



## PATIENT

Apollo Dubel

## SPECIES

Canine

## BREED

Mixed

## SEX

MN

## AGE

11

## WEIGHT

62.1

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Chelsea Pastor

## HOSPITAL NAME

Fredon Animal  
Hospital

## REFERRING VET

Dr. Sikkes

## INVOICE

75548

## DATE

6-17-26

## PRESENTING CLINICAL SIGNS

1-2 months adr, dry retch  
prone to diet indiscretion

Abnormal PE/Chem/CBC/UA Results: PE: tense abdomen cbc wnl chem: alp 3178 alt 144

## 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.

The area of the residual prostate appeared normal and free of pathology.

No evidence of pathology in the area of the aortic trifurcation.

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.8 cm in length. The right kidney measured 7.4 cm in length.

### *Adrenal Glands*

The left adrenal gland was mildly enlarged in size exhibiting a nonhomogeneous parenchyma. Strong suspicion for parenchymal expansion into the area of the left phrenicoabdominal vein with mild phrenicoabdominal vein distension. The left adrenal gland measured 1.1 cm width at the caudal pole.

The right adrenal gland was not definitively visualized.

### *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 presented generalized hepatomegaly exhibiting nonhomogeneous variable to increased hepatic parenchyma echogenicity and echotexture. Intermittent well-demarcated mildly hyperechoic intraparenchymal nodules were present. An example of a liver nodule measured 2.3 cm in diameter. Normal hepatic vascular volume was present. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non-distended in size with thin walls and mild nonorganized gallbladder debris. The cystic and common bile ducts were normal.

### *Gastrointestinal*



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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty without evidence of retained ingesta, fluid, 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 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

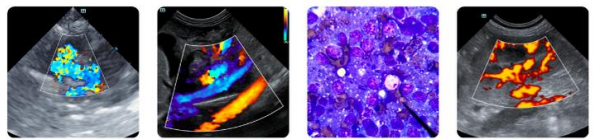
- Enlarged nonhomogeneous left adrenal gland with suspicion for early vascular invasion.
- Non visualized right adrenal gland.
- Enlarged nonhomogeneous liver exhibiting hyperechoic nodules.
- Nonorganized gallbladder debris (nonmucocele).
- Mild age related renal changes.
- Normal gastrointestinal tract/area of the pancreas.
- Normal spleen.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The left adrenal gland was suspicious for early vascular invasion most concerning for adrenal neoplastic criteria such as carcinoma, pheochromocytoma, or other.

Chronic vacuolar, cholestatic, inflammatory hepatopathy or a combination with parenchyma remodeling, fibrosis, nodular hyperplasia, lipogranulomas, emerging primary or metastatic hepatic neoplasia not excluded. Assuming normal clotting status, hepatic FNA cytology could be considered for further clarification.

Serial blood pressure measurements are warranted. If hypertension is present i.e. systolic pressure >160 then urine metanephrine level is indicated to assess for pheochromocytoma. If the patient appears Cushingoid then work-up for adrenal dependent Cushing's is indicated. CT evaluation would be ideal for surgical planning.



