



**PATIENT**

Oliver Meier

**SPECIES**

Canine

**BREED**

Cockapoo

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

19.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Animal Paradise  
Hospital

**REFERRING VET**

Dr. ElShafie

**INVOICE**

45203

**DATE**

2/16/23

**PRESENTING CLINICAL SIGNS**

Patient presents for possible gastroenteritis.  
Abnormal PE/Chem/CBC/UA Results: No reported blood work.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The right kidney measures 4.5 cm. The left kidney measures 4.35 cm. Small cortical cysts are noted in the left kidney.

**Adrenal Glands**

The right adrenal gland is normal in size (1.81 cm long x 0.81 cm at the cranial pole and 0.45 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.68 cm long x 0.59 cm at the cranial pole and 0.52 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). An approximately 1.0 cm slightly hypoechoic, non-capsule disrupting nodule is noted in the mid spleen. Splenic vasculature appears normal.

**Liver**

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions



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per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

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**Pancreas**

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

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There is no apparent lymphadenopathy noted in these images.

**WEIGHT**

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**ULTRASONOGRAPHIC FINDINGS**

- Age related kidney changes with small cortical cysts in the left kidney
- **Heterogenous Liver** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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Recommendations for this patient depend primarily on presenting complaint. Given that the history was suspect gastroenteritis, the assumption is that clinical signs are vomiting and diarrhea, in which case, if acute, supportive/symptomatic medical management of possible acute gastroenteritis, parasitic disease, dietary indiscretion, etc. is recommended with monitoring for progression versus resolution. However, if gastrointestinal signs are a chronic or intermittently chronic problem in this patient, further evaluation is recommended, beginning with metabolic health screen including CBC/Chem panel, electrolytes, a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

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A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is also recommended for further evaluation of GI and pancreatic function, and possibly a baseline cortisol. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

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Additionally, both the appearance of the liver and spleen trend in appearance toward benign. However, fine needle aspirates could be considered if coagulation status is appropriate.

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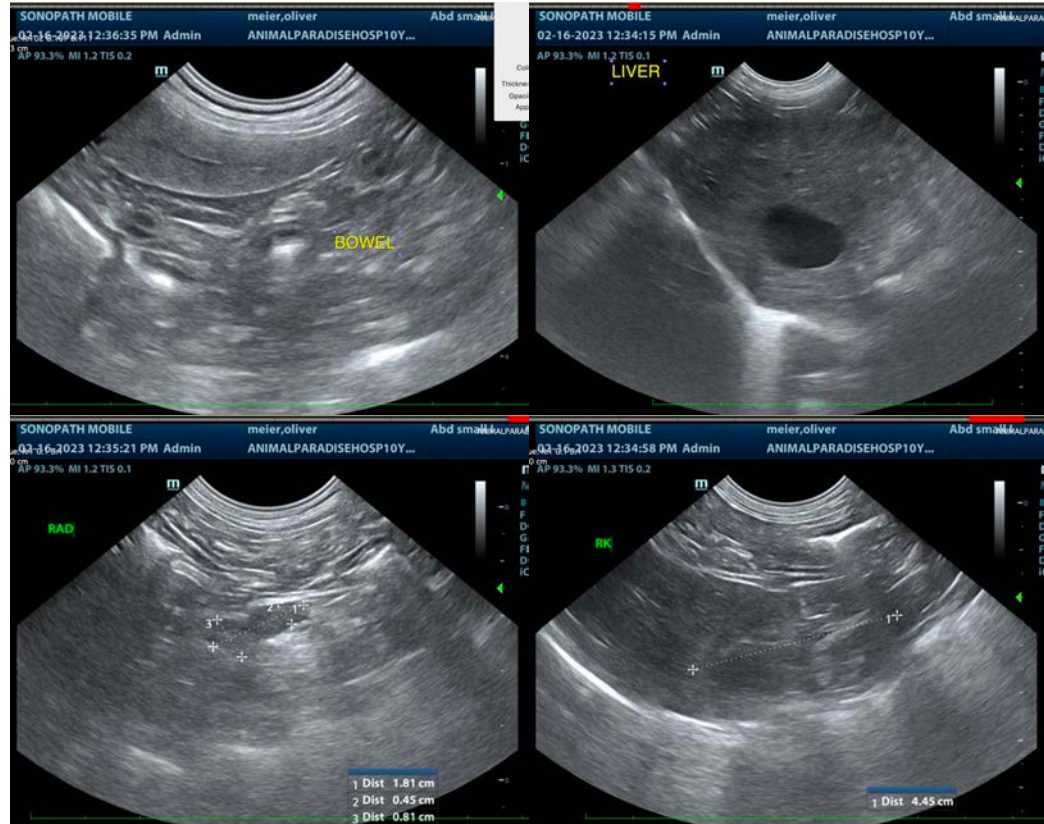
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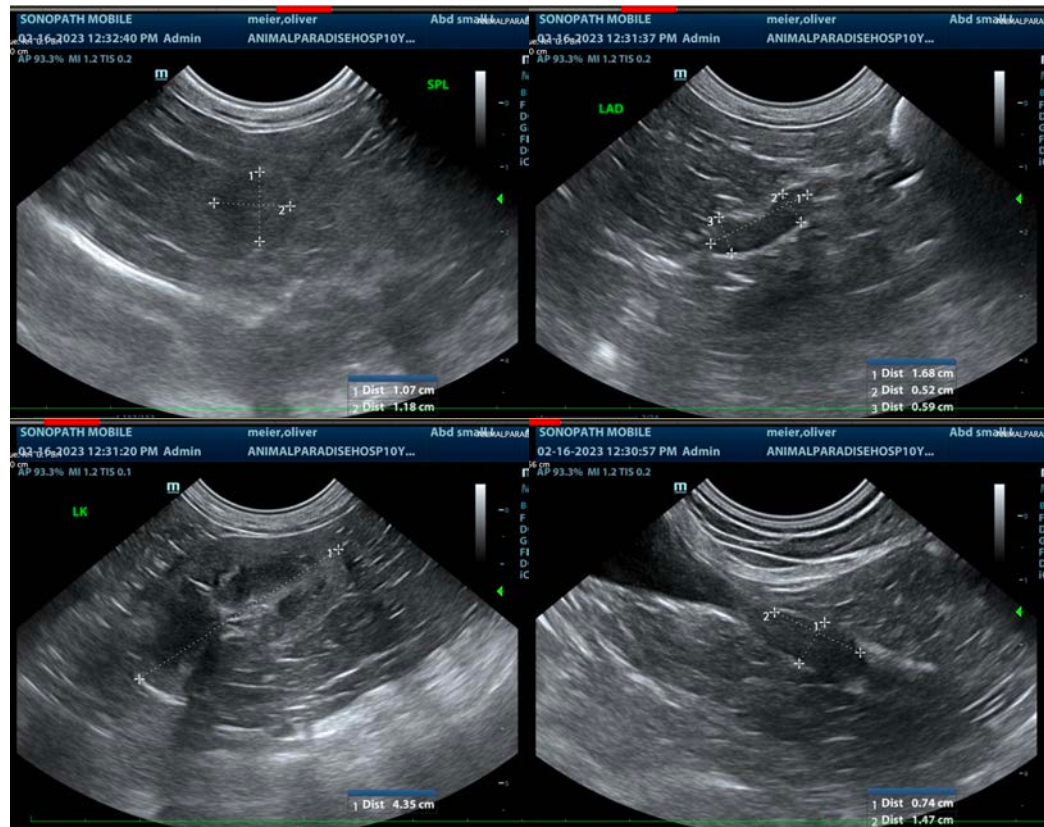
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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