

**DATE PRESENTING CLINICAL SIGNS**

11/5/21 History: 1 yr hx of thinning haircoat, progressive PU/PD, rising liver enzymes. Pot-bellied appearance. LDDST inconsistent with HAC.

**PATIENT**

Teddy Wilson

Current Medications: No current medications.

Lab Results: GLOB 4.6 (2.5 - 4.5) Prev 3.8, ALB/GLOB 0.7 Prev 0.8

ALT 240 (10 - 125) Prev 158, ALKP 1337 (23 - 212) Prev 1192. Attached separately.

**SPECIES**

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Canine

Sedation: Sedation not required for scan.

Stat Report: STAT report not requested by the veterinarian.

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

Bichon Mixed Breed

**Urinary System****SEX**

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 2.0 cm, are normal.

Neutered Male

**AGE**

10/2/2006

**WEIGHT**

The prostate is normal in size (0.97 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

18.5 Pounds

The left kidney is normal in size (5.28 cm in length); with a normal shape and smooth peripheral contours. The cortex is mildly thickened and heterogeneous with several small cortical cysts visualized. There is moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

**INTERPRETED BY**

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

The right kidney is normal in size (5.48 cm in length); with an irregular shape. A 3.49 cm x 2.22 cm irregular cortical cyst is observed at the medial aspect. A small amount of suspended echogenic debris is observed within the cyst. The cyst causes capsular expansion. In the remainder of the kidney, there is a normal 1:3 cortex to medulla ratio with poor corticomedullary distinction. The cortex is slightly heterogeneous in appearance with several small cortical cysts seen. Trace pyelectasia is present. Hyperechoic shadowing diverticular foci are observed. There is no evidence of infarcts or hydroureter.

**HOSPITAL NAME**

Timonium AH

**REFERRING VET****Adrenal Glands**

Dr. Montessi

The left adrenal gland is enlarged (0.81 cm at cranial pole) (0.93 cm at caudal pole) (2.79 cm in length); with an irregular shape, bordering on a mass effect. The parenchyma is heterogeneous in appearance with loss of glandular detail. Surrounding vasculature appears normal with no evidence of invasion.

**INVOICE**

14188

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.

The right adrenal gland is normal size (0.43 cm at cranial pole) (0.54 cm at caudal pole) (1.80 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.

### ***Spleen***

The spleen is normal in size (0.80 cm 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 prominent in size slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely heterogeneous in appearance. At least 2 cystic areas are observed, the larger measuring 2.21 cm x 1.70 cm, the smaller measuring 1.14 cm x 0.71 cm. These lesions are near the diaphragm. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestions.

The gall bladder is moderately distended. The wall is normal in thickness. A large amount of aggregated echogenic suspended sludge and a partially stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.

### ***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 pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal (xxx cm) with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The colonic lumen is distended with granular appearing fecal material. There is no evidence of obstruction.

### ***Pancreas***

The pancreas is diffusely prominent in size with slightly irregular peripheral contours. The parenchyma is isoechoic relative to surrounding omental fat and diffusely mottled in appearance with at least one small echogenic nodule, measuring 0.56 cm in the right limb. The pancreatic duct is not overtly dilated. There is no evidence of peripancreatic effusion.

### ***Free Abdomen***

There is no evidence of free fluid. The abdominal lymph nodes are normal/not visible.

### ***Other***

Several B-lines are visualized within the thorax.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered unlikely. Hepatic cysts, the hepatic cysts trend toward the benign with a lower possibility of emerging neoplasia.
- Left adrenomegaly +/- mass effect. Differentials include nodular hyperplasia, early neoplasia.

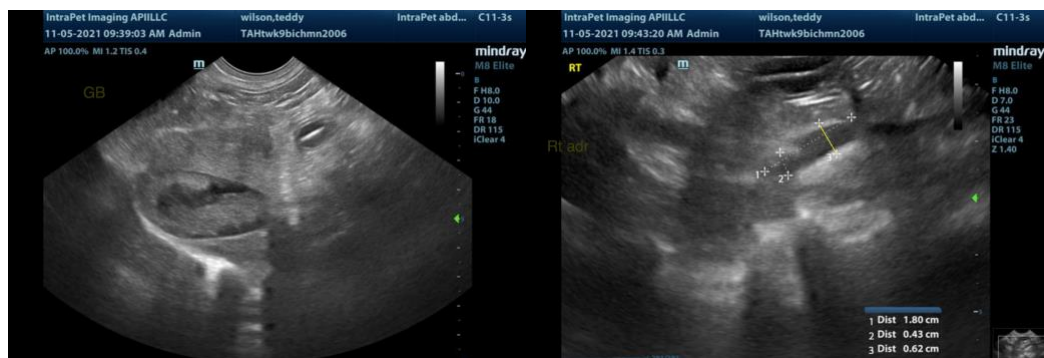
- The gallbladder changes are consistent with a developing mucocele.

