



**PATIENT**

Ebony Edlin

**SPECIES**

Canine

**BREED**

Bichon Mix

**SEX**

FS

**AGE**

13

**WEIGHT**

606 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

Ranchlands Vet Clinic

**REFERRING VET**

Dr. Sam

**INVOICE**

10911ag

**DATE**

06/22/2022

**PRESENTING CLINICAL SIGNS**

History: Chronic intermittent diarrhea responds to metronidazole. Attending concerned about IBD  
Abnormal PE/Chem/CBC/UA Results: Mod elevation liver enzymes last May

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with focal mild dependent mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Normal size and margination was 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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Pinpoint areas of nonobstructive medullary mineral and cortical cysts were noted. The left kidney measured 4.1 cm in length. The right kidney measured 4.6 cm in length.

The area of the aortic trifurcation was free of pathology.

No overt pathology in the area of the uterine remnant.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.68 cm width at the caudal pole and 0.53 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.56 cm width at the caudal pole and 0.44 cm width at the cranial pole.

**Spleen**

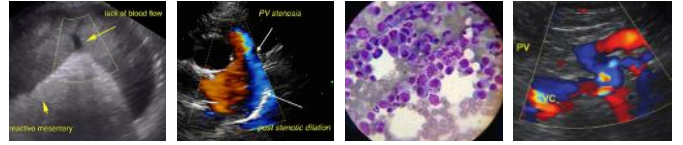
The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature 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**

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and mild debris. The cystic and common bile ducts were normal.

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild nonshadowing ingesta/chyme with no signs of ileus, obstruction or foreign material. The gastric body wall measured 0.32 cm in width.



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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine contained mild segmental nonshadowing ingesta with no signs of ileus, obstruction or foreign material. The jejunum wall measured 0.32 cm in width. The duodenum wall measured 0.35 cm in width.

**SPECIES**

Canine

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

**Pancreas**

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Bichon Mix

The pancreas exhibited normal size with areas of minor capsule asymmetry and heterogeneous to hypochoic parenchyma compared to adjacent omental fat.

**Free Abdomen**

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No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

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- Moderate chronic renal changes with minor medullary mineral and intermittent cortical cysts
- Mild urinary bladder mineral
- Hepatopathy-subjectively benign, vacuolar hepatopathy pattern suspected
- Mild gallbladder debris (non-mucocele)
- Intact GI wall layering with mild gastric and small intestinal ingesta/chyme
- Prominent nonhomogeneous to hypochoic pancreas-potential for low grade to chronic active pancreatitis

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INTERPRETED BY**

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DVM, DABVP  
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This patient may be passing small amounts of mineral from the kidneys into the urinary bladder. A full urinary workup including UA, C/S +/- baseline UPC is recommended.

No evidence of structural GI pathology was noted. At times the GI presentation does not correlate with the GI signs exhibited. Primary considerations may include mild pancreatitis, dysbiosis/antibiotic responsive diarrhea, (potentially a top differential given the response to metronidazole), dietary indiscretion, IBD with intestinal neoplasia considered unlikely. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

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Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), antibiotic trial and as needed gastrointestinal support with assessment of clinical response may prove beneficial. Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.

