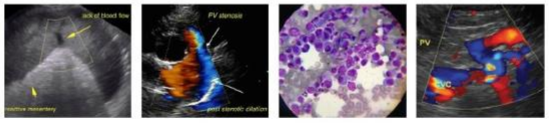




**PATIENT**

Captain Cheetham

**SPECIES**

Canine

**BREED**

Beagle

**SEX**

Neutered Male

**AGE**

8 Years 9 Months

**WEIGHT**

32.4 Pounds

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Mtn. View AH

**REFERRING VET**

Dr. Kalivoda

**INVOICE**

13980

**DATE**

2/17/22

## PRESENTING CLINICAL SIGNS

History: PAWS Request Form: Chief Concern / Provisional Diagnosis: ~chronic ALT elevation (3+mo), unkown prior hx. recent bilirubin elevation. Pet is asymptomatic. current medications: denamarin ~ Relevant Medical History and Physical Exam findings: ~PE overall unremarkable. several SC masses - consistent w/ lipomas, ~ Recent Diagnostics: Relevant Labratory Results / Abnormalities: ~BA pre/post WNL cbc/chem 1/17/2022: albumin 4.1 (2.2-3.9) ALT: 154 (10-125) ALKP: <10 (23-212) TBIL: 1.1 (0-0.9) chc/chem 10/12/2021: ALT: 176 ALP: 67 bilirubinuria 2+ otherwise unremarkable

## ULTRASONOGRAPHIC EXAMINATION OF THE

### *Urinary System*

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.

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

Left kidney is normal is size (5.2 cm), 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

Right kidney is normal is size (5.54 cm), 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

### *Adrenal Glands*

Left adrenal gland is normal in size (0.55 cm at cranial pole and 0.66 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.56 cm at cranial pole and 0.53 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

### *Spleen*

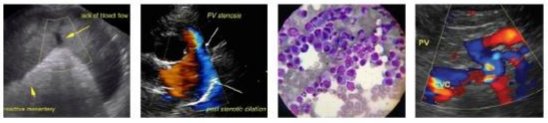
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). A 2.0 cm hypo- to anechoic mass was noted in the mid body, non-capsule disrupting. Splenic vasculature appears normal.

### *Liver*

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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.

### *Gastrointestinal*



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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*

Pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### *Free Abdomen*

There is no evidence of peritoneal effusion. A round hypoechoic mesenteric lymph node is visualized.

### *Other*

There is no pericardial effusion present in these images.

## ULTRASONOGRAPHIC FINDINGS

- A hypo- to anechoic splenic nodule/mass, differentials for which include both benign hematoma, extramedullary hematopoiesis, nodular hyperplasia, etc., as well as infiltrative neoplasia, such as sarcoma or round cell neoplasia, which, unfortunately, cannot be differentiated based on ultrasound alone.

- Likely reactive mesenteric lymphadenopathy. Infiltrative neoplasia cannot be ruled out but is considered less likely.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

ALT is more liver specific than other enzymes. It is a good indicator of active liver damage (cell membrane disruption, cellular necrosis) if the value is increased by at least 3-4 times normal. Differentials include infectious disease, including Leptospirosis, inflammatory disease (ie. active hepatitis, copper, other), toxic insult as well as infiltrative neoplasia.

ALT levels vary in cases of vascular anomalies such as microvascular dysplasia and portosystemic shunts (PSS), but are often less significantly increased.

Non primary hepatic causes of increased ALT can include a variety of other metabolic conditions including, but not limited to, pancreatitis, gastroenteritis, parasitic disease, dental disease, vacuolar or endocrine hepatopathy from diabetes mellitus or hyperadrenocorticism (steroid-induced), hypoadrenocorticism, certain drugs (e.g. phenobarbital, corticosteroids, azathioprine, etc.), and muscle ALT (more likely if AST and CK concurrently increased).

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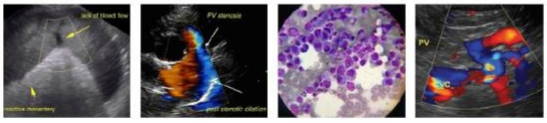

