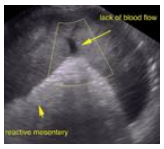
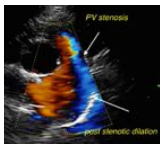
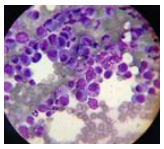
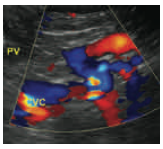
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Theo Heller

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered male

AGE

7 years

WEIGHT

10.5 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Potomac Mobile Veterinary Ultrasound

HOSPITAL NAME

Banfield Leesburg Village

REFERRING VET

Dr. Jarrett

INVOICE

91861

DATE

9/15/21

PRESENTING CLINICAL SIGNS

History: Slight lethargy. No GI symptoms reported. Elevated liver values- ALT and Bile Acids. No CBC or Chemistry values provided. Bile Acids- pre- 78.1, post 186.5

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and trigone presented normal thicknesses and normal tone. The ureters were not visible which is normal. Sand accumulation was noted in the cystourethral junction and urethra. Given the patient's history this is likely oxalate. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. Slight hyperechoic medullary rim sign with slight, pinpoint mineralization was noted. The left and right kidney measured 3.64 cm with.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.45 x 0.49 cm at the caudal pole and 0.39 cm at the cranial pole. The right adrenal gland measured 1.37 x 0.4 cm at the caudal pole and 0.36 cm at the cranial pole.

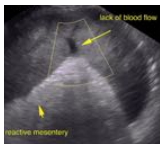
Spleen

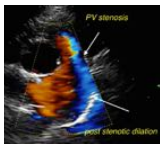
The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

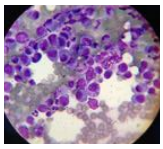
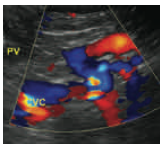
Liver

The **liver** was subnormal in size. Intrahepatic volume was subjectively subnormal. The hepatic width in short axis measured 2.0 – 2.5 cm. The portal vein at the branching of the portal hilus was subnormal in size and measured 0.25-0.3 cm. Visibility in the portal hilus was particularly challenging in this patient. The vena cava measured 0.7 cm. The gallbladder revealed a minor amount of debris without significant over distension.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Theo Heller

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered male

AGE

7 years

WEIGHT

10.5 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Potomac Mobile Veterinary Ultrasound

HOSPITAL NAME

Banfield Leesburg Village

REFERRING VET

Dr. Jarrett

INVOICE

91861

DATE

9/15/21

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS

Microhepatica with subnormal portal vein size.

Subnormal portal vein to vena cava ratio.

Bladder and urethral sand, likely biurate.

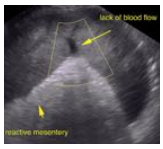
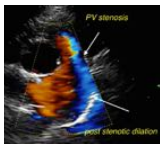
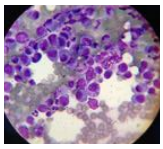
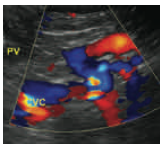
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no obvious extrahepatic portosystemic shunting; however, I am suspicious of splenoazygos or possible splenocaval shunt that is not visible in this particular patient owing to interfering artifact. I recommend CT with contrast for further evaluation +/- hepatic biopsy if no shunt is found on CT. Medical management with the following protocol would be suggested for stabilization.

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

Royal Canin Hepatic Support diet or Hills L/D, **Metronidazole** (7.5 mg/kg PO bid) over the next 14 days, **Lactulose** (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt** or **cheddar cheese**. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAMe and nutraceuticals as needed. **Ursodiol** (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200—500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Theo Heller

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered male

AGE

7 years

WEIGHT

10.5 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Potomac Mobile Veterinary Ultrasound

