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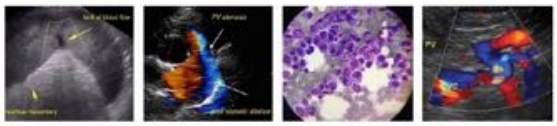


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Wallace Van Zuiden

SPECIES

Canine

BREED

Basset Cross

SEX

Neutered male

AGE

9 years

WEIGHT

22.7 kg

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Kelly Reshny, RVT

HOSPITAL NAME

Dundas AH

REFERRING VET

Dr. Middleton

INVOICE

44083

DATE

5/1/23

PRESENTING CLINICAL SIGNS

History: -multiple lipomas, has had a dermal hemangiosarcoma removed May 2022 increased liver enzymes on wellness blood work
Abnormal PE/Chem/CBC/UA Results: alb 46 (22-39) TP 87 (52-82) ALT 150 (10-125) ALKP 1099 (23-212)

ULTRASONOGRAPHIC EXAMINATION OF THE

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 hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. No evidence of pelvic dilation was present. The left kidney measured 5.99 cm and the right kidney measured 6.96 cm.

Adrenal Glands

Both adrenal glands were visualized and recognized. Both were enlarged with normal echogenicity. The phrenic vasculature, glandular echogenicity and detail were unremarkable. The left adrenal gland measured 2.62 cm in length x 0.81 cm at the caudal pole and 1.0 cm at the cranial pole. The right adrenal gland measured 2.6 cm in length x 0.72 cm at the caudal pole and 1.69 cm at the cranial pole.

Spleen

The spleen had a generally smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. Perivascular hyperechoic nodules visualized most consistent with benign myelolipomas. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

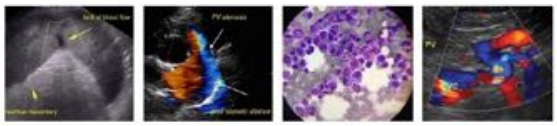
Liver

The liver is subjectively normal in size with normal contours and structure. The parenchyma is slightly heterogeneous with a coarse appearance and a few hypoechoic variably sized nodules visualized. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. . Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally

Gastrointestinal

The stomach contains gas and ingesta luminal contents. 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



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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.

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 were noted.

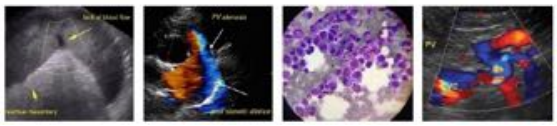
ULTRASONOGRAPHIC FINDINGS

1. Bilateral adrenomegaly
2. Hypoechoic liver nodules
3. Perivascular splenic myelolipomas
4. Degenerative renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Adrenomegaly is bilateral and is suspected to be secondary to hormonal stimulation as is seen with pituitary dependent hyperadrenocorticism. If corresponding clinical signs are present, testing for hyperadrenocorticism should be considered (ACTH stimulation test vs LDDST).

Liver changes are most consistent with a vacuolar hepatopathy, though this diagnosis cannot be definitively made with ultrasound imaging alone. Vacuolar degeneration is a common nonspecific indicator of hepatocyte injury which is most commonly secondary to exogenous steroid exposure, hyperadrenocorticism, or an idiopathic age related change, though other endocrinopathy (hypothyroidism), infectious or inflammatory hepatitis (bacterial, viral, auto-immune other), and neoplasia among other things remain possibilities. In the face of elevated liver enzymes liver aspirate is recommended to further characterize these ultrasonographic changes. Ultimately liver biopsy is generally required for definitive diagnosis and should be considered if significant clinical signs or severe liver enzyme elevations are progressive despite empiric treatments (SAM-E, milk thistle, Vitamin E, ursodiol). Bile acid profile could be considered to assess liver function if clinically indicated. Clinical signs associated with vacuolar hepatopathy often reflect underlying disease. Idiopathic vacuolar hepatopathy may be asymptomatic and treatment is not necessarily indicated or effective at reducing liver enzymes. Imaging should be rechecked on a routine basis (q3-6mo) or if further significant increase in liver enzymes and/or new clinical signs are noted.



