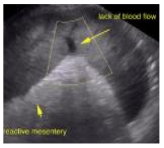
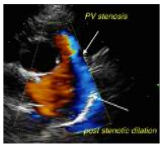
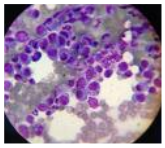
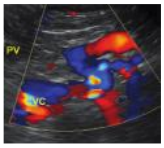
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Duncan Trotta

SPECIES
Canine

BREED
Beagle

SEX
Neutered Male

AGE
11 years 7 mos

WEIGHT
32.2 lbs

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

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Wantage VH

REFERRING VET
Dr. Bullock

INVOICE
11555

DATE
9.1.22

PRESENTING CLINICAL SIGNS

History: Elevated liver values on annual bw. No clinical signs. Enlarged liver on radiographs. R/O Liver dz vs Cushing's vs other

Abnormal PE/Chem/CBC/UA Results: ALKP 334, ALT 145

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The **prostate** is normal in size (1.15 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 (6.05 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. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The **right kidney** is normal size (5.33 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. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is normal size (0.54 cm at cranial pole) (0.58 cm at caudal pole) (1.90 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 mildly enlarged (1.31 cm at cranial pole) (0.81 cm at caudal pole) (1.86 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 (1.55 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 1.04 cm ill-defined, slightly hyperechoic nodule/area is observed at the mid to caudal aspect. Splenic vasculature is normal.

Liver

The **liver** is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and heterogenous in appearance, with one to two heterogenous nodules, the largest measuring 1.62 cm in length; as well as numerous ill-defined hyperechoic nodules/areas. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. A small amount of echogenic debris is adhered to the luminal surface. 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 mildly to moderately distended with ingesta. 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 dilated with 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. There is no evidence of an obstructive pattern.

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 (0.26 cm in diameter). There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

An area of **mesentery** in the midabdominal region is hyperechoic/reactive. There is no obvious evidence of free fluid. The abdominal **lymph nodes** are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The hepatic parenchymal changes trend toward the benign (i.e., regenerative nodular hyperplasia and/or vacuolar hepatopathy). Inflammatory disease is considered less likely given the liver enzyme pattern. Neoplasia is possible, particularly with regard to the heterogenous nodules. However, histopathology would be necessary to get a definitive diagnosis.

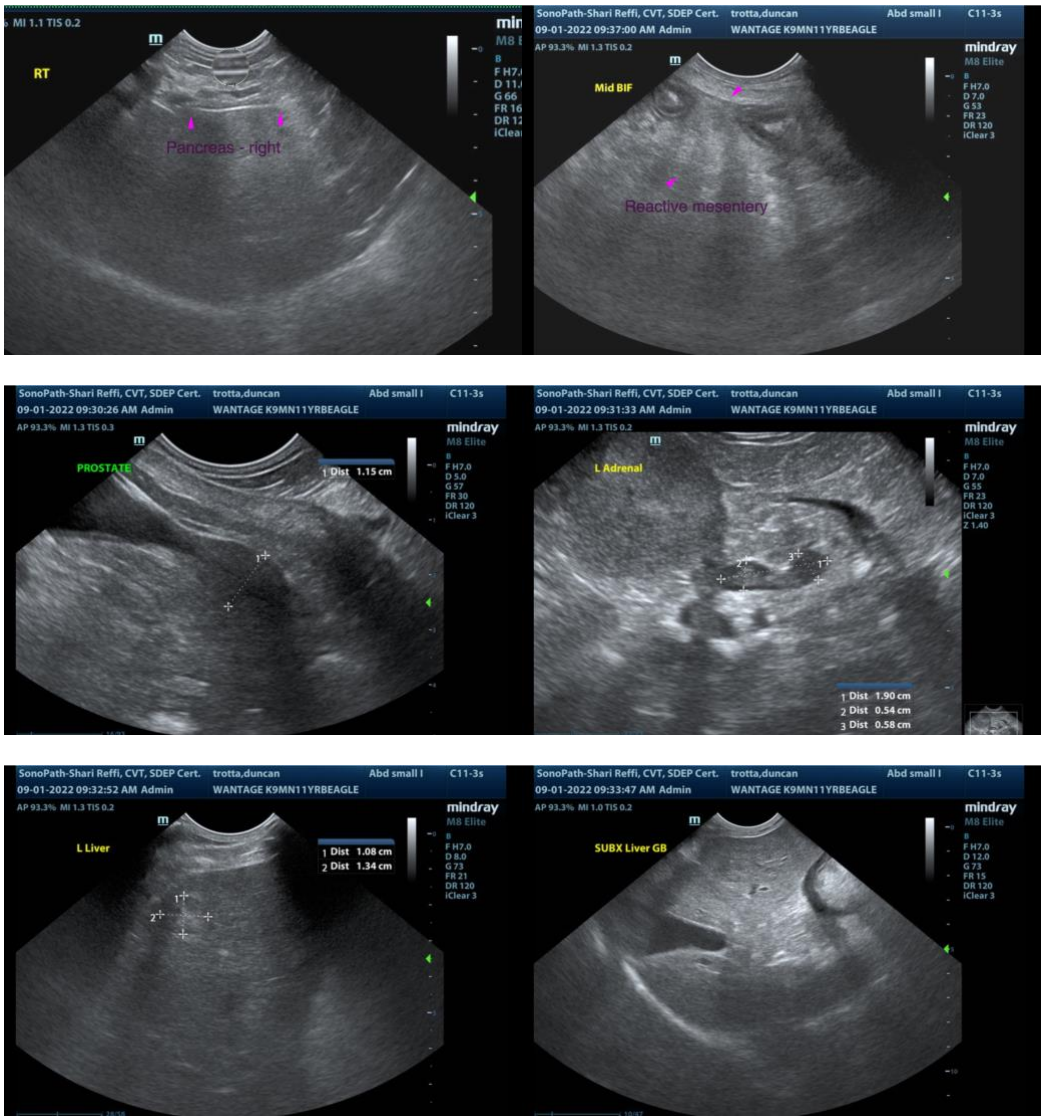
Secondary Findings

- Mild degenerative renal changes with dystrophic mineralization
- The mild right adrenomegaly may be a normal variant for this patient or may represent early hyperplastic change.
- The hyperechoic splenic region trends toward the benign (i.e., myelolipoma) with a low possibility of emerging neoplasia.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The significance of the reactive mesentery in the midabdominal region is unclear. It may represent mild peritonitis, secondary to resolving bowel or pancreatic pathology, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If an aggressive approach is desired, consider pre-and postprandial serum bile acids and hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy). Surgical biopsies are preferred in that they are more likely to yield a definitive diagnosis. If tissue sampling is not pursued at this time, serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdominal ultrasound, +/- hepatic tissue sampling may be warranted.

Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future. A urine specific gravity would be useful in determining if the patient is isosthenuric.



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