



PATIENT

Ting Ting Lowe

SPECIES

Canine

BREED

Pug

SEX

Female, spayed

AGE

6/10/2009

WEIGHT

17.2 lbs.

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

Sun Dog Cat Moon VC

REFERRING VET

Dr. Clayton

INVOICE

12908

DATE

1/25/2022

PRESENTING CLINICAL SIGNS

Chronic diarrhea for ~1mo duration. Originally started when O gave a bone and some turkey cuts, stool started soft and has progressed to liquid. Workup at Banfield 1/6: bloodwork showed Creat 2.0, otherwise all normal, SDMA normal (11), normal CPL. Started on metronidazole, k-pectalin paste, proviable forte and low fat GI food. No real improvement per O. Diarrhea has worsened -- seems to happen mostly in middle of night, but did have accidents in house during daytime in past few days. On PE, vitals normal, frank blood seen on glove during rectal exam.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The left kidney is normal size (4.27 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Several non-obstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.47 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. A few non-obstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.67 cm at cranial pole) (0.78 cm at caudal pole) (1.91 cm in length) with a slightly irregular shape. The parenchyma is subtly heterogeneous in appearance. No distinct focal lesions are observed. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.34 cm at cranial pole) (0.26 cm at caudal pole) (1.26 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 subjectively normal in size with a slightly irregular peripheral contour at the lateral aspect. A 1.27 x 0.75 cm irregular, hypoechoic nodule is observed at the lateral aspect. The lesion causes slight capsular expansion. The parenchyma in the remainder of the spleen is homogeneous. Splenic vasculature is normal with no evidence of thrombosis.

Liver

The liver is subjectively prominent in size with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen. A 1.85 cm well circumscribed, hypoechoic nodule/mass with a



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hyperechoic center is observed at the caudal aspect. In addition, an approximately 3 cm isoechoic mass is observed on the right side. In the remainder of the parenchyma there are ill-defined, hypoechoic nodules/areas throughout the organ. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

Gastrointestinal

The gastric lumen is mildly fluid distended. The gastric wall is diffusely and mildly thickened (up to 0.58 cm) with retention of the 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 wall of the descending colon is mildly thickened (up to 0.51 cm) with a normal layering pattern. No obstructive disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- 2 hepatic masses. Neoplasia (i.e., round cell tumor, histiocytic sarcoma, adenocarcinoma, other) is considered likely. However, multifocal inflammatory disease cannot be completely excluded. The diffuse hepatic parenchymal changes are non-specific and could be secondary to inflammatory disease, thromboembolic disease, hepatotoxicosis (i.e., copper), other hepatopathy +/- a benign age-related process (i.e., regenerative nodular hyperplasia).
- The splenic nodule may represent a metastatic lesion. Alternatively, a benign process such as a focus of lymphoid hyperplasia or extramedullary hematopoiesis cannot be completely excluded.
- The gastric and colonic wall changes are most consistent with inflammation with a lower possibility of emerging lymphoma.



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Secondary Findings:

- Minor age-related renal changes with non-obstructive nephrolithiasis.
- Gallbladder debris- incidental.
- Mild left adrenomegaly

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Fine needle aspirates of the accessible liver mass and splenic nodule can be considered (if clotting status is appropriate). 25-gauge needles should be used. If cytology results are inconclusive, surgical biopsies may be necessary to get a definitive diagnosis.
- Regarding the diarrhea, diagnostic/therapeutic considerations include the following:
 1. A fecal evaluation for ova/Giardia
 2. Prophylactic deworming with Fenbendazole at 50 mg/kg once a day for 5 days is recommended. Repeat above protocol in 3 weeks.
 3. GI panel (send to Texas A&M)
 4. A 6-week limited antigen diet trial to assess for food allergies
 5. Empirical treatment for small intestinal bacterial overgrowth with a 4-week course of Tylosin.
 6. Initiation of a probiotic with a high colony count (i.e., Visbiome or Provioble Forte).
 7. Ultimately, endoscopic or surgical gastrointestinal biopsies may be necessary to get a definitive diagnosis.





