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Clinical Sonography & Telecytology
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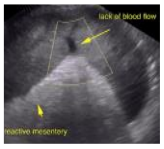

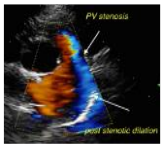

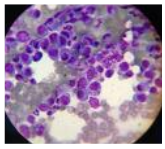
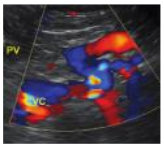


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1-800-838-4268 info@sonopath.com

**PATIENT**

Tami Stone

**SPECIES**

Canine

**BREED**

Pekingese

**SEX**

FS

**AGE**

6y 11m

**WEIGHT**

12 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Carly Pate

**HOSPITAL NAME**

VCA McKenzie AH

**REFERRING VET**

Dr. Arpaia

**INVOICE**

15877

**DATE**

1/18/23

## PRESENTING CLINICAL SIGNS

P presented for pre-dental visit, labwork showed, Elevated ALP, Marked elevation since last checked 1yr ago (300 now 1599)-- concern for Hyperadrenocorticism. LDDST (pre, 4hr, 8hr posts) P is on Hepatic Support and Urosdiol chronically, joint support supplements, Heska allergy drops

Abnormal PE/Chem/CBC/UA Results: 1/18/2023 LDDST (pre, 4hr, 8hr posts) CORTISOL SAMPLE 1 16.6 1 - 5ug/dL, CORTISOL SAMPLE 2 DEX 3.3 0 - 1.4ug/dL, CORTISOL SAMPLE 3 DEX 5.9 0 - 1.4 ug/dL 1/18/23 Urine/Protein Creatinine Ratio 1.2 1/10/23 CBC/Chem/UA CBC - Wnl except Platelets 656 (170-400); Accuplex - Heartworm (Antigen) NEGATIVE Borrelia burgdorferi NEGATIVE Ehrlichia canis NEGATIVE Anaplasma phagocytophilum NEGATIVE; Chemistry profile - Adult chemistry: wnl except - TP 7.7 (5-7.4) - albumin 4.6 (2.7-4.4) - ALP 1599 (5-131); Urinalysis - USG 1.053 pH 6 urine chems: wnl urine sedi: nsf MA: >30 (<2.5)

## 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.

No evidence of pathology was noted In the area of the uterine remnant.

No evidence of medial Iliac or sublumbar lymphadenopathy.

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. The left kidney measured 3.6 cm in length. The right kidney measured 4.3 cm in length.

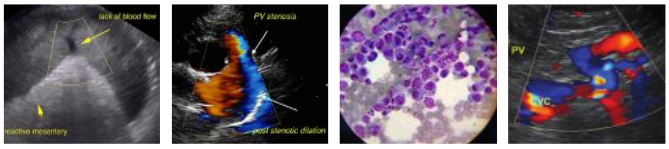
### *Adrenal Glands*

Previously noted mid to cranial, homogeneous, nonmineralized left adrenal nodule was present. The nodule resulted in mild symmetrical distortion of the mid to cranial splenic capsule, yet without evidence of parenchymal or overt vascular invasion. The left adrenal nodule measured 1.3 cm x 1.2 cm. The overall left adrenal gland measured 2.0 cm length x 1.2 cm width at the cranial pole and 0.65 cm width at the caudal pole.

Concurrent previously noted homogeneous nonmineralized cranial right adrenal nodule of similar appearance was present measuring 0.85 cm x 0.7 cm. Mild cranial right adrenal enlargement exhibiting symmetrical capsule contour without overt evidence of nodular parenchymal escape or vascular invasion. The overall right adrenal gland measured 1.6 cm length x 1.3 cm width at the cranial pole and 0.49 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

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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 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. 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 exhibiting minor, dependent to nondependent nonorganized echogenic debris. No evidence of gallbladder or peripheral gallbladder inflammatory criteria was noted. The cystic and common bile ducts were normal.

### *Gastrointestinal*

The stomach presented intact wall layering with a normal wall layer ratio. Minor nonshadowing ingesta and luminal fluid were present in the stomach.

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

- Persistent to mildly progressive bilateral mild nodular adrenomegaly
- Static benign hepatopathy, minor gallbladder debris (non-mucocele)

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The overall hepatic presentation appeared similar to the previous ultrasound without evidence of progressive hepatic parenchymal changes or hepatomegaly.

