



PATIENT PRESENTING CLINICAL SIGNS

Benet Landry Hx of laryngeal paralysis, heart murmur and renal insufficiency; chronic intermittent diarrhea that occurs with any changes - seems painful and cannot tolerate any medication; distended stomach images prevent full imaging of the liver and the pancreas

SPECIES Abnormal PE/Chem/CBC/UA Results: SDMA 26HIGH 0-14µg/dL CREA 207HIGH 44-159µmol/L UREA 10.6HIGH 2.5-9.6mmol/L cpl - abnormal TLI >50 remainder of the bloodwork NSF including TT4

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Urinary System

Lab 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.

SEX

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

Neutered Male

AGE

Right kidney is normal in size (4.8 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

14 Years

WEIGHT

Left kidney is normal in size (5.5 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

32.3 kg

Adrenal Glands

Right adrenal gland is normal in size (0.87 cm at cranial pole and 0.93 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Left adrenal gland is normal in size (0.74 cm at cranial pole and 0.87 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Spleen

Petworks VH

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). Multifocal well-demarcated hyperechoic homogenous nodules are present. Splenic vasculature appears normal.

REFERRING VET

Dr. Trudeau

Liver

**Part of the visualization of the liver is hindered by the markedly dilated stomach. The visible liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

INVOICE NUMBER

25459

DATE

9/16/21



PATIENT GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Benet Landry

Gastrointestinal

SPECIES The stomach wall appears diffusely thick, measuring 1.48 cm at its thickest part with a loss of normal layering. The stomach is markedly distended with fluid and suspended anechoic debris. The outflow tract cannot be fully assessed due to the marked distention.

Canine

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

Lab

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

Neutered Male

Pancreas

There are no abnormalities visible in the area of the pancreas.

AGE **Free Abdomen**

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

14 Years

ULTRASONOGRAPHIC FINDINGS

WEIGHT

32.3 kg

- Renal diverticuli - Non-obstructive areas of mineralization/nephroliths are noted, primarily in the diverticula of the kidney.
- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are less likely.
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Markedly fluid distended stomach with a diffusely thick gastric wall.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Wall thickness in this patient could be overinterpreted due to stomach contents being settled against the wall. Color flow doppler could be used on the tissue to help determine tissue versus ingesta or foreign contents up against the wall. Other recommendations for better assessment of the stomach include emptying the stomach via nasogastric tube, and reassessment of the tissue when less distention is present. Differentials for the distended stomach include an outflow obstruction by either foreign material or infiltrative neoplasia not visible on ultrasound. Ileus secondary to other metabolic disease is possible, but considered less likely given the marked focal distention.

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If this patient is eating and not vomiting, a food trial and recheck of the stomach in 24-48 hours could also be considered. Given this patient's chronic intermittent diarrhea, a gastrointestinal malabsorption/maldigestion panel including TLI, PLI, folate and cobalamin to Texas A&M Gi laboratory is recommended. Given the azotemia, a urine culture is recommended. Blood pressure is recommended. If the urine culture is negative and there is protein in the urine, then protein quantification with a urine protein/creatinine ratio would also be recommended.

SPECIES

Canine

Therapy for the azotemia could include a renal diet. However, the effect of that is uncertain given the unknown gastrointestinal disease causing the intermittent diarrhea and stomach distention. Therefore, further assessment of the GI disease is recommended prior to diet change to a renal diet. Finally, if emptying the stomach or feeding and rechecking the stomach don't provide more definitive information, then abdominal CT scan or endoscopy could be considered for further assessment.

