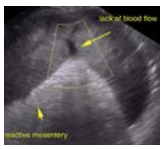
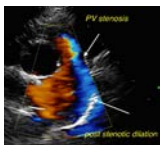
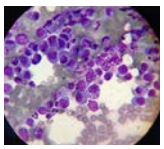
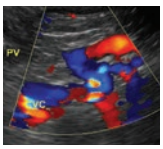

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1-800-838-4268 info@sonopath.com

PATIENT

Ari Thomas

SPECIES

Canine

BREED

Husky X

SEX

Spayed Female

AGE

7 Years

WEIGHT

40 Pounds

INTERPRETED BY

Tam Mengine, DVM, DABVP (canine/feline practice)

IMAGING PERFORMED BY

Dr. James Hornbuckle

HOSPITAL NAME

Golden Isles AH

REFERRING VET

Dr. James Hornbuckle

INVOICE

40566

DATE

8/17/22

PRESENTING CLINICAL SIGNS

Px has a hx of pu/pd, recent weight loss and inappetence. Also of note was hypercalcemia and elevated alkp. AUS ordered to further evaluate hypercalcemia, inappetence and elevated alkp
Abnormal PE/Chem/CBC/UA Results: Alkp 2177 Alt 197 Ca++=13.7

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. A large amount of echogenic lluminal sediment is present, which is freely movable. The ureteral papillae, trigone and pelvic urethra (visualized to 2.0 cm) are of normal appearance, and the ureters are not visible (normal). No masses, calculi or mucosal irregularities are noted.

The kidneys are of normal size and shape and exhibit appropriate corticomedullary differentiation with a normal 1:3 cortex to medulla ratio. There is no evidence of nephrolithiasis, mineralization, pyelectasia, cystic change or hydronephrosis. The proximal ureter is not visible (normal). The left kidney measures 6.6 cm. The right kidney measures 5.5 cm.

Adrenal Glands

The adrenal glands are both identified in their normal locations. They are normal in size and shape with appropriate parenchymal echogenicity and normal phrenic vasculature. The left adrenal gland measures 4.3 mm at the cranial pole and 4.6 mm at the caudal pole. The right adrenal gland measures 5.6 mm at the cranial pole and 4.5 mm at the caudal pole.

Spleen

The spleen is of appropriate size and has a normal, homogenous parenchyma with a smooth, continuous capsular surface. The splenic vasculature is normal with no evidence of congestion or thrombosis, and blood flow through the splenic hilus appears normal.

Liver

The liver is diffusely hyperechoic and subjectively enlarged. The portal and hepatic vasculature are of normal size and appearance with no evidence of congestion or thrombosis.

The gallbladder is minimally distended with anechoic contents. The wall was thin and continuous with no focal lesions. The cystic and common bile ducts are normal / not visible.

Gastrointestinal

The stomach is empty. The gastric wall is normal in thickness (6.0 mm) with normal deviations due to rugal folds, and exhibits appropriate wall layering. The pylorus is of normal appearance.

The visualized portions of the duodenum, jejunum, and ileum are of normal thickness with intact wall layering that exhibits the appropriate 1:3 muscularis to mucosa ratio. Jejunal wall measures up to 3.1 mm. Duodenal wall measured up to 4.1 mm. Intestinal motility appears normal.

The visible portions of the colon are of normal thickness with intact wall layering. The ileocecal junction is visualized. Wall thickness of 2.1 mm.

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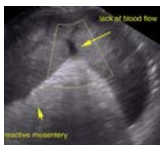
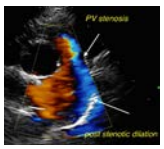
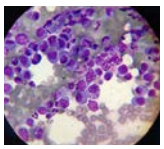
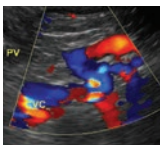

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Pancreas

The areas of the limbs and body of the pancreas are isoechoic to the surrounding mesenteric fat, with normal capsular appearance. There is no evidence of peripancreatic inflammation. The pancreatic duct appears normal.

