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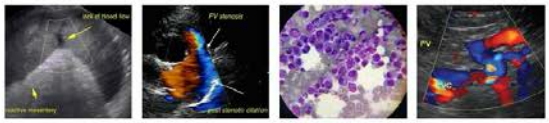

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Moe Johnson

SPECIES

Canine

BREED

Maltese

SEX

Neutered Male

AGE

14 Years

WEIGHT

8.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

Mountain View AH

REFERRING VET

Dr. Sarah Kalivoda

INVOICE

33231

DATE

12/2/21

PRESENTING CLINICAL SIGNS

Chief Concern / Provisional Diagnosis: Overall health assessment; evaluate heart disease progression - if meds are necessary Patient is asymptomatic for heart disease at this time Relevant Medical History and Physical Exam findings: Azotemia - IRIS Stage 2 with PLN Grade 3/6 left systolic heart murmur - Chronic Mitral and Tricupsid DVD Anal Sac Nodule L side Chronic intermittent conjuncitivitis Recent Diagnostics: Relevant Labratory Results / Abnormalities: SDMA 28 (0-14) Creatitine 1.9 (0.5-1.5) BUN 52 (9-31) Phosphorus wnl 5.4 (2.5-6.1) Lipase 501 (0-250) 9/21 Urinalysis 1028 USG; 5.5 pH; 1+ (UPC 0.4) protein; otherwise normal; 7/21 proteinuria 0.12. Blood Pressure: Systolic last taken 7/21 and was 139; Blood Pressur also being taken today. Current medications (include full name, dosage and frequency): Welactin 3TA Fish Oil - 1/2 scoop daily NeoPolyDex for chronic intermittent conjunctivitis Client: Denise Johnson Patient: MoeSex: Neutered Male Date: 11/29/2021 DOB: 1/24/2007 Species: Canine Phone: (775) 233-5078 Age: 14 Yrs. 10 Mos. Breed: Maltese Kan Rehmannia 8 - 1/4th tab Po BID for kidney support Losartan 2mg/mL - 0.5mls PO SID (owner admits to giving just ever so slightly less than 0.5mls every day); Received acupuncture / chiropractics every ~4 weeks Relevant Radiograph Findings(email radiographs if available): See radiographs. Performed for echo today.
Abnormal PE/Chem/CBC/UA Results: Ecg and rads attached for cardiologist

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 (0.76 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 (3.3 cm) with mild pyelectasia of 0.17 cm, numerous small cortical cysts, and pinpoint non-obstructive nephroliths. 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 infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.92 cm) with pinpoint non-obstructive nephroliths. 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 0.34 cm at the cranial pole, 0.81 cm at the caudal pole, and 1.17 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat atypical in appearance, in that the caudal pole appears enlarged, most consistent with a left-sided adrenal nodule. There is no evidence of vascular invasion visualized.

The right adrenal gland is normal in size measuring 0.68 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.

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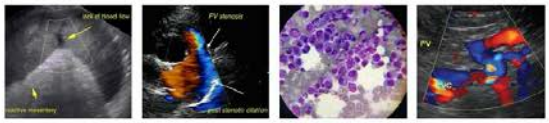

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Spleen

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 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. A small 0.78 cm anechoic cyst is visualized.

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 dependent debris. 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 measured 0.48 cm. Jejunum wall measured 0.30 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

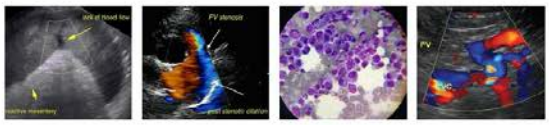
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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

- Isoechoic nodule in caudal pole of left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Decreased corticomedullary distinction in both kidneys with pinpoint non-obstructive nephroliths and cortical cysts – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated



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disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes observed in the kidneys are most consistent with age related chronic kidney disease as described in the history. Recommend periodic blood pressure evaluation, urinalysis and culture.

There is nodule present on the Left adrenal gland. This nodule is relatively small and is not deforming the adrenal gland significantly and doesn't appear to have any evidence of vascular invasion.

These nodules can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

Additionally, the liver appears heterogeneous, and there is a large amount of debris in the gallbladder. The gallbladder wall does not appear overtly thickened. If liver enzymes are elevated, then consider starting Ursodiol and continue monitoring the gallbladder periodically with ultrasound.

