

**PATIENT PRESENTING CLINICAL SIGNS**

Jacob Cooper Intermittent ADR, anemia, Doxycycline, Carafate, Yunnan

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Canine 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.

**BREED**

Bichon X

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.

**SEX**

Neutered Male

The left kidney has a normal shape and size (4.8 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.

**AGE**

2012

The right kidney has a normal shape and size (5.36 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.

**WEIGHT**

28.4 Pounds

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.47 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.

**INTERPRETED BY**

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

The right adrenal gland is normal in size measuring 0.38 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.

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**Spleen**

The spleen is large and irregular. The spleen echotexture is heterogenous and severely mottled, the splenic capsule is irregular. The blood flow through the hilus and splenic parenchyma appears normal. The spleen is severely nodular with numerous variably sized, expansile, solid, mixed echogenicity masses arising from the splenic capsule. Examples measure 1.7 cm, 1.1 cm, 2.0 cm, 3.7 cm. A larger one towards the head of the spleen measures 6.0 cm. There appears to be a cavitated mass effect towards the tail of the spleen.

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**Liver**

The liver is large, irregular and hypoechoic. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The liver is severely heterogeneous with ill-defined hypoechoic nodules. Additionally, there is a more distinct mass effect measuring 3.7 cm towards the medial aspect of the liver.

**REFERRING VET**

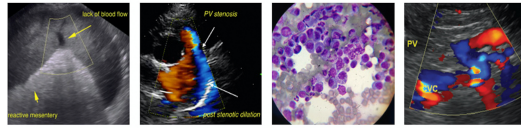
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**INVOICE**

35746

**DATE**

2/17/22



**PATIENT** *Gastrointestinal*

Jacob Cooper 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.

**SPECIES**

Canine

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.

**BREED**

Bichon X

**SEX**

Neutered Male

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*

**AGE**

2012

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*

**WEIGHT**

28.4 Pounds

There is a small volume of free abdominal fluid. No significant lymphadenopathy. The omentum is of increased echogenicity around the splenic masses.

*Thorax*

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 MS, Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

A brief echocardiogram reveals no obvious evidence of chamber enlargement or pericardial effusion. There is no obvious evidence of a right atrial/auricular mass. A pocket of pleural effusion is suspected. A small amount of ill-defined, echogenic tissue is seen, which may represent lung, inflammatory tissue, or neoplastic infiltration.

**ULTRASONOGRAPHIC FINDINGS**

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- Large, irregular, mottled spleen with numerous variably sized solid and cavitated mass lesions – These masses distort the splenic capsule. Differentials include benign lesions such as lymphoid hyperplasia, hematomas, etc., or more likely neoplasia such as hemangiosarcoma, lymphoma, or histiocytic sarcoma.
- Irregular, large, heterogeneous and hypoechoic 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. Additionally, there is a focal mass effect and numerous hypoechoic nodules within the parenchyma.
- Suspected pocket of pleural effusion and small amount of ill-defined, echogenic tissue within the thorax - Possibly lung, inflammatory tissue or neoplastic infiltration.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

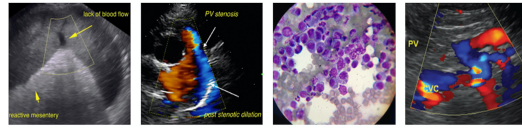
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The spleen is severely nodular with numerous solid and cavitated mass lesions that distort the splenic capsule. The appearance of the lesions is highly concerning for a neoplastic process. Additionally, the liver has a discrete mass effect and numerous mottled, hypoechoic nodules. Based on the history of intermittent anemia, there is concern for either an anemia of chronic disease, intermittent hemorrhage



**PATIENT**

Jacob Cooper

**SPECIES**

Canine

**BREED**

Bichon X

**SEX**

Neutered Male

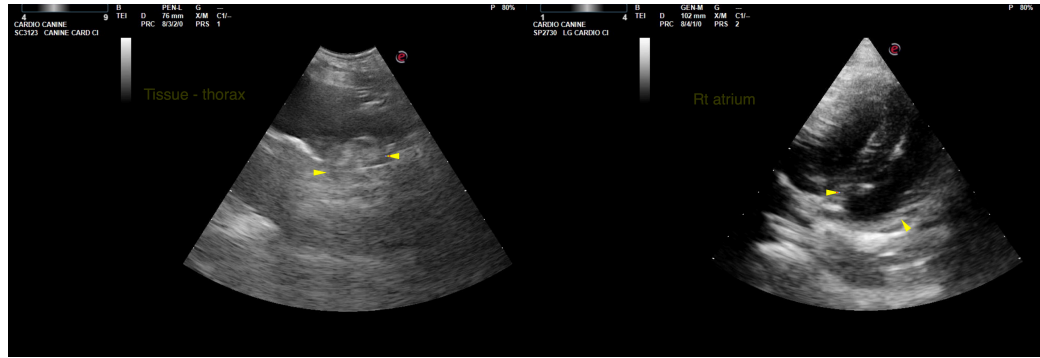
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**WEIGHT**

