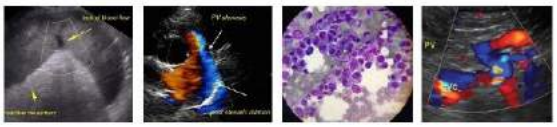
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT
Cato Howarth

SPECIES
Canine

BREED
Bull Terrier

SEX
Male Neutered

AGE
12 Years

WEIGHT
64 lbs.

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

IMAGING PERFORMED BY
Kelly Reshny, RVT

HOSPITAL NAME
Chedoke AH

REFERRING VET
Dr. Harris

INVOICE
11629kk

DATE
8/12/21

PRESENTING CLINICAL SIGNS

History: Elevated liver values.

Abnormal PE/Chem/CBC/UA Results: glu 0.9, ALT 734, ALP 2322, AST 188, Tbili 71, Bili conjugated 49.2, chol 17.5.

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 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 prostate is normal in size (1.70 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (6.96 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (7.25 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.64 cm at cranial pole) (0.57 cm at caudal pole) (2.57 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.

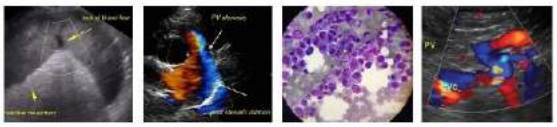
The right adrenal gland is normal size (1.69 cm at cranial pole) (0.81 cm at caudal pole) (2.69 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.94 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is slightly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and slightly mottled 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 lumen is distended. The wall is thin and smooth. There is questionable mineralization of the wall in the region of the gall bladder neck. A few polypoid-like lesions are arising



PATIENT
Cato Howarth

SPECIES
Canine

BREED
Bull Terrier

SEX
Male Neutered

AGE
12 Years

WEIGHT
64 lbs.

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

IMAGING PERFORMED BY
Kelly Reshny, RVT

HOSPITAL NAME
Chedoke AH

REFERRING VET
Dr. Harris

INVOICE
11629kk

DATE
8/12/21

from the luminal surface. A moderate amount of gravity-dependent, echogenic to mineralized debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. 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 not dilated. 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 disease is noted.

Pancreas

The right limb of the pancreas is visible/prominent with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

There is questionable reactive mesentery in the region of the gallbladder neck. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

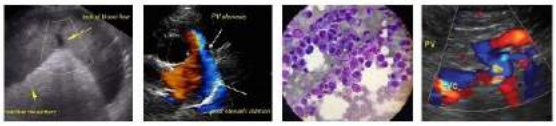
- Based on the clinical history and sonographic findings, a non-specific, diffuse hepatopathy appears to be present. Top differentials include inflammatory/immune-mediated disease, hepatotoxicosis (i.e., copper), infiltrative neoplasia (less likely) +/- concurrent age-related pathology.
- Gallbladder debris, non-mucocele. Possible mineralization and inflammation in the region of the gall bladder neck which is suggestive of cholecystitis.

Secondary Findings:

- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.
- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).
- Bilateral, age-related renal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
2. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis/cholecystitis (amoxicillin-clavulanic acid, Denamarin Advanced). If no



