



PATIENT

Nora Berezina

SPECIES

Canine

BREED

Terrier Mix

SEX

Spayed Female

AGE

14 Years

WEIGHT

21.6 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Animal Hospital of
 Kitchener Waterloo

REFERRING VET

Dr. Akhliesh

INVOICE

14947

DATE

04/08/26

PRESENTING CLINICAL SIGNS

New to us, presented with anemia, anorexia and lethargy. No meds

Abnormal PE/Chem/CBC/UA Results: RBC low 2.79, HGB low 6.2g/dL, HCT low 19.5%, PLT low 29

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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (5.86 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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. A small cortical cyst was present measuring 0.20 cm.

The right kidney has a normal shape and size (6.44 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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 was not clearly visualized.

The right adrenal gland was not clearly visualized.

Spleen

The spleen is subjectively large in size. The spleen echotexture is heterogenous and mottled and irregular. The blood flow through the hilus and splenic parenchyma appears normal. The majority of the splenic parenchyma is comprised of large hypoechoic/mixed echogenicity nodules/mass lesions which deviate the splenic margins. Examples measure 1.36 cm and 2.94 cm in diameter.

Liver

The liver is subjectively large 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 occasional poorly defined nodules visualized in the liver. On the left side, there is a large nodule/small mass effect measuring 2.24 cm. Other less prominent, poorly defined hypoechoic nodules are visualized.

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 <0.7 cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is



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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 (0.55 cm in wall thickness) and the jejunum measured as normal (0.27 cm) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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 visible/mildly mottled in the right limb 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 fluid. There are occasional prominent mesenteric lymph nodes. There is an isoechoic mass effect visualized cranially to the urinary bladder measuring 1.37 cm by 1.56 cm, possibly consistent with a lymph node, lipoma, etc.

Caudal to the stomach, there's an irregular hypoechoic mass effect visualized measuring 2.82 cm by 4.17 cm. The omentum is diffusely hyperechoic.

Other

The right auricle and pericardium were visualized and were unremarkable. No obvious pathology is visualized. If cardiac function evaluation is desired a full echocardiogram is warranted.

Pleural effusion is visualized cranial to the diaphragm.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Large irregular mottled spleen with too numerous to count expansile hypo/mixed echogenicity nodules/masses. Findings are concerning for neoplastic process (hemangiosarcoma, round cell neoplasia, etc.). Benign lesions are possible.
- Large heterogenous liver with a hypoechoic target like lesion and ill-defined nodules- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, infiltrative neoplasia (less likely) or other hepatopathy. The focal target-like lesion is concerning for possible metastatic lesion. The other lesions have the appearance most consistent with regenerative nodules, although it is difficult to differentiate a benign from neoplastic lesion.
- Scant amount of free abdominal fluid and pleural effusion visualized.



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- Hypochoic irregular mass effect visualized caudal to the stomach- Findings are suggestive of an effaced/metastatic lymph node. A liver mass lesion or similar cannot be ruled out.

- Isoechoic/hypochoic mass effect cranial to the urinary bladder. This could represent a large lymph node, an intra-abdominal lipoma, etc.

Secondary Findings

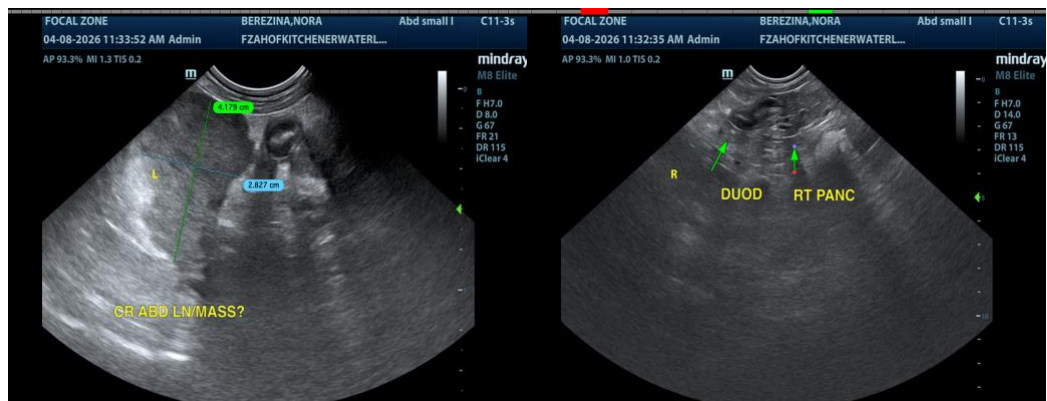
- Pancreatic changes consistent with chronic pancreatic remodeling.
- Age-related changes visualized associated with the kidneys.
- Moderate gallbladder debris- The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

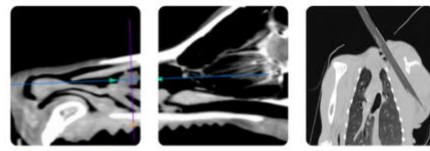
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The spleen is very abnormal in that it is large and comprised of expansile, mixed echogenicity, and hypochoic nodules/masses. The appearance is very concerning for neoplastic process. Consider a fine needle aspirate to further evaluate.

