



PATIENT	PRESENTING CLINICAL SIGNS
Ruby Ferrera	Hx of intermittent V+ and D+, decreased appetite. thin. Hx of microvascular dysplasia. Current meds: Metro, entyce, cerenia inj Abnormal PE/Chem/CBC/UA Results: Crea 0.4, Ca 8.7, cortisol normal. GI panel pending.
SPECIES	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Canine	Urinary System
BREED	Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.
Havapoo	
SEX	The right kidney is normal in size (4.25 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.
Spayed Female	
AGE	The left kidney is normal in size (4.12 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.
2 Years	
WEIGHT	Adrenal Glands
8.7 Pounds	The right adrenal gland is normal in size (1.9 cm long x 0.89 cm at the cranial pole and 0.44 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
INTERPRETED BY	The left adrenal gland is normal in size (1.85 cm long x 0.28 cm at the cranial pole and 0.31 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
Beth Johnson, DVM DACVIM	
IMAGING PERFORMED BY	Spleen
Jessica Miller	The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.
HOSPITAL NAME	Liver
Animal General on the Hudson	The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion. There is an image of a normal portal vein to vena cava ratio of 1:1.
REFERRING VET	
Dr. Ng	
INVOICE	The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.
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PATIENT

Gastrointestinal

Ruby Ferrera

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

SPECIES

Canine

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

BREED

Havapoo

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

SEX

Spayed Female

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

AGE

2 Years

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

WEIGHT

8.7 Pounds

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

PRIMARY FINDINGS

- **Reactive mesenteric lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

SECONDARY FINDINGS

- Urinary bladder debris
- **Bilateral medullary rim sign** - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Animal General
on the Hudson

REFERRING VET

Dr. Ng

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's concurrent hypocalcemia and mesenteric lymphadenopathy, gastrointestinal disease (infectious, parasitic, infiltrative, etc.) are the top differential for this patient's historical gastrointestinal signs. A GI panel is reportedly pending. Other recommendations include:

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A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease.

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In the meantime, an ionized calcium is recommended, given the hypocalcemia, to better direct therapy, etc.



PATIENT

Ruby Ferrera

A diet transition to a novel or hydrolyzed protein diet is recommended, and if that is not effective on a trial and error basis, potentially a low-fat diet, etc. could be considered.

Empirical deworming with a 5-day course of Panacur is recommended if not recently evaluated.

SPECIES

Canine

Additionally, a probiotic as well as potentially a trial with an antibiotic such as Metronidazole or Tylosin could be added to the other supportive/symptomatic medical management of this patient's gastrointestinal signs.

BREED

Havapoo

If the gastrointestinal panel returns normal, and/or therapy of gastrointestinal disease is not effective, bile acids are recommended to reassess this patient's reportedly historic hepatic microvascular dysplasia.

SEX

Spayed Female

If the GI panel does suggest a malabsorptive condition, and the above recommended diagnostics and therapeutics don't alter the course, biopsies of the GI tract may be necessary to definitively diagnose and therefore long-term manage this patient's gastrointestinal signs.

AGE

2 Years

WEIGHT

8.7 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

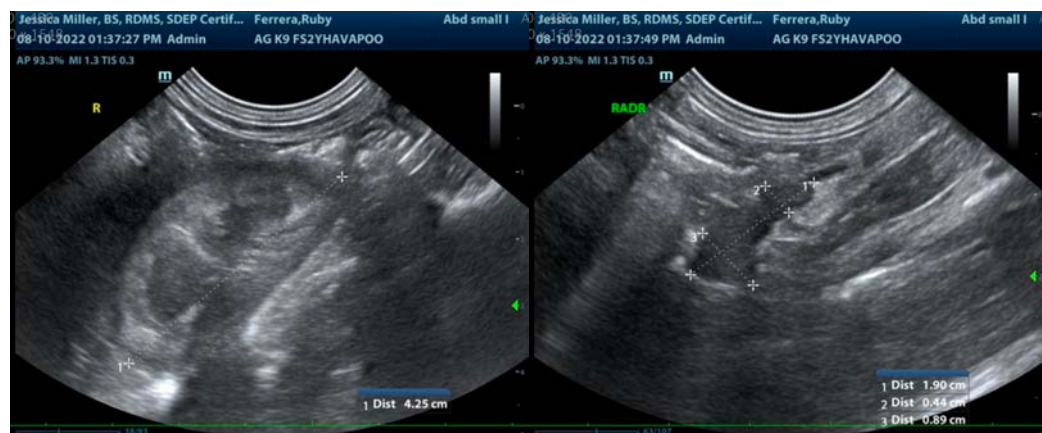
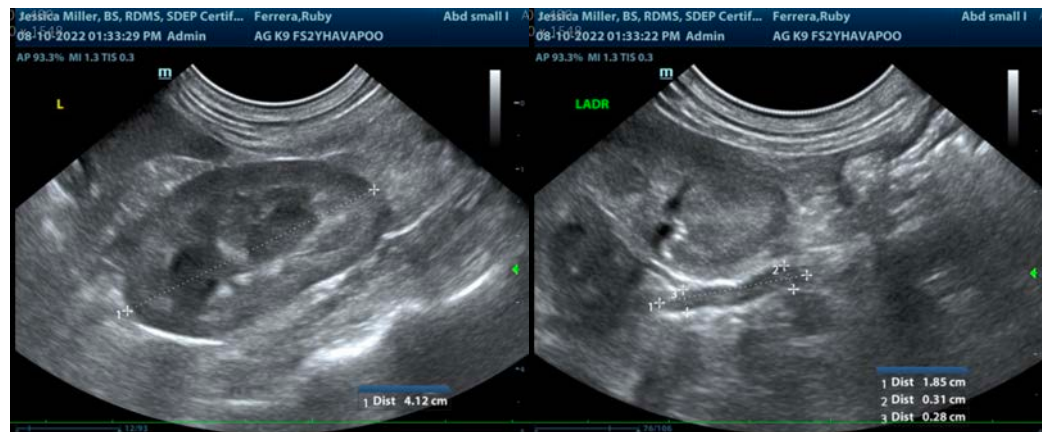
Jessica Miller

