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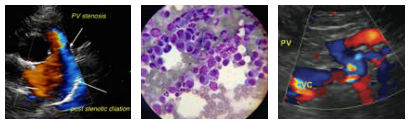

SonoPath
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DATE
11/11/21

PATIENT
Scotty Clark

SPECIES
Canine

BREED
Boxer Mix

SEX
Neutered male

AGE
2008

WEIGHT
52 lbs

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

IMAGING PERFORMED BY
Rachel Brilhart RDMS

HOSPITAL NAME
Banfield Columbia

REFERRING VET
Dr. Hirsch

INVOICE
93048

PRESENTING CLINICAL SIGNS

History: Presented for routine dental. Mild elevation liver values noted on preanesthetic bloodwork (ALT 145, ALKP 332). Significantly pot bellied appearance on physical exam. Significant cranial organomegaly and possible mass effect in abdomen noted on radiographs. Screening ultrasound.
Current Medications: None.
Lab Results: ALT 145, ALKP 145, BUN 31, Creatinine 1.0.
Urinalysis- specific gravity 1.042, 300+ protein, sediment unremarkable.
Radiographs: Abdominal radiographs- significant cranial organomegaly with possible mass effect. Thoracic radiographs unremarkable.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required for scan.
Stat Report: Not requested.

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 was normal and measured 1.18 cm.

The left kidney has a normal shape and size (6.62 cm). Overall echogenicity is normal with adequate 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 (6.76 cm). Overall echogenicity is normal with adequate 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 0.73 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 0.62 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 large 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 subjectively large 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 gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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 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 prominent and mildly mottled compared to the surrounding isoechoic mesentery. There is no evidence of regional mesenteric inflammation or fluid. In some images there is an ill-defined, hypoechoic nodule measuring 0.91 cm.

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.

Heart

A brief view of the heart was submitted. No pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- 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.

- Large heterogenous 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.

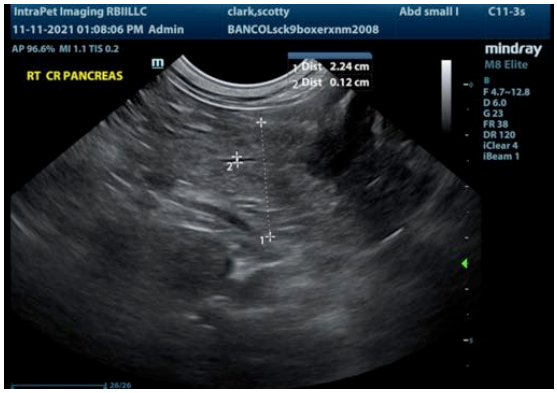
- Somewhat ill-defined, hypoechoic nodule in the region of the pancreas. The significance of this lesion is unclear and not distinctly visualized in all views. I recommend three view thoracic radiographs and continued monitoring with ultrasound.

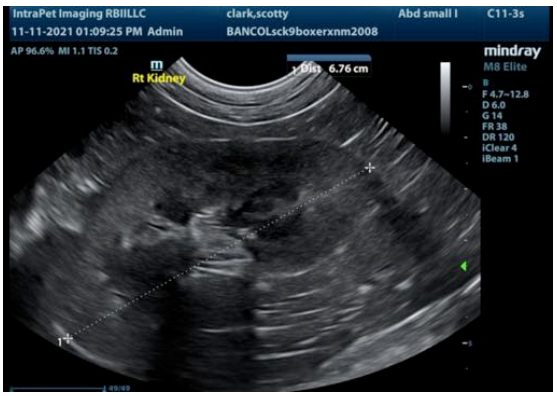
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

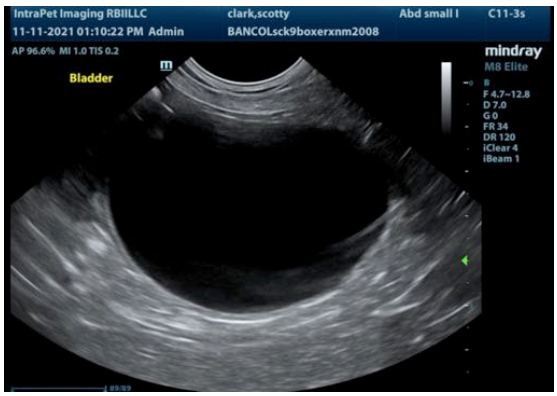
The changes observed in the liver and spleen are relatively non-specific. I would consider a FNA of the spleen an for further evaluation of the elevated liver enzymes consider:

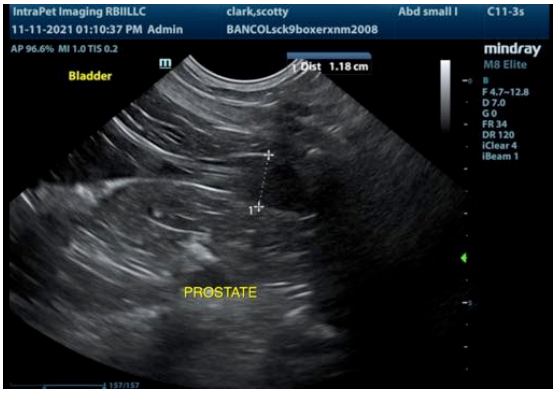
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate 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 liver values continue to rise despite supportive medical care with Denamarin, etc. and liver function is abnormal then consider a liver biopsy with samples obtained for histopathology, culture, and copper levels.

In some images there is a hypoechoic nodule effect in the area of the pancreas. The significance of this is unclear at this time. I recommend to continue monitoring with ultrasound (6-8 weeks). Consider more aggressive diagnostics such as advanced imaging (CT scan) if there is clinical concern regarding this lesion.





