


**PATIENT PRESENTING CLINICAL SIGNS**

Stuart Bird History: Pet presented for Pu/PD. Owner informs that pet started drinking a lot in the past few months. Pet has a history of severe anxiety not responding well to medication, pet does best with acepromazine.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: April 29 2022- BW- wbc's- 3.9, neutrophils- 2.5, lympho-0.8, BUN- 33, ALT- 145, CK- 268. normal thyroid. OCT 26 2022- normal CBC, chemistry- glucose 115, calcium - 12, ALT- 148, ALP -318. normal thyroid. 11/12/22- ACTH stim - pre- 11, post- 20. 10/26/22- u/a- sgr- 1.015, rbc's- none to rare, WBC's- 5 cell/ul

Canine

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Bichon Frise **Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is mildly to 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.

**SEX**

Neutered Male

The region of the prostate is not visualized due to its pelvic location.

**AGE**

13 years

The left kidney is normal size (4.37 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Mild pyelectasia is present (0.23 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

14 lbs

The right kidney is normal size (4.36 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**INTERPRETED BY**

Andrea Nicastro,  
DVM, Diplomate  
ACVIM (*Small Animal  
Internal Medicine*)

**Adrenal Glands**

The left adrenal gland is normal size (0.45 cm at cranial pole) (0.52 cm at caudal pole); 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.

**IMAGING PERFORMED BY**

Dr. A

The right adrenal gland is normal size (0.70 cm at cranial pole) (0.54 cm at caudal pole) (1.91 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.

**HOSPITAL NAME**

Surfside PH

**Spleen**

The spleen is normal in size (0.74 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Several irregular myelolipomas are observed in the region of the hilus. Splenic vasculature is normal.

**REFERRING VET**

Americo Abadia

**Liver**

The liver is subjectively prominent to enlarged in size with normal swollen peripheral contours on the right side and normal margins on the left. The parenchyma is isoechoic relative to the spleen and diffusely heterogenous in appearance, with ill-defined hypoechoic and hyperechoic nodules. A 1.12 cm cyst is observed on the right side, in the region of the right medial lobe. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

**INVOICE**

11885

**DATE**

11.21.22

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate to large amount of aggregated, echogenic, partially dependent debris/sludge 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 not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. 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. There is no evidence of an obstructive pattern.

### ***Pancreas***

The base and limbs 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***

Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Mild, bilateral, chronic, age-related renal changes with left pyelectasia
- Nonspecific diffuse hepatopathy. Top differentials include regenerative nodular hyperplasia, vacuolar hepatopathy, infiltrative neoplasia (more concerning on the right side), inflammatory disease, hepatotoxicosis (i.e., copper), other hepatopathy.
- The gall bladder sludge could be consistent with cholestasis, fasting or an emerging mucocele.
- Trace free fluid

