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Clinical Sonography & Telecytology
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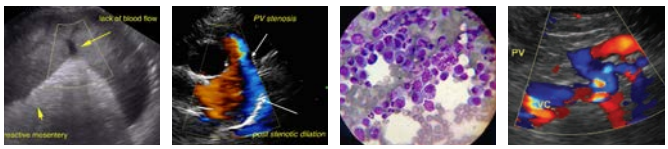

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1-800-838-4268 info@sonopath.com

PATIENT

Denzel Hernandez

SPECIES

Canine

BREED

Labrador

SEX

Intact Male

AGE

10 Years

WEIGHT

69.2 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer

HOSPITAL NAME

Paseos Vet Center

REFERRING VET

Dr. Vega

INVOICE

46792

DATE

4/19/23

PRESENTING CLINICAL SIGNS

The patient started to show signs of weakness and was diagnosed with DJD and treated with prednisone. The patient improved but once prednisone was finished, started again with weakness. Pyrexia and pale mm were noted. CBC showed anemia, leukocytosis, and thrombocytopenia. Ddx : neoplasia vs tick-borne dz

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 large in size (2.84 cm in height in the sagittal view) but has a regular shape with smooth external margins. The parenchyma is hyperechoic and heterogenous. There is a 0.34 cm small cystic region within the parenchyma. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (8.23 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 (7.18 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 0.59 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 0.55 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.

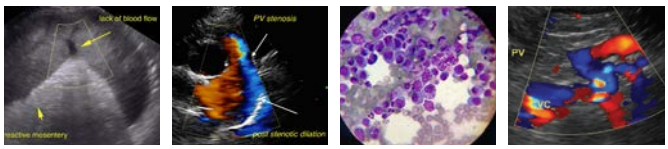
Spleen

The 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. Two small hypoechoic nodules are visualized within the parenchyma. One measures 0.68 cm x 0.85 cm. Another measures 1.11 cm x 1.02 cm.

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 are numerous ill-defined hyperechoic nodules within the parenchyma. Examples of this measure 1.0 cm x 2.45 cm an d2.68 cm x 1.99 cm.

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 moderate amount of non-organized echogenic debris. There is a



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focal hypoechoic, rounded structure associated with the gallbladder wall that measures 1.33 cm in diameter. This could represent a cystic structure, less likely a hypoechoic mass effect, or irregular folding of the gallbladder debris. Recommend continued monitoring. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. The majority of the stomach appears normal with wall layering varying between 0.30-0.50 cm. There is a focal area where the mucosal layer appears slightly irregular, creating a mass effect measuring approximately 0.70 cm x 0.77 cm. This could be consistent with a prominent rugal fold, a polypoid lesion, or a mass effect. Gastric wall layering is maintained and there is no impression of reduced peristaltic activity.

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 0.38 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 prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

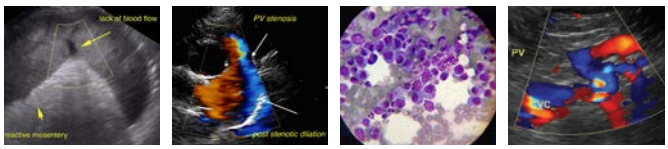
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

The right auricle and pericardium were visualized and were unremarkable. The appearance of the aortic valve is slightly irregular. This could represent an artifact or a valvular irregularity. Recommend full cardiac ultrasound.

PRIMARY FINDINGS

- Large, hyperechoic, heterogeneous prostate with a small cystic structure – Findings are most consistent with benign prostatic hypertrophy +/- prostatitis and a small prostatic cyst.
- Two hypoechoic splenic nodules – Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Mildly heterogeneous liver with 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 more benign etiology.



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- Small, rounded structure associated with the gallbladder wall – This could represent a cystic structure, a small mass, or even folded debris. Recommend continued monitoring with ultrasound (recheck in 8-12 weeks).

- Gastric wall irregularity – The focal irregularity/thickening could be consistent with focal gastritis, an ulcer, imaging artifact, a prominent rugal fold, a gastric polyp, or less likely an early mass lesion.

