



**PATIENT PRESENTING CLINICAL SIGNS**

Riggins Rohm PU/PD, decreased appetite, ataxic, weak, ADR, febrile several days ago.

Medication: SMZ, SQF, Cerenia, Benadryl

**SPECIES**

Canine

WBC 21 with neutrophilia, Cortisol 10.6, Calcium 4.6, Albumin 1.6, Globulin 1.7, ALT 383, AST 129, Na/K ratio 48

**BREED**

English Bulldog

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

N/M

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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.

**AGE**

2015

The residual prostate was free of pathology.

The area of the aortic trifurcation was free of pathology.

**WEIGHT**

56

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 5.8 cm in length. The right kidney measured 6.4 cm in length.

**INTERPRETED BY**

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

**Adrenal Glands**

The area of the left adrenal gland was free of overt pathology. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.3 cm length x 0.88 cm width at the caudal pole.

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
 ARDMS/RVT

**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.

**HOSPITAL NAME**

Mill Pond VC

**REFERRING VET**

Dr. Thayer

**Liver/ Gallbladder**

The liver presented borderline to mild enlargement. The parenchyma of the liver was subjectively increased in echogenicity compared to the spleen and renal cortices. The echotexture of the liver parenchyma was uniform with a mild coarse echotexture. The capsule of the liver was symmetrical in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with anechoic content. The gallbladder wall was mildly thickened in appearance consisting of an echogenic double rim corresponding to the inner

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**PATIENT**

Riggins Rohm

and outer portions of the wall. This is consistent with gallbladder wall edema. Possible causes may include acute inflammation, edema, and anaphylaxis. The cystic and common bile ducts were normal.

**Gastrointestinal**

**SPECIES**

Canine

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach was primarily empty with minor retained fluid and luminal gas.

**BREED**

English Bulldog

The small intestine presented generalized intact yet prominent wall layering exhibiting segmental mild mucosal hyperechogenicity and nonobstructive ileus.

**SEX**

N/M

The colon exhibited sonographically unremarkable colon wall layers and generalized distention with nonformed to liquid fecal matter. Moderate volume primarily anechoic peritoneal free fluid and generalized hyperechoic omentum were noted. No omental masses or significant visualized lymphadenopathy.

**AGE**

2015

**Pancreas**

The pancreas was indistinct to variably prominent, enlarged with heterogeneous parenchyma exhibiting indistinct, hypoechoic striations.

**WEIGHT**

56

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

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 (Canine and Feline)

- Gastroenteropathy exhibiting segmental intestinal mild mucosal hyperechogenicity and nonobstructive ileus
- Mild hyperechoic liver with mild gallbladder wall edema
- Edematous pancreas
- Moderate volume peritoneal effusion and generalized hyperechoic omentum
- Distended colon containing nonformed to liquid fecal matter

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The gastrointestinal presentation in conjunction with panhypoproteinemia is consistent with PLE intestinal pattern. Considerations may include inflammatory bowel disease, lymphangiectasia, and infiltrative intestinal disease i.e., neoplasia or fungal. Secondary peritoneal effusion and gallbladder wall edema owing to decreased hydrostatic pressure is likely.

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Further assessment may include effusion analysis, and cytology +/- C/S if clinically indicated. No obvious evidence of hepatic congestive criteria, which may suggest a cardiogenic component to the effusion. Three-view chest radiographs are recommended to assess cardiac size. Gastrointestinal biopsies are required for a definitive diagnosis yet are contraindicated with albumin levels (<2.0). Urinalysis is suggested to rule out evidence of proteinuria as a contributing factor.

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Some or all of the following protocol is recommended.

Riggins Rohm

**OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitory effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:**

**SPECIES**

**Plasma** 10 mL / kilogram IV over 4 hours

Canine

Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day

**BREED**

**And Colloids/Hetastarch**

10 to 20 mL per kilogram per day and dogs

10 to 15 mL per kilogram per day cats

(Can bolus first 1/3 of dose over 15 minutes)

& maintain on LRS maintenance otherwise.

