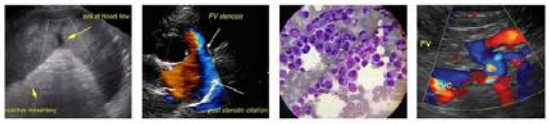
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



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

PATIENT

McBaine Tavares

SPECIES

Canine

BREED

West Highland White Terrier

SEX

Neutered Male

AGE

14 Years

WEIGHT

11.73 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

LuxPetVet

REFERRING VET

Dr. Kristin Kee

INVOICE

46128

DATE

3/22/23

PRESENTING CLINICAL SIGNS

Diagnosed with potential copper-associated hepatitis in 2021 via laparoscopic biopsy (Dog had Alkaline phosphatase elevation 768. No clinical signs of Cushing's. Ultrasound showed normal gallbladder and hepatomegaly with multifocal hypoechoic nodular change not disrupting surface capsule. On laparoscopic inspection, liver confirmed enlarged, off color, nutmeg in appearance with some surface color changes. liver margins were mildly rounded.). Patient has been managed with B16 and penicillamine. Patient is also on Galliprant and gabapentin PRN for previous CCL injury. Patient now exhibiting panting at night (which seems to be better regulated since starting gabapentin), polydipsia, and polyuria. UA with urine culture submitted to lab at time of U/S (awaiting results).

Abnormal PE/Chem/CBC/UA Results: 5/2022: ALP 545 IU/L (5-131); 12/2022: ALP 1086 IU/L (5-131); 3/17/23: ALP 1158 U/L (20-150) BP 169mmHg

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.30 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

The prostate is normal in size (0.70 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 (4.8 cm) with a small cortical cyst measuring 0.30 cm. Overall echogenicity is slightly hyperechoic with mildly reduced 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.

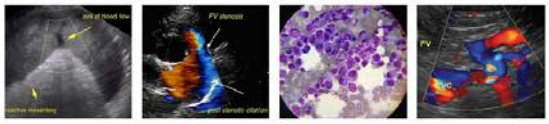
The right kidney has a normal shape and size (3.58 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.70 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 0.68 cm at the cranial pole, 0.48 cm at the caudal pole, and 1.83 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat irregular in appearance in that there is a small hyperechoic region/nodule on the cranial pole of the right adrenal measuring 0.59 cm x 0.39 cm. No evidence of vascular invasion is visualized.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



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

PATIENT

McBaine Tavares

SPECIES

Canine

BREED

West Highland White Terrier

SEX

Neutered Male

AGE

14 Years

WEIGHT

11.73 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

LuxPetVet

REFERRING VET

Dr. Kristin Kee

INVOICE

46128

DATE

3/22/23

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 and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are too numerous to count ill-defined hypoechoic nodules throughout the parenchyma.

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.

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 0.40 cm. Jejunum wall measures 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

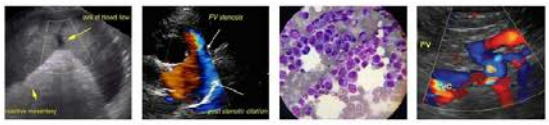
The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. Normal mesenteric lymph nodes are visualized measuring 0.47 cm and 0.49 cm. The omentum is of normal echogenicity.

PRIMARY FINDINGS

- Mildly thickened/irregular apical region of the urinary bladder – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.
- Large, heterogeneous nodular liver – 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.



PATIENT

McBaine Tavares

SPECIES

Canine

BREED

West Highland White Terrier

SEX

Neutered Male

AGE

14 Years

WEIGHT

11.73 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

LuxPetVet

REFERRING VET

Dr. Kristin Kee

INVOICE

46128

DATE

3/22/23

- 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.
- Subtle hyperechoic nodule in the cranial pole of the right adrenal – Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

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.
- Mildly reduced corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

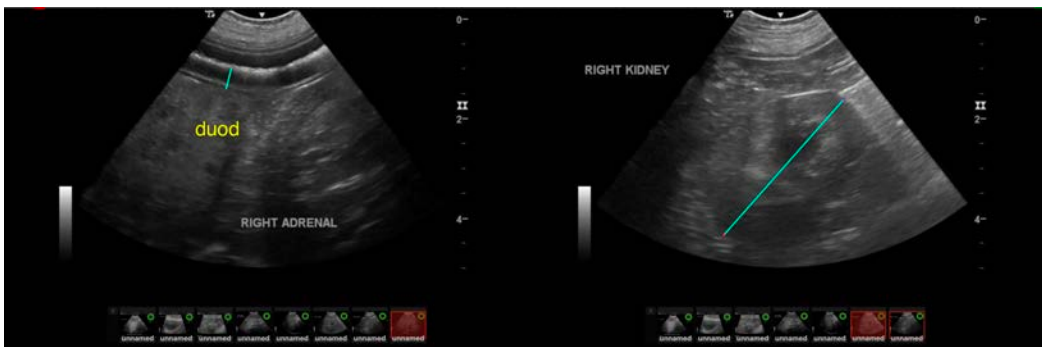
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes described in the liver previously are evident on today's scan. Additionally, there is some mild debris in the gallbladder, which is likely largely insignificant, but chronic Ursodiol therapy could be considered, as this can have somewhat of a hepatoprotective effect as well.

