



PATIENT	PRESENTING CLINICAL SIGNS
Andy Coleman	This study was done to investigate rising liver values in spite of medical management. Presented in February for hard swelling on the right side of his snout with no discharge. Bloodwork showed increased ALT and GGT. No clinical signs of liver disease were reported. Crypto titer was negative. Pre-prandial bile acids in March was normal. Post was elevated in the "gray zone" for interpretation. Started on Zentonil (50 mg PO SID). Is on a low fat GI diet as well. Repeat bloodwork May 1st showed increasing ALT and GGT with new elevations in AST and ALP. Submitted images are focuses on liver and gallbladder.
SPECIES	
Canine	
BREED	
Toy Poodle	Abnormal PE/Chem/CBC/UA Results: February, 2023: ALT=171 (12-121) GGT=42 (0-13) March 8, 2023 Pre-prandial BA=13 (0-14.9) Post-prandial=39.5 (0-29.9) 5/1/23 ALT=618 GGT=42 ALP=298 (5-160) AST=62 (6-55) Bloodwork is attached
SEX	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
MN	Urinary System
AGE	The urinary bladder was not visualized.
11yr	The prostate was not visualized.
WEIGHT	Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Mild areas of medullary mineralization were present. The left kidney measured 3.2 cm in length. The right kidney measured 3.0 cm in length.
1.99kg	Adrenal Glands
INTERPRETED BY	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.39 cm width at the caudal pole and 1.2 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.39 cm width at the caudal pole and 1.0 cm length.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Spleen
IMAGING PERFORMED 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.
Donna Markland, DVM	Liver/Gallbladder
HOSPITAL NAME	The liver exhibited possible borderline enlargement with symmetrical capsule contour and overall normal parenchymal echogenicity. Mild to moderate coarse echotexture was present. Normal to adequate vascular volume was present. The visualized cranial abdominal caudal vena cava appeared to exhibit subjective normal volume. No evidence of intraparenchymal masses/nodules.
Donna Markland, DVM	
REFERRING VET	
Chase River Veterinary Hospital	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with variably echogenic discretely mineralized non-organized debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.
INVOICE	Gastrointestinal
13712ag	
DATE	
05/05/2023	



PATIENT

Andy Coleman

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.

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.

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

Pancreas

BREED

Toy Poodle

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.

SEX

MN

Free Abdomen

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

AGE

11yr

- Hepatopathy exhibiting adequate vascular volume.
- Variably echogenic to discretely mineralized non-organized gallbladder debris (non-mucocele).
- Mild chronic renal changes with mild medullary mineralization.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

1.99kg

No evidence of intrahepatic or extrahepatic macroscopic shunt was visualized. Given the primary to chronic ALT elevation, suspect non-specific inflammatory hepatopathy with potential for concurrent vacuolar hepatic changes or non-obstructive cholestasis without overt evidence of hepatobiliary neoplastic criteria. Potential portal hypoplasia/microvascular dysplasia cannot be definitively excluded.

INTERPRETED BY

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

Assuming normal clotting status a hepatic FNA for screening cytology is warranted for further assessment and identification of inflammatory cell type. A hepatic core surgical biopsy is required for a definitive diagnosis. Some or all of the following protocol may be considered with monitoring of liver enzymes.

IMAGING PERFORMED BY

Donna Markland,
DVM

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.

HOSPITAL NAME

Donna Markland,
DVM

REFERRING VET

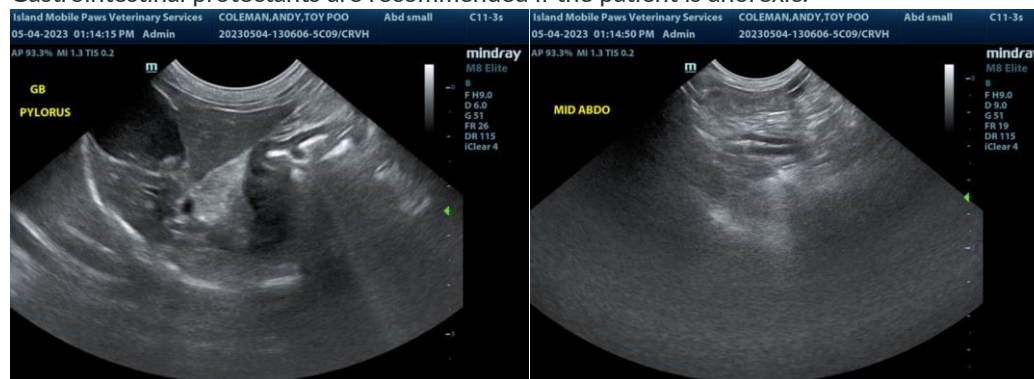
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Veterinary Hospital

