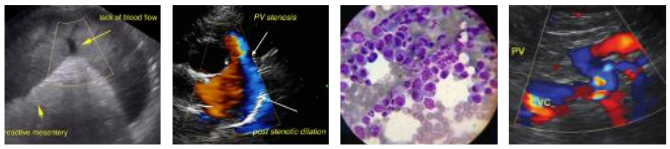
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Pooh Bear Diaz

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

9 Years

WEIGHT

9.5 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Animal Paradise Hospital

REFERRING VET

Dr. Bravo

INVOICE

17114

DATE

8/30/22

PRESENTING CLINICAL SIGNS

History: Patient presents prior to cystotomy surgery tomorrow due to abnormal blood work.

Abnormal PE/Chem/CBC/UA Results: ALT 227, ALP 1065, cholesterol 411.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (X cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. A 0.8 cm – 0.9 cm cystolith was present.

Left kidney is normal is size (3.88 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Cortical cysts were noted. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted

Right kidney is normal is size (3.37 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Cortical cysts were noted. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted

Adrenal Glands

Left adrenal gland is normal in size (1.33 cm long x 0.48 cm at cranial pole and 0.4 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (1.41 cm long x 0.34 cm at cranial pole and 0.38 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

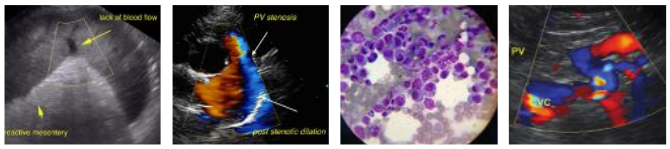
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. A 1.3 cm x 1.0 cm hyperechoic nodule was noted near the gallbladder.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal



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The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

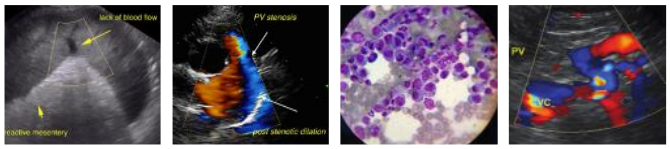
- A urinary bladder cystolith
- Heterogenous Liver with a liver nodule – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia. Differentials for a discrete liver nodule include primarily benign changes such as nodular hyperplasia, fibrosis of an old hematoma, granuloma, etc.; however, while considered less likely, primary hepatic neoplasia, infiltrative round cell neoplasia and metastatic disease can mimic benign lesions and cannot be definitively ruled out.

Secondary Findings

- Renal cortical cysts and bilateral nonobstructive mineralization

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious cause for the reported increased liver enzymes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, infiltrative neoplasia (considered unlikely), etc. cannot be definitively ruled out. Differentials for the high ALP relative to the high ALT are also vast and nonspecific with differentials including but not limited to benign nodular hyperplasia, which is present in 70% of older dogs and often does not result in an abnormal ultrasound. Reactive or idiopathic hepatopathy, a vacuolar or endocrine hepatopathy, as is seen with hyperadrenocorticism, gallbladder debris/cholangitis, as well as many chronic non-hepatobiliary diseases. Therefore, further work up of the liver enzymes could include testing for Leptospirosis, a fine needle aspirate of the liver if patients coagulation status is appropriate, testing for hyperadrenocorticism if clinical signs of hyperadrenocorticism are present, but testing is not warranted if there are not, etc. Having said that, however, there are no visible contraindications to pursuing the planned cystotomy to remove the cystolith tomorrow and further work up/evaluation of the increased liver enzymes could take place after recovery form surgery. Typically, at this stage of a liver enzyme work up, a liver biopsy is not the



