

**DATE PRESENTING CLINICAL SIGNS**

4/14/23

**PATIENT**

Kaylee Bowman

O presented with new onset of seizures in October 2022. Labwork at that time showed mild liver enzyme elevation (alt, ALKP), o declined follow up. Preanesthetic labwork for dental 4/2023 showed increase in liver enzyme elevation and o elected to pursue US. Clinically pet is stable, seizures well controlled with zonisamide.

**SPECIES**

Canine

Current Medications: None listed.

Lab Results: Alt/ALKP doubled from October to April.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

**BREED**

Unknown

Stat Report: Not requested.

Imaging Performed By: Stephanie Warga RDCS, RVT.

**SEX**

Spayed Female

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

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

**AGE**

1/1/14

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 3.91 cm. The left kidney measured 3.78 cm.

**WEIGHT**

14 Pounds

**INTERPRETED BY**Eric Lindquist, DMV  
DABVP, Cert. IVUSS**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having largely normal shape, size, position and acceptable echogenicity for this age group and breed. Some mild heterogeneity was noted within the adrenal parenchyma without concerning capsular distortion. These changes are likely age related but should be monitored by sonogram should the patient be suspected of having adrenal disease. The right adrenal gland measured 1.38 cm x 0.46 cm at the caudal pole and 0.52 cm at the cranial pole. The left adrenal gland measured 1.59 cm x 0.53 cm at the caudal pole and 0.47 cm at the cranial pole.

**HOSPITAL NAME**

Hickory Vet Hospital

**REFERRING VET**

Dr. McCourt

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

**INVOICE**

21993

**Liver**

The **liver** revealed multifocal hypoechoic nodular changes. Hepatic nodular changes are concerning and mild to moderately disruptive. Other nodular changes were noted throughout the liver with irregular contour. The gallbladder and common bile duct were unremarkable.

**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

### ***Pancreas***

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

### ***Other***

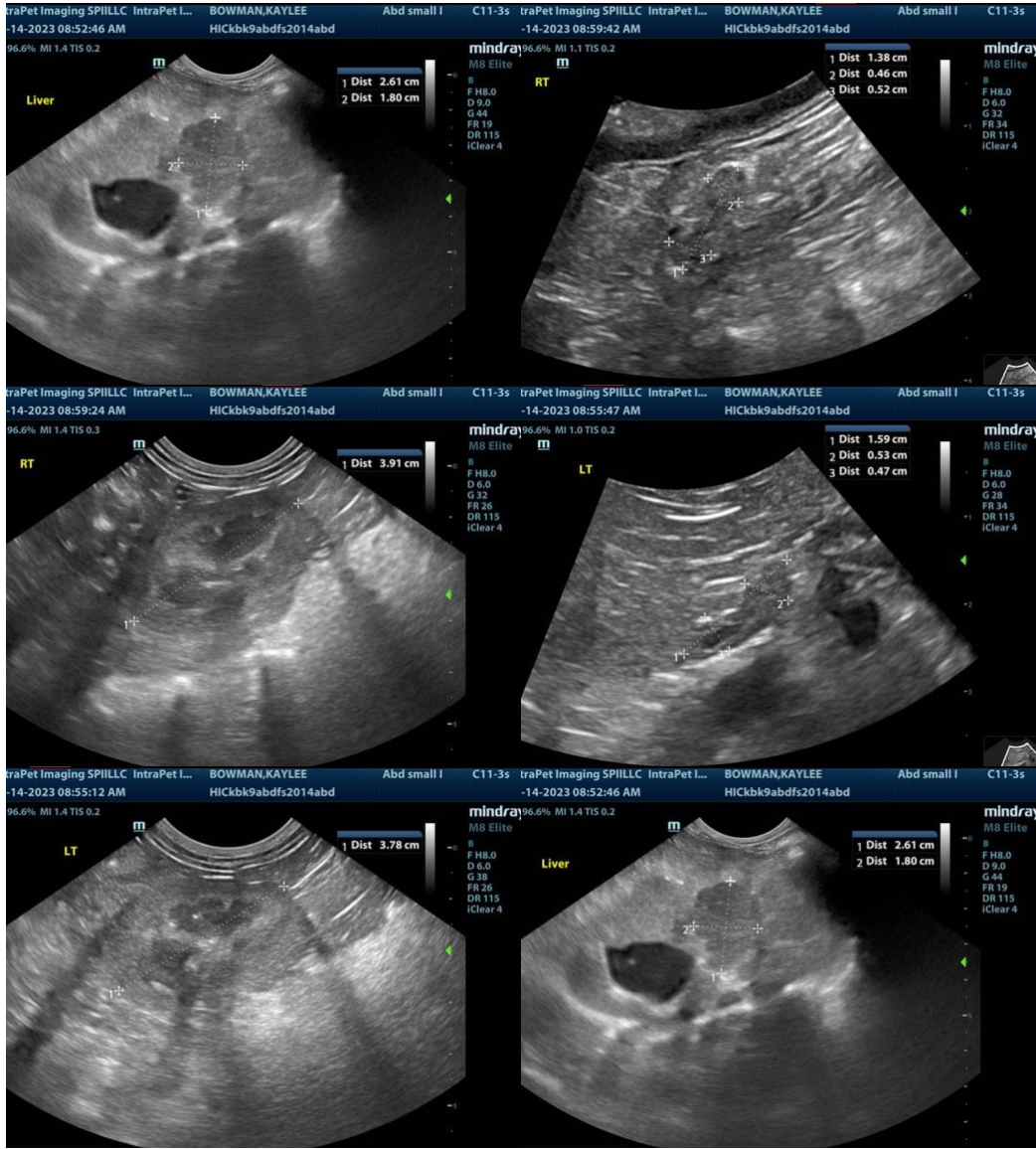
Mineralization areas were noted in the regions of the **ovariohysterectomy** ligation.