SECONDARY FINDINGS

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are numerous small lesions visualized on today's exam, but no large primary lesion to attribute to the anemia reported in this individual.

The prostate is large and hyperechoic. Consider urinalysis and culture, and neutering if there is concern for significant prostatitis.

There are two hypoechoic nodules associated with the spleen. Options moving forward would include fine needle aspirates of these lesions or continued monitoring with ultrasound.

The liver is mildly heterogeneous with some hyperechoic nodules visualized. The appearance of the nodules trends towards a benign etiology. Recommend continued monitoring.

There is a small cystic appearing lesion associated with the gallbladder wall. I suspect this is benign, but continued monitoring is warranted.

There is a small irregular area associated with the gallbladder wall. This could be imaging artifact, an early mass lesion, a prominent rugal fold, etc. In this individual, rectal exam should be performed, looking for any evidence of melena. If proteins are low or there is the suggesting of GI bleeding, then consider upper GI endoscopy to further evaluate. Otherwise, consider continued monitoring +/- treatment for gastritis and reevaluation of the gastric wall in the future.

If not already done, consider further evaluation of the anemia with a pathologist review of the blood smear, reticulocyte count, etc., and further workup for a regenerative or non-regenerative anemia as needed.

There is some slight irregularity possible visualized associated with the aortic valve (could be artifact?). Based on the history of a fever, low platelet count and a new murmur, I would strongly recommend evaluation for endocarditis and consider blood cultures.

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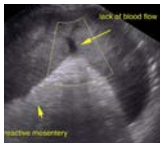
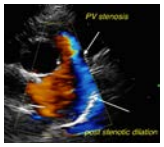
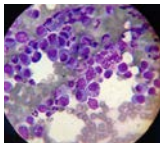
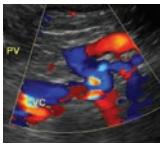

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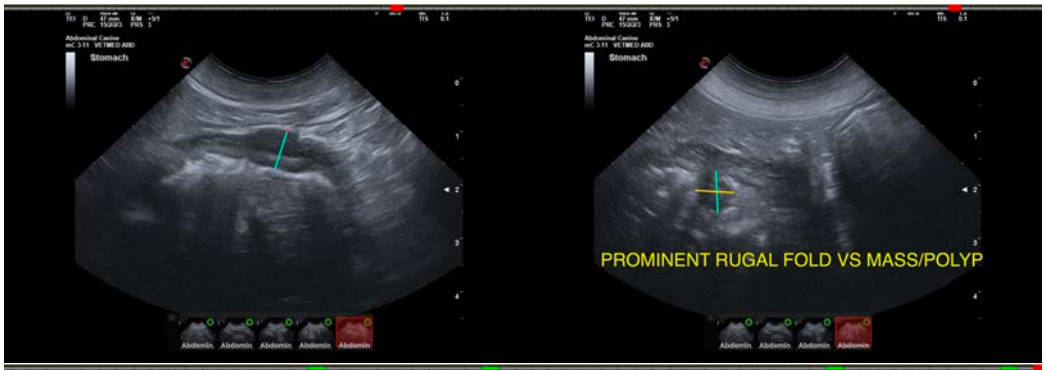

