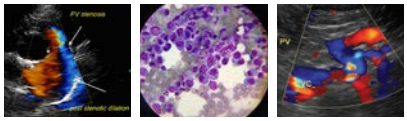
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

6/14/22

PATIENT

Jax Schauer

SPECIES

Canine

BREED

Labrador Retriever

SEX

Neutered Male

AGE

6/12/09

WEIGHT

93.5 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Willer

INVOICE

38696

PRESENTING CLINICAL SIGNS

06-12-2022 Notes: was fine yesterday this morning lethargic, did not eat- then vomited all his food that he ate last night along with phlegm and bile; had increased RR- took with them to farm- breathing got worse history of arthritis, elevated LE- suspected laryngeal paralysis; on/off episodes of abnormal breathing is on carprofen 100mg once a day- got this morning- but then had vomited. On PE slightly dehydrated, difficult to hear heart over lung sound; bronchovesicular, moderate effort.

Current Medications: terbutaline, Amp/Sulb, Maropitant, butorphanol, Pantoprazole.
Lab Results:
Radiographs: Abdomen 2 view--gas in the stomach; abnormal appearance to the liver in the caudal/ventral aspect no obvious FB noted. Thorax 2 view-- patchy interstitial pattern over the heart on the lateral- consolidate lung lobe region on right side; small circular opacities noted in the lung fields- r/o age related vs other mild gas in the esophagus.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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. A foley catheter is in place distally.

The area of the prostate is visualized without pathology noted.

The right kidney is normal in size (7.08 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 (7.66 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 (4.11 cm long x 1.44 cm at the cranial pole and 0.84 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 (3.37 cm long x 1.17 cm at the cranial pole and 0.93 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Small hyperechoic nodules are noted in both adrenal glands, which do not disrupt the normal shape and/or architecture.

Spleen

Spleen is subjectively enlarged in size with rounded margins but intact capsule. Parenchyma is homogenously coarse/mottled in echotexture and normal to hypoechoic in echogenicity. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver
Liver is subjectively enlarged with rounded margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature appears normal.

GB is mildly over 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.

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 pancreas is prominent in size, coarse in echotexture, and mildly hyperechoic in echogenicity. No peripancreatic enhancement is noted. No duct dilation is present.

Free Abdomen
There is no evidence of peritoneal effusion within the abdominal images There is no apparent lymphadenopathy within the abdominal images.

Thorax
Multifocal to coalescing mixed hypoechoic, undifferentiated tissue consolidation is present. Disruption of normal glide sign is noted.

PRIMARY FINDINGS

- Thoracic/pulmonary tissue consolidation – differentials include either a primary lung tumor versus metastatic nodules, pneumonia/necrosis/pneumonitis can appear similar and cannot be ruled out.

- Coarse splenomegaly – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.

- Heterogenous liver – Differentials for hepatic changes include both benign steroid (vacuolar) hepatopathy or extramedullary hematopoiesis as well as infiltrative round cell or metastatic neoplasia.

- 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.

- Hyperechoic adrenal nodules - 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. Lesions greater than 2 cm are generally primary adrenal neoplasia (benign or malignant) vs hyperplasia with lesions greater than 4 cm being more predictive of malignant neoplasia. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest hyperadrenocorticism) are most often incidental and should be monitored.

SECONDARY FINDINGS

- Medullary Rim Sign - of unknown clinical significance and can be a normal variant. Medullary rim sign(s) should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc.

- Age related pancreatic remodeling

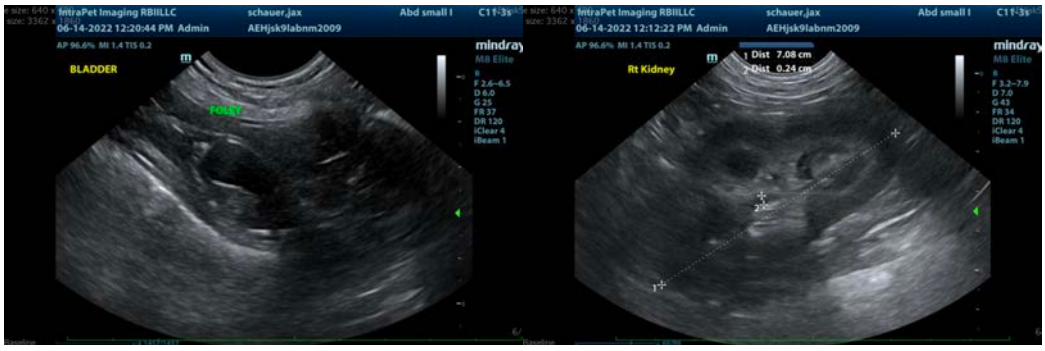
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

