
PATIENT PRESENTING CLINICAL SIGNS

Maui Renaud Significant weight loss and less of an appetite. Concerns for possible mass near or on liver. Was given Cerenia.

SPECIES Abnormal PE/Chem/CBC/UA Results: Low Albumin and on rads liver appears enlarged.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
BREED
Urinary System

Golden Retriever

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.

SEX

Neutered Male

The prostate is difficult to clearly visualize due to its intrapelvic location. There is the suggestion of a somewhat large slightly irregular prostate, but the margins are difficult to definitively delineate. Correlate these findings with a digital rectal exam.

AGE

9tr

The left kidney has a normal shape and size (7.49 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex: medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

65lbs

The right kidney has a normal shape and size (8.19 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex: medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands
IMAGING PERFORMED BY

Crystal Hill

The left adrenal gland is normal in size measuring 0.65 cm at the caudal pole. 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.

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The right adrenal gland is normal in size measuring 1.1 cm at the caudal pole. 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
REFERRING VET

Dr. Sandhu

The spleen is subjectively normal in size, echotexture is homogenous, and 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.

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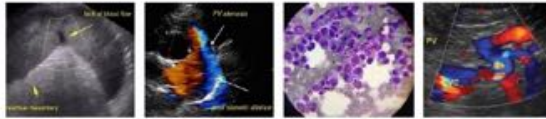
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Liver
DATE

3/29/2023

The liver is large in size, and normal in 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 are numerous hypoechoic nodules visualized throughout the hepatic parenchyma, varying in size from 0.50 cm to 2.0 cm, some of these have a target like appearance.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.


PATIENT *Gastrointestinal*

Maui Renaud

The stomach contains minimal luminal contents. 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 layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

SPECIES

Canine

BREED

Golden Retriever

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis: mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

SEX

Neutered Male

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.

AGE

9tr

Pancreas
WEIGHT

65lbs

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.

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Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

PRIMARY FINDINGS

- Questionable large/irregular prostate exact margins were difficult to visualize. Correlate findings with a digital rectal exam.
- Large heterogenous liver with numerous hypoechoic nodules. 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. It is very possible for these hypoechoic lesions to be benign, regenerative nodules, etc. Occasionally, a nodule had a target like appearance making concern for an underlying neoplastic process higher.
- Moderate gallbladder debris. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

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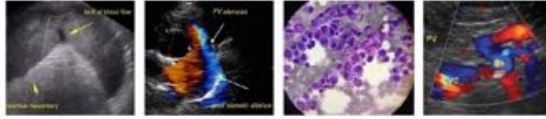
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on the history provided I was concerned about a possible gastrointestinal lesion causing the decrease in appetite and hypoalbuminemia. No abnormalities were visualized associated with the small intestine but protein losing enteropathy or small mass lesion could still be possible.

The liver is large and heterogenous with numerous hypoechoic nodules. These could represent benign or neoplastic lesions. These nodules subjectively appear slightly expansile and occasionally have a



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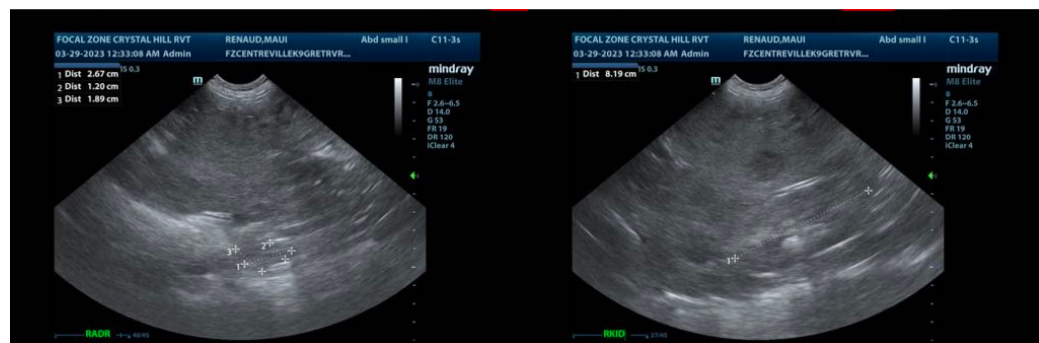
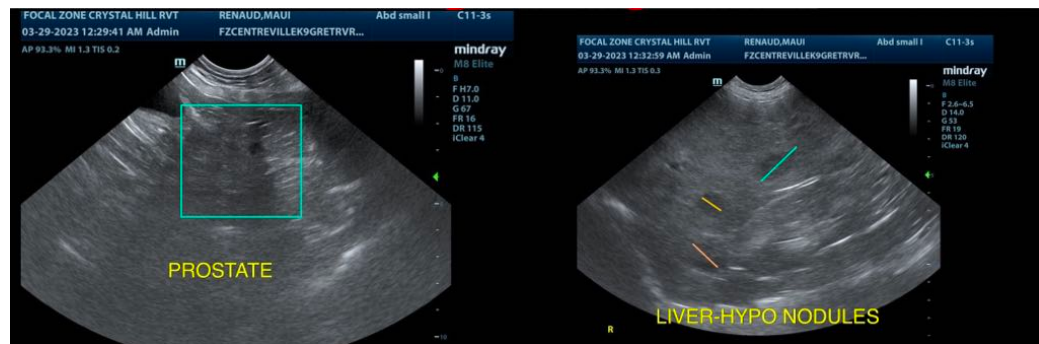
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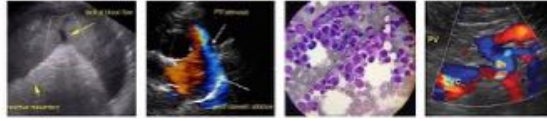
target like appearance increasing my concern for possible metastatic lesions. Recommend a fine needle aspirate.

The prostate is difficult to clearly visualize in this large dog but there is some concern that it could be somewhat large. Correlate this with a digital rectal exam and the age at neutering. If this patient was neutered prior to puberty this could be enlarged, if neutered later in life this could be less concerning. If rectal palpation confirms a large prostate, then consider possible sedation to further evaluate + or -. Consider a fine needle aspirate.

Consider a liver function test and evaluation of urine protein creatinine ratio to look further for a cause of the hypoalbuminemia reported. If these are normal, I would be more concerned about primary gastrointestinal disease/gastrointestinal lesion.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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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.

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