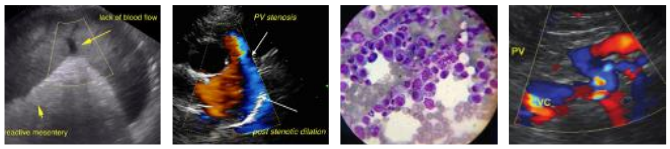
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Eva Strickler

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

13 Years 5 Months

WEIGHT

24.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Kevin Moon, DVM

HOSPITAL NAME

Shiloh VH

REFERRING VET

Nicole Kaczor, DVM

INVOICE

22042

DATE

4/17/23

PRESENTING CLINICAL SIGNS

History: BCS 7/9 Diabetes Mellitus since 2/3/21. p became unregulated with PU/PD before appt on 3/20/23. Concerned about Cushing's, neoplasia, or other metabolic disease causing disregulation

Abnormal PE/Chem/CBC/UA Results: ALP 245 (5-131) Glucose 545 (70-138) Potassium 5.9 (3.6- 5.5) Cholesterol 464 (92-324) Trig 2482 (29-291)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys have a smooth capsule and with mild hazing of corticomedullary definition. No evidence of pelvic dilation was present. Hyperechoic material in left renal calices with no dilation consistent with non-obstructive nephrolithiasis. The left kidney measures 4.07 cm. The right kidney measures 4.63 cm.

Adrenal Glands

Left adrenal gland poles and right adrenal gland were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The entire left adrenal gland was not captured in one frame so length could not be accurately determined. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measures 0.46 cm at the caudal pole and 0.38 cm at the cranial pole. The right adrenal gland measures 1.34 cm x 0.40 cm at the caudal pole and 0.45 cm at the cranial pole.

Spleen

The spleen was normal in size with a mottled parenchyma, a solitary hypoechoic nodule visualized and smooth capsule. Normal splenic vasculature with no signs of congestion or thrombosis.

Liver

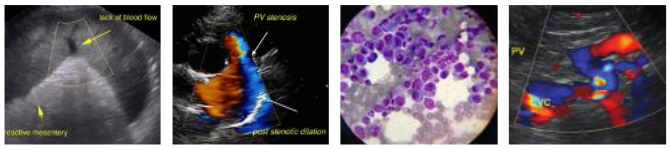
The liver is subjectively enlarged in size with slight rounding of lobes and homogenous hyperechoic parenchyma with no specific nodules or masses. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder is moderately distended with anechoic fluid, with hyperechoic non-shadowing gravity dependent debris present. There is no surrounding free fluid or signs of active inflammation.

Gastrointestinal

The stomach contains ingesta. It measures at a normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.



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

PATIENT

Eva Strickler

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

13 Years 5 Months

WEIGHT

24.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Kevin Moon, DVM

HOSPITAL NAME

Shiloh VH

REFERRING VET

Nicole Kaczor, DVM

INVOICE

22042

DATE

4/17/23

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid are noted.

ULTRASONOGRAPHIC FINDINGS

- Splenic parenchymal changes with smooth capsule
- Diabetic hepatopathy
- Gall bladder debris
- Degenerative renal changes with nephrolithiasis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

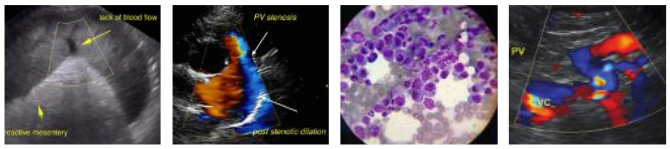
No overt cause of diabetic dysregulation is identified in this abdominal study. Possible causes include occult urinary tract infection and cholangiohepatitis (see suggestions below). While adrenal gland size is not supportive of hyperadrenocorticism, a LDDST could be considered if no other cause is found as adrenal size cannot definitively rule out functional abnormalities. While pancreas is overtly normal on ultrasound, pancreatitis remains a possibility and measurement of PLI may be helpful to discern this is a possible cause.

Splenic changes are a common benign age-related change, or may represent reaction to immune stimulation, but infiltrative disease (lymphoma, MCT, other) cannot be definitively ruled out. No significant disruption of architecture noted to suggest significant pathology. Fine needle aspirate could be considered to further characterize parenchymal changes if clinically indicated, especially if any weight loss is noted or for baseline cytological assessment.

