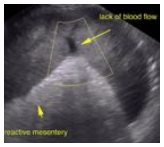
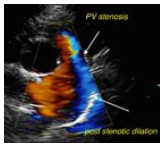
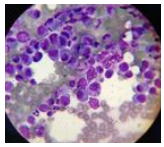
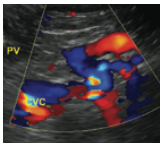
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





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

PATIENT

Sonny Davis

SPECIES

Canine

BREED

Poodle Mix

SEX

Neutered male

AGE

13 years

WEIGHT

12.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Andover AH

REFERRING VET

Dr. Hummel

INVOICE

40062

DATE

10/12/22

PRESENTING CLINICAL SIGNS

History: elevated ALKP and ALT, crystaluria, R/O underlying liver pathology
Abnormal PE/Chem/CBC/UA Results: ALT 123, ALKP 256, Na 157, K+ 5.8; UA: Ca+ oxalate crystals 21-50, USPG 1.051

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.49 cm). Mucosa is hyperechoic and irregular. No masses are observed. A small 0.18 cm cystoliths was noted at the level of the trigone. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

Left kidney is normal is size (4.5 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Small, non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted

Right kidney is normal is size (4.48 cm),shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Small, non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

Adrenal Glands

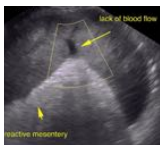
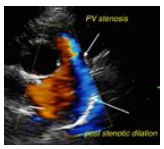
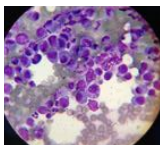
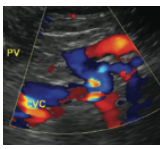
Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measured 1.6 cm long, 0.6 cm at the cranial pole and 0.6 cm at the caudal pole. The right adrenal gland measured 1.5 cm long, 0.85 cm at the cranial pole and 0.46 cm at the caudal pole.

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

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

PATIENT

Sonny Davis

SPECIES

Canine

BREED

Poodle Mix

SEX

Neutered male

AGE

13 years

WEIGHT

12.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Andover AH

REFERRING VET

Dr. Hummel

INVOICE

40062

DATE

10/12/22

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

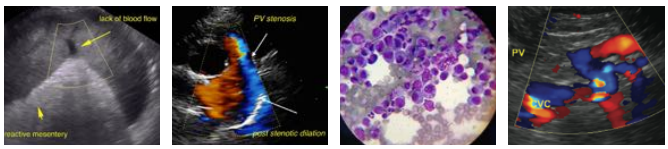
There is no evidence of peritoneal effusion or apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- **Bilateral adrenomegaly –** consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease. Given the marked degree of the nodular change infiltrative round cell or metastatic neoplasia while considered less likely should also be considered.
- **Gallbladder debris (canine) -** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

Secondary Findings



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

PATIENT

Sonny Davis

SPECIES

Canine

BREED

Poodle Mix

SEX

Neutered male

AGE

13 years

WEIGHT

12.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Andover AH

REFERRING VET

Dr. Hummel

INVOICE

40062

DATE

10/12/22

- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.
- **Small, non-obstructive nephroliths** bilaterally.
- **Chronic Cystitis -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes. Small cystoliths was noted.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted.

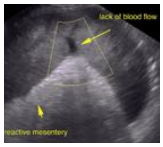
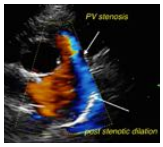
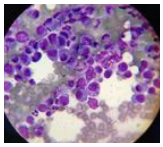
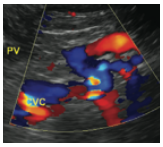
   If clinicals signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop.

   If not recently evaluated, blood pressure is recommended.

   If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

2. Given the marked degree of the nodular change, however, a FNA of the liver is also recommended if the patietn's coagulation status is appropriate.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Sonny Davis

SPECIES

Canine

BREED

Poodle Mix

SEX

Neutered male

AGE

13 years

WEIGHT

12.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Andover AH

REFERRING VET

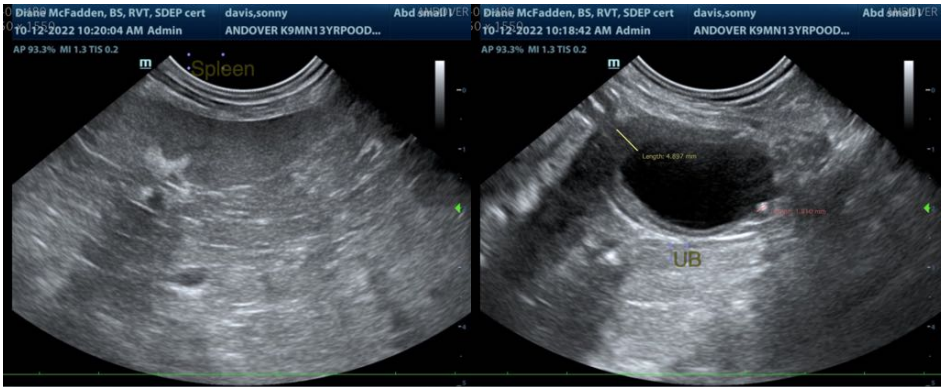
Dr. Hummel

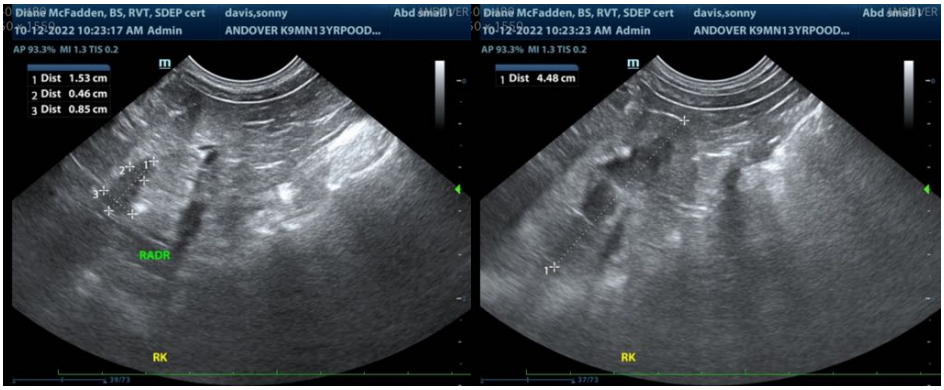
INVOICE

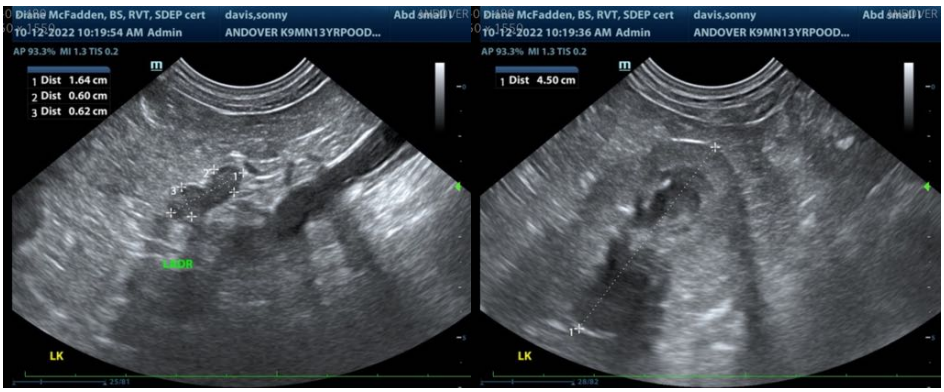
40062

DATE

10/12/22







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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com