

**IMAGING PERFORMED BY**

SVS Mobile Imaging MI 734-637-7711  
svsimagingmi@gmail.com

**PATIENT**

Felicity Nelson

**SPECIES**

Feline

**BREED**

DMH

**SEX**

Spayed Female

**AGE**

6 Years

**WEIGHT**

11 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Amy Mayhew, LVT

**HOSPITAL NAME**

SVS Imaging MI

**REFERRING VET**

Town Center Vet  
Associates

**INVOICE**

41311

**DATE**

9/14/22

**PRESENTING CLINICAL SIGNS**

check lump and recheck ALT, NT History: doing well, recently found small lump left axillary area, not bothering the cat. Eating and active. Had a dose of Gabapentin an hour before the appointment.

Abnormal PE/Chem/CBC/UA Results: Assessment: hepatitis/mast cell tumor Diagnostics: FNA and impression smear after FNA=mast cells primarily ALT=549 Tx: NT Plan: rec. US to start-though MCT in cats usually benign, still rec. staging and non-invasive look at liver, pancreas, LNs, etc. in light of increase in ALT. Rec. remove and biopsy and potentially biopsy liver tissue as well.

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

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.04 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.15 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.37 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.33 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

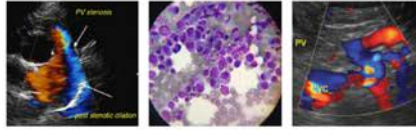
**Spleen**

The spleen is borderline large (1.08 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**Liver**

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The bile duct is visualized and appears slightly tortuous and dilated, measuring at 0.28 cm.

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***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.34 cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.26 cm. Jejunum wall measures 0.20 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

***Pancreas***

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

**ULTRASONOGRAPHIC FINDINGS**

- Borderline large spleen – This is a relatively large cat so this could be within normal limits, but given the history of mast cell disease, consider a fine needle aspirate.
- Heterogeneous liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Mildly tortuous/dilated bile duct – Dilation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other).

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No focal mass lesions are observed on today's scan but the liver and spleen both appear somewhat enlarged, and the liver is significantly heterogeneous. Given the history of mast cell disease, I would consider a fine needle aspirate of the spleen. These are my recommendations for further evaluation of an ALT elevation with no focal lesions.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Recommend thyroid evaluation (if not already done)
- If not already done consider pre and post prandial bile acids to evaluate liver function

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- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- Consider liver biopsy with samples obtained for histopathology and culture

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- If triaditis is suspected consider therapy for cholangiohepatitis, testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab)

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Given the history of mast cell disease, I feel that a cytologic evaluation is an important part of this workup.

