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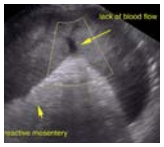
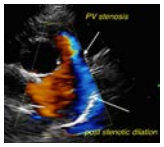
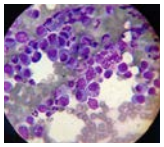
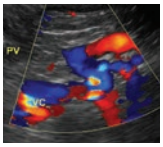

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1-800-838-4268 info@sonopath.com

PATIENT

Pia Maravilla Perez Montanez

SPECIES

Canine

BREED

Mix

SEX

Spayed Female

AGE

5 Years

WEIGHT

35.7 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Marlo Carrillo

HOSPITAL NAME

Animal Emergency Clinic – San Juan

REFERRING VET

Dr. Mayra Fonseca

INVOICE

44111

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1/12/23

PRESENTING CLINICAL SIGNS

1/10/23 Indoor dog taken for leash walks. UTD on vaccines and preventatives. GP is Diaz Umpierre in Cupey. Fed Nutro dry. Only pet in house. Not an indiscriminate eater. Ate french fries this weekend. Since then, has been vomiting inconsistently. Owner has given pet rice along with her kibble. Though good appetite, the vomiting continues. No diarrhea noted. No known health issues. Mild icterus noted sclera/gums. H/L wnl. Abdomen no obvious masses, mildly tense. LN wnl. rectal wnl. firm feces, so limited as to how much could advance index finger (due to feces). mild bilateral otitis (dirty ears). dull hair. so far cbc, chem, cPL normal. rads declined. Current HW prevention. Mild leukocytosis 22k, ALT 800.

Abnormal PE/Chem/CBC/UA Results: 1/10/23 1. CBC: WBC 22.92 NEU 20.51 EOS 0.03; 2. Cata 17: BUN 4 ALT 848 CHOL 497 AMYL 421; 3. cPL: NORMAL 1/11/23 1. recheck cata 15 - ALT off charts, ALP >2000, GGT 17, T. bili 9.2!!! 2. abdominal rads - no obstruction, no obvious masses, lots of feces in colon. gas in fundus. 3. lepto snap neg. 4. add metronidazole 7.5mg/kg iv bid 5. continue unasyn 30mg/kg iv bid 6. continue cerenia/protonix 7.a dd mirtazapine 8 clicks topico sid 8. add fenbendazole 50mg/kg po sid x 5 days. 9. si no mejora o empeora, strongly recommend abd. US - authorized. 10. increase fluids 50ml/hr 11. hospital until tomorrow.

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 left kidney has a normal shape and size (5.59 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 (5.76 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 0.52 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 0.53 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.

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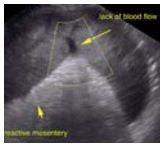
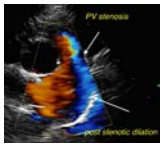
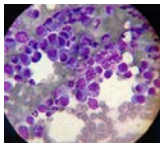
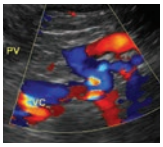

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Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris and some areas have early mucosal stranding and organization of the debris into an early mucocele. There is a large amount of primarily non-organized echogenic debris present as well. There is the appearance of hyperechoic tissue surrounding the gallbladder, particularly at the gallbladder neck, consistent with inflammatory changes. The proximal bile duct is dilated at 0.48 cm, and more distally at the duodenal papilla at 0.65 cm.

Gastrointestinal

The stomach contains a moderate to large amount of 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. Duodenum wall measures 0.44 cm. Jejunum wall measures 0.37 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

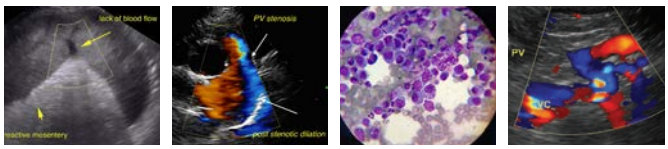
The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of inflammation in the right cranial abdomen in the region of the right limb of the pancreas and the bile duct.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are visible lymph nodes, which are relatively normal in size. The sublumbar lymph nodes measure 0.66 cm and 0.39 cm in diameter. Two mesenteric lymph nodes measure 0.49 cm and 0.43 cm. The omentum is hyperechoic in the right cranial abdomen in the region of the gallbladder, bile duct, and right limb of the pancreas.