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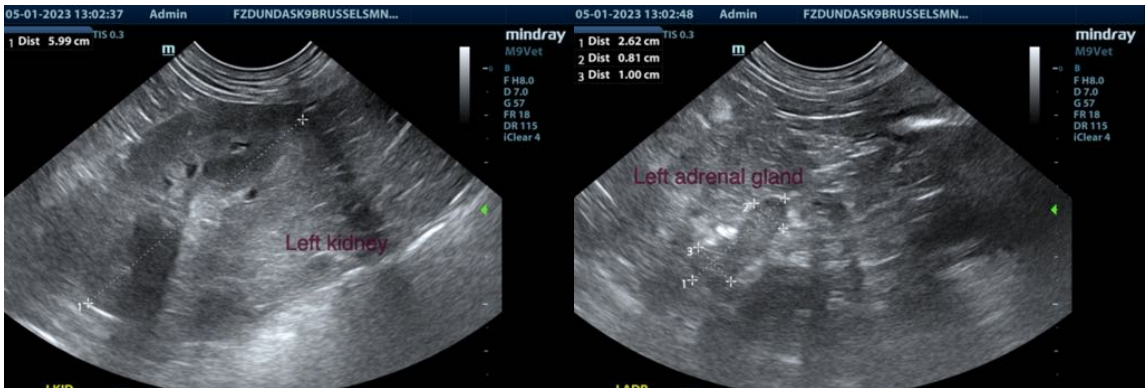
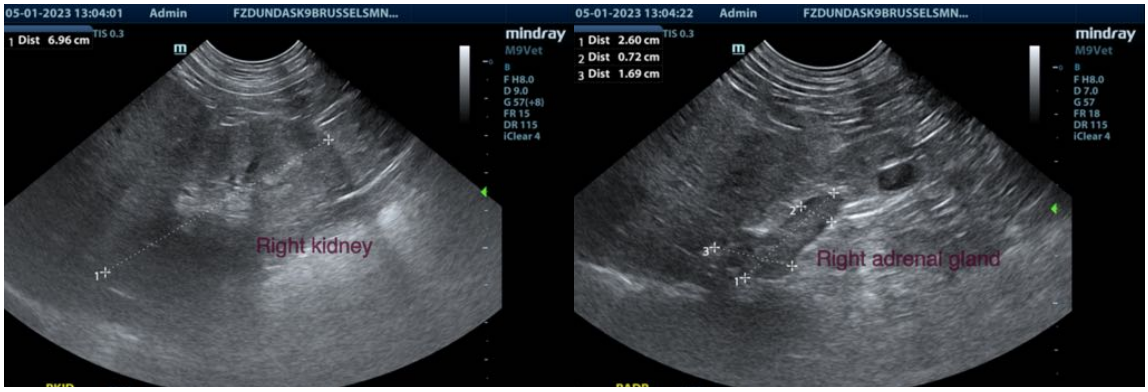
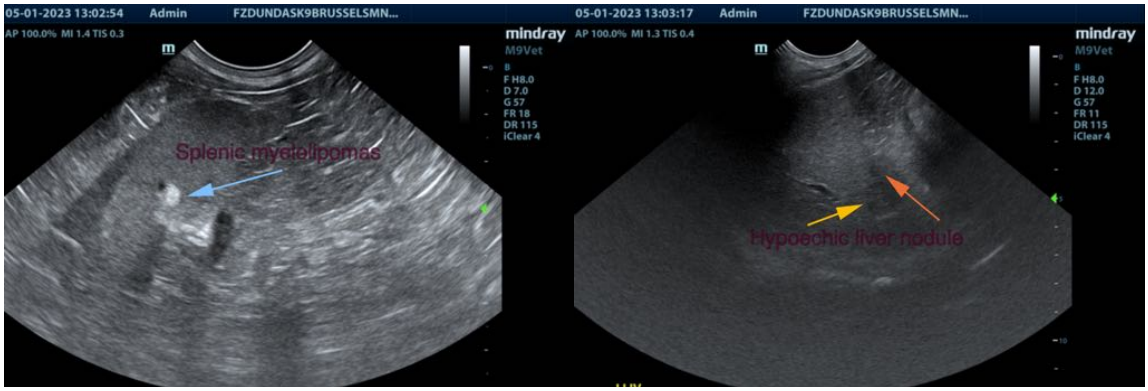
Splenic changes are a common age related change and nodules are most consistent with benign myelolipomas, but infiltrative disease (lymphoma, MCT, other) cannot be definitively ruled out. No significant disruption of architecture noted to suggest significant pathology. Fine needle aspirate could be considered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

Renal changes are likely age related degeneration. Correlate clinical significance with blood work/urinalysis findings and clinical signs.







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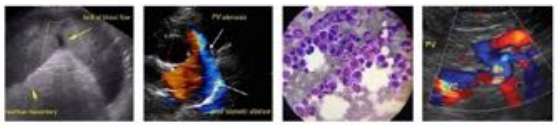

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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