



**PATIENT**

Miley Kirkeby

**PRESENTING CLINICAL SIGNS**

History: elevated liver values, unresponsive to amoxicillin and metronidazole  
Abnormal PE/Chem/CBC/UA Results: 6/7/22: ALT 549, ALKP 778, platelets 523. UA not performed.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Beagle Mix

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal.

**SEX**

Spayed Female

The **kidneys** revealed moderate chronic degenerative changes with increased cortical echogenicity. This is consistent with interstitial nephrosis. Multi-focal, cortical cysts were noted. The left kidney measured 8.28 cm.

**AGE**

13 years

**Adrenal Glands**

**WEIGHT**

54 lbs

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.44 x 0.75 cm at the caudal pole and 0.66 cm at the cranial pole. The right adrenal gland measured 3.13 x 0.53 cm at the caudal pole and 2.08 cm at the cranial pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Spleen**

**IMAGING**

**PERFORMED BY**

Diane McFadden, RVT

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 was noted.

**HOSPITAL NAME**

Mount Olive VH

**Liver**

**REFERRING VET**

Dr. Jones

Exam of the cranial abdomen demonstrated excessive **liver** size and swollen contour. Mild, coarse architecture was noted with increased portal markings and minor parenchymal remodeling is suggestive of an inflammatory component. Minor excessive GB debris was noted with the presence gallbladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. Minor gallbladder polyps were noted and non-pathological. There is a slight amount of sand/biliary mineralization. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine (Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.

**INVOICE**

30961

**DATE**

6/13/22



**PATIENT** *Gastrointestinal*

Miley Kirkeby 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.

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**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.

**SEX**

Spayed Female

**Heart**

Rapid view of the heart revealed no evidence of pathology.

**AGE**

13 years

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

54 lbs

Moderate degenerative renal changes with polycystic cortices.

Non-specific hepatic presentation consistent with vacuolar hepatopathy and inflammatory component.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Ultrasound-guided FNA of the liver could be considered for further definition. There is no evidence of neoplasia. I am most concerned about the renal function long term. Full urinalysis, blood pressure measurements and geriatric diet is all indicated. Leptospirosis titers are warranted to rule out subclinical disease. Bile acid profile would be ideal.

