SonoPath
Clinical Sonography & Telecytology
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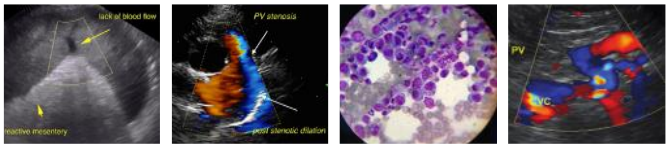



SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Peanut Harrison

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

FS

**AGE**

9 years

**WEIGHT**

3.14 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Guenther

**HOSPITAL NAME**

Central Island Veterinary Emergency Hospital

**REFERRING VET**

Dr. Guenther

**INVOICE**

16181

**DATE**

2/16/23

## PRESENTING CLINICAL SIGNS

Referral for acute onset vomiting, anorexia and lethargy (24hours). Urinary incontinence for months prior to this and chronic distended abd noted by O. Chronic PU/PD.
Abnormal PE/Chem/CBC/UA Results: Pot bellied appearance. Very lethargic/weak. Dehydrated ~8%. Rest of PE wnl, normotensive, normothermic.

CBC - marked neutropenia w/ left shift. Hemoconcentrated. Chem - Marked azotemia (unreadably high on rDVMs BW, no dilution), marked hyperphosphatemia (>5.20), Hypoglycemia (2.7mmol/L), mild hyperglobulinemia (47g/L), mild ALP elevation (513), hyperbilirubinemia (27), mild elevated cholesterol, Hyponatremic (134), hypochloremic (94). UA - numerous granular casts, mixed bacteria, mild pyuria. Isosthenuria (1.010).

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder was non-distended exhibiting subjective normal tone. Anechoic urine was present with no evidence of mineral, sediment, or calculi. Overtly normal proximal urethra structure and tone was present to a depth of 3.0 cm.

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 was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation, pyelectasia, or overt pyelonephritis criteria was present in either kidney. A focal area of non-obstructive lateral medullary mineral was noted in the left kidney. The left kidney measured 3.5 cm in length. The right kidney measured 3.9 cm in length.

### *Adrenal Glands*

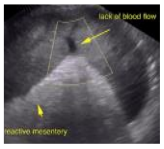
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.0 cm length x 0.46 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 1.5 cm length x 0.54 cm width at the caudal pole. No adrenal tumors were noted.

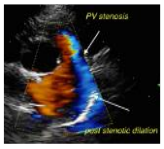
### *Spleen*

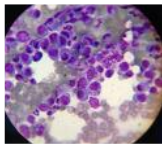
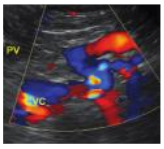
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

### *Liver/ Gallbladder*

The liver was mildly enlarged in size with areas of minor capsule asymmetry. Multiple primarily small nondisruptive hypoechoic intraparenchymal nodules were present. An example of an intraparenchymal nodule measured 0.87 cm in diameter. The gallbladder was non-distended in size



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containing anechoic content with mild nonorganized echogenic gallbladder debris. No evidence of peripheral gallbladder inflammation was noted. 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 mild luminal gas. No signs of ileus, obstruction, or foreign material were noted.

The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity with occasional mucosal speckling. A minor segmental duodenojejunal ileus along with minor duodenal corrugation was present without evidence of an obstructive pattern, loss of intestinal wall layering, or evidence of gastrointestinal foreign material.

Normal visible colon wall layers were present. Generalized mild colon distention was present with nonformed fecal matter extending into the colorectum.

### *Pancreas*

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

### *Free Abdomen*

No omental masses, lymphadenopathy, or peritoneal effusion were noted.

## ULTRASONOGRAPHIC FINDINGS

- Sonographically normal urinary bladder and visible proximal urethra
- Nephropathy with nonobstructive left kidney medullary mineral
- Nodular liver - concern for nodular neoplastic criteria, benign hyperplasia, hematopoiesis, granulomas, or similar possible
- Gallbladder debris (non-mucocele)
- Gastroenterocolitis pattern with non-formed fecal matter
- Heterogeneous pancreas

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Sonographically, the appearance of the kidneys was not overtly consistent with end-stage or advanced chronic nephropathy. Potential for acute kidney injury or insult could be possible. Consider exposure to infectious disease or toxin. Screening hepatic FNA cytology, assuming normal clotting status and using a 25-gauge needle, is recommended for further clarification of the intraparenchymal nodular changes. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

No sonographic evidence of significant or active pancreatitis or pancreatic neoplastic criteria as a primary clinical player, yet concurrent low-grade or chronic pancreatitis is possible.

