



**PATIENT PRESENTING CLINICAL SIGNS**

Trixie Monahan Liver, kidney, and pancreatic levels elevated on bloodwork. Doing well clinically.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Albumin 4.6; AST (SGOT) 88, ALT 250, ALP 2190, Urea Nit 63, creat 3.0, calcium 12.2, Potas 5.8. NA/K ratio 26, choles 449, Amy 1165, /t4 <0.5, Free T4 (dialysis) 5.5

**BREED**

Dachshund Mix

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

FS

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.

**AGE**

12yr

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. Mild bilateral pyelectasia was present. The left kidney measured 5.5 cm in length. The right kidney measured 5.2 cm in length.

**WEIGHT**

32.2lb

The area of the aortic trifurcation was free of pathology.

**INTERPRETED BY**

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

**Adrenal Glands**

Bilateral symmetrical adrenal gland enlargement with mildly non-homogenous parenchyma exhibiting suspect pinpoint dystrophic mineralization. The left adrenal gland measured 0.89 cm width at the caudal pole and 0.78 cm width at the cranial pole. The right adrenal gland measured 0.75 cm width at the caudal pole and 0.91 cm width at the cranial pole.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**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.

**HOSPITAL NAME**

East Boston Animal Hospital

**Liver/Gallbladder**

The liver exhibited subjective mild enlargement with normal in structure, and contour. The liver parenchyma exhibited normal echogenicity with a mild to moderate coarse echotexture. Intermittent discrete non-homogenous non-disruptive intraparenchymal nodules were present, an example measuring 1.7 cm diameter in the deep mid liver. A mildly expansive irregular mixed echogenic focally mineralized mass was present in the left medial to lateral liver measuring ~ 8.0 cm in diameter.

**REFERRING VET**

Dr. Chopra

**INVOICE**

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The gallbladder was non distended in size with echogenic, nonmineralized, non-dependent biliary sludge. The biliary sludge was non organized with a hypoechoic to anechoic, irregular to interrupted rim visible between the nondependent sludge and inner wall. No signs of peripheral inflammation.

**DATE**

01/08/2023

**Gastrointestinal**



**PATIENT**

Trixie Monahan

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 gastric body wall measured 0.40 cm in width.

**SPECIES**

Canine

The small intestine presented intact generalized prominent wall layering with a mildly prominent duodenojejunal mucosa layer. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The duodenum wall measured 0.54 cm width. The jejunum wall measured 0.46 cm width.

**BREED**

Dachshund Mix

Normal visible colon wall layers were present with apparent formed feces in lumen.

**SEX**

FS

***Pancreas***

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. Minor pancreatic duct dilation was present. No signs of active inflammation or neoplasia.

**AGE**

12yr

***Free Abdomen***

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

**WEIGHT**

32.2lb

**ULTRASONOGRAPHIC FINDINGS**

- Heterogenous liver with left mixed echogenic focally mineralized mass
- Partial/emerging gallbladder mucocele
- Moderate chronic renal changes with minor bilateral pyelectasia
- Bilateral adrenomegaly exhibiting non-homogenous pinpoint mineralized parenchyma
- Chronic pancreatitis pattern with pancreatic parenchymal remodeling
- Intact subjectively prominent small bowel walls

**INTERPRETED BY**

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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Primary concern for neoplastic criteria associated with the left focally mineralized hepatic mass. The concurrent separate hepatic nodules may indicate hyperplasia, hematopoiesis, or small granulomas although the possibly of intrahepatic metastasis is possible. Assuming normal clotting status and using a 25g needle, a hepatic mass FNA for screening cytology is warranted for further assessment.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDMS

The bilateral adrenomegaly is of unclear clinical significance given the lack of reported clinical signs suggestive of Cushing's syndrome. A full adrenal workup and screening BP is advised to assess for evidence of hypertension which may allude to emerging adrenal neoplastic criteria i.e. pheochromocytoma.

**HOSPITAL NAME**

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**REFERRING VET**

Dr. Chopra

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

A spec cPL could be considered if clinical concern for chronic pancreatitis is present.

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Hepatosupportive medications such as Denamarin and Ursodiol and close monitoring for evidence of increasing cholestasis associated with the gallbladder as well as early CRD therapy is recommended.

