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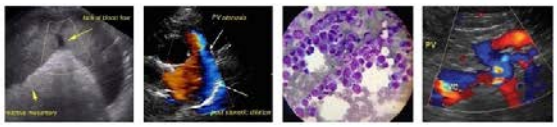

THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Niko Koschir

SPECIES

Canine

BREED

Labrador Retriever

SEX

Neutered Male

AGE

1 Year

WEIGHT

37.8 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

BPH Stoney Creek

REFERRING VET

Dr. Salib

INVOICE

46439

DATE

4/5/23

PRESENTING CLINICAL SIGNS

MM light pink, CRT less than 2, moderate tense cranial abdomen on palpation. Vomiting white foam 3 times so far. Not eating. Fluid wave in abdomen, abdominocentesis performed and yielded 12 ml of clear/cloudy serosanguinous fluid. Has been on Gabapentin, Sulcrate and Metronidazole.

Abnormal PE/Chem/CBC/UA Results: TP 44(52-82) ALB 22(23-40) Globulins 22(25-45) Rads: findings suggestive of mild abdominal distention and decreased peritoneal serosal detail. Fluid streaking is noted in ventral abdomen. Liver appears normal in size. Spleen is indistinct. Gas and fluid in stomach. Small intestine appears normal in size. Gas and formed feces in colon. Kidneys partially obscured. Cannot rule out peritonitis due to pancreatitis, no obvious masses.

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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (6.86 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 (6.56 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 region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

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 is visualized.

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 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. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder appears prominent and hyperechoic at 0.35 cm, consistent with edema. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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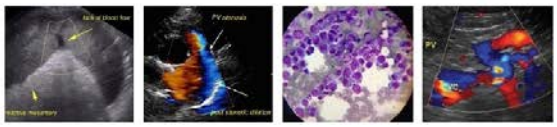

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Gastrointestinal

The stomach contains a moderate 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. Jejunum wall measures 0.33 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

There is an area of abnormal hypoechoic irregular mottled tissue visualized medial to the spleen, likely in the position where the left limb of the pancreas would be. Adjacent to this abnormal tissue is a rounded hypoechoic, echogenic mass effect measuring approximately 4.41 cm x 4.49 cm. This lesion is concerning for a possible pancreatic mass effect, less likely abscess, etc.

Free Abdomen

There is a large volume of primarily anechoic fluid. No lymphadenopathy is noted. The omentum is diffusely hyperechoic and slightly irregular.

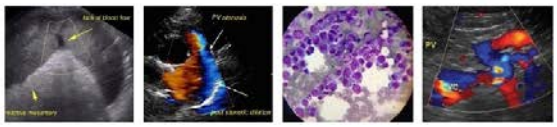
ULTRASONOGRAPHIC FINDINGS

- Irregular, hypoechoic, mottled tissue visualized medial to the spleen – findings are most concerning for possible pancreatic lesion with a mass effect.
- Thickened gallbladder wall – findings are most consistent with edema secondary to the free fluid present.
- Large volume free abdominal fluid – recommend fluid analysis and cytology.
- 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is some focally abnormal tissue visualized medial to the spleen in the region of the left limb of the pancreas. There appears to be an irregular mass effect arising from this abnormal tissue, which is concerning for a possible pancreatic mass, echogenic abscess, etc. Recommend a fine needle aspirate of this lesion with samples for cytologic evaluation +/- aerobic and anaerobic cultures. Additionally, recommend an immediate cytospin smear on the abdominal fluid with a total protein to try and rule out a possible septic effusion.

This patient is hypoalbuminemic, which may be contributing to the cause of the fluid, but this would not typically be serosanguinous fluid, so it will be important to definitively categorize the fluid and evaluate if it is cellular to try and rule out a septic peritonitis, which would be a candidate for emergency surgery.



