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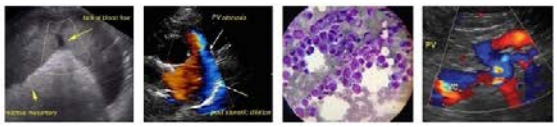


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Bugsy Brown

SPECIES

Canine

BREED

Boston X

SEX

Neutered Male

AGE

13 Years

WEIGHT

17 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Snelgrove VS

REFERRING VET

Dr. McQueen

INVOICE

39854

DATE

7/27/22

PRESENTING CLINICAL SIGNS

appears super painful when picking up - Weak on hind end and hind legs splay out (esp on right side of body) Proprioception and withdrawal normal. Mild pain on L-S pressure with tail jack - Mucous membranes pale pink and slightly tacky
Abnormal PE/Chem/CBC/UA Results: - Blood shows moderate regenerative anemia with low albumin and elevated ALT, ALK; concern re: blood loss? rads: - Xray shows possible fluid in ventral abdomen but no overt mass. Put u/s probe on belly and there is fluid present (likely blood)

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 normal in size (1.01 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 has a normal shape and size (5.72 cm). Overall echogenicity is slightly hyperechoic with poor 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 (6.38 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/borderline large in size measuring 1.11 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.

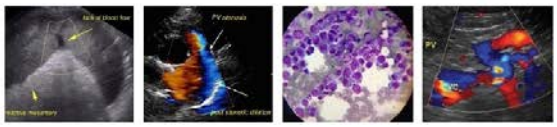
The right adrenal gland is normal in size measuring 0.53 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is hypoechoic, irregular, mottled, and prominent. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous ill-defined nodules within the splenic parenchyma. Two hyperechoic nodules are visualized measuring 1.5 cm and 0.69 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 intraparenchymal hyperechoic nodules throughout the liver, two of which are visualized measuring 1.49 cm and 1.7 cm.



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The gallbladder lumen is moderately distended. The wall of the gall bladder 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 is dilated with a large amount of shadowing ingesta. 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 layering 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 measured 0.40 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 hypoechoic as 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

There is a moderate amount of free fluid. No lymphadenopathy. The omentum is generally of increased echogenicity.

PRIMARY FINDINGS

- Prominent, irregular, hypoechoic, 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. The spleen is hypoechoic and there are some ill-defined nodular lesions within the parenchyma.
- 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.
- Hypoechoic, prominent pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, shadowing ingesta within the gastric lumen – Correlate with feedings history and abdominal radiographs. If adequately fasted then consider such differentials as delayed gastric emptying or a partial outflow tract obstruction (none visualized).
- Borderline enlarged left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

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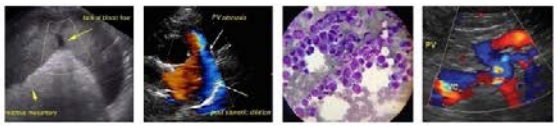

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SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Moderate amount of free abdominal fluid – Recommend fluid analysis and cytology.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both the liver and spleen appear very irregular, heterogeneous, and somewhat nodular. I was unable to find a cavitated mass lesion that I thought could be responsible for a possible hemoabdomen. (Recommend sampling of the abdominal fluid to determine if it is blood, transudate, exudate etc..). If there is a hemoabdomen present and coagulation parameters are normal, then options moving forward would include either exploratory surgery to look for a source of the bleeding, or a contrast CT scan to try and obtain better definition to try and identify the source.

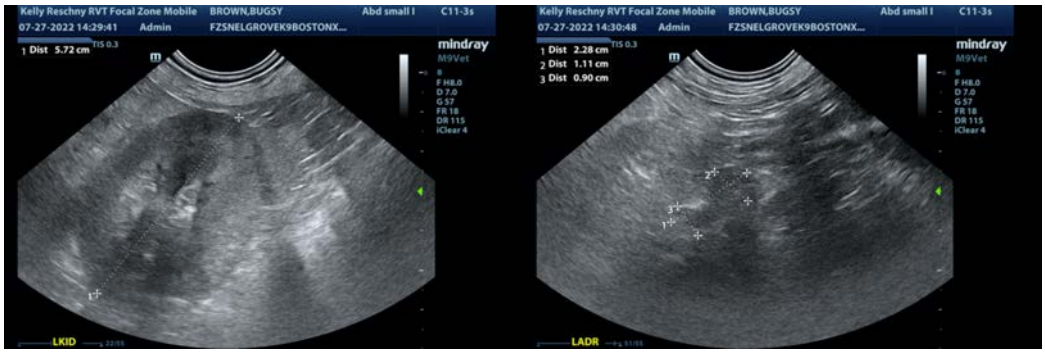
Additionally, you could consider a fine needle aspirate of the liver and spleen to try and determine if neoplastic cells are present.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

If the fluid is not blood, then consider hypoalbuminemia as a possible source (?) or a neoplastic effusion. Consider liver function testing, evaluating for proteinuria, and consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the GI tract, looking for evidence of small intestinal disease.

If a protein losing enteropathy is thought likely, or if cytology of the liver and spleen is not successful in identifying a source, you may need to consider obtaining biopsies of these tissues in the future if the patient is stable enough.

The left adrenal gland appears large, but no overt mass effect can be visualized on today's exam. Recommend a blood pressure evaluation. If the concurrent medical issues going on can be resolved, then further evaluation of the enlarged adrenal gland could involve a contrast CT scan, adrenal function testing, etc.



