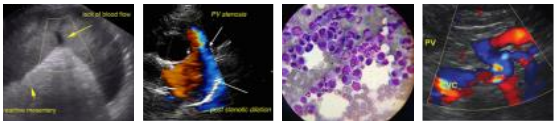

PATIENT

Rex Marley

SPECIES

Canine

BREED

Border Collie

SEX

Neutered Male

AGE

13 Years

WEIGHT

35.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Countryside AC

REFERRING VET

Dr. Cox

INVOICE

20377

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PRESENTING CLINICAL SIGNS

History: Lipoma - right side of chest, left side of prepuce dental disease joint disease, reduced mobility Elevated liver enzymes

Abnormal PE/Chem/CBC/UA Results: Senior Screen: Plt 525,000 Chem: Tp = 7.7, ALT = 324, ALP = 500, GGT = 20 Chol = 385 T4 is wnl 2.5 Urinalysis: spgr 1.020, ph = 6, inactive sediment Liver Chemistries: TP stable at 7.7 ALT = 362, AST = 68, ALP = 540, GGT = 21 Current Medications Welactin, Phycox max, Gabapentin 300mg BID

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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is normal in size (0.83 cm) and shape for this neutered male dog. The parenchyma is homogenous, and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.96 cm). Overall echogenicity is slightly hyperechoic with poor 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.

The right kidney has a normal shape and size (6.2 cm). Overall echogenicity is slightly hyperechoic with poor 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal. Pyelectasia is present, measuring 0.44 cm.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.95 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.

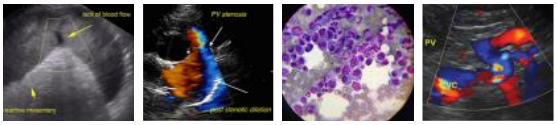
The right adrenal gland is normal in size measuring 0.81 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

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.

Liver

The liver is subjectively large in size, and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear



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normal. The parenchyma is generally heterogenous with some patchy hyperechoic regions, one of these regions measures 1.88 cm. Additionally, in the caudoventral aspect of the liver , there is rounded extension of a liver lobe creating a mass effect, measuring approximately 6.3 cm x 4.1 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.

Gastrointestinal

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.

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 (0.49 cm in wall thickness), and the jejunum measured as normal (0.37 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.

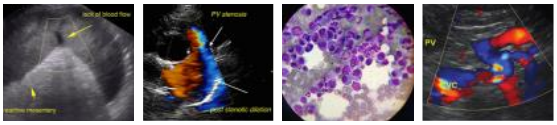
Free Abdomen

Evaluation of the peritoneal cavity 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.

ULTRASONOGRAPHIC FINDINGS

- Large heterogenous liver with rounded hyperechoic liver lobe/mass effect- 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. There is an extension of a caudoventral liver lobe into a rounded mass effect. This lesion is slightly hyperechoic to the normal liver.

- Decreased corticomedullary distinction in both kidneys and right sided pyelectasia- The bilateral renal findings are consistent with age-related change. Pyelectasia of the right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.



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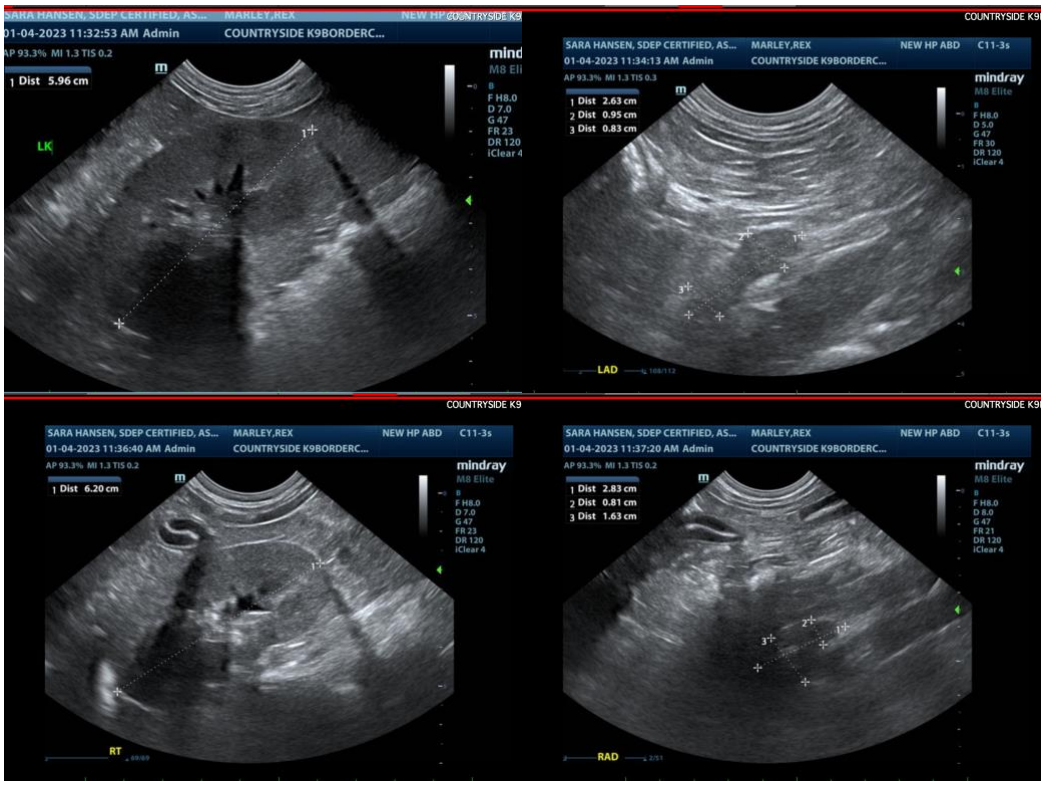
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is large and heterogenous on today's exam. That is a relatively nonspecific finding. Additionally, there is a rounded extension from a caudoventral liver lobe, creating a mass effect. This is of similar echogenicity to the normal liver and likely represents either a hyperplasia or an adenoma, although other differentials exist. A fine needle aspirate of this rounded area of liver lobe should be considered. Additionally, I would recommend getting a baseline liver function test (pre- and postprandial bile acids), and a fine needle aspirate of "normal liver". If liver enzymes continue to rise or there is concern regarding the results on cytology of the liver mass effect, then surgical evaluation for removal could be considered, ideally with a contrast CT scan to obtain information for presurgical planning.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.



