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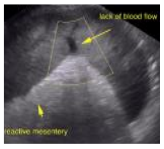
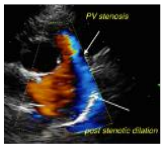
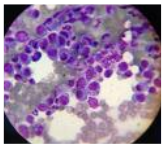
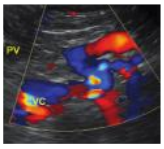





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Ella Hart

SPECIES
Canine

BREED
German Shep Mix

SEX
Spayed Female

AGE
15 years

WEIGHT
47.4 lbs

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

IMAGING PERFORMED BY
Dr. Jo Goodman

HOSPITAL NAME
Evandale-Blue Ash PH

REFERRING VET
Dr. Stephanie Wehmer

INVOICE
10717

DATE
4/7/22

PRESENTING CLINICAL SIGNS

History: History of liver enzyme elevations since 2017. Presented as a new patient with us on 4/25/2019 and we performed CBC/Chem/UA. Liver enzymes elevated as well as her cholesterol. Further treatment was not done at this point. Patient presented 5/20/2020 for a possible seizure, BW was performed and liver values were elevated much more than the previous year, calcium high, phos and potassium low. Started on Denamarin and amoxi tri clav 375mg (1 tab BID). Sent T4 to the lab and was normal. Rechecked on 5/26 and BW showed normal calcium, improved but still high ALT and cholesterol, further elevated GGT and ALP. Sent home additional course of amoxi tri clav. Per owner, patient was 95% improved at recheck. Recheck BW on 6/23/2020 showed elevated SDMA and her liver enzymes remained elevated. Has been on Denamarin since. 9/10/2020 patient presented for possible UTI. Urine showed protein present in urine and UPC performed - confirmed proteinuria. Negative for bacteria but had mild skin infection on vulva. 9/28/2020 performed BP and rx'd enalapril 10mg (1 tab SID). Rechecked renal panel and UPC on 10/29/2020 and renal values improved and UPC improved by almost half since starting enalapril. 1/11/21 patient's UPC elevated from October and SDMA elevated. increased enalapril to 10mg BID. 3/24/21 a UPC was rechecked and was higher than previous. Increased enalapril to 20mg BID. 11/26/21 patient start to have difficulty with standing/walking. Started her on laser therapy treatments, cerenia tablets for suspected nausea. Sent home prednisone 20mg on 12/7/21 in case the owners needed it over the weekend, and she was significantly more uncomfortable. started prednisone 20mg around the end of January 2022 and patient was more comfortable, eating better. Presented 2/18/2022 for liquid diarrhea and inappetence, BW showed further elevated kidney and liver enzymes. Did supportive care and patient improved with minor diarrhea flare ups after that were not as severe as the one in Feb. Presented 3/14/22 for annual exam, owner noted she was still having difficulty getting up and knuckling when moving around. Appetite normal and acting herself otherwise. Performed BW that showed progressing kidney elevations, improved but still elevated liver enzymes and chronic anemia. Presented today for u/s, eating really well and acting herself otherwise. Small amount of soft stool the last few days but was improved today. Current medications as of 4/7/22: entyce - hasn't had for a few weeks enalapril 20mg, 1 tab BID proviable 1 cap SID denamarin in AM gabapentin 100mg, 1 cap BID t-relief, 3 tab BID cosequin SID metronidazole - got it for 3 days, last got it yesterday aller-clear

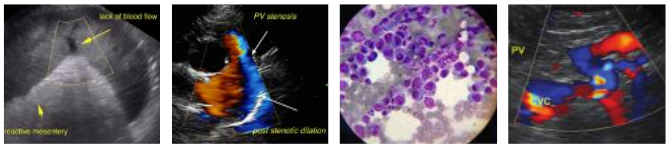
Abnormal PE/Chem/CBC/UA Results: BP - 9/28/2020 1.) 181/152 160M 181BPM 2.) 185/151 158M 182BPM 3.) 187/ 151 161M 186BPM 4.) 190/149 156M 181BPM bloodwork attached. Most recent blood work from 3/14/2022, reveals BUN of 36. SDMA 20. ALT 510. ALP 963. DGD 18. UPC 6.0. USG 1.025. Inactive sediment. Normal T4. 40x negative.

