

PATIENT PRESENTING CLINICAL SIGNS

PATIENT
Max Hensley

SPECIES
Canine

BREED
Chihuahua

SEX
Intact male

AGE
1 year

WEIGHT
5 lbs

PRESENTING CLINICAL SIGNS
History: Pt had pre-surgical bloodwork done for neuter and results showed increase in ALT. We then did Bile Acid testing which showed elevated post bile acids along with BUN and ALT. Pt is small breed
Primary Question/Differential to Be Answered in This Exam Evaluate risk of PPS
Abnormal PE/Chem/CBC/UA Results: 2/15/23: CBC is wnl. BUN = 34, ALT = 225 HWT negative
2/21/2023 (Bile Acid): pre 5.1 post 39.5

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Chihuahua *Urinary System*

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The prostate measured 1.09 cm. The testicles were imaged with no evidence of pathology.

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. The left kidney measured 3.44 cm. The right kidney measured 3.42 cm.

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 right adrenal measured 1.63 x 0.61 cm at the caudal pole. The left adrenal gland measured 1.07 x 0.32 cm at the cranial pole and 0.33 cm at the caudal 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. The portal vein to vena cava ratio was 1:1 each measuring 0.5 cm. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Countryside AC

REFERRING VET

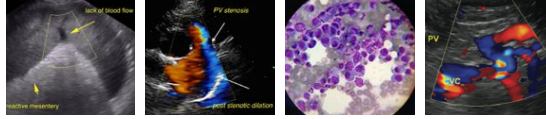
Dr. Cox

DATE

3/9/23

Invoice

43242



PATIENT

Max Hensley

bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

SPECIES

Canine

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.

BREED

Chihuahua

Pancreas

SEX

Intact male

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.

AGE

1 year

ULTRASONOGRAPHIC FINDINGS

Microhepatica, suspect microvascular dysplasia/portal vein hypoplasia.

WEIGHT

5 lbs

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no evidence of macroscopic shunting.

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

IMAGING PERFORMED BY

Jenna Walsh, CVT

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.

