

PATIENT

Emma Ignatius

SPECIES

Canine

BREED

Springer Spaniel

SEX

FS

AGE

12 years

WEIGHT

68 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Amazon Park AC

REFERRING VET

Dr. Jones

INVOICE

14334

DATE

3/16/22

PRESENTING CLINICAL SIGNS

Patient is polyphagic and PU/PD for over a year. Labwork shows elevated ALP, LDDS confirms hyperadrenocorticism. Owner initially declined treatment for Cushing's so we are treating for hypertension, well controlled. Current Medications Enalapril 15 mg twice daily Primary Question/Differential to Be Answered in This Exam Is this PDH vs adrenal tumor?
Abnormal PE/Chem/CBC/UA Results: ALP 1700, ALT 131

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.

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. Small cortical cysts were present in both kidneys. The left kidney measured 7.8 cm in length. The right kidney measured 8.1 cm in length.

Adrenal Glands

The left adrenal gland was mildly enlarged in size with mild asymmetrical capsular contour. Mildly expansive, mildly hyperechoic nodules were noted in the cranial and caudal poles of the left adrenal gland. A cranial left adrenal nodule measured 2.0 cm x 1.6 cm. The caudal left adrenal nodule measured 1.2 cm x 1.2 cm. The overall left adrenal gland measured 3.9 cm in length x 1.2 cm caudal pole width.

The right adrenal was enlarged in size with previously noted, mildly expansive, non-uniform to focally hyperechoic mass, occupying the majority of the mid to cranial right adrenal gland, measuring 3.9 cm x 3.7 cm. This indicates progression from previous measurements of the previously described right adrenal nodule. The overall right adrenal gland measured 4.4 cm in length x 3.7 cm width at the cranial pole and 0.76 cm width at the caudal pole. The caudal pole of the right adrenal gland appeared to be intact. Concern for vascular invasion associated with the right adrenal mass, as indicated by mildly prominent to dilated adjacent caudal vena cava.

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/ Gallbladder



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The liver was enlarged with generalized hyperechoic parenchyma, exhibiting multifocal discrete hypoechoic intraparenchymal nodules. An example of a liver nodule measured 2.4 cm in diameter.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

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 parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Bilateral adrenomegaly, exhibiting nodular cranial right adrenal mass with concurrent left adrenal nodules, possible right adrenal vascular invasion
- Hepatopathy, exhibiting generalized hyperechoic parenchyma with multifocal discrete hypoechoic intraparenchymal nodules
- Bilateral, moderate chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both adrenal glands were abnormal, exhibiting subjective mildly progressive nodular changes with right adrenal mass, which is suspected to be neoplastic and with high concern for associated vascular invasion. The left adrenal nodular changes may indicate functional versus non-functional adenoma, hyperplasia, while the possibility of bilateral adrenal tumors, such as pheochromocytoma, adenocarcinoma or potential mixed pathologies may be possible. Given the history of hypertension in this patient, potential for concurrent pheochromocytoma is of concern.

Continued therapy for hyperadrenocorticism and hypertension with as needed hepatosupportive medications, including Denamarin and ursodiol would be reasonable. Ideally, continued periodic sonographic monitoring of the bilateral adrenal glands for evidence of further progression recommended.