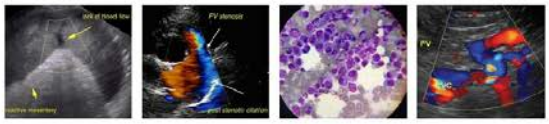
The adrenal glands appear relatively normal in size today. There is a small hyperechoic area on the cranial pole of the right adrenal. The significance of this is uncertain. It is very likely a benign incidental lesion, although an early neoplastic lesion cannot be ruled out. I would recommend a blood pressure evaluation, and if hypertension is present, then consider measuring catecholamines, looking for evidence of a pheochromocytoma. If not, you could consider adrenal function testing, although this may be difficult to interpret in light of the concurrent illness. You could consider a contrast CT scan and surgical removal, but I might recommend continued monitoring with ultrasound initially, as this may not be a significant finding (recheck in 3 months).

If the adrenal lesion is secreting hormone, this could be a cause for the PU/PD, but I am also concerned about the possibility of underlying liver dysfunction as a source. Recommend pre- and post-prandial bile acids, looking for evidence of liver dysfunction. Additionally, consider a urinalysis and culture, looking for any evidence of a urinary tract infection, which can also contribute to these symptoms.

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



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



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

PATIENT

McBaine Tavares

SPECIES

Canine

BREED

West Highland White Terrier

SEX

Neutered Male

AGE

14 Years

WEIGHT

11.73 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

LuxPetVet

REFERRING VET

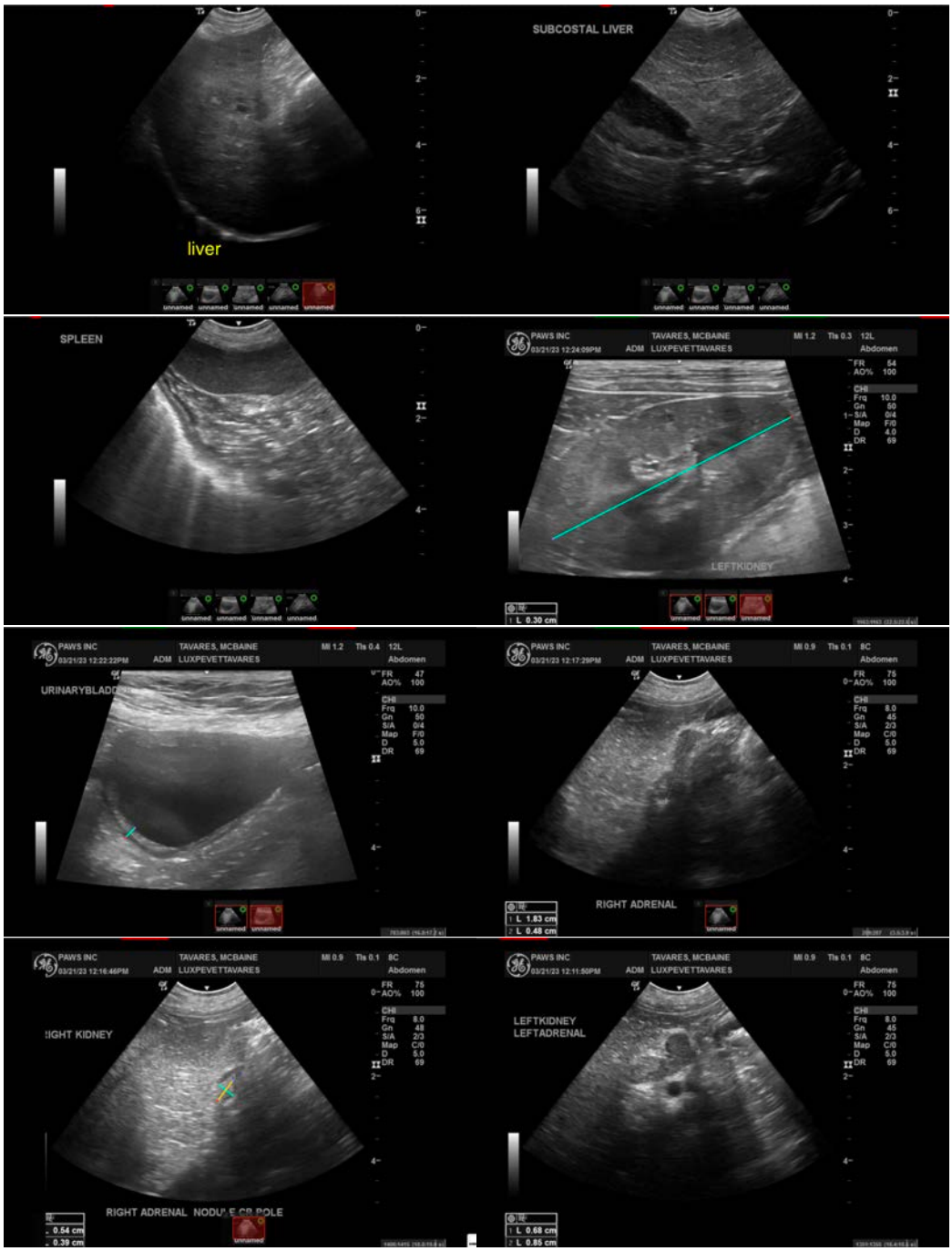
Dr. Kristin Kee

INVOICE

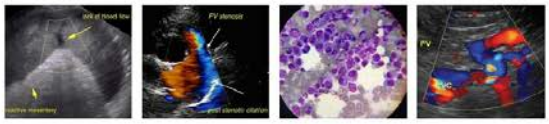
46128

DATE

3/22/23



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



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

PATIENT

McBaine Tavares

SPECIES

Canine

BREED

West Highland White Terrier

SEX

Neutered Male

AGE

14 Years

WEIGHT

11.73 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

LuxPetVet

REFERRING VET

Dr. Kristin Kee

INVOICE

46128

DATE

3/22/23

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.

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

kathleen.sennello@sonopath.com