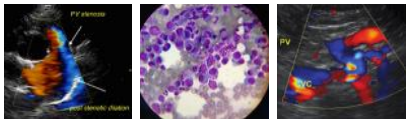
IMAGING PERFORMED BY

IntraPet.com



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**DATE**

12/16/21

**PATIENT**

Beasley Cook

**SPECIES**

Canine

**BREED**

Goldendoodle

**SEX**

Female Intact

**AGE**

3/2/13

**WEIGHT**

63 Lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Gambrills VC

**REFERRING VET**

Dr. Orenstein

**INVOICE**

13079

## PRESENTING CLINICAL SIGNS

History: Losing weight.
Additional history: A urinalysis reveals pyuria, bacteriuria and proteinuria. ALT is 403, ALP is 765, GGT 64, normal Tbili.

Lab Results: Attached separately.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended. The wall is normal in thickness with emphysematous changes, particularly along the ventral aspect. Several small cystic calculi are visualized as well as a small amount of echogenic debris. The region of the trigone is normal. Mineralized debris is observed within the proximal urethral lumen without obvious evidence of luminal dilation.

The left kidney presented normal size (7.12 cm in length); with a normal shape and smooth peripheral contours. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex and the cortical parenchyma is heterogeneous in appearance. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

The right kidney is normal in size (7.31 cm in length); with a normal shape and smooth peripheral contours. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex and the cortical parenchyma is heterogeneous in appearance. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

### *Adrenal Glands*

The left adrenal gland is enlarged (0.95 cm at cranial pole) (1.07 cm at caudal pole) (2.60 cm in length); with a relatively normal shape and smooth peripheral contours. The parenchyma is hypoechoic with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (0.84 cm at cranial pole) (0.86 cm at caudal pole) (2.86 cm in length); with a relatively normal shape and smooth peripheral contours. The parenchyma is hypoechoic with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

### *Spleen*

The spleen is normal in size (1.67 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 enlarged with swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely mottled and heterogeneous in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is moderately distended. The wall is mildly thickened (up to 0.48 cm) and hypoechoic. There appears to be mineralization along the mucosal surface of the gallbladder wall. Mineralized sand as well as small choleliths and echogenic debris are 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 small intestinal lumen is segmentally gas distended. 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 prominent in size with slightly irregular peripheral contours. The parenchyma is hyperechoic relative to surrounding omental fat and mottled in appearance. No distinct focal lesions are observed. The mesentery effacing the serosal surface is hyperechoic.

### *Free Abdomen*

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

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune mediated disease, infiltrative neoplasia (i.e., lymphoma), hepatotoxicosis (i.e., copper), other hepatopathy +/- concurrent age-related changes.
- The gallbladder wall changes could be consistent with cholecystitis, edema, other. Small non-obstructive choledocholiths.
- Cystic calculi with bladder wall emphysema, likely secondary to infection with gas-producing bacteria.
- The pancreatic changes are consistent with chronic active pancreatitis with age-related remodeling +/- fibrosis.

