

**DATE PRESENTING CLINICAL SIGNS**

10/20/22 Pet presented for lethargy and vomiting. BW: sdma: 89, creatinine: 7.9, bun: 219, phosphorus: 20.5, na: 143, k: 7.6, chloride: 95, pet is fiv positive. Pet went to AEH And after 24 hrs of fluid kidney values were normal.

**PATIENT**

Milo Abbas Current Medications: Amoxicillin, Cerenia, Omeprazole. Above started at ER- they do not list dosing.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED**

DSH

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Neutered Male

The right kidney is normal in size (3.72 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.

**AGE**

6/10/22

The left kidney is normal in size (3.81 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.

**WEIGHT**

4.4 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

Adrenal glands are small (flattened contour). Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left measures 0.30 cm. The right measures 0.38 cm.

**Spleen**

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.

**Liver**

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.

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.

**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min).

**INVOICE**

42246

Rachel Brillhart RDMS

**HOSPITAL NAME**

Perry Hall AH

**REFERRING VET**

Dr. Aleman

The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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

### ***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.

### ***Free Abdomen***

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

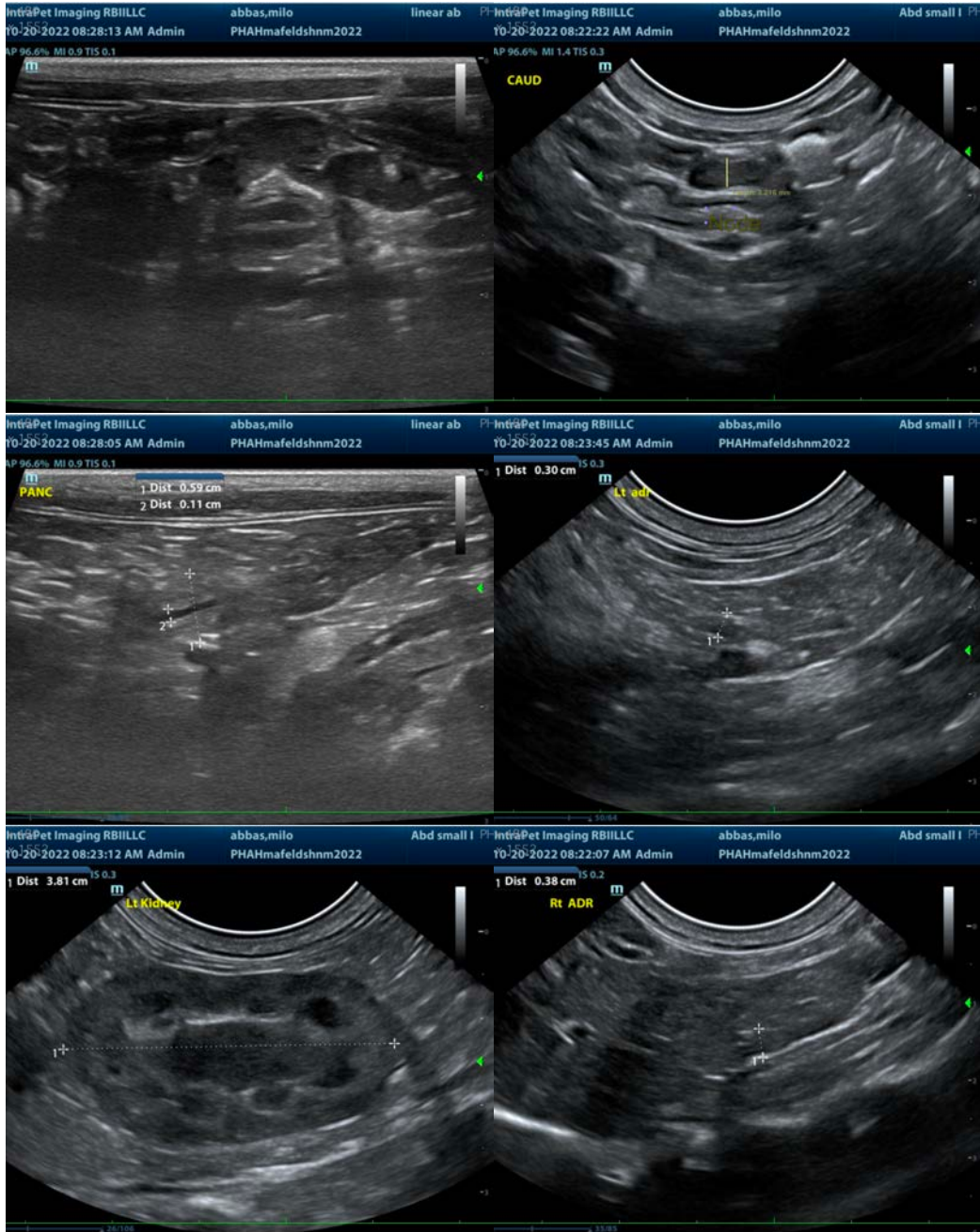
Hypoechoic, slightly heterogeneous mesenteric lymphadenopathy is noted.

## **ULTRASONOGRAPHIC FINDINGS**

- **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.
- **Flat adrenal glands** - This can be a normal patient variant and/or a sign of exogenous cortisol administration. If exogenous steroids are not being administered, hypoadrenocorticism (either relative or absolute) should be considered.
- **Mesenteric lymphadenopathy** - Likely normal patient variant for a kidney. However, reactive lymph nodes secondary to infectious disease and/or even infiltrative neoplastic nodes cannot be ruled out without tissue sampling.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given this patient's marked rapid improvement/resolution of azotemia, a significant pre-renal component is likely with the true renal component unknown. If the urine sample with the reported isosthenuria was obtained before fluid therapy, then a true renal component is present. However, if the urine was obtained after or while the patient was receiving fluids, then that can't be used to assess pre-renal versus renal azotemia, and a recheck urinalysis when not on fluids is recommended. If protein is still present in the urine, a quantification urine protein to creatinine ratio is recommended to help further guide management. In the meantime, while rare in cats, hypoadrenocorticism is a differential, and an ACTH stimulation test is recommended. In the meantime, empirical deworming with a 5-day course of Panacur is recommended.





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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