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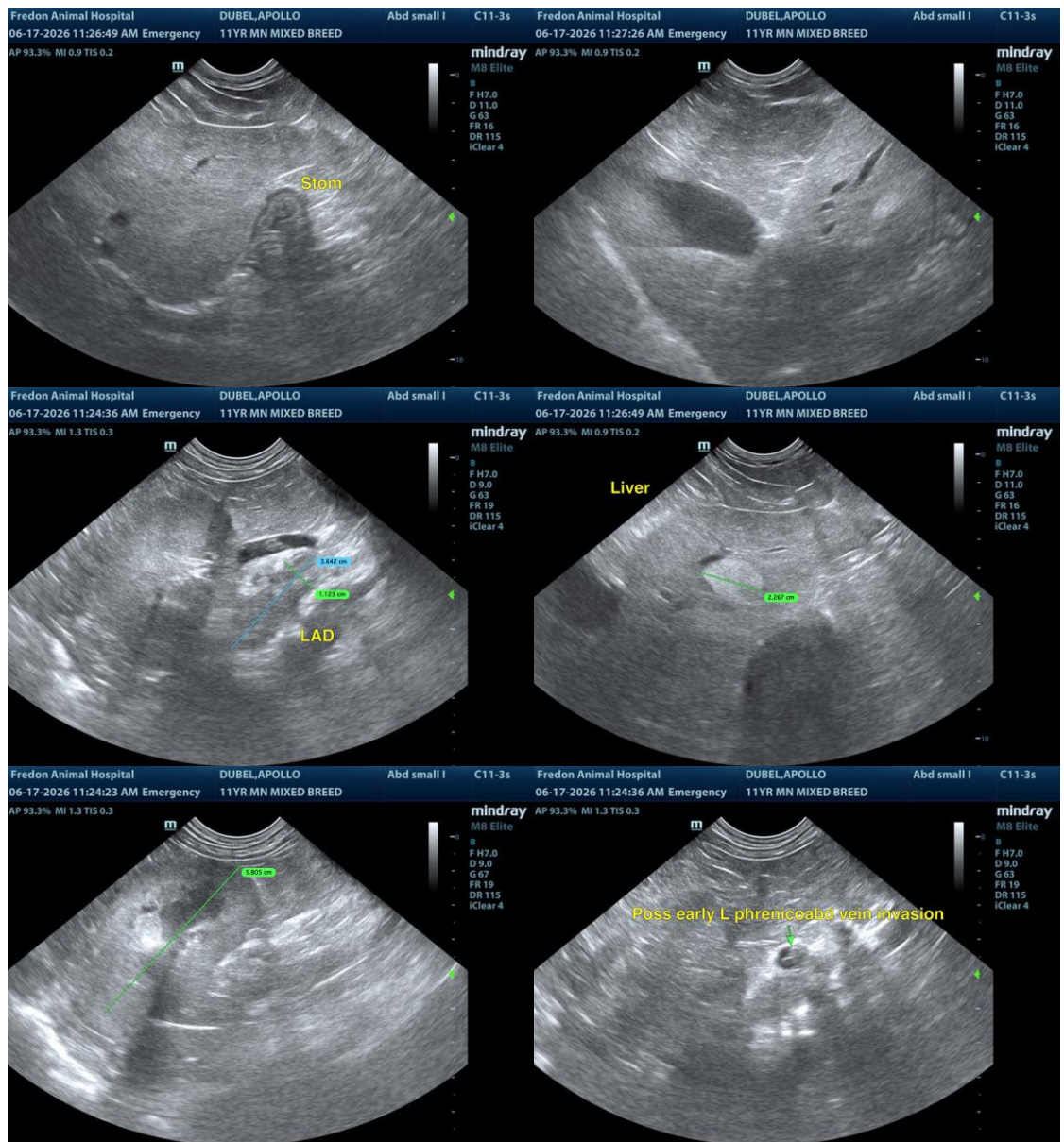
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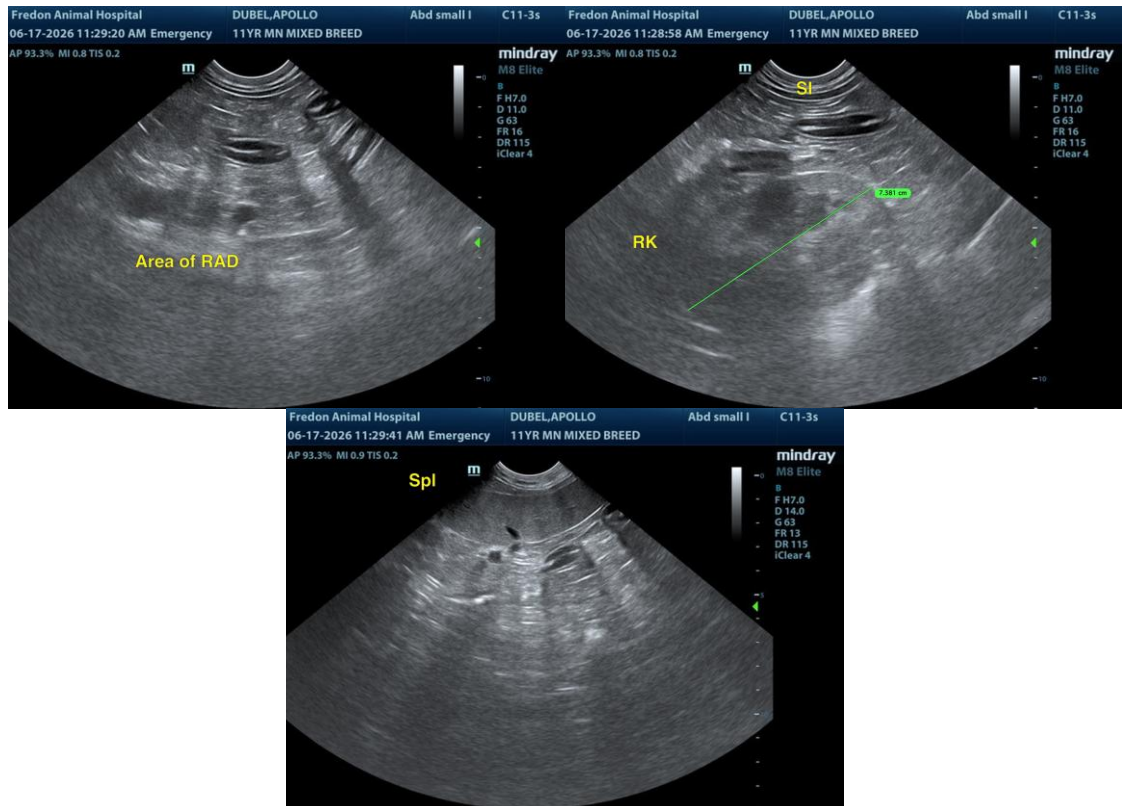
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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](mailto:info@sonopath.com)