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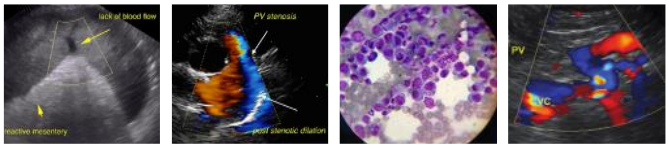

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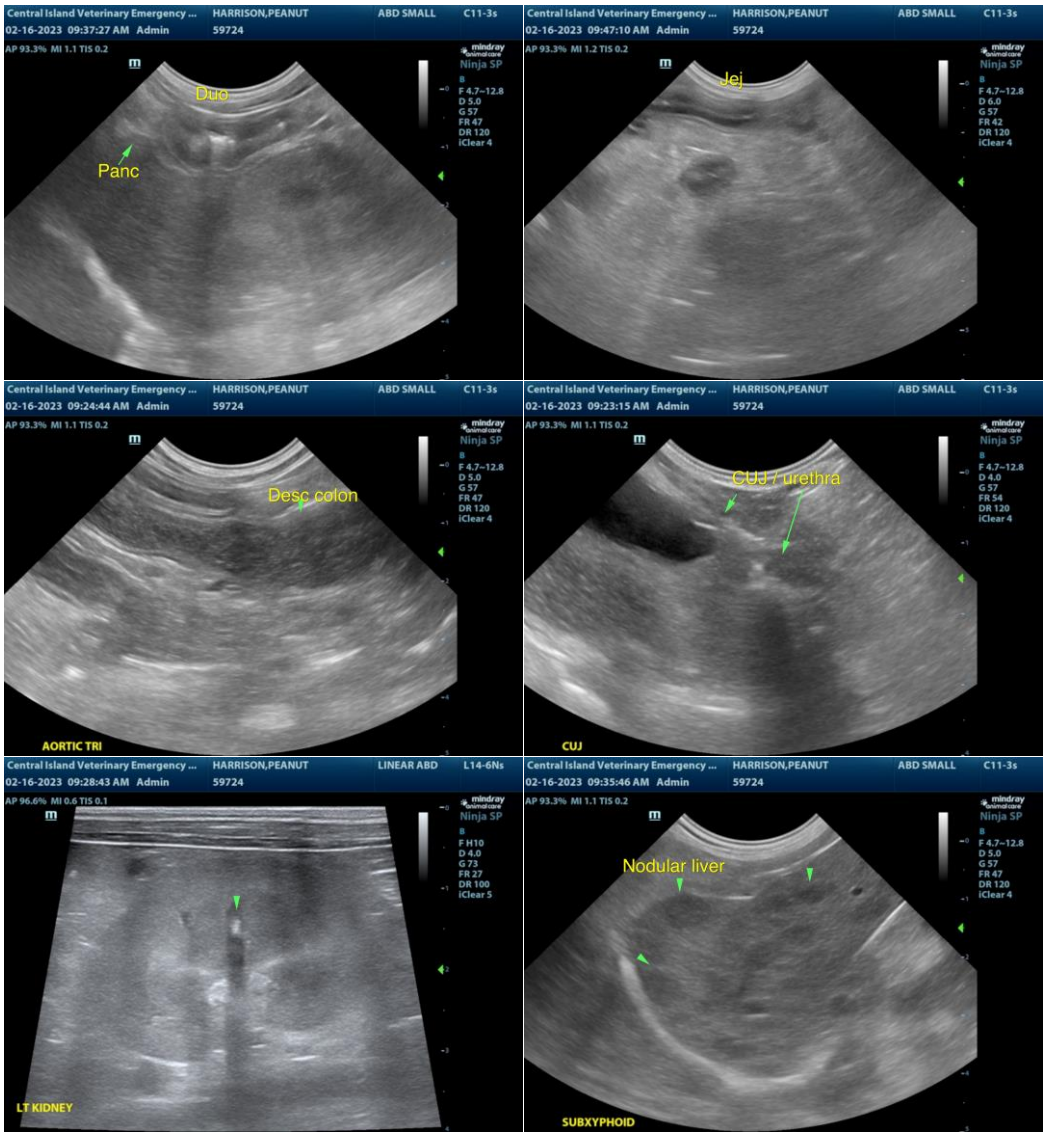
Hospitalization with diuresis protocol, monitoring of urine output and body weight, gastrointestinal support, gradual electrolyte correction, and antibiotic therapy if clinically indicated with an assessment of clinical response is recommended. A guarded prognosis, given the degree of azotemia and potential for acute renal failure, is indicated.



