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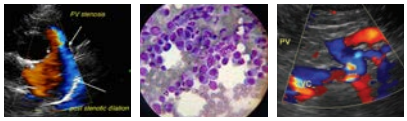

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

12/20/22

PATIENT

Calypso Murray

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

7/20/10

WEIGHT

6.9 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Creswell Vet Clinic

REFERRING VET

Dr. Cullum

INVOICE

43560

PRESENTING CLINICAL SIGNS

P came in for PE on 12/6 because of congestion/URI symptoms and to recheck heart because of Hx of murmur. Bloodwork (done on 12/6) revealed evidence of Liver Disease. PE: Hx of heart murmur that is getting worse (IV/VI systolic murmur on 12/6/22)

Current Medications: 0.3cc Convenia (80mg/mL) SQ on 12/6
Lab Results: revealed evidence of liver Dz. BW otherwise unremarkable including proBNP, T4 and kidney fxn.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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 (3.71 cm). Overall echogenicity is slightly hyperechoic with poor 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 (3.68 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.40 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 0.36 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 (0.86 cm in width at the level of the hilus). The spleen is hypoechoic and mildly mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

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 region in the mid liver where the liver margins appear somewhat rounded, creating the appearance of an isoechoic mass effect, measuring approximately 3.42 cm in diameter. Additionally, there is a small cystic structure measuring 0.43 cm.

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.

Gastrointestinal

The stomach contains moderate shadowing ingesta. It measures at a normal thickness of <0.36cm 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 uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.32 cm. 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 pancreas is prominent and mottled compared to the surrounding isoechoic mesentery, particularly in the left limb. Prominent pancreatic duct noted. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. There are visible mesenteric lymph nodes measuring 0.32 cm and 0.31 cm. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is mildly hyperechoic in the cranial abdomen.

PRIMARY FINDINGS

- Subjectively hypoechoic, mildly mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Large, heterogeneous liver with rounded liver margins/an isoechoic mass effect and a small cystic lesion – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy. The irregular isoechoic region is most consistent with a rounded liver lobe, although a mass effect cannot be excluded as a possibility. The cystic lesion is most consistent with benign hepatic cyst.

- Prominent muscularis layer to the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

- Prominent mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- Mild to moderate shadowing material visualized within the stomach – Findings are most consistent with a non-fasted patient.

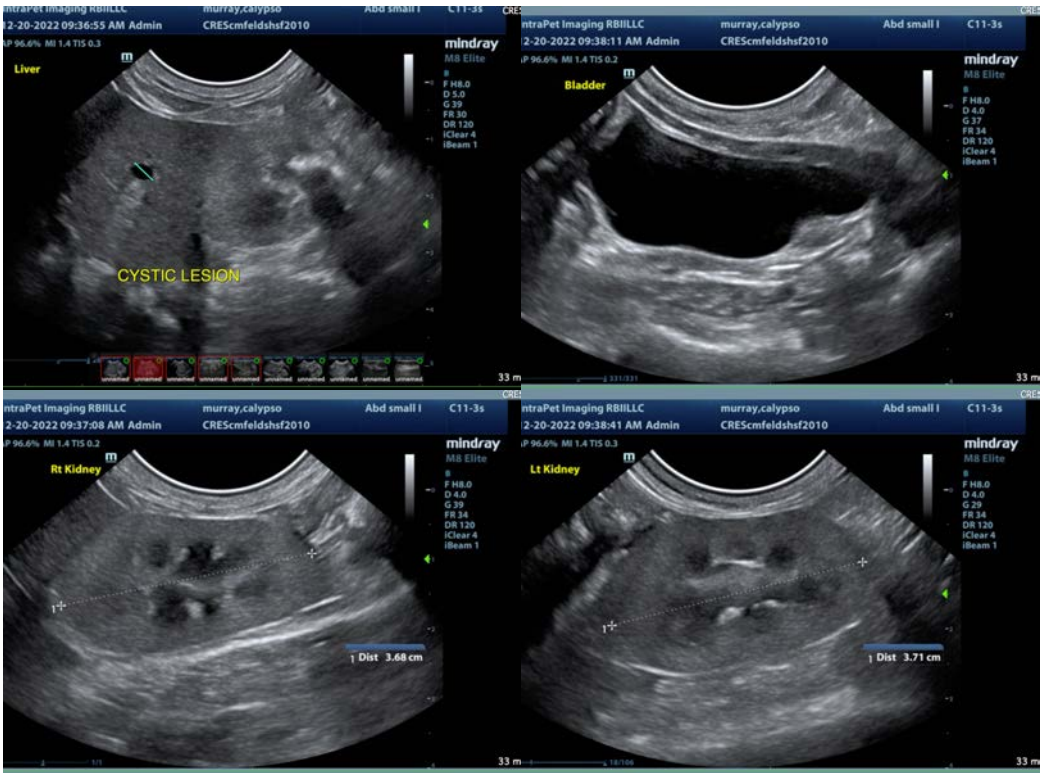
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

