



**PATIENT PRESENTING CLINICAL SIGNS**

Maddie Pinnell Clinical Exam Findings: acute azotemia and concern for UTI. Need cysto/culture & sensitivity  
Abnormal lab-work values:  
Phos 7.7  
**SPECIES** BUN 75  
Cr 4.3  
Canine SDMA 25

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Maltipoo **Urinary System**  
The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

Female Spayed **SEX**  
The left kidney is normal in size (3.78 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

08/06/2008 **AGE**  
The right kidney is normal in size (3.27 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

11.4 lbs **WEIGHT**  
**Adrenal Glands**  
The left adrenal gland is normal in size (0.46 cm at cranial pole) (0.45 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Andrea Nicastro, DVM, Diplomat ACVIM (*Small Animal Internal Medicine*) **INTERPRETED BY**  
The right adrenal gland is in normal size (0.70 cm at cranial pole) (0.43 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Andrea Nicastro, DVM, Diplomat ACVIM (*Small Animal Internal Medicine*) **IMAGING PERFORMED BY**  
**Spleen**  
The spleen is normal in size (1.21 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.

Sun Dog Cat Moon **HOSPITAL NAME**  
**Liver**  
The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

Pruitt **REFERRING VET**  
The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

12872 **INVOICE**  
**Gastrointestinal**  
The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering

**DATE**  
4.27.23

pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The colonic lumen contains shadowing fecal material. There is no evidence of an obstructive pattern.

#### ***Pancreas***

The base and right limb of the pancreas are visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic 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 or obvious right atrial/auricular mass.

### **ULTRASONOGRAPHIC FINDINGS**

#### **Primary Findings**

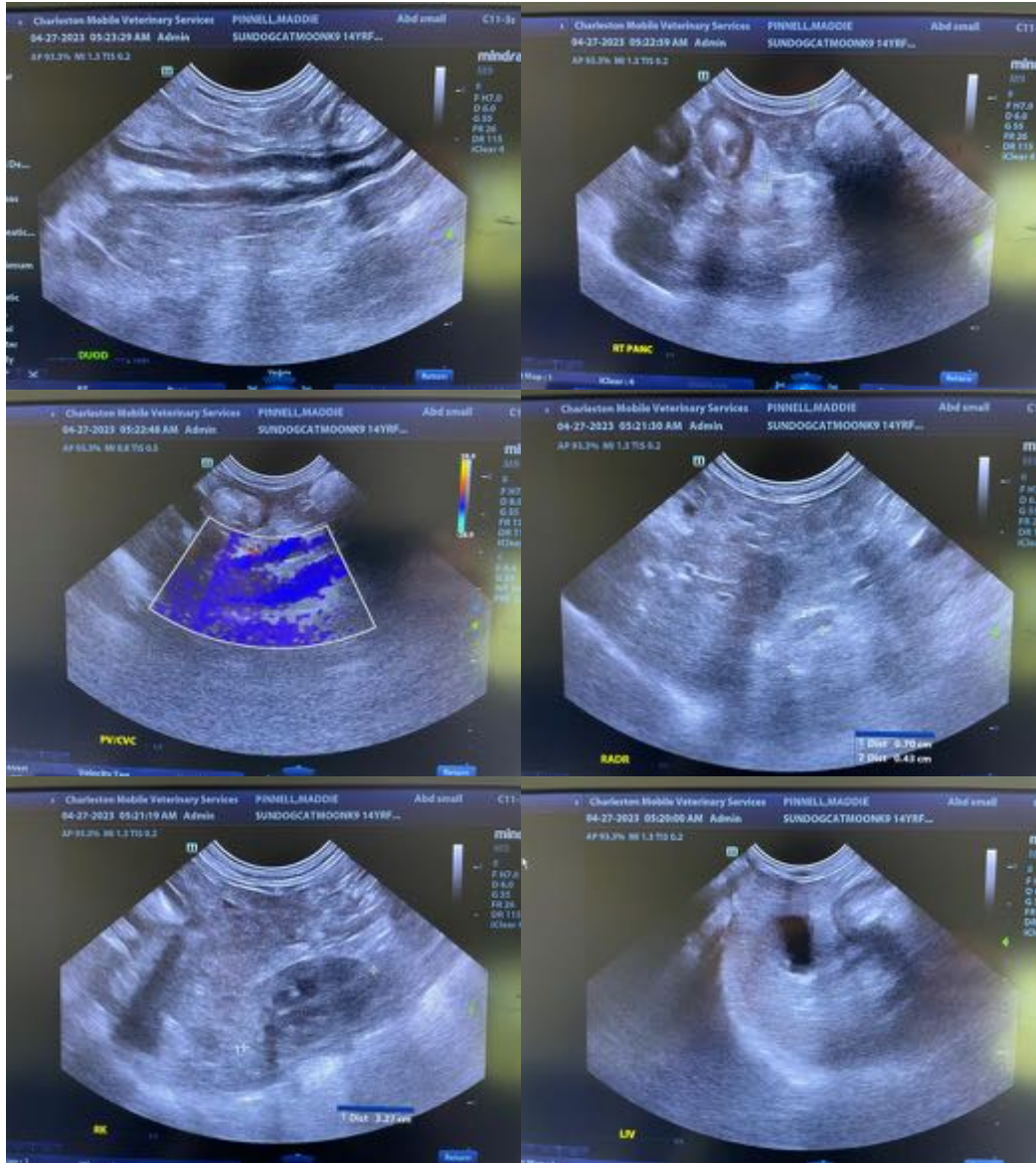
- Bilateral chronic renal changes with subtle dystrophic mineralization. Chronic or acute-on-chronic renal failure is suspected.

