



PATIENT

EmmyLou Scott

SPECIES

Canine

BREED

Rat Terrier

SEX

Spayed Female

AGE

15 Years

WEIGHT

4.94 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Patti Mayfield, DVM

HOSPITAL NAME

Emergency Vet
Hospital

REFERRING VET

Dr. Eleanor Teplin

INVOICE

38881

DATE

6/18/22

PRESENTING CLINICAL SIGNS

Managing heart disease (stage C MVI + LAE) under the care of OSU cardiology service, atopic dermatitis and luxating patella-left Presenting complaint: decreasing appetite for a week-yesterday ate a small amount of boiled chicken after adding Entyce and Cerenia, but no real meal for several days BW yesterday showed increased kidney and liver enzymes current medications: --- pimobendan 1.87mg PO BID mg (1 1/2 1.25mg tablets) -- diclofenac ophthalmic solution one drop OD SID --denamarin advanced small-med dog: 1/4 tablet PO SID -- Ursodiol 62.5mg PO SID -- Apoquel 2.7mg PO SID --Neo/Poly/Dex one drop OD SID --- recently discontinued furosemide
Abnormal PE/Chem/CBC/UA Results: PE: ~ 7% dehydrated Heart murmur; grade III/VI holosystolic Dental disease MPL's Blood work: 6/17/22 -- ALB: 4.7 g/dL (2.5-4.4) -- AIP: 870 U/L (20-150) -- ALT: 1276 U/L (10-118) -- BUN: 154 mg/dL (7-25) -- Creat: 2.9 mg/dL (0.3-1.4) -- K: 3.4 mmol/L (3.7-5.8) -- Ca: 12.1 mg/dL (8.6 - 11.8) CBC: Unremarkable 6/15/2022: Thoracic radiographs at OSU-- No profound cardiomegaly and no evidence of CHF. No pulmonary nodules noted. UA performed-- NSF Urine C/S-- pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder presented normal size and tone. Small, non-homogeneous pinpoint hyperechoic polypoid to sessile based mass present in the urinary bladder measuring approximately 1.3 cm x 0.85 cm. The urethra was normal in structure and tone to a depth of 3.0 cm. No overt pathology in the area of the iliac trifurcation, including no evidence of medial iliac or sublumbar lymphadenopathy.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. Non-uniform cortex exhibiting multiple small cortical cysts. Increased echogenicity and moderate to marked loss of corticomedullary symmetry and definition noted, expected for the age of the patient. Mild pyelectasia present in both kidneys. Pinpoint medullary mineral present in both kidneys. The left kidney measured 4.5 cm. The right kidney measured 4.4 cm.

Adrenal Glands

The bilateral adrenal glands exhibited mild prominent size. Mild non-homogeneous parenchyma and mild asymmetrical adrenal capsule margination. No evidence of mineralization. The left adrenal gland measured 1.9 cm length x 0.69 cm at the caudal pole. The right adrenal gland measured 2.4 cm length x 0.75 cm at the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size. The gallbladder wall was non-distended and thickened in appearance consisting of an echogenic double rim corresponding to the inner and outer portions of the wall. This is consistent with gallbladder wall edema. Possible causes may



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include acute inflammation, hypoalbuminemia, right sided heart failure and anaphylaxis. Gallbladder wall measured 0.38 cm. Moderate congealed, variably hyperechoic luminal debris present. No overt evidence of peripheral gallbladder inflammation or free fluid. The common bile duct was normal.

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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.

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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. Intermittent minor, non-specific small intestinal mucosal speckling noted.

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

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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.

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ULTRASONOGRAPHIC FINDINGS

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- Small UB mass - pinpoint areas of suspected mineral in the mass suggests neoplasia ie TCC or other, focal polyp or cystitis possible. Correlation with pending C/S and screening BRAF assay warranted (negative BRAF test does not exclude neoplasia). No evidence of regional mets.
- Chronic renal changes with cortical cysts and mild pyelectasia - CRF likely
- Non-homogeneous to mild irregular adrenal glands - nonspecific, adenomatous change or mild benign hyperplasia suspected.
- Hepatopathy - subjectively benign, metabolic, reactive vacuolar, hepatitis possible, no signs of neoplasia
- Cholecystitis GB pattern with moderate congealed luminal debris - possible emerging / atypical mucocele
- Overtly normal GI, minor pancreatic remodeling (no signs of active pancreatitis)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The inappetence in the patient may be secondary to both hepatobiliary and renal disease. If patient can tolerate IV fluids with the heart disease, hospitalization with judicious IV fluid protocol, GI support, and which may include the following protocol given the GB appearance could be considered with continued clinical assessment. Close monitoring for congestion indicated given the heart disease. BP suggested given the renal disease and adrenal gland appearance. Sonographic monitoring of the UB mass and GB especially if progressive hepatic enzymes / cholestasis is recommended. Guarded prognosis.

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Cholecystitis/Emerging Mucocele protocol.

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 subxyphoid discomfort or progressive anorexia.

