

**DATE PRESENTING CLINICAL SIGNS**

6/23/23

**PATIENT**

Gracie Door

**SPECIES**

Canine

**BREED**

Pomeranian Mix

**SEX**

Spayed Female

**AGE**

6/1/10

**WEIGHT**

19.4 Pounds

**INTERPRETED BY**Eric Lindquist, DMV  
DABVP, Cert. IVUSS**HOSPITAL NAME**Animal Emergency  
Hospital**REFERRING VET**

Dr. Nacke-Horney

**INVOICE**

23012

History: 3-4 weeks ago: was eating less often and stopped eating things that she preferred (green peppers and carrots) - was still eating her food - concerned for dental issues 6/6 had dental performed - seemed a bit lethargic for 1-2 days - then was ok for 1-2 days Developed a cough - came in for recheck after dental - did full work up and dx with bronchitis Bw changes were worsening with concerns for UTI in the urine Owner the weekend: was eating less often, started drinking more, needed to urinate more - owner was needing to hand feed her, wasn't interested in normal food so was eating chicken and rice Around past 2 or so day was very food adverse -presented to rdvm to vomiting -tried outpatient care - seemed to perk up a bit Since still food adverse and vomiting - if she did eat vomited afterwards Does have heaving associated with vomiting - if just water more like regurgitation No known dietary indiscretion - does have a history of getting into something weird before Nothing has changes in the house Presented to rdvm 6/16: - Hacking cough that is worsening, regurgitation/vomiting of water - has known history of kidney changes and heart murmur (1-2/6) - Bw: Glob 3.7 (H), Alt 310 (H), Alp 546 (H), Bun 87 (H), Crea 2.4 (H), Chol 440 (H), Plt 651 (H) - Psl 294 (H) - Ua: Usg 1.016, pH 6.5, Pro 3+, Wbc 4-10/hpf, rods 51-100/hpf - UPC: 4.4, 3.6 - was previous <0.5 - Rads: mild interstitial pattern, more pronounced in caudal lung fields, spondylosis L6-7 - Started on clavamox (250mg, 1 tab q12), omeprazole (20 mg, 1/4 tab q24) - Noted to have progressive azotemia consistent with chronic renal failure Presented to rdvm 6/20: - Still not eating much, had some vomiting - rdvm recommended referral - Tx: SQ fluids, cerenia Current meds: - Clavamox - last given: around 12p today - Omeprazole - last given: around 12p today - Incurin Estrial 1 mg, 1/2 tab q24 - last given around 12p today

Current Medications: Buprenorphine, Cerenia, Protonix, Unasyn.

Lab Results: See attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

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

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction.

The **kidneys** presented chronic interstitial nephrosis pattern with slight pyelectasia. The right kidney measured 5.4 cm. The left kidney measured 4.97 cm.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.81 cm x 0.56 cm at the cranial pole and 0.71 cm at the caudal pole. The left adrenal gland measured 1.93 cm x 0.58 cm at the cranial pole and 0.63 cm at the caudal pole.

**Spleen**

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-related alteration. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. Hyperechoic lipid plaques were noted with separate hypoechoic nodular changes (up to 0.3 cm).

### **Liver**

The **liver** in this patient presented heterogenous hyperechoic macronodular changes and mild generalized enlargement was noted. The left lateral liver revealed an anechoic irregular cyst, measuring 1.06 cm x 0.93 cm, appears benign. The gallbladder was overdistended with striating bile consistent with mucocele formation. Immobile debris was present. No pericapsular inflammation was noted.