English Bulldog

**Metronidazole** (10-20 mg/kg po bid)

**Famotidine** 1 mg/kg Iv 1m po dc Sid /bid

**SEX**

**Sucralfate** 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid

N/M

**Diet:** Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.

**AGE**

**Prednisone** or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m<sup>2</sup> Q 24-48 hours.

2015

**Cobalamine** (B12) 250-1500 ug/dog weekly x 6 weeks.

**Calcium** supplementation if necessary.

**WEIGHT**

**Aspirin** 0.5-1 mg/kg/day **or Clopidrel** (Plavix) 1-5 mg/kg/day.

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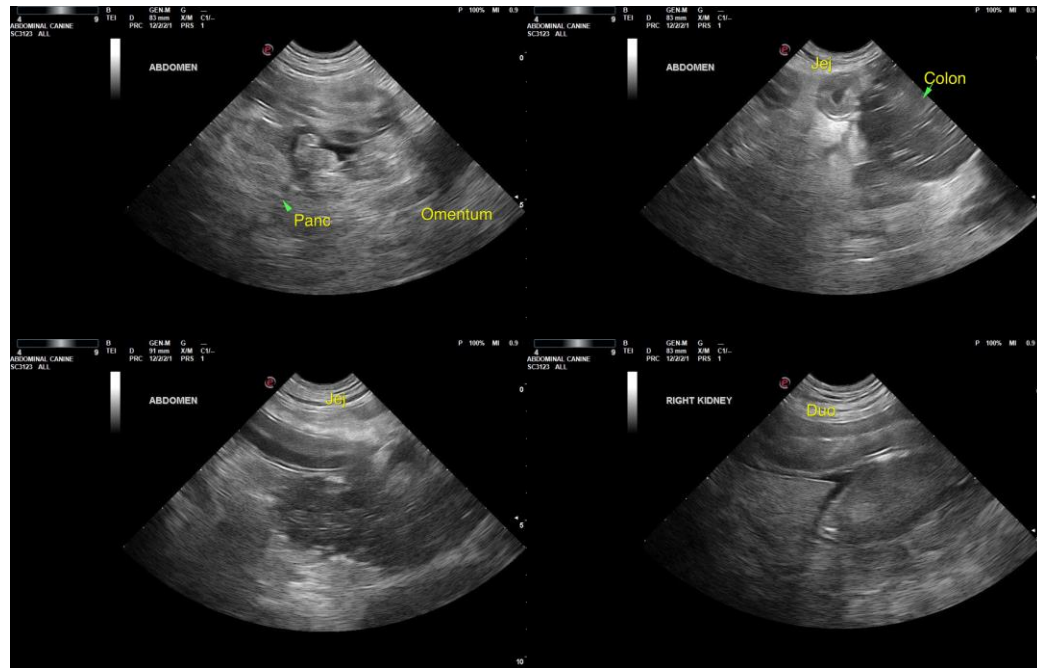
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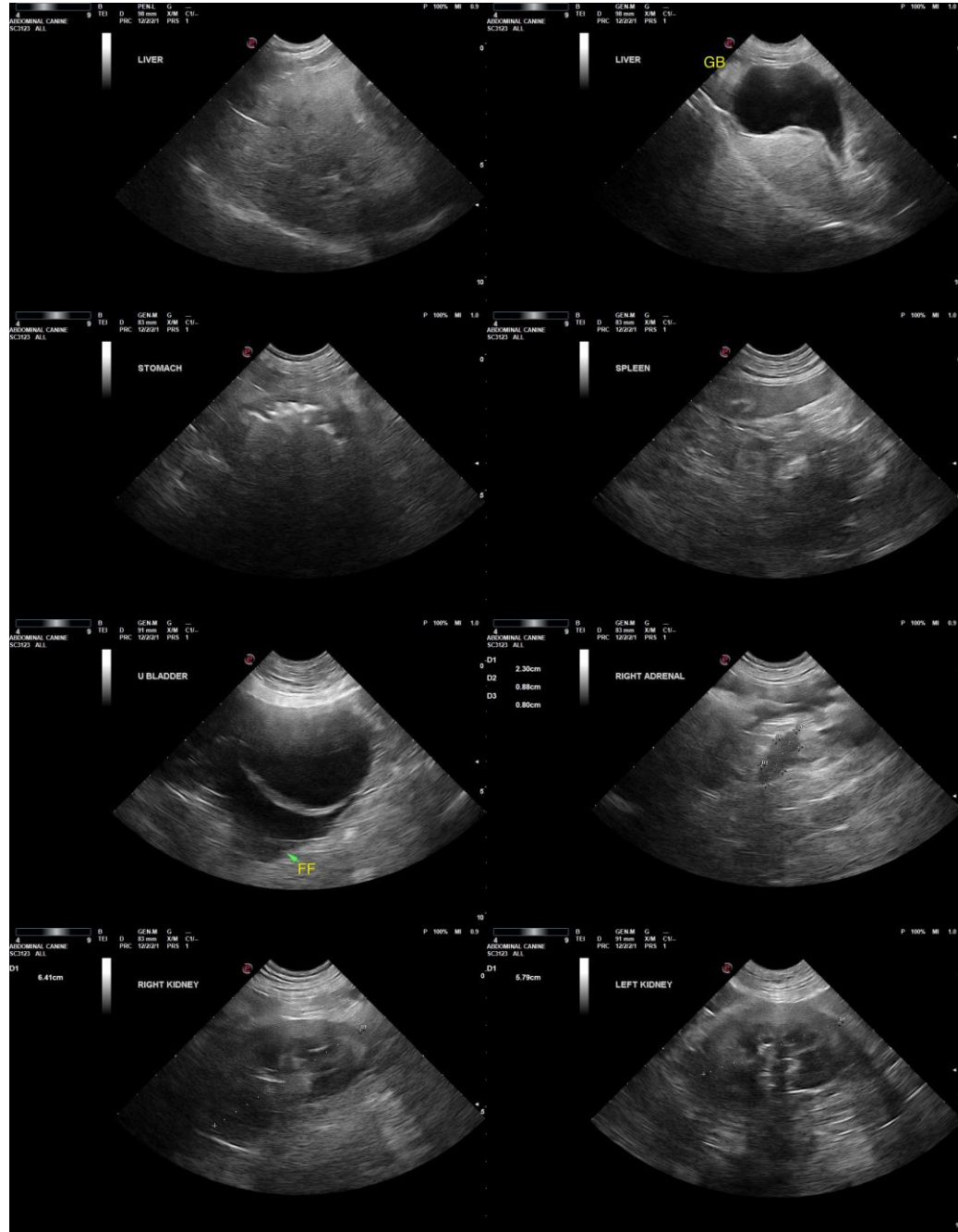
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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