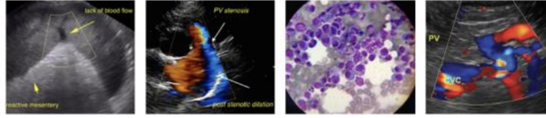

PATIENT

Lily Trimble

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

6/26/2005

WEIGHT

8.4 kg

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

HOSPITAL NAME

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REFERRING VET

Dr. Michelle Wall

INVOICE

10941

DATE

5/20/22

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: Lily is a 16 years 10 months 23 days Female Spayed Pug that presents for episodes of collapse and intermittent labored breathing.

Diagnosis: Episodes of collapse. Intermittent labored breathing
Mild pleural effusion. Pulmonary mass, left caudal lung lobe
ddx: benign vs malignant

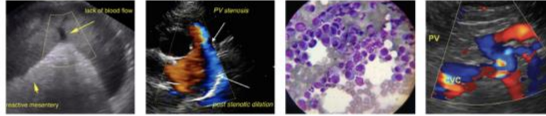
Diagnostics: pleural effusion PCV/ts: 0%/2.0 g/dl. Fluid cytology (pvps): pending
Keystone Radiology Report Findings:
Assessment: Anomalous development, thoracic and caudal vertebrae as described. Clinical significance is unclear. Correlate with neurological examination.
Multifocal chronic disc change as described. This is often an incidental finding but can be associated with acute exacerbation of chronic disc change. Correlate with neurological examination.

Mild bilateral pleural effusion. This does suggest an effusive process associated with the mass lesion which may represent hemorrhage, malignant effusion or inflammation. Consider assessment of the fluid obtained by thoracocentesis along with cytology.
Irregularly bordered pulmonary mass in the caudal dorsal portion of the left caudal lung lobe. Differentials include neoplasia, granulomatous disease such as fungal, eosinophilic, parasitic or foreign body granuloma or pulmonary abscess. As this is visible with thoracic ultrasound, consider guided fine needle aspirates for cytology. Further information may also be provided by computed tomography.
Ventrally distributed alveolar disease in the right cranial and right middle lung lobe. This could be gravitation of necrotic material from the pulmonary mass and secondary pneumonia or could be gravitation of pulmonary hemorrhage. Correlate with clinical signs and history.
Otherwise normal thorax.
Thoracocentesis with introduction of a small amount of free pleural air.
Mild to moderate hepatomegaly. Differentials include vascular congestion, metabolic hepatopathies (such as vacuolar hepatopathy, endocrine hepatopathy, fatty liver and hepatic lipidosis), infiltrative neoplasias, cholestatic hepatopathy and biliary associated liver disease, and infectious/inflammatory conditions such as hepatitis. Further information may be obtained by laboratory assessment of liver enzymes, potential bile acid stimulation testing and abdominal ultrasound with guided fine needle aspirates. ÍOtherwise normal abdomen.
HR/RR/BP: 146 HR,
Current Medications: Maropitant, Unasyn, Docycycline, Baytril and Famotidine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is distended. A small amount of suspended echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.



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The left kidney is normal in size (3.59 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size 4.11 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. A few small, nonobstructive nephroliths are visualized. Mild pyelectasia is present (0.34 in the transverse plane). There is no evidence of hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.45 cm at cranial pole) (0.44 cm at caudal pole) (1.67 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.16 cm at cranial pole) (0.45 cm at caudal pole) (1.64 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (0.92 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

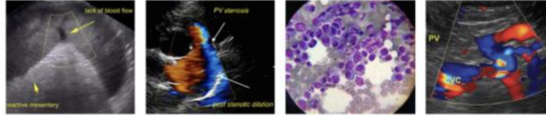
Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely mottled, bordering on a nodular appearance. A 2.01 cm hypoechoic nodule/mass is observed in the region of the right medial lobe. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are mostly anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is moderate fluid distended and hypomotile. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.



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Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

There is no evidence of free fluid. 1.90 x 1.15 cm cystic lymph node is observed in the right, cranial quadrant. In addition, a 0.81 cm lymph node is observed just caudal to the stomach.

ULTRASONOGRAPHIC EXAMINATION OF THE THORAX

A brief visualization of the heart reveals subjectively normal chamber size and contractility. There is no obvious evidence of a heart-based mass. There is suspected trace pericardial effusion. A moderate amount of echogenic pleural effusion is present. Within the cranial mediastinum, two enlarged, rounded lymph nodes are visualized, one measuring 1.80 cm in length, the other measuring 2.33 cm in length.

In the left hemithorax, a 2.42 x 1.54 cm irregular, slightly heterogenous mass is observed within the pleural effusion. It does not appear attached to the body wall or heart.