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 moderately distended with mostly anechoic urine. 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.

The left kidney presented normal size (5.80 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary



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distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter

The right kidney presented normal size (5.97 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter

Adrenal Glands

The left adrenal gland is normal size (0.46 cm at cranial pole) (0.55 cm at caudal pole); 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 not definitively visualized (See “Other” category).

Spleen

The spleen is normal in size (0.36 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 enlarged with irregular, peripheral contours. The parenchyma is hypoechoic relative to the spleen. An approximately 6 cm irregular, hyperechoic to heterogenous mass is observed in the cranial aspect, on the right side. Several varying-sized hyperechoic nodules/masses are also observed throughout the organ, the largest measuring 2.37 cm in diameter. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.
(See “Other” category).

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of echogenic debris/sludge is observed within the lumen. The cystic and common bile ducts are normal.

Gastrointestinal

The gastric lumen is not distended. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is segmentally dilated with gas and chyme. 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 or overt infiltrative disease is noted.

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 obvious evidence of free fluid. The abdominal lymph nodes are normal/not visible.

Other

A 5.20 cm irregular, hyperechoic to heterogenous mass is observed in the right cranial abdomen.

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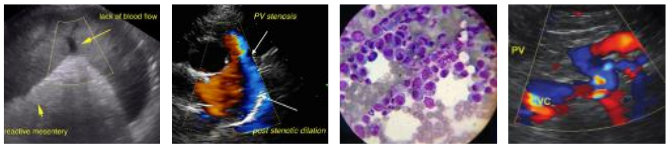

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

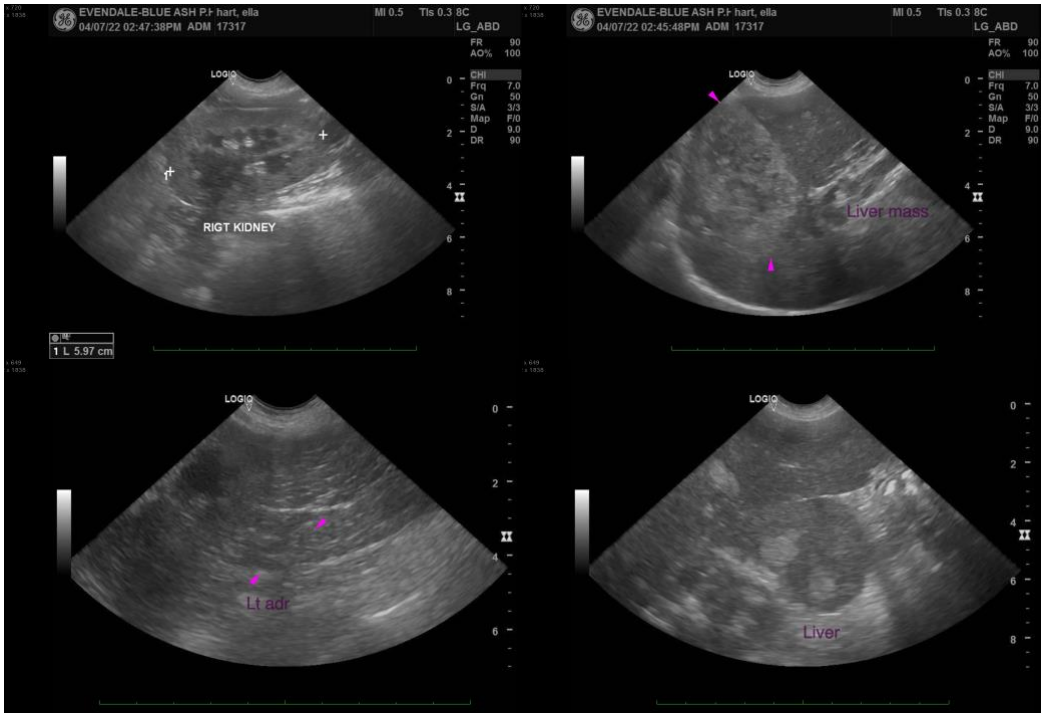
- Right hepatic mass. Neoplasia (i.e., adenocarcinoma, round cell tumor) is considered likely, with a lower possibility of a benign process (i.e., excessive regenerative nodular hyperplasia). The hyperechoic nodules throughout the liver could be consistent with regenerative nodular hyperplasia or metastatic disease.
- The origin of the mass in the right cranial quadrant is unclear. It may be arising from the liver, right adrenal gland, mesentery, other. Again, neoplasia is suspected with a lower possibility of benign pathology.

