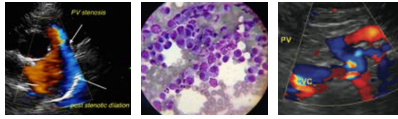
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE
5/19/22

PATIENT
Ranger Burky

SPECIES
Canine

BREED
Cocker Spaniel

SEX
Neutered male

AGE
7/1/09

WEIGHT
35 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

HOSPITAL NAME
Stay Pet Veterinary

REFERRING VET
Dr. Klimovitz

INVOICE
30543

PRESENTING CLINICAL SIGNS

Pre-surgery labwork abnormalities and late annual echo check. Grade 3/6 murmur systolic.
Current Medications: Thyro-tabs 0.3mg SID for years.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Pearce RDCS, RVT.

Urinary System

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone, proximal urethra or prostatic urethra. There is no evidence of sediment, cystoliths, polyps or a mass.

Prostate

The prostate is homogenous and measures 1.70 cm, which is within normal limits for a neutered male. A few hypoechoic to anechoic nodules are present; the latter are highly suggestive of cysts. The prostate and the cystic nodules are not abnormally vascularized.

Kidneys

The **left** kidney measures 5.97 cm. The capsule is smooth. The cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. Blood flow is excellent and possibly increased. The surrounding mesentery is not hyperechoic.
The **right** kidney measures 5.92 cm. Findings are similar to the left kidney. Blood flow is difficult to assess due to interrogation with Doppler.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.58 cm (high normal) at the cranial pole and 0.53 cm at the caudal pole. The cranial pole is at the high end of the normal reference range for a dog of Rangers stature. Both poles are slightly "plump", however no obvious masses or nodules are evident. No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.57 cm at the cranial pole and 0.61 cm at the caudal pole. The coddle pole is very mildly increased for a dog of Rangers stature. Both poles are "plump", without signs of a mass or nodules. No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Mild hepatomegaly is suspected, however, this is better characterized at the time of the ultrasound or with radiographs. The liver's borders are smooth, but rounded. The liver is mildly hyperechoic i.e. it is mildly

hyperechoic to the falciform fat. A mildly to moderately multifocal heterogeneous echotexture is observed due to the presence of a number of homogeneous, hypoechoic nodules of variable size dispersed haphazardly throughout the parenchyma. A subcapsular isoechoic nodule is noted. It measures 3.24 cm in diameter x 4.36 cm in length. A hypoechoic nodule is present within the isoechoic nodule. The hypoechoic nodule measures 1.56 cm in diameter x 1.59 cm in length. The largest hypoechoic nodule is noted in the right intercostal, cranial view, which measures 2.48 cm in diameter x 2.65 cm in length. Target lesions are not visualized. It appears encapsulated in certain angles. No abnormalities are observed with the hepatic vessels visualized.

The gallbladder wall is within normal limits in thickness and echogenicity. A small to moderate amount of echogenic material is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

A large amount of gas is present within the lumen of the stomach, in addition to a small amount of liquid. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

Liquid and ingesta are present within the duodenum. Wall thickness is within normal limits. The definition of wall layers is preserved, however, subjectively, the mucosa is mildly thickened and fogging is present.

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal. Formed stool is present in the colon. There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

Pancreas

The **left** limb has a mildly coarse echotexture, consisting of very small hypoechoic nodules of variable size and punctate, hyperechoic foci, scattered throughout the parenchyma. These changes are suggestive of nodular hyperplasia and fibrosis, respectively, and likely due to age-related changes, and possibly to previous episodes of pancreatitis. Signs of active pancreatitis or neoplasia are not appreciated.

The **right** limb has a slightly coarse echotexture and is diffusely hypoechoic, albeit mildly. Pinpoint and punctate hyperechoic foci are scattered throughout the parenchyma. The hyperechoic foci may be due to mineralization, fibrosis, and amyloid deposition. The surrounding mesentery is mildly to moderately hyperechoic. Overt neoplasia is not noted.

