



PATIENT

Pepper Gallagher

SPECIES

Canine

BREED

Shih-Poo

SEX

Spayed Female

AGE

12 Years

WEIGHT

N/A

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional

REFERRING VET

Dr. George Cattiny

INVOICE

42525

DATE

11/3/22

PRESENTING CLINICAL SIGNS

Patient presents for diabetes mellitus (controlled), chronic hepatopathy. Current meds: IVFs, Humulin N 7 units, Cerenia 1 mg/kg IV.

Abnormal PE/Chem/CBC/UA Results: CPLI positive.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The 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.

The right kidney is normal in size (4.63 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. Small cortical cysts noted.

The left kidney is normal in size (4.45 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. Multiple cortical cysts noted.

Adrenal Glands

The area of the right adrenal gland was examined without evident pathology.

The left adrenal gland is normal in size (1.78 cm long x 0.49 cm at the cranial pole and 0.57 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 (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.



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The visible colon is normal in wall thickness (< 0.2 cm) and layering. The colon contains soft stool.

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Pancreas

SPECIES

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

Canine

Free Abdomen

BREED

There is no evidence of free peritoneal effusion noted in these images.

Shih-Poo

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

SEX

- **Heterogenous Liver** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

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- **Gallbladder debris** - 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. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

12 Years

WEIGHT

- Chronic active pancreatitis

N/A

SECONDARY FINDINGS

- Incidental renal cortical cysts bilaterally

INTERPRETED BY

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Beth Johnson, DVM
DACVIM

There is ultrasonographic evidence of some potentially chronic pancreatitis and chronic low-grade smoldering pancreatitis cannot be ruled out. Recommendations regarding the chronic pancreatitis should be made in combination with clinical signs and/or physical exam findings that might support an acute or active process.

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The same recommendations exist in terms of the reported chronic hepatopathy. This patient does have liver changes that suggest a chronic hepatopathy. However, they are changes that can be seen with a relatively benign reactive hepatopathy and/or endocrine hepatopathy, likely secondary to this patient's diabetes. However, if liver enzymes suggest a more severe process and/or the patient is clinically ill, losing weight, painful, etc., then testing for Leptospirosis should be considered as well as liver sampling, beginning with a fine needle aspirate if coagulation status is appropriate and proceeding ultimately to a biopsy if a diagnosis is not obtained cytology and the clinical picture warrants further investigation.

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Additionally, if not recently evaluated, Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

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Regardless of clinical signs, etc., empirical hepatic nutraceuticals such as Denamarin as well as Ursodiol, given the concurrent gallbladder debris, may be helpful.

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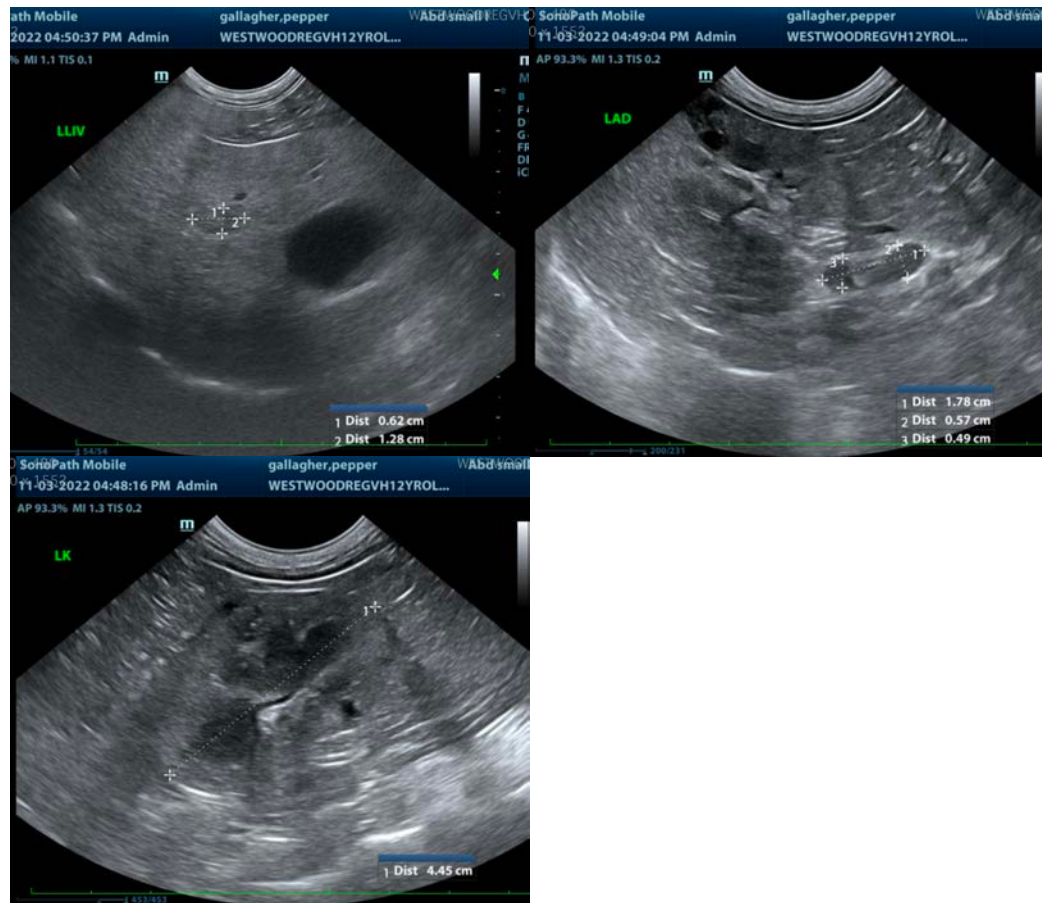
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Beth.Johnson@sonopath.com