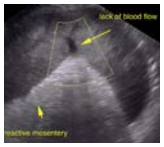
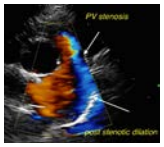
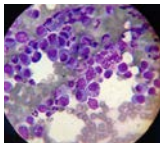
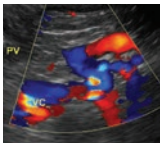
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Luna Decandia

SPECIES
Canine

BREED
German Shepherd

SEX
Spayed Female

AGE
8 Years

WEIGHT
93 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
New Bridge VP

REFERRING VET
Dr. Abina Glennon

INVOICE
41124

DATE
9/8/22

PRESENTING CLINICAL SIGNS

Patient presents for anorexia x 4 days and anemia. Hepatomegaly and splenomegaly on radiographs.

Abnormal PE/Chem/CBC/UA Results: 5/29/22: CBC WNL. Chem: potassium 5.5, Na:K ratio 27, TP 7.9, AST 56, GGT 18, creat. kinase 418. NEW blood work 9/8/2022: CBC: RBC 4.84, HCT 33.8, HGB 10.9, MCHC 32.2, retics 194, WBC 28.5, neuts. 22515, monos 2366. Chem: SDMA 15, phosphorus 6.5, ALT 492, AST 403, ALP 242, GGT 39, Total bili 1.0, Bili un-conj. 0.5, bili conj. 0.5, chol. 114, amylase 1621, lipase >1800, creat. kinase 269.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (6.77 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (8.3 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

The area of the right adrenal gland is examined without evident pathology.

The left adrenal gland is normal in size (1.9 cm long x 0.53 cm at the cranial pole and 0.53 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size with a swollen and scalloped/undulating capsular contour. Multifocal coalescing nodules are noted throughout the parenchyma. Splenic vasculature appears normal. Enhanced hyperechoic surrounding fat is noted.

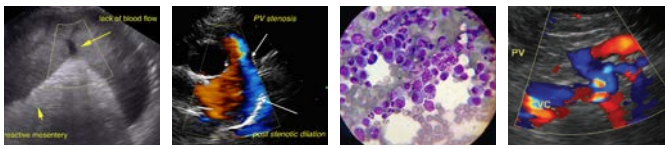
Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mottled by multifocal discrete hypoechoic nodules of varying sizes “moth-eaten”. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.



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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no apparent lymphadenopathy noted in these images.

There is a moderate amount of anechoic free fluid.

No evidence of pericardial effusion or right auricular masses noted.

ULTRASONOGRAPHIC FINDINGS

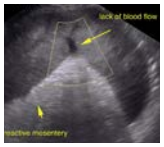
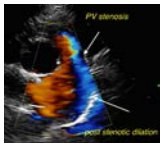
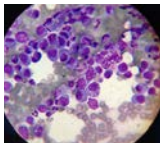
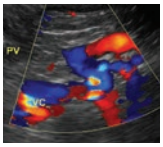
- **Honeycomb Spleen –** This finding is strongly suggestive of infiltrative disease such as round cell neoplasia. Benign disease cannot be ruled out but is considered less likely.
- **Nodular Liver -** This finding is concerning for infiltrative disease such as round cell neoplasia or metastatic neoplasia. Benign disease (nodular hyperplasia) cannot be ruled out but is considered less likely.
- **Bilateral medullary rim sign -** This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.
- **Moderate amount of anechoic free abdominal fluid** – Reported to be hemoabdomen.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The top differential for the combined splenic and hepatic pathologies is infiltrative neoplasia, possibly infiltrative round cell neoplasia, in which case medical management/chemotherapy may be possible. However, given the reported hemoabdomen, prognosis is guarded to grave if the hemorrhage continues. Given the diffuse nature of the pathology, surgery to remove the gross disease and stop the hemorrhage is likely not possible. Having said that, recommendations include:

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

If the free abdominal fluid has not been confirmed as a hemoabdomen, then abdominal fluid sampling to confirm hemoabdomen is recommended. If proceeding towards therapy is elected, a fine needle aspirate of the liver and spleen could be considered if patient's coagulation status is appropriate with the understanding that this could exacerbate the hemorrhage. Surgery could be pursued as an aggressive approach to try to stop the reported hemorrhage. However, it is not surgically possible

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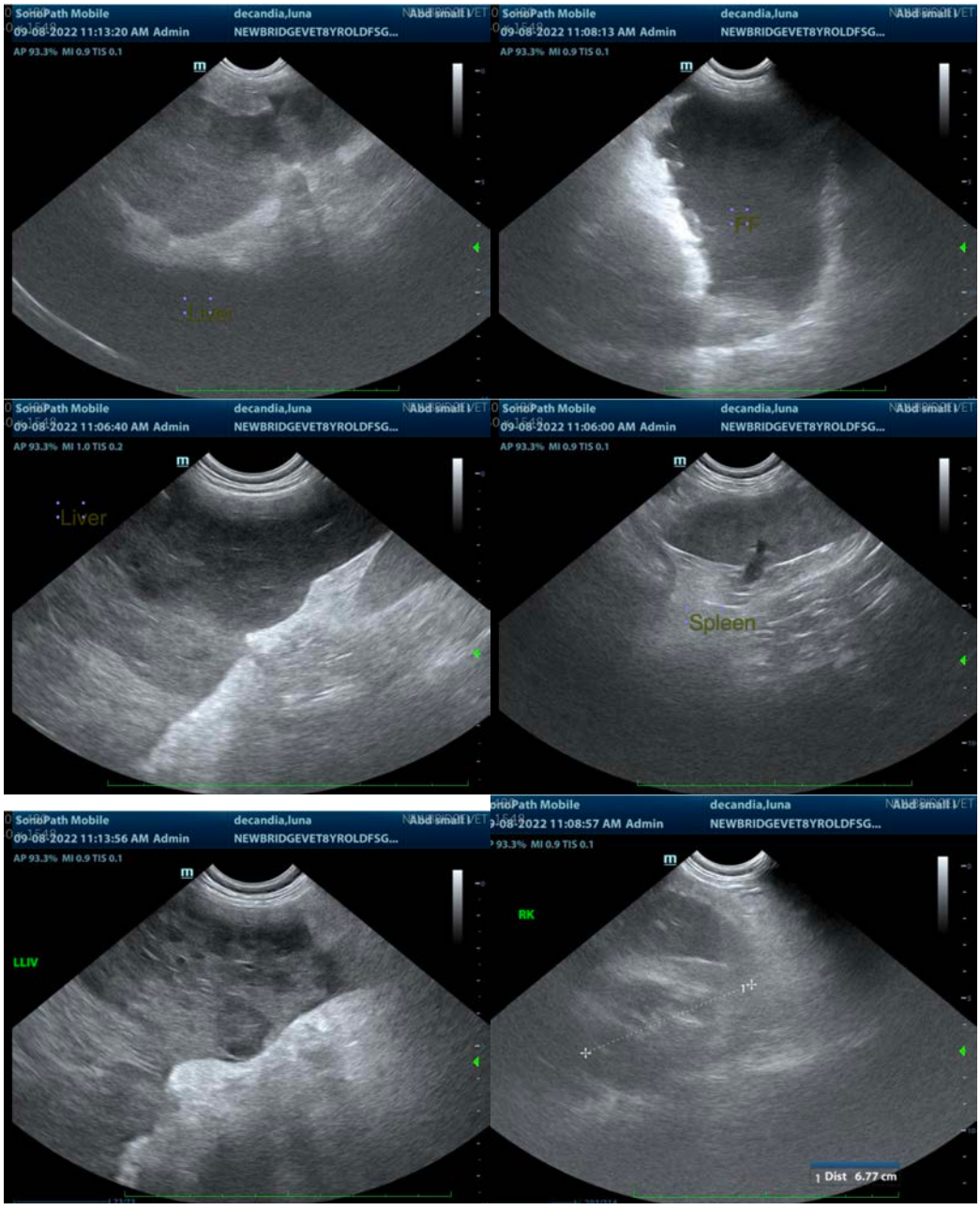
(based on these images) to remove all of the grossly abnormal tissue.



