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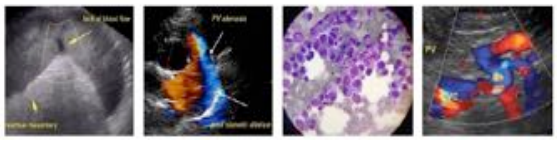


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Lucy Shannon

SPECIES

Canine

BREED

Portugese Water Dog

SEX

Spayed Female

AGE

9 years

WEIGHT

31.6 kg

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

East Credit VH

REFERRING VET

Dr. Webster

INVOICE

30786

DATE

5/31/22

PRESENTING CLINICAL SIGNS

History: Decreased appetite. History of sensitive GI tract. Last 4 to 6 weeks sudden decrease in appetite and some mild weight loss. No vomiting or diarrhea. Meds Nexgard Spectra monthly. Abnormal PE/Chem/CBC/UA Results: CBC - NSF ALP 241(5-160) Creatine Kinase 225(10-200) SPec cPL 129(normal) Cortisol normal 41(28-120) 4dx negative Fecal negative T4 13.1(7.7-47.6)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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

Kidneys

The **left** kidney measures 6.52 cm. The capsule is smooth. The cortex is mildly, but diffusely hyperechoic circumferentially, with multifocal, ill-defined, hyperechoic areas. 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. Pyelectasia is present (longitudinal view = 3.82 mm). An accumulation of intrapelvic fat is noted. Blood flow is within normal limits. Subjectively, the surrounding mesentery is very mildly hyperechoic.

The **right** kidney measures 6.41 cm. An in-depth evaluation is difficult to perform due to interference from the ribs. In general, findings are similar to the left kidney.

Aortic bifurcation/trifurcation

No abnormalities observed.

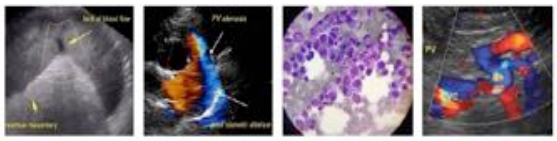
Adrenal Glands

The **left** adrenal gland measures 0.47 cm at the cranial pole, 0.57 cm at the caudal pole and 1.48 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.52 cm at the cranial pole, 0.63 cm at the caudal pole. A nodule is observed at the caudal pole, however, no abnormalities are noted with the 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.



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Liver

Hepatomegaly is highly suspected, however, this is better characterized at the time of the ultrasound or with radiographs. The liver's borders are smooth and vary between sharp to very mildly rounded. The liver is very mildly, but diffusely hyperechoic, i.e. it is isoechoic to the falciform fat. A diffuse, mildly coarse or granular echotexture is observed. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels. The mesentery surrounding the liver is mildly to moderately hyperechoic.

The gallbladder wall is within normal limits in thickness and echogenicity. A trivial 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

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

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

The colonic wall is not thickened and mural detail is considered normal.

Pancreas

The left limb has a very mildly coarse echotexture, which is considered secondary to age related changes, however, previous episodes of pancreatitis cannot be excluded. The surrounding mesentery is mildly hyperechoic, i.e. active pancreatitis cannot be excluded. There are no signs of or neoplasia.

A proper evaluation of the right limb of the pancreas is not possible due to gas in the surrounding gastrointestinal tract and interference with the rib. However, the mesentery in the cranial quadrant is diffusely hyperechoic.

Other

Lymph nodes

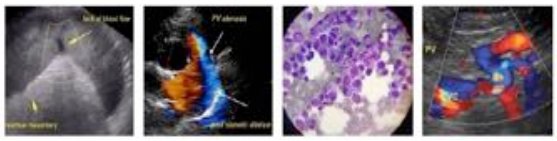
A hepatic lymph node, 5.6 mm in diameter x 4.43 cm in length, is noted. The surrounding mesentery is hyperechoic.

No abnormalities are observed

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Kidneys**: Age related degeneration. However, pyelectasia noted within the left kidney may be due polydipsia and polyuria (not mentioned in history) or pyelonephritis. Pyelonephritis cannot



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be excluded based on other subtle changes observed. Glomerulonephritis may also be considered.

- **Liver**: Vacuolar and reactive hepatopathies are suspected. A vacuolar hepatopathy may occur due to stress, such as chronic illness. Cholestasis may also be present. Differential diagnoses, such as hepatitis, cholangitis/cholangiohepatitis, are less likely. There are no obvious signs of neoplasia. Very mild lymphadenomegaly of hepatic lymph node, which is surrounding by a hyperechoic mesentery.

- A **hepatic lymph node**, 5.6 mm in diameter x 4.43 cm in length, is noted. The surrounding mesentery is hyperechoic

- **Gallbladder**: Gallbladder sludge is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required. 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.

