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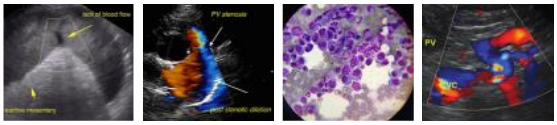


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Gracie Anderson

SPECIES

Canine

BREED

Havanese

SEX

FS

AGE

14yr

WEIGHT

11.1lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh CVT

HOSPITAL NAME

Four Corners VC

REFERRING VET

Dr. Dull

INVOICE

13532ag

DATE

04/18/2023

PRESENTING CLINICAL SIGNS

*Inappetence, decreased weight *Iris Stage 3 CKD *Anemia *Leukocytosis - historical, noted 3/27/2023, repeat CBC reveals WBC now normal Current Medications Mirtazapine 3.25mg PO SID Radiographic Findings Hepatomegaly noted on radiographic study performed on 01/27/2023 Primary Question/Differential to Be Answered in This Exam Any biliary sludging or gall bladder mucocele? Any evidence of a gastric neoplasia? What is the current status of kidneys?

Abnormal PE/Chem/CBC/UA Results: decreased RBC=4.82 decreased HCT=27.9% decreased HGB=10.2 mildly increased Monos/EOS today increased PLTS=519 increased ALKP=1,431 increased SDMA=31 increased Crea=2.5 increased BUN=40

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 were noted.

Normal size and asymmetrical capsule contour 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. Mild bilateral pyelectasia was present. Discrete dystrophic medullary mineral was present. The left kidney measured 3.2 cm in length. The right kidney measured 3.5 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the uterine remnant appeared normal and free of pathology.

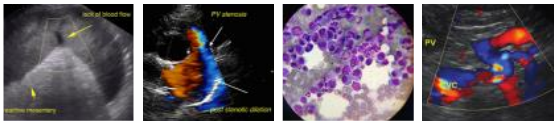
Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.44 cm width at the caudal pole and 0.43 cm width at the cranial pole. The right adrenal gland was mildly prominent based on caudal pole width and body weight. Subtle non-homogenous parenchyma was present. The right adrenal gland measured 0.61 cm width at the caudal pole and 0.69 cm width at the cranial pole.

Spleen

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multifocal, well-defined, symmetrical, hyperechoic nodules were present throughout the cranial to caudal parenchyma. Concurrent pinpoint hyperechoic splenic foci was present which may indicate areas of microinfarction, fibrosis or mineralization. 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 or neoplastic changes were not noted. The hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver/Gallbladder



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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 hyperechoic nodules consistent with subtle lipogranulomas were 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 mildly distended in size with primarily anechoic luminal content and moderate congealed non-organized hyperechoic debris. 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 contained mild non-shadowing ingesta with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Mild duodenal hyperechoic mucosal speckling was present. 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 mild non-uniform hypoechoic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

- Benign hepatopathy-sonographically suggestive of vacuolar hepatopathy pattern or non-obstructive cholestasis.
- Immature gallbladder mucocele.
- Moderate chronic renal changes with mild bilateral pyelectasia.
- Borderline prominent right adrenal gland-no adrenal tumors.
- Heterogenous remodeled pancreas- patient/ age related variant, remodeling owing to previous inflammatory episode or mild to chronic pancreatitis possible.
- Suspect mild gastroduodenitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of intra-abdominal neoplastic criteria. The kidneys are consistent with moderate chronic renal disease pyelectasia secondary to chronic renal changes or pelvic scarring. A full urinary workup including UA, C/S and baseline UPC level if evidence of proteinuria is suggested. Adrenal disease may be less likely in this patient given lack of reported clinal signs. Hepatosupportive medications such as Denamarin and Ursodiol may prove beneficial.

