



**PATIENT**

Lulu Murgo

**SPECIES**

Canine

**BREED**

Puggle

**SEX**

Spayed Female

**AGE**

17 Years

**WEIGHT**

16.5 Pounds

**INTERPRETED BY**

Tam Mengine, DVM,  
DABVP (canine/feline  
practice)

**IMAGING  
PERFORMED BY**

Sorbo

**HOSPITAL NAME**

Millbrook AC

**REFERRING VET**

Jeffers

**INVOICE**

17751

**DATE**

10/17/22

**PRESENTING CLINICAL SIGNS**

History: PUPD, accidents all day. Polyphagia.

Abnormal PE/Chem/CBC/UA Results: Large liver on rads, Alk 736, USG 1.023, UPCR 0.5. LDD suppression (0/4/8hrs): 2.6/2.0/2.4.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic urine, and no luminal sediment is present. The ureteral papillae, trigone and pelvic urethra are of normal appearance, and the ureters are not visible (normal). No masses, calculi or mucosal irregularities are noted. Urethra visualized to 3.0 cm.

The kidneys are hyperechoic, and exhibit poor cortico-medullary differentiation. There is mild dilation of the renal pelvis, with anechoic contents. There is no evidence of nephrolithiasis, mineralization, or hydronephrosis. The proximal ureters are not visible (normal). The left kidney is 3.8 cm in length. The right kidney is 3.5 cm in length.

**Adrenal Glands**

The adrenal glands are both identified in their normal locations. There is a hyperechoic mass arising from the caudal pole of the left adrenal gland, measuring 2.2 cm x 2.6 cm. Vascular invasion is not evident. They are otherwise normal in size and shape with appropriate parenchymal echogenicity and normal phrenic vasculature. The left adrenal gland height is 1.2 cm at the cranial pole and 2.6 cm at the caudal pole. The right adrenal gland height is 7.5 mm at the cranial pole and 5.5 mm at the caudal pole.

**Spleen**

The spleen is of appropriate size and has a normal, homogenous parenchyma with a smooth, continuous capsular surface. The splenic vasculature is normal with no evidence of congestion or thrombosis, and blood flow through the splenic hilus appears normal.

**Liver**

The liver is diffusely hyperechoic and subjectively enlarged. There is a 5.0 cm x 3.8 cm inhomogeneous mass located at the caudal margin. The portal and hepatic vasculature are of normal size and appearance with no evidence of congestion or thrombosis.

The gallbladder is distended with anechoic contents. The wall was thin and continuous with no focal lesions. The cystic and common bile ducts are normal / not visible.

**Gastrointestinal**

The stomach is mildly distended with gas. The gastric wall is 3.6 mm with normal deviations due to rugal folds and exhibits appropriate wall layering. The pylorus is of normal appearance.

The visualized portions of the duodenum, jejunum, and ileum are of normal thickness with intact wall layering that exhibits the appropriate 1:3 muscularis to mucosa ratio. The duodenal wall measures 4.9 mm. The jejunal wall measures up to 4.5 mm. Intestinal motility appears normal.

The visible portions of the colon are of normal thickness, up to 1.2 mm, with intact wall layering. The ileocecal junction is visualized and appears normal.

**Pancreas**



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The areas of the limbs and body of the pancreas are isoechoic to the surrounding mesenteric fat, with normal capsular appearance. There is no evidence of peripancreatic inflammation. The pancreatic duct appears normal.

**SPECIES**

Canine

**Free Abdomen**

There is no evidence of free fluid within the peritoneal cavity. The omentum and intra-abdominal fat are of appropriate echogenicity. Enlarged abdominal lymph nodes are not observed. The aortic trifurcation has normal blood flow with no evidence of thrombosis.

**BREED**

Puggle

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

**SEX**

Spayed Female

- A 5.0 cm x 3.8 cm liver mass
- A 2.6 cm left adrenal mass

**Secondary Findings**

**AGE**

17 Years

- Chronic renal changes with pyelectasia bilaterally

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

16.5 Pounds

The patient history of polyuria and polydipsia, polyphagia, and a lack of suppression on a low dose dex suppression test, all suggest that the observed adrenal mass is a metabolically active adrenal tumor, and adrenal dependent hyperadrenocorticism. The liver mass may represent benign or malignant disease, and a fine needle aspirate could be considered to differentiate.