ULTRASONOGRAPHIC FINDINGS OF THE THORAX

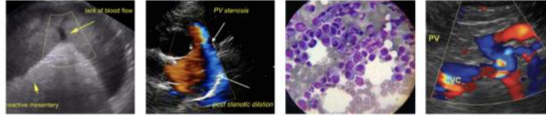
- Mass in the left hemithorax. Neoplasia (i.e., adenocarcinoma) is considered likely with a lower possibility of a benign process (i.e., inflammatory focus, granuloma). The cranial mediastinal lymphadenopathy may be due to metastatic disease, reactive lymphadenitis or lymphoid hyperplasia. The pleural effusion is likely secondary to the thoracic mass.

ULTRASONOGRAPHIC FINDINGS OF THE ABDOMEN

Primary Findings

- The hepatic parenchyma changes could be consistent with a benign process (i.e., regenerative nodular hyperplasia). However, given the disproportionate elevation in ALT, more insidious hepatic pathology (i.e., infiltrative neoplasia, inflammatory disease or hepatotoxicosis (i.e., copper)) is considered more likely.
- The cystic lymph node in the right cranial quadrant may represent a benign reactive change. However, metastatic disease cannot be completely excluded.
- Gastric ileus

Secondary Findings



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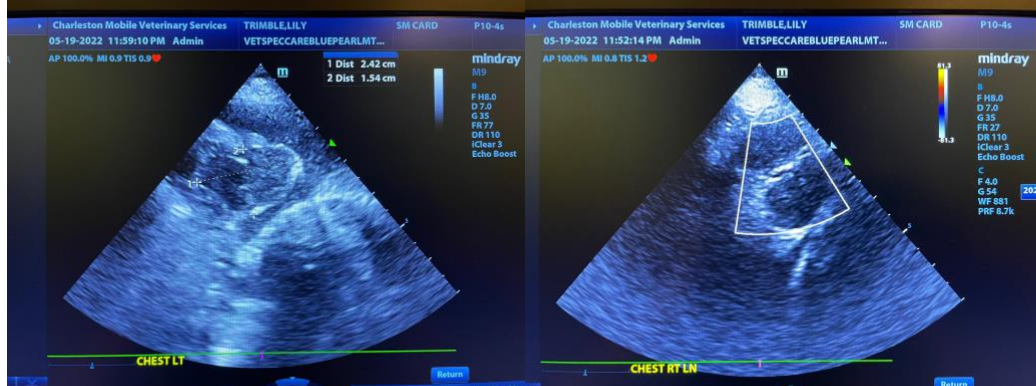
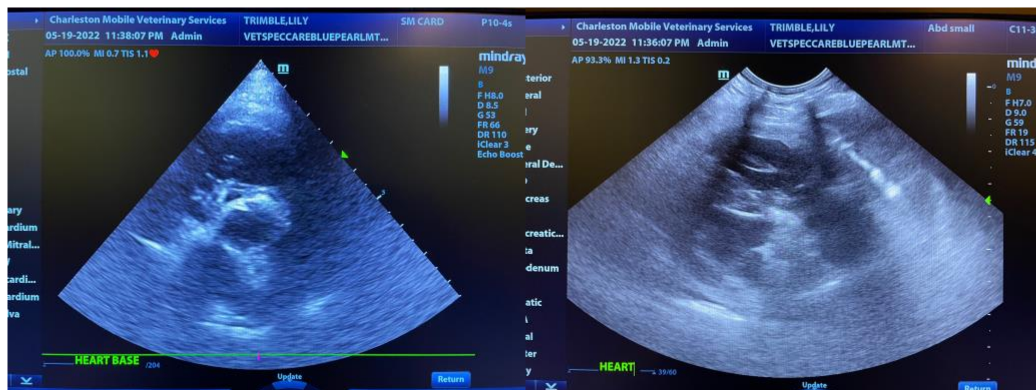
- Bilateral, chronic, age-related renal changes with dystrophic mineralization, pyelectasia, and right nonobstructive nephrolithiasis.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Submission of the thoracic fluid for cytologic evaluation is recommended. If results are inconclusive, a thoracotomy with removal of the mass and submission for histopathology may be necessary to get a definitive diagnosis. A thoracic CT scan would be useful in presurgical planning.
- Regarding the hepatic parenchymal changes, hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) would be necessary to get a definitive diagnosis. Clotting time should be assessed prior to any tissue sampling.
- Consider initiation of a promotility agent (i.e., metoclopramide) for the gastric ileus.





