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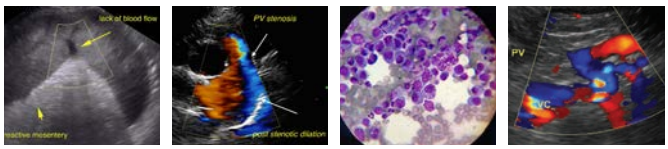
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Graham Bear

SPECIES
Canine

BREED
Golden X

SEX
Neutered Male

AGE
8 Years 4 Months

WEIGHT
76 Pounds

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Sonopath Imaging Center

HOSPITAL NAME
Sonopath Imaging Center

REFERRING VET
Dr. Day

INVOICE
47270

DATE
5/10/23

PRESENTING CLINICAL SIGNS

Possible abd mass.
Abnormal PE/Chem/CBC/UA Results: ALT (SGPT) 194 , Alk Phosphatase 310, CPK 54

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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 were noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 7.53 cm. The left kidney measured 7.19 cm.

Adrenal Glands

Both **adrenal glands** were slightly enlarged, uniform. Minor capsular expansion noted without capsular escape. The left adrenal gland measured 2.56 cm x 0.62 cm at the caudal pole and 0.86 cm at the cranial pole. The right adrenal gland measured 1.5 cm at the cranial pole and 0.85 cm at the caudal pole.

Spleen

The **spleen** was mildly enlarged and folded upon itself cranially. Subtle heterogeneous parenchymal changes noted. If any weight loss is present, then ultrasound guided FNA indicated.

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

Minor amount of ingesta present in the **pylorus**. The small intestine and colon were unremarkable, curvilinear patterns were maintained.

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.

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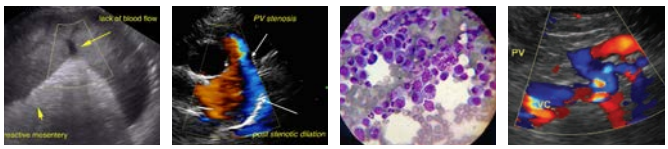

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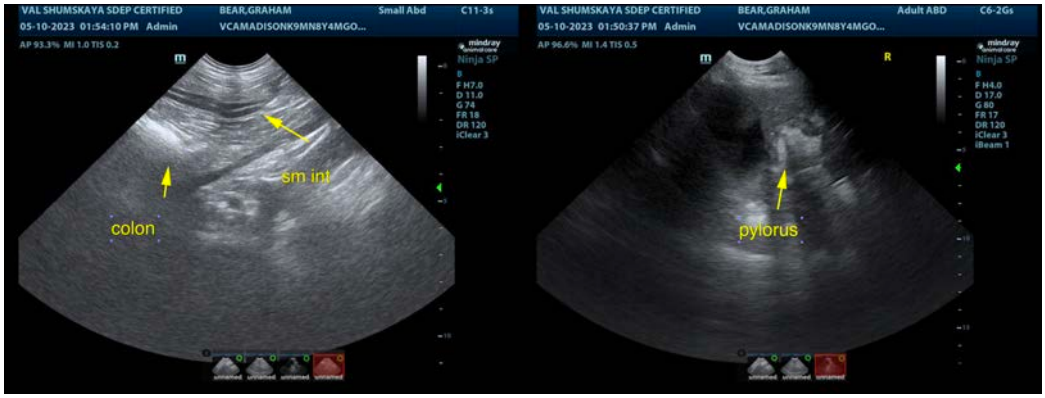
ULTRASONOGRAPHIC FINDINGS

- Slightly prominent adrenal glands
- Age related hepatic changes
- Age related renal changes
- Folded spleen – likely the cause of thickness in the palpable cranial abdomen, subjectively benign.
- Minor ingesta in the pylorus

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If weight loss is an issue, FNA of the spleen could be considered. FNA of the liver could be considered to assess inflammatory cell type. However, given the liver value elevations and the sonographic appearance of the liver, this is likely reactive hepatopathy. Benign abdomen otherwise. If the patient develops PU/PD, then consideration to PDH/Cushing's would be warranted, given the adrenal presentation, as the adrenals do appear mildly enlarged.

