

## PATIENT PRESENTING CLINICAL SIGNS

**Lilee Markus**  
No major exam abnormalities. Identified elevated liver enzyme (ALT) on pre-dental screening. Mild dental disease, no major gingivitis identified.

**SPECIES**  
Abnormal PE/Chem/CBC/UA Results: ALT elevated - 513 on 5/31/2022.. AST now normal at 63 (n<66) 3/16/2022 - 282, AST also mildly elevated at 84 12/2020 - 121 CBC: Mild-moderate thrombocytosis 530,000 on 5/31/22 CBC 470K on 3/16/22 CBC Current Medications Started liver support with Denamarin Advanced and Hepatrophin PMG in March 2022.

**Canine**

## BREED

Pomeranian X

## SEX

Spayed Female

## AGE

7 Years

## WEIGHT

12.6 Pounds

## 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.

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 left kidney measured 4.0 cm. The right kidney measured 3.21 cm.

### Adrenal Glands

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 right adrenal gland measured 1.91 cm x 0.67 cm at the caudal pole and 1.35 cm at the cranial pole. The left adrenal gland measured 1.42 cm x 0.42 cm at the caudal pole and 0.27 cm at the cranial pole.

### 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.

### Liver

The **liver** was slightly subnormal in size with increased portal markings and coarse architecture. 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.

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Sara Hansen

## HOSPITAL NAME

VCA McKenzie AH

## REFERRING VET

Dr. Fricke

## INVOICE

38305

## DATE

6/2/22



**PATIENT** *Pancreas*

Lilee Markus 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.

**SPECIES**

Canine

**ULTRASONOGRAPHIC FINDINGS**

- Non-specific inflammatory hepatopathy/remodeling

**BREED**

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Pomeranian X

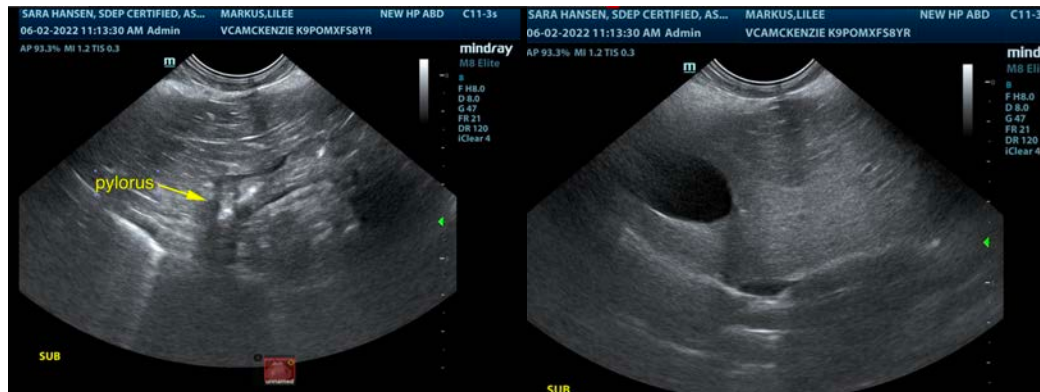
Bile acid profile recommended prior to any anesthetic procedure. However, it appears to be stable. Underlying Leptospirosis should be ruled out as inciting cause. If bile acids are elevated, then surgically or laparoscopically guided biopsies would be indicated. If liver enzyme elevations recur, then FNA could be considered to assess inflammatory cell type. No evidence of neoplasia. Liver oriented diet warranted. Long-term periodic bile acids warranted every 6 months, if stable.

**AGE**

7 Years

**WEIGHT**

12.6 Pounds

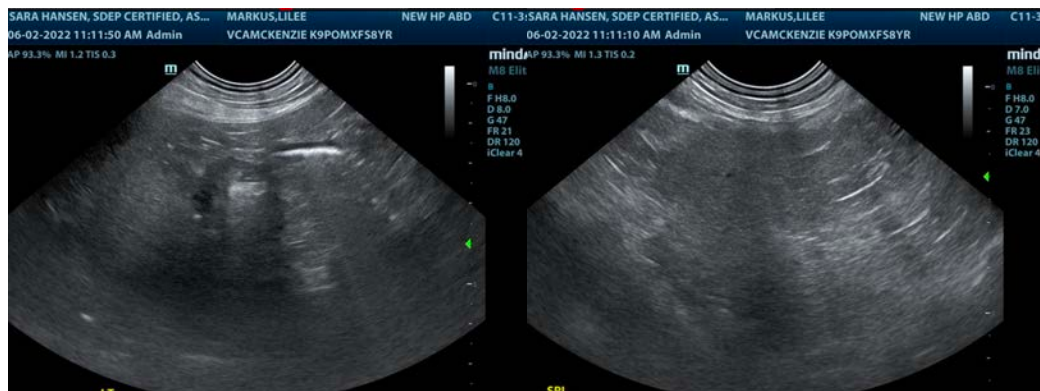


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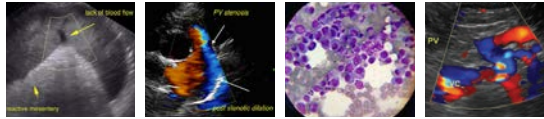
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**PATIENT**

Lilee Markus

**SPECIES**

Canine

**BREED**

Pomeranian X

**SEX**

Spayed Female

**AGE**

7 Years

**WEIGHT**

12.6 Pounds

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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**

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