

**PATIENT PRESENTING CLINICAL SIGNS**

Skyler Bachman

History: Gender (altered?): neutered male Age: 12 yrs Weight (in lbs): 46.2 lbs Breed: border collie  
Chief Concern/Provisional Diagnosis: Consistent hx of elevated liver enzymes. Possible liver bx if anything significant is found. No clinical signs. Hx of seizure disorder. Diagnosis: DDX: liver mass, hepatitis, hepatomegaly History/Physical Findings BCS:5/9 Hydration status: euhydrated MM Pink, capillary refill time less than 2 seconds. Heart auscultates normally, no murmur or arrhythmia noted. Lungs auscultate normally. Hair coat appears healthy. OU appear normal. AU are clean in visible ear canal. Nose appears normal. Mouth appears to have grade 2/4 periodontal disease. LN are WNL. Abdomen palpates normally with no palpable masses. No signs of lameness. Total body function performed on 4/27/ 22, ALT elevated at 480, ALK phos elevated at 635, cholesterol elevated at 490, precision PSL low at 22, increased platelet count at 445, neutrophils elevated at 79 Radiographic Abnormalities: No radiographs taken. Current Therapy and Medications: Keppra 500 mg, zonisamide 50 mg, similax

**SPECIES**

Canine

**BREED**

Border Collie

**SEX**

Neutered Male

**AGE**

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**WEIGHT**

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**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface in the region of the apex is slightly irregular. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 1-2 cm, are normal.

The prostate is normal in size (1.05 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (5.81 cm in length) with an irregular shape. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. A large cortical infarct is observed at the caudolateral aspect. There is no evidence of pyelectasia, nephroliths or hydroureter.

The right kidney is normal size (5.56 cm in length) with an irregular shape. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. Cortical infarct are observed at the caudal aspect. There is no evidence of pyelectasia, nephroliths or hydroureter.

**Adrenal Glands**

The left adrenal gland is normal size (0.79 cm at cranial pole) (0.76 cm at caudal pole) (2.87 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The caudal pole of the right adrenal gland is well visualized and is normal size (0.62 cm in width) with a normal shape, glandular echogenicity and detail. The phrenicoabdominal vein and surrounding vasculature are normal.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Valley VC

**REFERRING VET**

Dr. Anna Lopez

**INVOICE**

13372

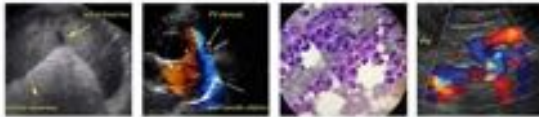
**Spleen**

The spleen is normal in size with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**DATE**

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**Liver**



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An approximately 5 cm hypoechoic to slightly heterogeneous vascular mass is arising from the left lateral lobe at the caudal aspect. The mass causes capsular expansion. In the remainder of the liver, the margins are curvilinear and the parenchyma is mottled with several small ill-defined hypoechoic nodules. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

**Gastrointestinal**

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. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

**Pancreas**

A portion of the pancreas is obscured by the left hepatic mass. In the region of the base/right limb, the pancreas is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

**Other**

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- Large left hepatic mass. Neoplasia (i.e., adenoma, adenocarcinoma, round cell tumor) is considered likely with a lower possibility of benign pathology (i.e., excessive regenerative nodular hyperplasia). The diffuse hepatic parenchymal changes trend toward the benign (i.e., regenerative nodular hyperplasia, age-related remodeling). However, metastatic disease cannot be completely excluded.

**Secondary Findings:**

- Bilateral, age-related renal changes with cortical infarcts.
- Supportive care for pancreatitis is recommended including IV fluid therapy, gastric protectants, antiemetics, pain medication as needed, +/- fresh frozen plasma.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.