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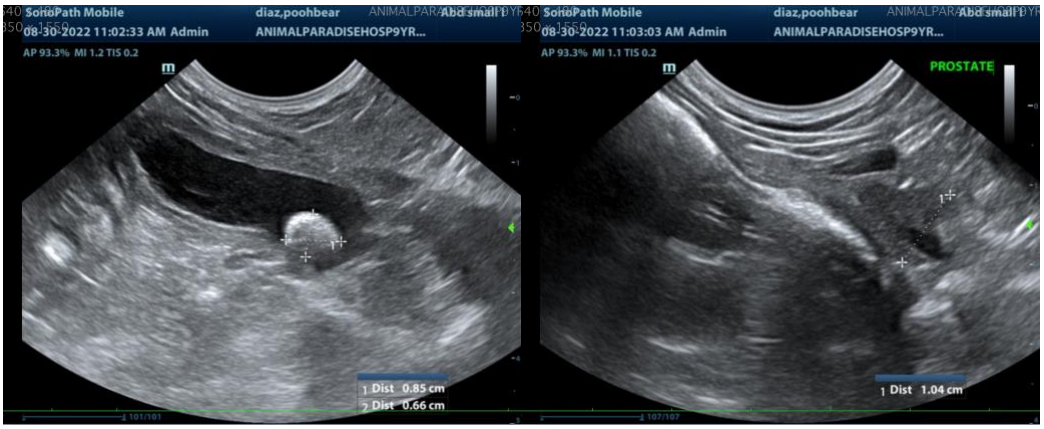
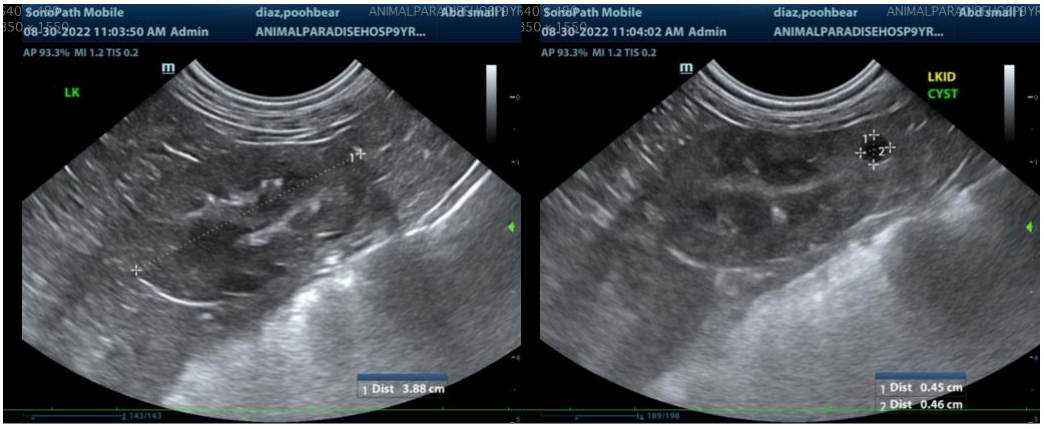
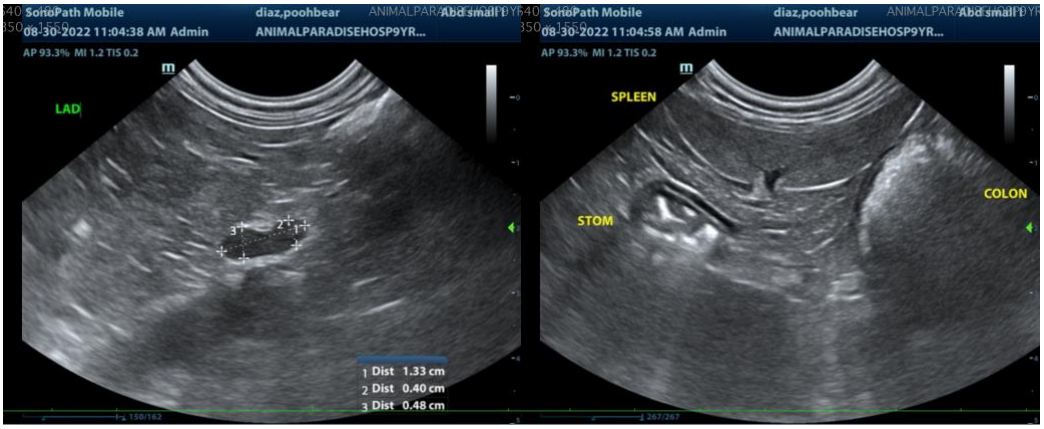
next step, however, since this patient will be having a surgical laparotomy tomorrow, a liver biopsy could be considered.







