

**DATE PRESENTING CLINICAL SIGNS**

4/18/22

Persistent elevated ALT and ALKP. No PU/PD reported. Outwardly healthy.

**PATIENT**

Maxwell Swigert

Current Medications: Has run a 30 day course of Amoxicillin and Denamarin since January 2022. Gabapentin 200mg 2 hours prior to scan.

Lab Results: In the face of appropriate Amoxi and Denamarin therapy- ALT is still elevated at 274, down from 307 but still abnormal. ALKP is 2552 same as January.

Date of Previous IntraPet Ultrasound: No previous.

**SPECIES**

Canine

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Stephanie Pearce RDCS, RVT.

**BREED**

Pomeranian

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder is moderately distended. The wall is normal in thickness with a smooth mucosal surface.

A small amount of gravity-dependent aggregated mineralized sand +/- tiny calculi is observed within the lumen. The region of the trigone and the visible portion of the proximal urethra are normal.

**SEX**

Male, neutered

The prostate is normal in size (0.73 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**AGE**

4/2/2013

The left kidney is normal size (4.78 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is diffusely thickened and hyperechoic and there is moderate loss of corticomedullary distinction. Several non-obstructive nephroliths are visualized. Mild to moderate pyelectasia is present (0.60 cm in the transverse plane). There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

24.7 lbs.

The right kidney is normal size (4.73 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is diffusely thickened and hyperechoic and there is moderate loss of corticomedullary distinction. Several non-obstructive nephroliths are visualized. Mild pyelectasia is present (0.21 cm in the longitudinal plane). There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)**Adrenal Glands**

The left adrenal gland is mildly enlarged (0.56 cm at cranial pole) (0.80 cm at caudal pole) (2.37 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**

Eastern AH

The right adrenal gland is mildly enlarged (0.70 cm at cranial pole) (0.77 cm at caudal pole) (2.24 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.

**REFERRING VET**

Dr. Warner-Jones

**INVOICE**

13214

**Spleen**

The spleen is normal in size (1.19 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 irregular peripheral contours. The parenchyma is isoechoic relative to the spleen. An approximately 5.5-6 cm swelling/mass effect appears to be arising from the left to mid caudal aspect. The lesion is largely isoechoic with ill-defined hyperechoic areas. The lesion causes capsular expansion. The remaining hepatic parenchyma is homogeneous. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and

smooth. A moderate amount of aggregated echogenic suspended debris/sludge in 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 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. No obstructive disease is noted.

### ***Pancreas***

The right limb of the pancreas is 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***

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

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings:**

- Hepatic swelling/mass effect, left to mid-caudal aspect. Differentials include a benign process (i.e., excessive regenerative nodular hyperplasia) vs neoplasia (i.e., adenoma, adenocarcinoma).
- The gallbladder changes are consistent with a developing mucocele.

