



PATIENT

Lilly Mossberg

SPECIES

Canine

BREED

Terrier Mix

SEX

FS

AGE

7 years

WEIGHT

7.37 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

The Ark VC

REFERRING VET

Dr. Hilberg

INVOICE

14555

DATE

8/10/22

PRESENTING CLINICAL SIGNS

HH1: 07-20-22 at 12:07p: Bloodwork suspicious for hyperadrenocorticism. Elevated liver enzymes, cholesterol. UA not suggestive of UTI. USG > 1.050 Current Medications Trazodone 50mg, for anxiety
Abnormal PE/Chem/CBC/UA Results: ALT-184 AST-69 CHOL-408 TT4 0.8 Pre ACTH-3.1 post ACTH23.6

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder was subnormal in size owing to lack of urine distention. No evidence of sediment or calculi was noted. Full evaluation of the urinary bladder walls was prohibited owing to lack of urine distention, yet no obvious evidence of urinary bladder inflammatory or neoplastic criteria was noted. The urethra exhibited normal structure and tone to a depth of 2.0 cm.

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. Pinpoint to focal areas of nonobstructive medullary mineral were noted in both kidneys. The left kidney measured 3.5 cm in length. The right kidney measured 4.0 cm in length.

Adrenal Glands

The bilateral adrenal glands exhibited subjective prominent size, given the patient body size, with primarily maintained homogenous to mildly hypoechoic parenchyma. No evidence of neoplastic criteria was noted. The left adrenal gland measured 1.8 cm length x 0.47 cm width at the caudal pole. The right adrenal gland measured 1.4 cm length x 0.52 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 was enlarged in size with symmetrical to mildly rounded hepatic contour. Uniform mildly hyperechoic hepatic parenchyma, compared to the falciform fat and spleen, was present. No masses or nodules were noted. The gallbladder was mildly distended. The gallbladder walls were sonographically normal. Moderate, non-dependent, organized, variably echogenic to hyperechoic debris with areas of shadowing mineralization were present. No evidence of gallbladder or peripheral gallbladder inflammation was noted.



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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.

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

Pancreas

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

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Hepatopathy
- Moderate non-dependent, organized to focally mineralized gallbladder debris - consistent with emerging gallbladder mucocele with nonobstructive cholelithiasis
- Subjective bilateral mild prominent adrenal glands
- Pinpoint to focal nonobstructive renal medullary mineralization
- Minor pancreatic remodeling

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although the urine specific gravity (>1050) was not overt suggestive of PU/PD, further assessment may include LDDST if strong clinical suspicion for Cushing's Syndrome. If Cushing's Syndrome is ruled-out, underlying inflammatory hepatopathy i.e., cholangiohepatitis, could be a consideration in this patient. Further assessment may include, assuming normal clotting status, liver FNA cytology. Close monitoring going forward for evidence of increasing cholestasis or cranial abdominal / subxiphoid discomfort in the area of the gallbladder is recommended.

Some or all of the following protocol could be considered empirically. Hepatosupportive medications including Denamarin +/- Ursodiol may prove beneficial.

Enrofloxacin 5 mg/kg SID PO & **Metronidazole** (10-20 mg/kg po bid) over 3 weeks, **Ursodiol** (10-15 mg/kg p.o. q24h) over 8 weeks and recheck sonogram. Monitor rapid rise in ALT, SAP, Bilirubin, bilirubinuria, leukocytosis, focal cranial abdominal subxiphoid discomfort or progressive anorexia. More information regarding clinical emerging mucocele issues may be found with our article and research at <http://sonopath.com/resources/articles>, **Defining a GB Mucocele** and **Clinical Parameters in Dogs with Sonographically Diagnosed Surgical Biliary Disease** from ECVIM 2009.



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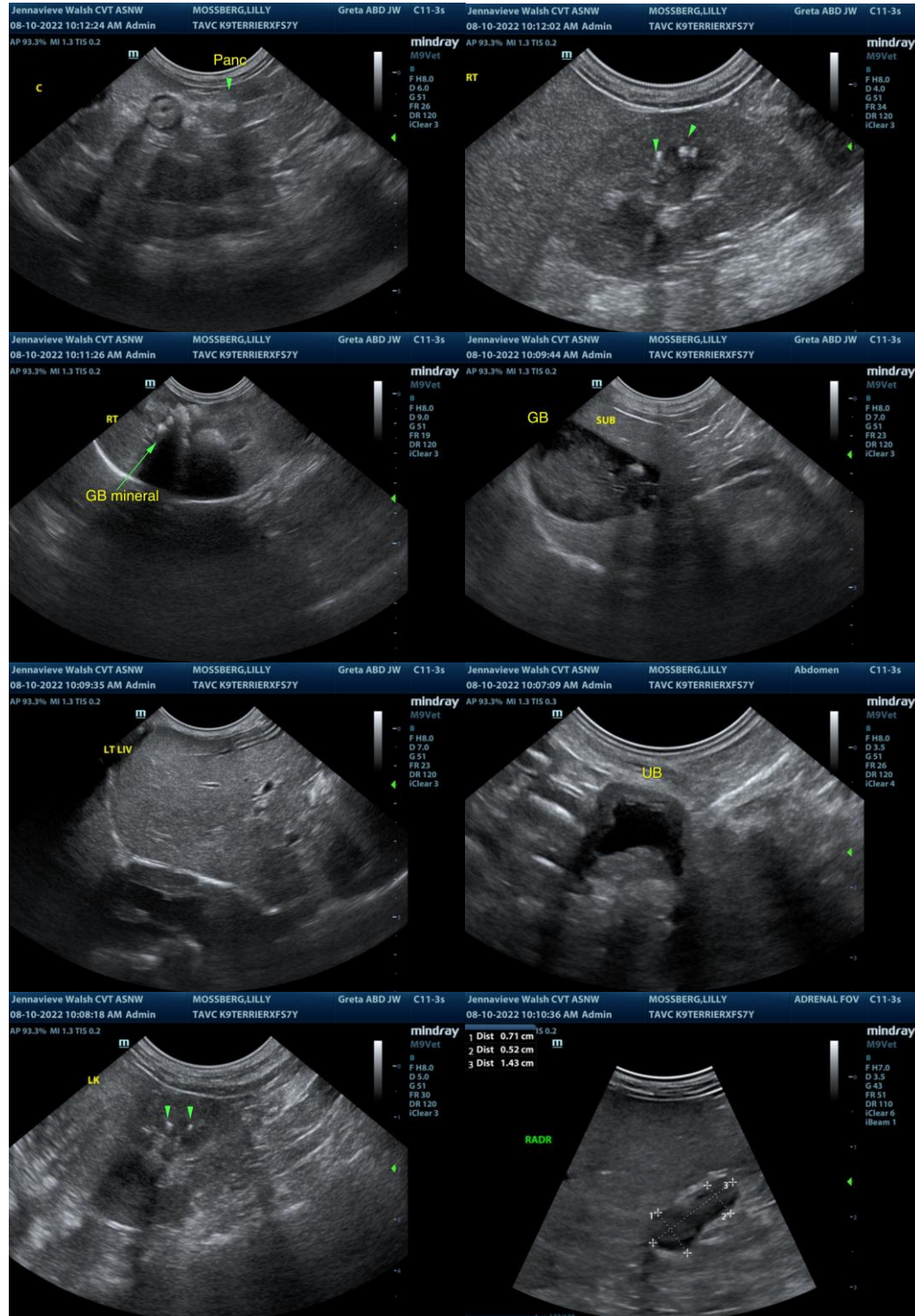
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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