**IMAGING PERFORMED BY**

Diane McFadden, RVT

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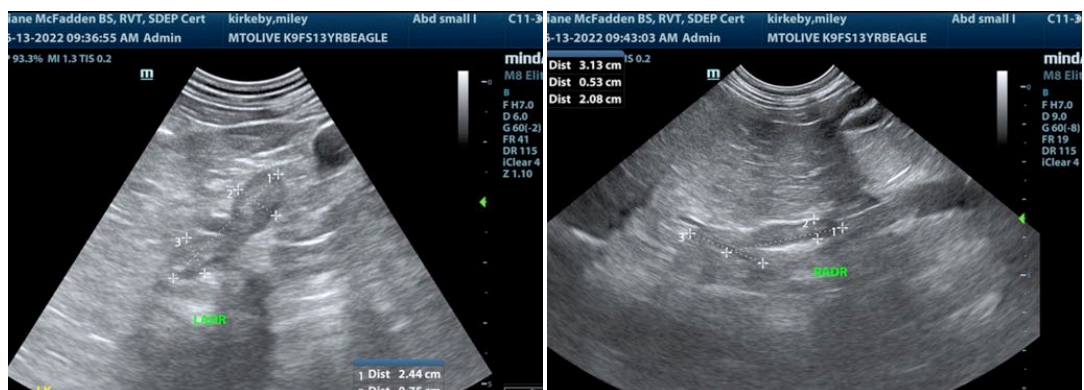
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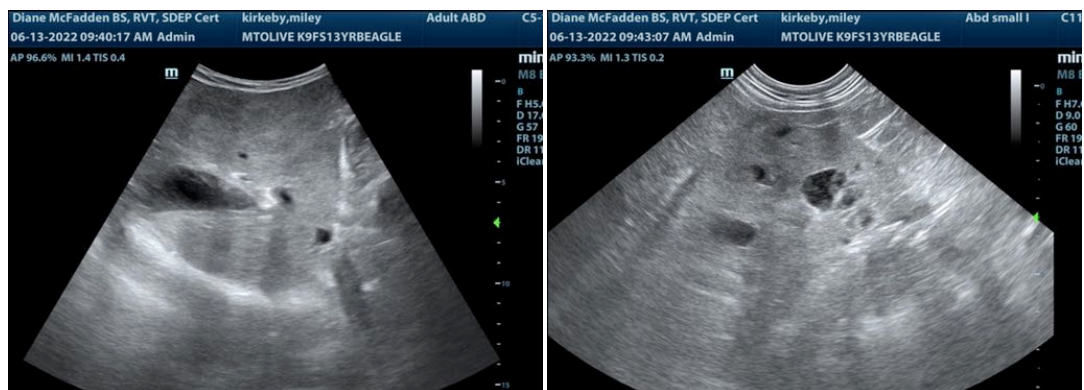
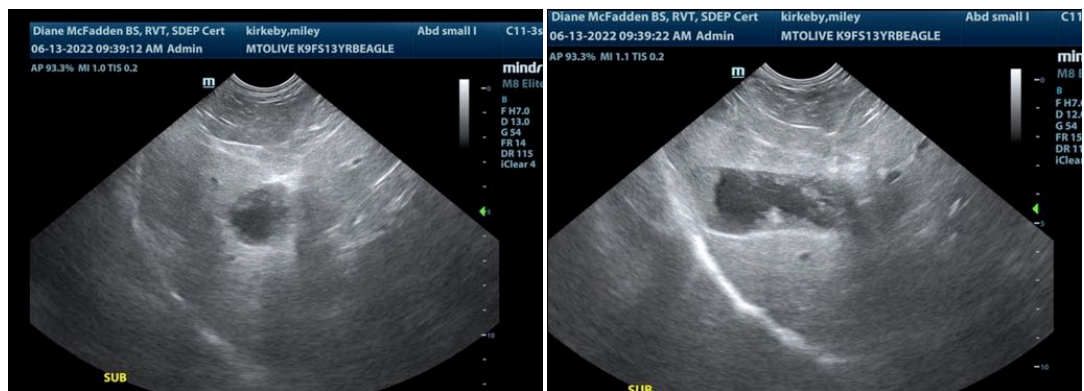
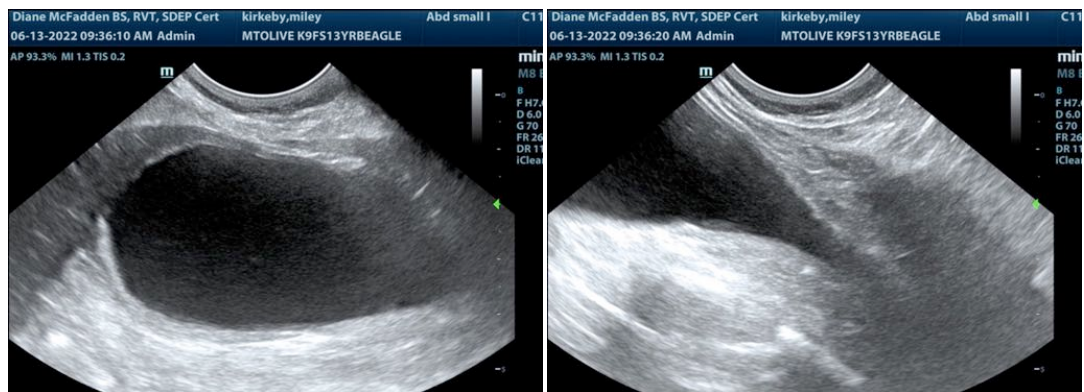
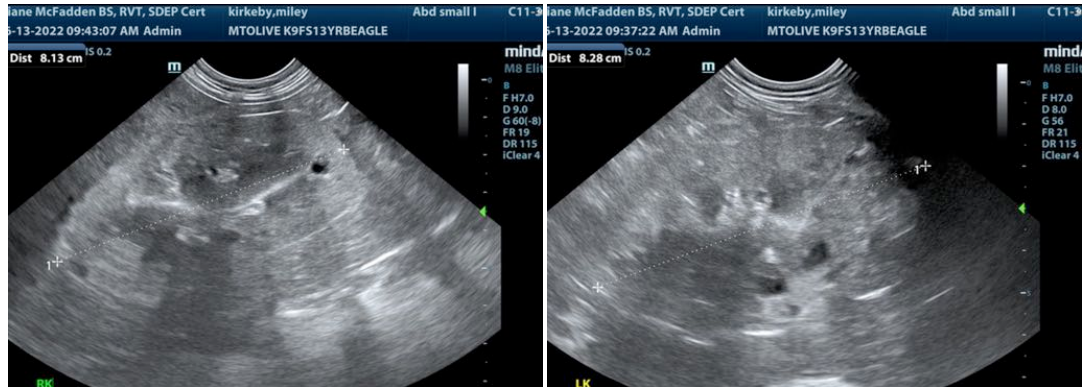
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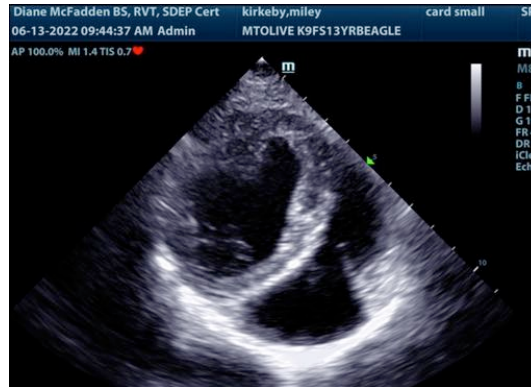
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
Info@SonoPath.com