

**DATE PRESENTING CLINICAL SIGNS**

3/16/23

**PATIENT**

Lacey Lotz

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Spayed Female

**AGE**

5/10/13

**WEIGHT**

10.4 Pounds

**INTERPRETED BY**Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)**HOSPITAL NAME**

Everhart Vet Hospital

**REFERRING VET**

Dr. Betta

**INVOICE**

45985

Presented for pu/pd. Dx with Cushings disease in 1/2020. Was put on trilostane 30mg 1 tab PO q24hr. Decreased dose of trilostane 20mg q24hr in Nov 2020. Decreased dose of trilostane 15mg q24hr in Feb 2021. In April 2021, acth stim showed pre 0.7, post < 0.2. electrolytes normal on labs. no gi signs noted. Spoke with internist who recommended physiological dose of pred- 1.25mg SID. do for a couple weeks and then do EOD a week. when pred off for 24 hrs and do another stim with fasted. June 2021 stim results pre 7.0, post 7.1. kept off of trilostane. July 2021 acth stim results pre 4.6, post 7.0. proteinuria (with quiet sediment) noted on labs in July 2021. BP 140mmHg on doppler. Upc in Sept 2021 was 3.1. started on telmisartan 5mg q24hr and switched to kidney diet. Nov 2021 upc 4.2. Oscillometric BP done - systolic around 162-170mmHg. Pooled sample done in Dec 2021 and UPC was 1.5. seen in Jan 2022 for shivering and shaking. blood was too lipemic to run in house. was start on ursodiol 250mg 1/4 tab PO q24hr (suspect some gallbladder sludge seen). Repeated fasted acth stim in Jan 2022- pre 5.7, post 18.6. No trilostane added in. Seen in June 2022 for increased pu/pd - alp 1756, ggt 25. acth stim pre 5.0, post 18.0. Iddst recommended - 4.5, 4hr 0.8, 8hr 0.3. o told to monitor water intake. rechecked Iddst but no pu/pd noted - 5.4, 4hr <0.2, 8hr 1.3. now seen for pu/pd signs again. disc'd the alp 1784, ggt 95, phos 6.1, ca 11.8, k 5.6, na 140, chol 388, trig 3347. usg 1.010 with 3+ proteinuria. resubmitting upc with pooled sample. and will get bp the day of ultrasound. no gi signs noted at home. otherwise acting normal other than pu/pd. nsf on physical exam

Current Medications: semintra 10mg/ml 0.5ml PO q24hr

Lab Results: See attached.

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**

The urinary bladder is moderately distended with anechoic urine. The bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.35 cm) with mild pyelectasia at 0.37 cm. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.03 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.52 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.42 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### ***Spleen***

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### ***Liver***

The liver is large in size, and hyperechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a slightly irregular hypoechoic mass effect visualized in the ventral aspect of the liver measuring 4.31 cm x 1.88 cm. An additional hypoechoic nodule was visualized measuring 1.69 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a moderate to large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.20 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are occasional prominent mesenteric lymph nodes. One such lymph node measures 0.50 cm. The omentum is of normal echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Large, hyperechoic, heterogeneous liver with a large hypoechoic mass effect – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. The focal hypoechoic lesion could be consistent with a hyperplastic nodule, a hepatoma, etc. An underlying neoplastic process cannot be ruled out.
- Large gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

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

The liver is large and somewhat heterogeneous. These findings are most consistent with a vacuolar

