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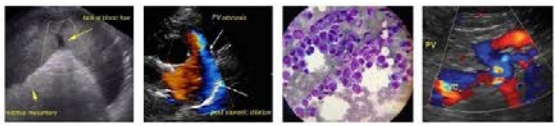

THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Zack Caravaggio

SPECIES

Canine

BREED

Golden Retriever

SEX

Intact Male

AGE

13 Years

WEIGHT

31.7 kg

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Nelson AH

REFERRING VET

Dr. Anderson

INVOICE

24948

DATE

8/26/21

PRESENTING CLINICAL SIGNS

increased liver values. No meds.
Abnormal PE/Chem/CBC/UA Results: ALT, ALP, GGT, CK, Lipase, Cholesterol and triglycerides elevated. Albumin and TP decreased. Sp Grav - 1.012

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is large in size, measuring 3.36 cm. in the sagittal view. It has a regular shape with smooth external margins. The parenchyma is heterogeneous, and there are rare, small, discreet cystic lesions visualized. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect, or calculi.

The left kidney has a normal shape and size (6.44 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.05 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is some evidence of perinephric inflammation and scant effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. The renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.92 cm. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.69 cm. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an ill-defined hypoechoic nodule visualized at 1.3 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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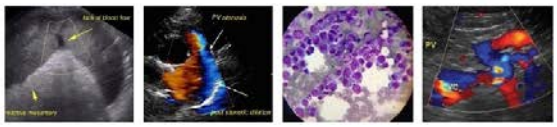

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Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Jejunum wall measured 0.4 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity revealed scant anechoic free fluid. No lymphadenopathy visualized. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of increased echogenicity in the area around the right kidney.

Other

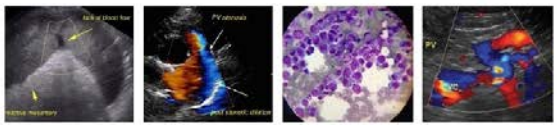
A brief view of the heart was submitted. No pericardial effusion was seen.

PRIMARY FINDINGS

- Large, hyperechoic prostate with pinpoint prostatic cysts – most consistent with benign prostatic hyperplasia +/- prostatitis.
- Mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Heterogeneous liver with ill-defined hypoechoic nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Subjectively thickened small intestine with intact layering – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

SECONDARY FINDINGS

- Mildly/moderately fluid dilated stomach – most consistent with a non-fasted individual. Correlate with feeding history. If fasted, consider delayed gastric emptying or a partial gastric obstruction (seems unlikely, not visualized).
- Decreased corticomedullary distinction both kidneys – The bilateral renal findings are



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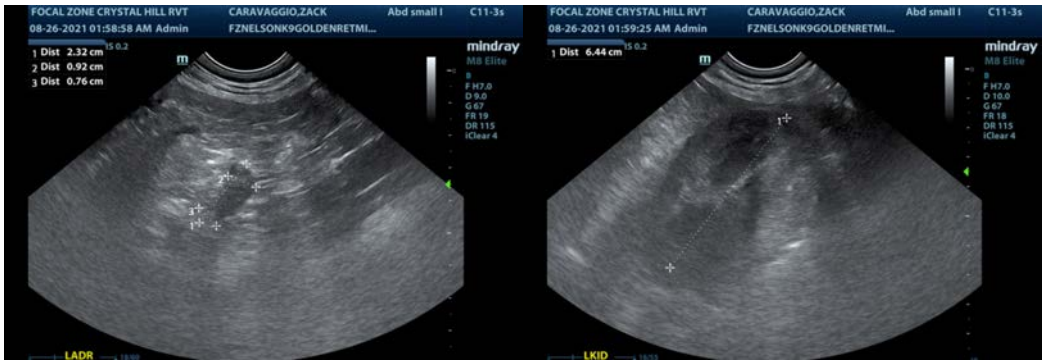
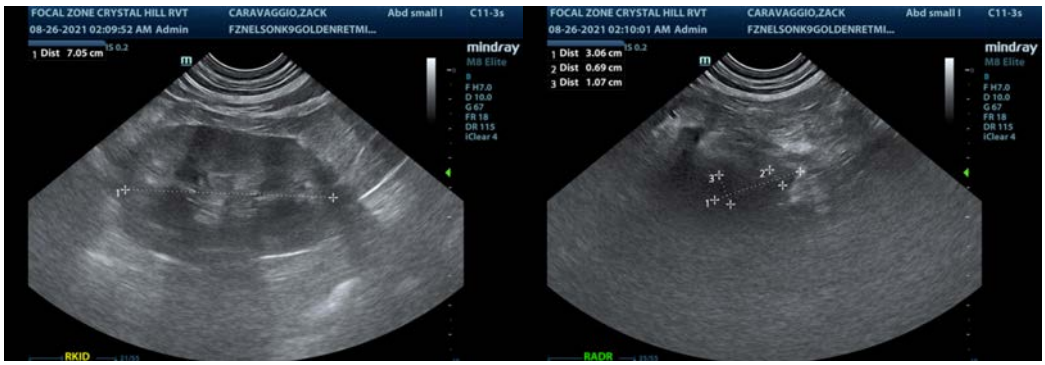
consistent with age-related change. There is evidence of some hyperechoic mesentery and free fluid surrounding the area of the right kidney. This is of unknown significance.

