



PATIENT PRESENTING CLINICAL SIGNS

Gigi Maldonado

History: Presented as a referral for an abdominal ultrasound to evaluate de gastro-intestinal tract. Patient was referred by Dr. Jonathan De Jesus Nazario on 10/13/22. Patient started with clinical sign of vomiting and was diagnosed with gastritis around 10/05/22. Since patient has been anorexic and developing diarrhea too and no improving the clinical signs besides been on Tx, further evaluation with abdominal ultrasound was recommended. Tx: Gastrointestinal diet, Probiotics. An FNA of the Mesenteric LN were done and it is pending.

SPECIES

Canine

BREED

Mix

Abnormal PE/Chem/CBC/UA Results: PE 10/13/22: Cardiovascular: Heart murmur grade III-IV/VI
Bloodwork: 10/11/22 CBC: WBC 105.65+ 10⁹/l (6-17) LYM: 13.13+ 10⁹/l (1-4.8) MON: 9.41+ 10⁹/l (0.20-1.50) NEU: 83.00+ 10⁹/l (3-12) PLT: 189

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX

Spayed Female

Urinary System

The **urinary bladder** wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone is normal.

AGE

14 years

The **left kidney** is normal size (4.64 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. A few small nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

WEIGHT

13.86 lbs

The **right kidney** is normal size (4.29 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. A few small nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

INTERPRETED BY

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

Adrenal Glands

The **left adrenal gland** is normal size (0.52 cm at cranial pole) (0.64 cm at caudal pole) (2.04 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.

IMAGING PERFORMED BY

Dr. G. Ferrer, DVM

The **right adrenal gland** is normal size (0.60 cm at cranial pole) (0.48 cm at caudal pole) (1.74 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.

HOSPITAL NAME

Paseos VC

Spleen

The **spleen** is subjectively normal in size (0.96 cm in width at the level of the hilus) with normal curvilinear peripheral contours. At the caudal pole, a 2.21 x 1.02 cm hypoechoic area is visualized. The lesion does not cause capsular expansion. A few myelolipomas are also seen. Splenic vasculature is normal with no evidence of thrombosis.

REFERRING VET

Dr. Jonathan De
Jesus Nazario, DVM

Liver

The **liver** is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

INVOICE

11823

DATE

10.13.22

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. A moderate amount of echogenic debris is observed within the lumen, most of which is gravity dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The **gastric lumen** is not distended. 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 segmentally fluid-distended (mild). The small intestinal wall is normal to mildly thickened (up to 0.50 cm) with questionable retention of the normal layering pattern in some areas. There is evidence of mucosal fogging in some regions. Discreet masses are not identified. The ileocecal colic junction is normal. The wall of the descending colon is normal to mildly thickened (up to 0.44 cm) with retention of the normal layering pattern. The lumen of the descending colon contains echogenic fluid. There is no obvious evidence of an obstructive pattern.

Pancreas

The base and limbs of the **pancreas** are 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

The **mesentery** throughout the abdomen is hyperechoic. A small amount of free fluid is observed. The medial iliac **lymph nodes** are visible/prominent, the largest measuring 1.32 cm in length. Several enlarged irregular hypoechoic mesenteric lymph nodes are also seen, the largest measuring 4.03 cm in length.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The bowel wall changes could be consistent with a severe inflammatory process or emerging neoplasia (i.e., lymphoma).
- The abdominal lymphadenopathy could be consistent with infiltrative neoplasia (i.e., lymphoma, lymphadenitis or lymphoid hyperplasia).
- Diffuse peritonitis, likely secondary to bowel and/or lymph node pathology

