



PATIENT

Toby Kotles

SPECIES

Canine

BREED

Cockapoo

SEX

Neutered Male

AGE

13 Years

WEIGHT

23 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Millburn Vet Hospital

REFERRING VET

Dr. Turowsky

INVOICE

42489

DATE

11/2/22

PRESENTING CLINICAL SIGNS

Several month hx of diarrhea, increased frequency. Also recent persistent non-regen anemia

Abnormal PE/Chem/CBC/UA Results: RBC 472, Hct 34, Hgb 12, retic 71, BUN 46 UA SG: 1.013

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.76 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal 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. Multiple cortical cysts of varying sizes noted bilaterally. The right kidney measures 5.85 cm. The left kidney measured 5.25 cm.

Adrenal Glands

The right adrenal gland is normal in size (2.4 cm long x 0.95 cm at the cranial pole and 0.63 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 (2.39 cm long x 0.59 cm at the cranial pole and 0.58 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. The common bile duct is visible with upper limits of normal distention for a dog (mildly dilated). There is no evidence of effusion.

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.



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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.

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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.

Pancreas

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The area of the pancreas contains irregular hyperechoic pancreatic remodeling.

Free Abdomen

SEX

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

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

AGE

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- **Emerging mucocele** – 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. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.

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23 Pounds

- **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.

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- **Hyperechoic pancreas** – This finding is suggestive of pancreatic fibrosis, possibly secondary to chronic pancreatitis. A TLI is recommended to rule out exocrine pancreatic insufficiency (EPI), especially if clinical signs (weight loss, diarrhea, etc.) are present.

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SECONDARY FINDINGS

- **Chronic Cystitis** - Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

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- Age related renal changes with cortical cysts bilaterally

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

REFERRING VET

Dr. Turowsky

Given this patient's chronic diarrhea and hyperechoic pancreatic area, a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

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Given the concurrent reported non-regenerative anemia and mildly increased BUN with a reportedly normal creatinine, microulcerations resulting in GI bleed could be present. Recommendations include empirical deworming with a 5-day course of Panacur as well antacid therapy and sucralfate with monitoring of the anemia for improvement. A probiotic such as Provable or Visbiome is also recommended.

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Finally, given the gallbladder changes, empirical Ursodiol could be considered to slow down/try to prevent the progression of the gallbladder debris.