### **Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

### **Pancreas**

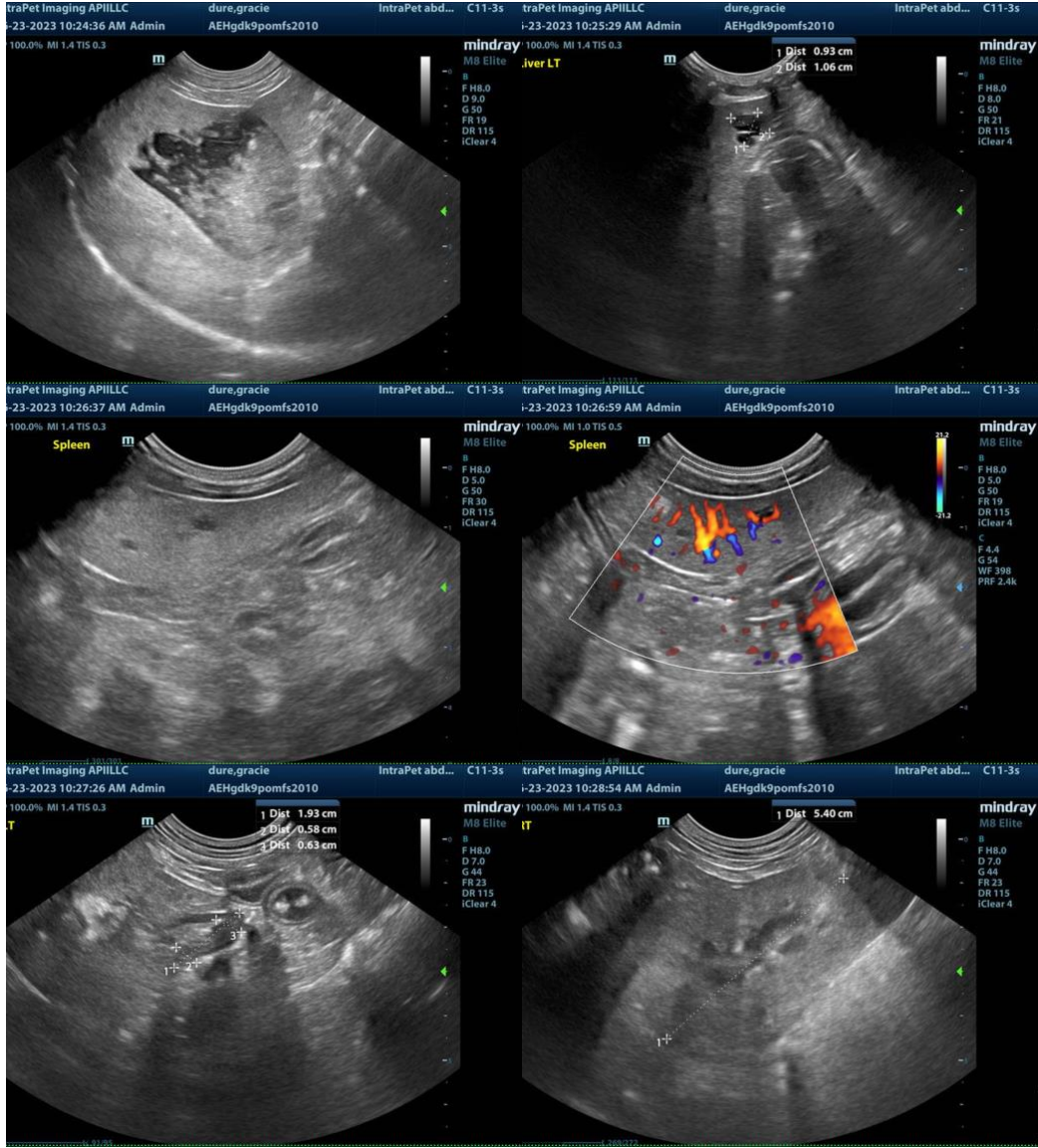
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

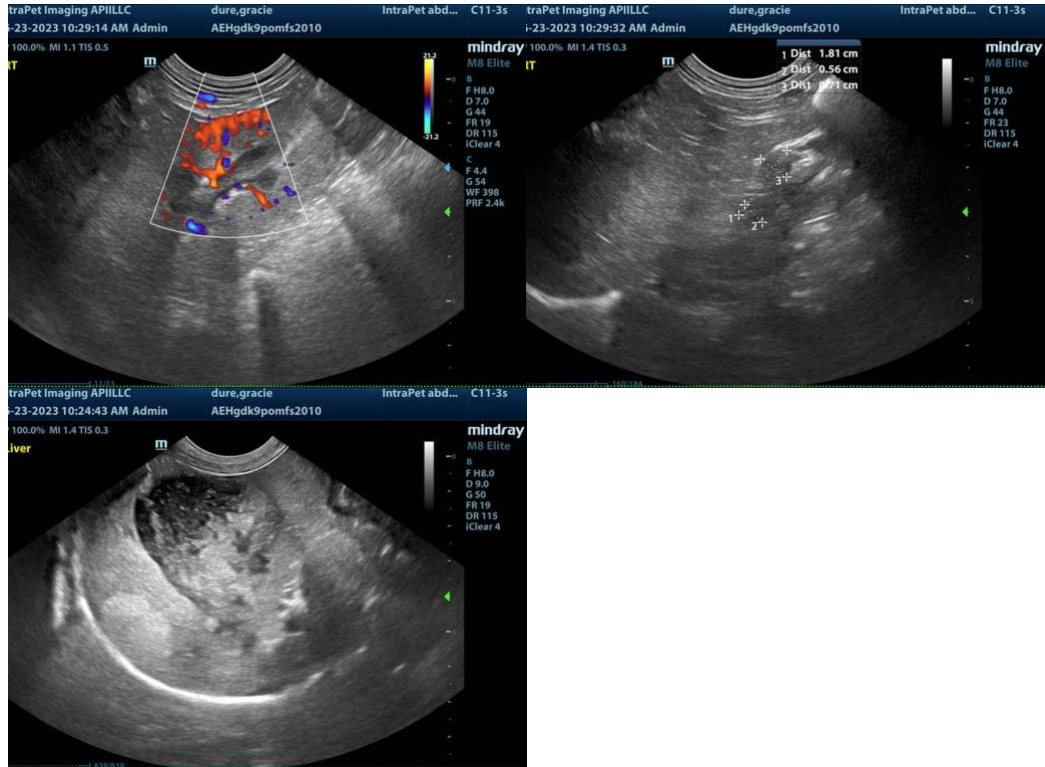
## **ULTRASONOGRAPHIC FINDINGS**

- Nodular hyperplasia vacuolar hepatopathy liver pattern with occasional cyst and gallbladder mucocele
- Undefined splenic nodule, minor
- Chronic interstitial nephrosis renal pattern with pyelectasia. Given the history, UTI and underlying low-grade pyelonephritis is suspected.

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

72hr IV fluid protocol, urine culture, and blood pressures are all indicated. Ursodiol therapy over the next 6-8 weeks and/or gallbladder motility study are indicated. Prognosis is guarded. The kidneys subjectively appear near end stage.





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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com