Assessment for evidence of cranial abdominal/subxiphoid discomfort on palpation which may allude to chronic active pancreatitis is recommended. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

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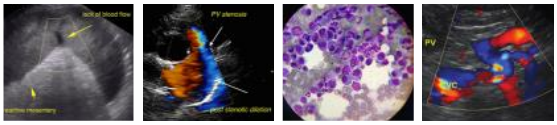

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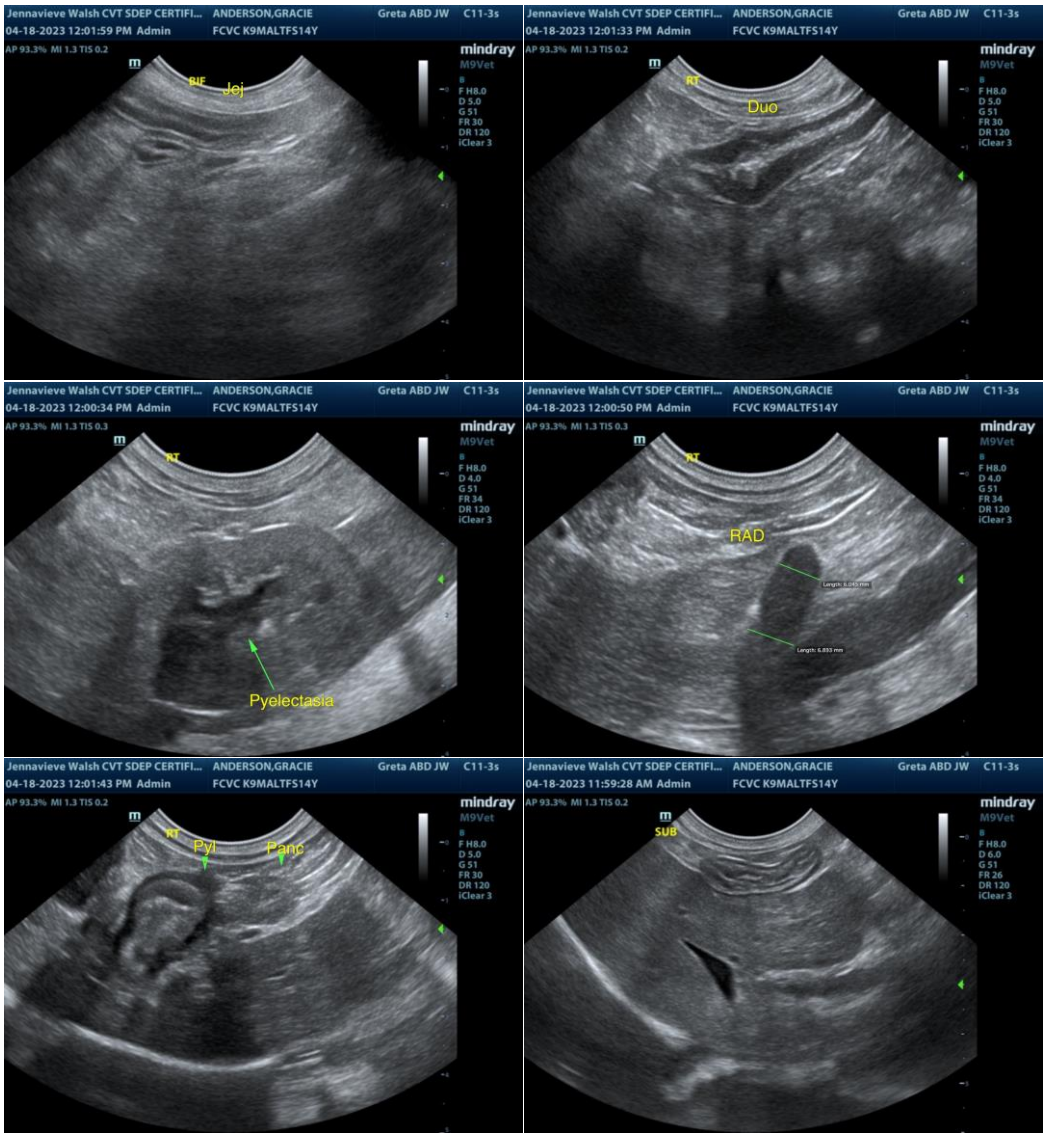

