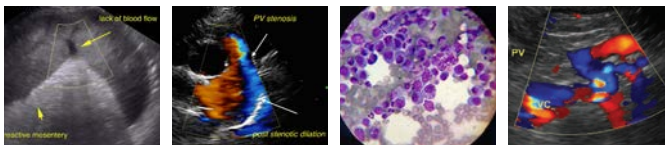
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Chai Best

SPECIES
Canine

BREED
Golden Retriever

SEX
Spayed Female

AGE
9 Years 2 Months

WEIGHT
31.7 kg

INTERPRETED BY
Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY
Dr. Brian Barnes

HOSPITAL NAME
Westview Vet Hospital

REFERRING VET
Dr. Brian Barnes

INVOICE
38963

DATE
6/22/22

PRESENTING CLINICAL SIGNS

Recent flair up of pancreatitis, Previous History: 1) Pancreatitis 2) PLN 3) Glomerulonephritis (GN) 4) Mild hypertension 5) Gall Bladder sludge 6) Bilateral Stifle DJD and O/A 7) Tendenopathy calcanious tendons 8) Left tarsal O/A 9) Possible Small Intestinal Bacterial Overgrowth (SIBO)
Abnormal PE/Chem/CBC/UA Results: In hospital patient on IVF, Cerenia, Antibiotics for Pancreatitis. Snap cPl Abnormal, Spec cPl pending Increased ALT 155 (N 10-125), ALP 476 (N 23-212), Increased Chol, Amy, Lip

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mildy echogenic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (6.99 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.64 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.83 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.61 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

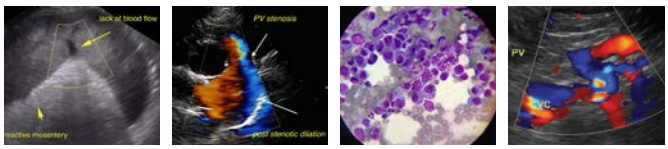
The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. there are numerous ill-defined hyperechoic nodules throughout the parenchyma. The nodules do not appear to deviate the hepatic margins. An example of one such nodule measures 1.63 cm x 0.91 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder has irregular polypoid projections and there is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal



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The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.36 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

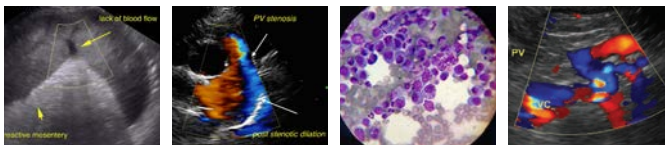
- Mildly echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Large, heterogeneous liver with ill-defined hyperechoic nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The appearance of the hyperechoic nodules trends towards a benign etiology, but an underlying neoplastic change cannot be ruled out.
- Moderate gallbladder polyps – The significance of the gall bladder polyps and debris is unclear. This could represent an early mucocele, cholestasis, or chronic inflammation, or could be an incidental finding.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions were observed in the GI tract to explain the recent symptoms consistent with pancreatitis. Additionally, a severely inflamed pancreas was not visualized. Unfortunately, the severity of pancreatic disease on ultrasound does not always correlate with clinical symptoms. Additionally, sometimes other problems such as gastroenteritis, cholecystitis, etc. can mimic these symptoms. Consider such differentials as chronic/acute pancreatitis, dietary intolerance/food allergy, dysbiosis, dietary indiscretion, GI parasitism, IBD, and less likely intestinal neoplasia. Also consider metabolic or non-GI causes such as cholecystitis, hepatic disease, hypoadrenocorticism, etc.

Correlate these findings with your clinical symptoms and quantitative PLI levels. Recommend symptomatic treatment for gastroenteritis/pancreatitis. If not already doing so, consider the following:

- Consider a hydrolyzed protein/novel protein diet.



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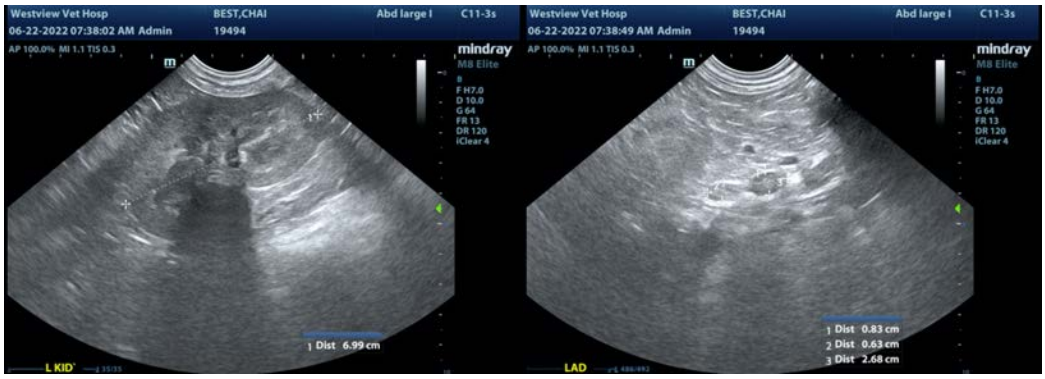
- Recommend chronic probiotic therapy.
- Recommend a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.
- If GI signs persist, and pancreatic disease is thought unlikely or part of multifactorial GI Disease, you could consider obtaining GI biopsies.
- Additionally, the gallbladder wall appears somewhat thickened, and there are some mild polyps present. This is indicative of mild inflammation. You could consider Ursodiol therapy +/- a course of antibiotics (with probiotics, so as not to affect the flora too much) and see if there is any improvement in liver enzymes, possibly the appearance of the gallbladder, etc. Continued monitoring of the gallbladder is warranted.