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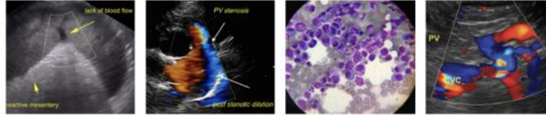

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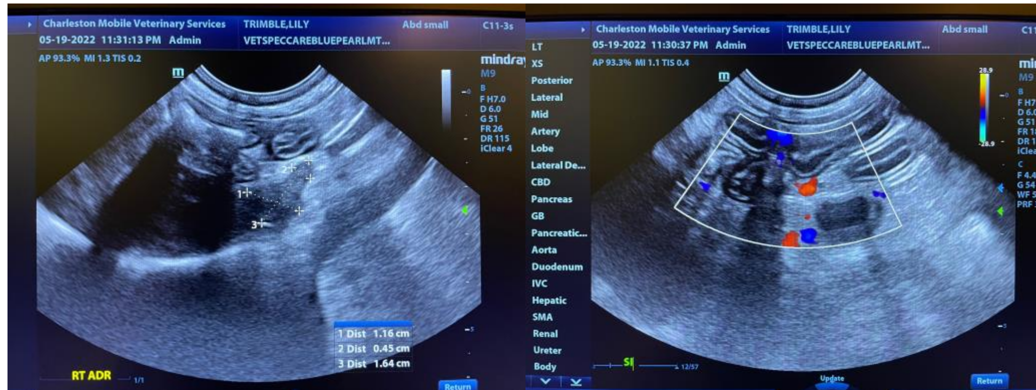

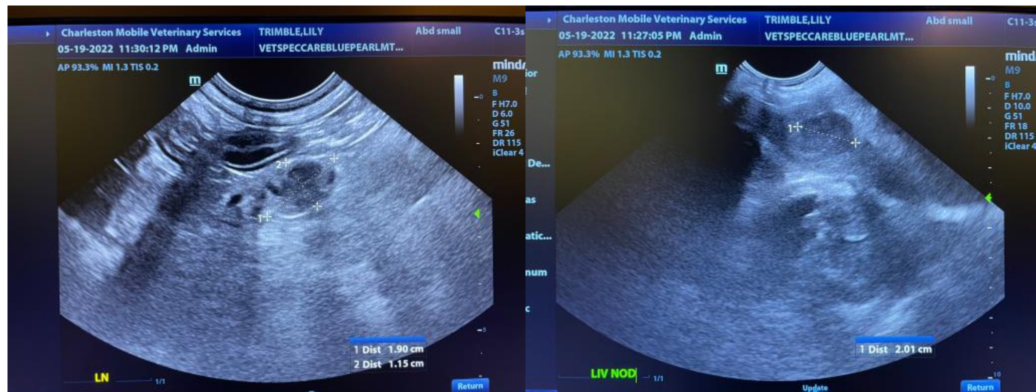

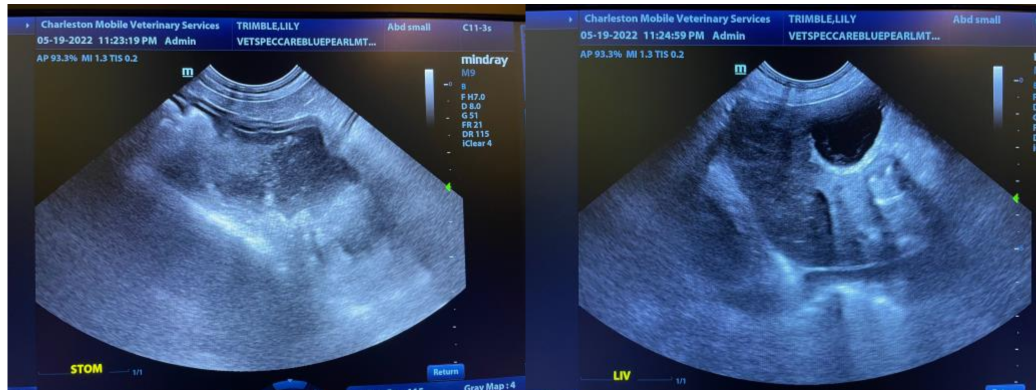

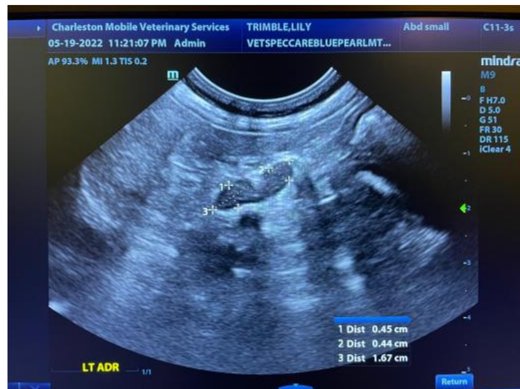

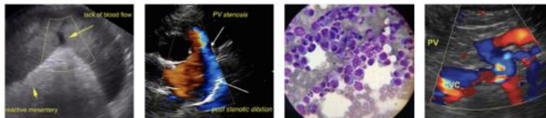

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com