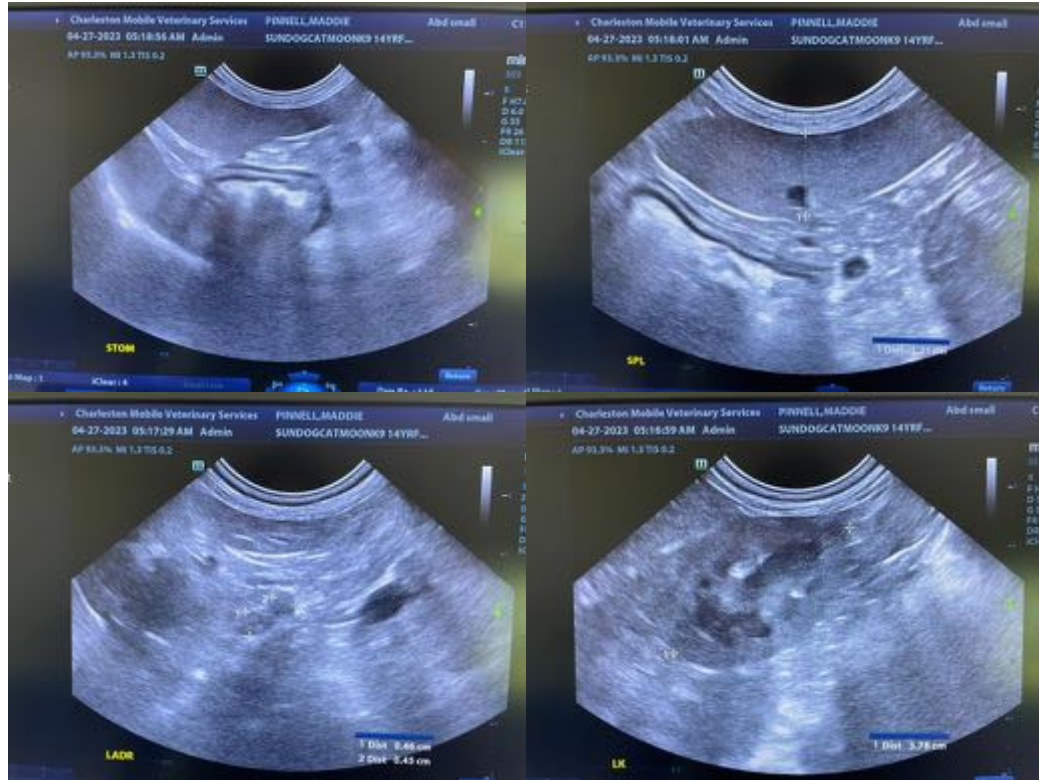
#### **Secondary Findings**

- The hepatic parenchymal changes are most consistent with a benign diffuse hepatopathy. Vacuolar hepatopathy (i.e., idiopathic/endocrine) is the top differential. However, correlation with the patient's liver values is recommended.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

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

- Urine culture and sensitivity
- A UPC is recommended (if proteinuria is present in the absence of infection)
- Baseline blood pressure measurement
- Transition to a prescription renal diet (if the patient will tolerate it)
- Fluid therapy and supportive measures as needed
- Serial monitoring of the patient's renal values is recommended to assess for progressive azotemia





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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