The hepatic clinical sonographic presentation is most consistent with Reactive Hepatopathy which is the most common cause of liver enzyme elevation in dogs and cats. The presumption is that gut and other organ antigen stimuli may be causing a low-grade immune response through portal system with which the liver is reacting to causing low-grade enzyme elevations. US-guided FNA could be performed to assess if low grade lymphoplasmacytic inflammation is present that would support this theory. If FNA is performed, please ask the cytologist to emphasize the primary inflammatory cell type. Empirical treatment measures to address this issue can include diet change to hydrolyzed diet, probiotics, deworming, neutraceuticals (SAMe, Actigall…), dental exam and cleaning, and potentially antibiotics such as Clavamox. Metronidazole and Tylosin have traditionally been utilized for this purpose but new studies show that both these antibiotics can disrupt the normal intestinal bacterial flora (intestinal dysbiosis) for weeks and up to 4-6 months. Therefore, Metronidazole and Tylosin should be utilized as a last resort if other efforts have not been effective and sonographic organ appearance remains benign.



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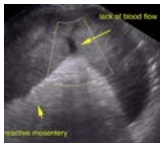
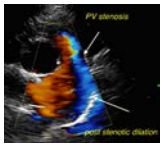
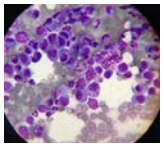
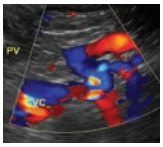

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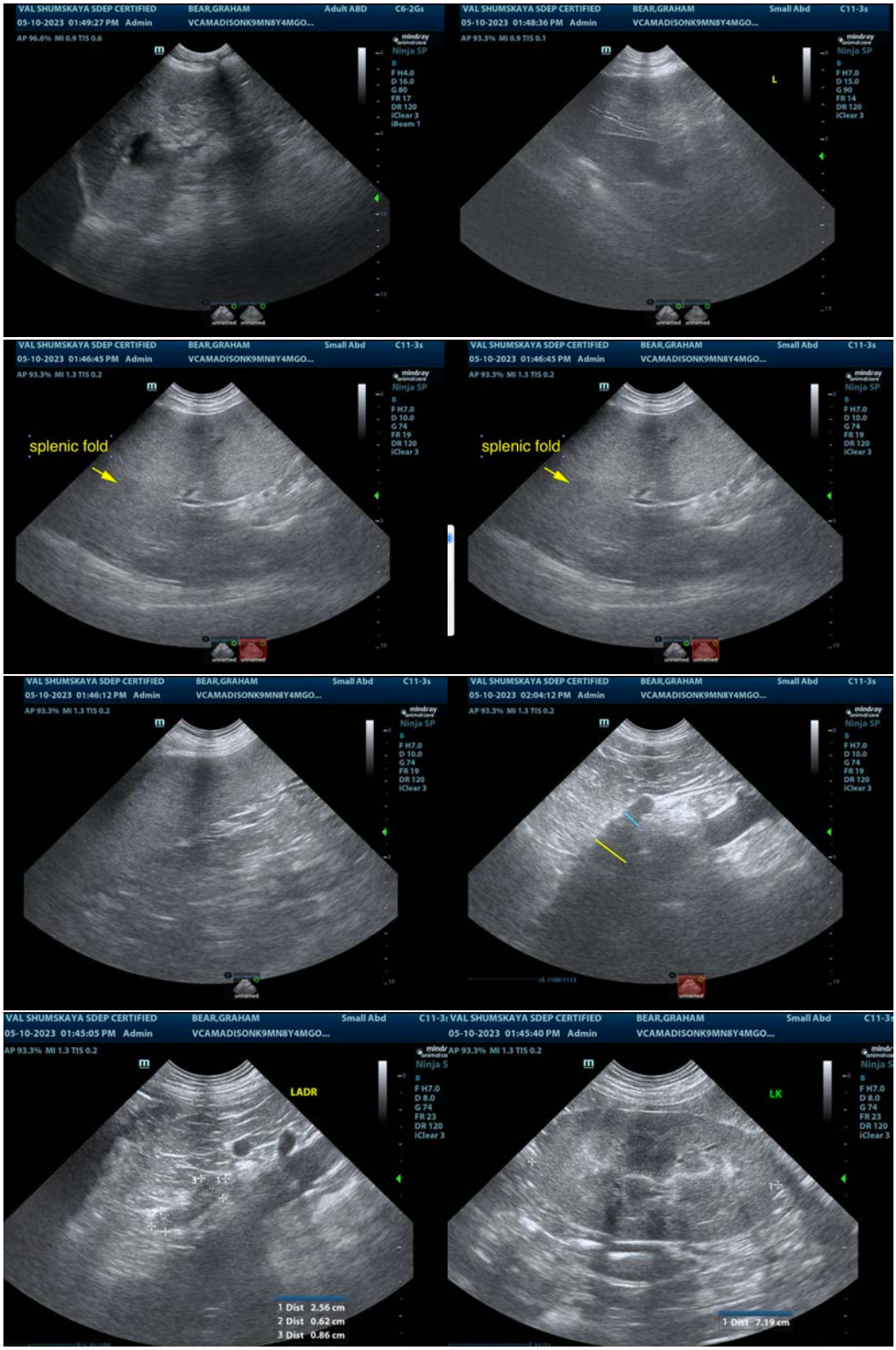