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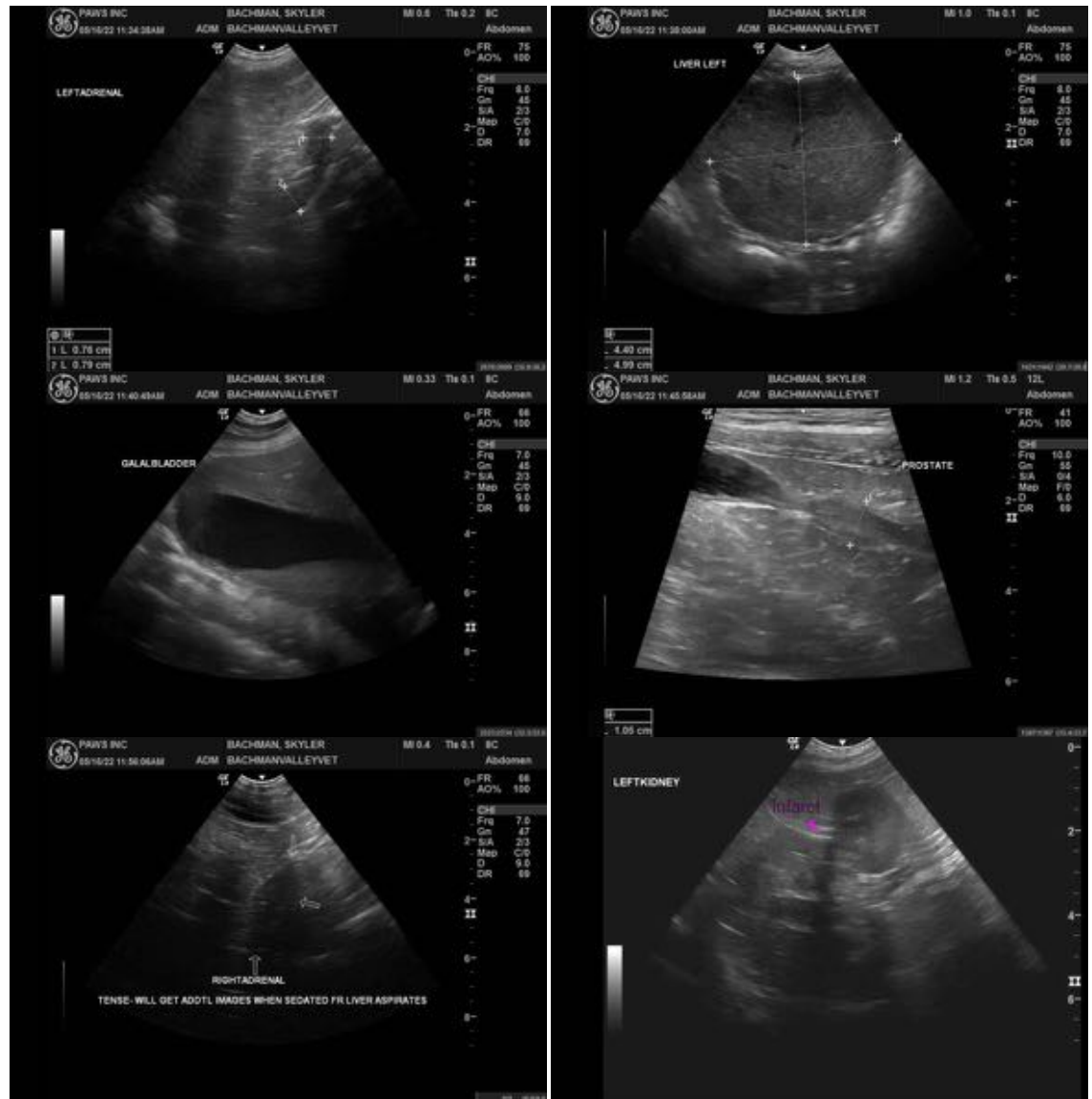
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- A fine needle aspirate of the liver mass can be considered if clotting status is appropriate. However, it should be noted that pulmonary hepatic tumors can be difficult to diagnose cytologically.
- If an aggressive approach is desired, consider hepatic mass removal with submission for histopathology. Biopsies of the other liver lobes are also recommended given the sonographic changes.



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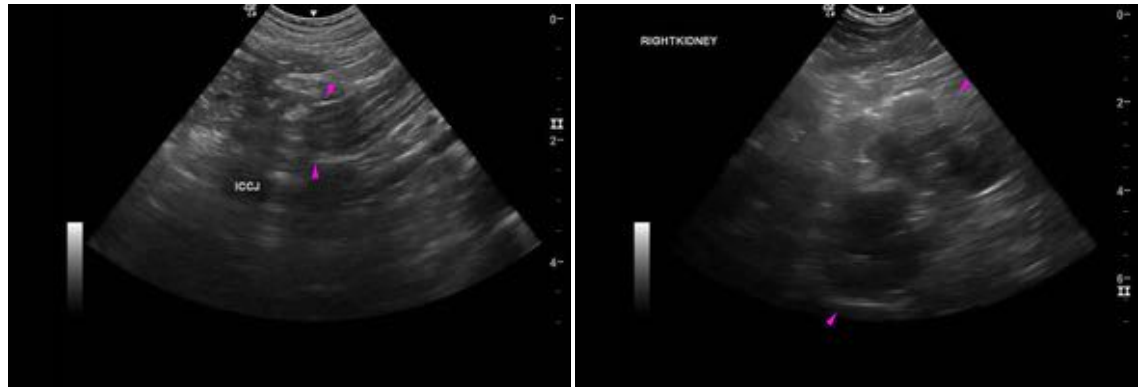
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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12 Years

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.

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

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[andrea.nicastro@sonopath.com](mailto:andrea.nicastro@sonopath.com)

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