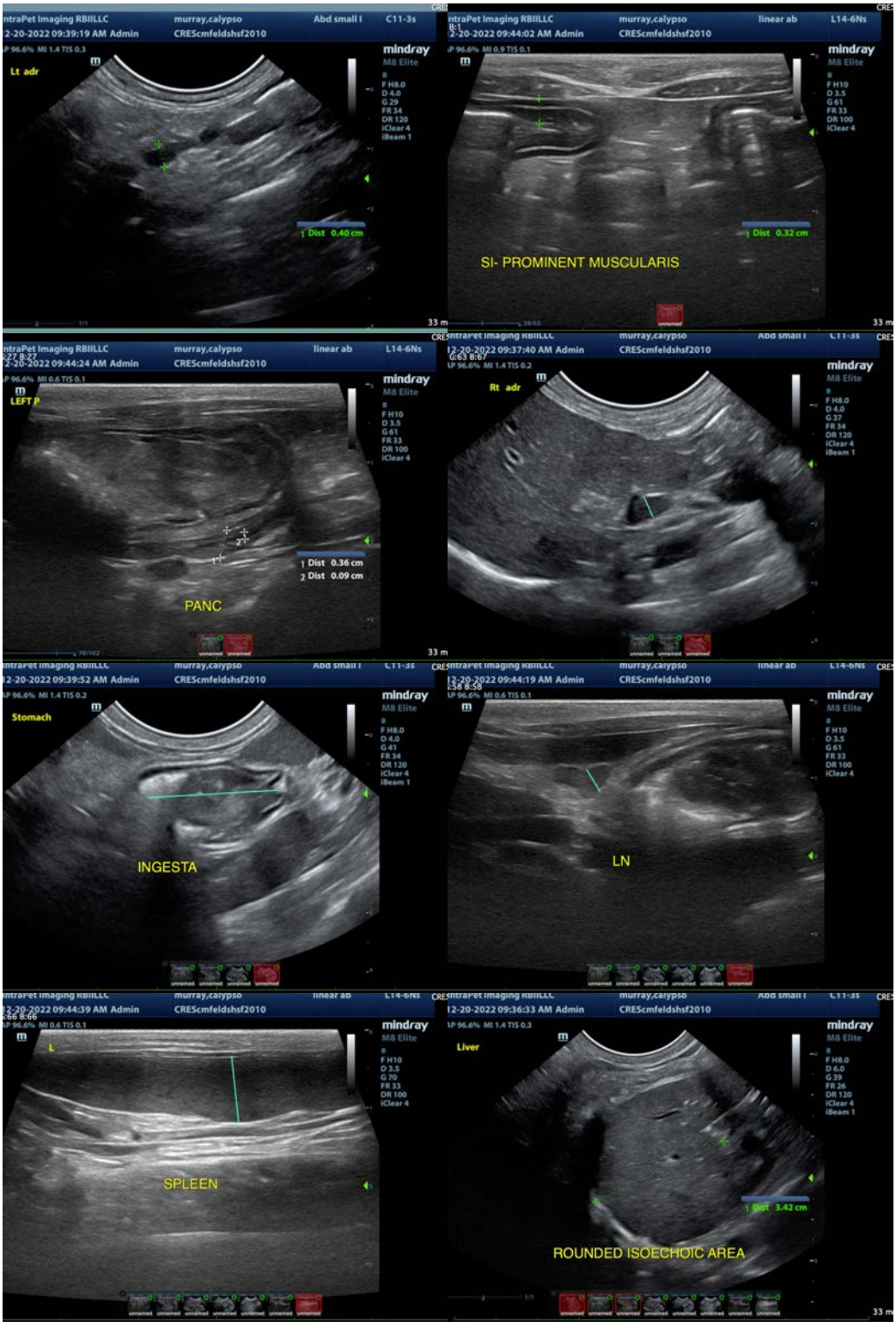
The liver is large and somewhat mottled with what I suspect is a rounded liver lobe, although an isoechoic mass effect cannot be excluded as a possibility. Consider a liver function test and a fine needle aspirate of the liver, as well as screening for toxoplasmosis. If no other cause for a liver enzyme elevation is identified, you could consider a contrast CT scan for a more global view of the liver and better resolution to look for a possible mass effect.

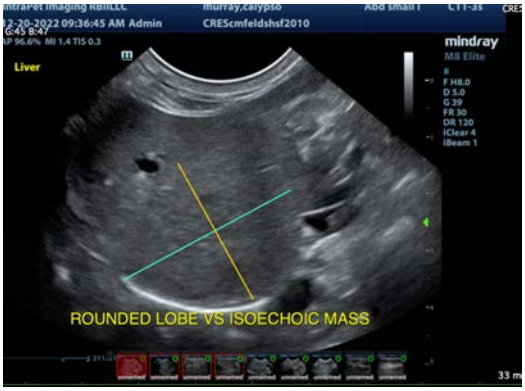
The spleen is very subjectively hypoechoic and mottled. If round cell neoplasia is of concern, and no other issues are identified, you could consider a fine needle aspirate of the spleen.

The small intestine appears slightly "ropey". This can be an incidental finding in some older cats, but can also be an indicator of underlying small intestinal disease. If small intestinal disease is suspected, consider a GI panel to Texas A&M for a qualitative fPLI, TLI, cobalamin and folate to further investigate.

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




Lt adr
Dist 0.40 cm
SI- PROMINENT MUSCULARIS
Dist 0.32 cm
LEFT P
Dist 0.36 cm
Dist 0.09 cm
PANC
Rt adr
Stomach
INGESTA
LN
L
SPLEEN
Liver
Dist 3.42 cm
ROUNDED ISOECHOIC AREA



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.

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