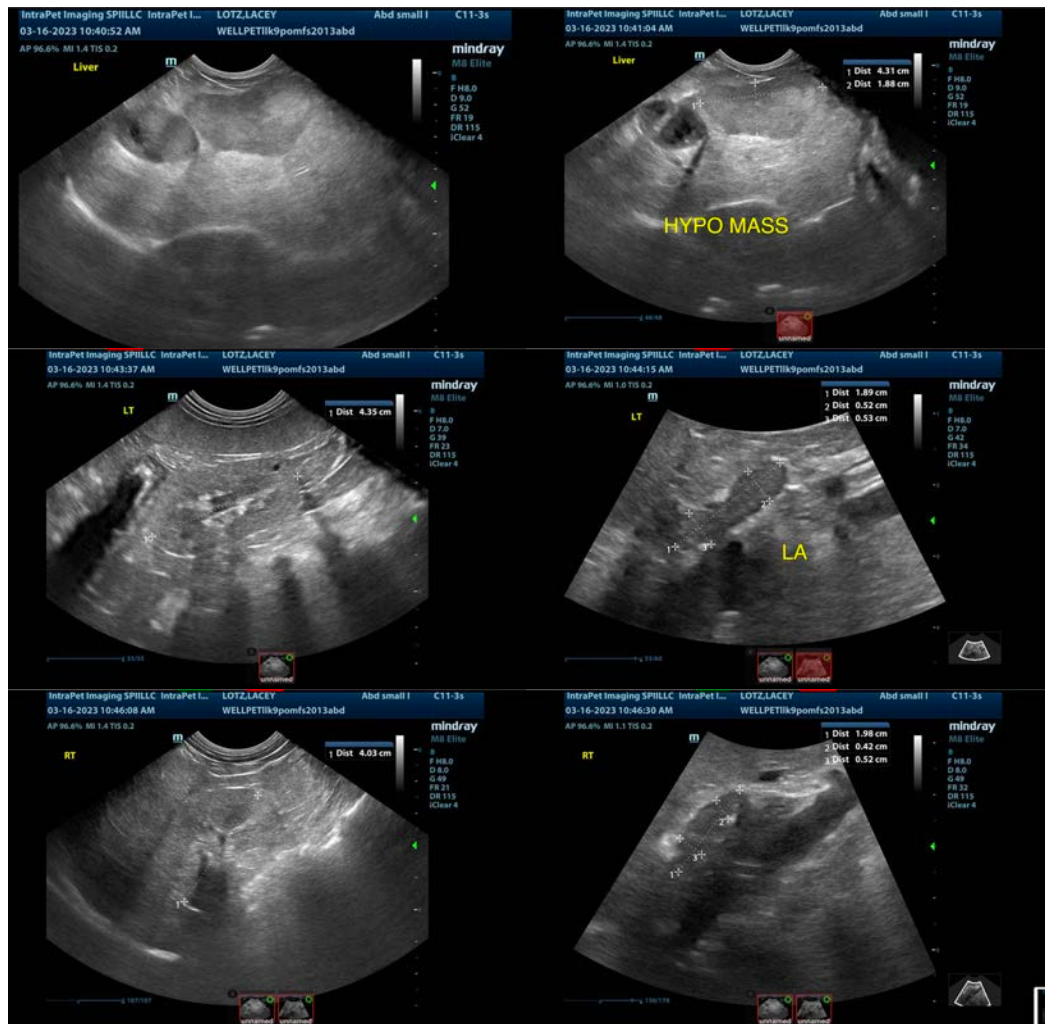
hepatopathy, which is consistent with the elevation in ALP reported. Additionally, there is a large focal hypoechoic mass effect. Consider I fine needle aspirate of this lesion. This has the characteristics of a benign lesion but is relatively large, and even a benign hepatoma could cause liver enzyme elevations, etc. A contrast CT scan could be considered to evaluate this further for possible removal and histopathology.

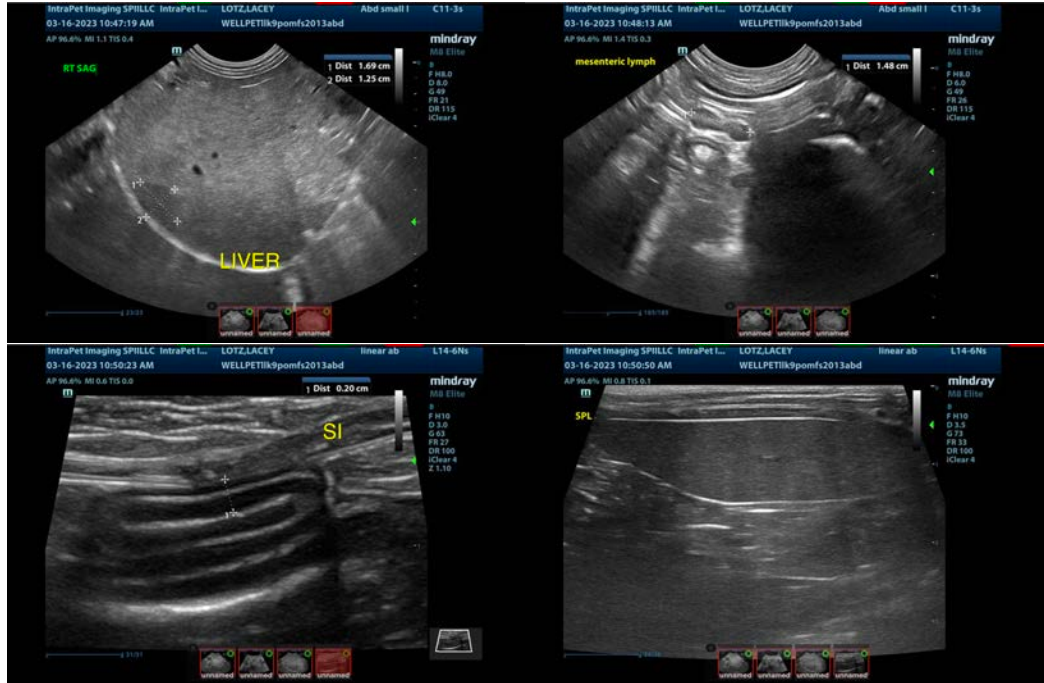
There is a moderate to large amount of debris in the gallbladder and some of this debris is mildly adherent to the gallbladder wall. Recommend continued Ursodiol therapy and continued monitoring.

The hypertriglyceridemia reported is significant. If this is persistent despite a 12+ hour fast, then consider medical therapy for hyperlipidemia.

The PU/PD reported could be secondary to the hepatic mass lesion, early recurrent Cushing's, a urinary tract infection (recommend urinalysis and culture), secondary to renal disease (given the proteinuria reported). Recommend continued monitoring of the proteinuria and blood pressure, as these issues may need to be addressed medically if persistent.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)  
kathleen.sennello@sonopath.com