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More information regarding clinical emerging mucocele issues may be found with our article and



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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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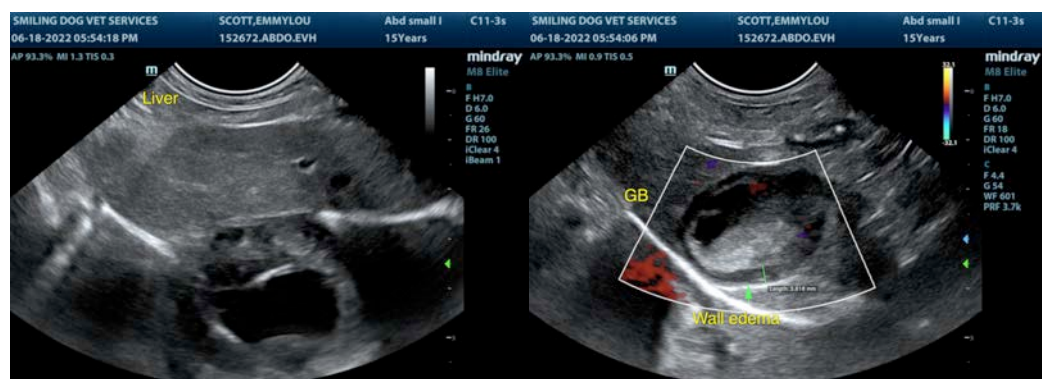
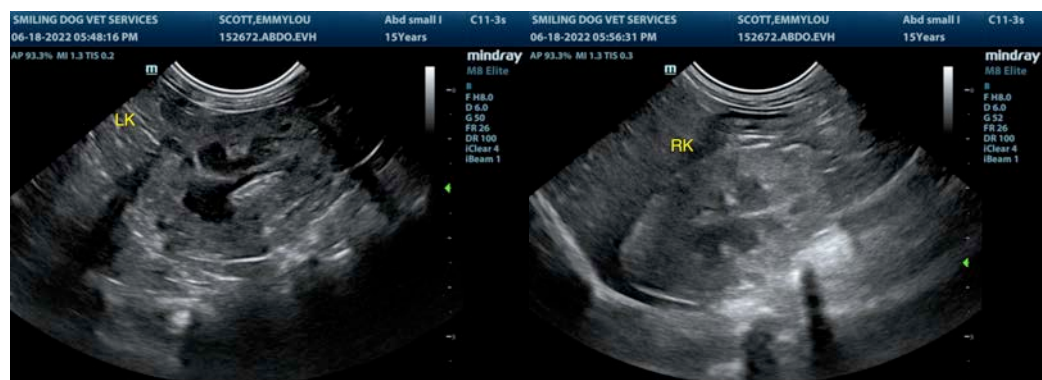
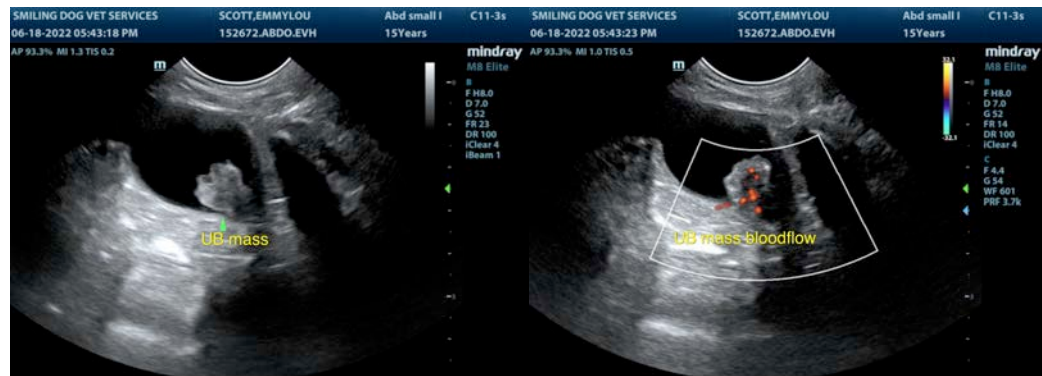
Dr. Eleanor Teplin

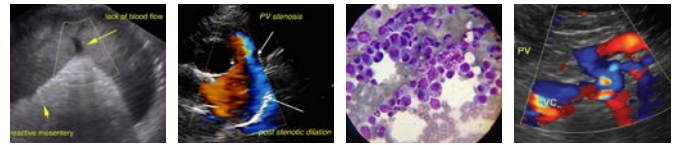
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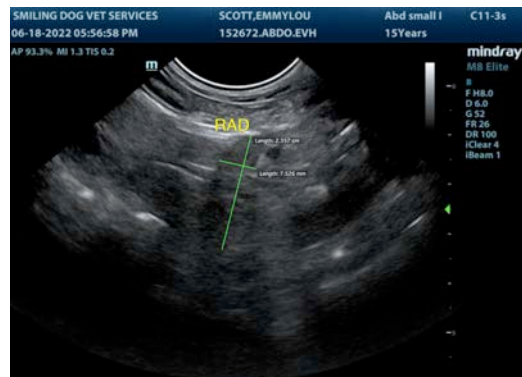
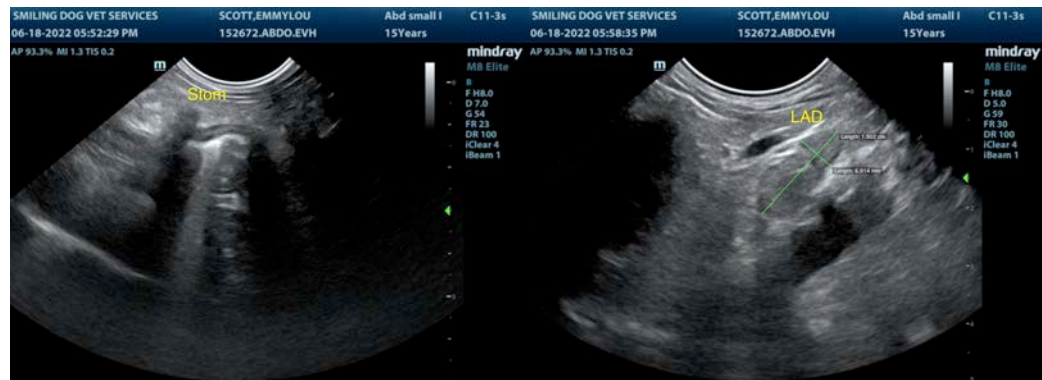
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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