



**PATIENT**

Emma Tuttle

**SPECIES**

Canine

**BREED**

Chihuahua Mix

**SEX**

FS

**AGE**

9 years

**WEIGHT**

9 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Karen Ebersole, DVM,  
DABVP (Canine/Feline  
Practice)

**HOSPITAL NAME**

Scanvet

**REFERRING VET**

Dr. Bennett

**INVOICE**

16468

**DATE**

3/28/23

**PRESENTING CLINICAL SIGNS**

Elevated ALT found on preanesthetic BW for a dental. No clinical signs of liver disease. Abnormal PE/Chem/CBC/UA Results: PE: non-icteric, mild tartar, all else WNL ALT 1,526

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. No evidence of mineral or calculi was noted. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were 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. Focal to discrete areas of medullary mineral were noted. The left kidney measured 3.1 cm in length. The right kidney measured 3.3 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 1.5 cm length x 0.42 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 1.5 cm length x 0.47 cm width at the caudal pole.

**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/ Gallbladder**

The liver exhibited subjective subnormal size yet primarily maintained symmetrical capsule contour and normal parenchyma echogenicity. Subtle increased yet indistinct prominence for the portal vascular borders was noted. The portal vein appeared to exhibit subjective normal volume. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**Gastrointestinal**

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.

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.



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

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## Pancreas

## SPECIES

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

Canine

## BREED

## Free Abdomen

Chihuahua Mix

No overt lymphadenopathy or peritoneal effusion was present.

## SEX

## ULTRASONOGRAPHIC FINDINGS

FS

- Sonographically unremarkable urinary bladder - no evidence of mineral / calculi
- Discrete bilateral renal medullary mineral
- Subnormal liver - nonspecific yet subjective benign hepatopathy

## AGE

9 years

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## WEIGHT

9 lbs.

Although nonspecific, considerations for the liver may include inflammatory hepatopathy with potential for portal hypoplasia / microvascular dysplasia. A macroscopic shunt was not definitively visualized, indicating less likely potential in conjunction with a lack of reported clinical signs suggestive of a macroscopic shunt, as well as no evidence of concurrent findings such as cystic calculi or mineral.

## INTERPRETED BY

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DVM, DABVP  
(Canine and Feline)

If accessible and assuming normal clotting status, screening hepatic FNA could be considered to assess for potential inflammatory cell type. Core or surgical biopsy is likely necessary for further definition. Hepatic functionality is assumed to be normal given the lack of reported decreased BUN, cholesterol, albumin, or glucose levels. Bile acid testing for further clarification of hepatic function is suggested prior to anesthetic considerations.

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DABVP (Canine/Feline  
Practice)

Pending additional diagnostics, hepatosupportive medications including Denamarin may prove beneficial.