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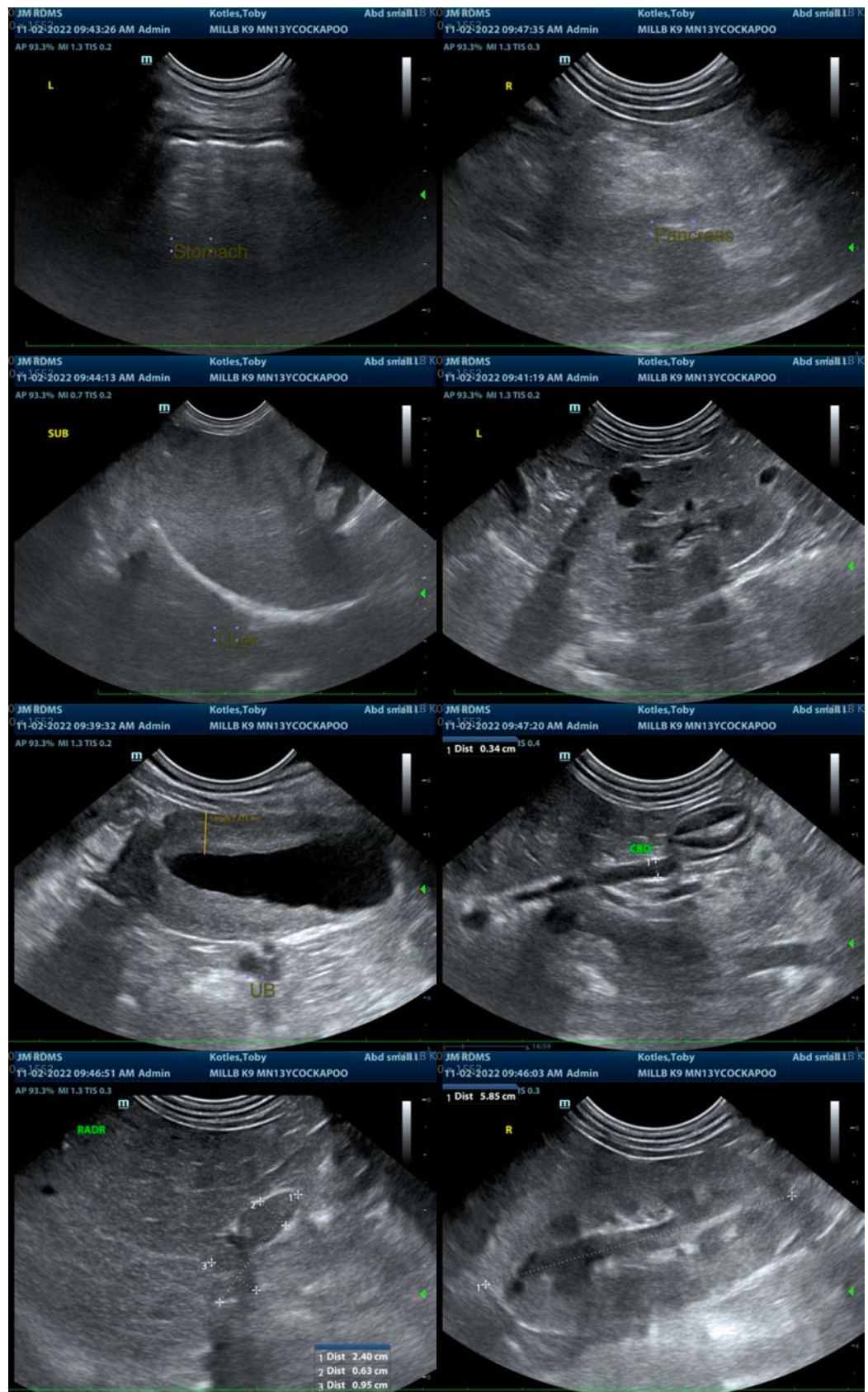
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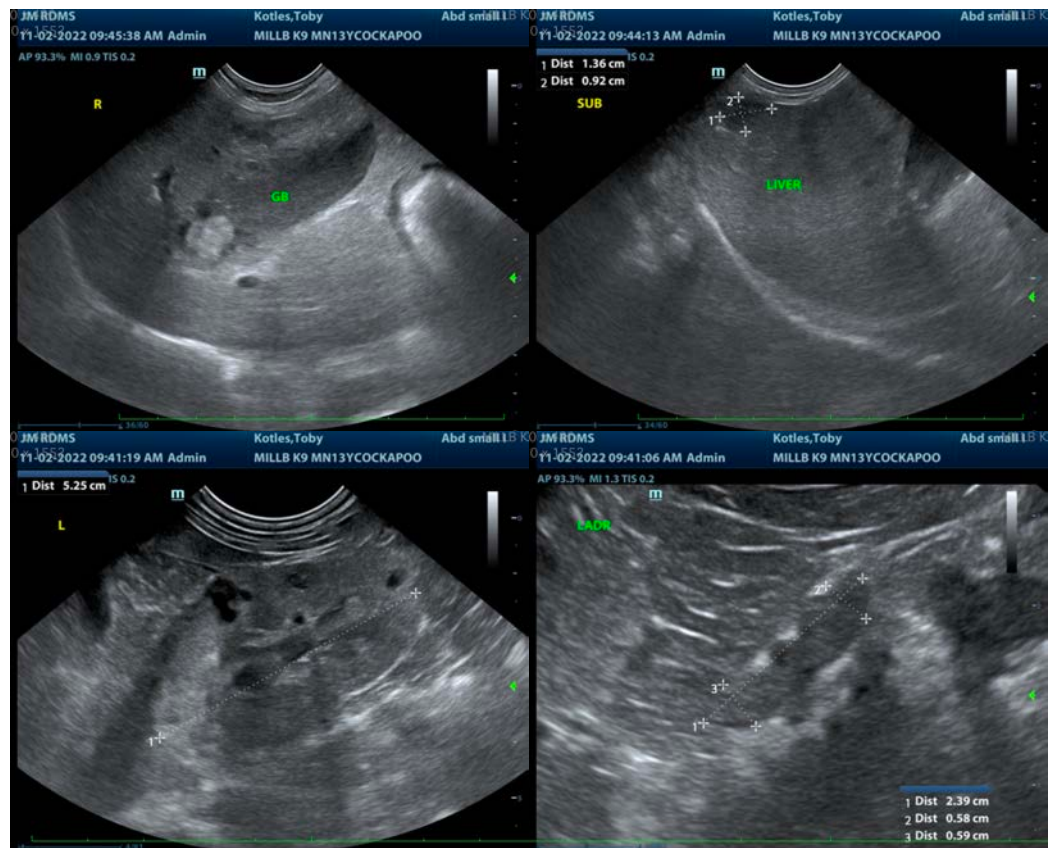
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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