- **Pancreas**: Age related changes are noted, however, previous episodes of pancreatitis must also be considered. Although the right limb is not overtly hypoechoic, the surrounding mesentery is mildly hyperechoic, which is suggestive of inflammation, i.e. active pancreatitis cannot be excluded, despite spec CPL results. The mesentery in the cranial quadrant is also diffusely hyperechoic. There are no overt signs of or neoplasia.

- **Gastrointestinal tract**: The mild fogging of the mucosa of the duodenum is somewhat subjective. This finding may not be clinically significant, however, it may be associated with GI inflammation, for example inflammatory bowel disease or something she may have ingested.

- **Adrenal glands**: The nodule observed at the caudal pole of the right adrenal may be due to a benign adenoma or myelolipoma. There are no signs of neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended

- Systemic arterial blood pressure
- Monitor 24 hour water consumption
- Urine culture and sensitivity, +/- addition of enrofloxacin pending results
- If negative, a protein: creatinine ratio is suggested to exclude glomerulonephritis
- ACTH stimulation test, i.e. the baseline cortisol was less than 55 nmol/L
- Note, active pancreatitis cannot be excluded, despite the spec CPL within the normal reference range. There are no overt signs of or neoplasia.
- Analgesia (e.g. gabapentin)
- Intravenous fluids, if possible
- If IV fluids not possible, encourage water consumption (as much as possible)
- A fine needle aspirate or biopsy of the liver may be considered if there is no response to the above suggestions

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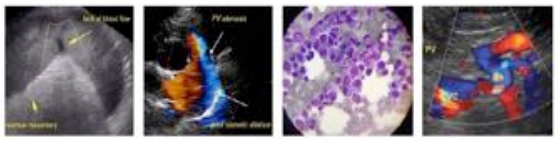

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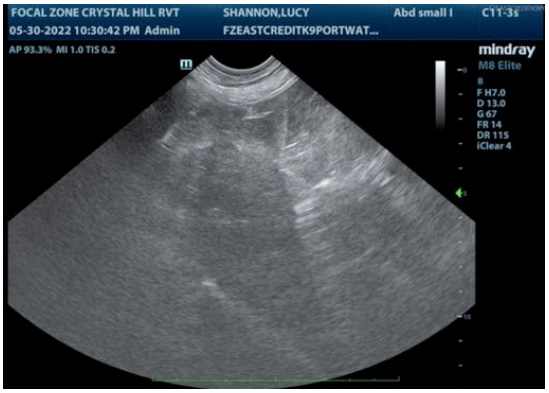