ULTRASONOGRAPHIC FINDINGS

- Large distended gallbladder with surrounding inflammation and a dilated bile duct – I suspect this is most consistent with primary cholecystitis and a gallbladder mucocele, although there is bile duct dilation, but no clear obstruction visualized.
- Heterogeneous liver – 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.
- Fluid distended stomach and proximal duodenum – Correlate with feeding history. If the patient was adequately fasted, this is likely consistent with ileus/delayed gastric emptying, although a cranial obstruction cannot be ruled out.



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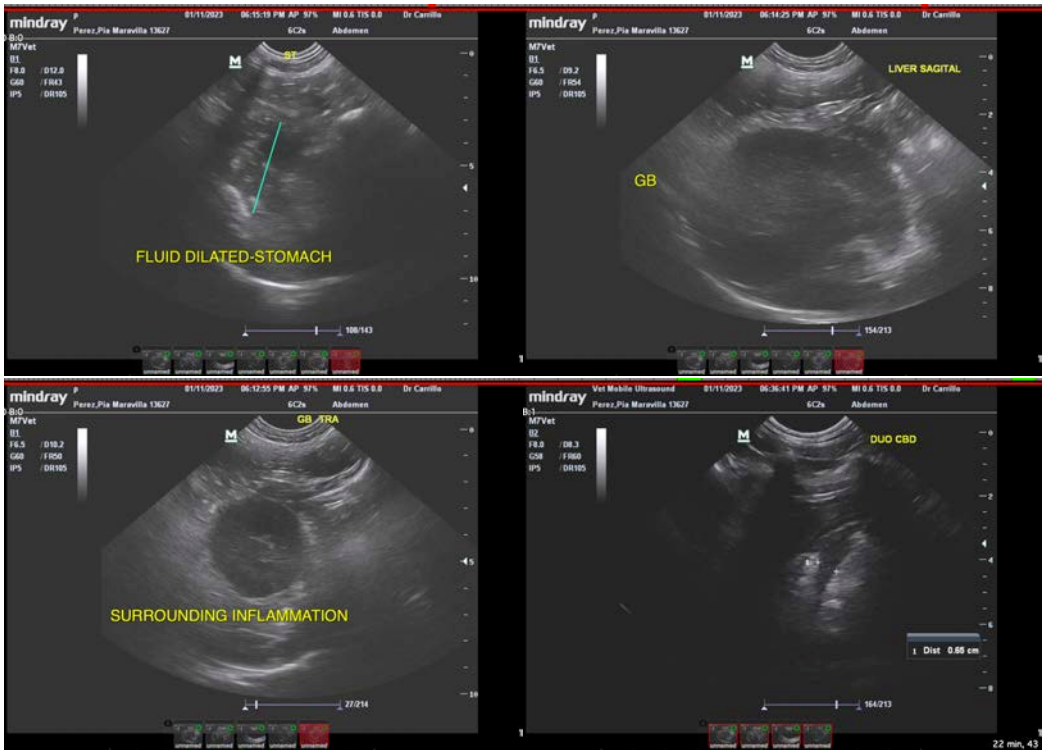
- Hyperechoic mesentery in the right cranial abdomen – Findings are consistent with focal inflammation. This is suspected to be due to the gallbladder/bile duct, although the pancreas in this region is not clearly visualized.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The gallbladder is large and distended and has surrounding inflammation. I suspect this is the source of the bilirubin elevation, but with primary cholecystitis, typically the bile duct is not dilated, and this bile duct is somewhat prominent, although an obstruction is not visualized. Additionally, I cannot clearly visualize the right limb of the pancreas, so a post-hepatic obstruction with an inflamed pancreas is also possible.