Free Abdomen

There is no evidence of free fluid within the peritoneal cavity. The omentum and abdominal fat are of appropriate echogenicity. Numerous lymph nodes including the iliac nodes, mesenteric nodes, gastric nodes, hepatic nodes, and other nodes are moderately enlarged and hypoechoic, some with a rounded shape, measuring up to 2.0 cm. The aortic trifurcation has normal blood flow with no evidence of thrombosis.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Mildly to moderately enlarged lymph nodes throughout the abdomen

SECONDARY FINDINGS:

- Reactive hepatopathy
- Mineralized bladder sediment

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The hypercalcemia and weight loss in this patient are concerning for malignancy. A malignancy profile as well as a rectal exam to rule out the possibility of an anal sac carcinoma are both recommended in addition to the specific recommendations below.

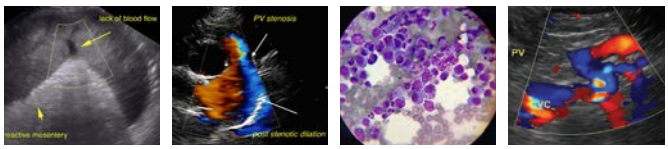
The numerous enlarged lymph nodes could be representative of either a reactive process or a malignancy. Given the hypercalcemia, lymphoma is of concern. Recommendations include:

- ❖ confirmation with fine needle aspiration using a 25G needle, for cytology
- ❖ additional sampling via fine needle aspiration should be considered for flow cytometry or PARR, as indicated. More information about flow cytometry and PARR, including how to perform each test and when they are indicated, can be found on Colorado State University's website: https://vetmedbiosci.colostate.edu/chl/choose-a-test/

The sediment in the bladder is likely due to the hypercalcemia. There is no evidence of an obstruction in the urethra at this time. Radiographs that include the pelvic and penile urethra are recommended to rule out the possibility of impending obstruction. Cystotomy could be considered if signs of lower urinary tract disease are present.

The changes in the liver are non-specific and could be attributed to endocrine disease, other vacuolar hepatopathies, reactive hepatopathy, storage hepatopathy, chronic infectious or inflammatory disease (including leptospirosis), hepatic lipidosis, or less likely neoplasia. Ultrasound-guided or laparoscopic biopsies would be needed for definitive diagnosis. Recommendations include:

- ❖ screening for diabetes mellitus and hyperlipidemia if not already performed
- ❖ testing for Cushing's disease is recommended only if clinical signs support the diagnosis
- ❖ bile acid testing is recommended to further assess severity of hepatic disease - if elevated then liver biopsies should be considered



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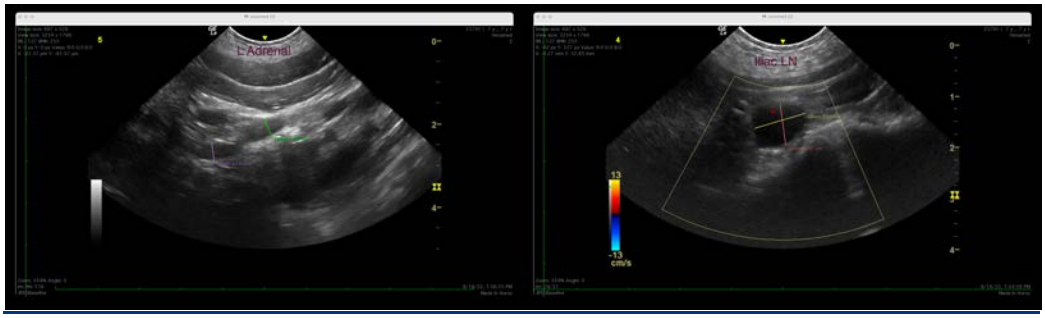
- if bile acids are normal, but the ALT is increased, then initiation of liver support therapies such as SAMe, Vitamin E and ursodiol, along with serial monitoring of liver enzyme levels every 2-3 months, could be initiated



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.

Tam Mengine, DVM, DABVP (canine/feline practice) info@SonoPath.com