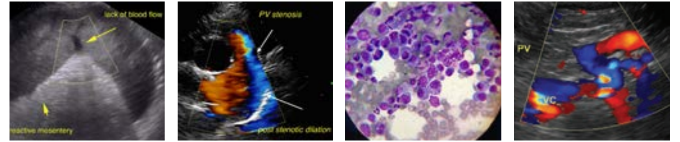
SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Lily Bier

SPECIES

Canine

BREED

Mix

SEX

Spayed Female

AGE

11.5 Years

WEIGHT

55.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Val Shumskaya

HOSPITAL NAME

Brenda King Vet

REFERRING VET

Dr. King

INVOICE

46670

DATE

4/13/23

PRESENTING CLINICAL SIGNS

Radiographic evidence of possible abd mass

Abnormal PE/Chem/CBC/UA Results: ALT 704, ALKP 685, AST 162, GGTP 16, T.Bil 0.5, Ca 8.8, Elevated wbc w/clumping 29.4, Platelets low w/giant platelets + clumping, neutro 25,812, mono 1176, bands 1176

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 left kidney has a normal shape and size (5.15 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 (5.85 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 0.62 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.

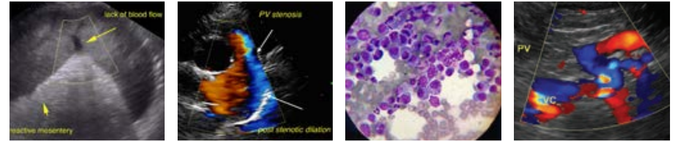
Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a hypoechoic solid cranial abdominal mass that is suspected to be of hepatic origin, but a splenic mass cannot be definitively ruled out.

Liver

The liver is large in size, and hypoechoic with smooth peripheral margins. Surrounding mesentery is hyperechoic. 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 solid heterogeneous hypoechoic mass effect visualized in the region of the right cranial abdomen measuring approximately 4.22 cm x 7.67 cm. This mass appears to be pedunculated, arising from a caudal section of liver, although splenic origin cannot be definitively ruled out.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.



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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. In some views, there is the impression that a mass effect can be associated with the stomach with the impression that the pylorus has severely thickened wall with loss of layering, consistent with a mass effect (*see under small intestine).

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Duodenum wall measures 0.50 cm. Jejunum wall measures 0.37 cm. Visualized peristalsis appears appropriate. There is mild fluid dilation of the proximal duodenum. As the small bowel is followed cranially, in the right cranial abdomen the wall thickens and loses distinct wall layering, creating a mass effect. In cross section this section of bowel measures 2.98 cm in diameter with a wall thickness of 1.31 cm. This area is most consistent with proximal duodenum/pylorus.

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

There is scant free abdominal fluid. No lymphadenopathy is noted but the mesentery is severely hyperechoic in the cranial abdomen around the cranial abdominal mass and the liver.

ULTRASONOGRAPHIC FINDINGS

- Large, heterogeneous, hypoechoic liver surrounded by hyperechoic mesentery – 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.

- Large, solid, heterogeneous, hypoechoic cranial abdominal mass – The appearance of this mas is most consistent with a pedunculated hepatic mass lesion, although splenic origin cannot be definitively ruled out.

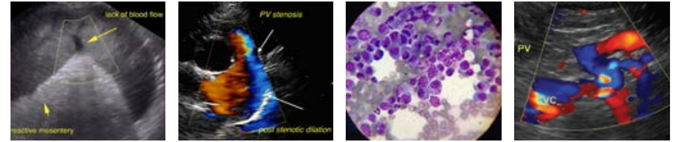
- Section of small intestine with severe wall thickening and loss of layering – This mass effect is visualized in the right cranial abdomen and is most consistent with proximal duodenum/pylorus. Primary differentials include round cell neoplasia, carcinoma, etc.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Severe cranial abdominal inflammation – This appears centered around the large mid abdominal mass, but the bowel mass is in this region as well.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is large, hypoechoic and heterogeneous with a large amount of surrounding inflammation. There is a solid heterogeneous cranial abdominal mass that appears to be somewhat pedunculated,



