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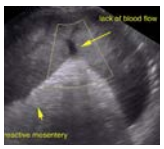
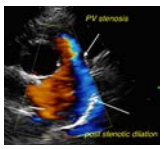
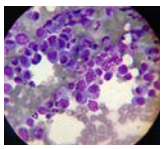
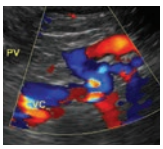

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1-800-838-4268 info@sonopath.com

PATIENT
Jack Norwood

SPECIES
Canine

BREED
Setter X

SEX
Neutered Male

AGE
13 Years 9 Months

WEIGHT
72.4 Pounds

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

IMAGING PERFORMED BY
M Kermendy, CVT

HOSPITAL NAME
Wauwatosa Vet Clinic

REFERRING VET
Dr. Elaine Binor

INVOICE
41405

DATE
9/16/22

PRESENTING CLINICAL SIGNS

History of hyporexia for about a month. Decreased mobility for about 1 year. Coughing at times. History of increased panting. On physical exam found cranial abdominal organomegaly. Overweight. BCS = 8/9. Plan to image abdomen to check renal status and pancreas. Has a history of elevated lipase. Normal urine cortisol:creatinine ratio. Plan to check for causes of hyporexia and increased panting +/- organomegaly.

Abnormal PE/Chem/CBC/UA Results: UPC was elevated = 1.36 (<0.5) SDMA = 16 (0-14) Alk Phos = 1246 (5-160) Potassium = 5.5 (4.0-5.5) Lipase = 500 (0-250)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly/moderately distended with anechoic urine. The Bladder wall largely appears to have a smooth mucosal surface. In some views it appears somewhat thickened, particularly at the dorsal apical area, where some measurements reach up to 0.93 cm. In other areas, there is more diffuse thickening measuring 0.68 cm. The area of the trigone, ureteral papillae, and proximal urethra appear free of any mucosal irregularities, masses, or calculi. Findings are likely most consistent with cystitis or lack of urine distention, although an underlying neoplastic process cannot be ruled out.

The prostate is normal in size (0.98 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 is normal in size (6.31 cm). It is severely cystic with a motheaten appearance and poor corticomedullary distinction.

The right kidney is normal in size (8.01 cm). It is severely cystic with a motheaten appearance and poor corticomedullary distinction.

Adrenal Glands

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. 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. No focal parenchymal abnormalities are visualized.

Liver

The liver is large with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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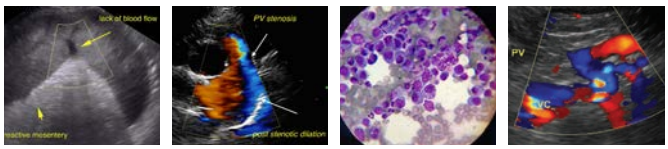

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Gastrointestinal

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 uniform diameter with minimal fluid distension. Wall thickness is moderately increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Jejunum wall measures 0.37 cm. Mild mucosal speckling is noted. 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.

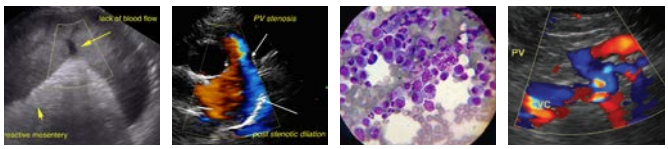
ULTRASONOGRAPHIC FINDINGS

- Subtly irregular thickening of the urinary bladder wall – No focal mass effect is seen, but the dorsal apical wall of the urinary bladder appears somewhat thicker than the rest of the urinary bladder wall. This could represent an obliqued view, a mass effect, or cystitis. Recommend urinalysis and culture and continued monitoring.
- Severely cystic kidneys with decreased corticomedullary distinction – Findings are most consistent with cystic renal disease. Renal architecture is very abnormal.
- Large, hyperechoic liver – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy.
- Mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Mild mucosal speckling visualized associated with the small intestine – Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

One focal lesion responsible for the decrease in appetite described is not identified. There are numerous irregularities noted with somewhat questionable significant.

The kidneys are very abnormal. These changes are likely consistent with chronic progressive cystic renal disease. Recommend a urinalysis, culture, and blood pressure evaluation.



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Additionally, the spleen appears mottled. Recommend a fine needle aspirate.

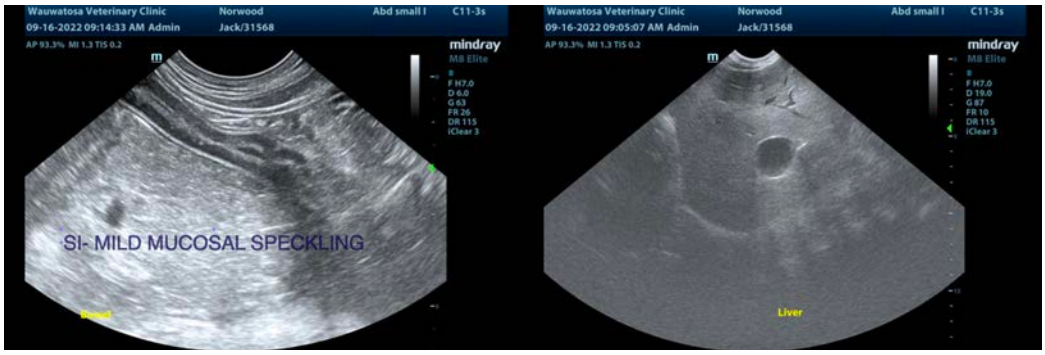
The liver is large and hyperechoic. This correlates with the elevation in ALP reported. These are my recommendations for evaluation of an elevation in ALP.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

Mild mucosal speckling is visualized associated with some areas of small intestine. This can be an indicator of underlying small intestinal disease. If cytology of the spleen is normal, then consider additional evaluation for possible underlying intestinal disease.

