



PATIENT

Rubie Jane Davis

SPECIES

Canine

BREED

Bichon Mix

SEX

FS

AGE

15yr

WEIGHT

9.2lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Todd

HOSPITAL NAME

Lambs Gap Animal
Hospital

REFERRING VET

Dr. Todd

INVOICE

12451ag

DATE

12/16/2022

PRESENTING CLINICAL SIGNS

Rubie is a fifteen year old, FS, Bichon Frise mix who was presented on 10/24/22 for trembling, not self, restlessness and increased hunger. CBC, cPL, 4DX, and T4 were normal. Chemistry panel showed azotemia (SDMA=36, Creat=3.0, BUN=79, Phos=7.3). Phosphate binder was started. UA/UPC of first morning urine sample showed USG=1.013, no proteinuria or UTI. Recheck renal panel on 11/4/22 showed SDMA=26, Creat=3.5, BUN=85, phos=7.0 so aluminum hydroxide was increased, Rx renal diet sample was sent home and at home SQ fluids 250 ml once daily was started. Since Rubie gives her mom a hard time at home with SQ fluids, we have been doing them here. On 11/20/22 recheck SDMA=18, Creat=2.5, BUN=42, calium=12.5, Phos=4.4. SQ fluids were decreased to 250 ml SQ every other day. Recheck on 12/3/22 showed SDMA=23, Creat=3.1, BUN=73, Phos=5.6, calcium normal, so SQ fluids were increased to daily again. Blood pressure on 12/8/22 was slightly elevated, but likely due to how nervous Rubie is when coming here. Abdominal ultrasound was advised due to increased renal enzymes and dilute urine.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with minor non-dependent particulate sediment with dependent luminal mineral. The sediment may indicate cellular debris / protein, crystalline debris, lipid, or mucus. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Non-obstructive medullary mineral to renolithiasis and minor pyelectasia was present. Intermittent cortical cysts were present. The left kidney measured 3.5 cm in length. The right kidney measured 3.6 cm in length

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The bilateral adrenal glands exhibited borderline prominent size based on caudal pole width and patient body weight. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.64 cm width in the caudal pole and 1.5 cm length. The right adrenal gland measured 0.52 cm width in the caudal pole and 1.4 cm length.

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

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. Intermittent discrete hypoechoic nodule consistent with discrete



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lipogranuloma was present. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and moderate mildly inspissated variably echogenic debris in the cranial lumen. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were 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.

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

FS

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, likely consistent with age related changes and considered incidental. No signs of active inflammation or neoplasia.

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Free Abdomen

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

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ULTRASONOGRAPHIC FINDINGS

- Dependent urinary bladder mineral
- Bilateral moderate chronic renal changes with medullary mineral/renolithiasis and cortical cysts
- Focal to intermittent benign hepatic nodule
- Moderate inspissated gallbladder debris (non-mucocele)
- Borderline prominent bilateral adrenal glands-nonspecific likely incidental

INTERPRETED BY

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(Canine and Feline)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient is likely passing small amounts of mineral from the kidneys into the urinary bladder. The kidneys did not appear to be end stage yet are sonographically consistent with IRIS stage 3 CKD. CRD therapy and monitoring of systemic BP if possible is recommended. Probable incidental age-related adrenal changes, benign hyperplasia or minor adenomatous changes is likely. Hepatosupportive medications such as Denamarin and Ursodiol are suggested if elevated hepatic enzymes or cholestasis.

