



**PATIENT PRESENTING CLINICAL SIGNS**

Jackie Kappel PU/PD, unsteady and abnormal mentation for ~1 month Enalapril 2.5mg BID  
 ALP >2000, ALT 171, GGT 21, Platelets 518, Urine specific gravity 1.016, 2+Protein, Negative glucose

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Terrier Mix

**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

**SEX**

FS

The area of the aortic trifurcation was free of pathology.

**AGE**

2007

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Pinpoint areas of medullary mineral were noted in the right kidney. No evidence of pyelectasia was present. The left kidney measured 4.4 cm in length. The right kidney measured 4.8 cm in length.

**WEIGHT**

18.8

**Adrenal Glands**

Bilateral symmetrical adrenal gland enlargement with mild nonhomogeneous parenchyma was present without evidence of parenchymal mineralization. The left adrenal gland measured 0.90 cm width at the caudal pole and 0.65 cm width at the cranial pole. The right adrenal gland measured 0.81 cm width at the caudal pole and 0.75 cm width at the cranial pole.

**INTERPRETED BY**

R. McKenzie Daniel,  
 DVM, DABVP  
 (Canine and Feline)

**Spleen**

The spleen was normal in size exhibiting areas of mild capsule asymmetry and mildly nonhomogeneous splenic parenchyma echogenicity with indistinct areas of increased to hyperechoic parenchyma, which may suggest areas of ill-defined myelolipomas, previous infarction, or emerging mineralization.

**IMAGING PERFORMED BY**  
 Rebekah Jakum, CVT  
 ARDMS/RVT

**HOSPITAL NAME**

Lehigh Valley AH  
 (Allen)

**Liver/ Gallbladder**

The liver presented mild to moderately enlarged in size. Mildly nonuniform to mildly echogenic parenchyma exhibiting evidence of parenchymal remodeling with discrete non-expansive to nondisruptive hypoechoic nodules were present. An example of a nodule measured 0.80 cm in diameter. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild gallbladder debris. Potential areas of mucus were noted between the nondependent debris and inner luminal wall. No evidence of overt gallbladder or peripheral inflammation was noted. The cystic and common bile ducts were normal.

**REFERRING VET**

Dr. Hersh

**INVOICE**

13540

**DATE**

3/23/22



**PATIENT** *Gastrointestinal*

Jackie Kappel The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

**SPECIES** The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Canine Normal visible colon wall layers were present with apparent formed feces in lumen.

**BREED** *Pancreas*

Terrier Mix The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**SEX** *Free Abdomen*

FS No overt lymphadenopathy or peritoneal effusion was present.

**AGE** **ULTRASONOGRAPHIC FINDINGS**

2007 *Primary Findings*

**WEIGHT**

18.8

- Mild chronic renal changes
- Hepatopathy exhibiting remodeled to discretely nodular parenchyma - subjectively benign, probable vacuolar hepatopathy with areas of hematopoiesis, nodular to regenerative hyperplasia, or small lipogranulomas
- Mild gallbladder debris (non-mucocele)
- Bilateral prominent to subtle nonhomogeneous adrenal glands
- Benign splenic nodules
- Mild pancreatic remodeling - age-related pancreatic changes with potential for low-grade to chronic pancreatitis

**INTERPRETED BY**

R. McKenzie Daniel,  
 DVM, DABVP  
 (Canine and Feline)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**HOSPITAL NAME**

Lehigh Valley AH  
 (Allen)

Full adrenal work-up including LDDST is recommended, given the patient's clinical signs, and lab work abnormalities including the presence of thrombocytosis.

**REFERRING VET**

Dr. Hersh

Concurrent or primary inflammatory hepatopathy i.e., cholangiohepatitis and/or neoplasia is considered a less likely differential diagnosis. Pending adrenal testing, hepatic sampling could be considered for further clarification. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. Monitoring of systemic blood pressure is recommended.

