



**PATIENT PRESENTING CLINICAL SIGNS**

Joey Goodhew History: Has a grade 2/6 heart murmur PMI left base(holosystolic) and concerns about Cushing's disease.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: Please see attached bloodwork.

Canine ALP >1000

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED** *Urinary System*

Shih Tzu The **urinary bladder** wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is mildly to moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**SEX**

Neutered Male The **prostate** is normal in size (0.70 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**AGE**

10 years The **left kidney** is normal size (4.45 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

6.4 kg The **right kidney** is normal size (5.72 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

**Adrenal Glands**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The **left adrenal gland** is mildly enlarged (0.52 cm at cranial pole) (0.69 cm at caudal pole) (1.83 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The **right adrenal gland** is mildly enlarged (0.84 cm at cranial pole) (0.68 cm at caudal pole) (1.64 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**IMAGING PERFORMED BY**

Crystal Hill

**Spleen**

**HOSPITAL NAME**

Westoak AH

The **spleen** is normal in size (0.91 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**REFERRING VET**

Kohlmaier/Fisher

**Liver**

The **liver** is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion.

**INVOICE**

11901

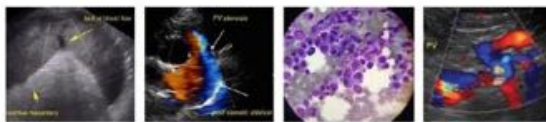
The **gall bladder** lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated, echogenic, partially dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**DATE**

10.26.22

**Gastrointestinal**

The **gastric lumen** is mildly to moderately distended with ingesta and gas. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small



**PATIENT**

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intestinal lumen is segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

**SPECIES**

Canine

**Pancreas**

The base and limbs of the pancreas are visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

**BREED**

Shih Tzu

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

**SEX**

Neutered Male

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- Gall bladder sludge, non-mucocele
- Mild bilateral adrenomegaly

**AGE**

10 years

**WEIGHT**

6.4 kg

**Secondary Findings**

- Age-related pancreatic remodeling +/- fibrosis. Mild concurrent pancreatitis may also be present, particularly if the patient exhibits clinical signs that fit this diagnosis.
- Bilateral, chronic age-related renal changes with mild dystrophic mineralization

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A urinalysis is recommended to assess for isosthenuria, if not already performed.

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Crystal Hill

If the patient is exhibiting clinical signs of Cushing's Disease, further testing (i.e., low-dose dexamethasone suppression test) may be warranted.

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**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered Male

**AGE**

10 years

**WEIGHT**

6.4 kg

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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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