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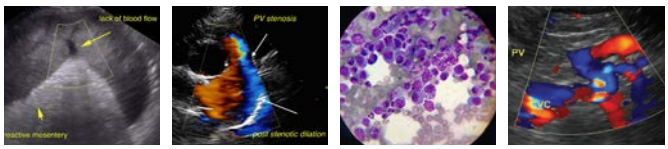

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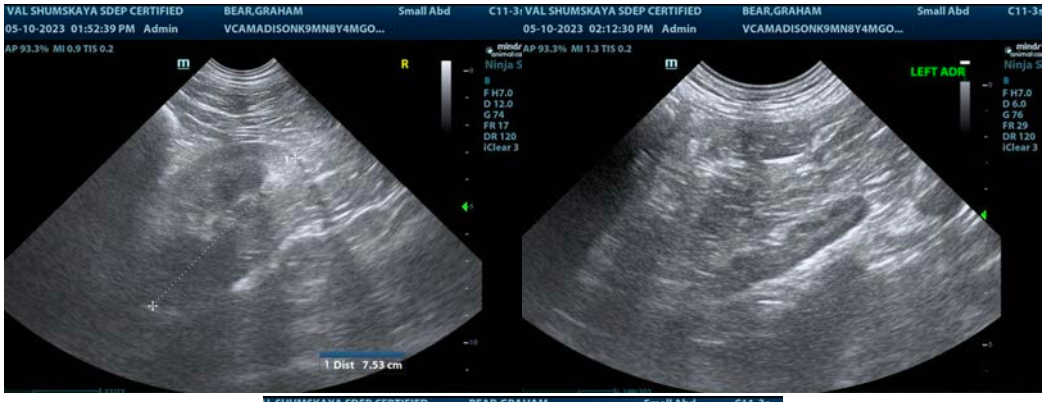

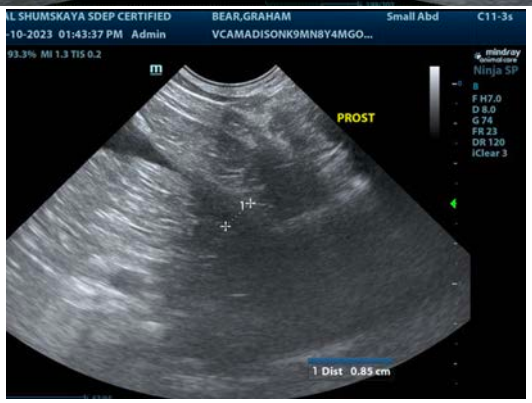

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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