

**PATIENT**

Beemer Davis

**PRESENTING CLINICAL SIGNS**

Rule out cause of SAP elevation

**SPECIES**

Canine

**BREED**

Shih Tzu Mix

**SEX**

MN

**AGE**

11 years

**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 was noted. Ureteral papillae were normal.

The kidneys revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some minor age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Minor slight pinpoint mineralization noted in the left kidney. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present.

The left kidney measured 4.76 cm in length.

The right kidney measured 5.0 cm in length.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

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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 minor 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 left adrenal gland measured 1.94 cm length x 0.62 cm cranial x 0.62 cm caudal.

The right adrenal gland measured 2.30 cm length x 0.72 cm cranial x 0.62 cm caudal.

**HOSPITAL NAME**

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**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 was noted.

**REFERRING VET**

Dr. Hummel

**INVOICE**

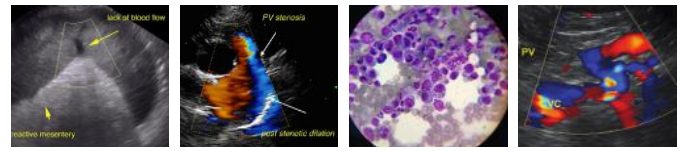
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**Liver**

**DATE**

06/06/2022

Exam of the cranial abdomen demonstrated moderate excessive liver size, swollen contour, with conserved uniform architecture. Occasional isoechoic nondisruptive nodular change noted in the liver. Parenchymal echogenicity was diffusely isoechoic to the spleen and falciform fat. Minor excessive GB debris was noted with the presence gall bladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. 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



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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.

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**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.

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**Pancreas**

The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Some minor parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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**ULTRASONOGRAPHIC FINDINGS**

- Subjectively benign vacuolar hepatopathy
- Slight renal mineralization
- Age related abdominal changes

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of significant disease observed on today's scan. This is likely a breed specific issue.

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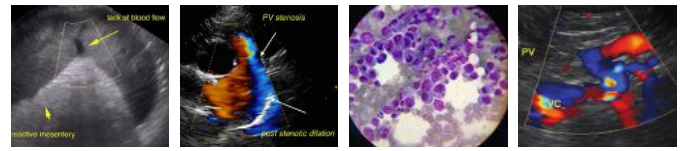
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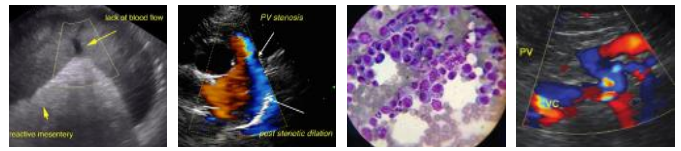
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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