

**DATE PRESENTING CLINICAL SIGNS**

3/17/2022 No complaints, outwardly acting normally. Elevated BUN noted on pre-dental screening in fall. Treated infection now following up. BUN elevated 66, low USG, proteinuria and UPC 5.9 with negative urine culture. BP 110/70.

**PATIENT**

Cami Carlin Current Medications: No. meds or diet change yet. Will have Gabapentin 2 hours prior to scan, 20mg.  
 Date of Previous IntraPet Ultrasound: No previous.  
 Sedation: Not required to complete full diagnostic ultrasound.  
 Stat Report: Not requested.

**SPECIES**

Canine Imaging Performed By: Andi Parkinson, RDMS.

**BREED**

Yorkie

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Spayed Female

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**AGE**

4/10/2010

The left kidney is normal in size (3.62 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. The cortex is hyperechoic. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

**WEIGHT**

9.34 lbs

The right kidney is normal in size (3.34 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. The cortex is hyperechoic. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

**INTERPRETED BY**

Andrea Nicastro, DMV,  
 Diplomate DACVIM  
 (Small Animal  
 Internal Medicine)

**HOSPITAL NAME**

Eastern Animal  
 Hospital

**Adrenal Glands**

The left adrenal gland is upper limits of normal size (0.43 cm at cranial pole) (0.55 cm at caudal pole) (0.43 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**REFERRING VET**

Dr. Warner-Jones

The right adrenal gland is normal size (0.76 cm at cranial pole) (0.51 cm at caudal pole) (1.61 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**INVOICE**

10572

**Spleen**

The spleen is normal in size (0.97 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative

pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated echogenic debris is observed within the lumen, some of which is gravity dependent, and some of which is suspended and stranding. The cystic and common bile ducts are normal.

### ***Gastrointestinal***

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

### ***Pancreas***

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

### ***Free Abdomen***

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

### ***Other***

A brief echocardiogram reveals no evidence of pericardial effusion.

Several ring-down lesions are observed within the thorax.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Bilateral chronic nephropathy. Based on the patient's clinical history, a protein-losing nephropathy (PLN) is suspected. Most cases of PLN are idiopathic. However, they can occasionally be secondary to infectious, inflammatory or neoplastic disease.