**INVOICE**

13540

**DATE**

3/23/22



**PATIENT**

Jackie Kappel

**SPECIES**

Canine

**BREED**

Terrier Mix

**SEX**

FS

**AGE**

2007

**WEIGHT**

18.8

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

Lehigh Valley AH  
(Allen)

**REFERRING VET**

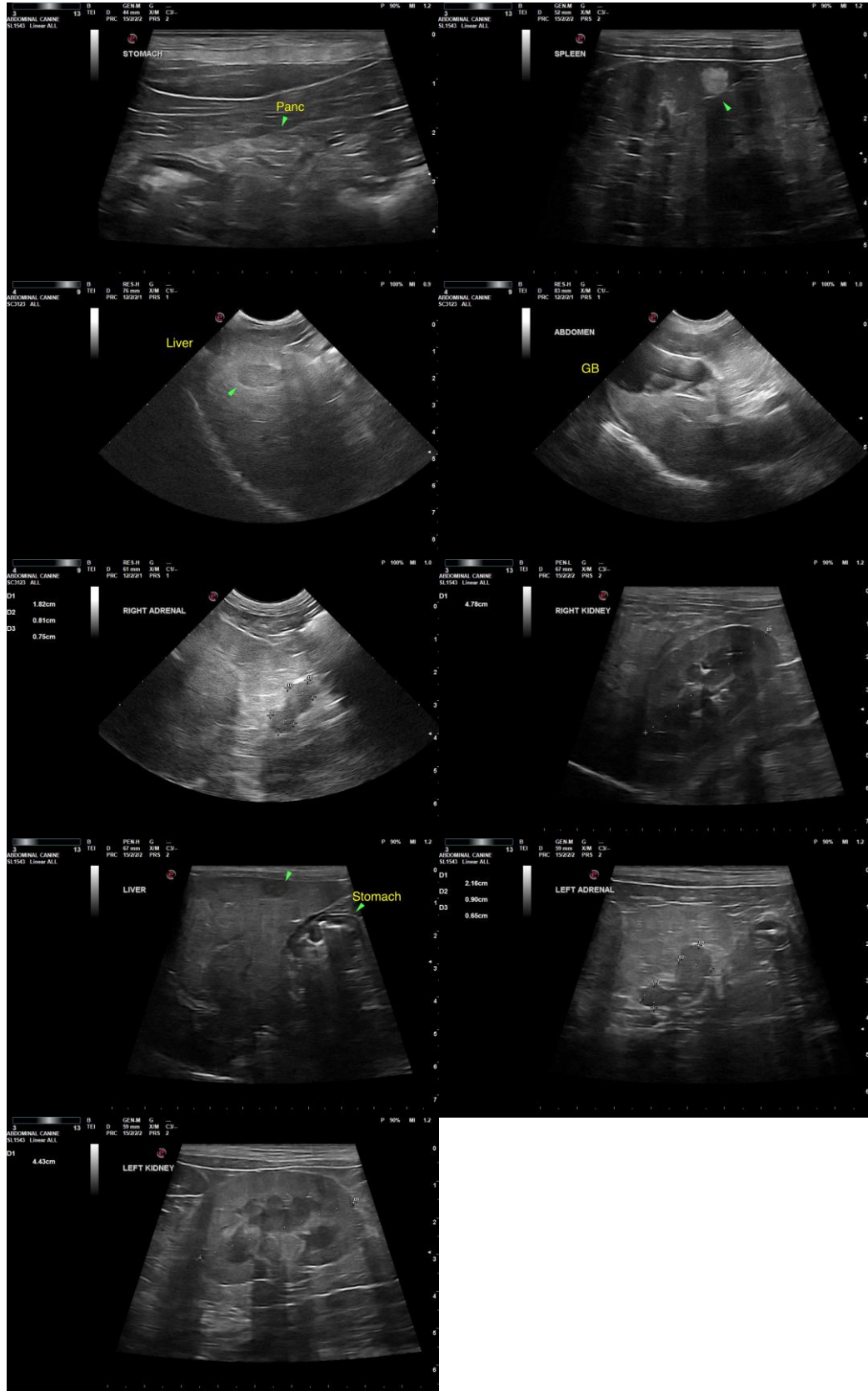
Dr. Hersh

**INVOICE**

13540

**DATE**

3/23/22





**PATIENT**

Jackie Kappel

**SPECIES**

Canine

**BREED**

Terrier Mix

**SEX**

FS

**AGE**

2007

**WEIGHT**

18.8

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING  
PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

Lehigh Valley AH  
(Allen)

**REFERRING VET**

Dr. Hersh

**INVOICE**

13540

**DATE**

3/23/22

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.

**R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)**  
[mac.daniel@sonopath.com](mailto:mac.daniel@sonopath.com)