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either intraabdominally or intralesionally from the mass lesions, etc. Recommended plans for moving forward include a fine needle aspirate of the spleen and liver and 3-view thoracic radiographs.



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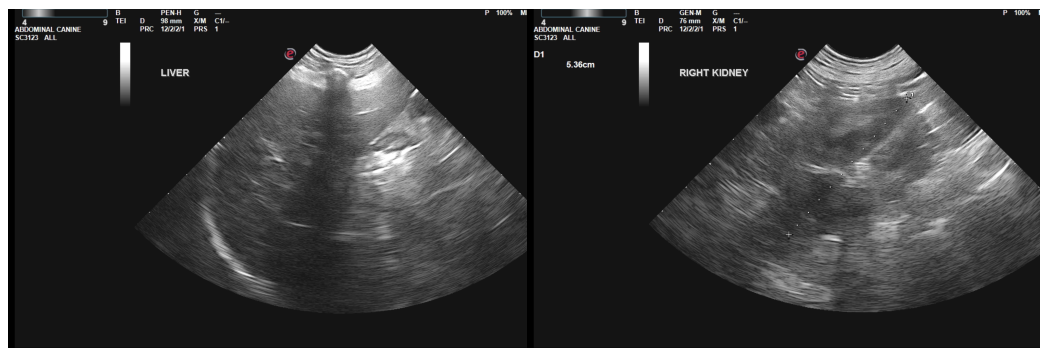
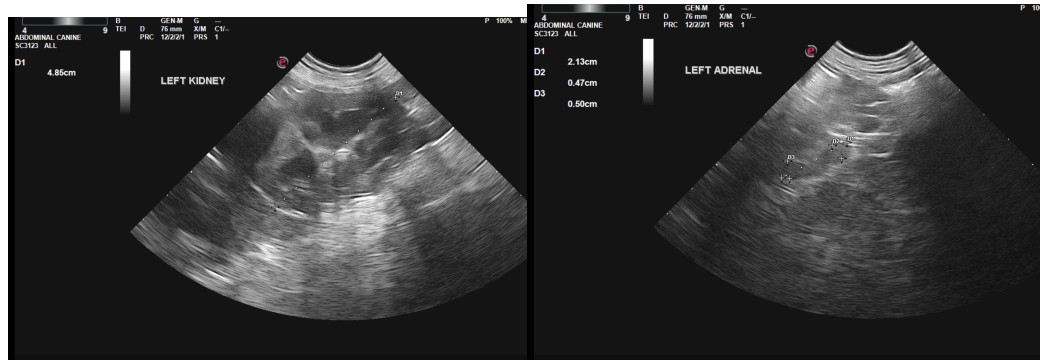
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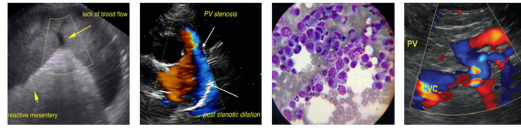
