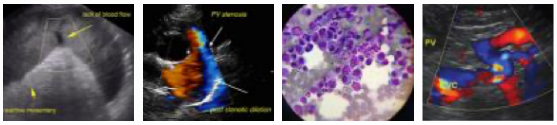
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Comet Eberlein

SPECIES

Feline

BREED

Mini Schnauzer

SEX

Neutered Male

AGE

10 years

WEIGHT

13.5 lbs

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr Powers

INVOICE

12681

DATE

4.5.23

PRESENTING CLINICAL SIGNS

History: History of elevated liver values since May 2022. P has been on Denamarin with no effect. Comet has a history of intermittent diarrhea and vomiting and has been on the RC GI low fat diet. He currently has no symptoms.

Abnormal PE/Chem/CBC/UA Results: ALT (692); ALP (1562); GGT (28); GLOB (3.7); Cholesterol (869); Triglyceride (876); UA: 3+ proteinuria with some oxalate crystals seen Current Medications Denamarin, RC low fat diet, Apoquel Radiographic Findings None taken

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (4.85 cm in length) normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is moderate loss of corticomedullary distinction. Small, nonobstructive focus of mineralization are observed. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (4.81 cm in length) normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is moderate loss of corticomedullary distinction. Small, nonobstructive focus of mineralization are observed. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The prostate is normal in size (0.84 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

Adrenal Glands

The left adrenal gland is normal size (0.50 cm at cranial pole) (0.55 cm at caudal pole) (2.05 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is mildly enlarged (1.36 cm at cranial pole) (0.62 cm at caudal pole) (2.47 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

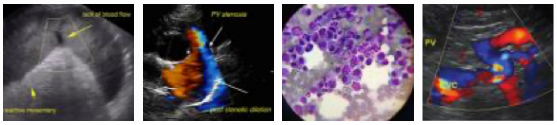
Spleen

The spleen is normal in size (1.59 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and mildly heterogenous in appearance. A 2.36 x 1.17 cm multiseptated cystic nodule is observed on the left side. In addition, an approximately 0.50 cm hyperechoic nodule is observed on the right side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

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



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Comet Eberlein

SPECIES

Feline

BREED

Mini Schnauzer

SEX

Neutered Male

AGE

10 years

WEIGHT

13.5 lbs

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr Powers

INVOICE

12681

DATE

4.5.23

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated echogenic debris/sludge is observed within the lumen (most of which is gravity-dependent, some of which is adhered to the luminal surface). The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is normal in size with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

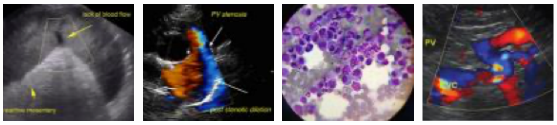
- The hepatic changes could be consistent with inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), regenerative nodular hyperplasia, vacuolar hepatopathy, other hepatopathy or some combination thereof. The left cystic heoatic nodule could be consistent with a benign cluster of cysts, small biliary cystadenoma/ cystadenocarcinoma, an emerging vascular tumor, other.
- Trace ascites

Secondary Findings

- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis with dystrophic mineralization.
- Mild bilateral adrenomegaly
- Gall bladder debris/sludge – non-mucocele
- Age-related pancreatic remodeling

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre-and postprandial serum bile acids to assess hepatic function.
- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic