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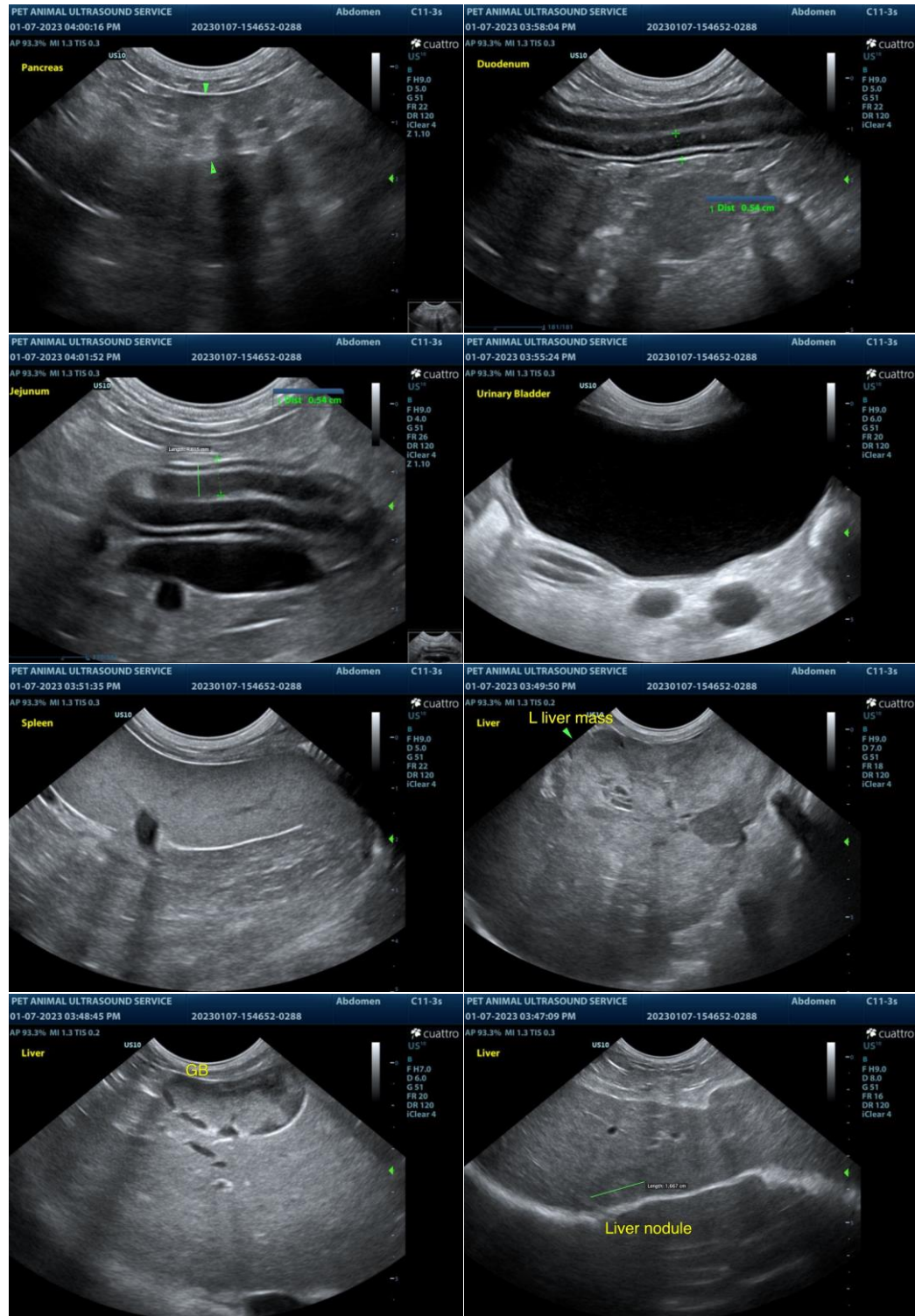
Dr. Chopra

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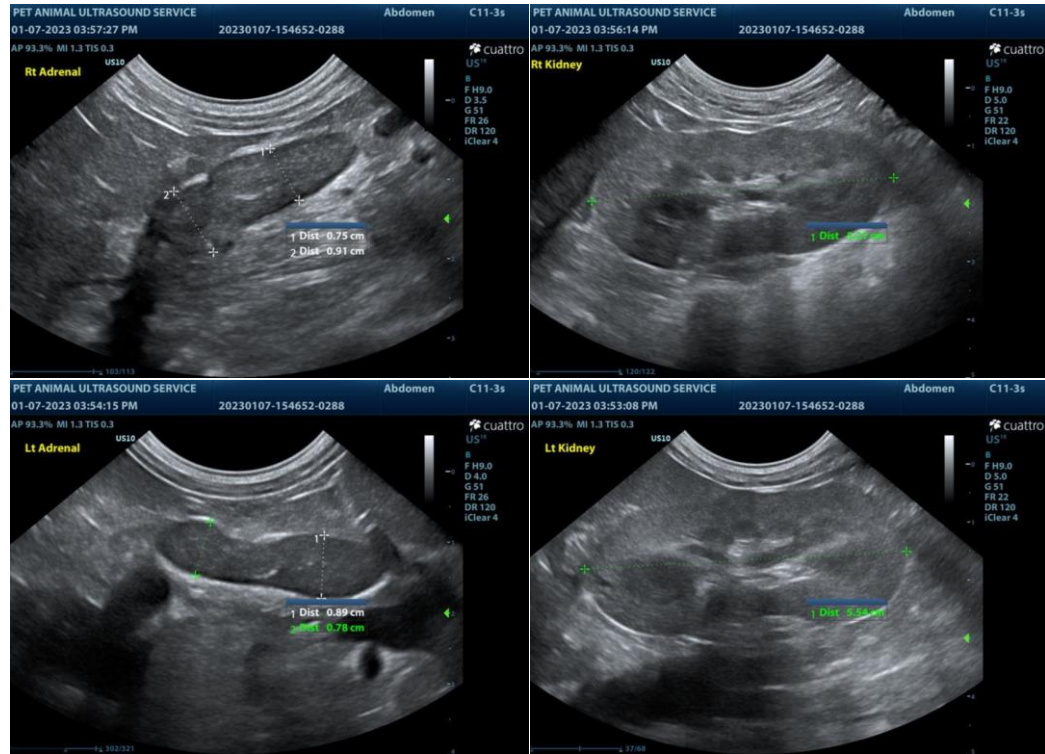
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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