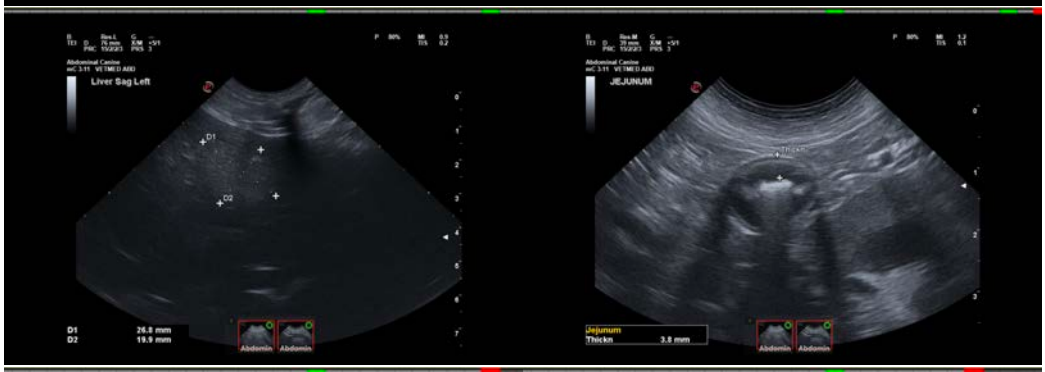

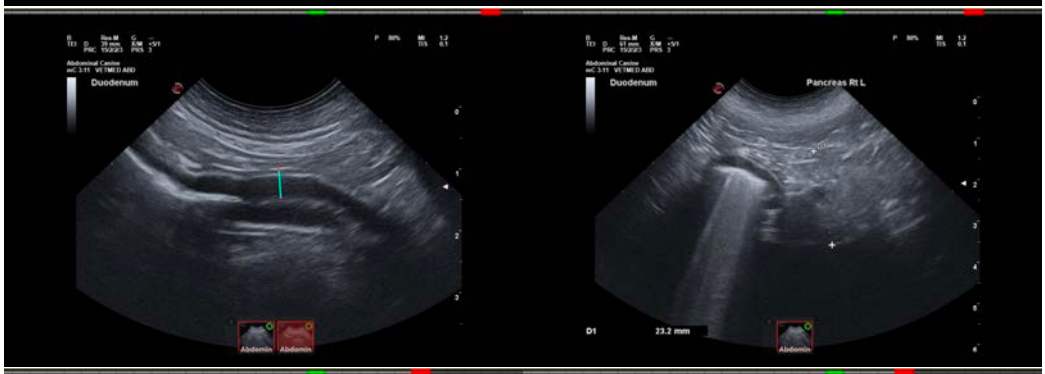

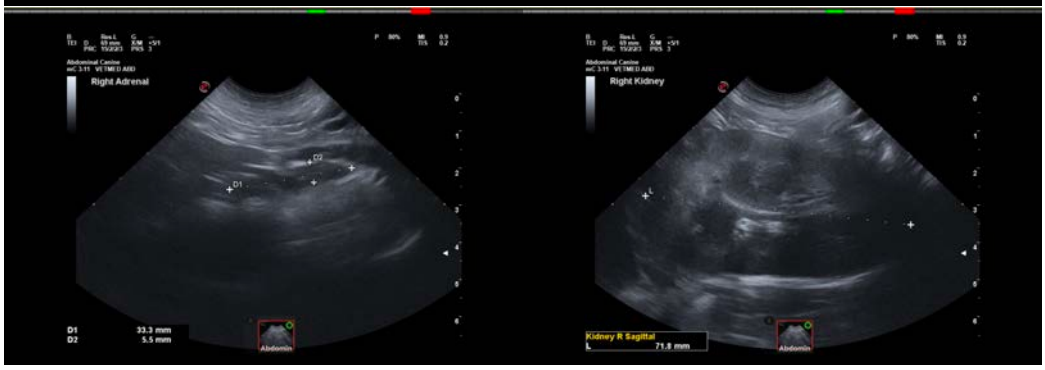

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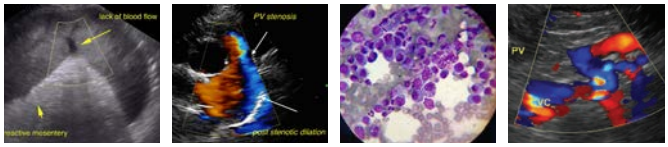