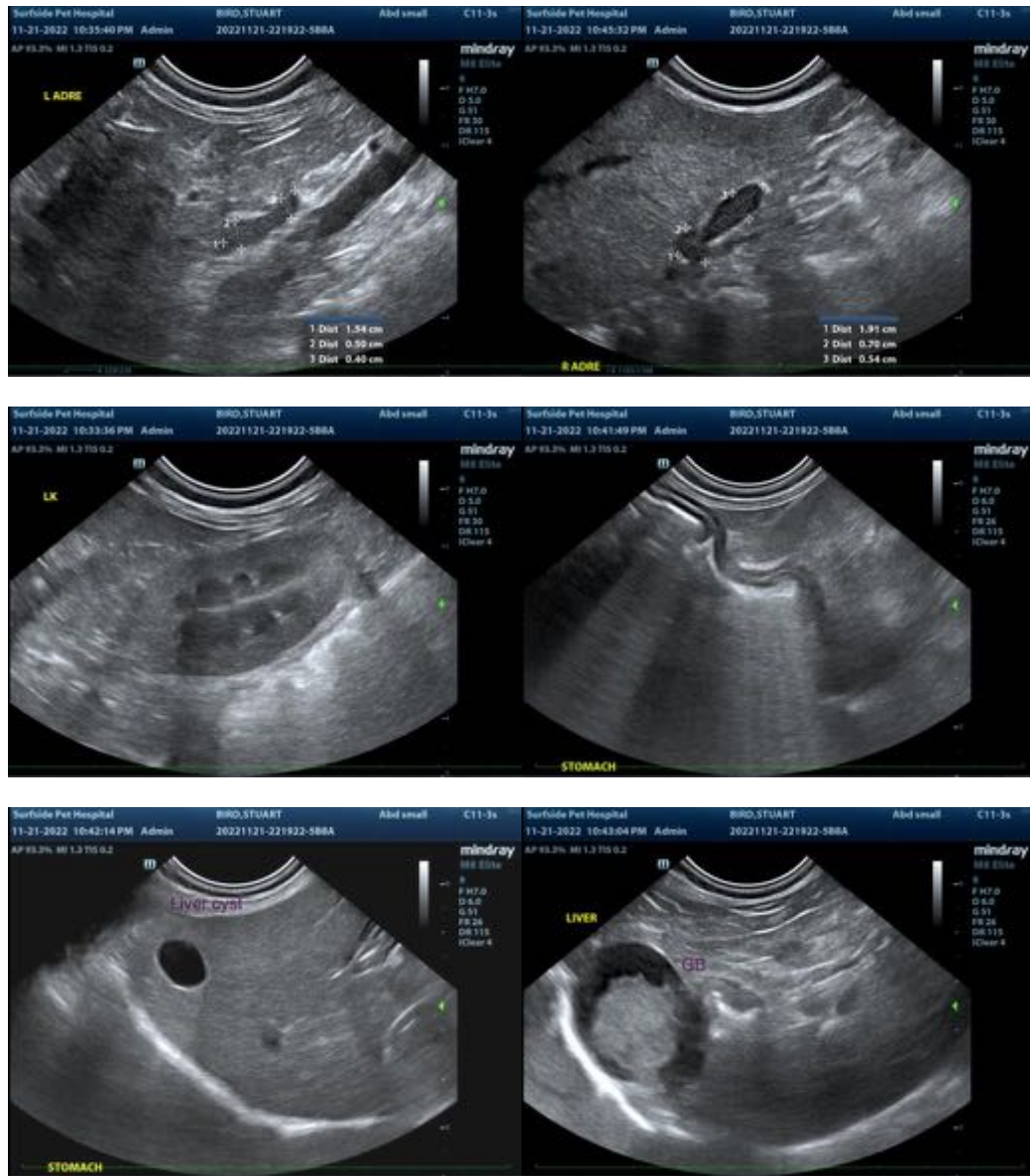
### **Secondary Findings**

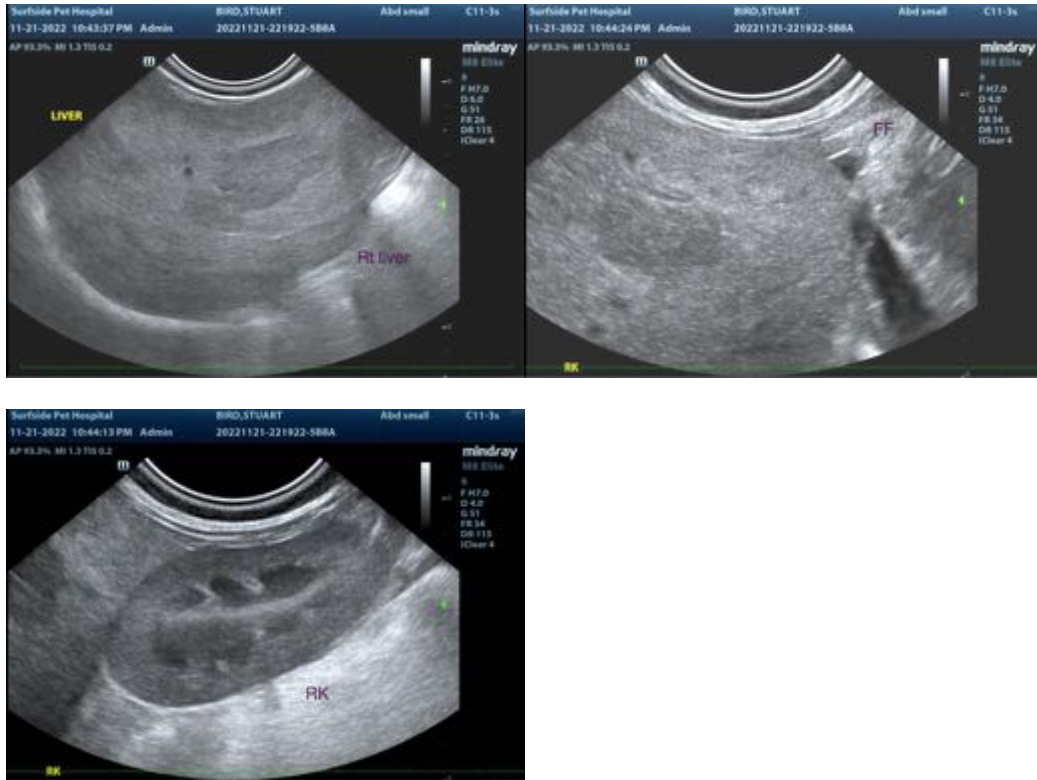
- Age-related pancreatic remodeling

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

- Given The history of PU/PD, consider the following:
  1. Urine culture and sensitivity
  2. Pre-and postprandial serum bile acids to assess for hepatic dysfunction
  3. Leptospirosis testing (i.e., blood and urine PCR, serology)
  4. Additional testing for Cushing's Disease (i.e., low-dose dexamethasone suppression test)
  5. +/- adrenal panel (University of TN)
  6. Depending on the results of the above diagnostics, additional testing (i.e., DDAVP trial, modified water deprivation test) may be warranted.
- Regarding the hypercalcemia, consider the following:
  1. Rectal examination to assess for anal gland masses
  2. Three-view thoracic radiographs to evaluate for occult neoplasia in the chest

3. Ionized calcium +/- PTH/PTHrP





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.

**Andrea Nicastro**, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)  
[info@SonoPath.com](mailto:info@SonoPath.com)