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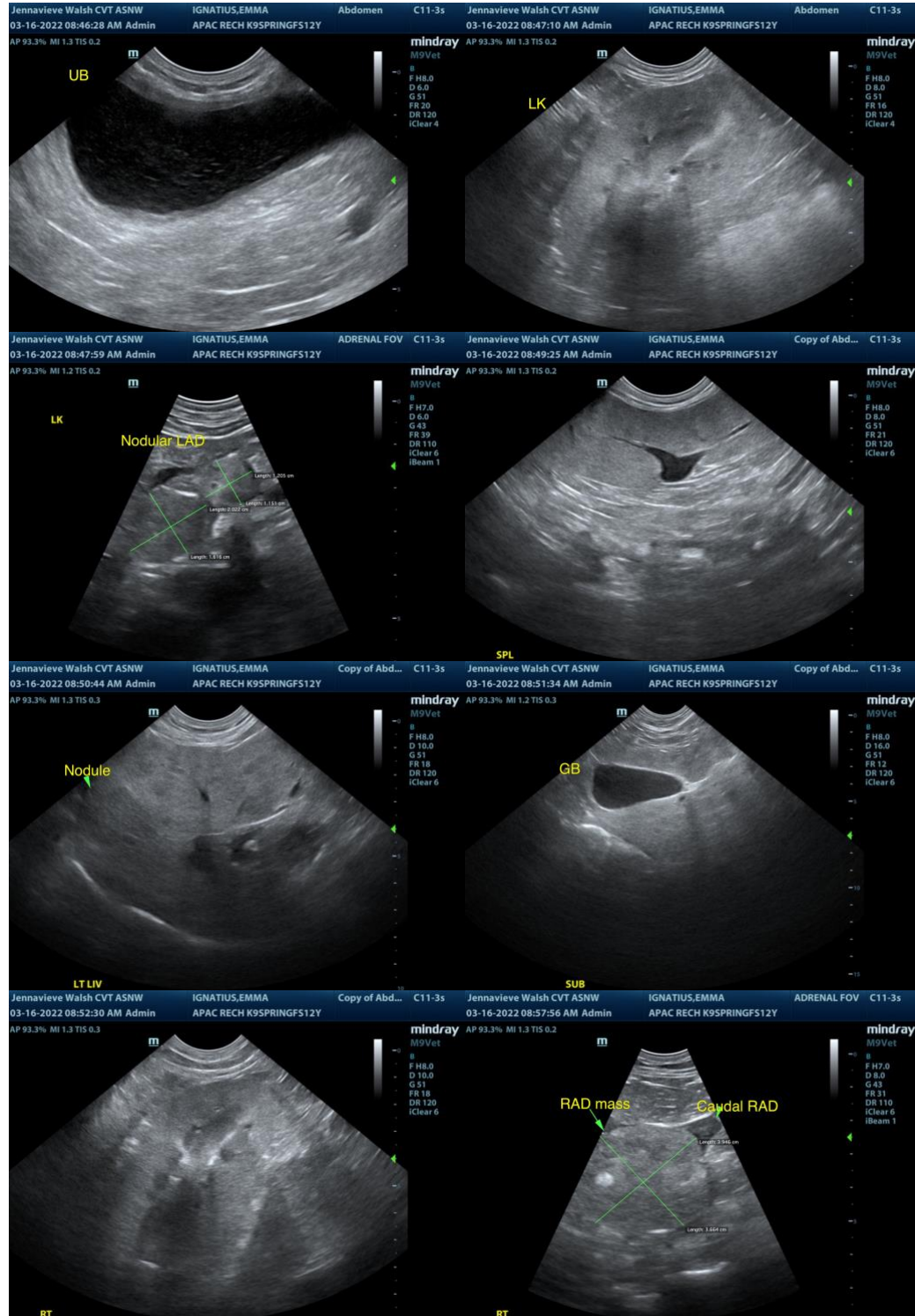
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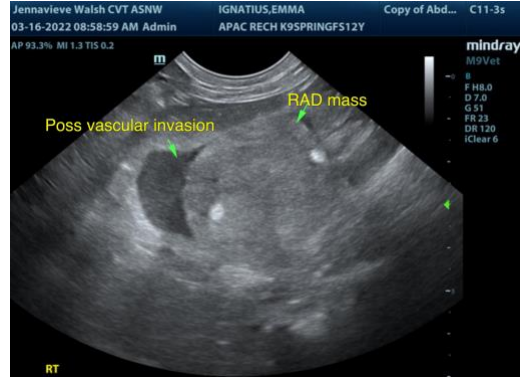
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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info@SonoPath.com