



**PATIENT**

Penny Bozeman

**SPECIES**

Canine

**BREED**

Coonhound Mix

**SEX**

FS

**AGE**

12 years

**WEIGHT**

48 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING  
PERFORMED BY**

Karen Ebersole, DVM,  
DABVP (Canine/Feline  
Practice)

**HOSPITAL NAME**

Scanvet

**REFERRING VET**

Dr. Barengo

**INVOICE**

16475

**DATE**

3/29/23

**PRESENTING CLINICAL SIGNS**

Anorexia, occasional vomiting, icteric, afebrile. Clotting profile WNL. FNA done of liver. Abnormal PE/Chem/CBC/UA Results: PE: QAR/depressed. ALP 1993, ALT > 2000, TBili 5.4, K+ 3.6, serum icteric. Lepto titers all negative @ < 1:100.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. No evidence of mineral or calculi was noted. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.0 cm in length. The right kidney measured 6.5 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.7 cm length x 0.67 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 3.1 cm length x 0.85 cm width at the caudal pole.

**Spleen**

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

**Liver/ Gallbladder**

The liver was normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The common bile duct was not definitively visualized. No evidence of post hepatic obstructive criteria was noted.



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***Gastrointestinal***

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no evidence of gastric distention secondary to retained ingesta, fluid, or foreign material.

The small intestine exhibited subjective segmental intact yet prominent wall layering owing to propensity for mildly prominent segmental intestinal muscularis layer. The duodenum wall measured 0.48 cm width. The jejunum wall measured 0.44 cm width. No evidence of loss of intestinal wall layering, intestinal mechanical / metabolic ileus, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

***Pancreas***

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

***Free Abdomen***

Intermittent mesenteric lymph nodes were present primarily in the area of the mesenteric root vasculature. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example lymph node measured 5.0 cm x 2.3 cm. No evidence of peritoneal effusion was noted.

**ULTRASONOGRAPHIC FINDINGS**

- Hepatopathy
- Sonographically unremarkable gallbladder / common bile duct - no evidence of post hepatic obstruction
- Sonographically unremarkable empty stomach
- Subjective segmental to possible generalized enteropathy with associated nonspecific yet sonographically benign / reactive mesenteric lymphadenopathy

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The hepatopathy was nonspecific yet may be consistent with acute on chronic hepatopathy. Considerations may include vacuolar hepatopathy, inflammatory / immune mediated / infectious disease, hyperplasia, hematopoiesis, mild fibrosis, toxic hepatopathy, i.e., copper, infiltrative neoplasia (less likely), or other hepatopathy.

Suspect potential for concurrent segmental to possible generalized inflammatory enteropathy, although potential for very early infiltrative intestinal neoplasia cannot be definitively excluded. Further assessment may include, pending hepatic FNA cytology, as well as a GI panel to include PLI/TLI/Cobalamin/Folate. Hepatic and gastrointestinal biopsies are likely required for a definitive diagnosis. Empirically, as-needed gastrointestinal support and hepatosupportive medications +/- empirical therapy for nonspecific hepatitis with an assessment of hepatic, gastrointestinal, and clinical response would be reasonable.