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The presence of pyelectasia may indicate pyelonephritis, and so a urine culture is recommended. This can also be a finding associated with chronic renal disease without the presence of infection.

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If aggressive intervention is desired, then three view chest radiographs are recommended, followed by surgical adrenalectomy and potentially removal of the liver mass. A presurgical CT scan would be helpful for surgical planning. If surgical intervention is not desired, then palliative therapy with Trilostane at 1 mg/kg twice daily could be attempted. Unfortunately, control of symptoms for adrenal dependent hyperadrenocorticism is less successful with medical therapy, as compared to pituitary dependent disease.

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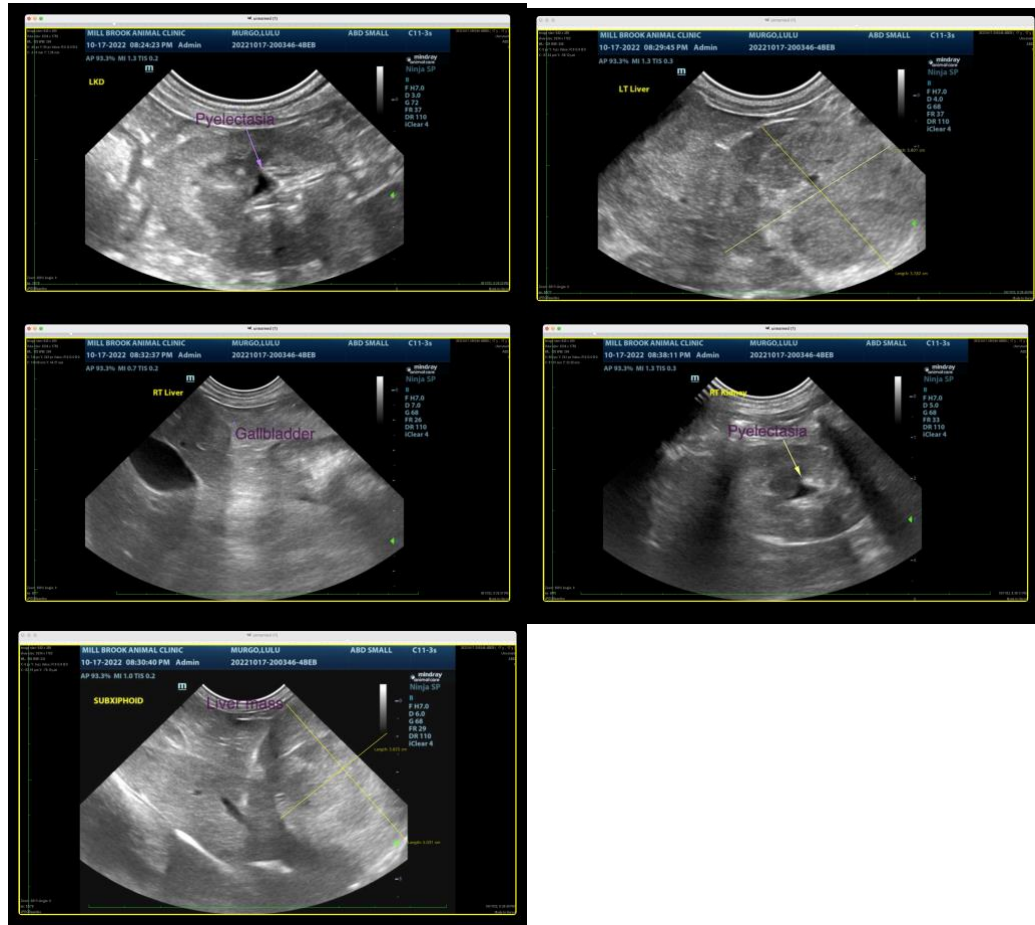
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**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Tam Mengine, DVM, DABVP (canine/feline practice) info@SonoPath.com**