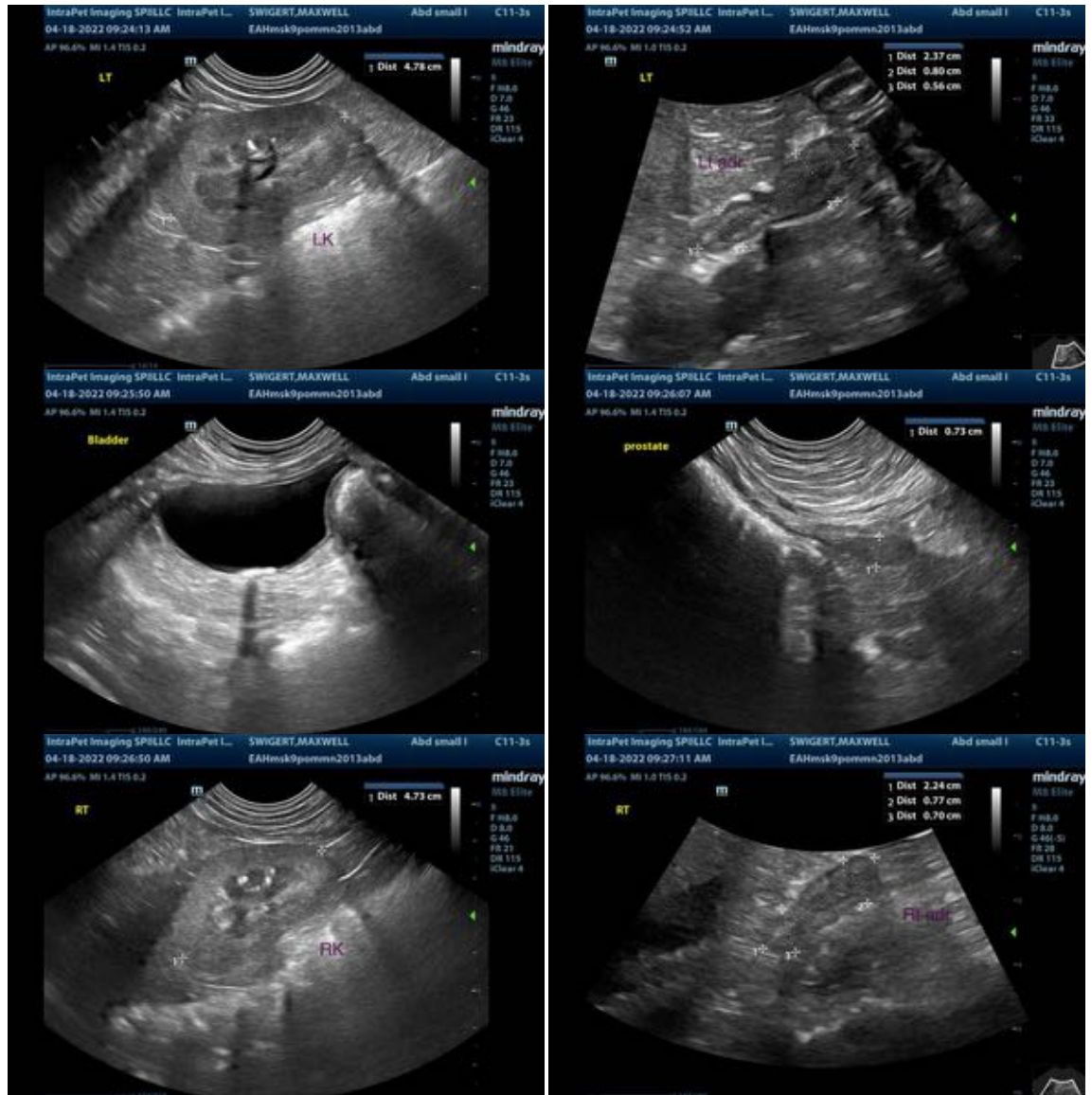
### **Secondary Findings:**

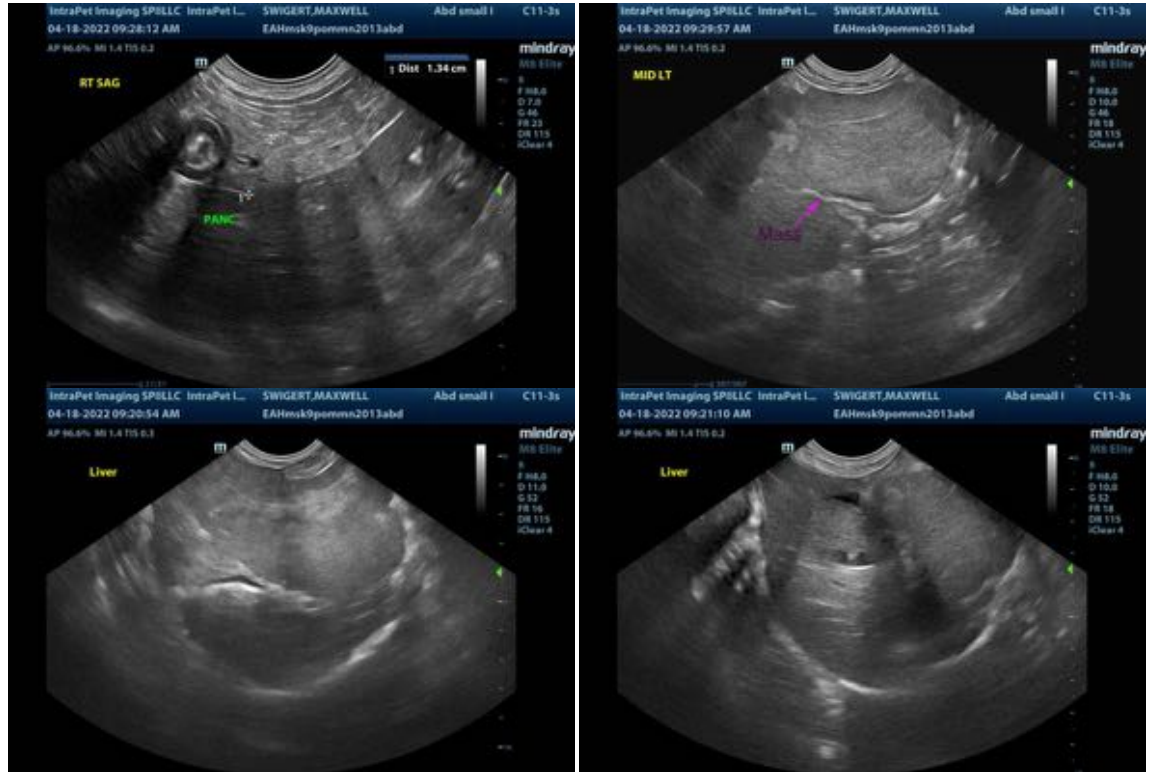
- Mild bilateral adrenomegaly.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral age-related renal changes with pyelectasia and non-obstructive nephrolithiasis.
- Mineralized urinary bladder sand +/- tiny calculi.

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

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- A fine needle aspirate of the hepatic mass can be considered if clotting status is appropriate. However, it should be noted that primary hepatic tumors are often difficult to diagnosis cytologically. Therefore, surgical biopsies/removal may be necessary to get a definitive diagnosis. If surgery is pursued, consider a prophylactic cholecystectomy and removal of the urinary bladder sand/stones with submission for analysis and culture. Referral to a board-certified surgeon is recommended. If surgery is not pursued at this time, consider Ursodiol therapy to address the gallbladder sludge with serial sonographic monitoring (i.e., every 2-3 months) to assess for progression to a fully formed mucocele.

- Consider a urinalysis with a urine specific gravity to determine if PU/PD may be present. If isosthenuria is present, further testing for Cushing's disease can be considered. If the test results are consistent with Cushing's disease, the benefit of treatment will need to be weighed against the risks if the patient is not overtly symptomatic.





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.

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