PATIENT

Cato Howarth

SPECIES

Canine

BREED

Bull Terrier

SEX

Male Neutered

AGE

12 Years

WEIGHT

64 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reshny, RVT

HOSPITAL NAME

Chedoke AH

REFERRING VET

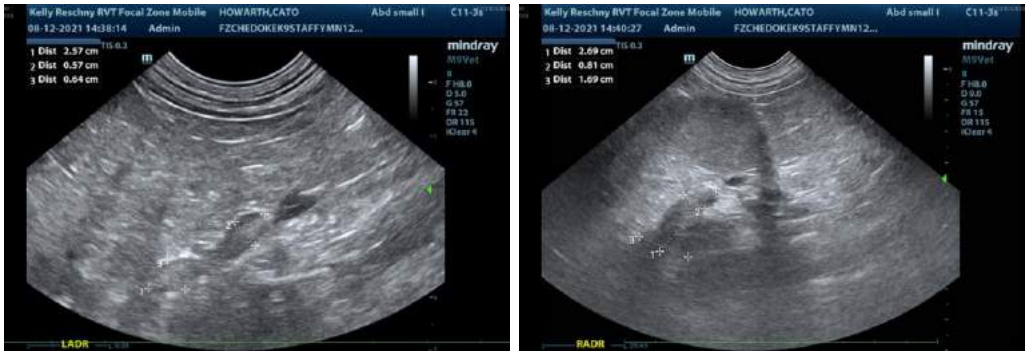
Dr. Harris

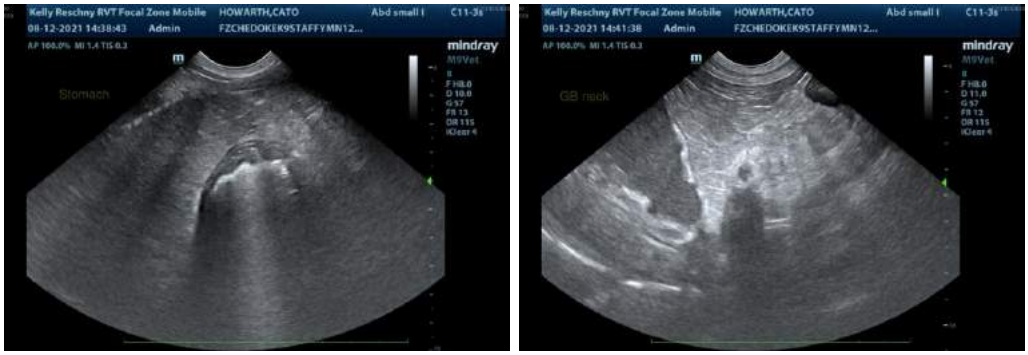
INVOICE
11629kk

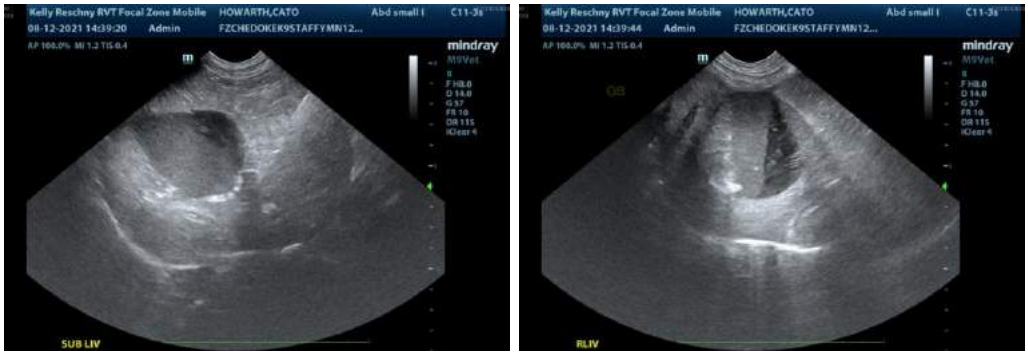
DATE
8/12/21

improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.

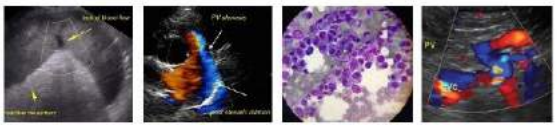
3. Leptospirosis testing (i.e., blood and urine PCR, serology) should also be considered, particularly if the disease is endemic in the patient's geographic region.







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



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Cato Howarth

SPECIES

Canine

BREED

Bull Terrier

SEX

Male Neutered

AGE

12 Years

WEIGHT

64 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reshny, RVT

HOSPITAL NAME

Chedoke AH

REFERRING VET

Dr. Harris

INVOICE
11629kk

DATE
8/12/21

The information and recommendations provided are based on the images presented by the referring veterinarian. 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@sonopath.com