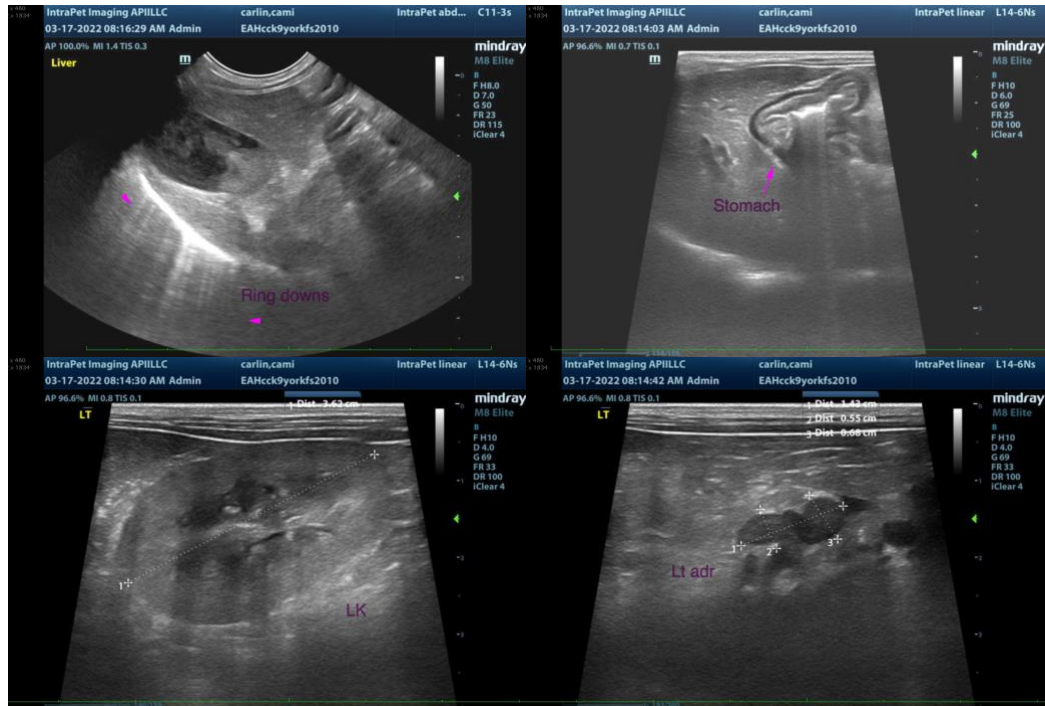
### **Secondary Findings**

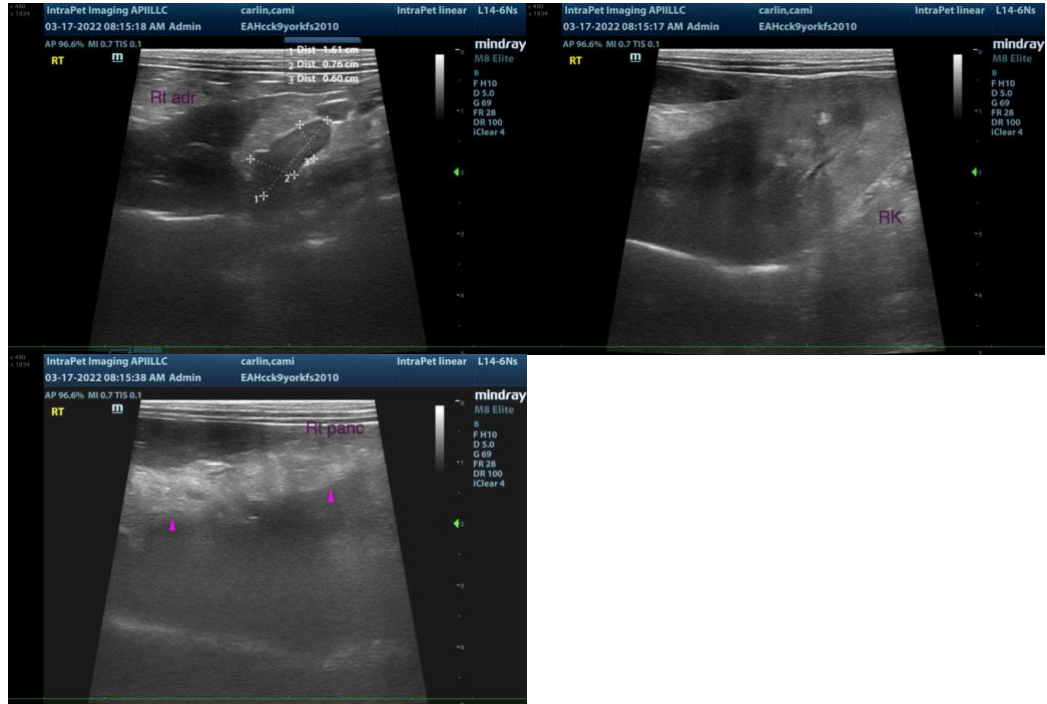
- Age-related pancreatic remodeling/fibrosis. Concurrent low-grade pancreatitis may also be present, particularly if the patient exhibits a positive Murphy's sign.
- The ring-down lesions in the thorax are suggestive of pulmonary parenchymal disease.

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

- Consider further testing for neoplastic disease (i.e., three-view thoracic radiographs) as well as infection (i.e., Leptospirosis, heartworm test and tick-borne disease.)

- Diagnostic/therapeutic considerations for PLN:
  1. Angiotensin II receptor blocker (e.g., telmisartan)
  2. Antithrombotic (e.g., clopidogrel at 2.5 mg/kg PO q 24 hours)
  3. Omega-3 fatty acids (65 mg/kg of DHA and EPA combined daily)
  4. Prescription renal diet
  5. Routine monitoring of UPC, bloodwork (CBC, chemistry panel) and blood pressure to assess for progressive disease





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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