



PATIENT

Charlie Bell

SPECIES

Canine

BREED

German Shepherd

SEX

NM

AGE

9 years 7 months

WEIGHT

114 lbs

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Kristen Carpenter

HOSPITAL NAME

Pennridge AH

REFERRING VET

Dr. Jen Makem

INVOICE

11414

DATE

3/4/2026

PRESENTING CLINICAL SIGNS

- Sedated with Butorphanol. Hx of littermate having multicentric neoplasia, suspected multiple myeloma on CT. Screening US for splenomegaly on 9/19/24 - splenomegaly with mottled parenchyma. FNA of spleen 10/10/24 - consistent with passive congestion vs mild lymphoid hyperplasia. Repeat US 3/6/25 after bout of gastroenteritis and mildly low albumin. Findings were splenomegaly, mild GB debris, inc echogenicity adjacent to bowel consistent with inflammation of the bowel. Patient treated supportively and albumin returned to normal. Patient presented 2/16/26 for a wound on RH tarsus. Tx with carprofen and clindamycin. Routine senior bloodwork performed and showed hypoalbuminemia. UA neg for protein. Recheck bloodwork 2/25/26 showed persistently low albumin
- Patient is aclinical at home per owner - e/d normally, no v/d. Patient has gained weight. Patient was uncomfortable and vocalized when scanning the region of the pancreas today.
- Current meds: Apoquel 16 mg PO SID
- -Diet: Purina proplan
- Diagnostics: Bloodwork 2/16/26: CBC NSF. Chem - TP 4.6 (L), Alb 1.8 (L), Glob 2.8 (normal), amylase 1515 (H). T4 normal. UA: USG 1.047, neg for protein, quiet sediment. Chronically anaplasma +, prev tx. Fecal NOS. Bloodwork 2/26/26: TP 4.1 (L), Alb 1.7 (L), Glob 2.4 (low normal.) Chest rads 3/4/26 - NSF, no effusion or metastatic disease. Resting cortisol 3/4/26 - 8.3 (normal.) CPL 3/4/26 - 304 (normal 0-200.)

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 (7.38 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.

The left kidney is normal is size (6.9 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

The right adrenal gland is normal in size (0.6 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 (0.53 cm at cranial pole and 0.51 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size (2.5 cm thick at the hilus) with normal smooth margins. Parenchyma is normal in echogenicity with a diffusely coarse/heterogenous echotexture. No discrete sizable focal nodules or masses are observed. Splenic vasculature appears normal.



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Liver

The 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 moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. Some mineral/sand debris is suspected. 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 visible stomach wall is normal in thickness 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 or foreign material noted. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction or foreign material noted.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Enhanced hyperechoic ill-defined surrounding fat is noted.

Free Abdomen

There is trace free fluid in the area of the prominent pancreas.

Additionally, throughout the cranial abdomen, surrounding primarily the right limb as well as partially the left limb of the pancreas, is enhanced hyperechoic, almost clumped, mesentery and omentum. This suspected inflammatory change is likely related to pancreatitis but concurrent reaction to focal bowel disease can't be ruled out.

There is no apparent pathologic lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- Suspect moderate to severe acute pancreatitis.
- Mucosal speckling – Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.
- Coarse splenomegaly – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as



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extramedullary hematopoiesis, lymphoid hyperplasia, amyloidosis as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.

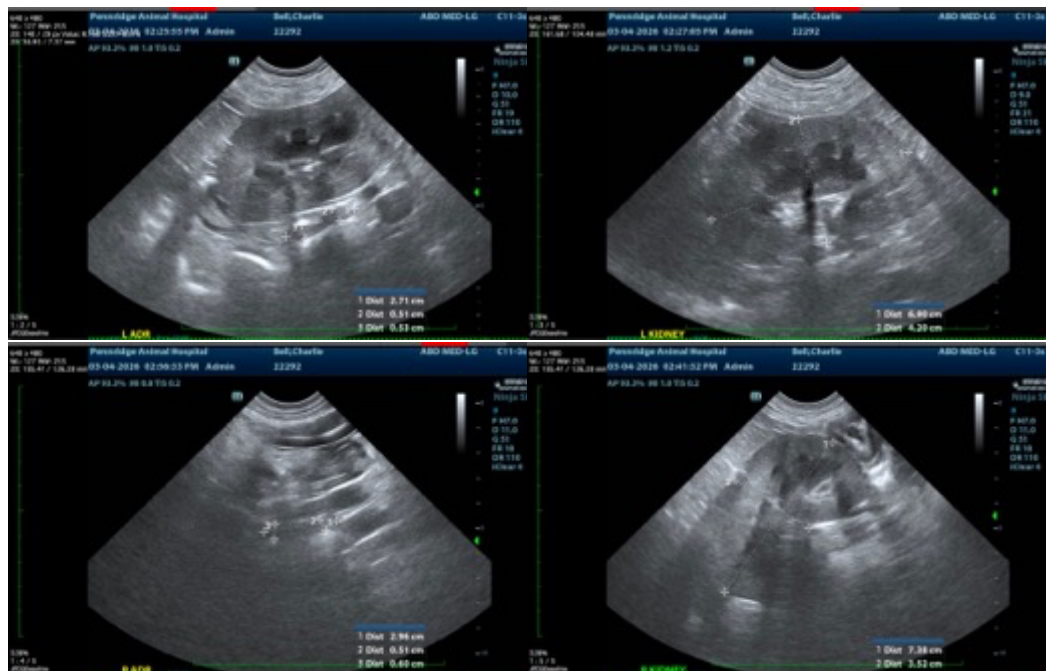
- Moderate gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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

