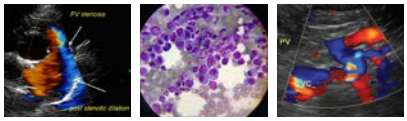
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

DATE

1/11/23

PATIENT

Koda Aguilar

SPECIES

Canine

BREED

German Shepherd

SEX

Neutered Male

AGE

7/22/13

WEIGHT

113 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Paradise AH

REFERRING VET

Dr. Riehl

INVOICE

44128

PRESENTING CLINICAL SIGNS

Presented for wellness services on 1/3/2023 but had been vomiting/diarrhea and decreased appetite. Intermittent travel history to Texas--not on heartworm prevention. Recent travel to/from Texas to acquire new doodle puppy and GI signs occurred post travel. 4DX/BW not pursued at time of appt due to clinical impression. Hx chronic skin disease/secondary pyoderma. Not in treatment--reportedly quite good for patient today.

Current Medications: Ondansetron 6 mL SQ, Proviable kit: UAD
Radiographs: Soft tissue nodule left IC 7, ~CCJ. No orthogonal for comparison. No palpable nodule in region—suspect intrathoracic/pulmonary. Diffuse gas in GIT. Thickening/outline of stomach with loss of detail cranial. Spleen enlarged but smooth.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IV Torb.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is only mildly distended (empty). Visible contents are anechoic. Urinary bladder wall is unable to be fully assessed for pathology without further distension. No visible masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. If there are urinary signs and/or concern for urinary bladder pathology, reassessment after complete filling is recommended.

The area of the prostate is examined without evident prostatic pathology.

The right kidney is normal in size (7.57 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, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (8.15 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, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

The right adrenal gland is normal in size (3.23 cm long x 1.0 cm at the cranial pole and 0.54 cm at the caudal pole), shape and contour. A hyperechoic nodule is noted in the cranial pole. Nodule does not disrupt normal shape and/or architecture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (2.89 cm long x 0.73 cm at the cranial pole and 0.83 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size with a swollen and scalloped/undulating capsular contour. Multifocal coalescing nodules are noted throughout the parenchyma. Splenic vasculature appears normal.

Liver
The 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.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal
The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. 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 per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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

Pancreas
The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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

The sublumbar lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

PRIMARY FINDINGS

- **Honeycomb Spleen –** This finding is concerning for infiltrative disease such as round cell neoplasia. However, benign disease cannot be definitively ruled out without tissue sampling.

- **Bilateral medullary rim sign -** This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

- **Pancreatic age-related remodeling –** Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.

SECONDARY FINDINGS

- **Reactive sublumbar lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

- **Hyperechoic adrenal nodule (cranial pole right adrenal) –** Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.