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Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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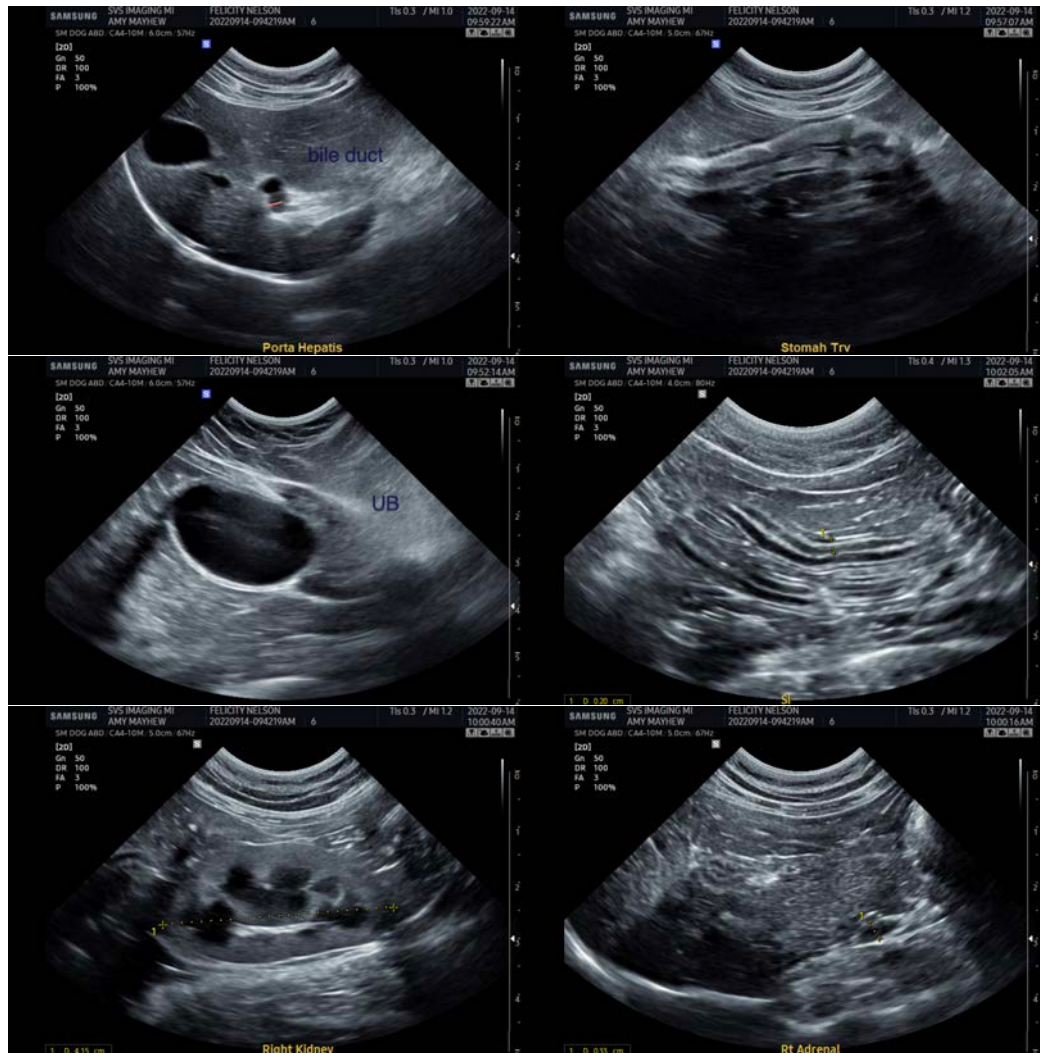
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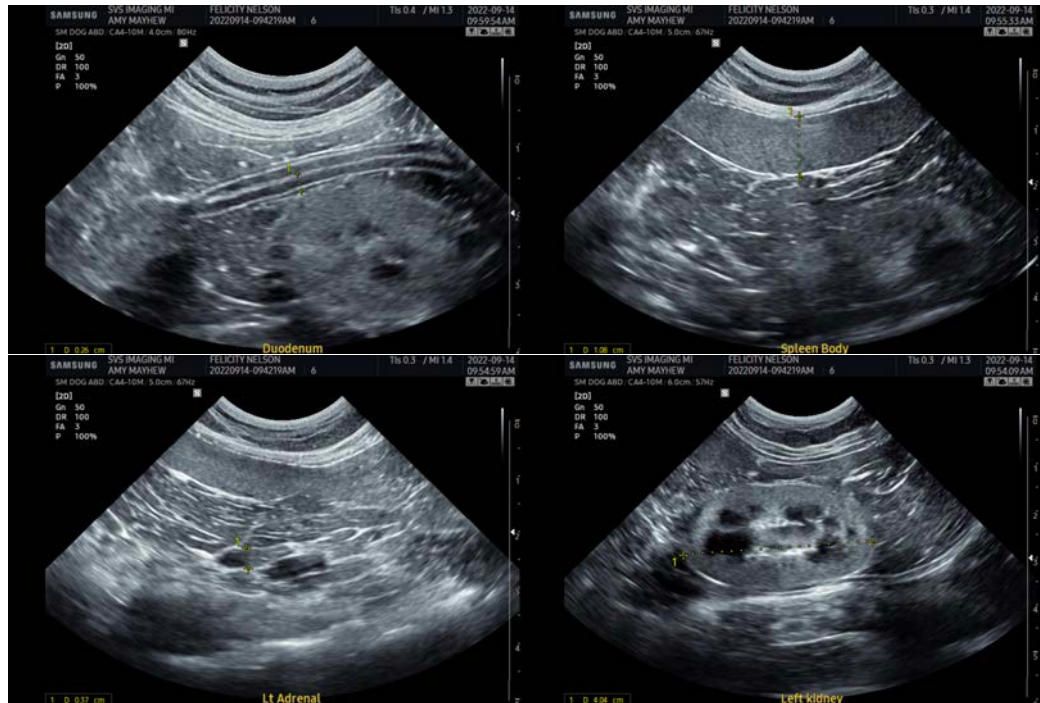
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com