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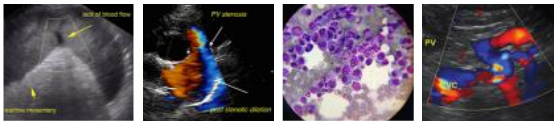

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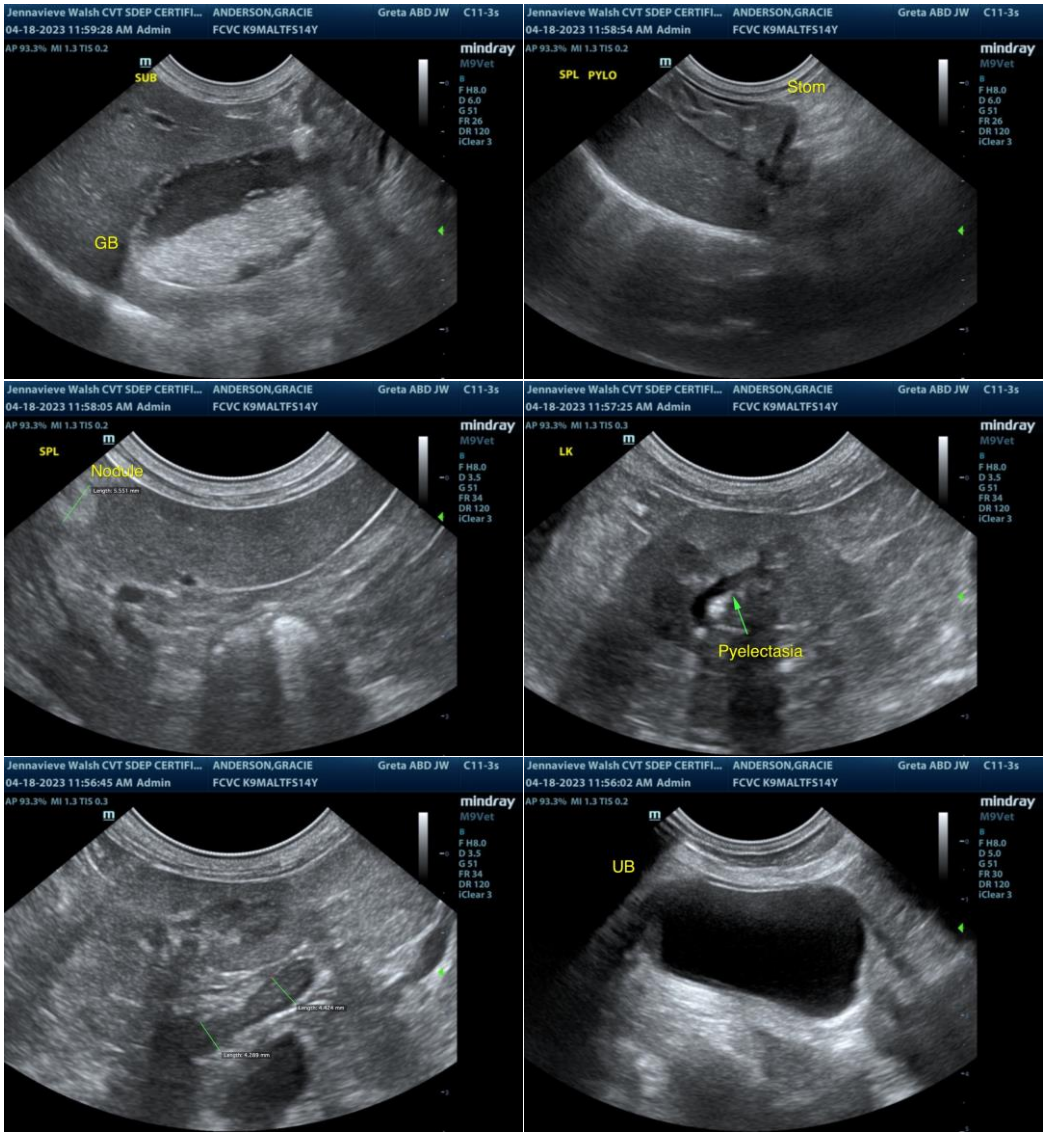

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com