Secondary Findings

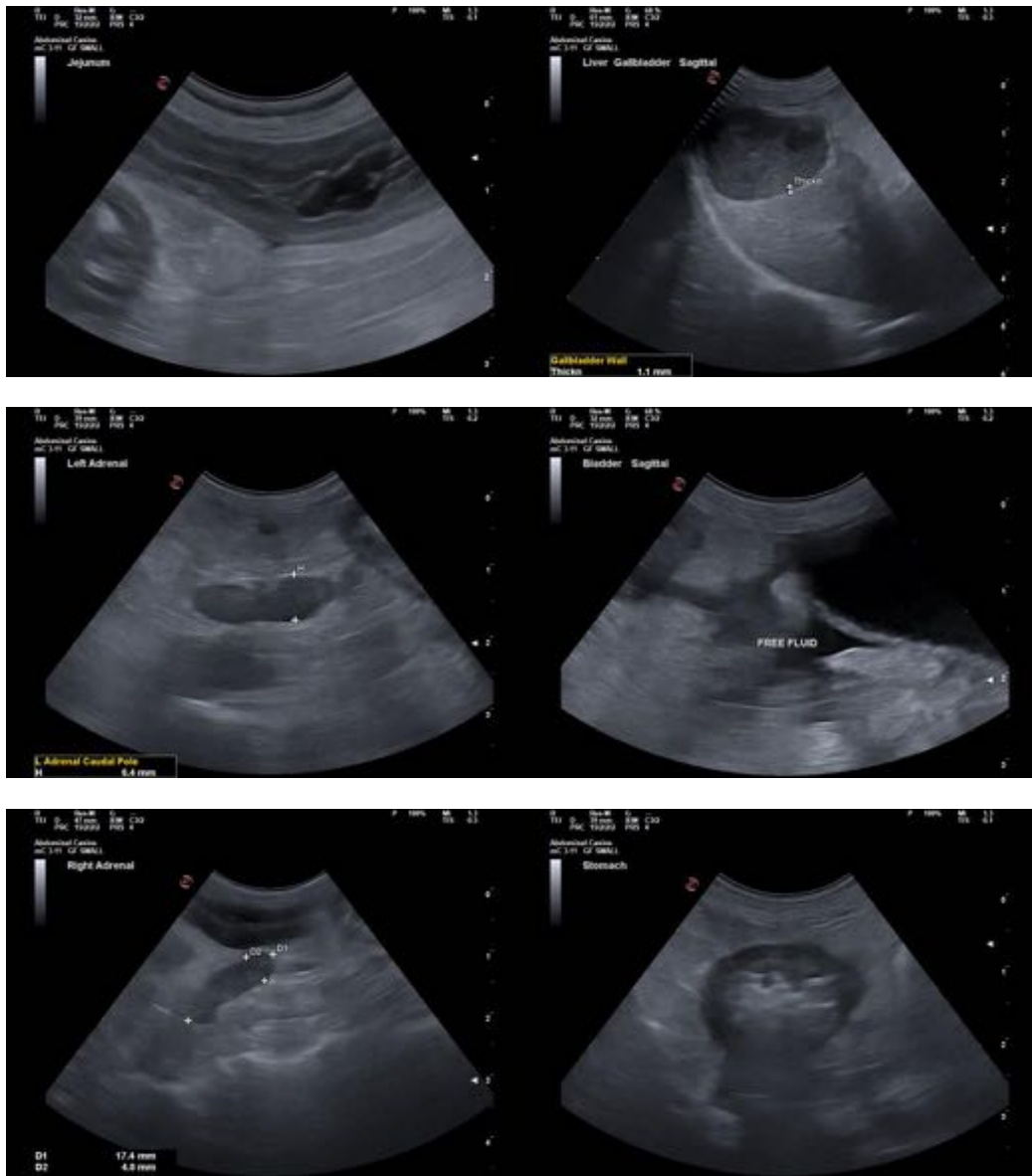
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral age-related renal changes with dystrophic mineralization
- The hypoechoic area at the caudal aspect of the spleen could be consistent with infarction, focus of extramedullary hematopoiesis, inflammation, lymphoid hyperplasia, or emerging neoplasia.

