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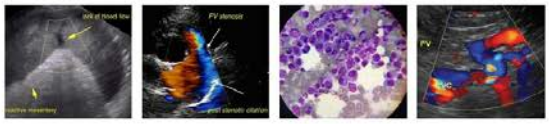


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Robbie Herzig

SPECIES

Canine

BREED

Chinese Crested

SEX

Neutered Male

AGE

14 Years

WEIGHT

14.7 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

MountainView AH

REFERRING VET

Dr. Pablo Mendoza

INVOICE

44184

DATE

1/12/23

PRESENTING CLINICAL SIGNS

Chief Concern / Provisional Diagnosis: ~persistent proteinuria, evaluation of urinary tract, kidneys, bladder, and prostate. Hx of degenerative mitral valve disease~ Relevant Medical History and Physical Exam findings: ~Patient had recent re-evaluation of cardiac status, MVD remains stable. Patient is currently on enalapril. Recommended abdominal ultrasound to r/o causes for persistent proteinuria. Enalapril 2.5mg tabs: 3 tabs PO BID

Abnormal PE/Chem/CBC/UA Results: Persistent proteinuria: 10/29/22 UPC 2.5 10/9/22 UPC 2.0 8/25/22 UPC 1.2 Elevated BUN 50mg/dl

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 normal in size (1.14 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 is large (4.86 cm) and hyperechoic with decreased corticomedullary distinction. Numerous large cortical cysts are noted. Two of the larger cysts measure 1.58 cm and 1.55 cm in diameter. There is pyelectasia at 0.41 cm. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is large (5.6 cm) and hyperechoic with decreased corticomedullary distinction. Diffuse cortical cysts are noted. Two of the largest cysts measure 1.12 cm and 2.4 cm in diameter. The renal pelvis is dilated at 0.67 cm. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large, measuring 0.72 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.

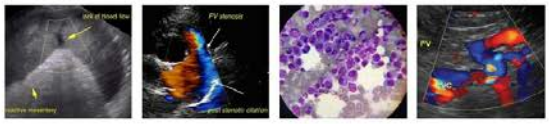
The right adrenal gland is large, measuring 0.81 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size. The spleen echotexture is heterogenous and diffusely 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 large, heterogeneous, and hyperechoic. The visible portions of the vasculature and biliary tract appear normal. The hepatic parenchyma is diffusely nodular with generally small nodules, which



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appear variably hyperechoic, hypoechoic, of mixed echogenicity, etc. Additionally, there are large hepatic cysts noted, particularly a cyst on the left side measuring 4.35 cm x 7.73 cm. An additional cyst measures 4.98 cm in diameter.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and 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. Duodenum wall measures 0.42 cm. Jejunum wall measures 0.27 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 nonformed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering. Colon wall measures 0.23 cm.

Pancreas

The pancreas is prominent and mottled compared to the surrounding isoechoic 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.

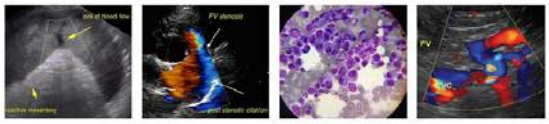
Other

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

PRIMARY FINDINGS

- Large, hyperechoic, heterogeneous liver with too numerous to count nodules varying from hypoechoic, hyperechoic, and mixed echogenicity. Additionally, there are large hepatic cysts present. 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. The nodules identified in the liver sound similar to the previous reports, although these lesions appear to be progressing. Additionally, the hepatic cyst is much larger (previous measurement was 3.78 cm x 3.51 cm).

- Bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is



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recommended.

- Hyperechoic cystic kidneys with decreased corticomedullary distinction and bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other. The large cystic lesions are typically benign and incidental, although these are large enough and numerous enough to consider affecting renal function.

- Diffusely large, 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. The previous description is similar to today's presentation.

