



**PATIENT**

Booboo Rhoads

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Male

**AGE**

15 years

**WEIGHT**

11.5 #

**INTERPRETED BY**

Remo Lobetti, BVSc,  
MMedVet (Med),  
PhD, Dipl. ECVIM

**IMAGING  
PERFORMED BY**

Lara Wiseman, DVM

**HOSPITAL NAME**

Calusa Veterinary  
Center

**REFERRING VET**

**INVOICE**

302948

**DATE**

5/9/22

**PRESENTING CLINICAL SIGNS**

History: Acute onset vomiting and hyporexia. Previous history of heart and renal disease.

Physical Examination: N/A.

Urinalysis: N/A.

CBC: N/A.

Serum Biochemistry: Severely elevated ALT and ALP activity, elevated bilirubin.

Radiographic Findings: Normal thorax.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Full urinary bladder with a normal appearance and thickness of the wall. Normal anechoic urine with no sediment or uroliths evident.

Normal trigone area, proximal urethra, and iliac blood vessels.

Normal iliac lymph nodes. Ureters not visualized.

Normal renal size (both 3.8 cm) with increased echogenic appearance, loss of cortico-medullary differentiation, and normal capsule. Bilateral pyelectasia (left 0.6 cm, right 0.4 cm) and pinpoint mineralization.

**Reproductive System**

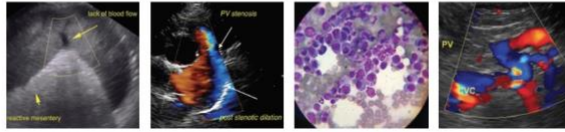
Normal size (1.1 cm) and appearance of the prostate. Small amount of hyperechogenic sediment within the prostatic urethra.

**Adrenal Glands**

Normal shape, echogenic appearance, size, and position. Left 0.57 cm, right 0.45 cm.

**Spleen**

Normal size (0.9 cm) and echogenic appearance. Smooth homogenous parenchyma, smooth curvi-linear capsule, and normal vasculature. No evidence of inflammatory, neoplastic, infarction, or infiltrative changes noted. Head of the spleen appears to be bulging with an isoechoic appearance.



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**Liver**

Normal size with a mottled, coarse and nodular echogenic appearance, and loss of portal markings. Nodules are parenchymal, of various sizes, and range from anechoic to hyperechogenic in appearance. No masses evident. Distended gall bladder containing large amount of adherent and non-adherent hyperechogenic sediment. Thickened, irregular, and hyperechogenic appearance of the gall bladder wall. Dilated bile duct (0.6 cm) containing small amount of hyperechogenic sediment. Hyperechoic lith at the duodenal papilla.

**Gastrointestinal**

Normal appearance of the gastro-esophageal junction, stomach, duodenum, small intestine ileo-cecal junction, and colon with no loss of layering, normal wall thickness (stomach 0.32 cm, duodenum 0.34 cm, jejunum 0.29 cm) and peristalsis, and no distension of the lumen.

**Pancreas**

Normal size (right 1.2 cm) with a diffuse hyperechogenic appearance. Regular capsule. Focal hypoechogenic nodule (0.6 x 0.8 cm) in the right lobe. Normal echogenic appearance of the mesentery and fat surrounding the pancreas.

**Free Abdomen**

No mesenteric lymphadenomegaly.

No ascites.

Hyperechogenic appearance of the cranial mesentery in the region of the duodenal papilla, bile duct, and gall bladder.

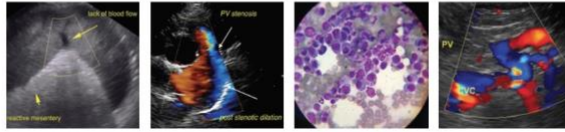
**ULTRASONOGRAPHIC FINDINGS**

Primary findings:

- Cholecystitis.
- Nodular hepatopathy.
- Renal disease.
- Pancreatitis.
- Pancreatic nodule.
- Focal peritonitis.

Secondary findings:

- Splenic mass?
- Urethral sediment.



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The appearance of the gall bladder is consistent with cholecystitis that may be associated with a mucocele and/or bile duct obstruction. With the focal peritonitis in the cranial abdomen, as well as the severely elevated liver enzyme activity, a compromised gall bladder wall/bile duct would be an important consideration.

Etiologies for the nodular hepatopathy would be reactive, metabolic, nodular regeneration, chronic hepatitis, and neoplasia.

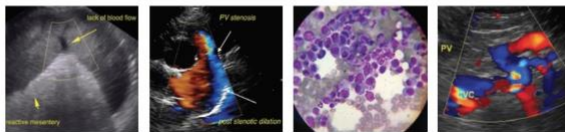
The appearance of the kidneys is consistent with chronic kidney disease with pyelonephritis a differential diagnosis.

Etiologies for the pancreas would be fibrosis and chronic pancreatitis. Etiologies for the nodule would be reactive, granuloma, abscess, and neoplasia.

The appearance of the spleen may be an incidental reactive finding with emerging neoplasia a differential diagnosis.

Further assessment would be urinalysis, urine culture, cPL/PSL assay, and FNA cytology of the liver and pancreatic nodule.

Specific therapy would be cholecystectomy, which would allow for evaluation and biopsy of the liver, spleen, pancreas, and pancreatic nodule. Symptomatic therapy would be fluid therapy, antibiotics, ant-emetics, and opioid analgesics.



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**IMAGES**

**Liver**



**Gall bladder**



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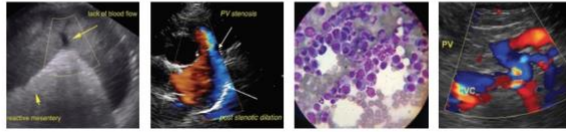
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**Pancreas**



**Spleen**



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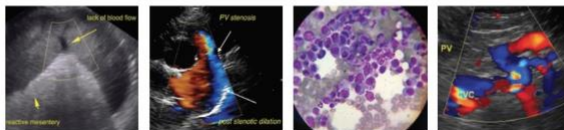
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**Left kidney**



**Prostate**



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The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

**Remo Lobetti, BVSc, MMedVet (Med), PhD, Dipl. ECVIM (Internal Medicine)**  
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