



PATIENT	PRESENTING CLINICAL SIGNS
Bo Stephens	Non clinical but elevated bile acids on pre anesthetic blood work
SPECIES	Abnormal PE/Chem/CBC/UA Results: Mild elevation ALT moderate elevation of pre and post prandial bile acids consistent with possible MHVD
Canine	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
BREED	Urinary System
Maltese Shih Tzu Mix	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.
SEX	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. The left kidney measured 3.2 cm in length. The right kidney measured 2.9 cm in length.
MI	The area of the aortic trifurcation was free of pathology.
AGE	The prostate appeared as expected for an intact young male canine.
17 mo	Adrenal Glands
WEIGHT	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.24 cm width at the caudal pole and 0.26 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.40 cm width at the caudal pole and 0.33 cm width at the cranial pole.
2.5kg	Spleen
INTERPRETED BY	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.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Liver
IMAGING PERFORMED BY	The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. Subjective adequate to normal vascular volume. Normal laminar caudal vena cava flow at the level of the liver and diaphragm.
Dr. Belan	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
HOSPITAL NAME	Gastrointestinal
Beddington Trail AH	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained ingesta likely consistent with port-prandial presentation with no signs of ileus, obstruction or foreign material.
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PATIENT	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.
Bo Stephens	Normal visible colon wall layers were present with apparent formed feces in lumen.
SPECIES	<i>Pancreas</i>
Canine	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 was evident.
BREED	<i>Free Abdomen</i>
Maltese Shih Tzu Mix	No peritoneal effusion was present.
SEX	Focal intermittent benign mildly prominent mesenteric lymph nodes were present, an example measuring 1.2 cm x 0.44 cm. Minor lymphoid hyperplasia or immunologic immaturity possible.
MI	
AGE	Primary
17 mo	<ul style="list-style-type: none"> Low grade hepatopathy-inflammatory hepatopathy vs possible portal hypoplasia/microvascular dysplasia. No evidence of portosystemic shunt
WEIGHT	<u>INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS</u>
2.5kg	Assuming normal clotting status and using a 25g needle a hepatic FNA is recommended for screening cytology and assessment of inflammatory cell type if present. Core surgical biopsy is likely necessary for further definition. A clinical trial of the following could be considered.
INTERPRETED BY	A small portosystemic shunt considered unlikely given normal hepatic volume as well as no overt concurrent common clinical findings.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, Lactulose (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a high-quality protein supplement of minor amount of yogurt or cheddar cheese. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. Ursodiol (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. Zinc serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.
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PATIENT

Bo Stephens

SPECIES

Canine

BREED

Maltese Shih Tzu Mix

SEX

MI

AGE

17 mo

WEIGHT

2.5kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Belan

HOSPITAL NAME

Beddington Trail AH

REFERRING VET

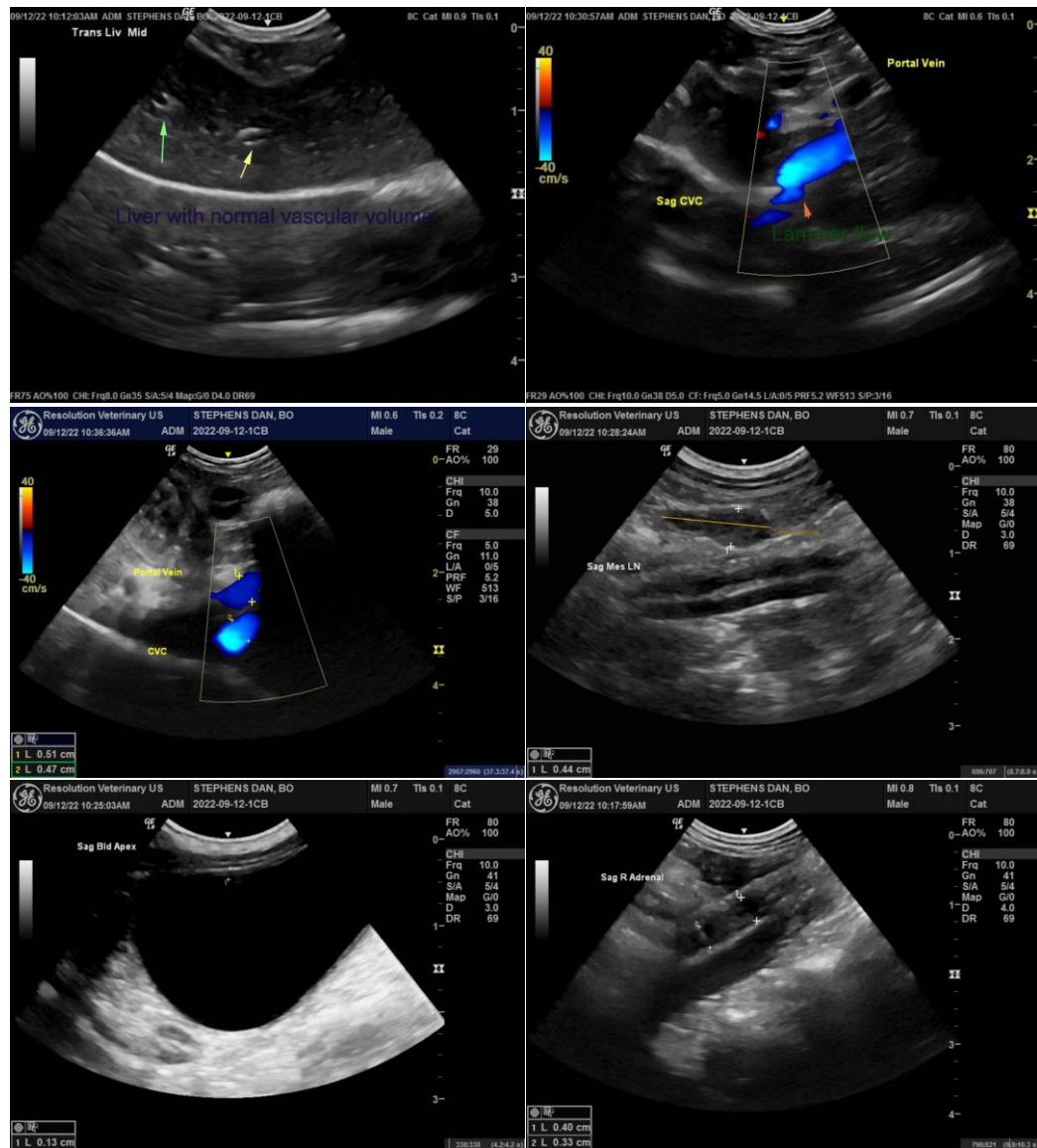
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PATIENT

Bo Stephens

SPECIES

Canine

BREED

Maltese Shih Tzu Mix

SEX

MI

AGE

17 mo

WEIGHT

2.5kg

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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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com