HOSPITAL NAME

Countryside AC

REFERRING VET

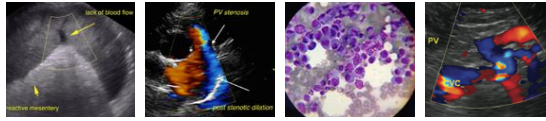
Dr. Cox

DATE

3/9/23

Invoice

43242



PATIENT

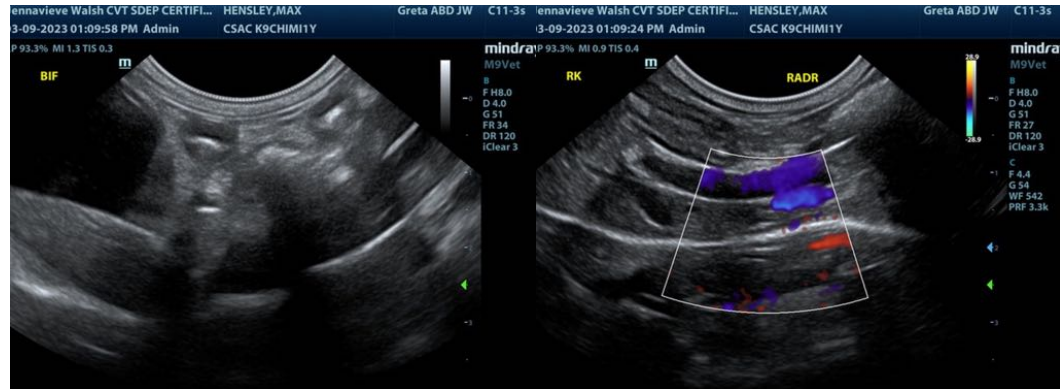
Max Hensley

SPECIES

Canine

BREED

Chihuahua



SEX

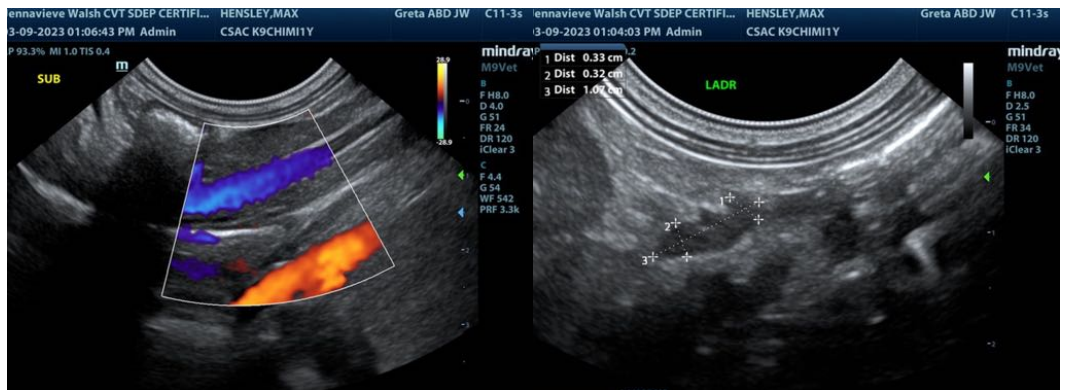
Intact male

AGE

1 year

WEIGHT

5 lbs



INTERPRETED BY

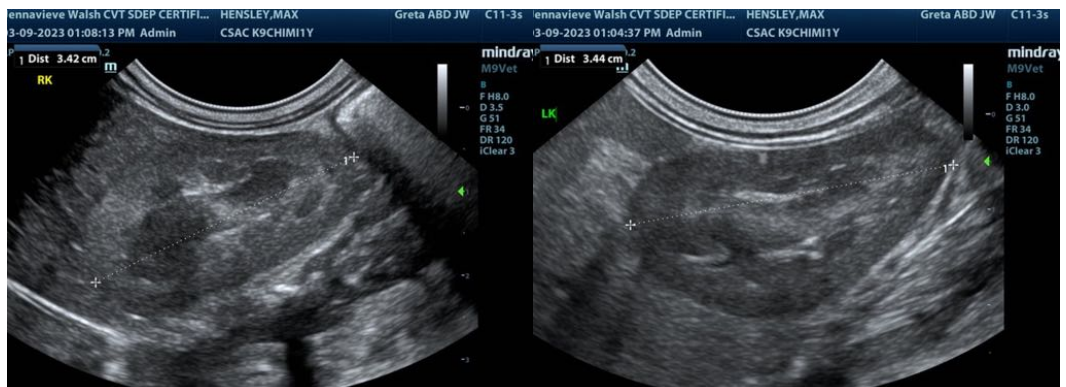
Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Countryside AC



REFERRING VET

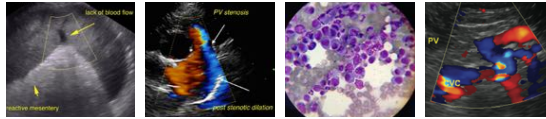
Dr. Cox

DATE

3/9/23

Invoice

43242



PATIENT

Max Hensley

SPECIES

Canine

BREED

Chihuahua

SEX

Intact male

AGE

1 year

WEIGHT

5 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Countryside AC

REFERRING VET

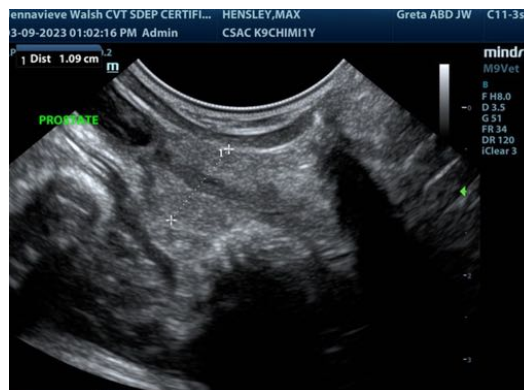
Dr. Cox

DATE

3/9/23

Invoice

43242



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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS

CEO of Sonopath.com

Eric.Lindquist@SonoPath.com