The previously noted bilateral adrenal glands appeared to be mildly larger compared to the previous study, yet some degree of measurement variability could be possible. Continued potential considerations for the adrenal nodules may include functional vs. nonfunctional adenomas and benign hyperplasia, while the possibility of emerging neoplasia i.e., pheochromocytoma, cannot be definitively excluded. Nodular adrenal neoplastic criteria is considered less likely at this stage, given the lack of significant progression and sonographic appearance.

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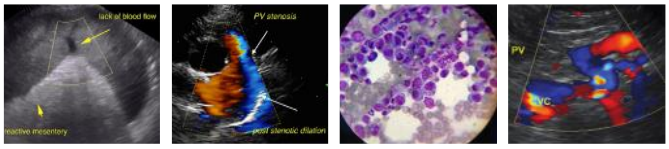

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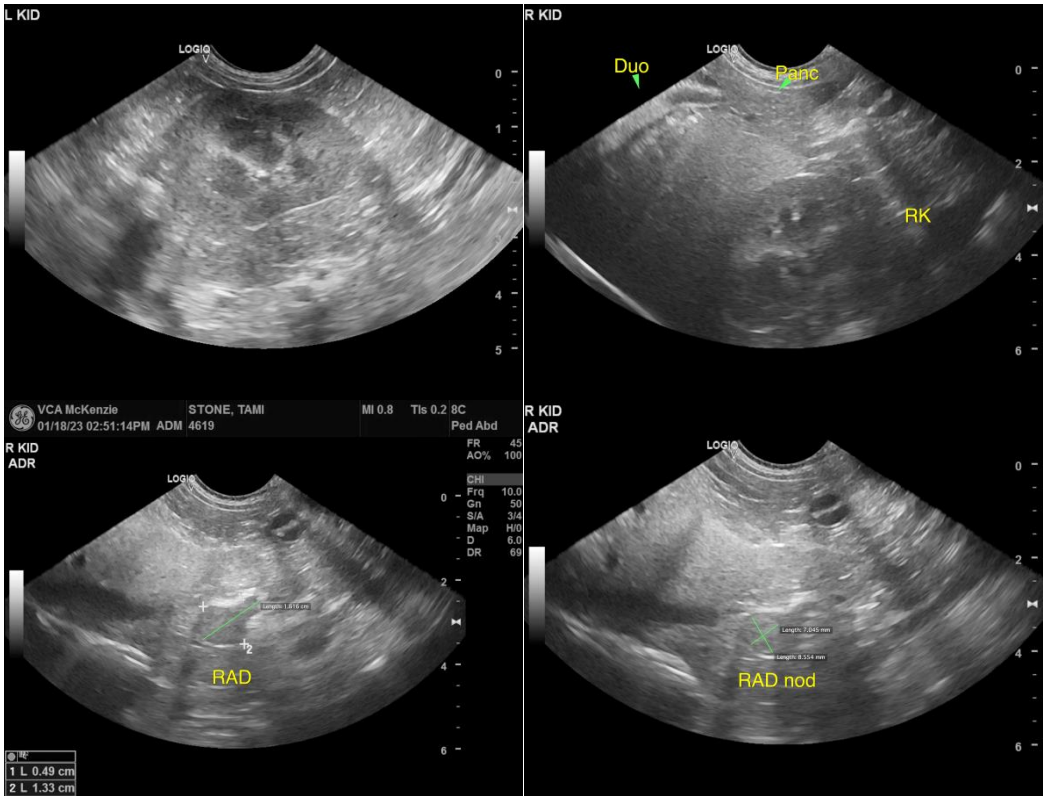
Continued monitoring of systemic blood pressure for evidence of hypertension, which may allude to a left, right, or bilateral pheochromocytoma, is suggested going forward. Potential functional adenomas, given the LDDST results and if clinical signs suggestive of Cushing's Syndrome, may be a higher potential. However, the reported urine specific gravity indicating adequate concentration was not overtly consistent with PU/PD. Correlation with clinical impression is suggested.

Continued sonographic monitoring of the adrenal nodules, especially if clinical signs suggestive of adrenal disease, or evidence of hypertension, is recommended. Empirical continued hepatosupportive medications are recommended.

