



**PATIENT**

Charley Brunnett

**SPECIES**

Canine

**BREED**

Border Collie x

**SEX**

Neutered Male

**AGE**

12 Years

**WEIGHT**

27.5 lbs

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING  
PERFORMED BY**

Pamela Harrigan,  
RDCS, Certified Vet  
Sonographer

**HOSPITAL NAME**

Wagmore Animal  
Hospital

**REFERRING VET**

Vicki Kucia, DVM

**INVOICE**

74966

**DATE**

5/6/26

**PRESENTING CLINICAL SIGNS**

Owner reports weak, hoarse cough for 6 months - getting worse. PE WNL, lungs clear, no heart murmur. Lab work: non-specific hepatitis with pancreatitis. On i/d low fat prescription diet. Presently, doing well clinically - good appetite, good energy level. \*3 pound weight loss x 4 months.

Abnormal PE/Chem/CBC/UA Results: ALT 3335, ALP 264, Spec cPL 802, cardiopet proBNP 1480

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is adequately 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 is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal is size (5.19 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 a small cortical cyst in the right kidney. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal is size (5.22 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Trace pyelectasia is noted. There is no evidence of mineral or infarcts observed.

**Adrenal Glands**

The right adrenal gland is normal in size (0.83 cm at cranial pole and 0.51 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.46 cm at cranial pole and 0.65 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. 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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is markedly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Specifically, one of the hypoechoic nodules measuring 2.0 cm x 3.0 cm in size adjacent to the gallbladder has an almost "target" lesion appearance characterized by a slightly hyperechoic center. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge



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and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with 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. 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 proximal descending colon is mildly to moderately thick, measuring between 0.23-0.33 cm in thick with normal intact layering and a lumen that is diffusely mildly distended with soft stool.

***Pancreas***

The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

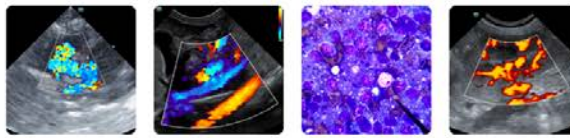
***Free Abdomen***

There is no visible free peritoneal effusion noted in these images.

Medical iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**PRIMARY FINDINGS**

- The markedly heterogeneous liver could represent a benign process such as nodular hyperplasia, steroid or vacuolar hepatopathy, extramedullary hematopoiesis, or chronic inflammatory disease. However, given the degree of change as well as the almost “target” lesion appearance of at least one of the nodules, infiltrative neoplasia including round cell neoplasia or even metastatic neoplasia can't be ruled out without tissue sampling.
- Emerging mucocele – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- The colon trends in appearance towards benign as is seen with a benign parasitic, infectious, dietary related, other inflammatory colitis, although infiltrative neoplasia such as round cell neoplasia versus other can't be ruled out without tissue sampling.
- Mildly reactive medial iliac lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.



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**SECONDARY FINDINGS**

- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.
- Trace pyelectasia in the left kidney and a small cortical cyst in the right kidney.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Fine needle aspirates of the liver are recommended if patient's coagulation status is appropriate.

Pending results of that cytology, bile acids could be considered if patient's total bilirubin is not increased, as could testing for Leptospirosis.

Given reported history, if not already evaluated a full cardiac evaluation including an echocardiogram is recommended.

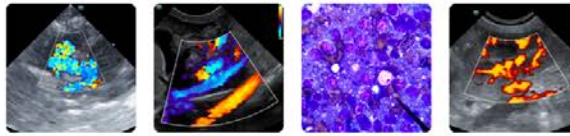
The colon changes are of unknown relation, but given the concern for possible colitis, a routine fecal/giardia exam is recommended if not recently evaluated.

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact lab for recommendations on how long to discontinue antibiotics (if indicated) prior to obtaining a stool sample for submission.

Other than supportive/symptomatic medical management of clinical signs, further diagnostic and treatment recommendations are largely dependent on results of the above.





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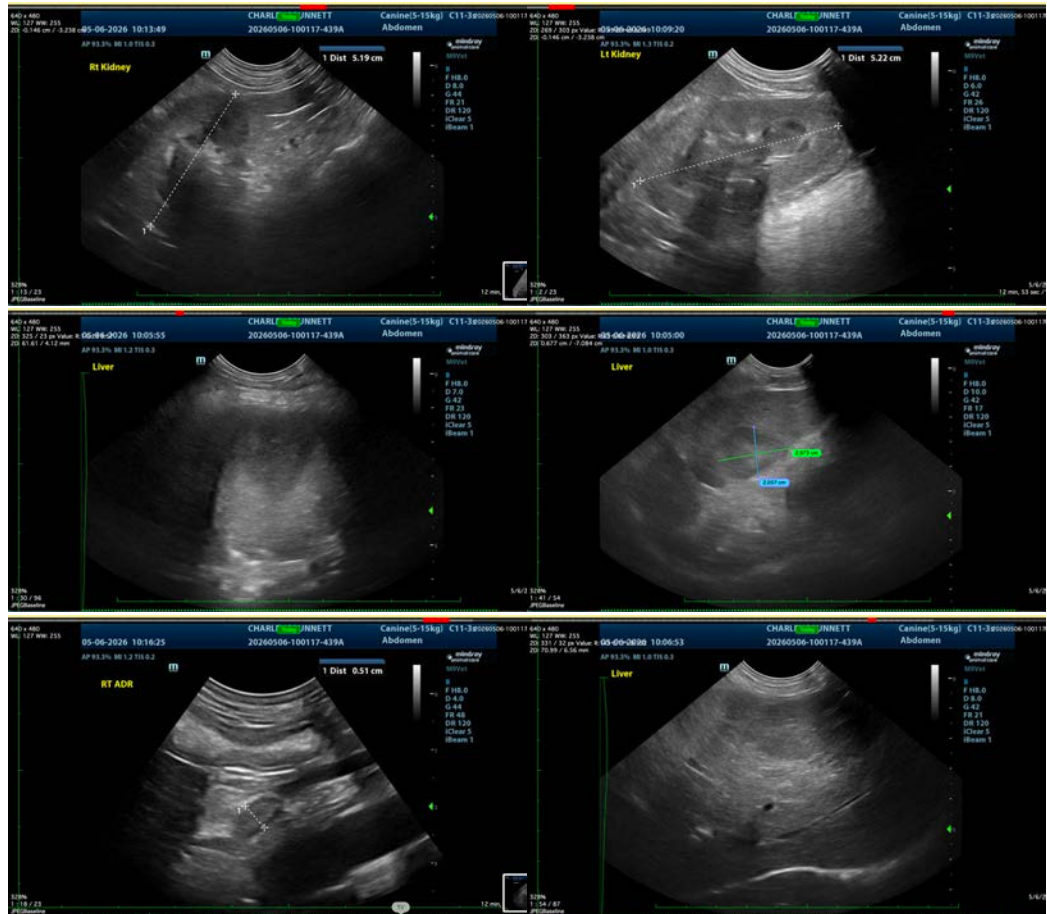
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
info@sonopath.com