Especially given the chronicity of patient's reported lab changes and the lack of the clinical signs that would be expected with the degree of severity of pancreatic inflammation suspected based on visible appearance, additional sampling of the area including fine needle aspirates of the pancreas as well as potentially the enhanced hyperechoic tissue in the cranial abdomen could be considered if patient's coagulation status is appropriate.

In the meantime, if quality of life can be maintained without Apoquel, discontinuation of the Apoquel while monitoring the albumin level could also be considered. The degree of hypoalbuminemia in this patient is much more severe than is historically associated with Apoquel, and I believe based on the presented history that hyperalbuminemia was present prior to patient receiving Apoquel but contribution for Apoquel can't be ruled out. If the problem persists and diagnosis or cause is not found, advanced imaging of the cranial abdomen via potentially contrast CT scan could be considered.





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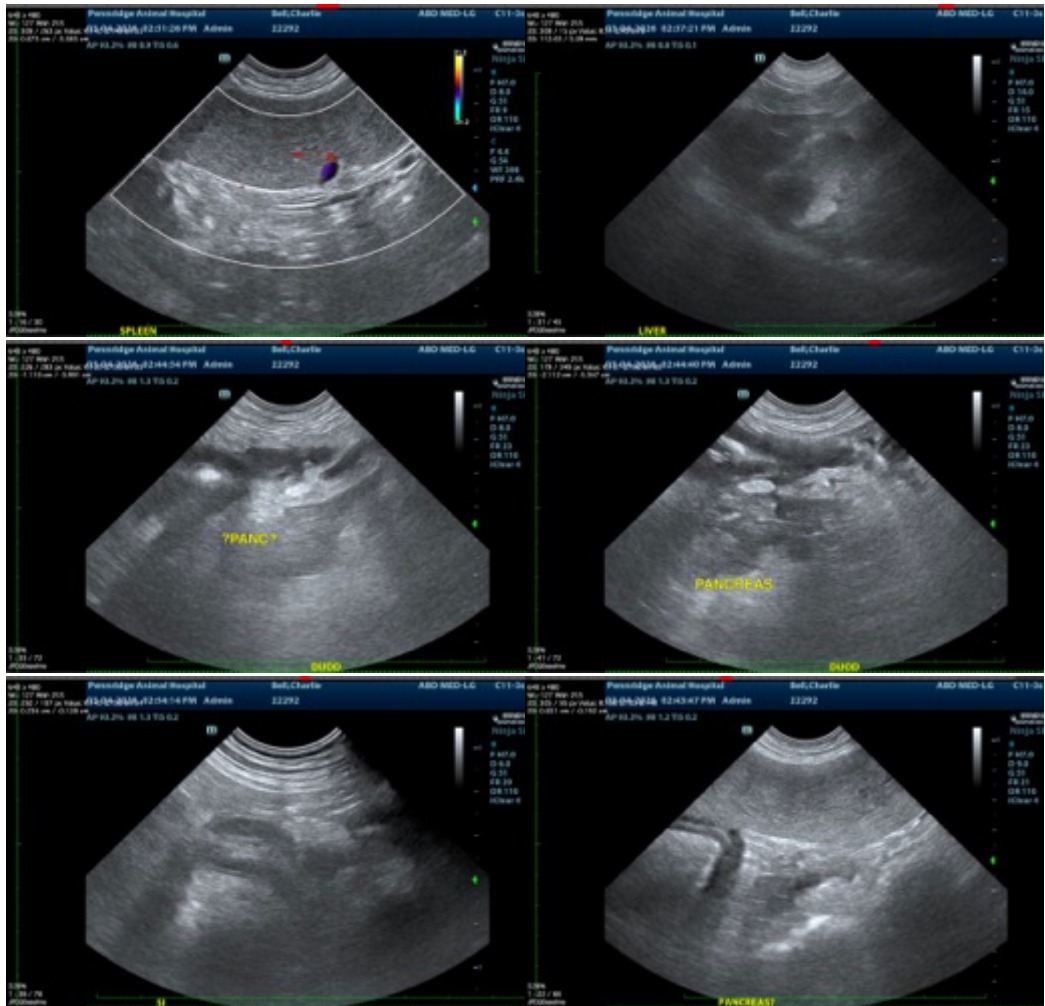
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
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