


**PATIENT PRESENTING CLINICAL SIGNS**

Kaiser Gasselle diagnosed with villous atrophy with unclear cause. Was responding to medication but has stopped. - 2/9 BCS - not eating - occ vomiting currently on: Metronidazole, Metoclopramide, Omeprazole, possibly pred

**SPECIES** Abnormal PE/Chem/CBC/UA Results: rads and BW and histo report attached

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**
**BREED**
**Urinary System**

German Shepherd

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 were noted.

**SEX**

Neutered Male

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture. The prostate measured 0.9 cm in width.

**AGE**

10 Years

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 7.5 cm. The right kidney measured 6.9 cm.

**WEIGHT**

36.2 kg

**Adrenal Glands**

The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.7 cm length x 0.56 cm at the caudal pole. The right adrenal gland measured 2.1 cm length x 0.78 cm at the caudal pole.

**INTERPRETED BY**

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

**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. Multiple non-expansive hyperechoic parenchymal nodules were present, primarily in the medial spleen and along the medial capsule. No splenic masses. 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.

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Buck Animal Hospital

**Liver**

The liver exhibited generalized enlargement with mild generalized non-uniform hepatic parenchyma with moderate coarse echotexture. Multiple variably sized well demarcated uniformly hypoechoic intraparenchymal nodules were present in the liver, example measured 1.5 cm. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**REFERRING VET**

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**Gastrointestinal**

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild to moderate gastric distension with primarily anechoic fluid was present. No evidence of retained ingesta or overt foreign material. No evidence of pyloric outflow obstruction. Gastric body wall measured 0.57 cm.

**DATE**

12/17/21



**PATIENT**

Kaiser Gasselle

The small intestine exhibited primarily intact wall layering with maintained 1:3 muscularis/mucosa ratio with focal to potential segmental areas of mild jejunal mural hypertrophy exhibiting intact to indistinct wall layering. An area of jejunal mural hypertrophy measured 0.69 cm in width. By comparison, normal appearing jejunum measured 0.35 cm in width.

**SPECIES**

Canine

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

**Pancreas**

**BREED**

German Shepherd

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 was evident.

**Free Abdomen**

**SEX**

Neutered Male

A focal mildly prominent to non-homogeneous medial iliac lymph node measuring 4.0 cm x 1.2 cm was present.

**AGE**

10 Years

Several enlarged mid to cranial abdominal mesenteric lymph nodes were present. Example measured 2.2 cm x 1.0 cm. These lymph nodes were homogenous, mildly hypoechoic and smoothly margined. A normal width: length ratio was maintained (<0.5). Perilymphatic to mid to cranial abdominal reactive mesentery was noted. No effusion.

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

36.2 kg

- Gastritis with associated gastric hypomotility
- Focal to segmental jejunal mural hypertrophy exhibiting intact to subjective indistinct wall layering
- Multifocal hypoechoic hepatic intraparenchymal nodules – non-specific, hematopoiesis, nodular/regenerative hyperplasia, lipogranulomas, primary/metastatic neoplastic nodules possible.
- Probable benign splenic nodules – benign myelolipomas, hyperplasia, emerging mineralization, previous chronic infarcts possible.
- Mid to cranial abdominal mesenteric and focal medial iliac lymphadenopathy – non-specific, hyperplasia, reactive lymphadenitis, or emerging neoplastic lymphadenopathy possible.
- Mid to cranial abdominal reactive mesentery

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The presentation of the gastrointestinal tract may correlate with previous diagnosis of villus atrophy or antibiotic induced dysbiosis. However, potential for alternative or emerging non-associated pathology such as inflammatory or neoplastic infiltrative enteropathy (given the focal to segmental mural changes) may be possible.

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In addition to current gastrointestinal protocol, a high colony count probiotic such as Provable may prove beneficial. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Assuming normal clotting status, ultrasound guided hepatic parenchymal and nodule FNA, lymph node FNA, +/- screening splenic FNA for cytology warranted.

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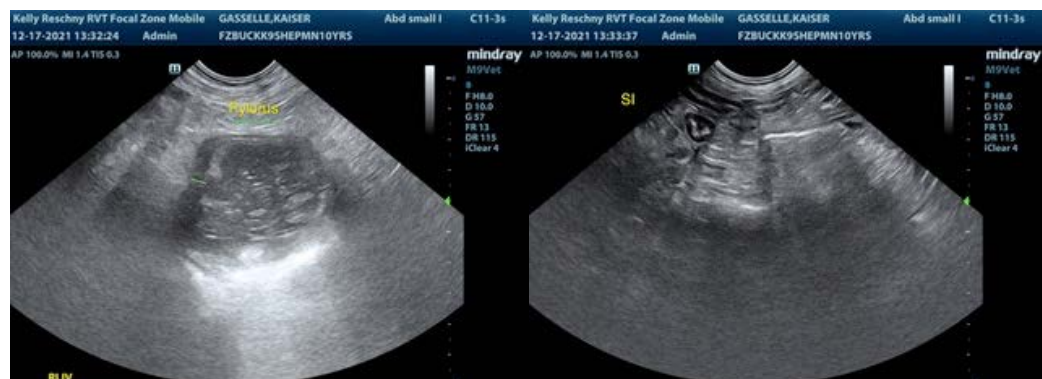
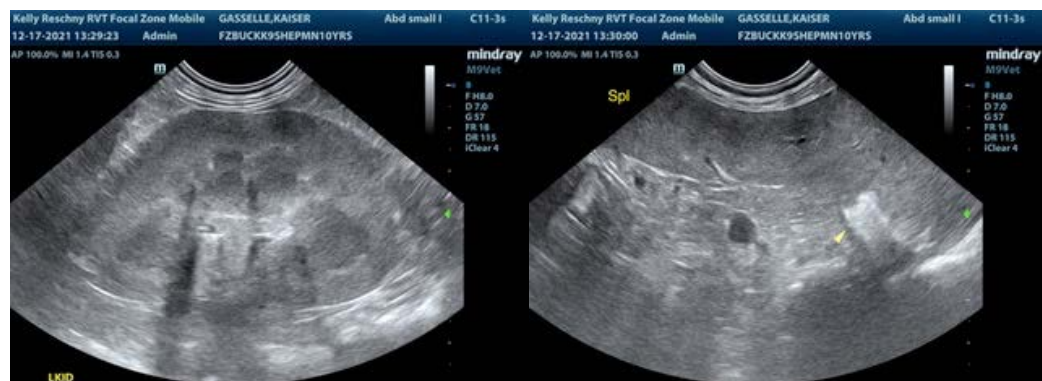
Dr. Gallbraith

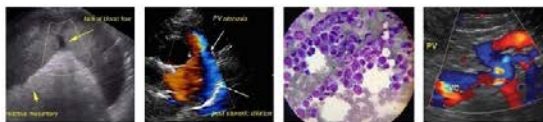
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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