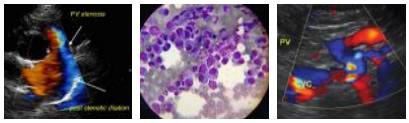
IMAGING PERFORMED BY

IntraPet.com



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**DATE**

1/23/23

**PATIENT**

Puma Brady

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

8/1/06

**WEIGHT**

4.6 Pounds

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**HOSPITAL NAME**

Everhart VH

**REFERRING VET**

Dr. Rubinstein

**INVOICE**

20761

## PRESENTING CLINICAL SIGNS

History: Pt presents for weight loss and vomiting 3x/day. Known hyperthyroid but unable to get meds into pt at home.

Current Medications: Metro, Methimazole, Cerenia, Mirtaz.
Lab Results: 1/5- T4 elevated at 7.7, ALT 104, BUN 54, Creat 2.1, Mg 1.4, USG 1.026.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are bilaterally normal in size. The kidneys are irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. No mineral is observed. Mild to moderate pyelectasia is noted in the left kidney measuring 0.47 cm in the transverse view. The left kidney measures 2.53 cm. The right kidney measures 2.8 cm.

### *Adrenal Glands*

Adrenal glands are bilaterally uniformly plump egg-shaped adrenals (left adrenal measures 0.46 cm, right adrenal measures 0.53 cm), hypoechoic in echogenicity. This is most likely a benign age-related change. This change can be caused by chronic stress/disease, so investigation for/management of other disease (chronic kidney disease, hyperthyroidism, etc.) is recommended.

### *Spleen*

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

### *Liver*

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. In the mid right liver, there is a 2.76 cm x 3.0 cm primarily hyperechoic partially cystic mass. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is almost empty. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

### *Gastrointestinal*

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### *Pancreas*

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

### *Free Abdomen*

There is no evidence of peritoneal effusion. The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Chronic Kidney Disease with mild to moderate left sided pyelectasia – This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc. Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.
- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Feline biliary cystadenoma – In a senior cat, this liver lesion is most consistent with a/multiple benign biliary cystadenoma(s). Malignancy cannot be ruled out but is considered less likely give lack of clinical signs and/or laboratory changes.

### Secondary Findings

- Chronic active pancreatitis
- Age-related adrenal gland changes

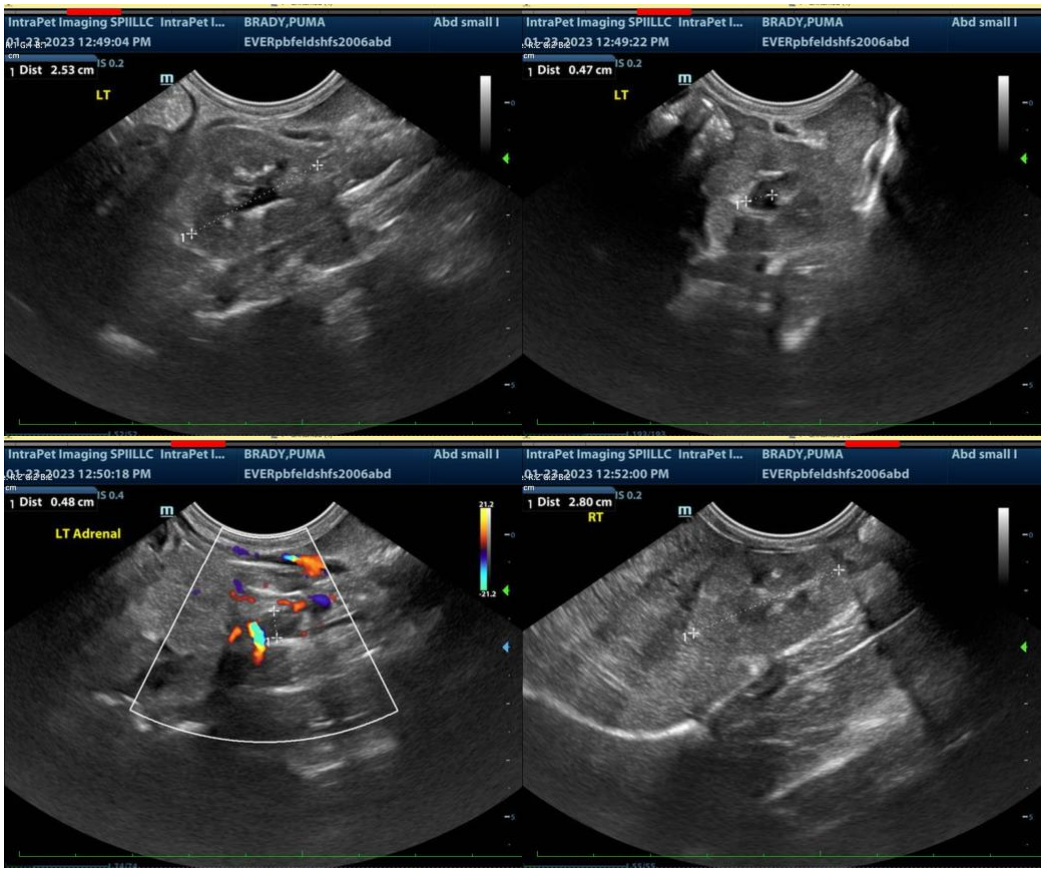
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