PATIENT

Comet Eberlein

SPECIES

Feline

BREED

Mini Schnauzer

SEX

Neutered Male

AGE

10 years

WEIGHT

13.5 lbs

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr Powers

INVOICE

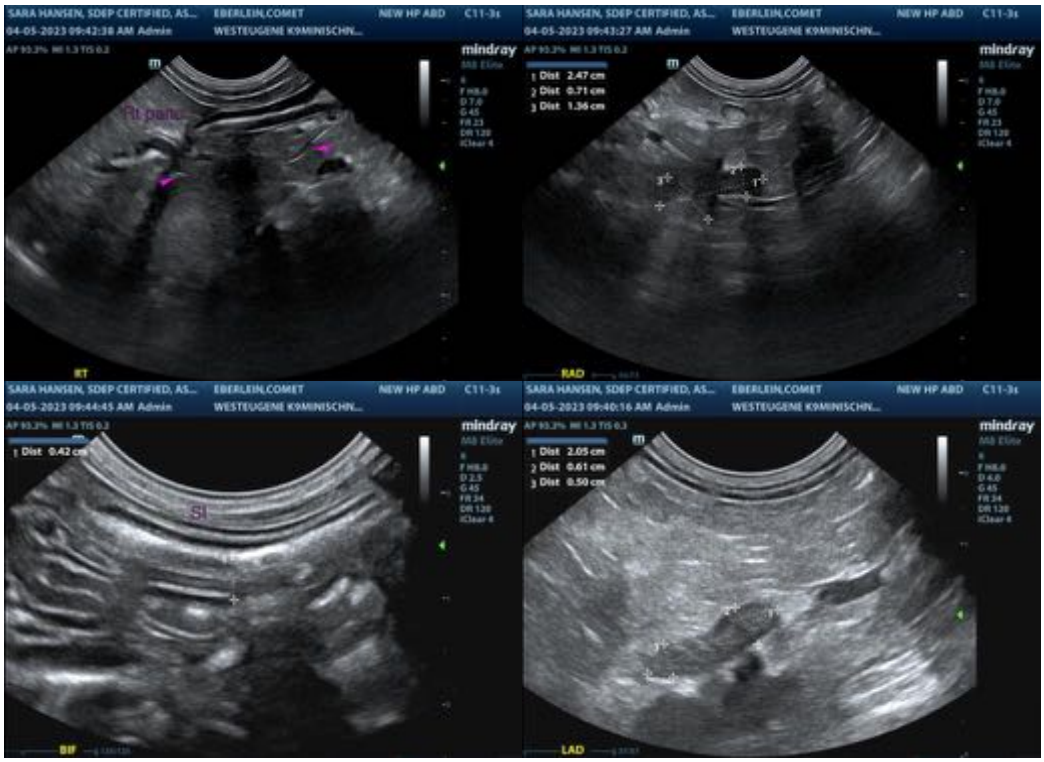
12681

DATE

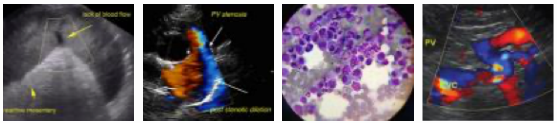
4.5.23

evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.

- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If values do improve, a 4–6-week course of treatment is recommended. Leptospirosis testing can also be considered. However, given the chronicity of the liver enzyme elevations, this differential is considered less likely.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop.
- Given the proteinuria, a UPC is recommended.
- Regarding the history of GI signs, if these symptoms recur, further work-up may be warranted.



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



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Comet Eberlein

SPECIES

Feline

BREED

Mini Schnauzer

SEX

Neutered Male

AGE

10 years

WEIGHT

13.5 lbs

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

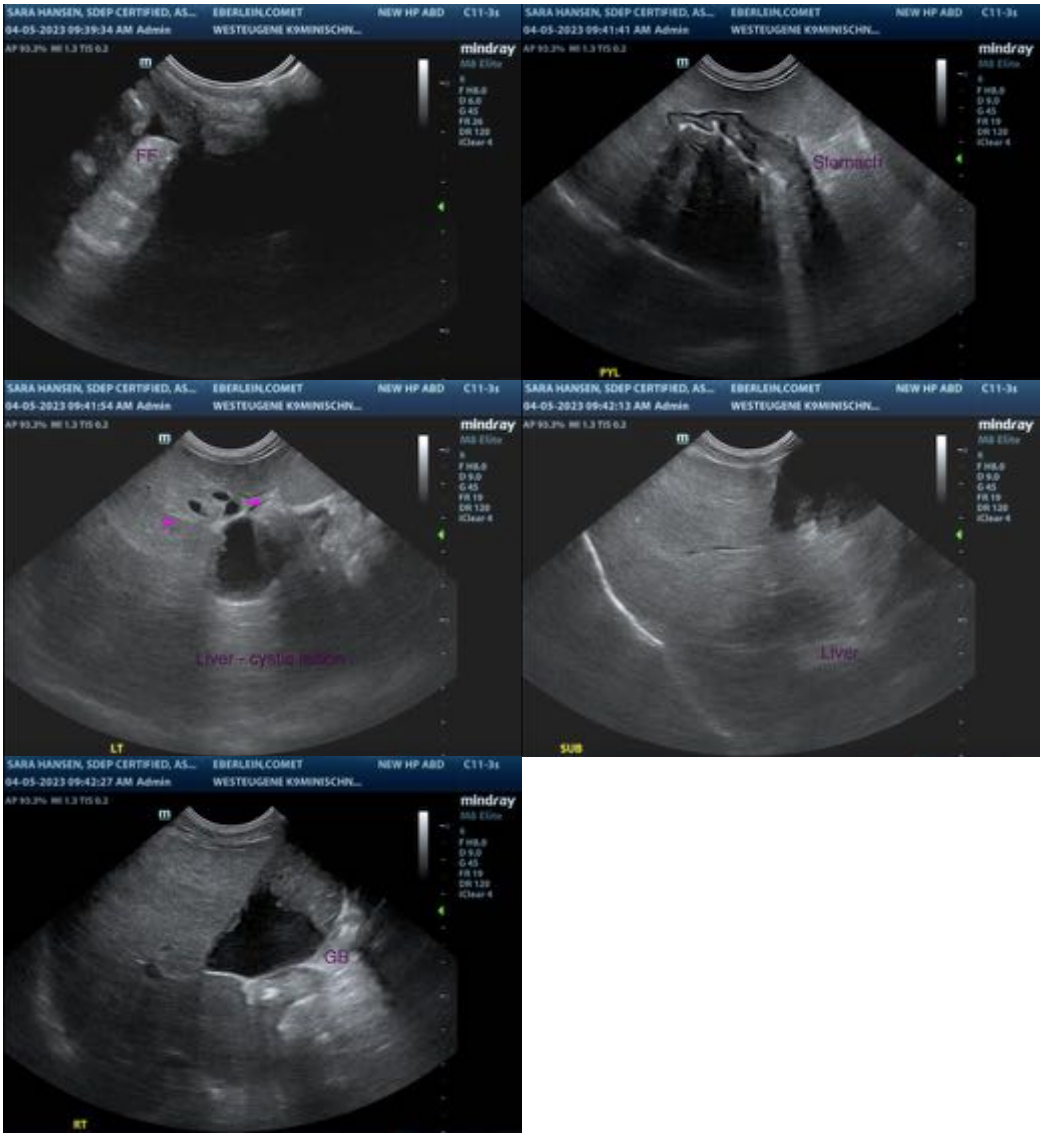
Dr Powers

INVOICE

12681

DATE

4.5.23



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.
Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com