Other

Lymph nodes

No abnormalities are observed

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- A **vacuolar hepatopathy** due to stress (chronic illness) or hyperadrenocorticism may be present. Differential diagnoses, such as hepatitis, cholestasis and cholangitis/cholangiohepatitis, are considered less likely, but cannot be excluded. An infectious cause, (leptospirosis) is also considered

unlikely. The hypoechoic nodules are most likely due to **nodular hyperplasia** or regeneration, which is a benign, age-related change. Target lesions, which are suggestive of neoplasia, are not observed, and the latter is considered much less likely, however, fine needle aspirates are required to exclude neoplasia.

- Age-related changes are noted with the pancreas however mild smoldering pancreatitis of the right limb cannot be excluded. Signs of neoplasia are not appreciated.

- Renal changes are suggestive of age related degeneration. Blood flow in the left kidney may be increased, i.e. hypertension cannot be excluded.

- Depending on Ranger's clinical signs the absence of adrenomegaly does not rule out hyperadrenocorticism.

- The electrolyte abnormalities cannot be explained by the abdominal ultrasound. laboratory error is possible, therefore, repeating the electrolytes while fasted is suggested before pursuing further diagnostics.

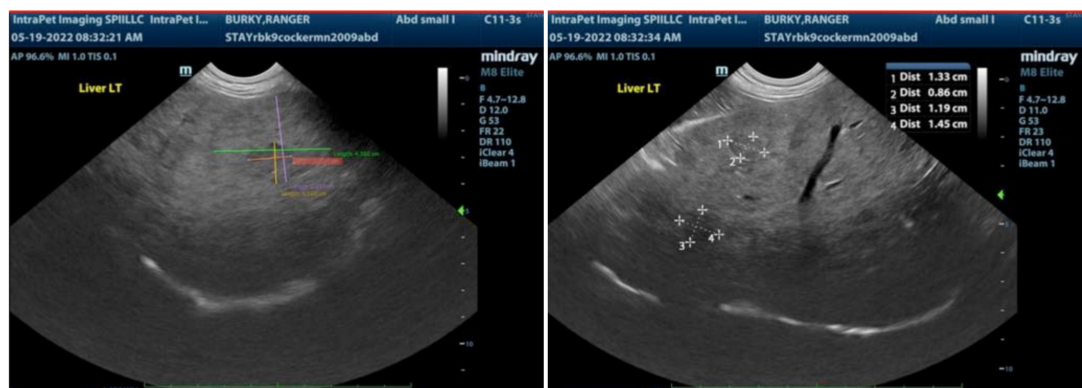
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

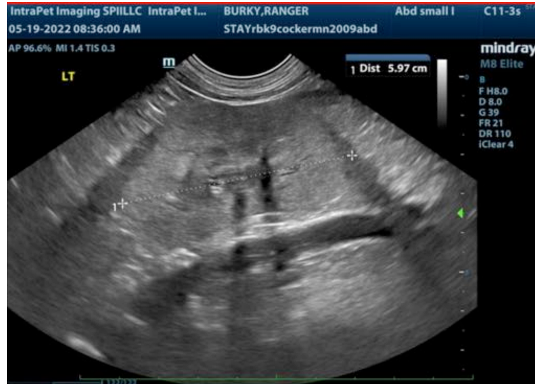
If electrolytes are still abnormal, deworm with fenbendazole as GI parasites can cause hyperkalemia and hyponatremia.

A urine culture and sensitivity is recommended.

If negative, a urine protein: creatinine ratio is suggested.
An arterial blood pressure is recommended.

A decision to pursue further diagnostics for hyperadrenocorticism should be correlated with Ranger's clinical signs or whether he has proteinuria and/or hypertension.