Options moving forward would include a CT scan of the abdomen for better resolution to clearly visualize the bile duct and the pancreas, or referral to a veterinary surgeon for surgery to grossly evaluate the gallbladder, bile duct, and pancreas, as my suspicion is high that this is primary gallbladder disease, and that the gallbladder will likely need to be removed surgically.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.



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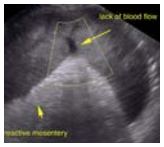
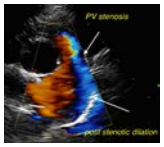
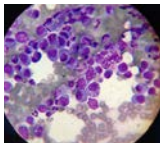
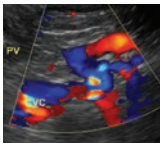

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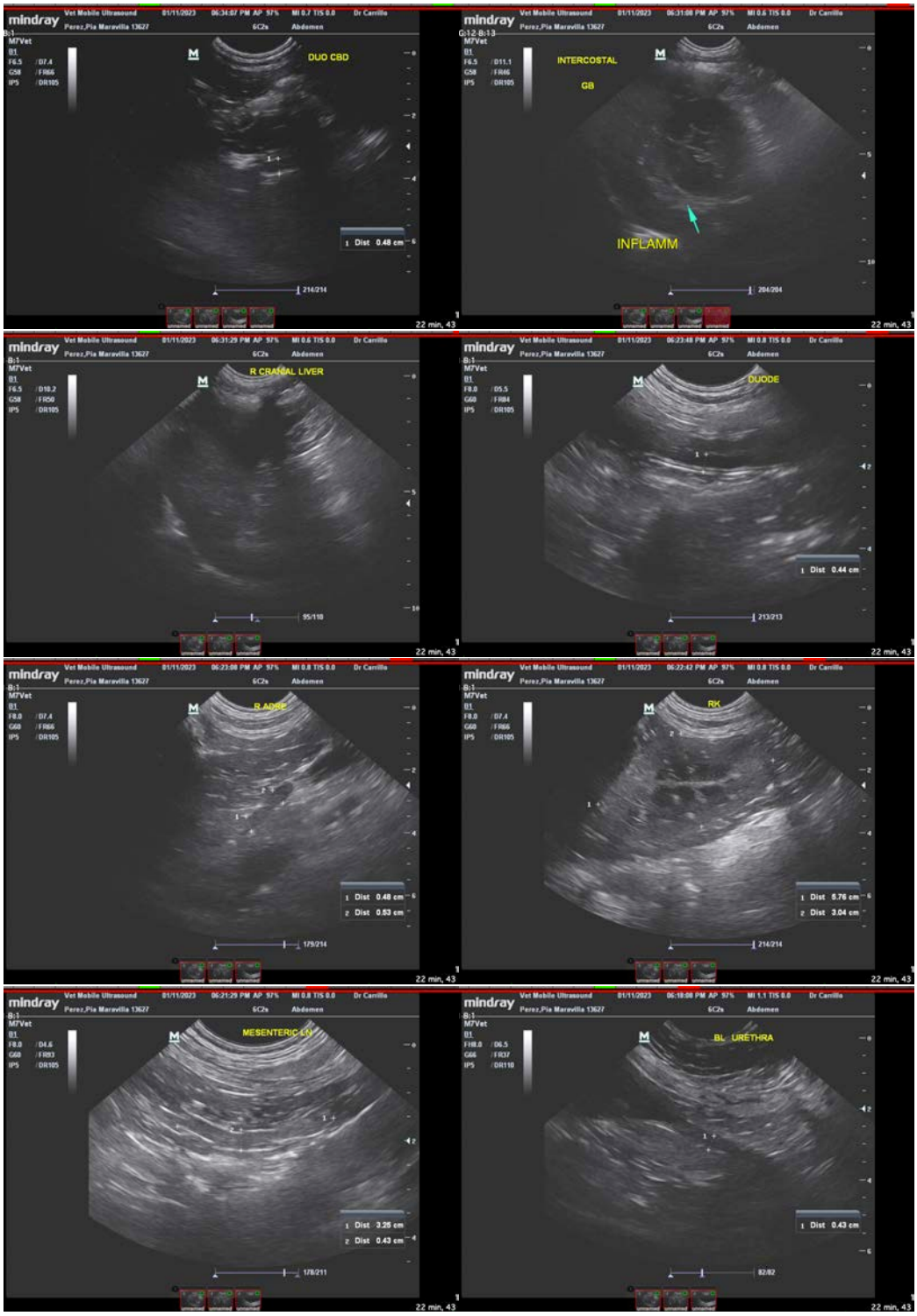