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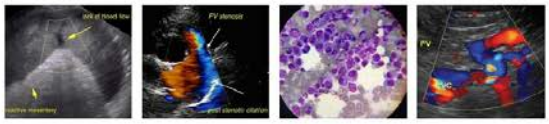

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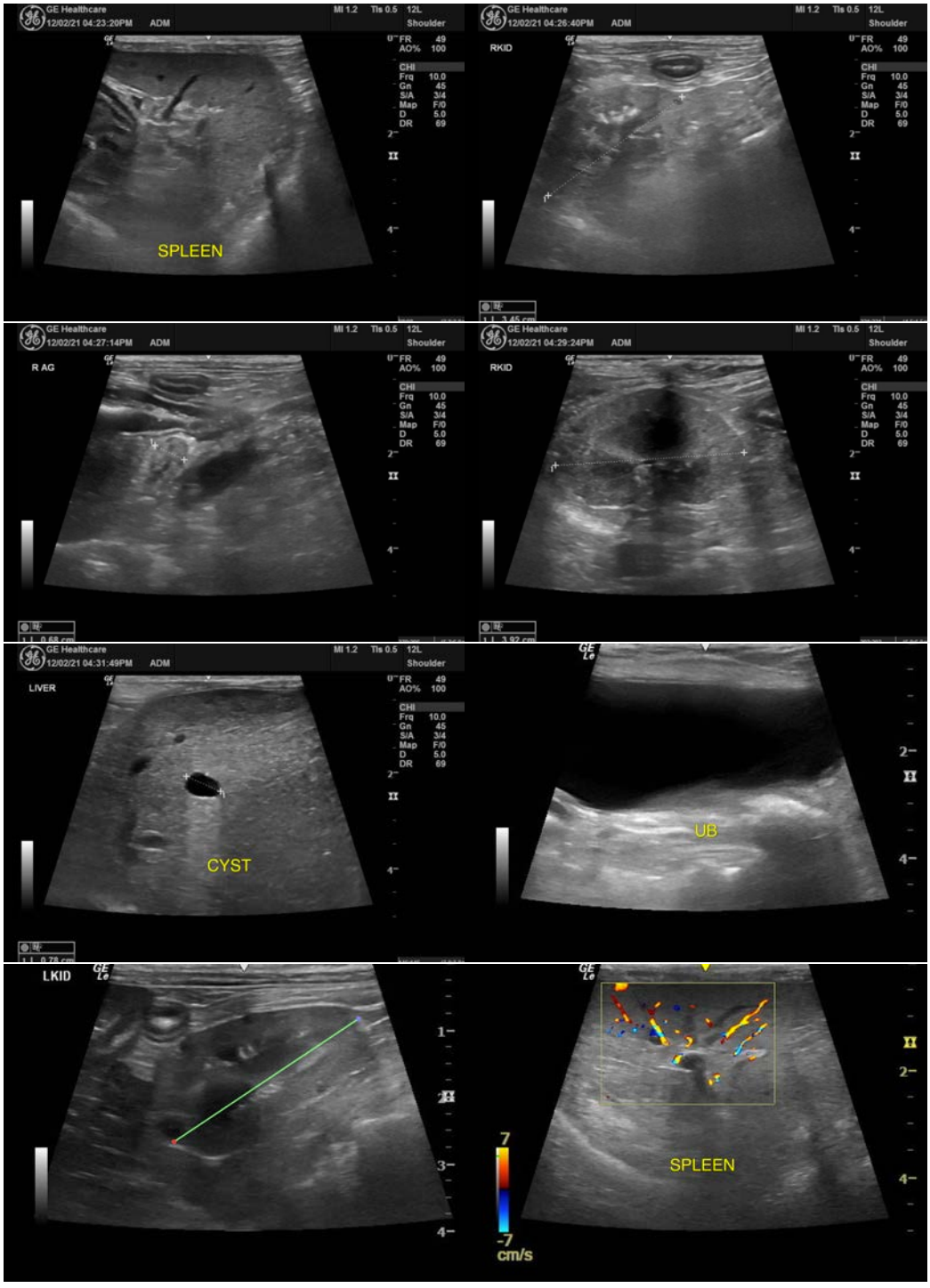

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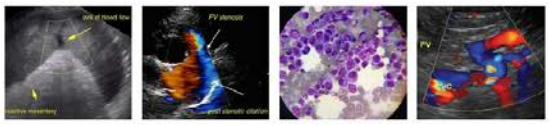

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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