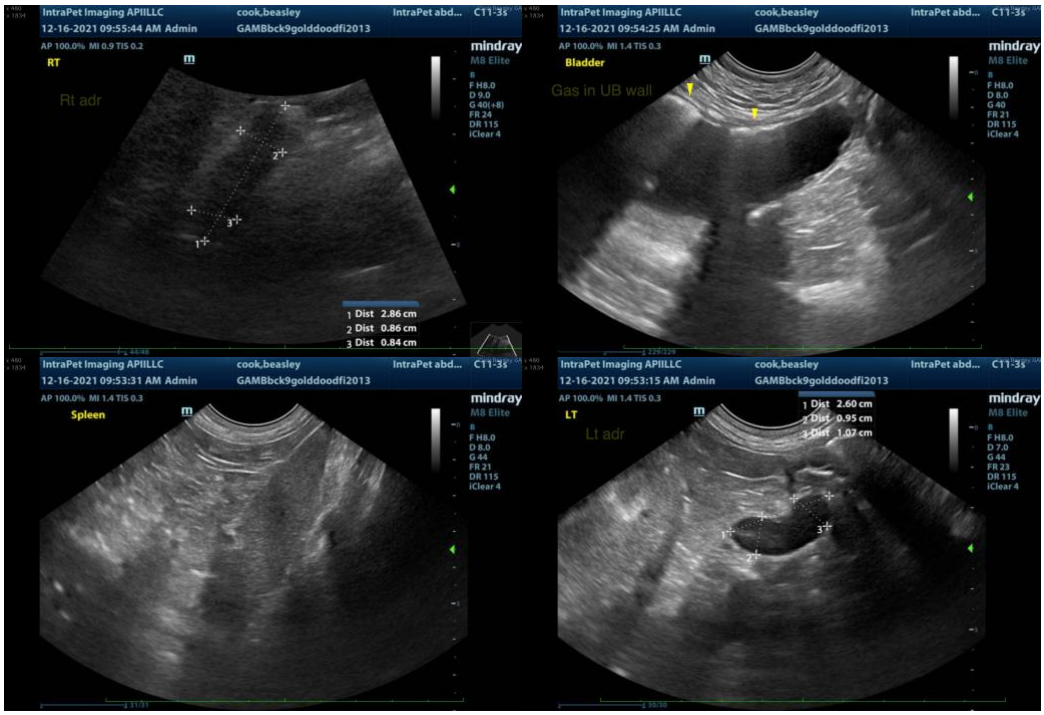
### Secondary Findings

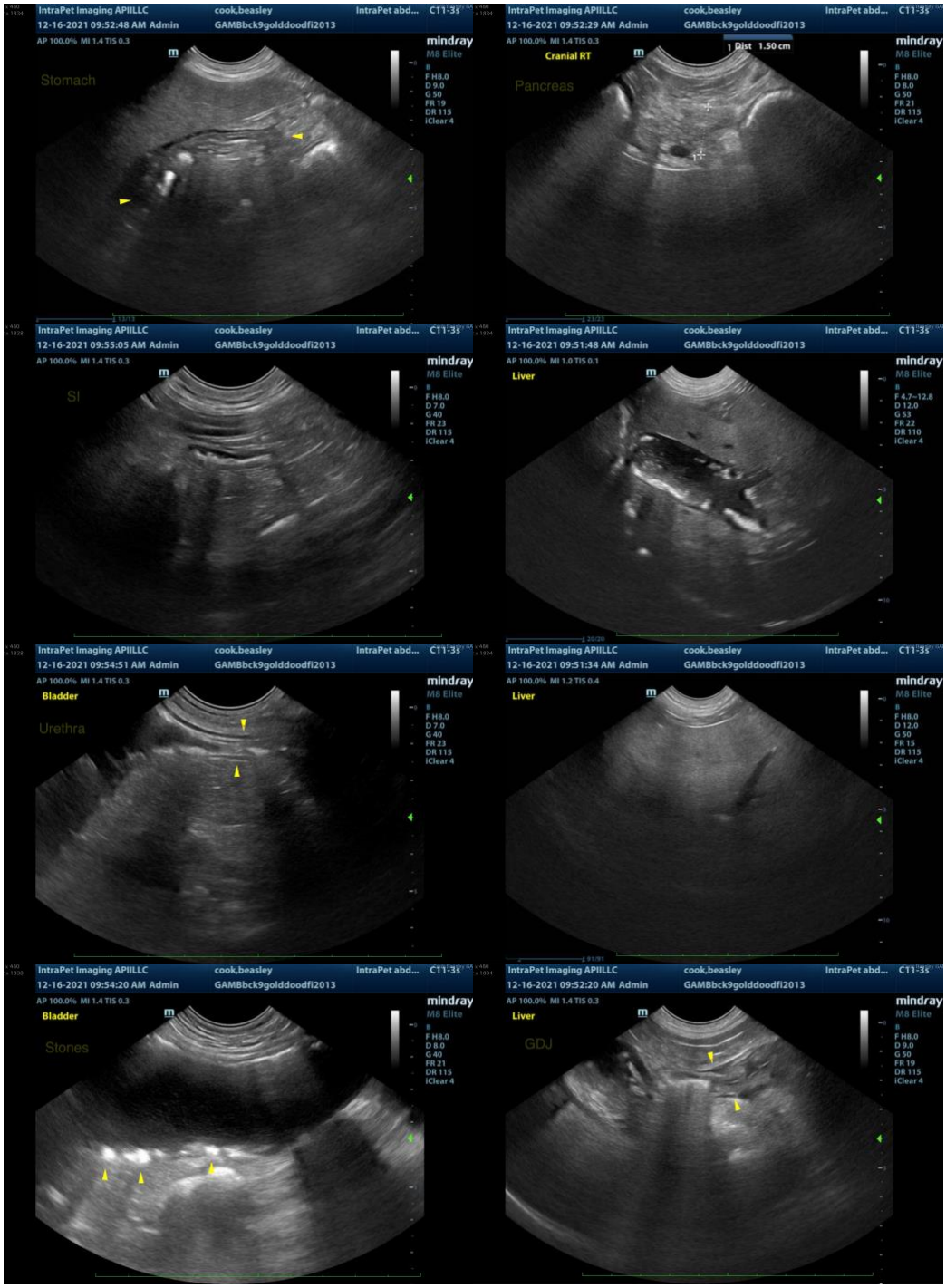
- Bilateral adrenomegaly

- Bilateral age-related renal changes with dystrophic mineralization

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the urinary bladder wall changes, a urine culture and sensitivity is recommended. Empirical treatment for a urinary tract is recommended while awaiting test results.
- Three-view thoracic radiographs are recommended to assess for occult neoplasia in the chest.
- A fine needle aspirate of the liver is recommended if clotting status is appropriate.
- Also consider a malabsorption panel, including serum cobalamin, folate, TLI and PLI to further assess for small intestinal and pancreatic disease.
- Depending on the results of the above diagnostics, an abdominal exploratory with GI and hepatic biopsies may be warranted. If surgery is pursued, a cystotomy with stone removal analysis and culture should also be performed.






**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