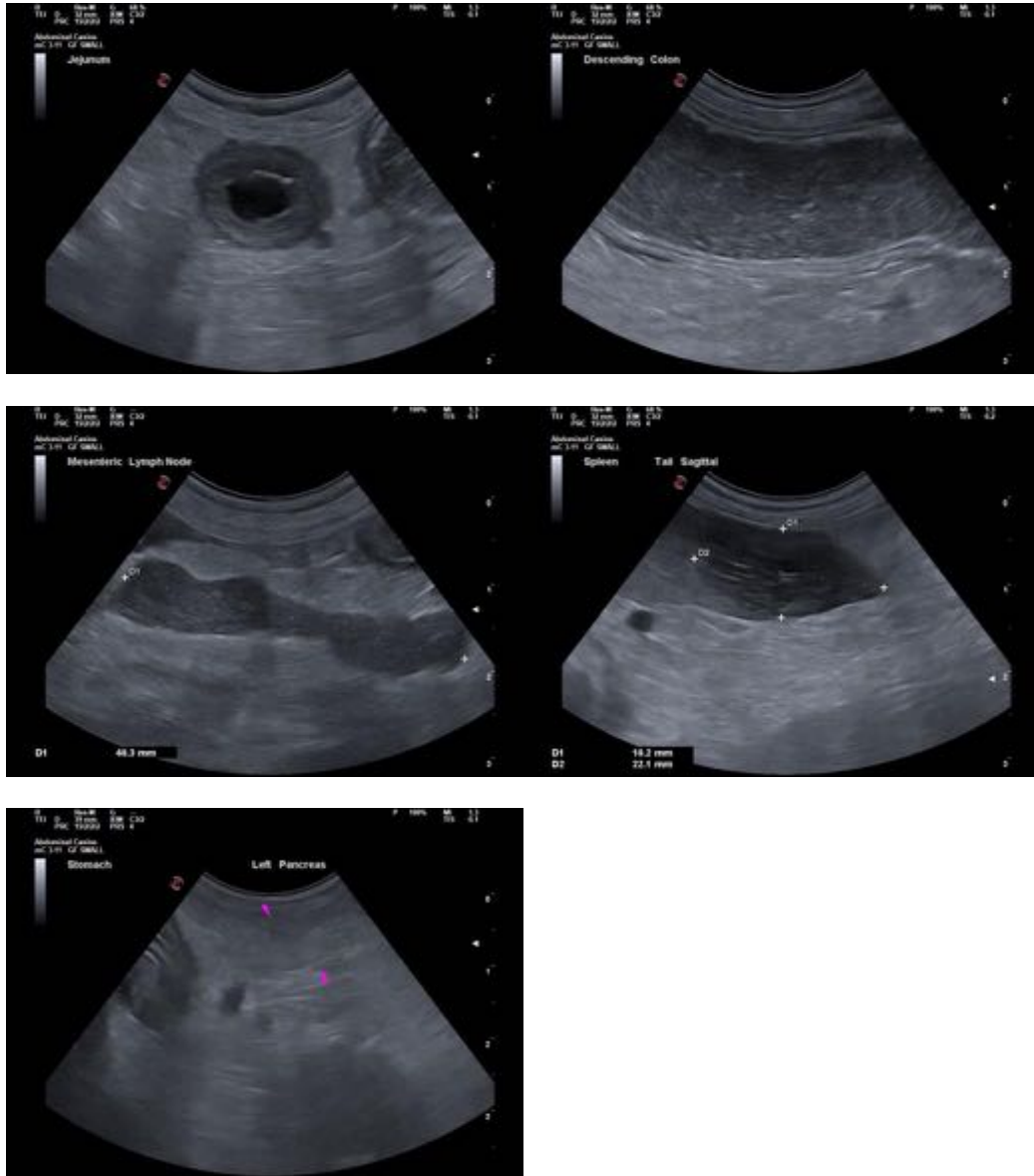
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If the abdominal lymph node cytology results are inconclusive, more advanced testing (i.e., PARR flow cytometry or biopsies) may be necessary to get a definitive diagnosis.

Other diagnostic considerations include:

1. Thoracic radiographs to assess for occult disease in the chest
2. A malabsorption panel including serum cobalamin and folate, TLI and PLI
3. A fecal evaluation for ova and Giardia is recommended.
4. Given the history of a heart murmur, an echocardiogram, blood pressure, +/- EKG may also be warranted.





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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