HOSPITAL NAME

Banfield Leesburg Village

REFERRING VET

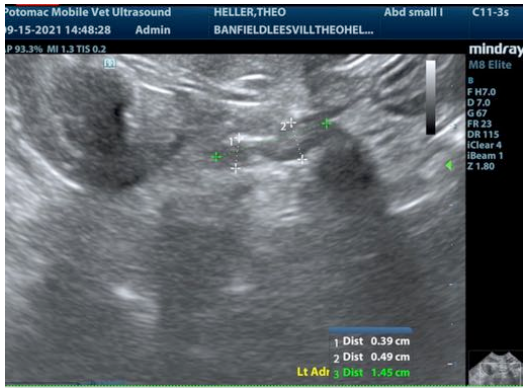
Dr. Jarrett

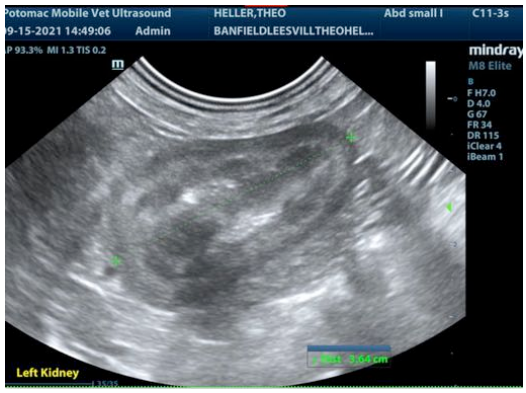
INVOICE

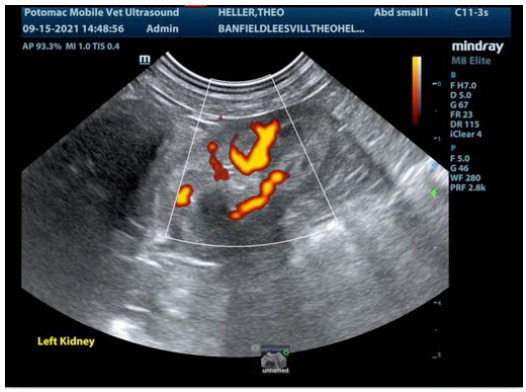
91861

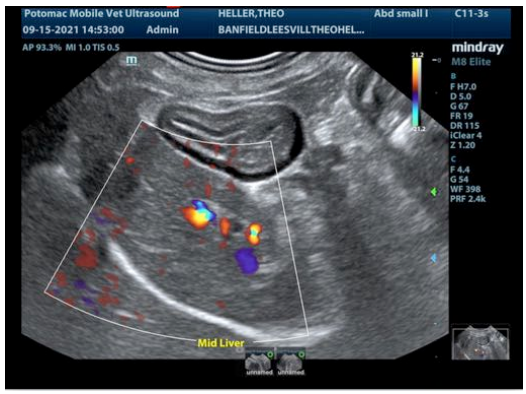
DATE

9/15/21

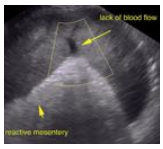
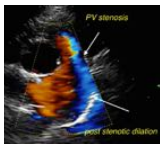
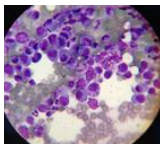
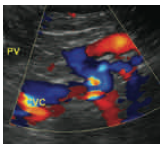








SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Theo Heller

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered male

AGE

7 years

WEIGHT

10.5 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Potomac Mobile Veterinary Ultrasound

HOSPITAL NAME

Banfield Leesburg Village

REFERRING VET

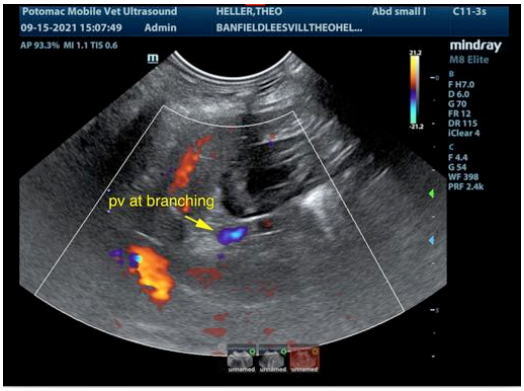
Dr. Jarrett

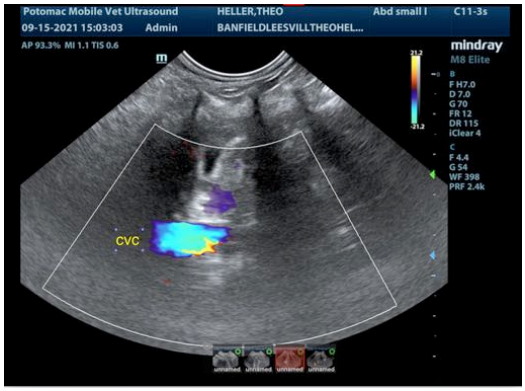
INVOICE

91861

DATE

9/15/21





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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS

CEO of Sonopath.com

info@SonoPath.com