Additionally, there is irregular hypochoic mass effect/lymph node visualized caudal to the stomach and a smaller, less concerning mass effect visualized cranial to the urinary bladder. If surgery is considered, recommend a fine needle aspirate of these locations looking for evidence of definitive metastatic disease.

There's pleural effusion visualized. Recommend three view thoracic radiographs looking for any evidence of metastatic disease, etc. Sampling and cytology may need to be considered.





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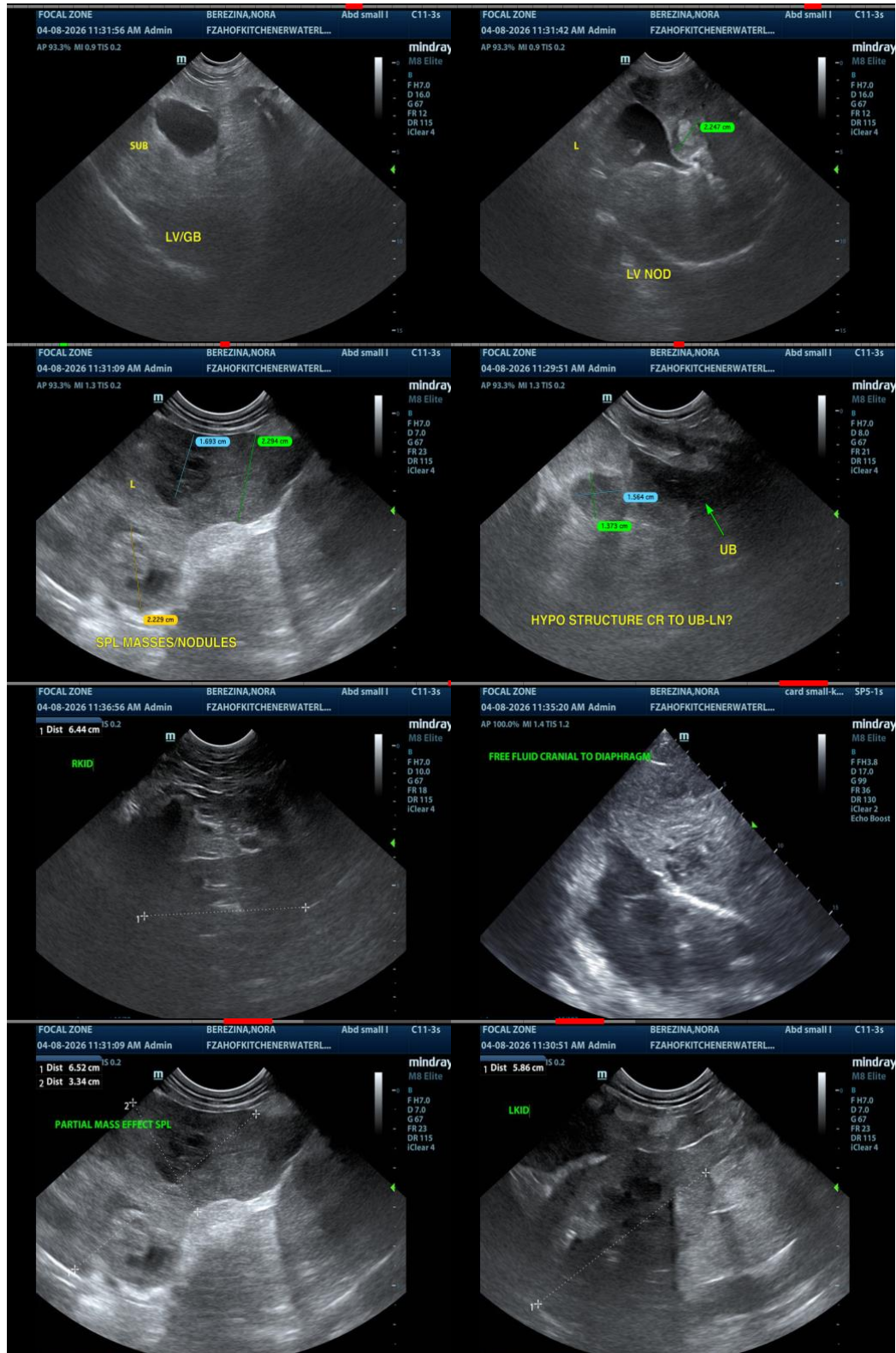
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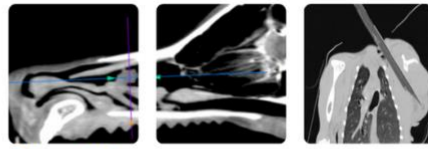
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

info@sonopath.com