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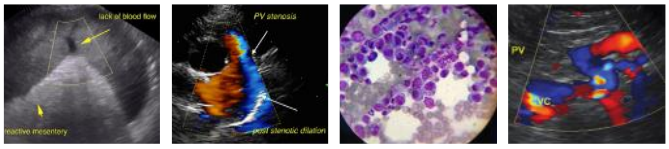

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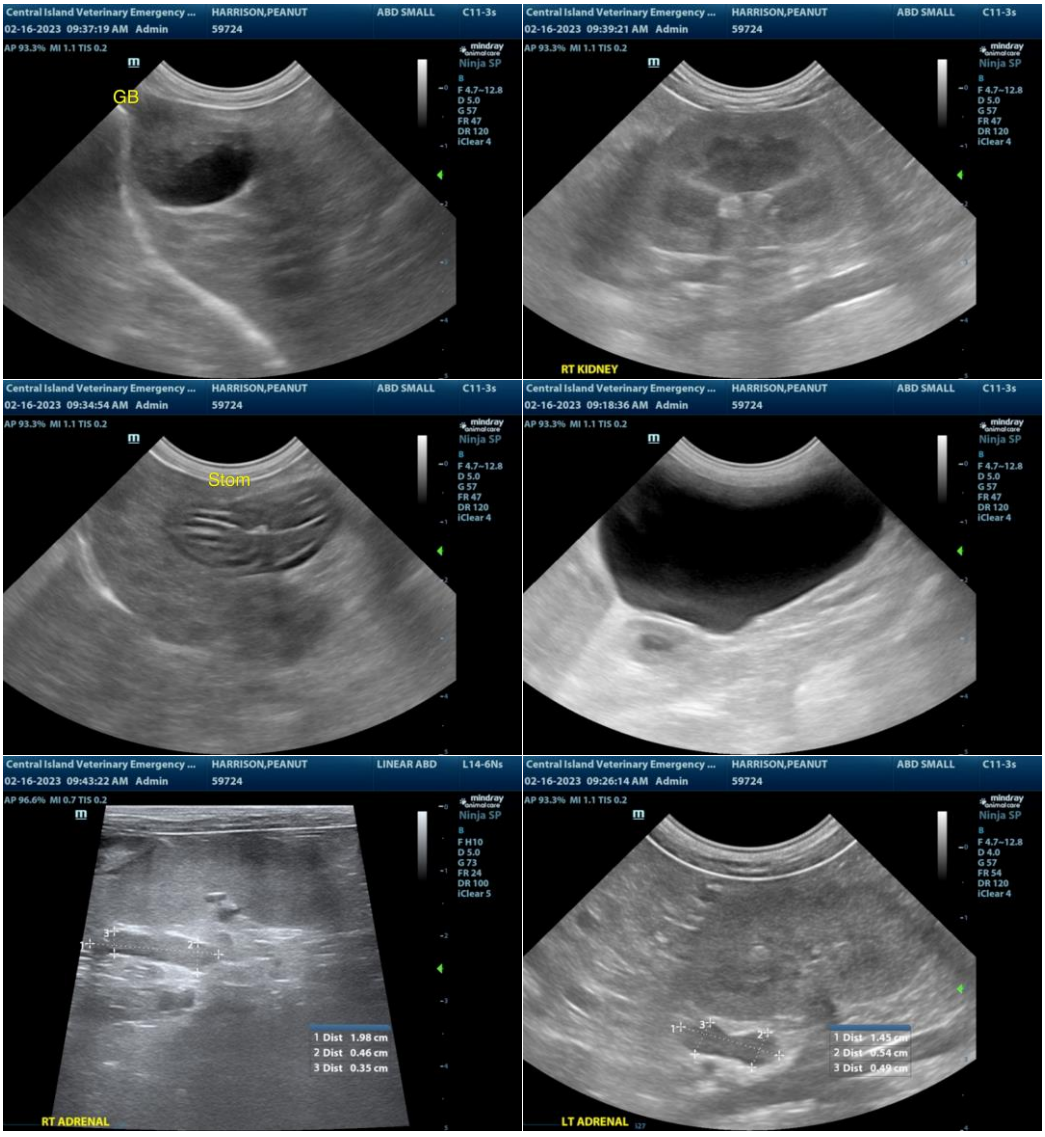


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**