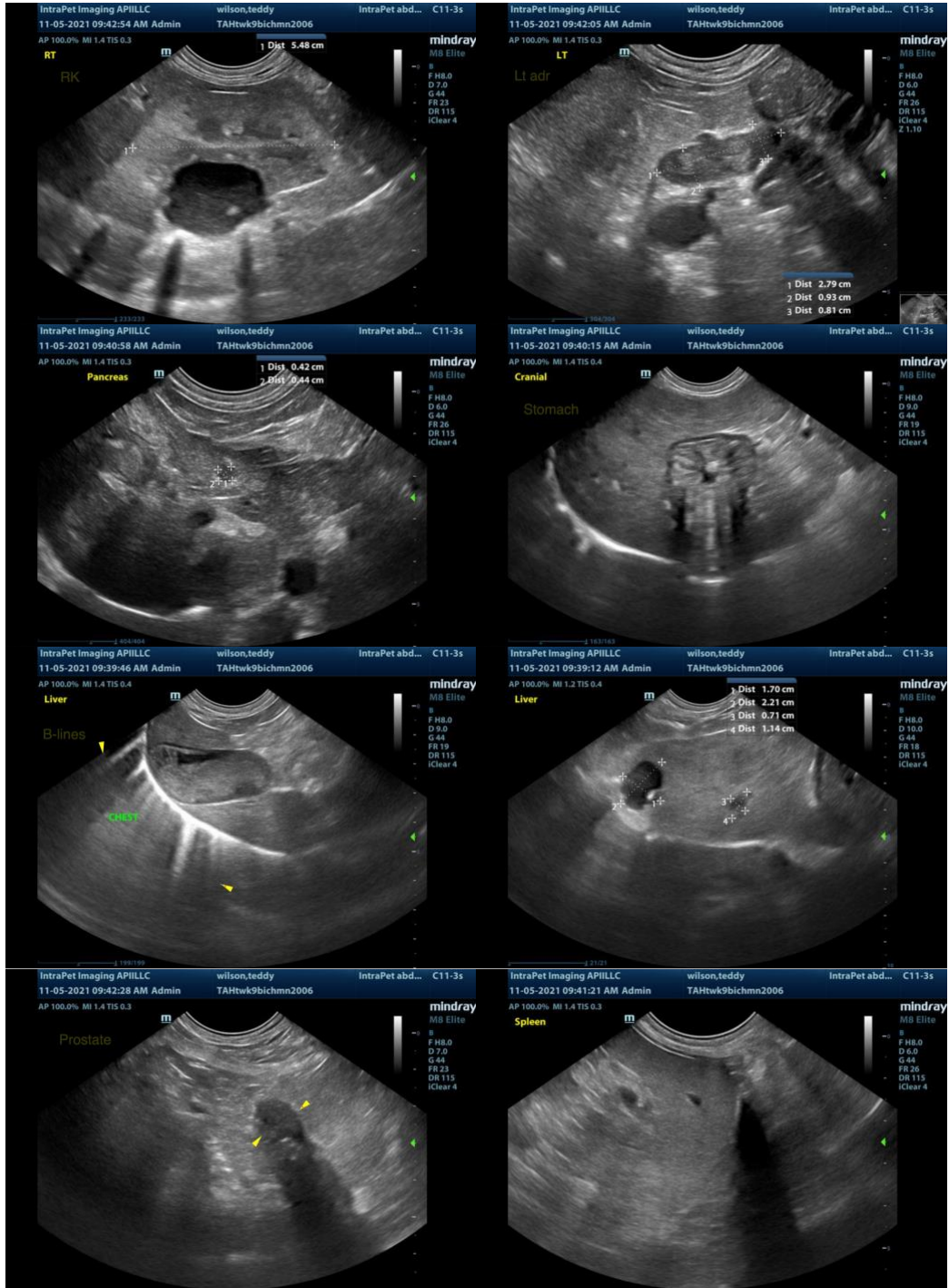
### Secondary Findings

- Age-related pancreatic remodeling. The pancreatic nodule trends toward the benign (i.e., benign nodular hyperplasia with a low possibility of an early neoplastic process).
- Bilateral age-related renal pathology with dystrophic mineralization and cortical cysts (large cortical cysts on the right side).
- The b-lines within the thorax are suggestive of pulmonary parenchymal disease.

### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the presence of B-lines in the thorax, three-view chest radiographs are recommended to assess cardiopulmonary status.
- Regarding the patients' clinical signs, consider the following:
  1. Additional testing for Cushing's disease (i.e., ACTH stimulation test) +/- adrenal panel (sent to the University of Tennessee).
  2. Urine culture and sensitivity (to further assess for causes of PU/PD).
  3. +/- pre-and postprandial serum bile acids
- Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. Serial sonographic monitoring (e.g., every 6-8 weeks) of the gall bladder is recommended to assess for progression to a fully formed mucocele.
- Regarding the left adrenomegaly, a repeat ultrasound is recommended in 4-6 weeks to assess for progression.
- Also consider a baseline blood pressure measurement to assess for hypertension and a UPC (if proteinuria is present).





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.

**Andrea Nicastro**, DVM, Diplomate DACVIM (Small Animal Internal Medicine)  
info@SonoPath.com