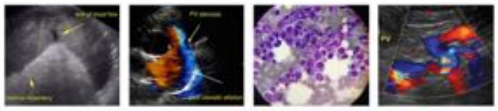
PAUS
Pet Animal Ultrasound Service
4paus.com 781-635-5677



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Carly Viera

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

12 years

WEIGHT

19.6 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Anchor AH

REFERRING VET

Katherine Pietsch, DVM

INVOICE

12488

DATE

3.23.23

PRESENTING CLINICAL SIGNS

History: P has been drinking excessively & urinating excessively for a while. She has been vomiting intermittently. The patient may have had a "seizure like" episode several weeks ago. The patient presented very lethargic, weak, dehydrated and mildly icteric. Abdominal palpation is doughy and mildly painful. The patient is in liver failure (see chem) R/O neoplasia. MVD vs primary liver failure. Current meds: LRS IV, Unasyn, Enrofloxacin, Lactulose. Chest x-rays wnl. Decreased abd detail near liver. Liver slightly enlarged. Intestines bunched in mid abdomen w/ some gas dilation.

Abnormal PE/Chem/CBC/UA Results: SDMA 15, ALT 4765, ALP 1885, GGT 19, Bili 4.1, Pre-Bile Acids 531.3, Post Bile Acids 551.8, Ammonia 347.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (4.00 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal in size (3.91 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size (0.50 cm at cranial pole) (0.45 cm at caudal pole) with a normal shape and 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 in normal size (0.49 cm at cranial pole) (0.44 cm at caudal pole) with a normal shape and 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 overall normal in size (0.93 cm in width at the level of the hilus). A 0.80 cm hypoechoic nodule/mass is observed at the cranial pole. The lesion causes slight capsular expansion. The remaining parenchyma is subtly mottled in appearance. Splenic vasculature appears normal with no evidence of thrombosis.

Liver

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic-to-hyperechoic relative to the spleen and diffusely heterogenous in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is distended. The wall normal in thickness. A moderate amount of suspended echogenic debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is not distended. The gastric wall thickness is difficult to determine due to excessive rugal folds. However, it is subjectively thickened. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The colonic lumen contains shadowing fecal material. There is no evidence of an obstructive pattern.

Pancreas

The pancreas is diffusely prominent to enlarged with irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is not overtly dilated. Surrounding mesentery is hyperechoic.

Free Abdomen

The mesentery in the cranial abdomen is hyperechoic. There is no obvious evidence of free fluid. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The pancreatic changes are consistent with moderate acute or chronic active pancreatitis with adjacent peritonitis.
- The hepatic parenchymal changes are nonspecific and could be secondary to inflammatory disease (i.e., bacterial cholangiohepatitis, chronic hepatitis), Leptospirosis, hepatotoxicosis, infiltrative neoplasia (i.e., lymphoma), other hepatopathy.
- The gall bladder changes could be consistent with cholestasis, an emerging mucocele, or less likely, fasting.
- Splenic nodule/mass. Neoplasia (i.e., sarcoma, round cell tumor) is suspected. However, a benign lesion (i.e., focus of lymphoid hyperplasia or similar), cannot be excluded.

Secondary Findings

- Bilateral chronic renal changes with right dystrophic mineralization
- The subjective gastric wall thickening may be artifactual due to excessive rugal folds, may represent an inflammatory process, or less likely, emerging neoplasia.