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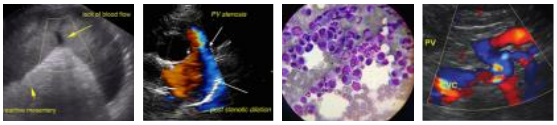

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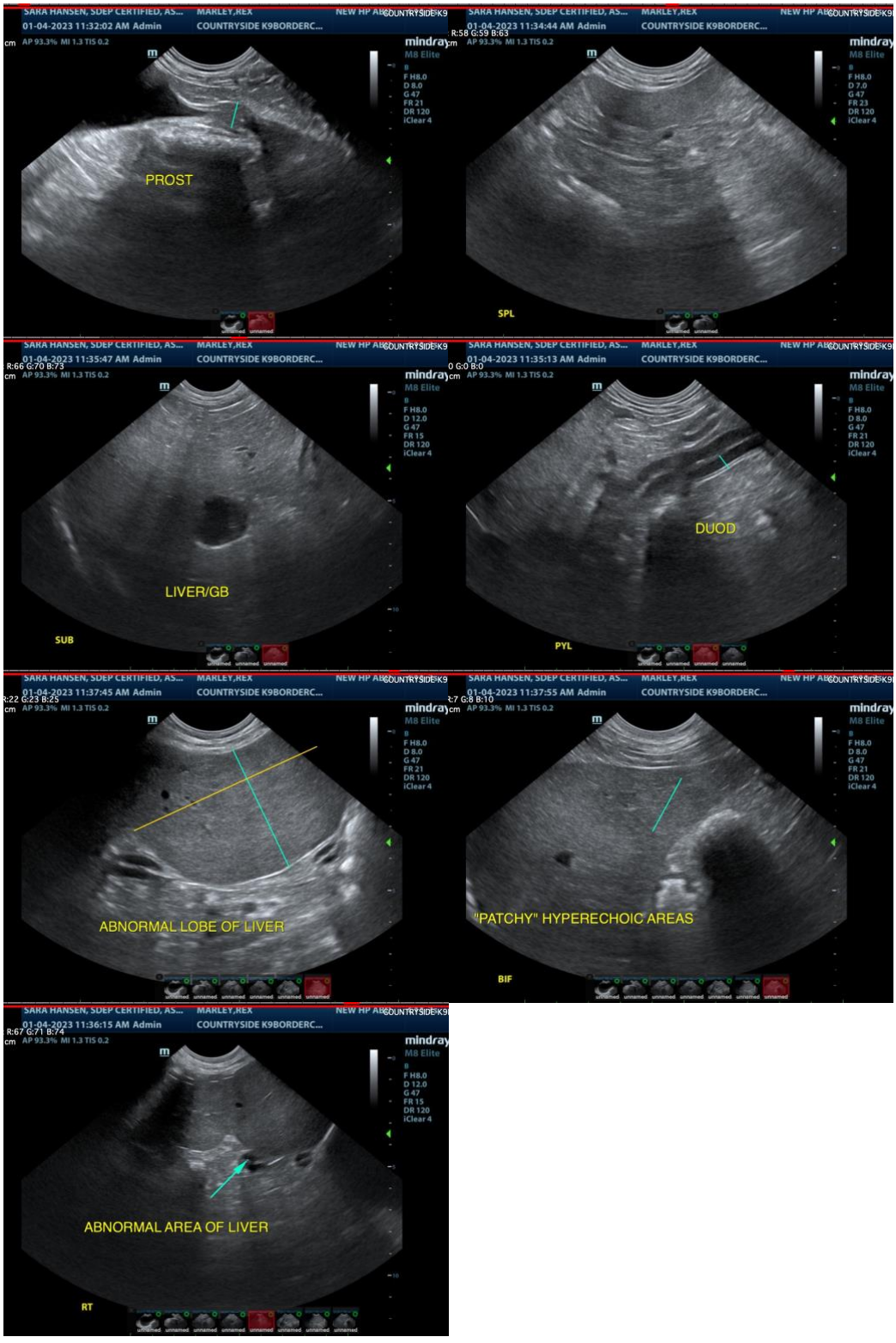

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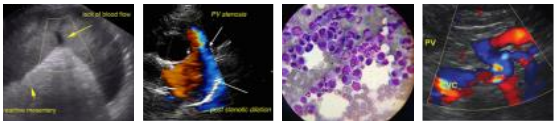

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com