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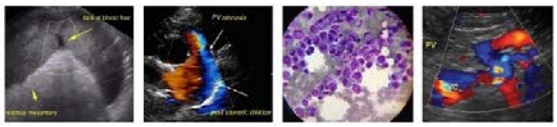

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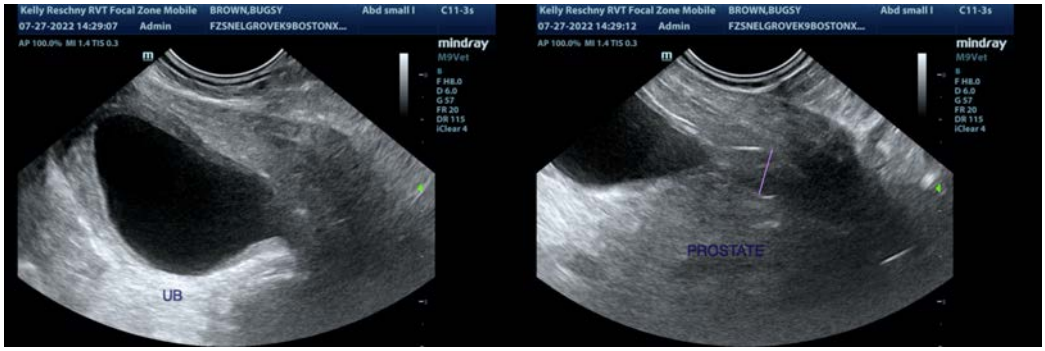

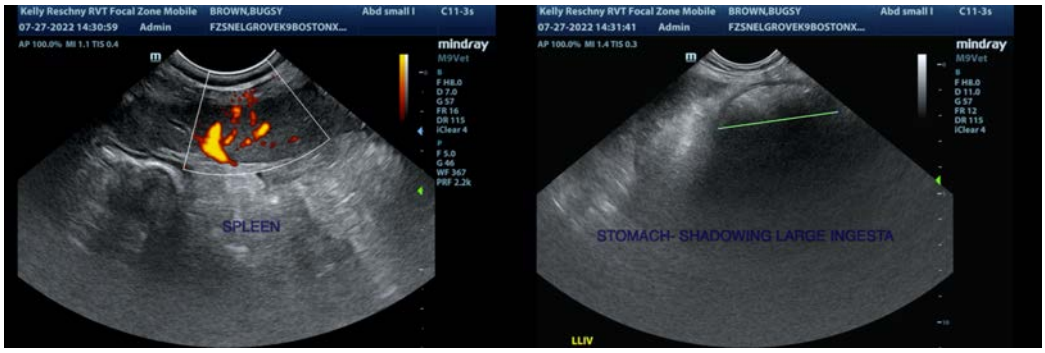

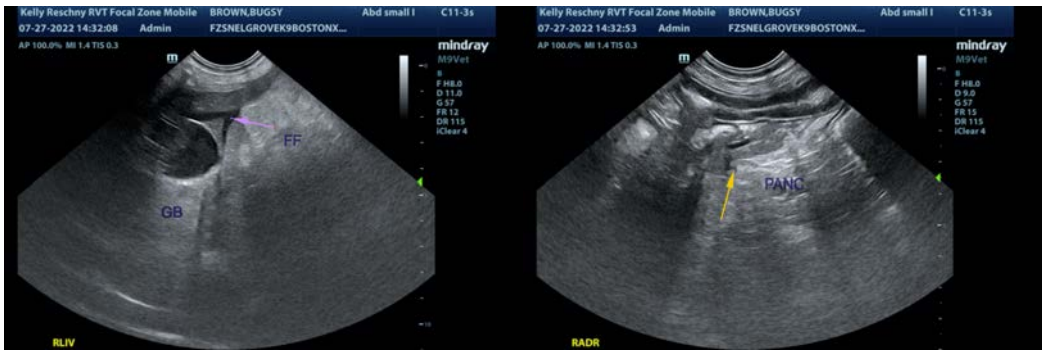

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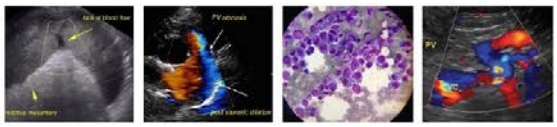

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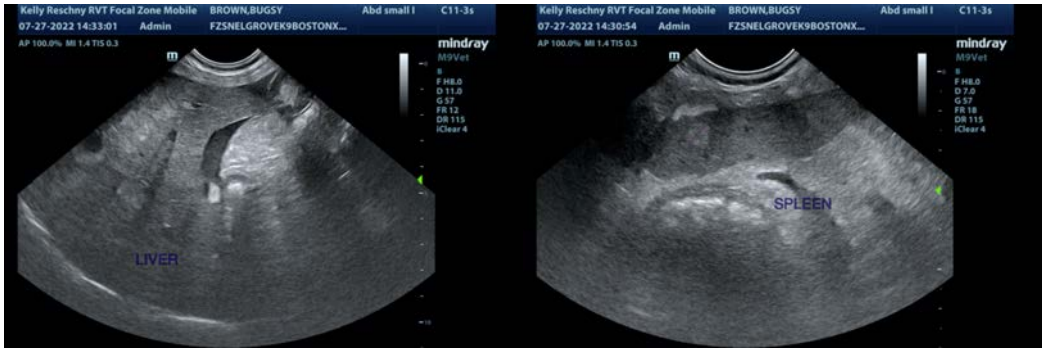

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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