



PATIENT

Pesto Sorrano

SPECIES

Canine

BREED

Maltese

SEX

Neutered male

AGE

3 ½ years

WEIGHT

12.75 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Jessica Miller, RDMS

HOSPITAL NAME

Animal Care Center of
Flanders

REFERRING VET

Dr. Hallihan

INVOICE

30132

DATE

5/2/22

PRESENTING CLINICAL SIGNS

Seems painful, not eating well, hunched over. Chronic elevated liver enzymes. Had u/s at outside facility 12/21- heterogeneous liver. No current meds
Abnormal PE/Chem/CBC/UA Results: ALT 907 (was 3085 1/25/22), bile acid pre >420 post 116.5, Neg Lepto

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction. 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 residual prostate measured 0.5 cm.

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 right kidney measured 4.58 cm. The left kidney measured 4.13 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 left adrenal gland measured 1.6 x 0.46 cm at the caudal pole and 0.43 cm at the cranial pole. The right adrenal gland measured 1.6 x 0.44 cm at the caudal pole and 1.13 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** revealed subjectively normal to slightly subnormal size with increased portal markings and anechoic cysts that measured 1.0 cm adjacent to the pylorus. The portal vein to vena cava ratio was 1:1. Ultrasound-guided FNA was performed without complication. There were no overt extrahepatic or intrahepatic shunts. Intrahepatic vascular volume appeared to be normal. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. The common bile duct measured 0.37 cm. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.



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Gastrointestinal

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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

Maltese

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.

SEX

Neutered male

ULTRASONOGRAPHIC FINDINGS

Chronic cholangiohepatitis pattern. No overt portosystemic shunting. Acute insult is suspected.

AGE

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

12.75 lbs

Treatment is recommended based on FNA results. Ampicillin, Metronidazole and nutraceuticals are all indicated. Core liver biopsy may be necessary for a complete diagnosis if FNA is not adequate.

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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.

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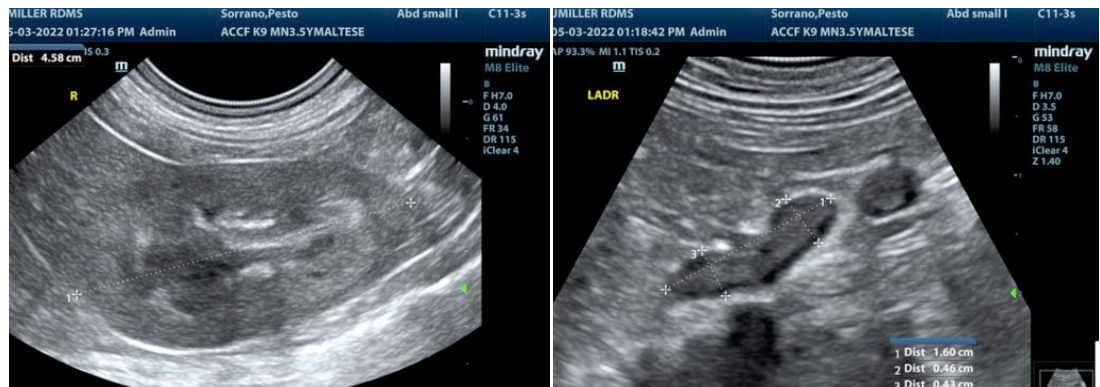
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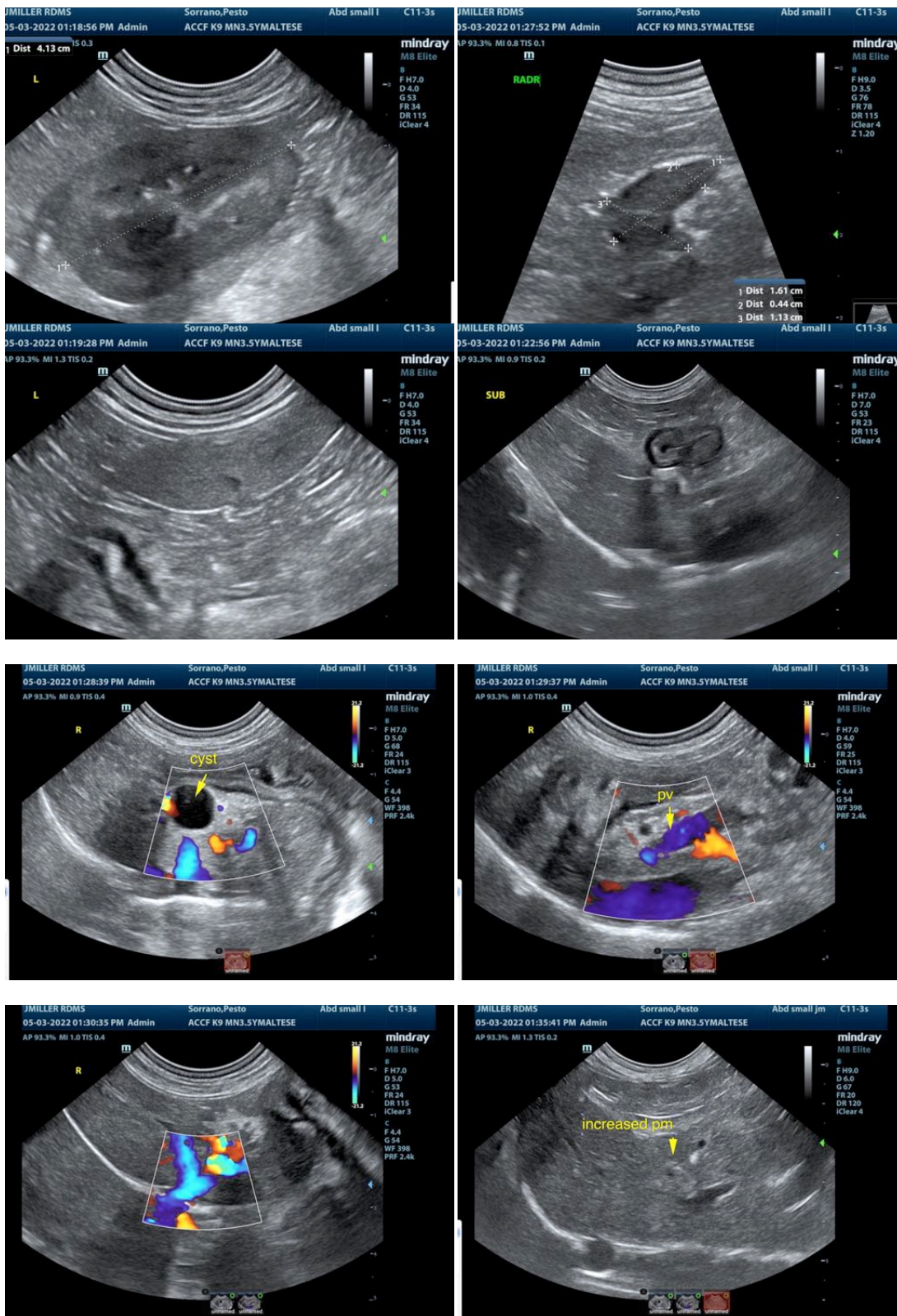
Dr. Hallihan

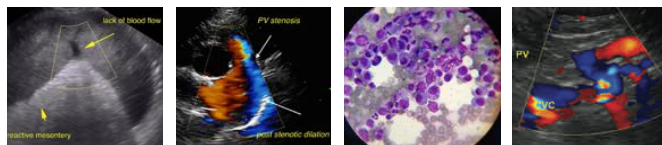
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

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info@SonoPath.com

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