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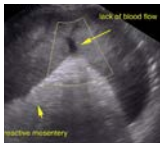
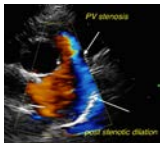
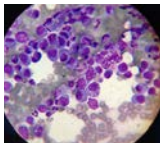
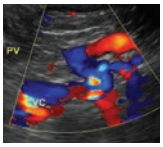

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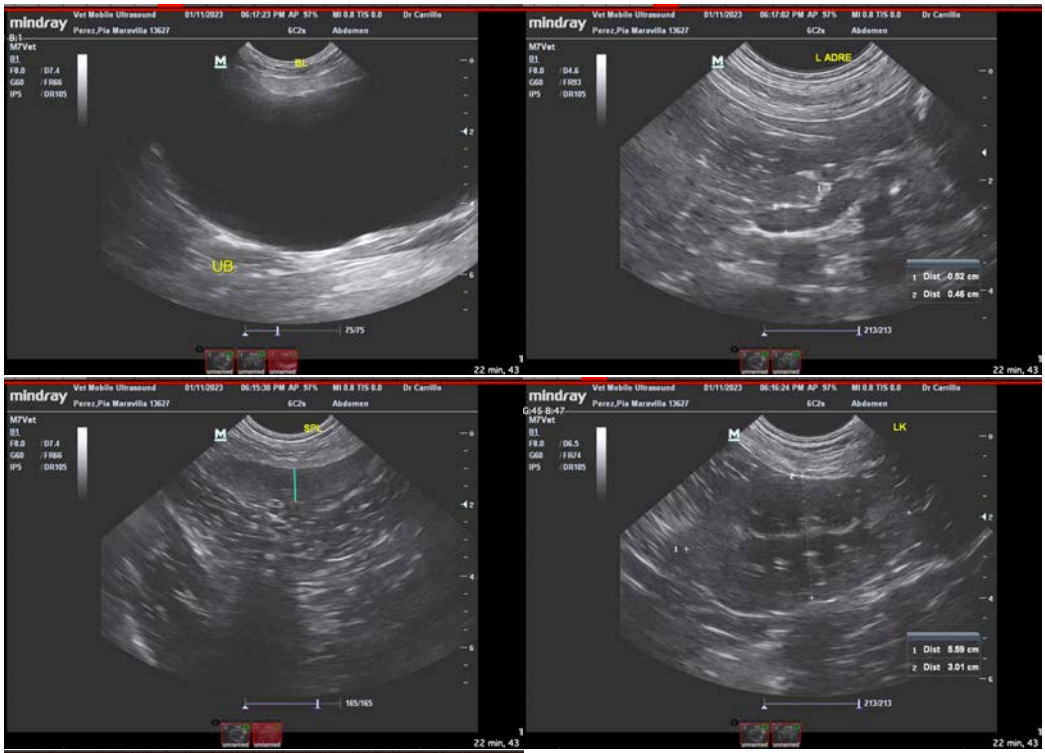

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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