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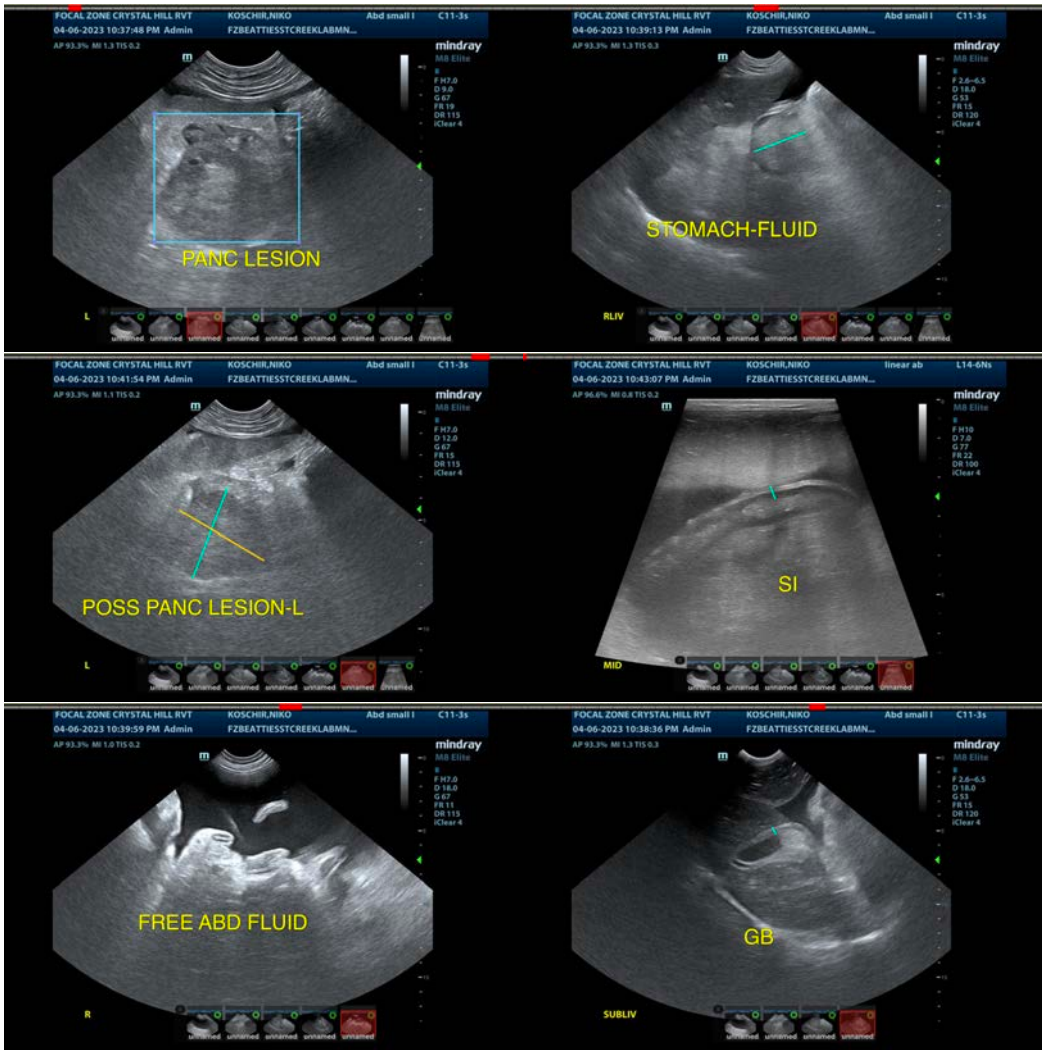
The most common differentials for hypoalbuminemia would include gastrointestinal disease. This would include a protein losing enteropathy, a foreign body, etc. Other possibilities would include liver disease. Consider a liver function test to look for evidence of liver dysfunction. Additionally, protein loss from the kidney would be possible. Correlate these findings with a urine protein to creatinine ratio. If there is a lack of protein loss from the liver or kidneys, then underlying gastrointestinal disease is likely. I do not see any focal obstruction or an obstructive pattern. The bowel wall appears relatively normal, but a focal mass effect or foreign body cannot be definitively ruled out.

Depending on the patient's clinical status, supportive treatment should be implemented, ideally a fine needle aspirate of the suspected pancreatic lesion would be performed. Additionally, you could consider a contrast CT scan, which could provide some additional insight. If the abdominal effusion is septic effusion, referral to a veterinary surgeon should be performed to consider emergency surgical exploration with the possibility that there may be significant pathology within the abdomen. If treatment and diagnostic options are very limited, then I would treat for sepsis and pancreatitis and reimage the patient in 24-48 hours with concern that this could have a guarded prognosis.

