



**PATIENT PRESENTING CLINICAL SIGNS**

Emma Lebeau V/D; anorexia, abdominomegaly. BUN 29, creat 6.2; ALP 259.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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 were noted.

BREED

Chihuahua Mix

SEX

FS

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 corticomodullary symmetry and definition expected for the age of the patient. Bilateral areas of minor medullary mineralization were present along with intermittent cortical cysts and mild pyelectasia. The left kidney measured 5.4 cm in length. The right kidney measured 6.0 cm in length

AGE

15yr

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

WEIGHT

26 lb

Mild to moderate unilateral enlargement of the right adrenal gland was present. Asymmetrical adrenal capsule margination was present. The parenchyma of the enlarged adrenal gland presented heterogenous to mixed echogenic with nonuniform echotexture. A centralized to mildly peripheral mixed echogenic to non-homogenous nodular component measuring 2.9 cm x 2.4 cm was present. Potential impingement on the medial aspect of the right kidney possible. Vascular invasion was not apparent yet cannot be definitively excluded. The overall right adrenal gland measured 4.0 cm in length x 2.5 cm in width.

**INTERPRETED BY**

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

Discrete non-disruptive nodules were present at the cranial and caudal pole of the left adrenal gland. Maintained symmetrical capsule contour was present. The nodules did not exhibit signs of mineralization or vascular invasion. The cranial left adrenal nodule measured 1.0 cm x 0.66 cm. The caudal left adrenal nodule measured 1.1 cm x 0.92 cm. The left adrenal gland measured 1.0 cm width at the caudal pole and 2.6 cm width at the cranial pole.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**Spleen**

HOSPITAL NAME

Falmouth Animal Hospital

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. A solitary mildly shadowing hyperechoic nodule was present in the medial parenchyma consistent with benign myelolipoma, previous infarct or emerging mineralization. The splenic nodule measured 0.50 cm in diameter. 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.

REFERRING VET

Dr. Hauser

INVOICE

12540ag

**Liver/Gallbladder**

DATE

12/26/2022

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



**PATIENT**

Emma Lebeau

was non-distended in size with primarily anechoic luminal content and moderate mildly congealed non-organized variably echogenic luminal debris in the area of the caudal lumen and gallbladder neck. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

**SPECIES**

Canine

**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.

**BREED**

Chihuahua Mix

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Minor segmental duodenojejunal mucosal specking was present which is non-specific yet at times may be associated with underlying enteritis. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

**SEX**

FS

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Semi formed fecal matter was present in the colon lumen with lumen dilation.

**Pancreas**

**AGE**

15yr

The pancreas base and right pancreatic limb were mildly prominent in size exhibiting mild capsule asymmetry and heterogenous to mildly mixed echogenic parenchyma. No evidence of peripancreatic inflammatory omentum was noted.

**WEIGHT**

26 lb

**Free Abdomen**

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

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DABVP (Canine and Feline)

**ULTRASONOGRAPHIC FINDINGS**

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

- Chronic renal changes with cortical cysts, minor medullary mineral and minor pyelectasia
- Discrete non-disruptive left adrenal nodules
- Right adrenal nodular to mixed echogenic mass
- Hepatomegaly-subjectively benign, suggestive of vacuolar hepatopathy pattern and potential non-obstructive cholestasis
- Moderate gallbladder debris (non-mucocele)
- Gastroenteritis pattern
- Heterogeneous to mixed echogenic pancreas-patient/age related variant, remodeling or minor fibrosis owing to previous inflammation, potential for chronic pancreatitis possible

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Falmouth Animal Hospital

**Secondary**

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- Benign splenic nodules

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The bilateral adrenal glands are abnormal with potential benign nodular changes or neoplastic etiologies possible. High concern for right adrenal neoplastic tumor is warranted. A screening BP is advised to assess for evidence of hypertension which may allude to emerging adrenal neoplastic criteria i.e. pheochromocytoma. An abdominal CT is likely ideal given this presentation for further assessment and possible surgical planning if clinically indicated. A spec cPL could be considered to assess for evidence of chronic pancreatitis. Empirically as needed hepatic and gastrointestinal support would be reasonable. A full urinary workup including UA, C/S and baseline UPC is suggested.