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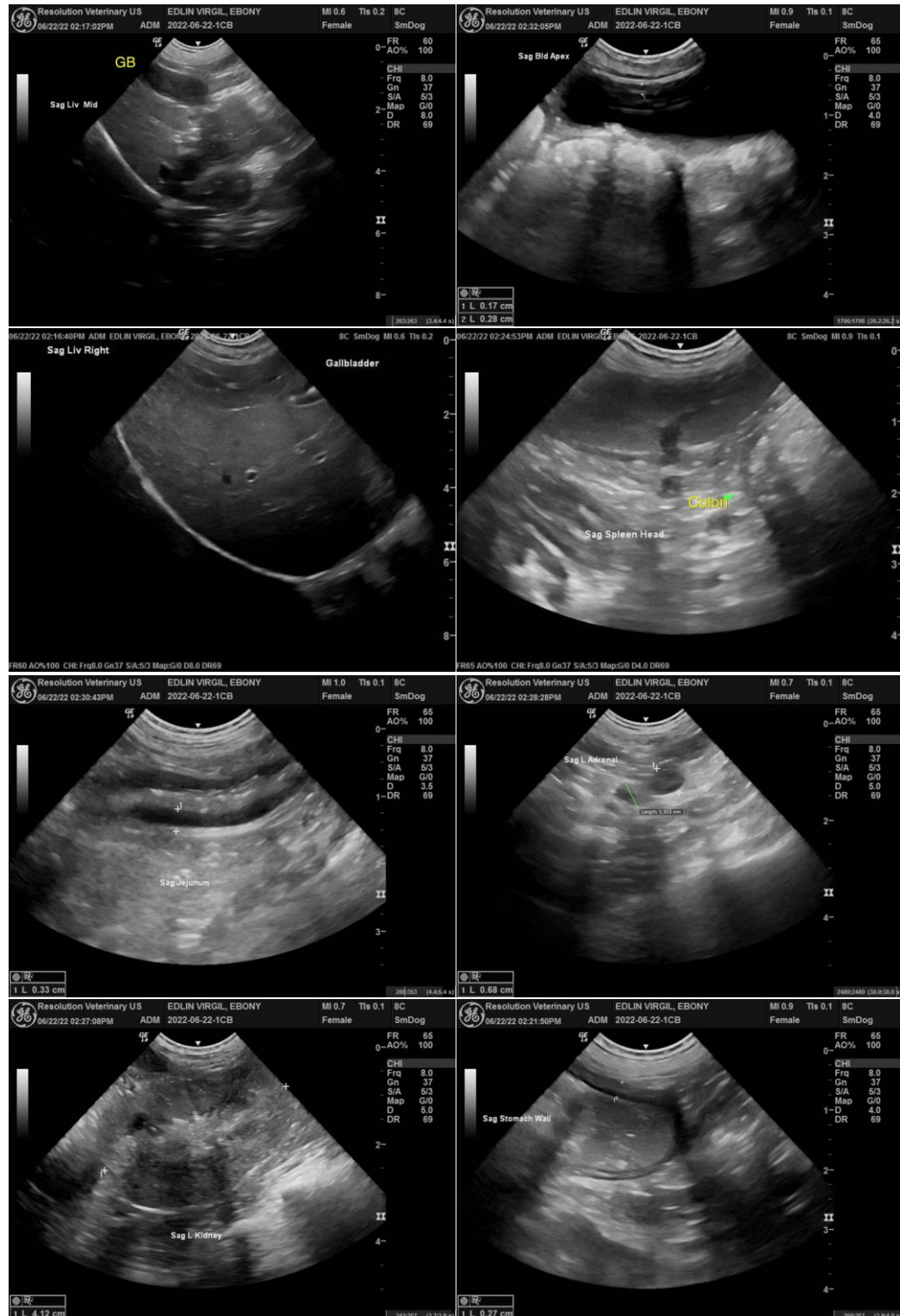
Dr. Sam

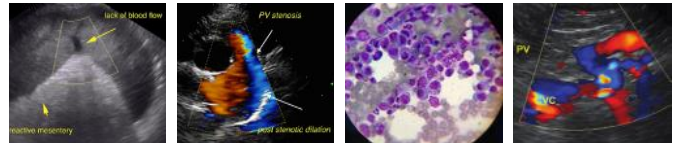
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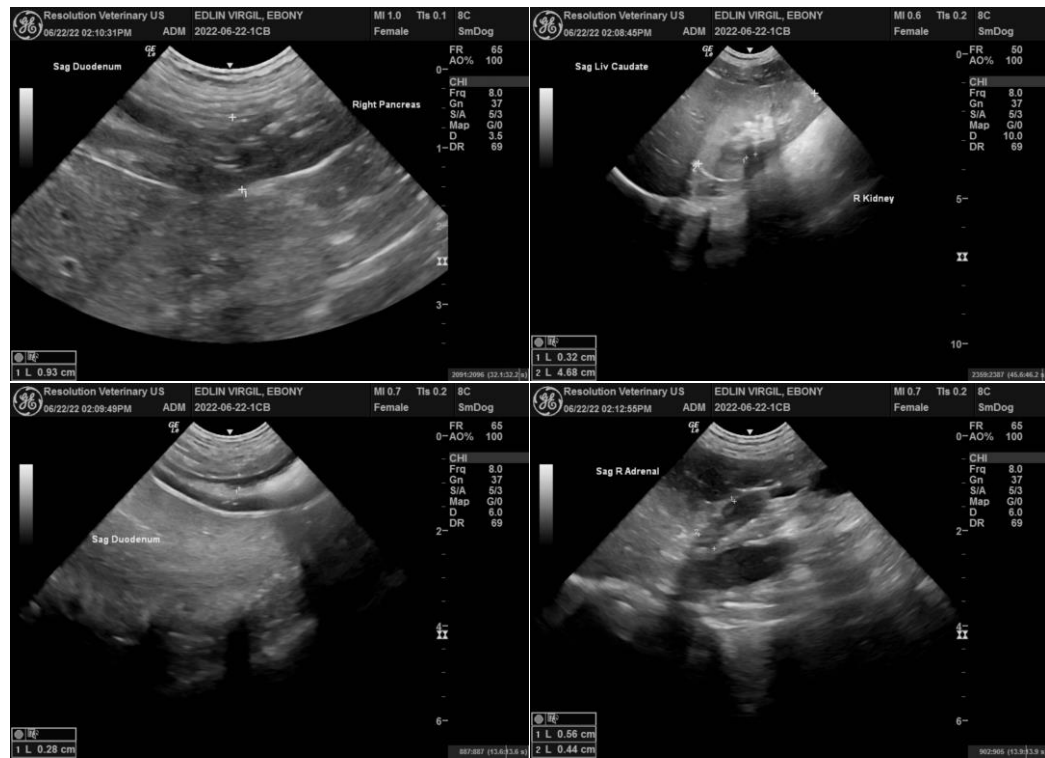
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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