



**PATIENT**

Chewy Crippen

**SPECIES**

Canine

**BREED**

Large Mix

**SEX**

Neutered male

**AGE**

12.5 years

**WEIGHT**

73 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Schroeder

**HOSPITAL NAME**

Animal Health  
Associates

**REFERRING VET**

Dr. Schroeder

**INVOICE**

94986

**DATE**

1/4/22

**PRESENTING CLINICAL SIGNS**

History of osteoarthritis, on carprofen therapy for past 9 months. Labs run 3 months ago showed normal liver enzymes. Seen last week for lethargy, decreased appetite, and labs showed very elevated ALT. Patient has large SQ mass on L lateral abdomen which made imaging a challenge. Abnormal PE/Chem/CBC/UA Results: ALT 659 U/I AST 91 U/I These levels were normal 3 months ago. Patient losing weight. SQ mass on lat abdomen has previously been aspirated as lipoma, but noted a cavitated area on US.

**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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (6.17 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (6.84 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.86 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 0.79 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 subjectively large in size The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a 0.67 cm hyperechoic nodule visualized within the parenchyma.



**PATIENT**

*Liver*

Chewy Crippen

The liver is subjectively normal in size, and 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 gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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*Gastrointestinal*

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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.

**SEX**

Neutered male

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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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.

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*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.

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*Free Abdomen*

There is a large subcutaneous mass effect. This lesion is of mixed echogenicity and appears partially cavitated. The lesion measured 4.8 x 2.1 cm.

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**ULTRASONOGRAPHIC FINDINGS**

**PRIMARY FINDINGS:**

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- Large, mottled spleen with hyperechoic nodule. The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Large heterogenous liver. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

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- Large, somewhat cavitated subcutaneous mass effect. I recommend FNA of cavitated area.

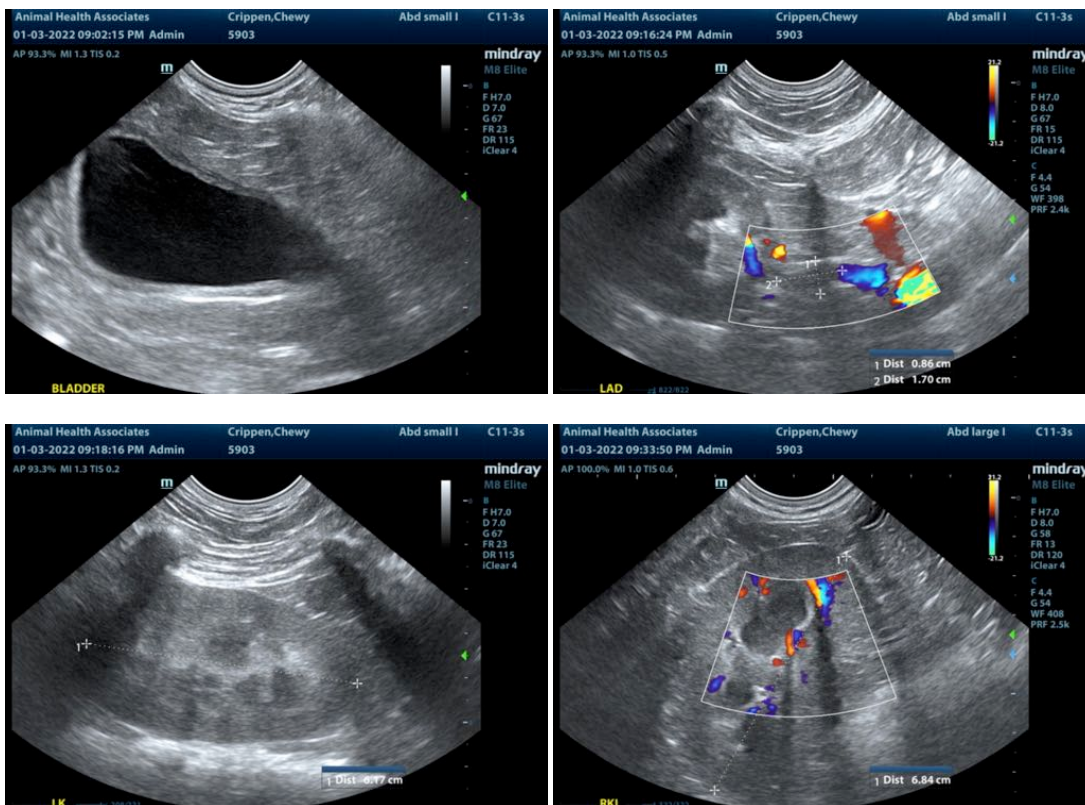
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The ultrasonographic changes in the liver were relatively mild. Unfortunately, the sonographic changes do not always reflect the severity or cause of the hepatopathy. The scan today supports a primary hepatopathy as no severe biliary changes were observed.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If no response to medical care (Denamarin, +/- antibiotics, +/- Ursodiol etc...) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

