



**PATIENT**

Lady George  
Mendes

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

FS

**AGE**

14 years

**WEIGHT**

9.9 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Summit Dog and Cat

**REFERRING VET**

Dr. Traci Vogler

**INVOICE**

13496

**DATE**

3/16/22

**PRESENTING CLINICAL SIGNS**

Liver/kidney changes

Abnormal PE/Chem/CBC/UA Results: PLT 568, ALKP 306, GGT

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm 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 was noted.

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 was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Nonobstructive medullary mineralization to small renoliths were present in both kidneys. An example of a left kidney renolith measured 0.35 cm in diameter. An example of a right kidney renoliths measured 0.3 cm in diameter. No evidence of pyelectasia was present. The left kidney measured 4.1 cm in length. The right kidney measured 4.4 cm in length.

**Adrenal Glands**

The left adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. No evidence of additional left adrenal nodular changes was noted. The left adrenal gland measured 2.4 cm length x 0.44 cm width in the caudal pole.

A primarily uniform to nonhomogeneous nodule was present in the cranial right adrenal gland resulting in mild symmetrical distortion of the cranial capsule. The nodule did not exhibit signs of mineralization, parenchymal escape, or overt evidence of vascular invasion. The nodule measured 1.5 cm x 1.2 cm. The overall right adrenal gland measured 2.6 cm length x 0.44 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 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 with thin walls and primarily anechoic luminal content. 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.

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**

***Primary Findings***

- Benign hepatopathy exhibiting minor generalized parenchymal remodeling
- Nonspecific mildly expansive cranial right adrenal nodule
- Bilateral chronic renal changes with nonobstructive medullary renoliths

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

The right adrenal nodule is nonspecific with considerations including function vs. nonfunctional adenoma, hyperplasia, lipogranuloma, or emerging neoplasia such as adenocarcinoma, pheochromocytoma, or other. Screening blood pressure is suggested to assess for evidence of hypertension which may allude to possible pheochromocytoma.

Although no reported clinical signs In this patient, adrenal workup could be considered if clinical signs of hyperadrenocorticism are present, given the ALP elevation and thrombocytosis. Conservatively, sonographic monitoring of the right adrenal nodule for evidence of progression with initial recheck in 4-6 weeks would be ideal.

Hepatosupportive medications may prove beneficial.



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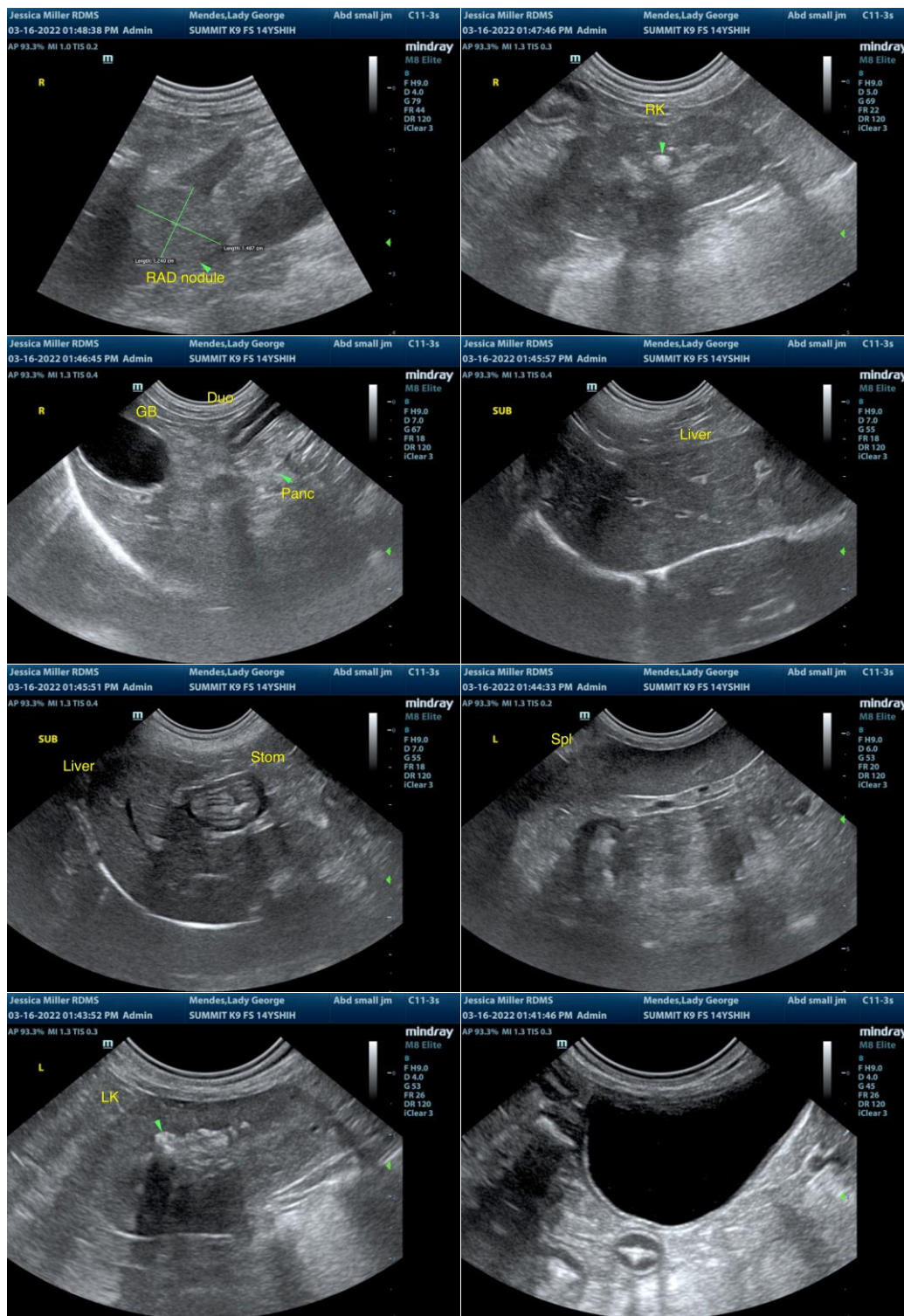
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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