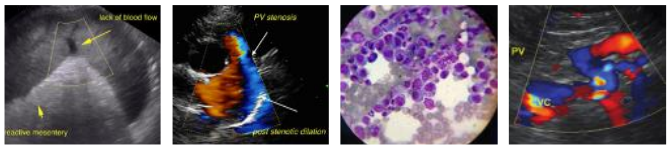
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Cooper Nazzaro

SPECIES
Canine

BREED
Pomeranian

SEX
Neutered Male

AGE
13 Years

WEIGHT
14 Pounds

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

IMAGING PERFORMED BY
Dr. Scott

HOSPITAL NAME
Ho-Ho-Kus VH

REFERRING VET
Dr. Eisenberg

INVOICE
37414

DATE
5/5/22

PRESENTING CLINICAL SIGNS

Diabetic, hx of pancreatitis not eating since yesterday morning, vomited two days ago, lethargic has been getting outpatient cerenia and SQ fluids daily or 2-3 days
Abnormal PE/Chem/CBC/UA Results: trace urine ketones today, BG 492,

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic 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 prostate is normal in size (1.0 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.6 cm). Overall echogenicity is slightly hyperechoic with poor 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 (4.1 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.58 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect.

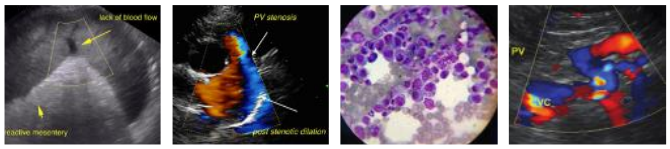
Spleen

The spleen is subjectively normal in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous small hyperechoic foci within the splenic parenchyma. These lesions trend towards benign appearance, but an underlying neoplastic process cannot be excluded as a possibility.

Liver

The liver is subjectively normal in size, and 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 is a hyperechoic nodule visualized measuring 1.28 cm x 0.6 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation. These changes can be consistent with an early gall bladder mucocele. The mesentery in the cranial abdomen is severely hyperechoic and inflamed. Some of this



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hyperechoic mesentery is in the region around the gallbladder. I suspect it is largely due to the inflammation in the pancreas rather than gallbladder disease, but this cannot be definitively determined. Therefore, close monitoring is warranted.

Gastrointestinal

The stomach is moderately to severely dilated with fluid. 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with severe pancreatitis.

Free Abdomen

There is a small amount of free abdominal fluid. No lymphadenopathy is noted. The omentum is severely hyperechoic focally in the region around the pancreas.

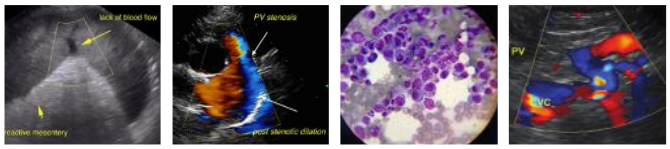
PRIMARY FINDINGS

- Irregular, swollen, hypoechoic pancreas surrounded by severely hyperechoic mesentery and a small amount of free abdominal fluid – The pancreatic changes are most consistent with severe pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

- Large and distended gallbladder with heavy debris, which is adherent to the gallbladder wall – There is concern for significant gallbladder disease present, but I suspect these symptoms are secondary to pancreatitis. Recommend close monitoring of the gallbladder for progression secondary to the pancreatitis.

- Heterogeneous liver with hyperechoic nodule – 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.

- Moderate to severe fluid distention of the stomach – I suspect this is due to ileus secondary to the pancreatitis. Other possible differentials would include an outflow tract obstruction (none observed). Continued monitoring and treatment for ileus is warranted.



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- Focally hyperechoic mesentery with scant free abdominal fluid – Findings are consistent with focal peritonitis, likely sterile secondary to pancreatitis.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

- Mottled spleen with hyperechoic foci – These lesions have a somewhat benign appearance, but an underlying neoplastic process cannot 100% be excluded. A fine needle aspirate could be considered.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas is swollen and hypoechoic with severely hyperechoic and edematous mesentery surrounding. These findings are most consistent with severe pancreatitis. Additionally, the gallbladder is very distended with a large amount of sludge adherent to the gallbladder wall. At this time, I feel that the inflammation is largely due to the pancreas, but continued monitoring of the gallbladder is warranted, as this could flare up secondary to a post-hepatic biliary obstruction and surrounding inflammation.

- Consider starting Ursodiol once this patient is feeling better.

- Recommend treatment for severe pancreatitis including pain medications, IV fluids, likely antibiotics in this case due to the gallbladder changes, +/- plasma, etc.

Continued monitoring of the pancreas is warranted to monitor for the development of an abscess, biliary obstruction, etc., in addition to monitoring and managing the diabetes, as ketosis is likely if not managed intensively.

Recommend promotility medication for the gastric ileus that is suspected.

