



**PATIENT**

Phoebe Brooks

**SPECIES**

Canine

**BREED**

German Shepherd

**SEX**

FS

**AGE**

1 year

**WEIGHT**

29.1 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Sarah Barthelemy

**HOSPITAL NAME**

Britannia Kingsland  
Vet Clinic

**REFERRING VET**

Dr. Rondot

**INVOICE**

15176

**DATE**

10/11/22

**PRESENTING CLINICAL SIGNS**

History of mild hypoalbuminemia and borderline hypoglobulinemia. Hx of some intermittent GI upsets. No protein in urine dipstick. Abnormal PE/Chem/CBC/UA Results: Mild low albumin.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 5.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. 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 and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.0 cm in length. The right kidney measured 6.6 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 0.36 cm width at the caudal pole and 0.45 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 0.41 cm width at the caudal pole and 0.62 cm width at the cranial pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. 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 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 was empty with no signs of ileus, obstruction, or foreign material.



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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. The duodenum wall measured 0.34 cm width. The jejunum wall measured 0.34 cm width.

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

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**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.

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**Free Abdomen**

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Focal to intermittent, mildly prominent mesenteric lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of subtle perilymphatic hyperechoic mesentery was evident. An example of lymph node size was 1.8 cm x 0.66 cm.

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**ULTRASONOGRAPHIC FINDINGS**

- Overtly normal gastrointestinal tract
- Intermittent subjective benign / reactive mesenteric lymph nodes - lymphoid hyperplasia or minor reactive lymphadenitis potentially secondary to structurally insignificant enteropathy likely

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of overt visceral, specifically gastrointestinal pathology was noted. At times, the sonographic presentation of the gastrointestinal tract does not always correlate with history of intermittent or consistent gastrointestinal signs, given the mildly hypoalbuminemia and borderline hypoglobulinemia. Assuming normal hepatic function and lack of proteinuria, malassimilation disorder or intestinal protein loss are suspected. Considerations may include dysbiosis, occult parasitism, occult Addison's Disease, IBD, non-classical protein-losing enteropathy, or other enteropathy.

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Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate, fresh fecal analysis to rule out parasitic ova / Giardia, as well as a resting cortisol level +/- ACTH Stimulation test if resting cortisol is <2.0. Empirically, hydrolyzed diet trial, high colony count probiotic if evidence of diarrhea or concern for dysbiosis, and empirical deworming even if fecal testing is negative, i.e., Panacur 50 mg/kg PO SID for at least 5 consecutive days with potential repeat protocol in 3 weeks, would be reasonable. Endoscopic intestinal biopsies may be required for a definitive diagnosis if albumin levels >2.0.

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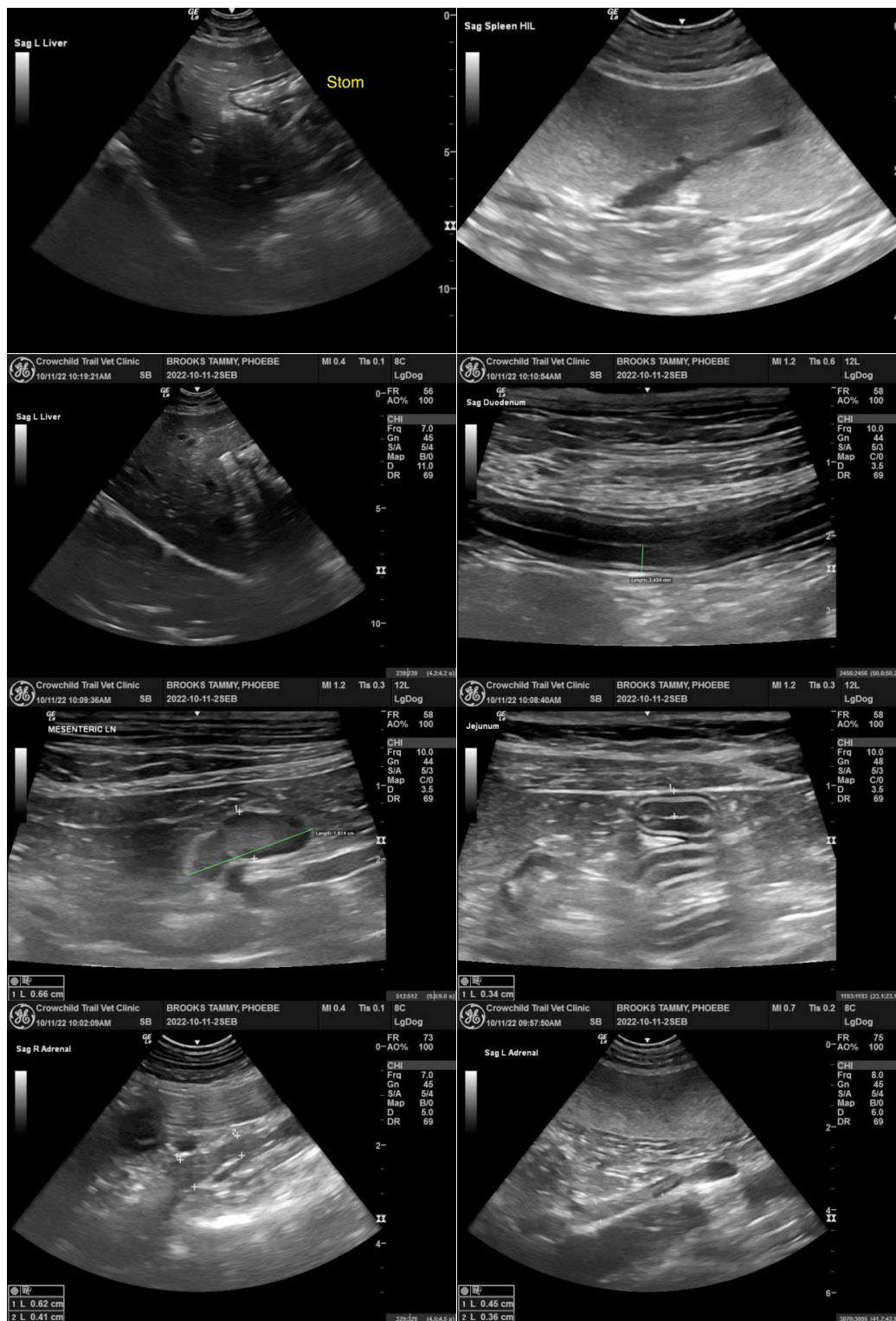
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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