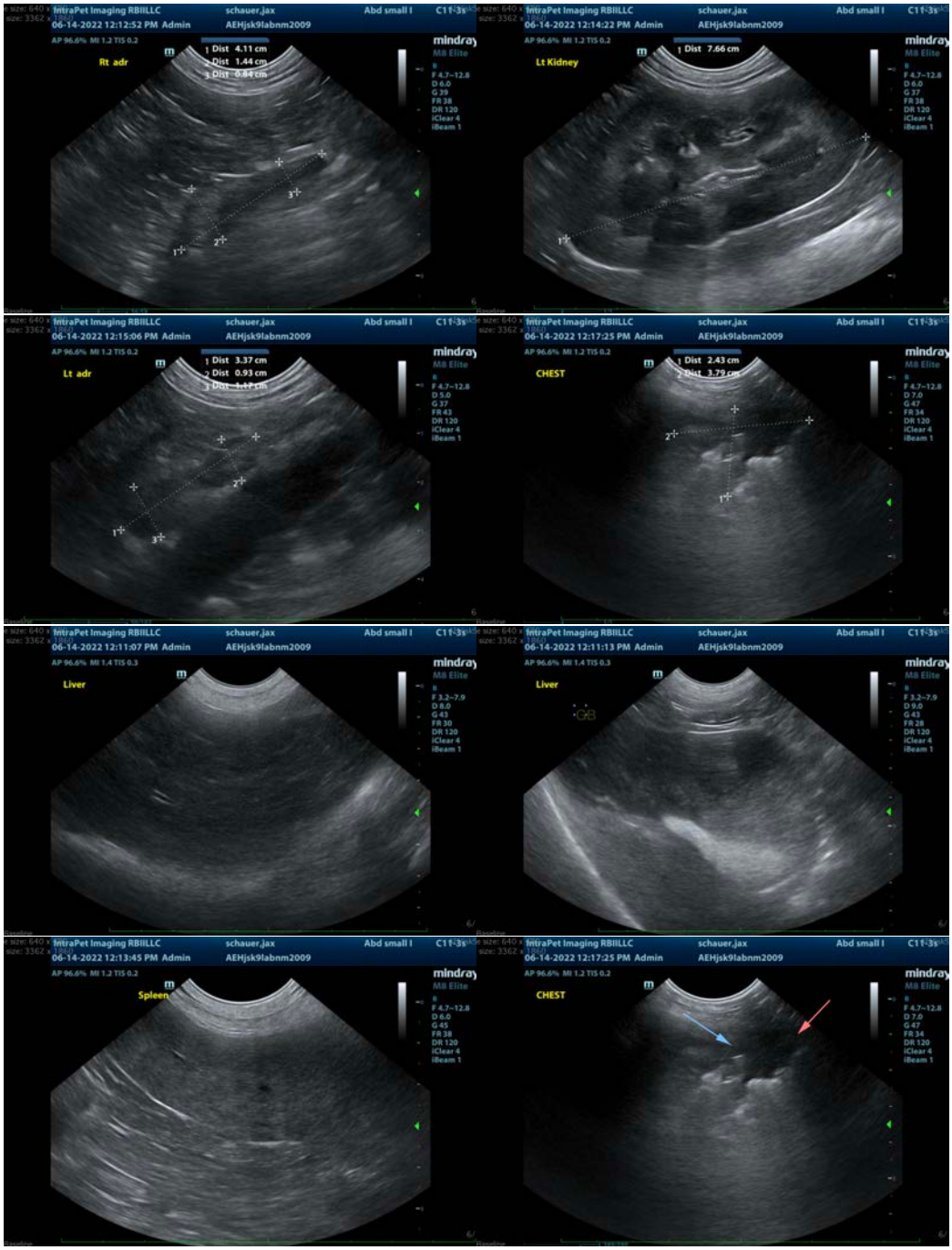
Recommendations include:

- A fine needle aspirate of the consolidated lung tissue (if coagulation status is appropriate) for cytology and culture and/or a thoracic CT.

- Fine needle aspirate of spleen and liver, if patient's coagulation status is appropriate.

The patient's gallbladder debris could be contributing to nausea that resulted in the vomiting. However, it is considered a secondary problem, given the other lesions, respiratory distress, and suspected pulmonary nodules. Therefore, the gallbladder findings should be interpreted in conjunction with the full clinical picture, including laboratory changes.

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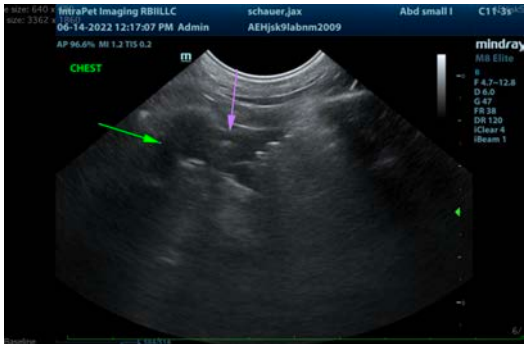

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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