- **Mild 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

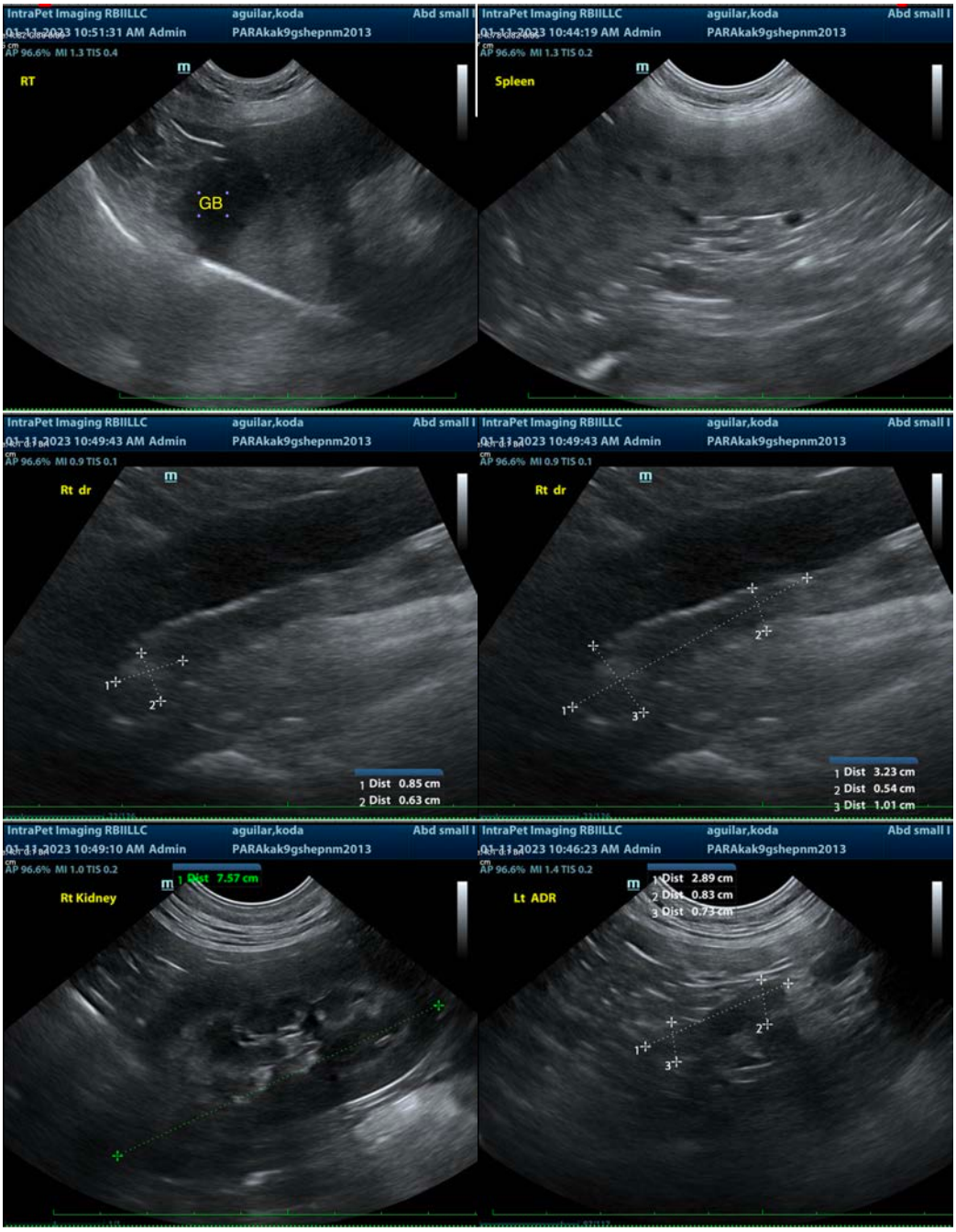
An overall metabolic health screen in the form of a CBC/Chem panel, electrolytes and urinalysis is recommended if not recently evaluated.

Additionally, given this patient's signalment and clinical signs combined with the appearance of the pancreas, 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.

The gastrointestinal signs reported in this patient are suspected to be secondary to chronic smoldering gastrointestinal disease or pancreatitis, and the splenic pathology may be incidental/unrelated. However, further investigation of the spleen is recommended, beginning with three view thoracic radiographs for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluate, followed by a fine needle aspirate of the spleen if patient's coagulation status is appropriate.

In the meantime, empirical deworming with a 5-day course of Panacur is recommended, as is a probiotic such as Visbiome or Proviable, antiemetics if indicated, gastroprotectants, and at least a short term transition in diet (if tolerated) to a low-fat or bland, easy to digest diet.