- Consider a novel protein/hydrolyzed protein prescription diet.
- Consider chronic probiotic therapy.
- 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.
- If diagnostic testing is strongly supportive of an intestinal issue, consider obtaining GI biopsies.

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



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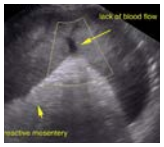
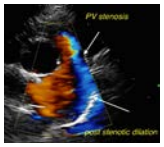
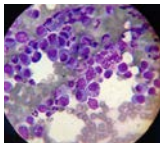
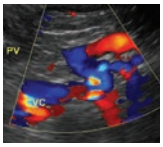

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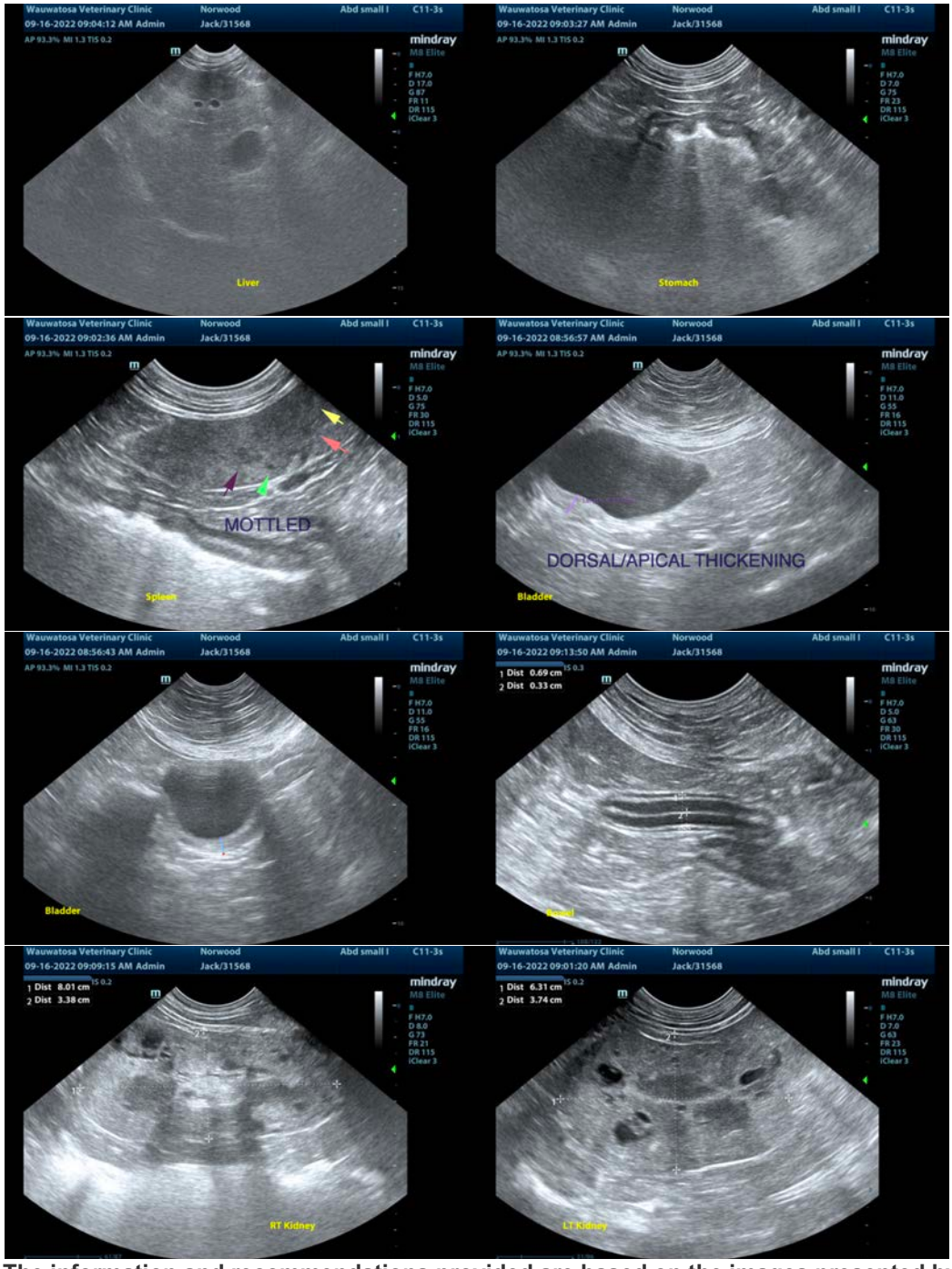

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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