HOSPITAL NAME

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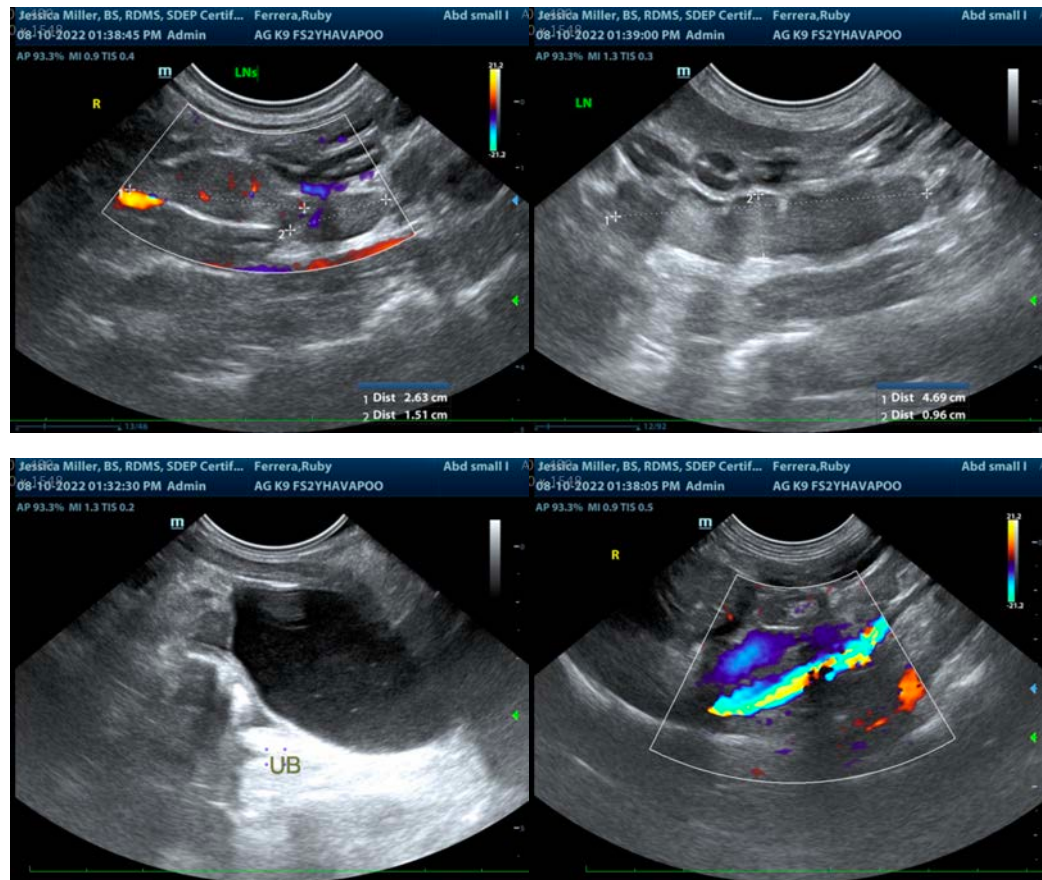
Dr. Ng

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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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com