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SPECIES

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Toy Poodle

SEX

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AGE

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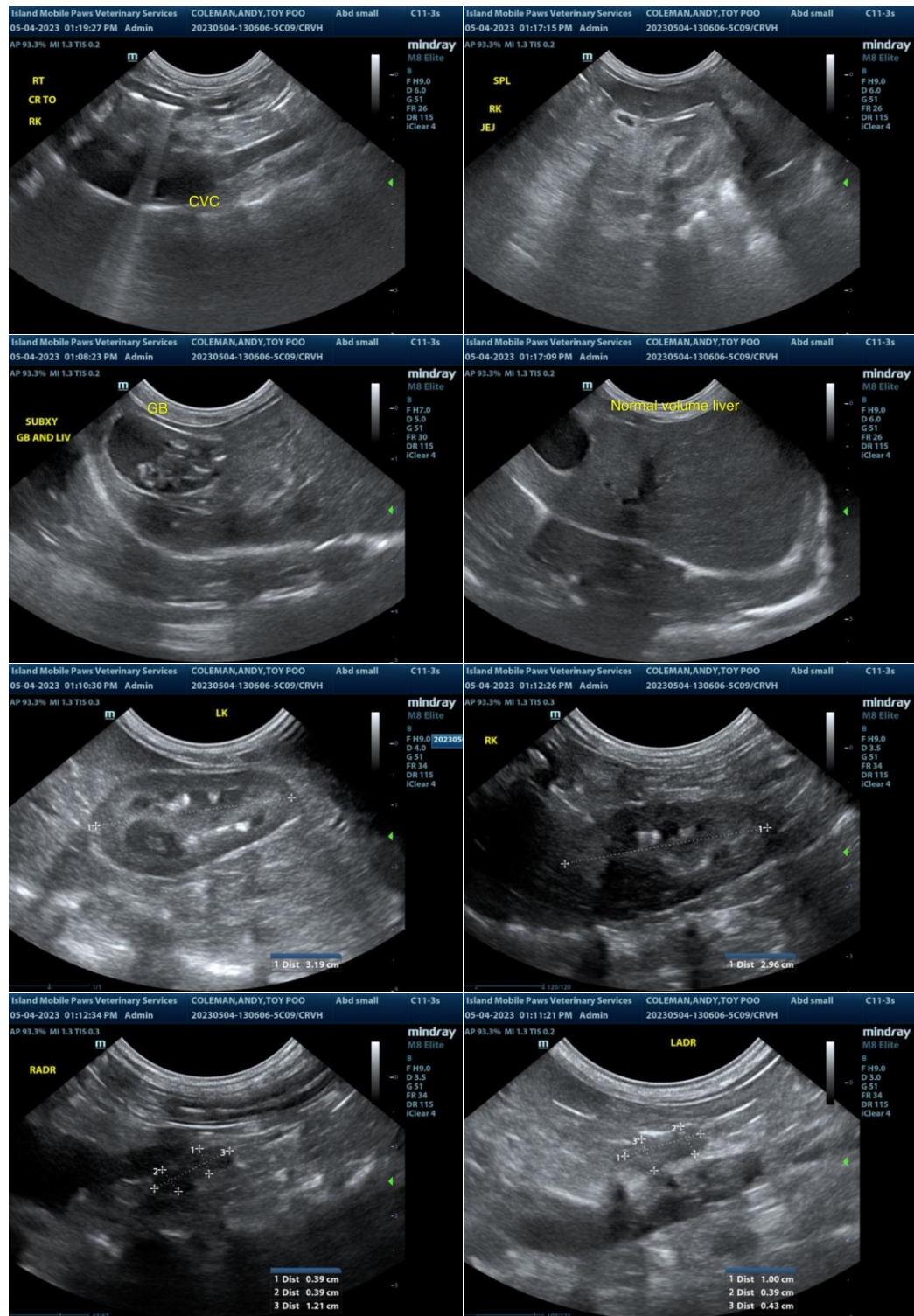
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



PATIENT

Andy Coleman

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.

SPECIES

Canine

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
mac.daniel@sonopath.com

BREED

Toy Poodle

SEX

MN

AGE

11yr

WEIGHT

1.99kg

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