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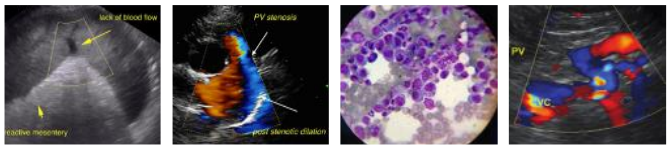

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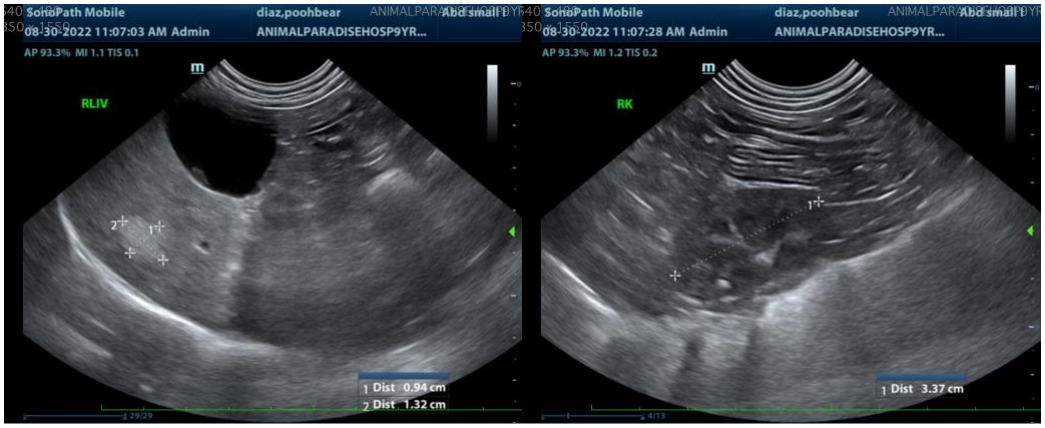

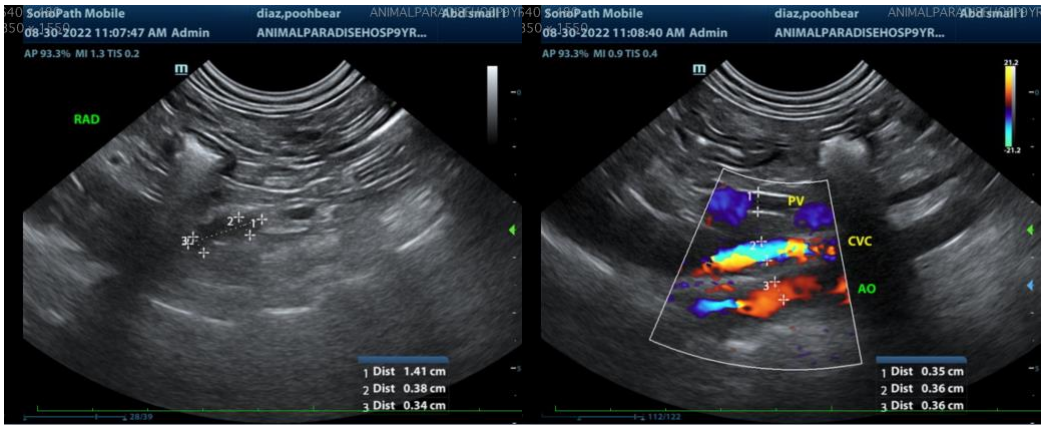

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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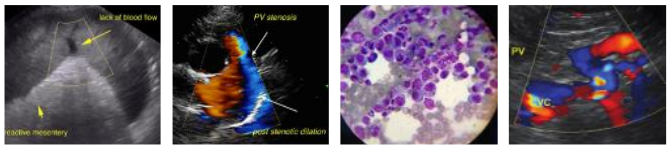

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