPHIC FINDINGS****Primary Findings**

- Moderate pancreatitis with regional inflammation and lymphadenomegaly
- Hepatomegaly with coarse echotexture and hepatic lymphadenomegaly
- Cholecystitis with dilation of the common bile duct and regional inflammation and lymphadenomegaly
- Gastroenteritis with suspected reactive mesenteric lymph nodes
- Splenomegaly

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**Secondary Findings**

- Right adrenomegaly
- Scant peritoneal effusion, suspected to be reactive

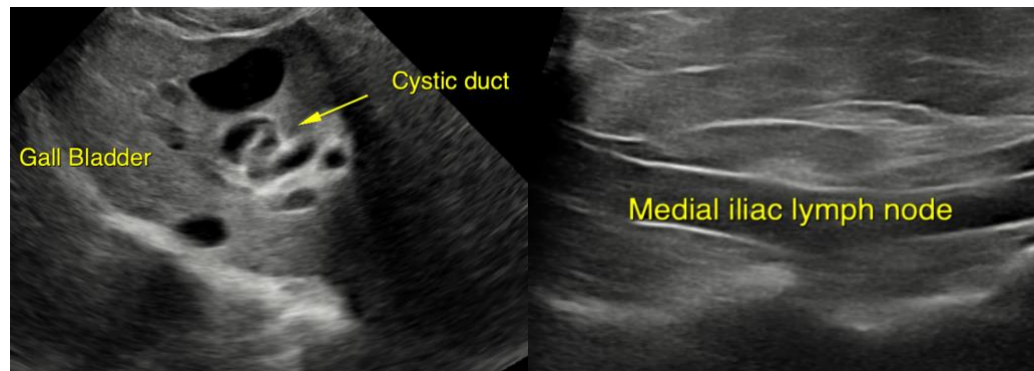
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is a moderate pancreatitis with regional inflammation and enlarged lymph nodes, and concurrent cholecystitis with similar regional inflammation and enlarged lymph nodes. The cystic duct and common bile duct are dilated and inflamed. These changes could be secondary to pancreatitis given the degree of inflammation. However, sampling of the gallbladder for cytology and culture of the bile should be considered to rule out bacterial cholecystitis/cholangitis. Consider sampling the liver as well, via fine needle aspirate to rule out round cell neoplasia, which cannot be ruled out sonographically. There is also mild gastroenteritis with lymph nodes that are suspected to be reactive.

The right adrenal gland is enlarged, which could be secondary to physiologic stress. Hyperthyroidism would be another consideration vs normal variation.

The kidneys in this patient are enlarged and the renal cortex of both kidneys are mildly hyperechoic despite a decreased corticomedullary definition and an irregular contour, which would be more consistent with chronic kidney disease. While the size of the kidneys could be a variation of normal, sampling should be considered to rule out round cell neoplasia. Other considerations would be amyloid deposition or FIP.

Lastly, the spleen is enlarged with a mildly bulging contour. While this could be lymphoid hyperplasia, secondary to FIV infection or reactive to all of the other inflammation in the abdomen, fine needle aspirates should be considered, as well as infectious disease testing, such as toxoplasmosis.