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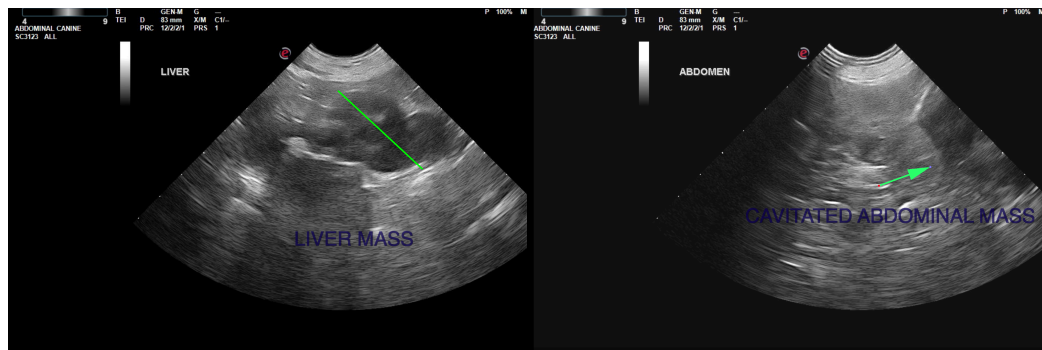
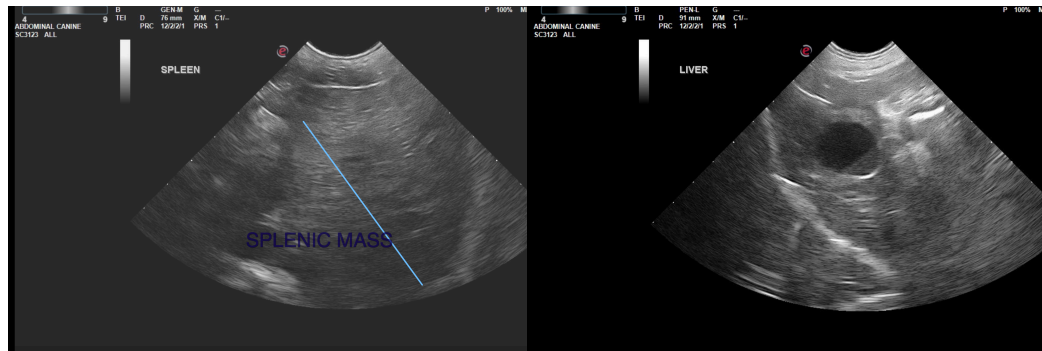
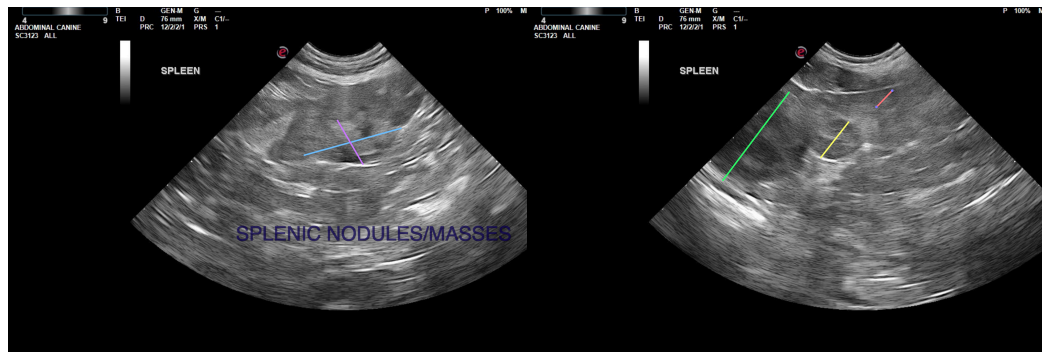
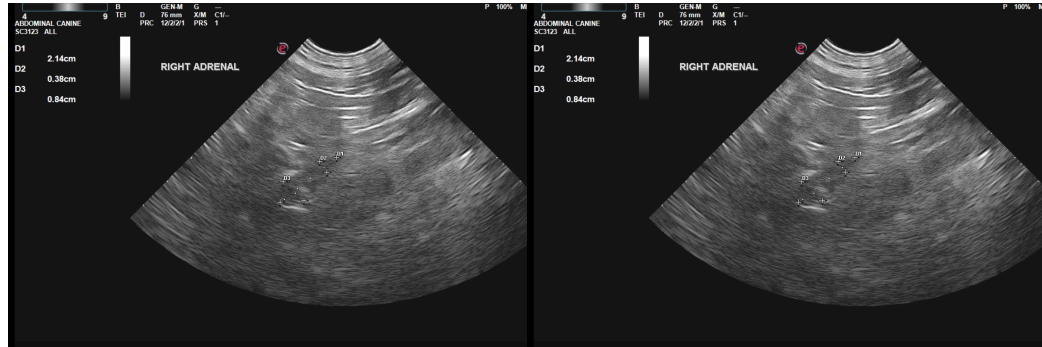
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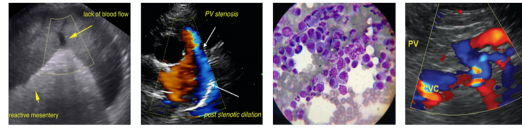
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

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

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**SEX**

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