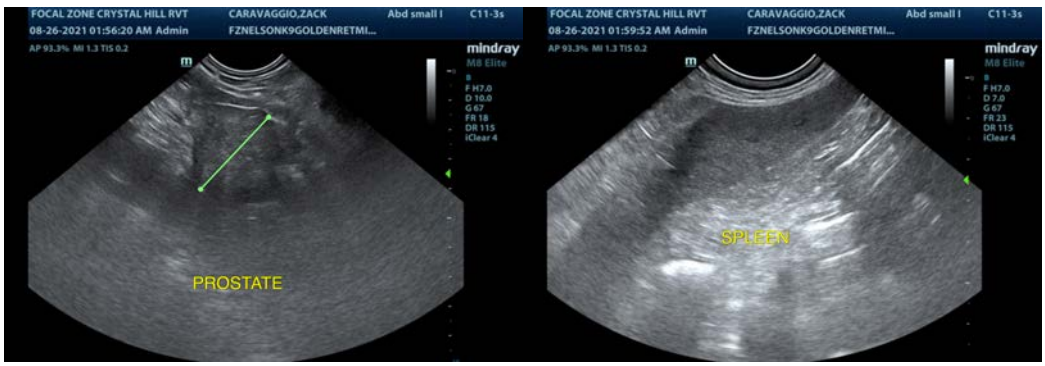
- Small volume abdominal effusion – this could be due to hypoalbuminemia (I'm not sure how severe it is) or could be inflammatory change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are relatively mild, non-specific parenchymal changes visualized in both the liver and spleen. The significance of these is unclear. Consider liver function test, clotting times, and a fine needle aspirate of both liver and spleen. Additionally, there is diarrhea reported. Consider workup of the hypoalbuminemia to try to determine its source, including a liver function test (already advised), a urine protein/creatinine ratio with urinalysis and culture, and GI panel with PLI, B12 and folate levels to look for evidence of small intestinal disease. Hopefully these test results will help to clarify if the hypoalbuminemia is due to liver or GI disease. Ultimately, biopsies are recommended of either the GI tract or the liver as indicated. Recommend 3-view thoracic radiographs.







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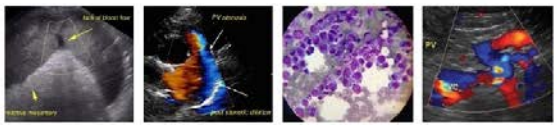

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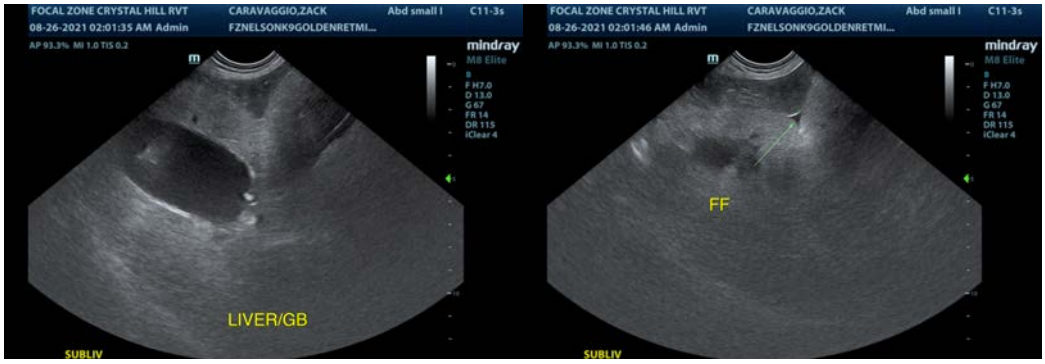

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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