Secondary Findings

- Minor, nonspecific age-related renal changes
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The gall bladder sludge could be consistent with cholestasis, fasting or a developing mucocele.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Three-view thoracic radiographs are recommended to assess for pulmonary metastases. A fine-needle aspirate of the right hepatic mass can be considered, if accessible and if clotting status is appropriate. However, it should be noted that cytologic evaluation of primary hepatic tumors is often inconclusive. Therefore, if a definitive diagnosis is desired, an abdominal exploratory with biopsies and/or removal of the masses can be considered. An abdominal CT scan would be useful in presurgical planning. However, given the likelihood of multiple tumors, the prognosis for this patient is considered guarded.



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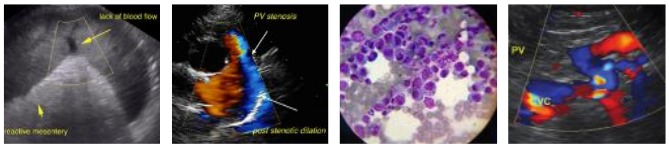

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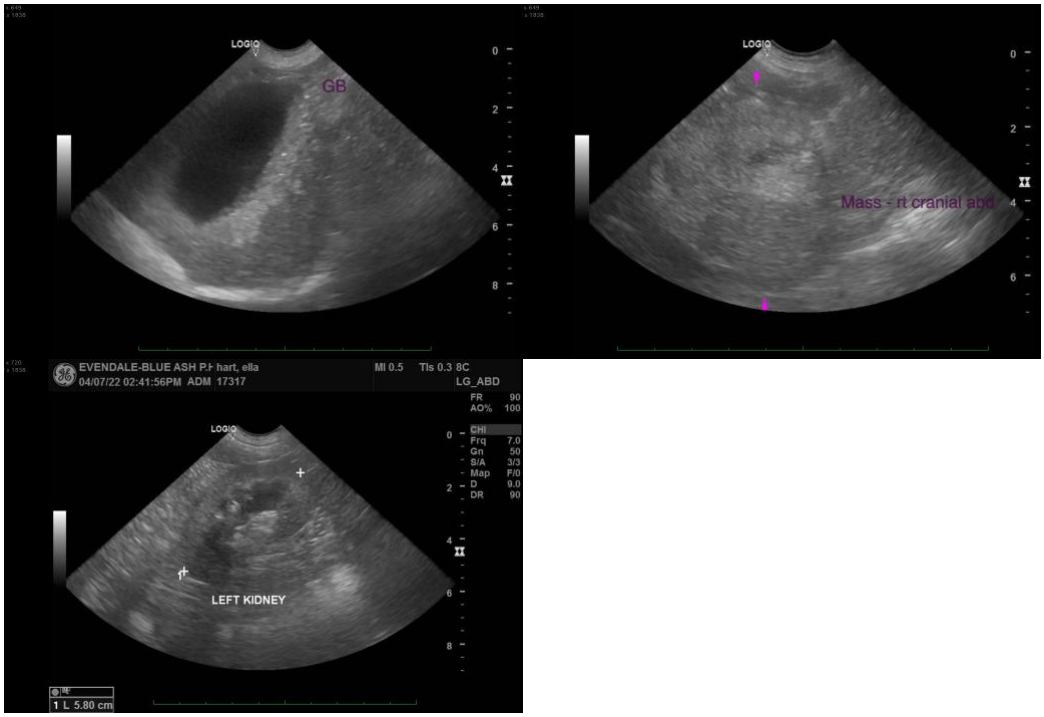

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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