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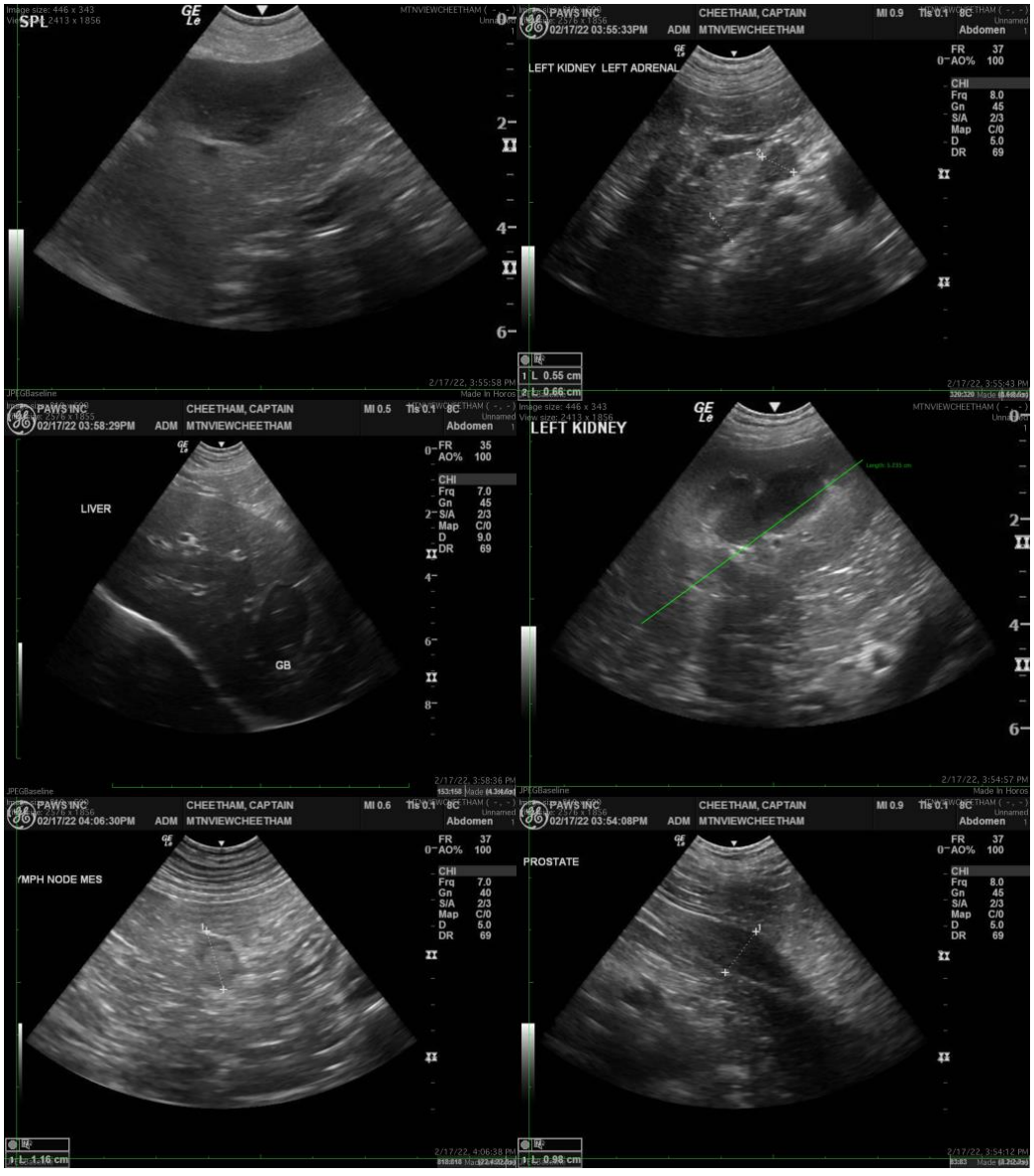
Recommendations include a fine needle aspirate of the splenic mass/nodule, if patients coagulation status is appropriate, understanding that aspirating anechoic splenic nodules can result in hemorrhage and should be monitored after the procedure, as well as the mildly enlarged lymph node (if possible). Leptospirosis testing is recommended. Three-view thoracic radiographs are recommended, if not recently evaluated. In the meantime, therapeutic recommendations include an empirical course of antibiotics with monitoring of ALT and total bilirubin for improvement. If laboratory values progress, recheck imaging is warranted.



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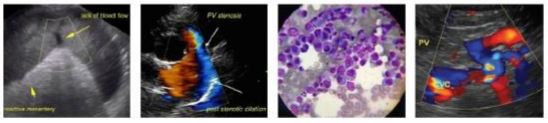

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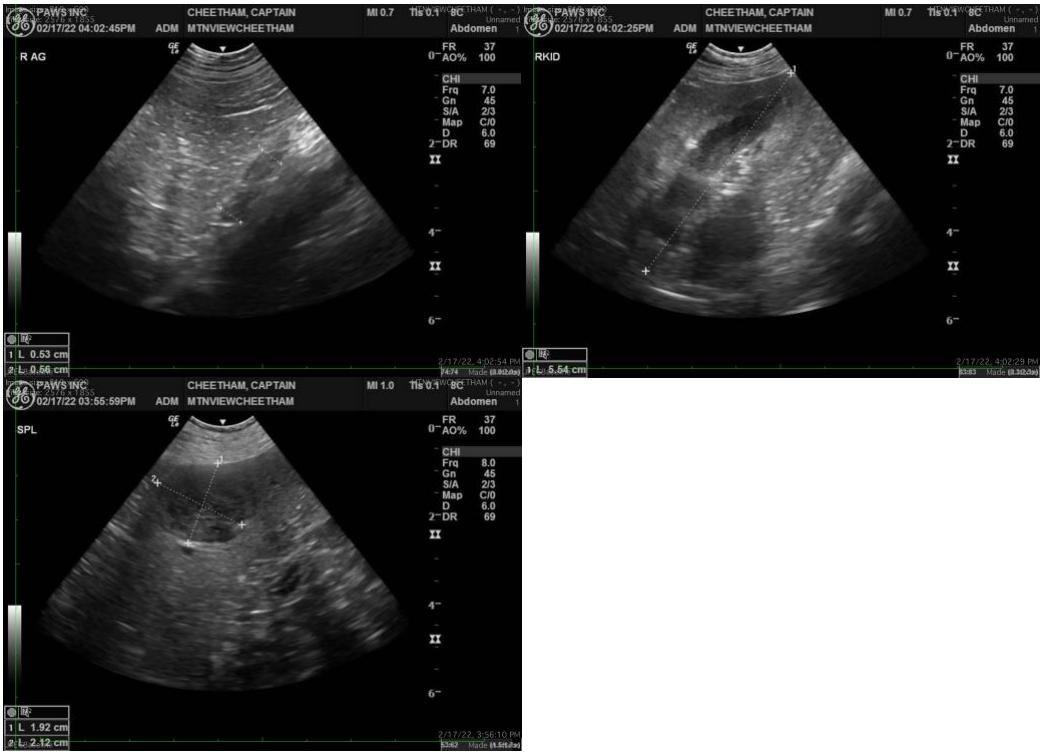


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Beth Johnson, DVM DACVIM**

Beth.Johnson@SonoPath.com