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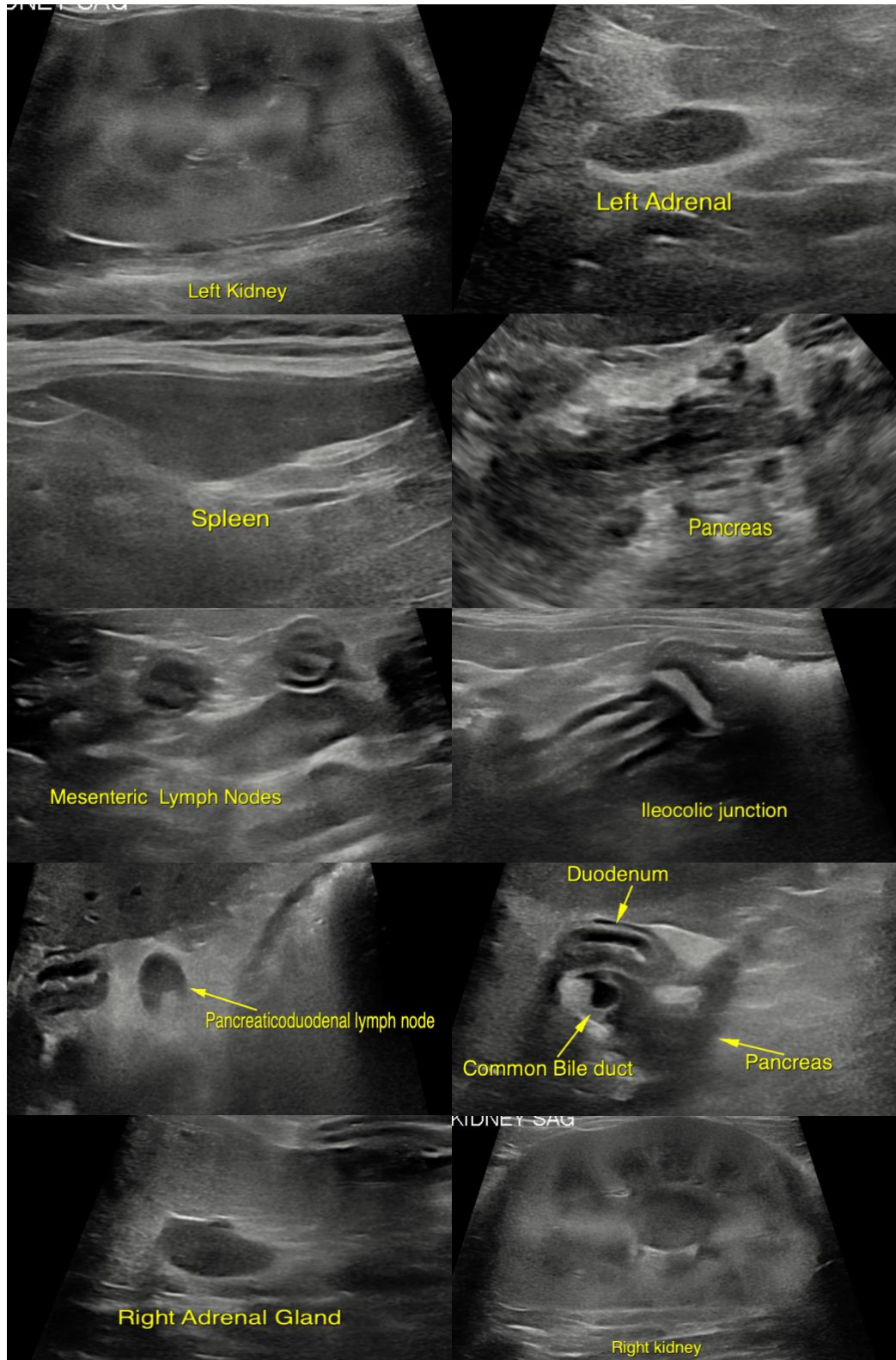
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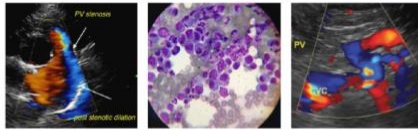
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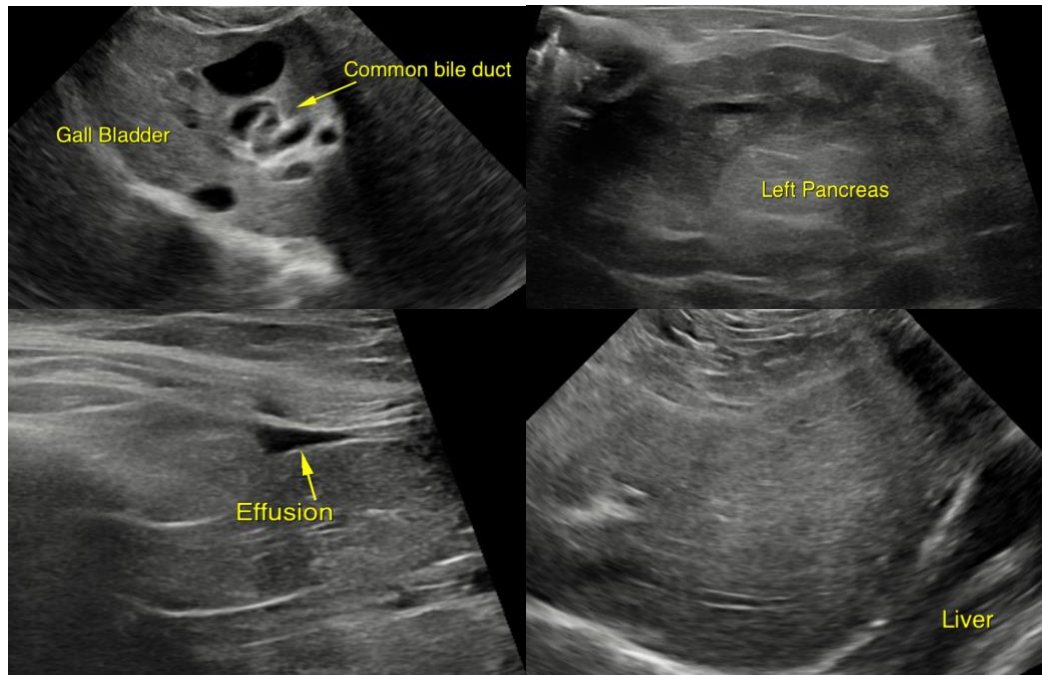
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Jessica Midence, DVM, DACVIM (SAIM)**

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