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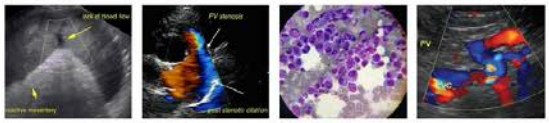

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Peewee Woodward

**SPECIES**

Canine

**BREED**

Australian Shepherd X

**SEX**

Neutered Male

**AGE**

15 Years

**WEIGHT**

32 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Roundhill AH

**REFERRING VET**

Dr. Carl Kelly

**INVOICE**

34190

**DATE**

1/13/22

## PRESENTING CLINICAL SIGNS

Unwilling or unable to stand for several days. Complete anoexia over same period (4 days) Rectal exam revealed formed, dark, greenish brown feces (melena?) Abdomen palapated very full. Abdominal tap = free fluid (blood) with pcv of 25 and tp of 5.0
Abnormal PE/Chem/CBC/UA Results: HEMOABDOMEN

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is severely 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 (1.2 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 (6.52 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 (7.2 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 0.84 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 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 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. There is a large, irregular, mixed echogenicity cranial abdominal mass measuring >7.1 cm x 11.44 cm. I suspect this mass is originating from the spleen, but there is a lot of direct contact with the liver and therefore I cannot exclude the possibility of hepatic origin.

### *Liver*

The liver is large in size, and normal in 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 is a 2.83 cm x 2.52 cm mixed echogenicity nodule in the liver, which is deforming the hepatic margins. Additionally, there is a very large mixed echogenicity cranial abdominal mass, which I suspect is of splenic origin, but cannot rule out the possibility of hepatic origin.

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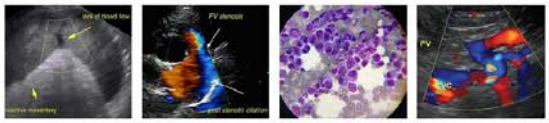

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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### *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 area of 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*

There is a large amount of echogenic free fluid. There is a large, rounded, hypoechoic structure measuring 2.44 cm x 3.35 cm. This lesion is either an enlarged cranial abdominal lymph node or a daughter spleen/omental NET. The omentum is generally of increased echogenicity.

### *Other*

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

## PRIMARY FINDINGS

- Large mixed echogenicity cranial abdominal mass with surrounding free fluid – Findings are most consistent with a ruptured splenic mass, but the mass is very large and hepatic origin cannot be ruled out.
- Heterogeneous liver with mixed echogenicity nodule – 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 mixed echogenicity nodule visualized in the liver is likely a metastatic lesion from the primary cranial abdominal mass.
- Large volume free abdominal fluid – Based on appearance and history, this likely represents a hemoabdomen.

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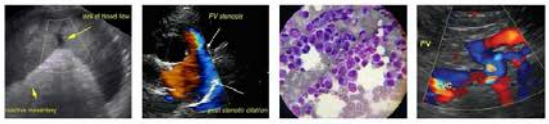

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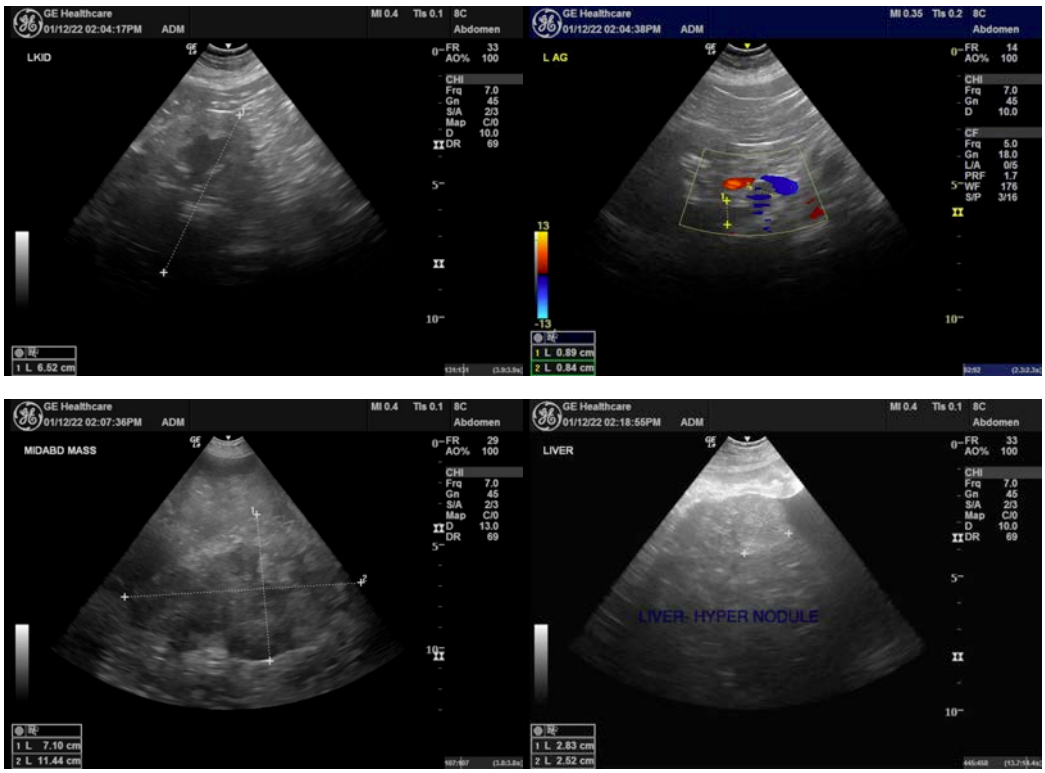
## SECONDARY FINDINGS

- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a very large, mixed echogenicity cranial abdominal mass, which appears to have likely ruptured, causing a hemoabdomen. I suspect this mass is arising from the spleen, but I cannot rule out hepatic origin. Additionally, there is a similar looking but much smaller nodule in the liver, and an omental lesion, which could be either a large lymph node, an omental metastasis, or a daughter spleen.

Receommend 3-view thoracic radiographs and referral to a veterinary surgeon for exploratory to remove the mass and submit for histopathology. Ideally, blood products should be available. Prognosis is guarded.



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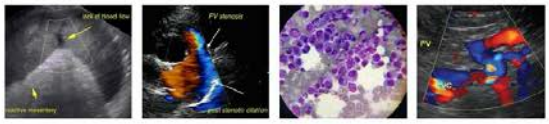

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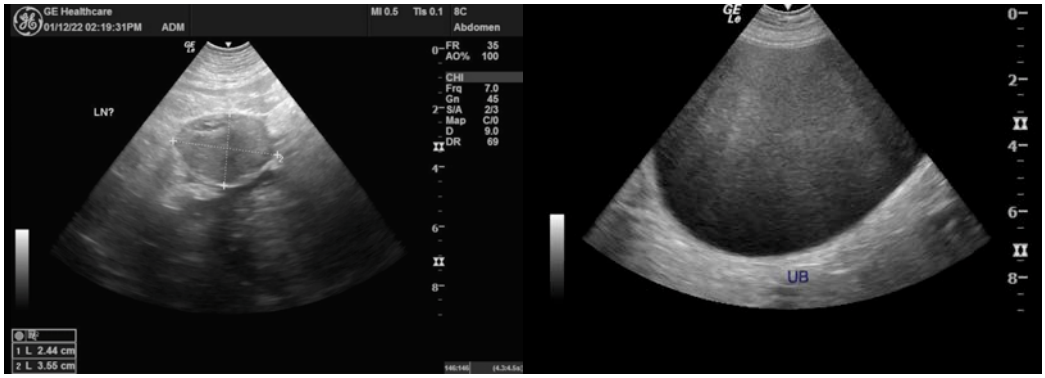


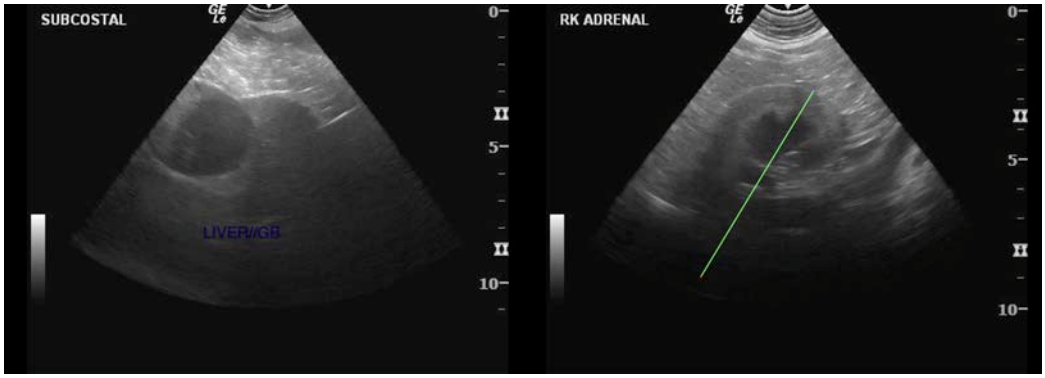


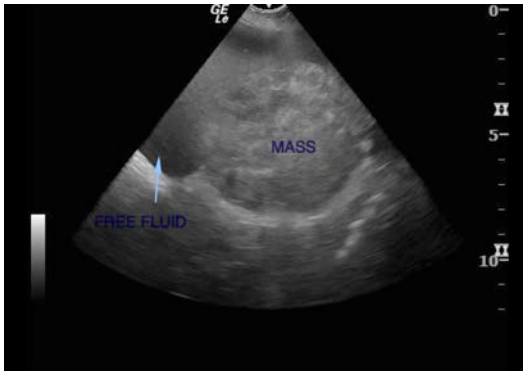


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

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

kathleen.sennello@sonopath.com