Hepatic parenchymal changes are a common finding in the face of diabetes mellitus, though other endocrinopathy (hypothyroidism), infectious or inflammatory hepatitis (bacterial, viral, auto-immune other), and neoplasia among other things remain possibilities. Especially if elevated liver enzymes are present, fine needle aspirate is recommended to further define.

Gall bladder debris may be an incidental finding given lack of surrounding inflammation. In the face of elevated ALKP ursodiol could be given as a choleretic and empiric treatments (SAM-E, milk thistle, Vitamin E) could be tried. If liver supportive medications do not improve liver enzymes, a course of empiric antibiotics (clavamox, enrofloxacin) could be considered to cover for infectious cholangiohepatitis, though the lack of surrounding inflammation makes this less likely. Imaging should be rechecked on a routine basis for monitoring (q3-6mo) or if further significant increase in liver enzymes and/or new clinical signs are noted. If otherwise clinically indicated, investigation for endocrinopathy such as hyperadrenocorticism or hypothyroidism could be considered as an underlying cause predisposing to gall bladder debris accumulation.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Eva Strickler

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

13 Years 5 Months

WEIGHT

24.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Kevin Moon, DVM

HOSPITAL NAME

Shiloh VH

REFERRING VET

Nicole Kaczor, DVM

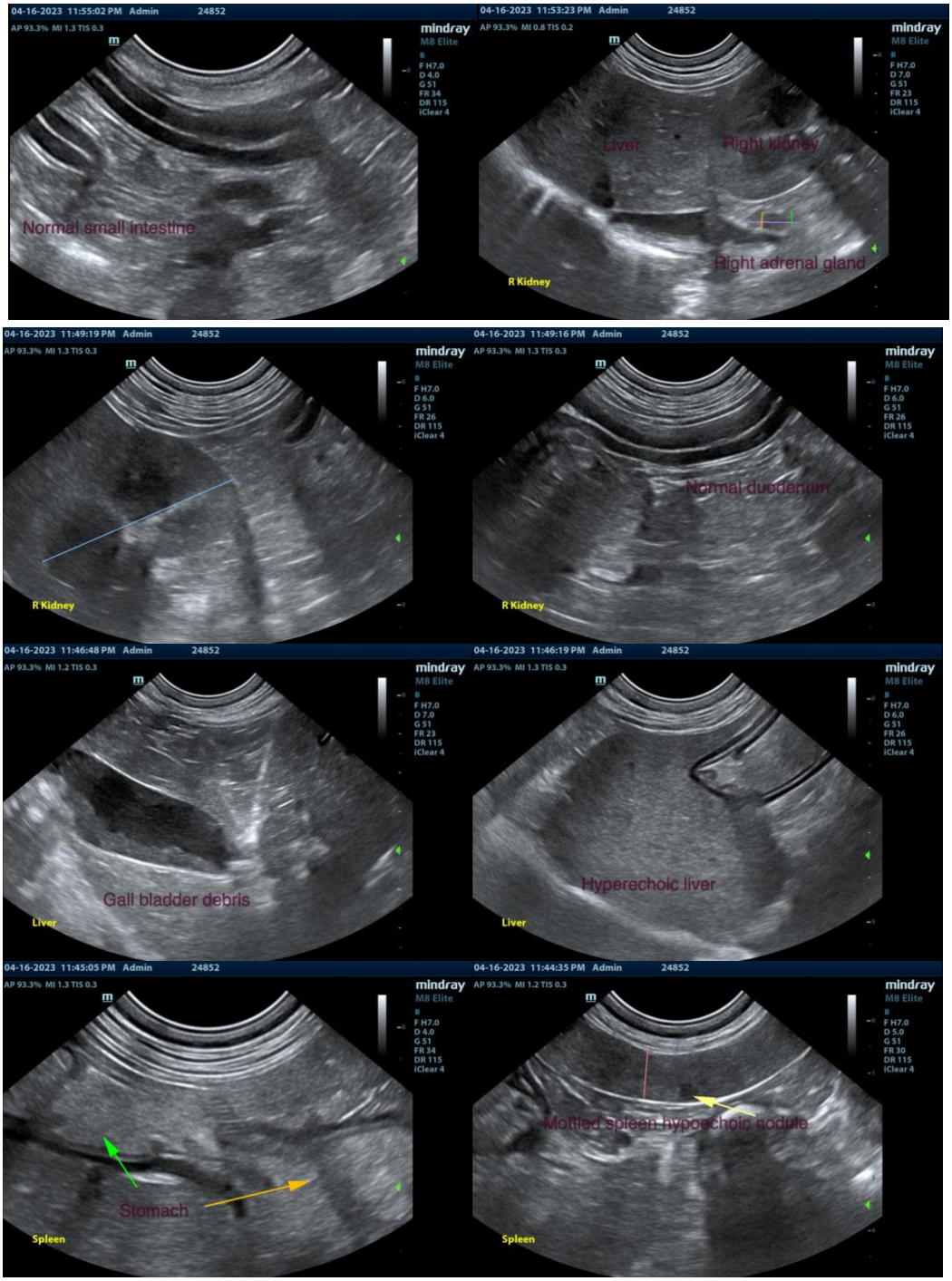
INVOICE

22042

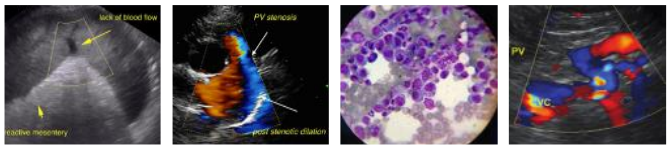
DATE

4/17/23

Renal changes are likely age-related degenerative changes. Correlate clinical significance with blood work/urinalysis findings and clinical signs. Occult urinary tract infections are not uncommon in diabetics and can lead to dysregulation. Nephroliths may act as a nidus of infection and predispose to urinary tract infections. They have the potential to move into the ureters or bladder causing obstructive nephropathy.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Eva Strickler

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

13 Years 5 Months

WEIGHT

24.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Kevin Moon, DVM

HOSPITAL NAME

Shiloh VH

REFERRING VET

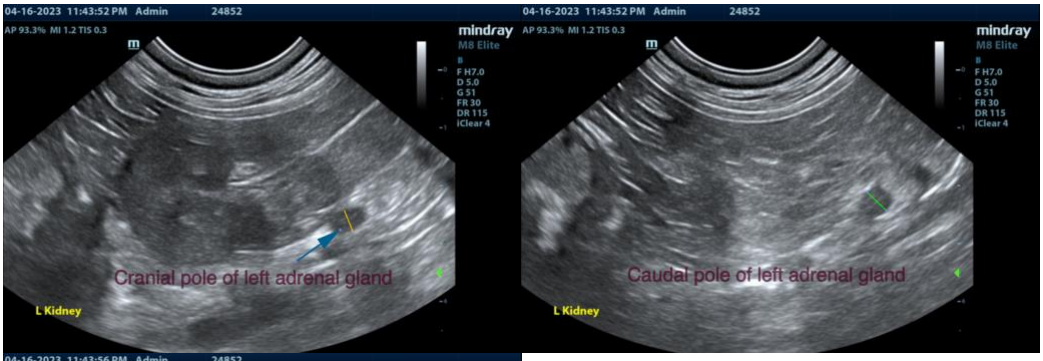
Nicole Kaczor, DVM

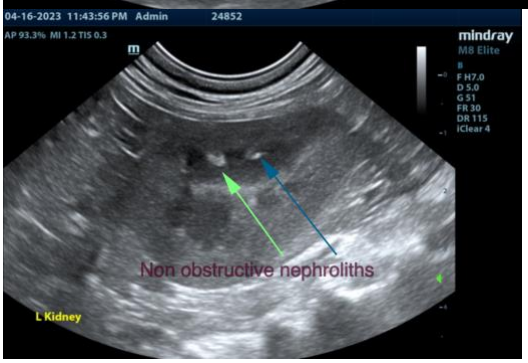
INVOICE

22042

DATE

4/17/23





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.

Dr Brittany Sinclair, BVSc(hons), DACVECC
info@SonoPath.com