SECONDARY FINDINGS

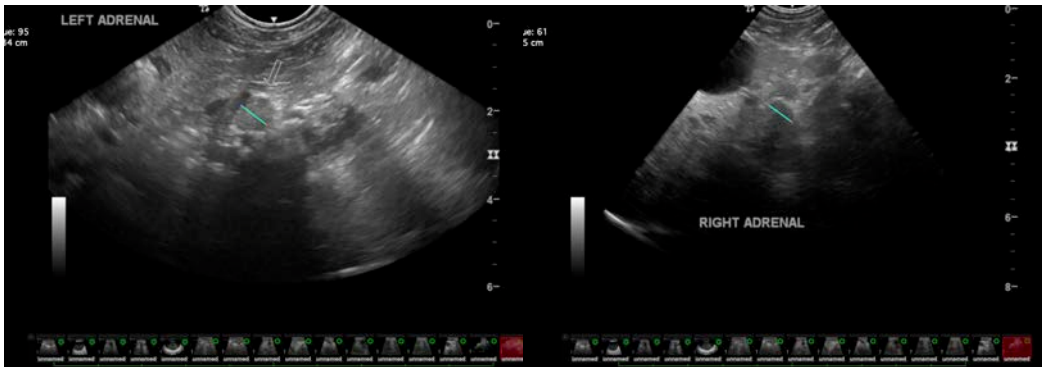
- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The findings on today's exam are similar to those reported 5/6/21, although the severity of these lesions have progressed. There are more hepatic nodules present on today's scan, and the cystic lesions are larger. This is the same for the kidneys. These lesions are likely largely benign, but as the cysts become larger, they can start to interfere with organ function or cause discomfort. The large hepatic cyst could be drained if it is causing discomfort, but they typically will refill quickly.

Both adrenals measure as large. If signs of Cushing's are present, you could consider adrenal function testing.

This patient is proteinuric, which is not surprising considering the anatomic abnormalities visualized in both the liver and kidneys. The degree of proteinuria is relatively mild and there has been a good response to your therapy. It would be unusual for the proteinuria to resolve with medication.



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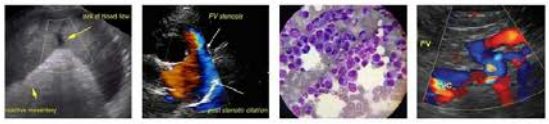

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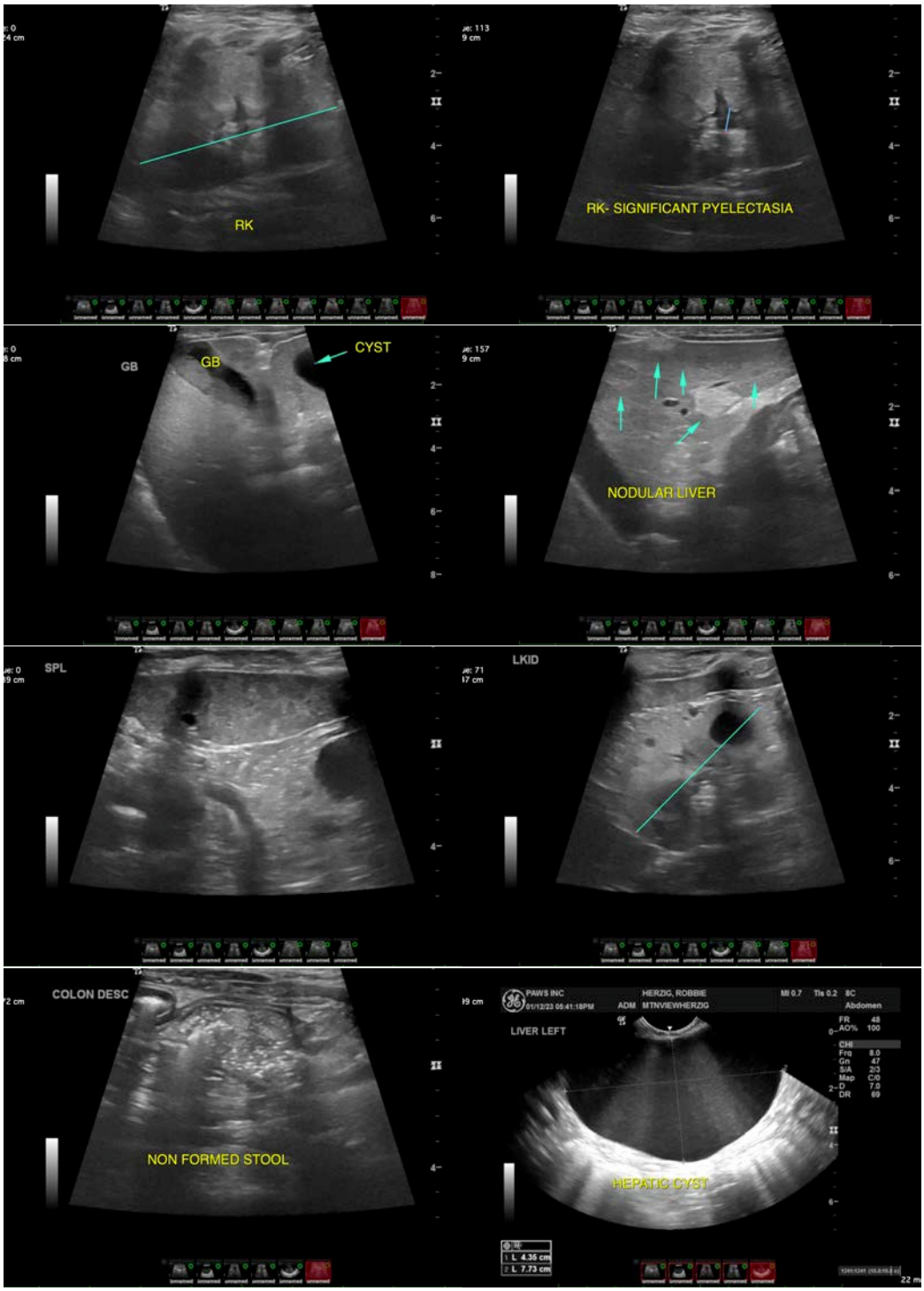