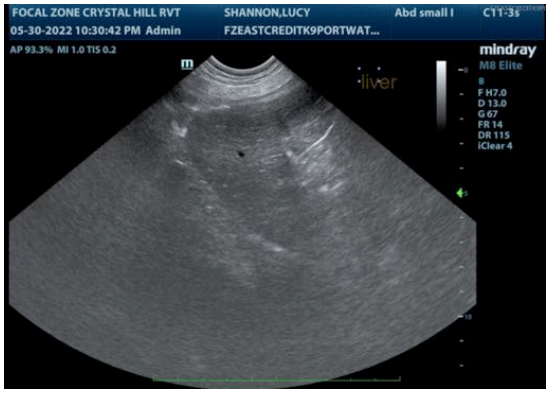

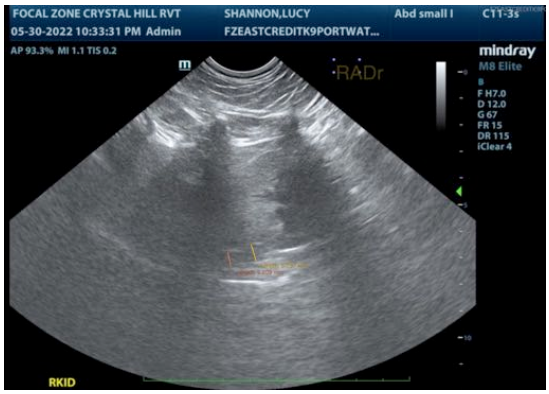

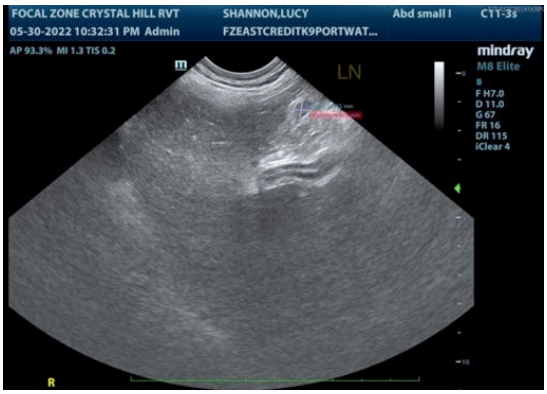

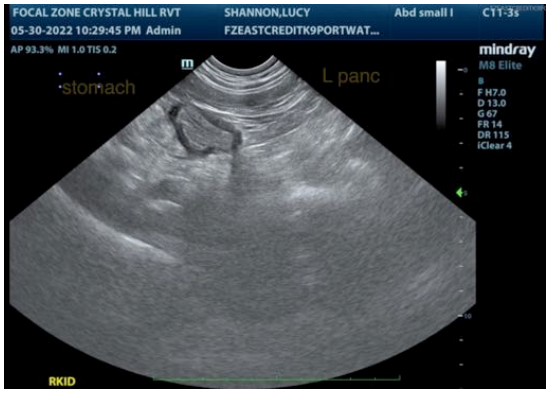

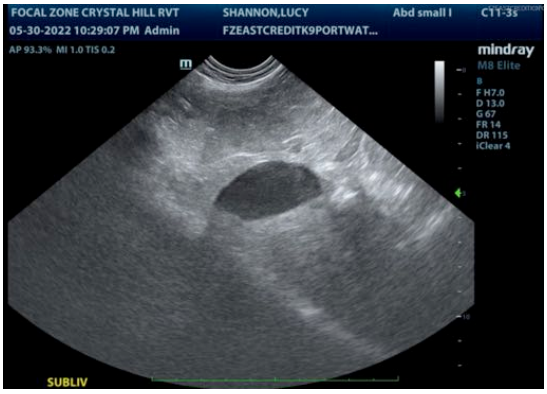

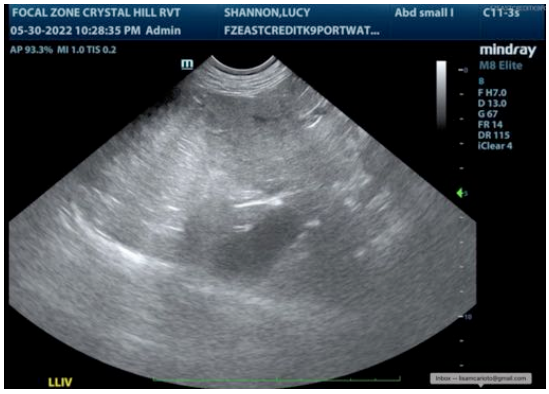

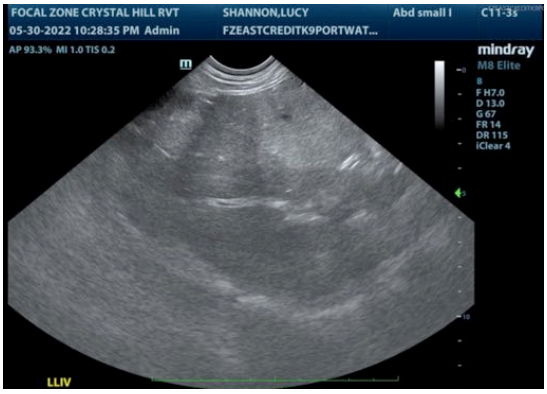

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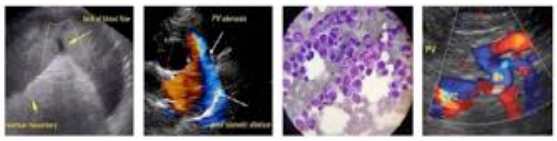

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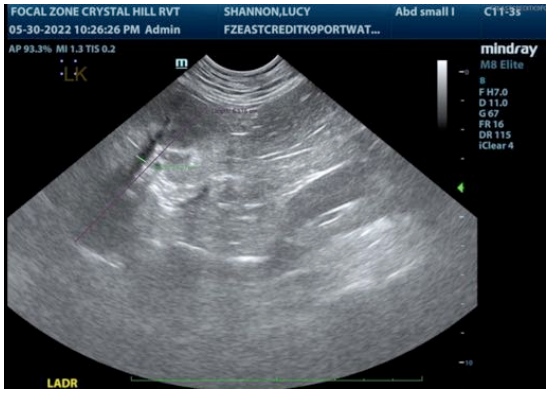

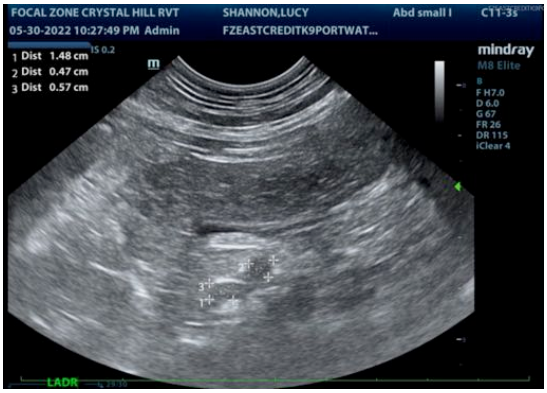

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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