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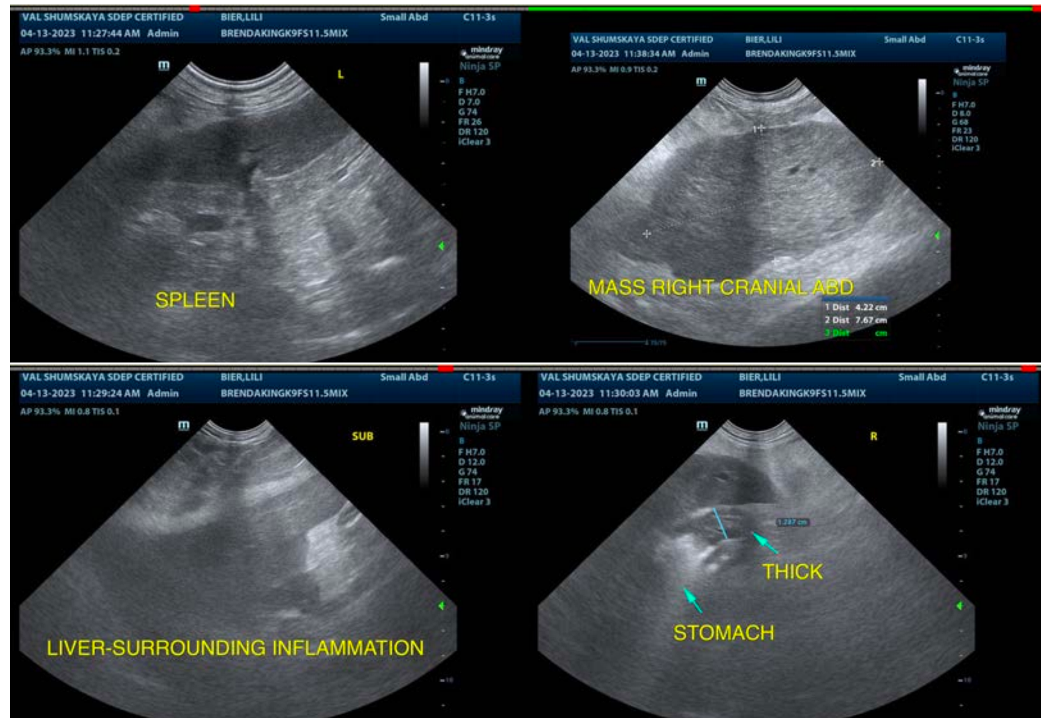
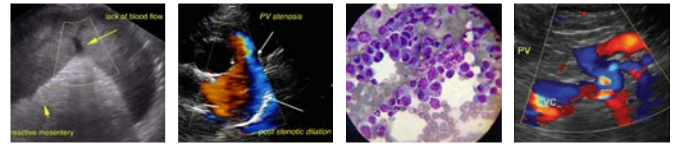
arising from the caudal aspect of the liver, although splenic origin cannot be definitively ruled out. Additionally, there is a section of bowel that has severe asymmetric thickening and loss of layering of the wall, creating a mass effect. This is associated with the small bowel in the right cranial abdomen and appears most consistent with proximal duodenum/pylorus.

Although there is a mass effect visualized associated with the liver, the entire hepatic parenchyma appears abnormal. Recommend a fine needle aspirate of the liver +/- the liver mass effect (provided coagulation parameters are normal), as I'm concerned about the possibility of infiltrative disease (round cell neoplasia). Alternately, there could be inflammatory or infectious disease present. If a window can be visualized to aspirate the abnormal wall of the bowel mass, this could also be considered. If a cytologic diagnosis cannot be obtained, surgical evaluation/biopsies of the abdomen, liver (mass effect), and proximal bowel may need to be considered, but the pylorus/proximal duodenum can be a challenging area to manage surgically, so referral to a veterinary surgeon may be recommended in that event.

Additionally, a contrast CT scan of the abdomen could be considered to confirm the origins of the cranial abdominal mass and confirm the location of the bowel mass.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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LIVER MASS

POSS HEPATIC MASS

DUOD PANC

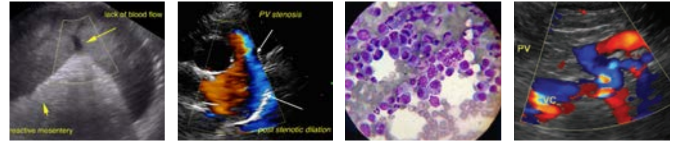
SI

LIVER/GB

STOMACH-MILD SHADOWING INGESTA

SPLEEN

RA



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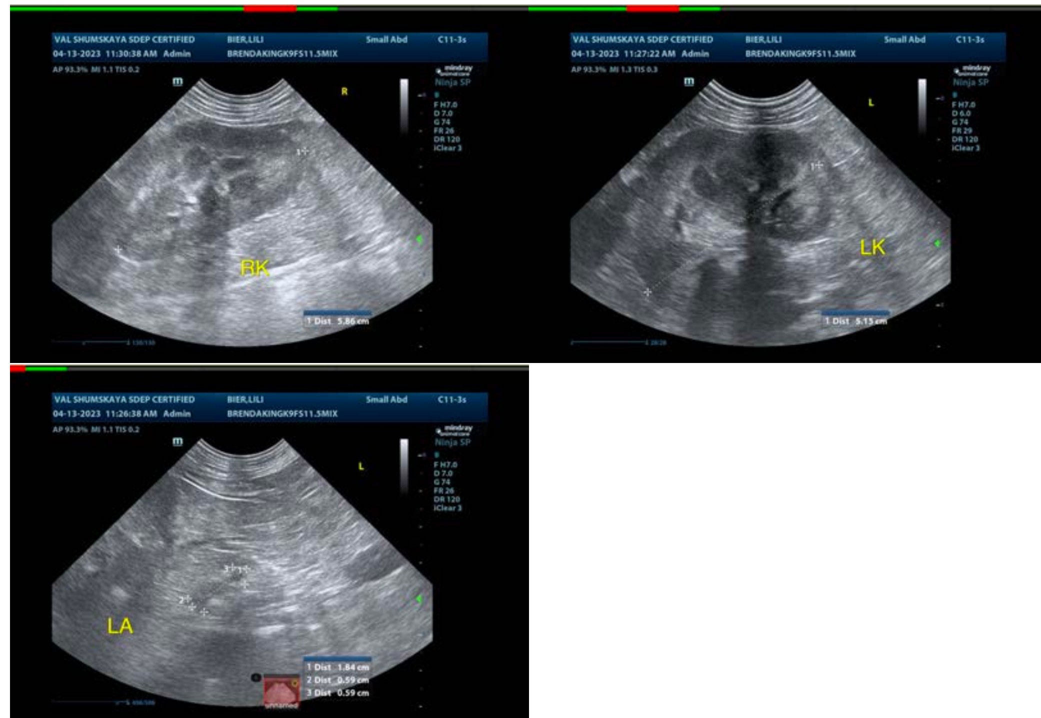

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com