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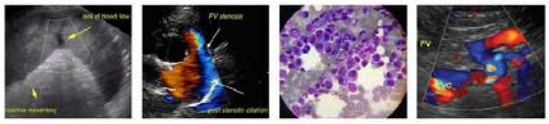

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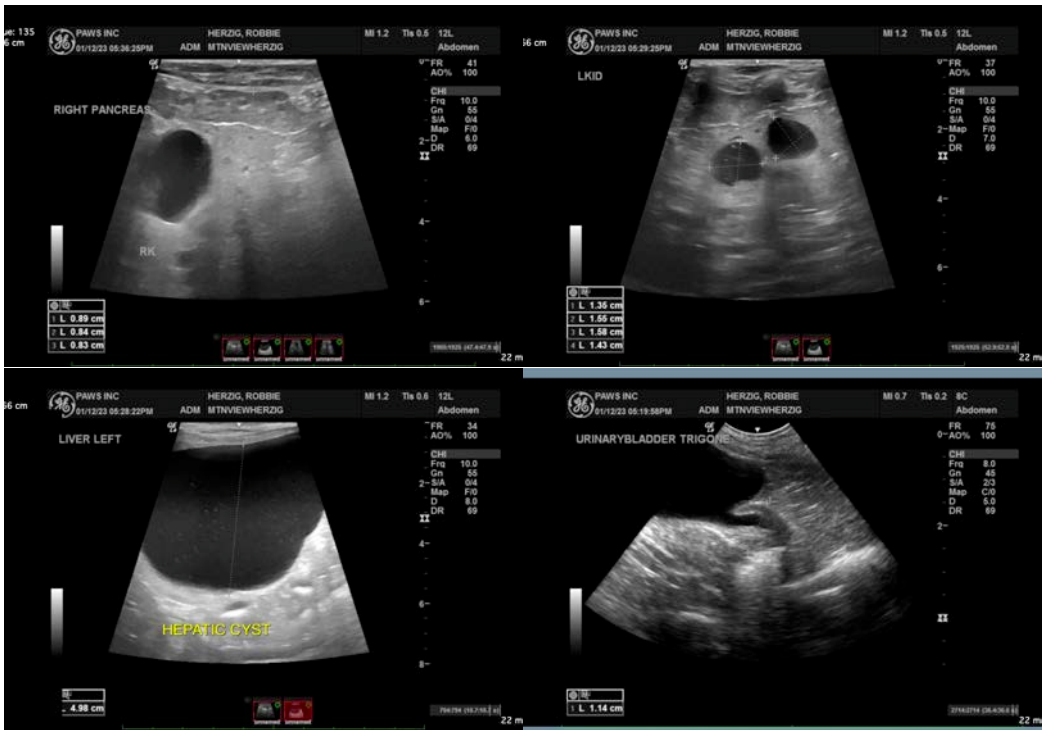

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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