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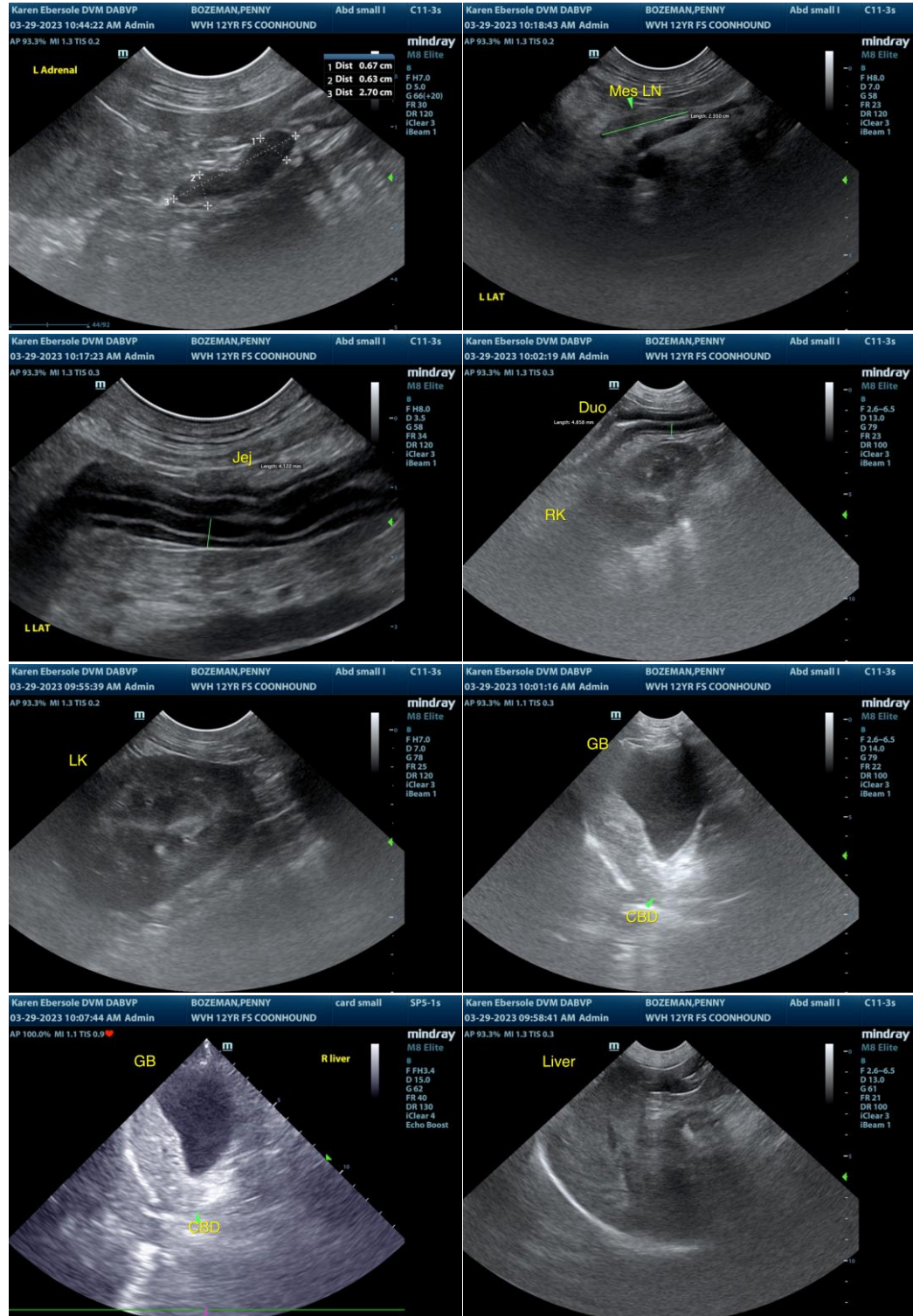
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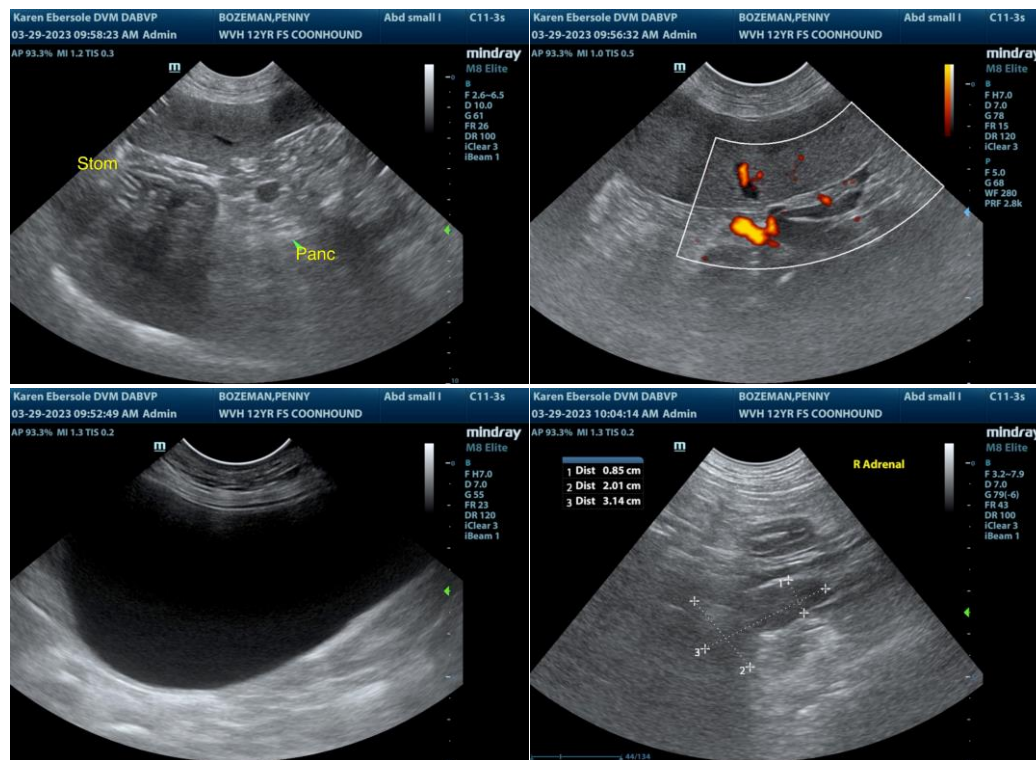
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com