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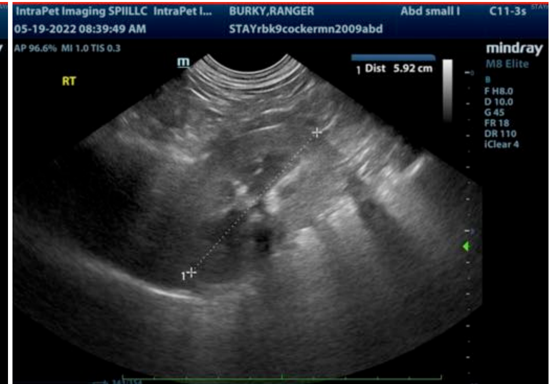
LT
1 Dist 5.97 cm
mindray
M8 Elite
B
F H8.0
D 8.0
G 39
FR 21
DR 110
iClear 4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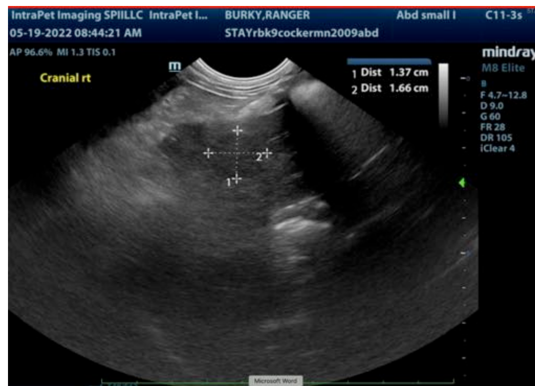
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Cranial rt
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2 Dist 1.66 cm
mindray
M8 Elite
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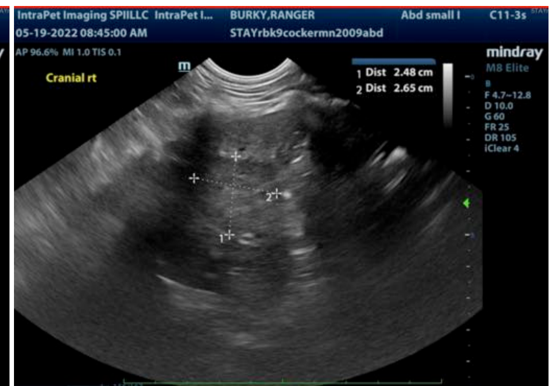
F 4.7–12.8
D 9.0
G 60
FR 28
DR 105
iClear 4
Microsoft Word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Cranial rt