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



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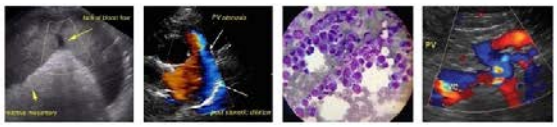

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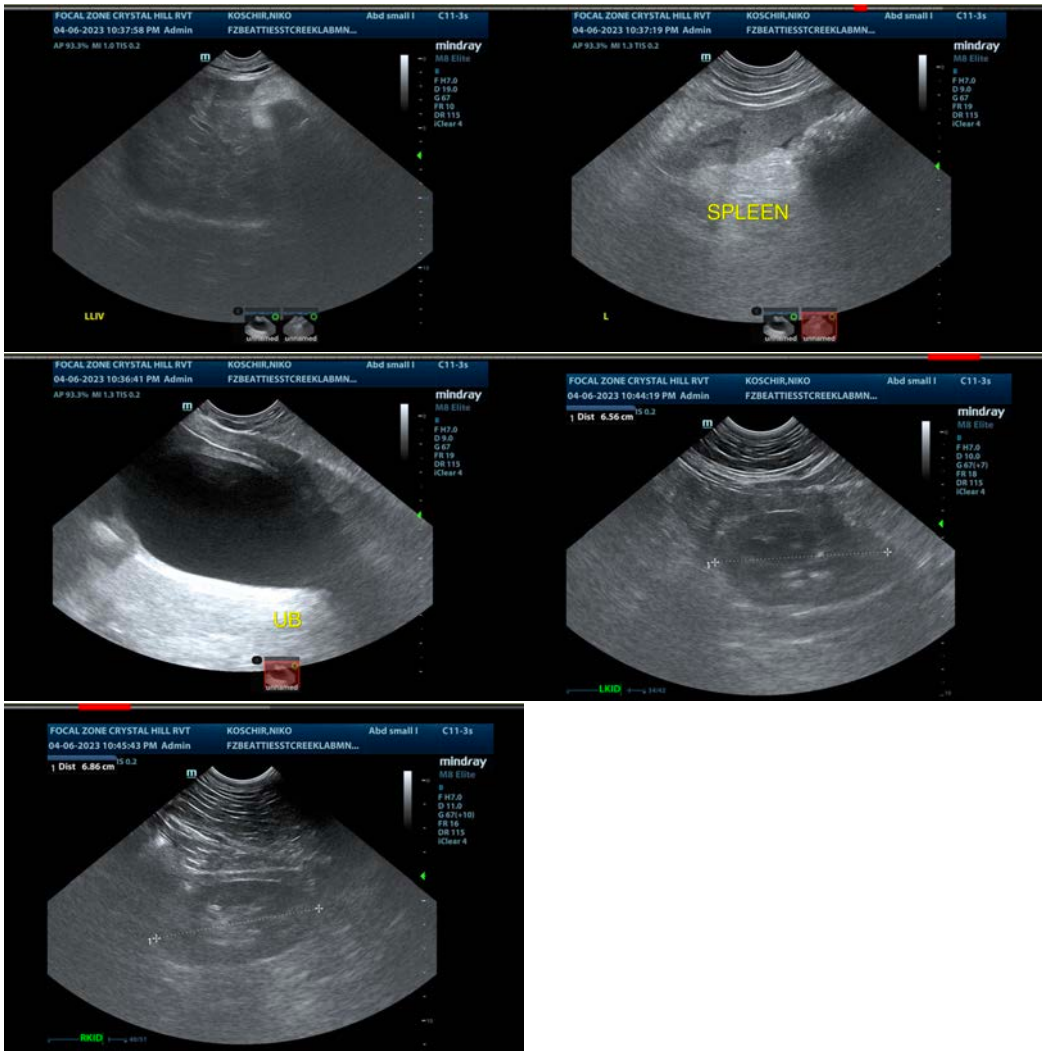

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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