BREED

Lab

SEX

Neutered Male

AGE

14 Years

WEIGHT

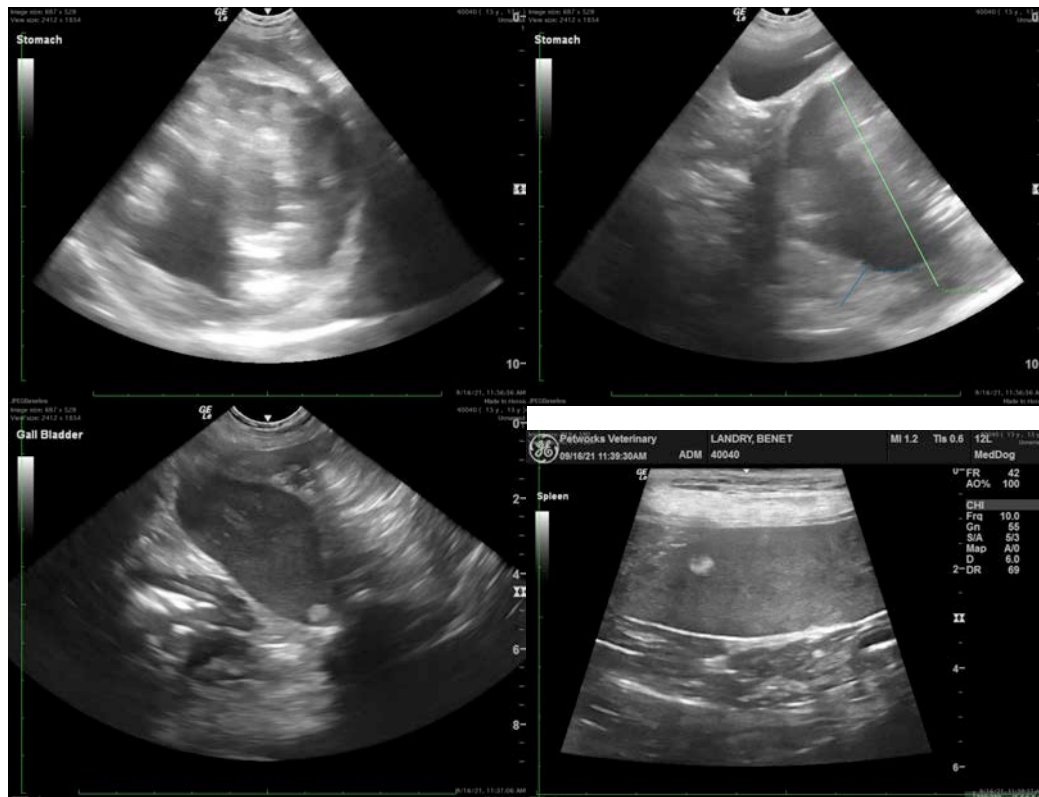
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SPECIES

Canine

BREED

Lab

SEX

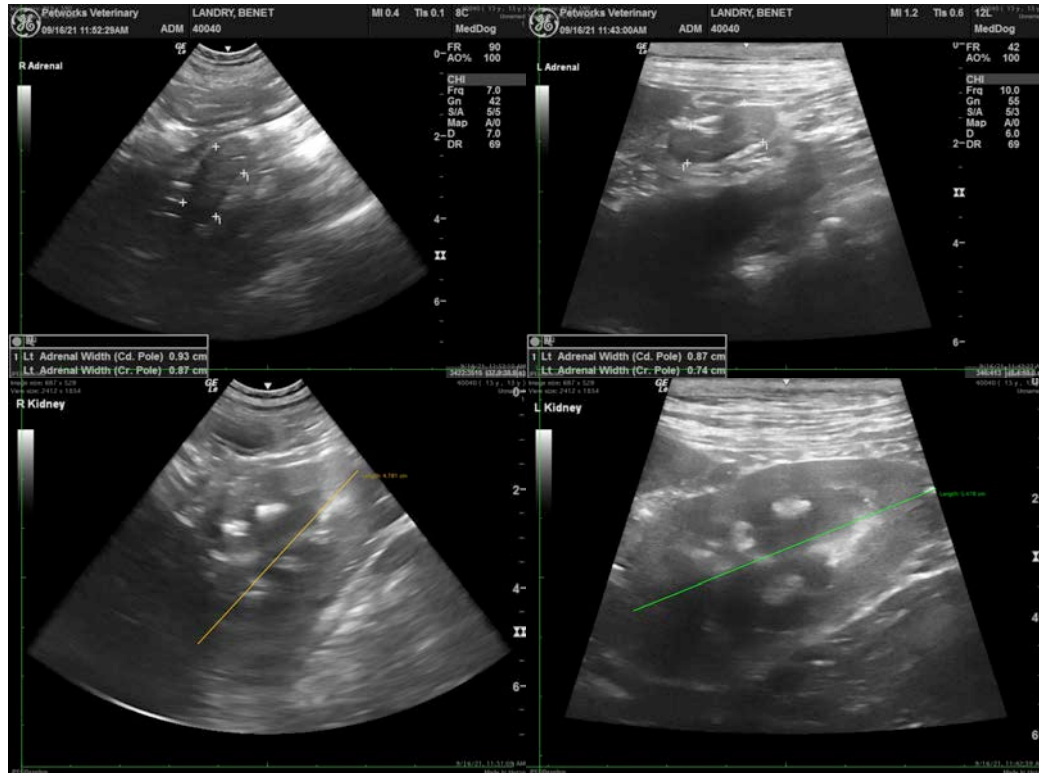
Neutered Male

AGE

14 Years

WEIGHT

32.3 kg



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.

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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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