For an additional charge, internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at http://spa.sonopath.com/.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services



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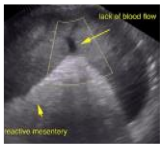
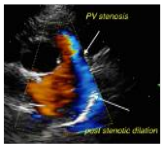
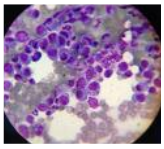
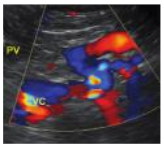

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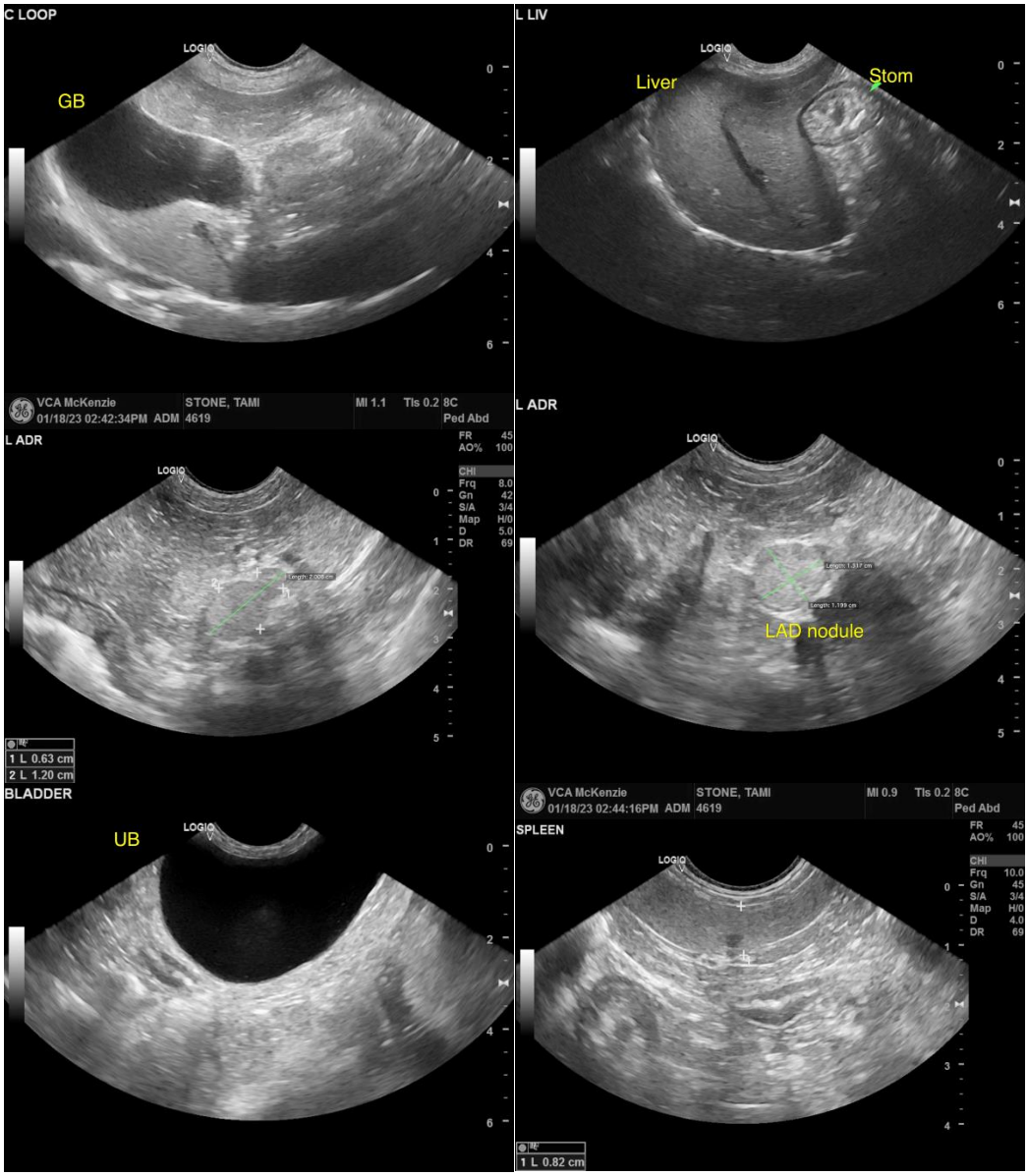


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**