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2 Dist 2.65 cm
mindray
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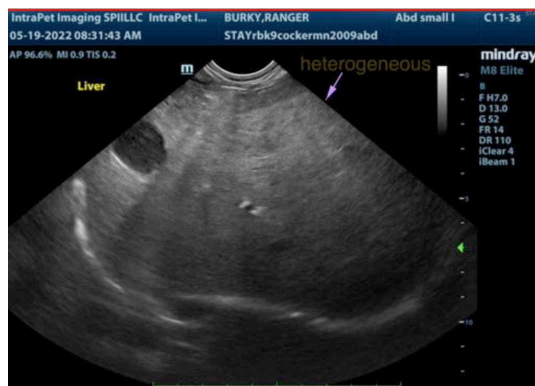
D 10.0
G 60
FR 25
DR 105
iClear 4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Liver
heterogeneous
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G 52
FR 14
DR 110
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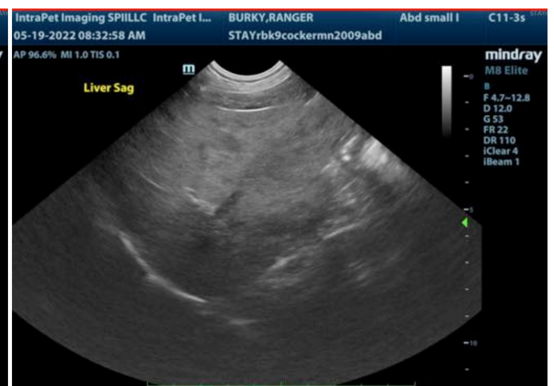
iBeam 1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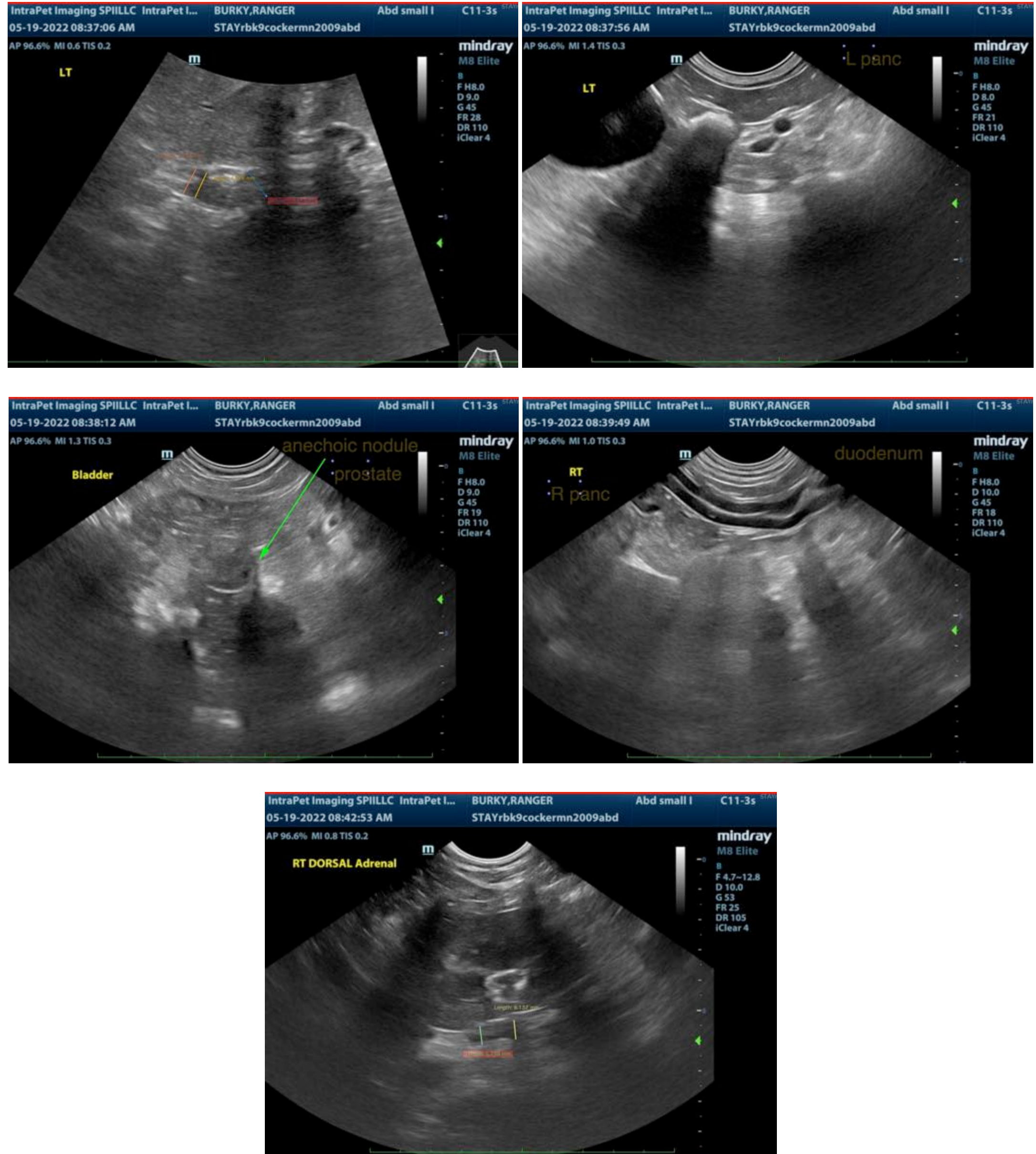

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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