
**PATIENT PRESENTING CLINICAL SIGNS**

Amber Klunder History: - Acute vomiting - Shaking - Lethargic Cerenia injection Concerns re: gall bladder dz or hepatic neoplasia  
 Abnormal PE/Chem/CBC/UA Results: Lactate 4.09 mmol/L ALT 721 U/L ALP 340 U/L GGT 23 U/L  
 Total bilirubin 37 umol/L Chol 9.68 mmol/L

**SPECIES**

Canine

**BREED**

Standard Poodle

**SEX**

Spayed Female

**AGE**

10 years

**WEIGHT**

16.3 kg

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**
**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm 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 were noted.

The aortic trifurcation was normal. There was no overt pathology in the area of the uterine stump.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 5.2 cm in length. The right kidney measured 5.9 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.7 cm length x 0.63 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.3 cm length x 0.5 cm width at the caudal pole.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

 Niagara Vet  
 Emergency Care

**REFERRING VET**

Dr. Price

**INVOICE**

94299

**DATE**

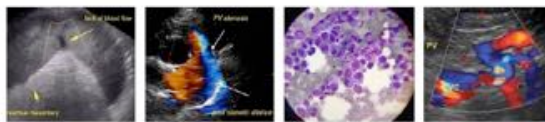
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**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver**

The liver exhibited subjectively normal size and was mildly rounded, yet symmetrical hepatic contour was noted. Subjective, mild decreased hepatic parenchyma echogenicity with mildly increased prominence of portal vascular borders along with generalized, moderate coarse parenchyma echotexture. There were no hepatic masses or nodules noted. The gallbladder had minor, cranial luminal congealed debris. There was no evidence of gallbladder or peripheral inflammation. The common bile duct was normal.



**PATIENT**

**Gastrointestinal**

Amber Klunder

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. Gastric body wall measured 0.53 cm. Duodenal wall measured 0.41 cm.

**SPECIES**

Canine

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. The jejunal wall measured 0.37 cm.

**BREED**

Standard Poodle

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

**SEX**

Spayed Female

**Pancreas**

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

**AGE**

10 years

**ULTRASONOGRAPHIC FINDINGS**

Hepatopathy-subjectively acute or potential acute on chronic.

**WEIGHT**

16.3 kg

Minor congealed gallbladder (non-mucocele). No evidence of peripheral inflammation.

Subtle hypoechoic to heterogenous pancreas.

Sonographically unremarkable gastrointestinal tract.

**INTERPRETED BY**

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DABVP (Canine and  
Feline)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The overall appearance of the liver was non-specific with considerations including primary concern for acute to acute on chronic hepatitis given the primarily elevated ALT (viral, bacterial, Leptospirosis, toxin). Concurrent or primary vacuolar or metabolic hepatopathy given the ALP elevation with hepatic cholestasis. There was no evidence of post hepatic obstruction, gallbladder mucocele or overt neoplastic criteria with occult hepatic neoplasia considered a less likely differential diagnosis. Further assessment may include Leptospirosis titers/PCR and assuming normal clotting status ultrasound-guided FNA of the liver using a 25-gauge needle for screening cytology. Without evidence of gastrointestinal pathology the acute vomiting may be secondary to hepatopathy although structurally insignificant inflammatory bowel episode cannot be excluded. As needed gastrointestinal support is recommended. Empirically hepatosupportive medication +/- antibiotic trial such as Amoxicillin, Metronidazole with assessment of hepatic response can be considered.

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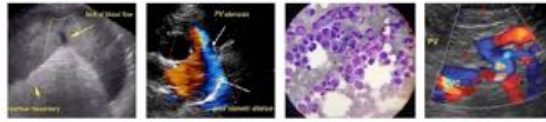
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**PATIENT**

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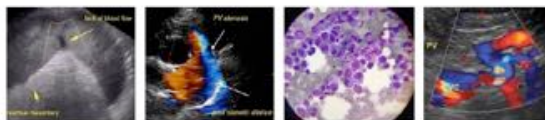
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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