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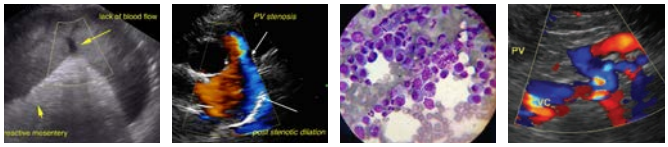

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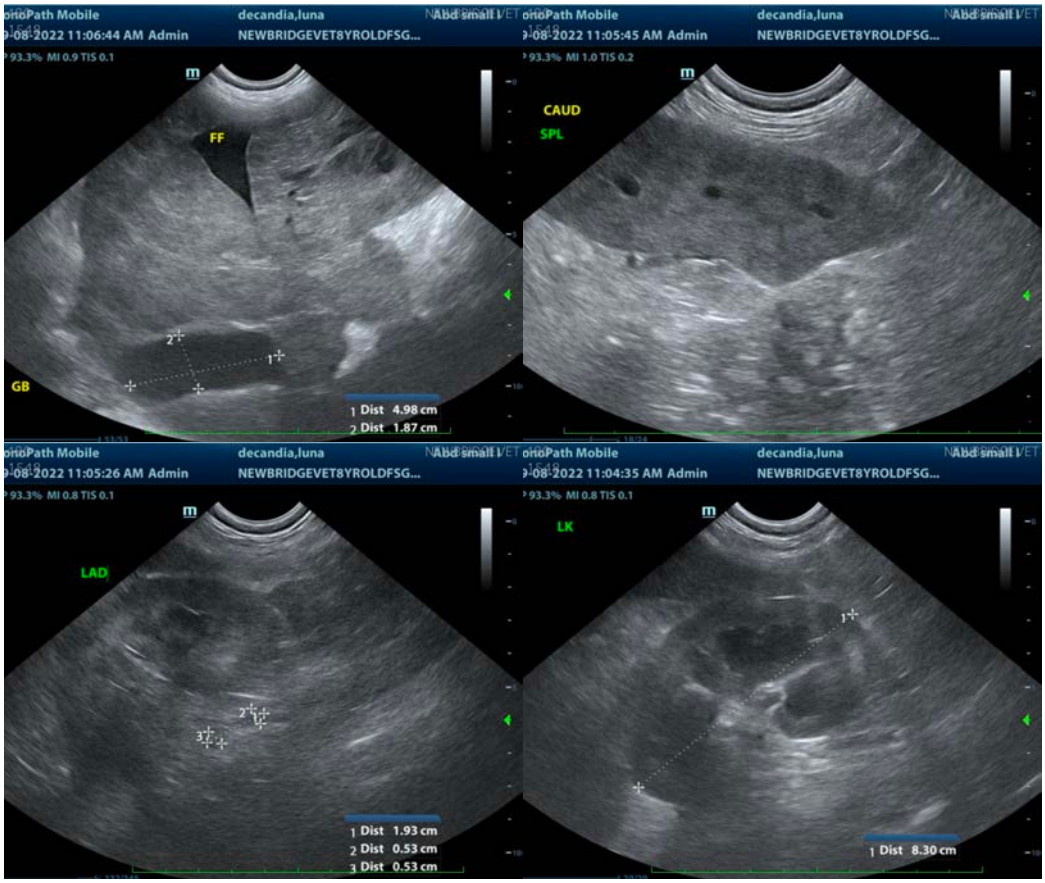

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com