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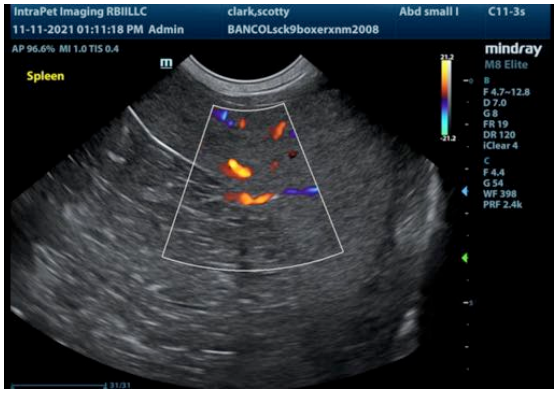
Bladder
1 Dist 1.18 cm
PROSTATE
mindray
M8 Elite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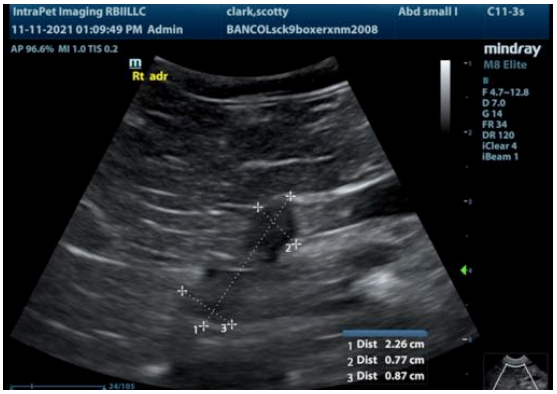
Spleen
mindray
M8 Elite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clark,scotty
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BANCOLsck9boxerxnm2008
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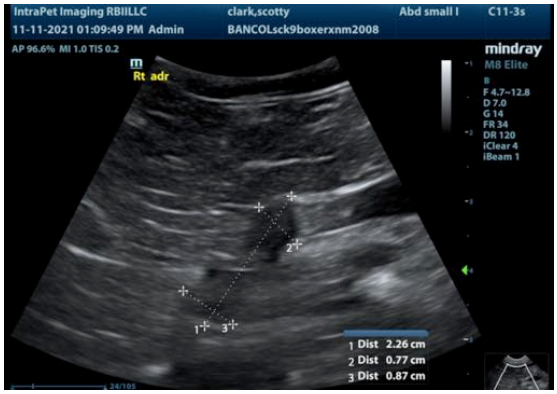
Rt adr
1 Dist 2.26 cm
2 Dist 0.77 cm
3 Dist 0.87 cm
mindray
M8 Elite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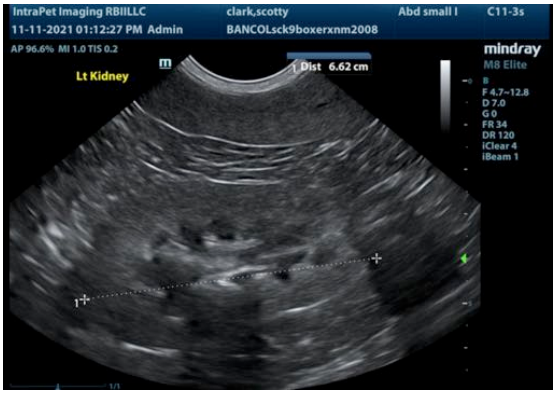
BANCOLsck9boxerxnm2008
AP 96.6% MI 1.0 TIS 0.2
Rt adr
1 Dist 2.26 cm
2 Dist 0.77 cm
3 Dist 0.87 cm
mindray
M8 Elite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clark,scotty
Abd small I
C11-3s
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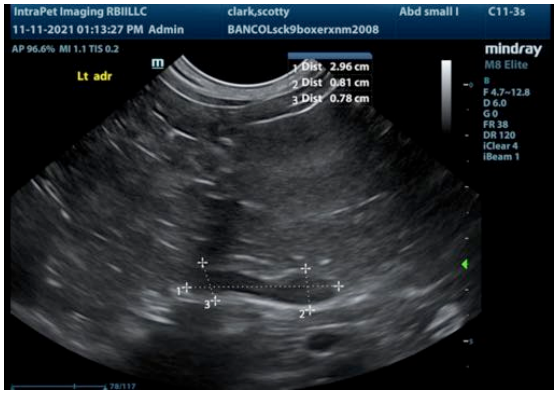
AP 96.6% MI 1.0 TIS 0.2
Lt Kidney
1 Dist 6.62 cm
mindray
M8 Elite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BANCOLsck9boxerxnm2008
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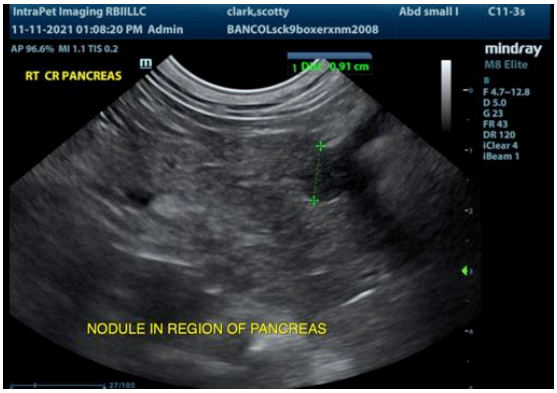
Lt adr
1 Dist 2.96 cm
2 Dist 0.81 cm
3 Dist 0.78 cm
mindray
M8 Elite



The information and recommendations provided are based on the images presented by the referring veterinarian. 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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