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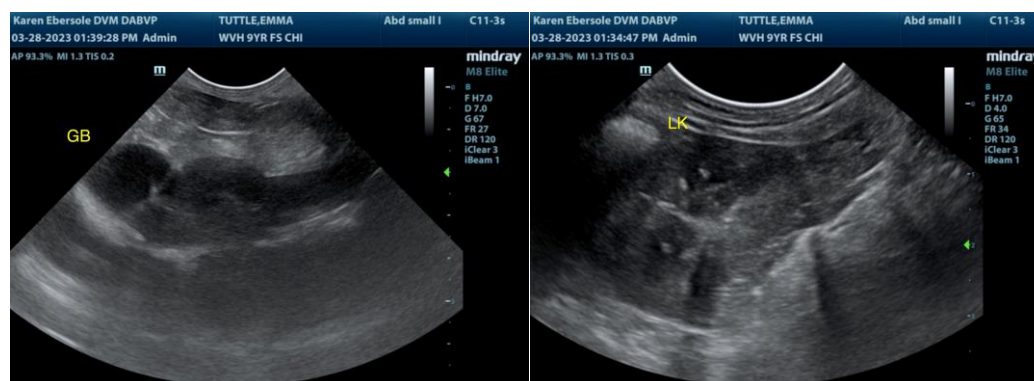
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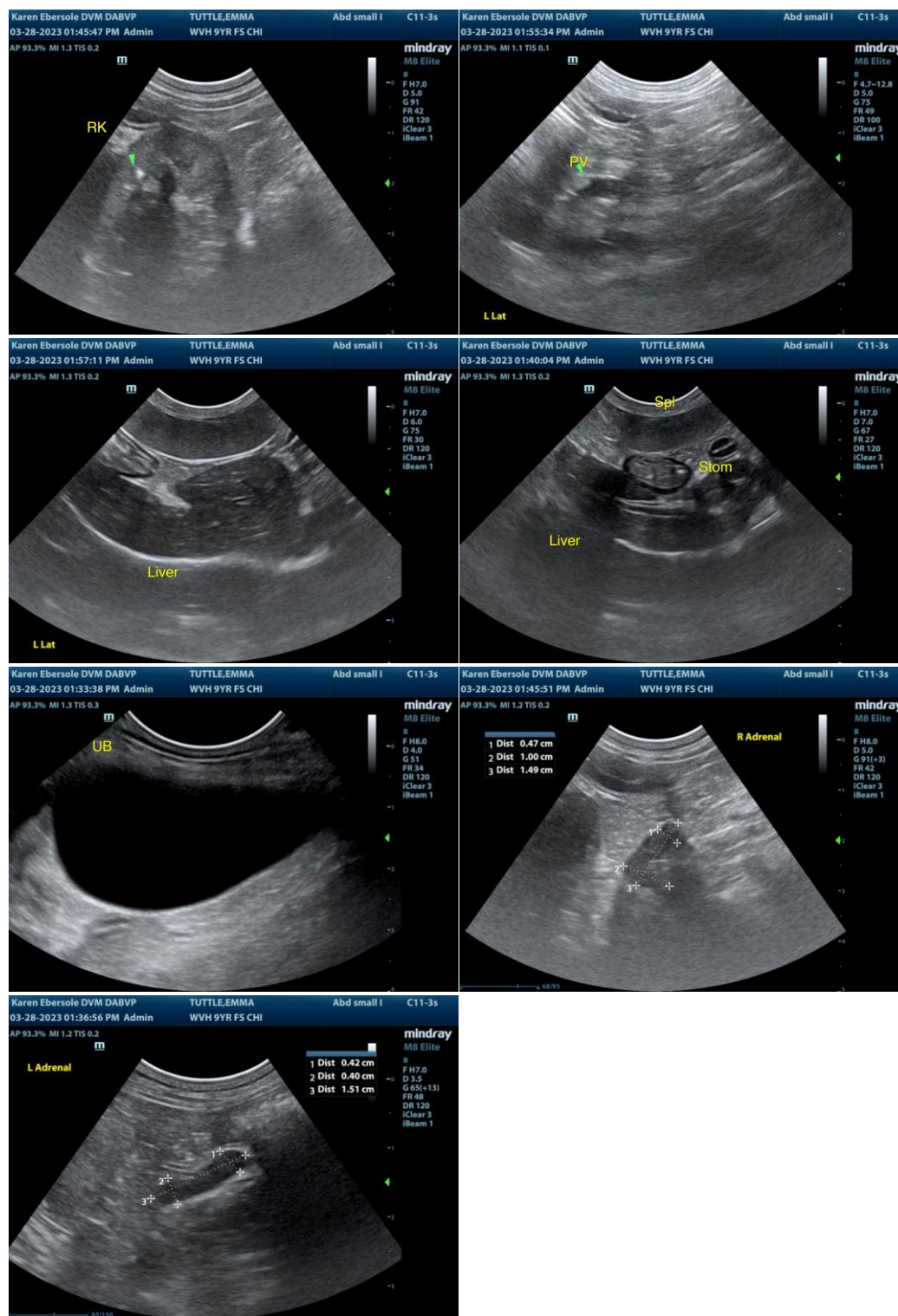
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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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**info@SonoPath.com**

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