Recommend continued monitoring of the liver lesion and spleen. I suspect these are incidental findings at this time, but without monitoring could develop into something more significant.

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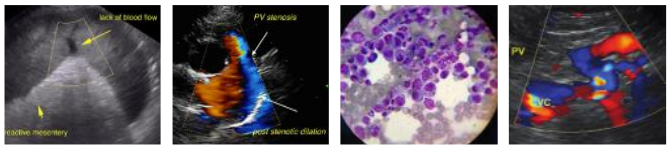

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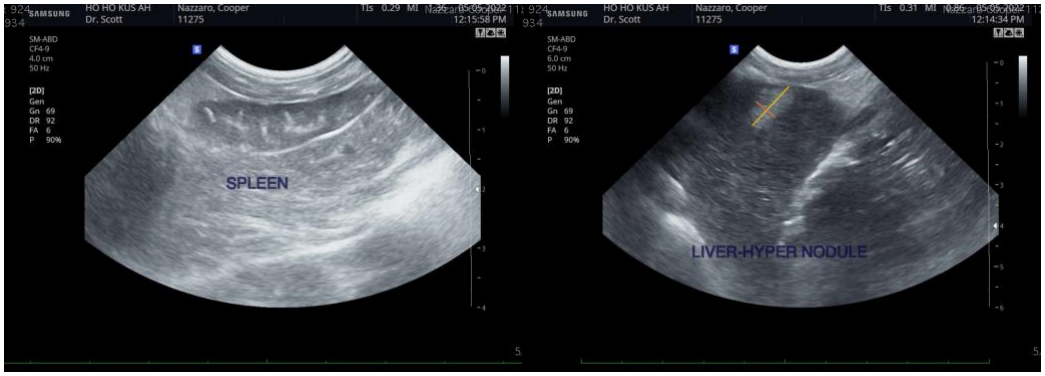

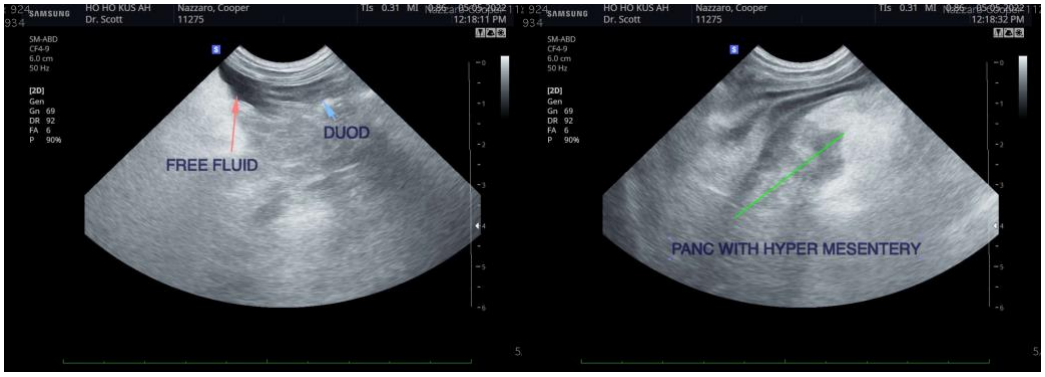

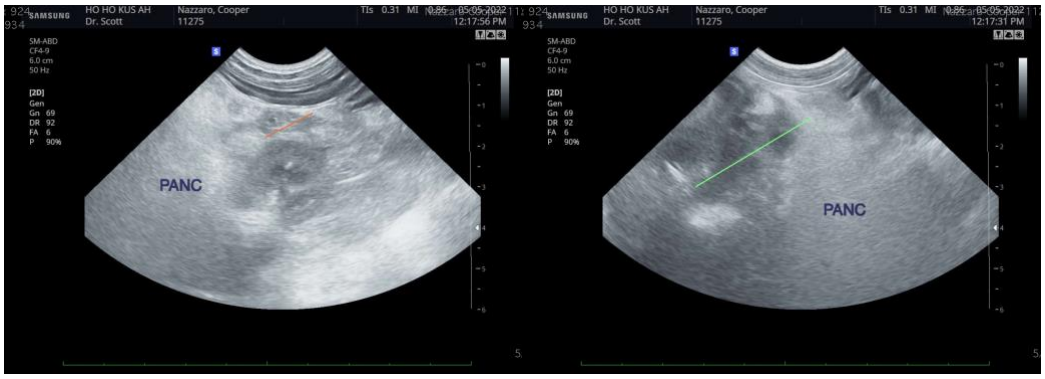

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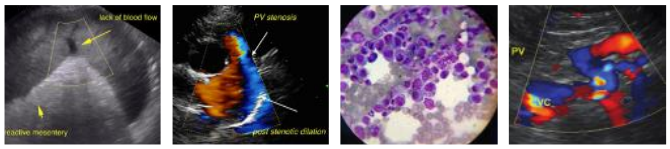

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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