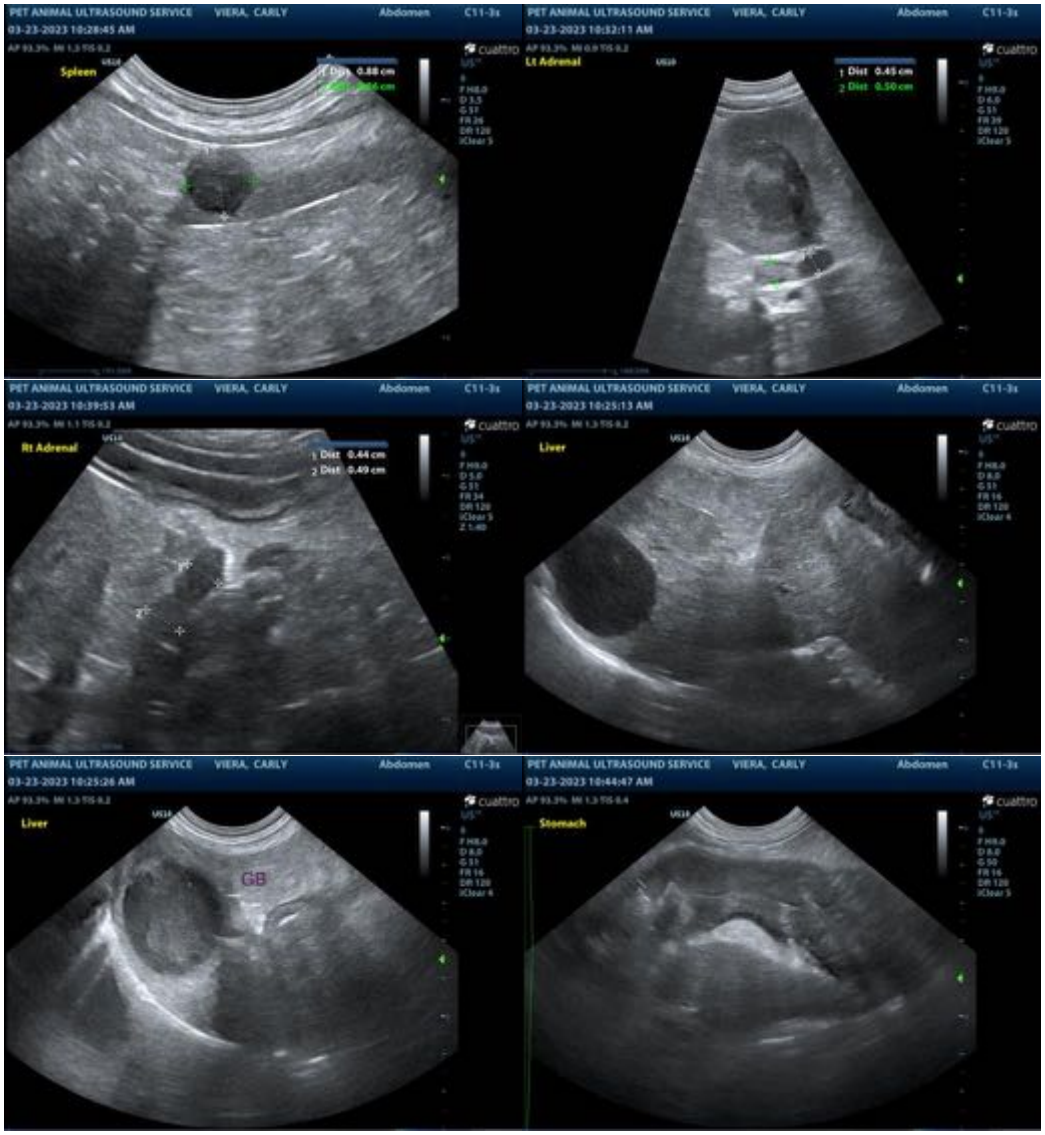
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.

- Consider fine-needle aspirates of the liver and the splenic nodule/mass (if clotting status is appropriate). Twenty-five gauge-needles should be used. If cytology results are inconclusive and the patient can be stabilized, liver biopsies as well as a splenectomy with submission of tissue samples for histopathology can be considered.

- Also consider Leptospirosis testing if clinical suspicion for disease is high.

- In the meantime, supportive care for pancreatitis is recommended including IV fluid therapy, gastric protectants, antiemetics, pain medication as needed, +/- fresh frozen plasma. Nutritional support (i.e., via trickle feeding) should be initiated as soon as the patient will tolerate it, as this will help to maintain enterocyte health.



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