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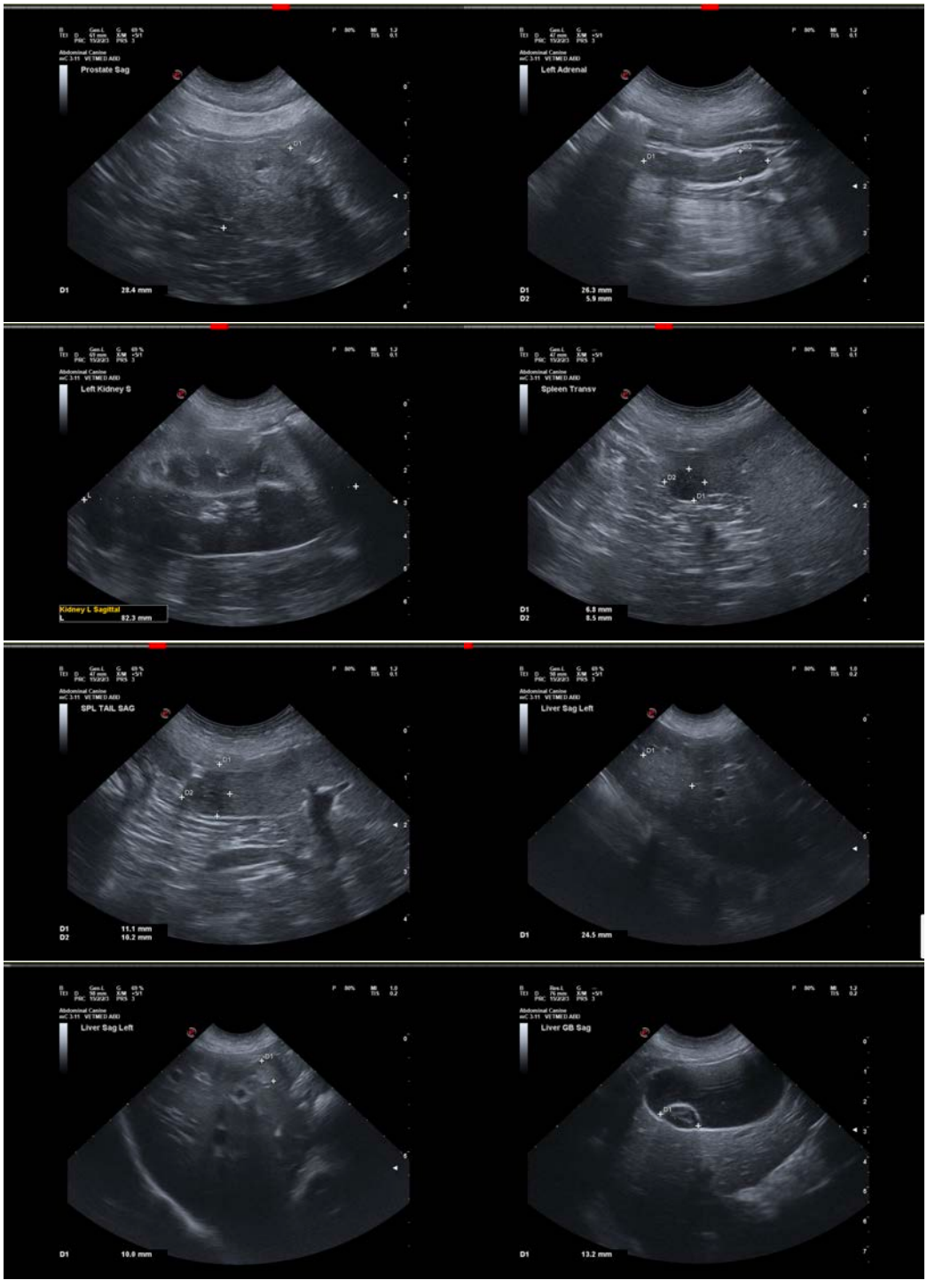

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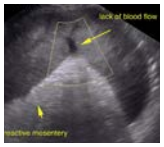
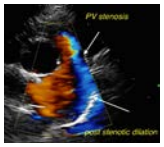
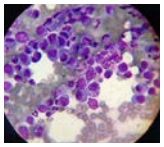
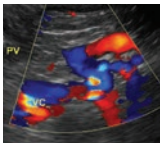

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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