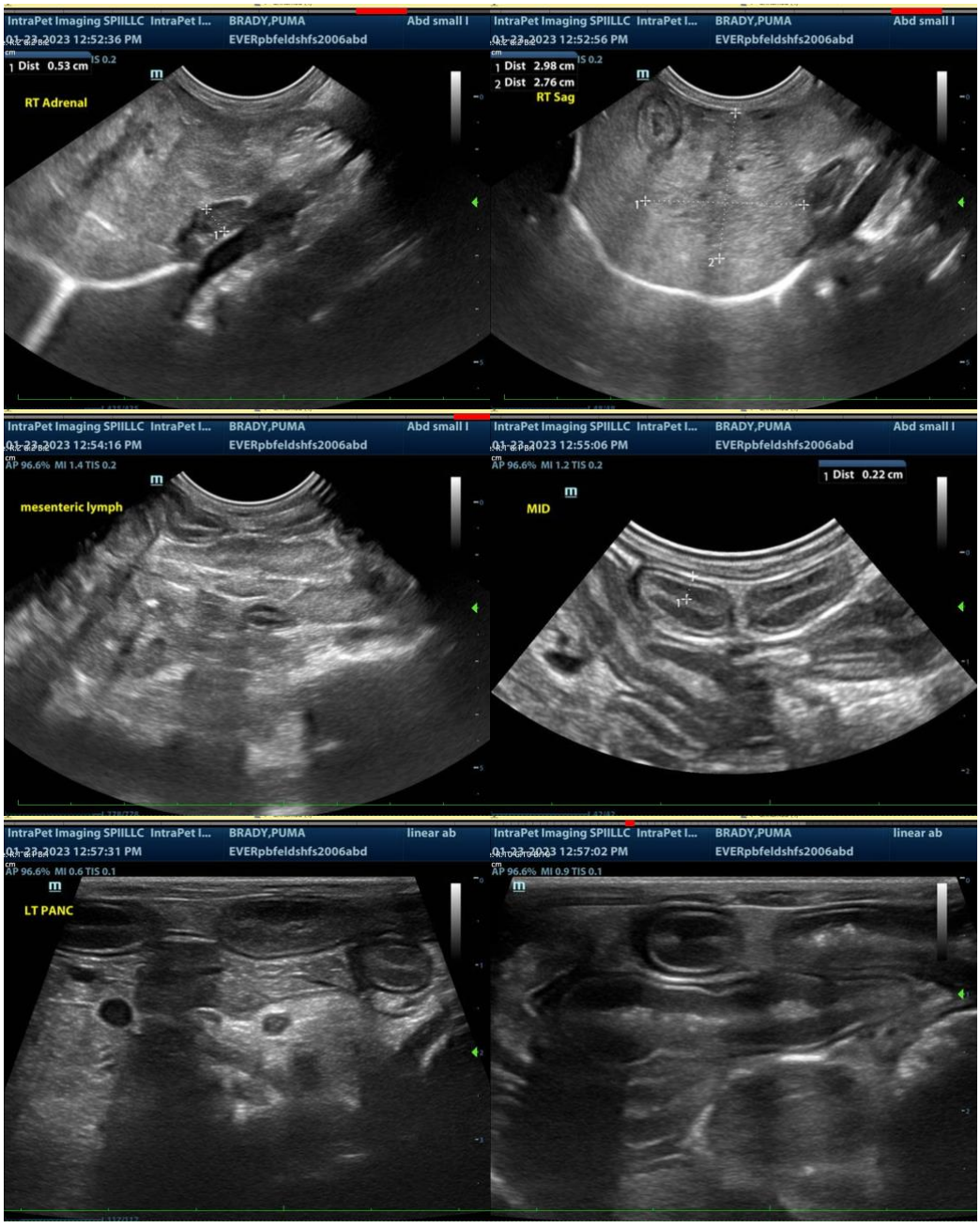
The pathology described above is primarily age-related/benign in appearance without an obvious visible explanation for this patients vomiting and/or weight loss, however, given the reported hyperthyroidism, and an inability to orally medicate the patient at home, hyperthyroidism is considered the primary differential for the vomiting, the weight loss, as well as potentially the increased ALT.

Further evaluation of the gastrointestinal tract could be considered with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Additionally, while the liver mass trends in appearance towards benign, a fine needle aspirate could be considered if patients coagulation status is appropriate.

Additionally, if not recently evaluated, urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.
In the meantime, other options to address the hyperthyroidism include a transition to a YD diet if tolerated or potentially transdermal vs oral methimazole or even i131 therapy, although pursuing i131 therapy should be done very cautiously given the suspicion of chronic kidney disease. Recommendations would be to try to obtain a euthyroid stat via an alternative method first, reassess the kidneys in a euthyroid state and then if everything is stable, pursue i131 therapy.






**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.

**Beth Johnson, DVM DACVIM**
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