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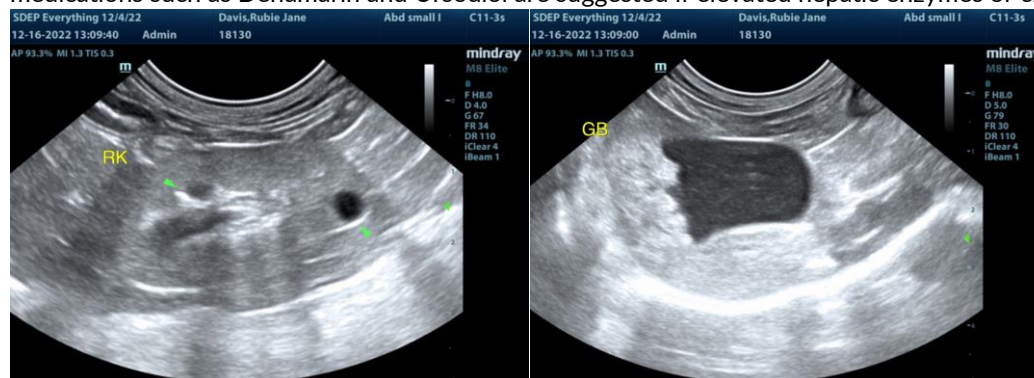
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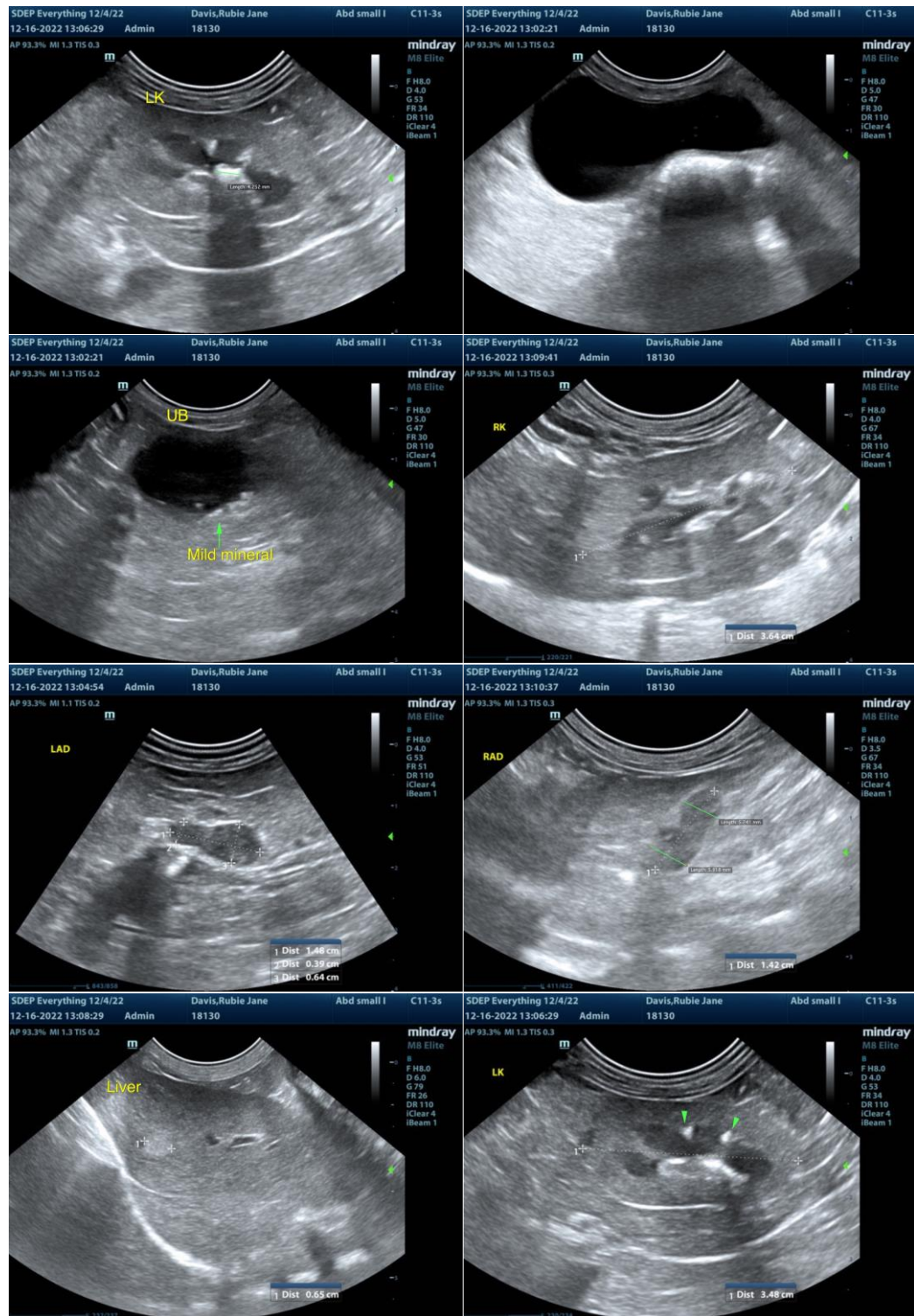
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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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mac.daniel@sonopath.com

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