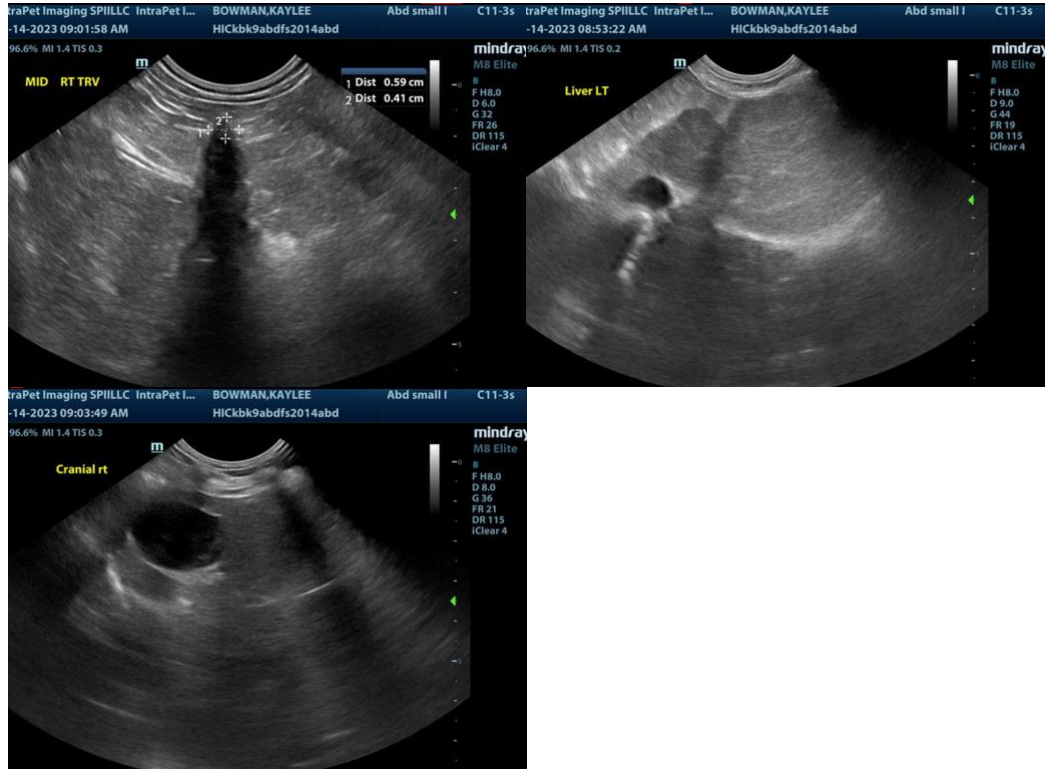
## **ULTRASONOGRAPHIC FINDINGS**

- Nodular irregular liver with remodeling- round cell neoplasia/sarcoma vs pronounced nodular hyperplasia +/- cirrhosis are potentials
- Mineralization areas in the regions of the ovariohysterectomy ligation
- Age-related adrenal gland changes

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

Bile acid profile and core liver biopsy are indicated. FNA could be considered upon the liver for cursory evaluation, however, core biopsy is likely best for full evaluation.





**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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
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