



**PATIENT**

Piper Jewell

**SPECIES**

Canine

**BREED**

Bichon Frise

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

10.5 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Gudrun Gunther

**HOSPITAL NAME**

New Frontier AMC

**REFERRING VET**

Gudrun Gunther

**INVOICE**

16621

**DATE**

7/13/22

**PRESENTING CLINICAL SIGNS**

History: Housemate passed away June 19, 2022. Patient has been depressed and lethargic, eating more slowly than usual Diagnosed with back pain 7/8/2022 BetaGent eye drops OU SID long term

Abnormal PE/Chem/CBC/UA Results: Stress leukogram (leukocytosis due to neutrophilia with low normal lymphocytes, monocytosis, basophilia) Reticulocytosis with no anemia (retic count 145K) CHEM - mild elevation ALT (224), mild elevation globulins (4.8), cholesterol mildly elevated 416

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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.

Left kidney is normal is size (4.0 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 (4.22 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 or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted

**Adrenal Glands**

Left adrenal gland is normal in size (0.34 cm at cranial pole and 0.44 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.61 cm thick), 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. 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 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**



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Fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. There is mild luminal fluid accumulation. No evidence of masses/nodules or foreign material present.

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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.

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The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

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**Pancreas**

The observed pancreas 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**

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There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

**ULTRASONOGRAPHIC FINDINGS**

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- Gastritis – Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.
- 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.
- Hyperechoic hepatomegaly – This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible but considered less likely.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given this patients malaise and reported slightly slower interest in food, management of mild gastritis is recommended with an antiemetic and gastroprotectants, including potentially sucralfate, especially if there is any evidence of blood and or melena reported in the stool to see if that management helps alleviate clinical signs. Mild ALT increase is often secondary to a reactive hepatopathy and in this case may be partially related to the emerging mucocele.

Recommendations include:

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16621

- Testing for Leptospirosis
- The fine needle aspirate of the liver, which is reportedly already pending

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- Beginning medical management with empirical antibiotics and hepatic nutraceuticals, including ursodiol for the gallbladder, with monitoring of the ALT for improvement.



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- Without other laboratory changes and/or clinical signs, such as cranial abdominal pain, vomiting, inappetence, etc., Furthermore aggressive intervention regarding the gallbladder at this time is likely not indicated. However, if clinical signs change, and/or develop, and/or laboratory values progress, recheck of the gallbladder is warranted to determine when and if a cholecystectomy is indicated.

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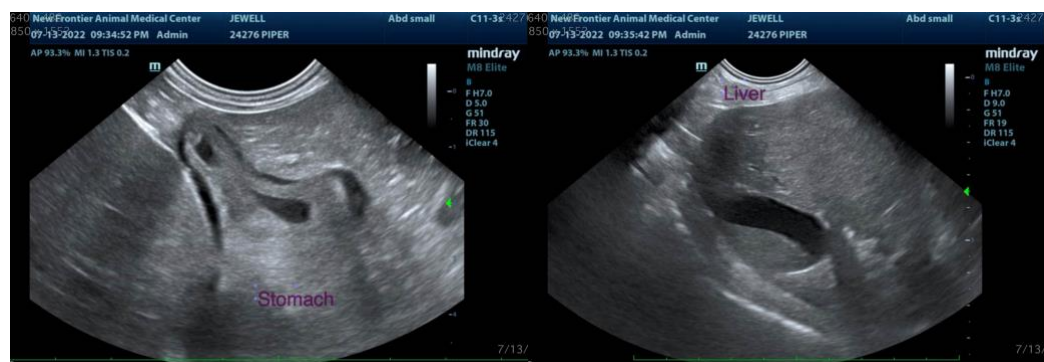
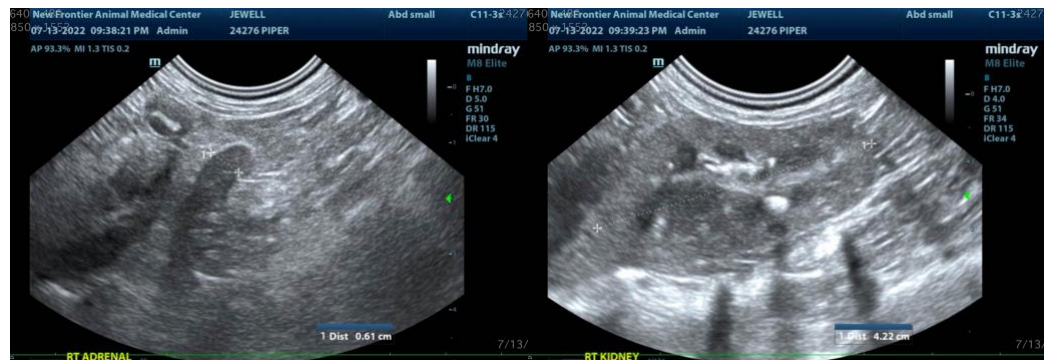
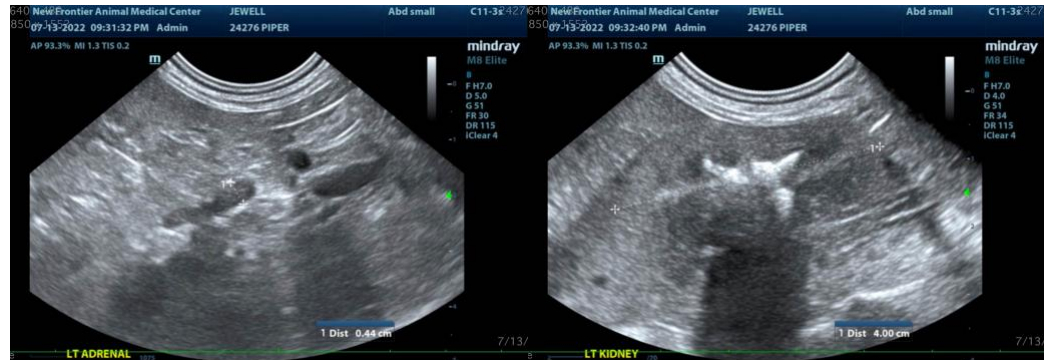
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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**

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