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**SPECIES**

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**BREED**

Chihuahua Mix

**SEX**

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**HOSPITAL NAME**

Falmouth Animal  
 Hospital

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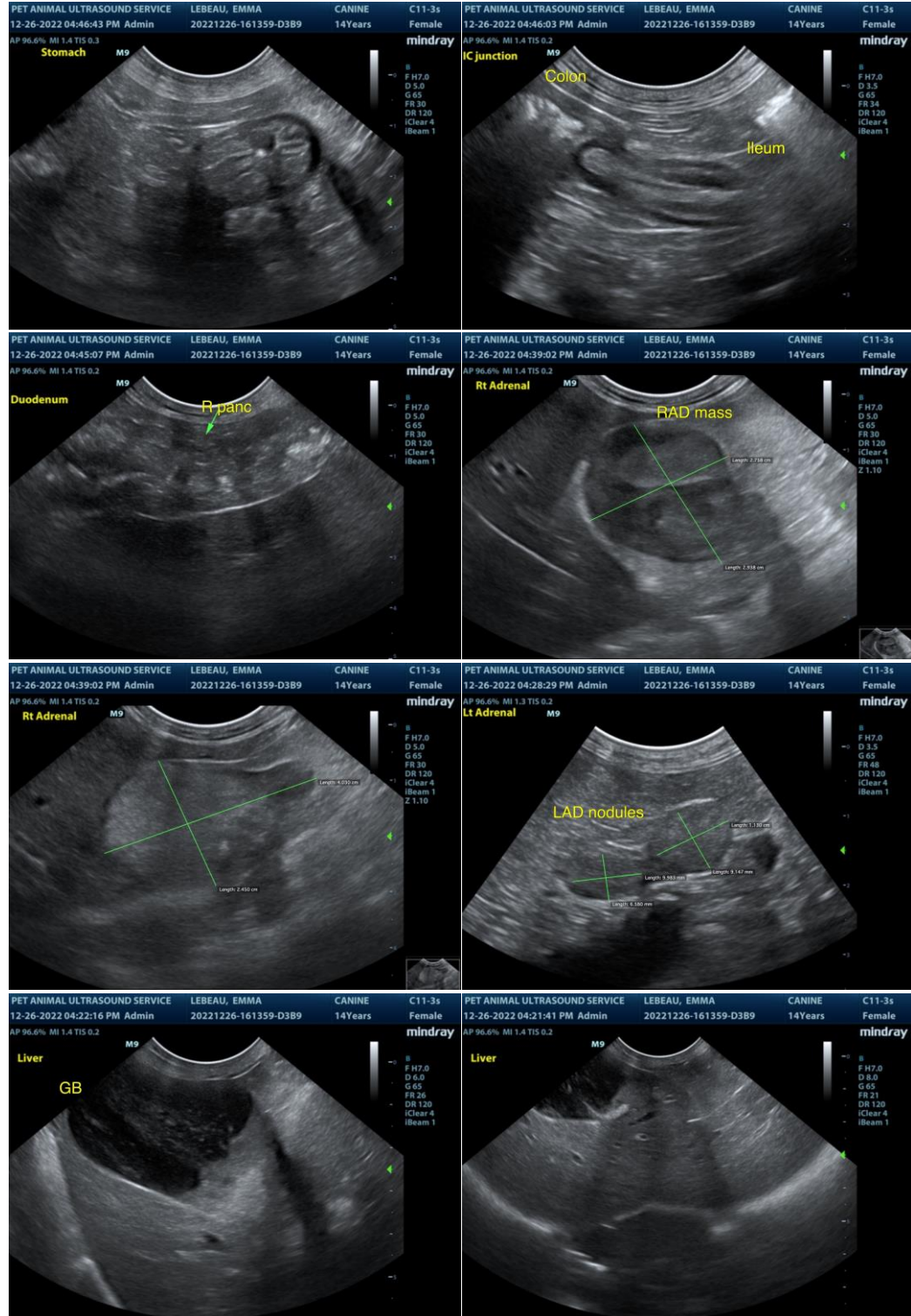
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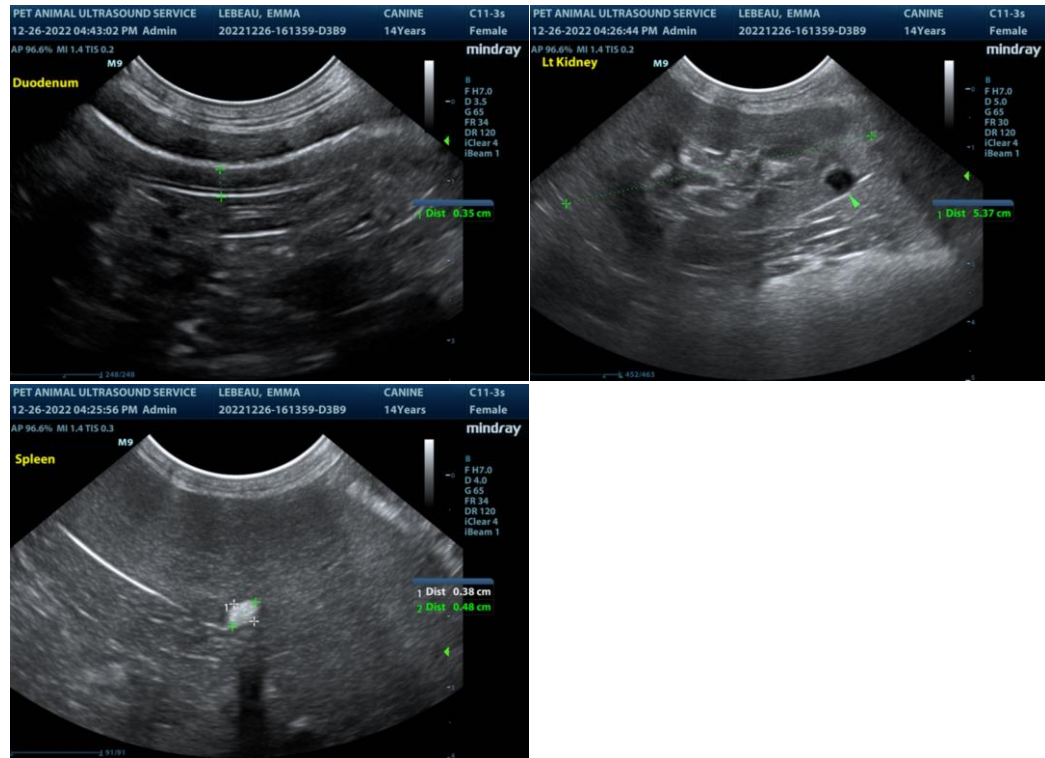
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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