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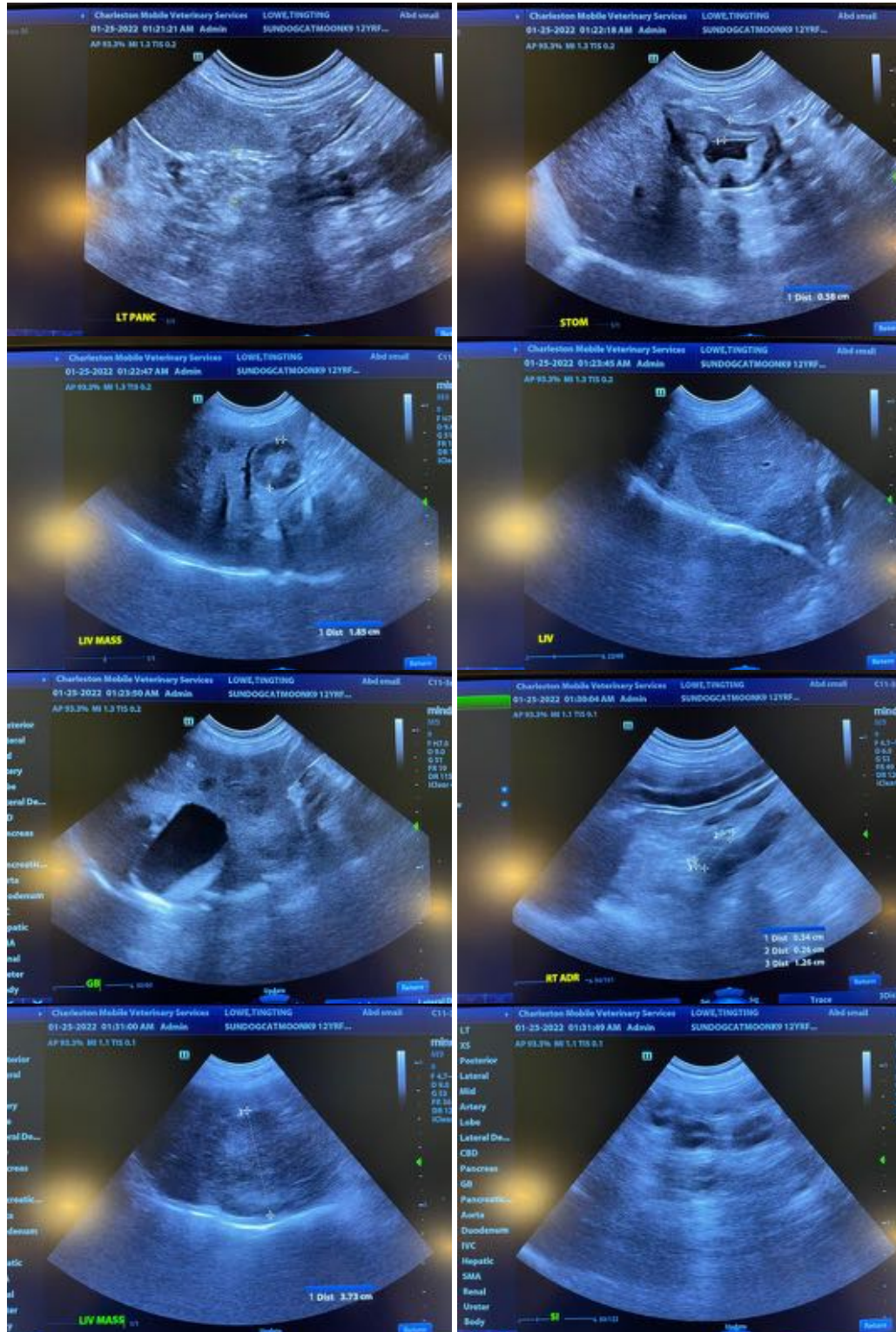
Dr. Clayton

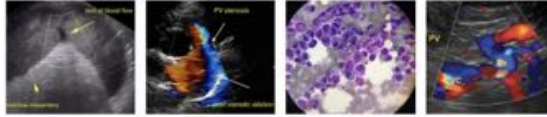
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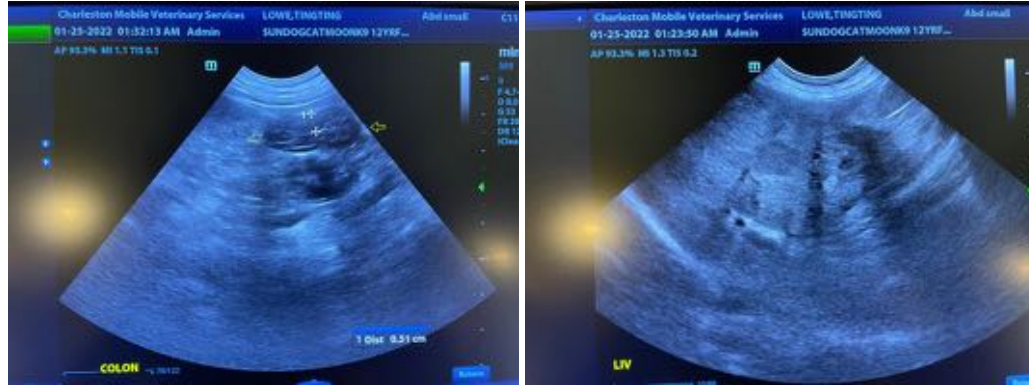
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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 ACVIM (*Small Animal Internal Medicine*)

Andrea.Nicastro@CharlestonMobile.net

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