If recurrent bouts of pancreatitis are occurring, confirm normal fasted triglyceride levels to rule out hyperlipidemia as a possible cause.



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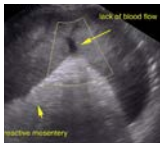
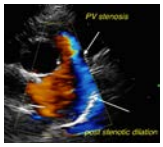
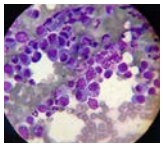
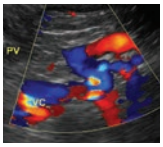

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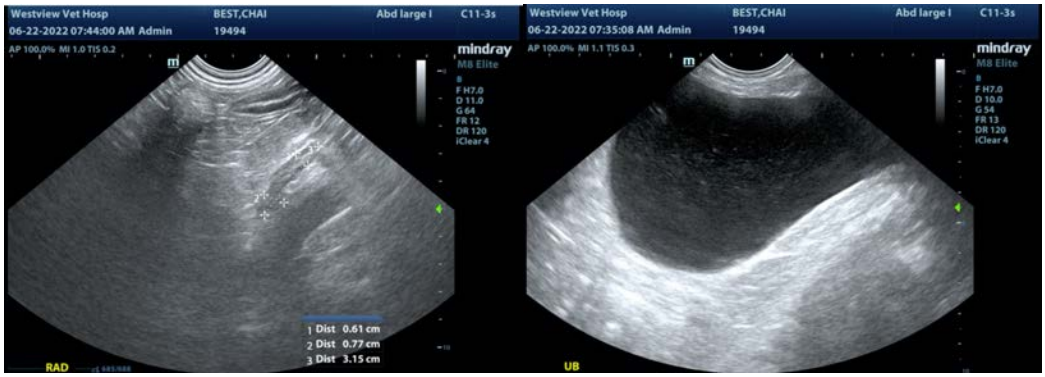

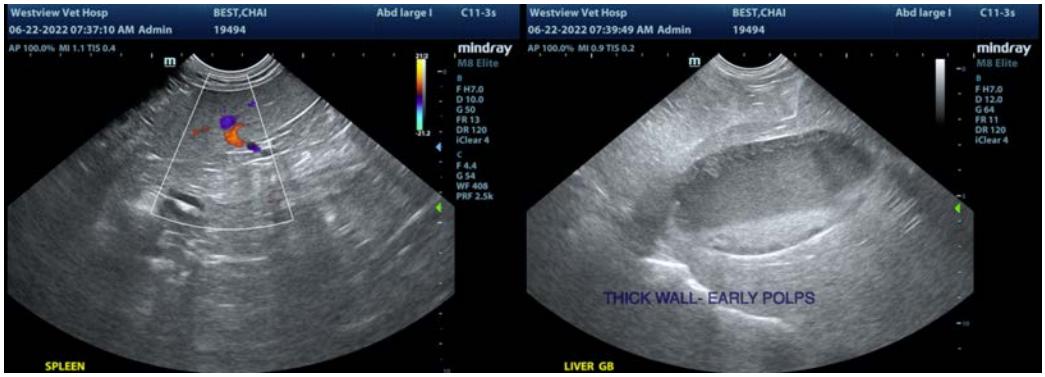

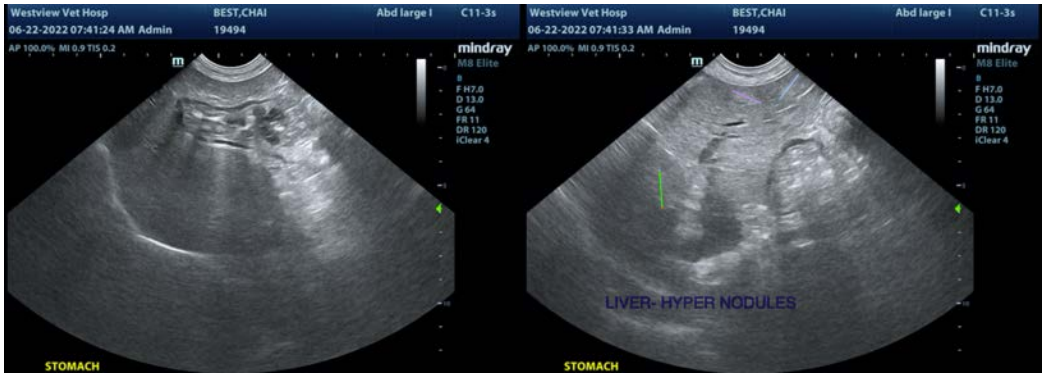

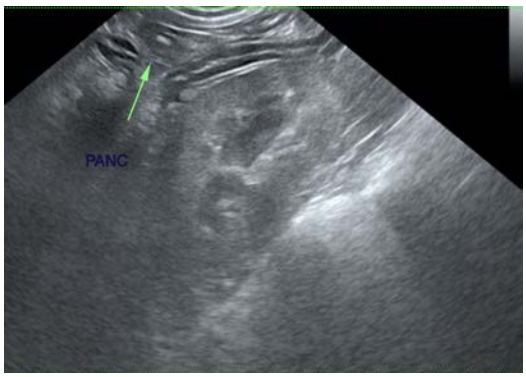

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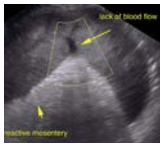
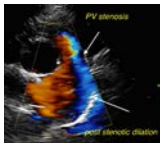
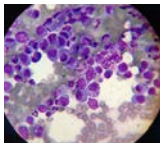
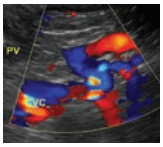

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com