If gastrointestinal signs persist, given the patient's travel history, exposure to a new housemate, etc., additional considerations could include a fecal enteropathogen PCR panel to Texas A&M GI Laboratory for further evaluation of possible infectious disease.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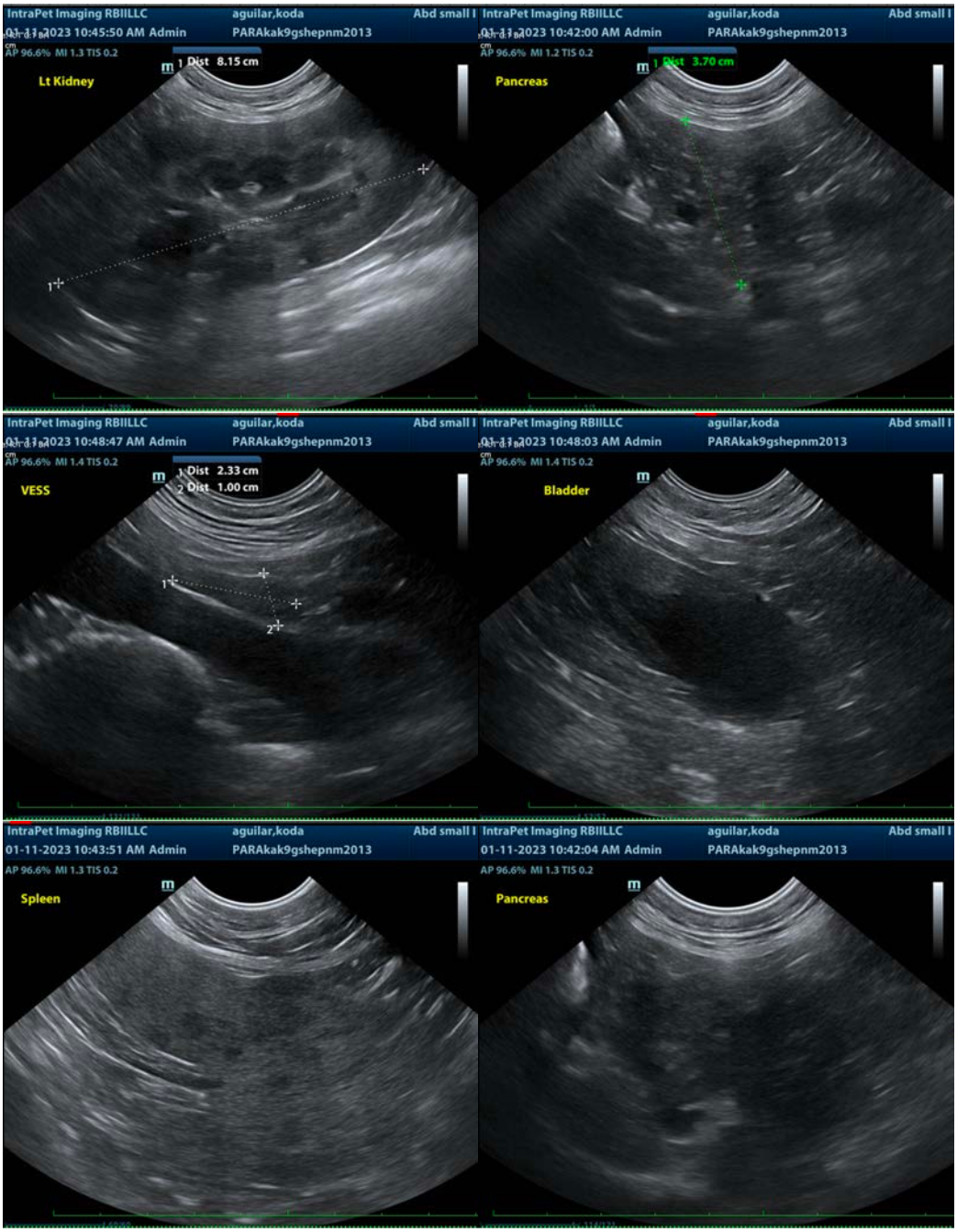
2 Dist 0.83 cm
3 Dist 0.73 cm



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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