Additionally I would consider FNA of the spleen as there was non-specific, subjective mottling in this area as well.

Recommend three view thoracic radiographs to look for any evidence of concurrent intrathoracic disease.





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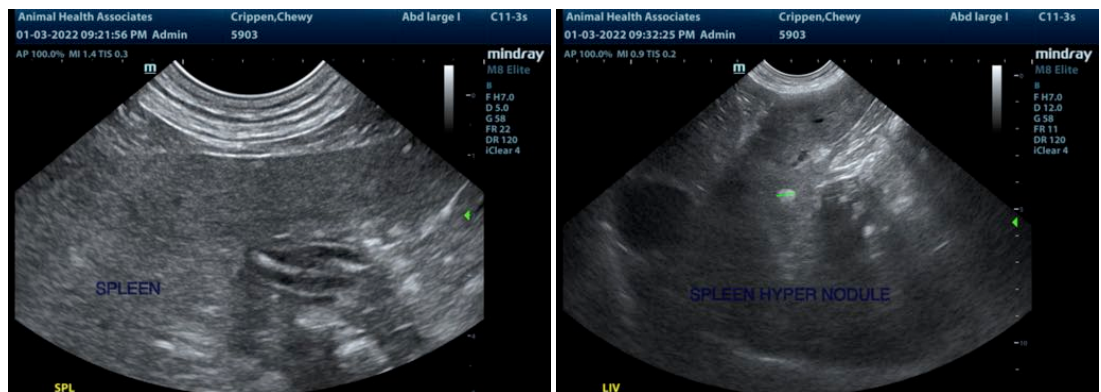
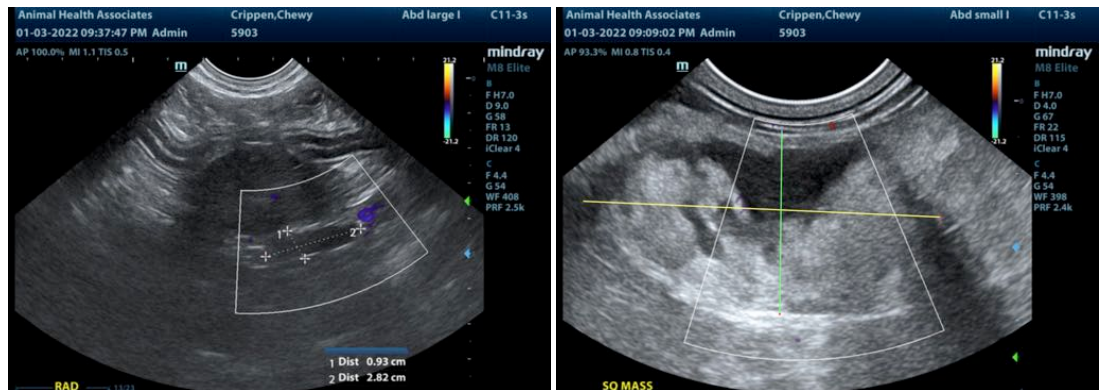
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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