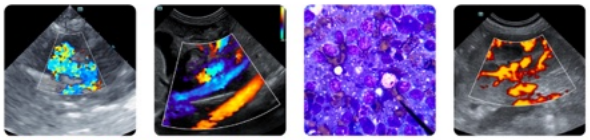


PATIENT

Milo McDonald

SPECIES

Canine

BREED

Australian Shepherd

SEX

Neutered male

AGE

12 years

WEIGHT

70 lbs

INTERPRETED BY

Alicia Angosto Guerrero, DMV, PgDip, MSc.

IMAGING PERFORMED BY

Katie Kobyra

HOSPITAL NAME

Valley West & Elk Valley VH

REFERRING VET

Dr. Tom Isaac

INVOICE

77641

DATE

5/18/26

PRESENTING CLINICAL SIGNS

History: Inappropriate urination and defecation; otherwise normal behavior at home; annual senior bloodwork (see below); indicated possible liver or endocrine disorder
Abnormal PE/Chem/CBC/UA Results: ECG: no signicant findings CBC: HCT 40%, WBC 17.1, Neutrophilia 11.03, monocytosis 1.8 Chem: ALT 183, ALP 686, Lipase 387 tT4: 1.1 UA: unremarkable

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder lumen is normally distended, and the urinary bladder wall appears thin and smooth. The urine is anechoic. The bladder neck and proximal urethra have a normal ultrasonographic appearance. No calculi are identified, and there is no ultrasonographic evidence of inflammatory or neoplastic mural disease.

The left kidney is normal in shape and size, measuring 6.64×3.86 cm, with a cortical thickness of 0.70 cm in the sagittal plane. The renal cortex is isoechoic relative to the liver parenchyma. The corticomedullary ratio and corticomedullary definition are preserved. No evidence of pyelectasia, nephrolithiasis, or hydronephrosis is identified.

The right kidney is normal in shape and size, measuring 6.82×3.94 cm, with a cortical thickness of 0.72 cm in the sagittal plane. The renal cortex is isoechoic relative to the liver parenchyma. The corticomedullary ratio and corticomedullary definition are preserved. No evidence of pyelectasia, nephrolithiasis, or hydronephrosis is identified.

Adrenal Glands

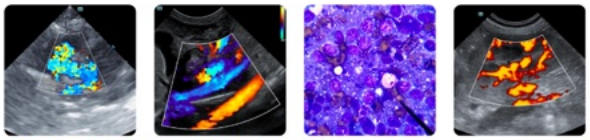
Both adrenal glands demonstrate normal shape and echogenicity. Dorsoventral diameters measured in the sagittal plane are as follows: the left adrenal gland measures 0.52 cm at both the cranial and caudal poles. The right adrenal gland was suboptimally visualized, and measurements should therefore be interpreted cautiously; the cranial pole measures approximately 0.78 cm and the caudal pole 0.64 cm. Mild right adrenal enlargement cannot be excluded, although the measurements are of limited reliability due to visualization constraints.

Spleen

Splenic thickness is 1.47 cm. The parenchyma demonstrates normal echogenicity and fine homogeneous echotexture with a small hypoechoic focus measuring approximately 3.71×4.14 mm and a small hyperechoic myelolipoma-like lesion measuring approximately 2.5×3.7 mm. The splenic capsule is smooth and regular. Splenic vasculature appears normal.

Liver

The liver is subjectively mildly enlarged, with mildly rounded margins and a regular contour. The hepatic parenchyma is heterogeneous with a mildly patchy echotexture and contains multiple small hypoechoic



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nodular foci measuring up to approximately 1.2 cm in diameter. No hepatic lymphadenopathy is identified.

The gallbladder lumen is normally distended. The wall is thin. A small amount of non-shadowing biliary sludge is present within the lumen. No ultrasonographic evidence of cystic duct or common bile duct dilation is identified.

Gastrointestinal

The stomach contains a small amount of ingesta, with preserved wall layering and mural thickness measuring approximately 1.99 mm. The pylorus measures 5.99 mm. The duodenum measures 4.90 mm. The jejunum measures 3.67 mm with preserved wall layering. No ultrasonographic evidence of gastrointestinal inflammation, obstructive disease, ileus, or foreign material is identified. The colon measures approximately 0.92 mm and contains formed fecal material within the descending colon.

Pancreas

The evaluated pancreatic regions do not show evidence of overt inflammation or neoplastic disease.

Free Abdomen

No sonographic evidence of abdominal effusion, peritonitis, or lymphadenomegaly is identified. The iliac trifurcation is normal.

PRIMARY FINDINGS

- Mild hepatomegaly with heterogeneous patchy hepatic parenchyma and multifocal small hypoechoic hepatic nodules
- Small incidental splenic nodules, including probable myelolipoma-like change

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The dominant ultrasonographic abnormality is a mildly enlarged heterogeneous liver containing multiple small hypoechoic nodular foci. In an older dog with marked ALP elevation and concurrent ALT increase, this pattern is most compatible with chronic hepatopathy with multifocal nodular hyperplasia or regenerative nodular change. The diffuse patchy hepatic appearance and multiple small hypoechoic nodules are common ultrasonographic manifestations of chronic benign hepatocellular remodeling in older dogs.

Differential considerations include nodular hyperplasia, chronic vacuolar hepatopathy/endocrine-associated hepatopathy, chronic inflammatory hepatopathy/chronic hepatitis, and less likely multifocal infiltrative or metastatic neoplasia.

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Although the current appearance is not strongly suggestive of aggressive infiltrative malignancy, multifocal primary hepatic neoplasia, metastatic disease, or chronic inflammatory hepatopathy cannot be completely excluded based on imaging alone.

Possible mild right adrenal enlargement is present, although assessment was limited by suboptimal visualization. Given the marked cholestatic enzyme elevation, inappropriate urination/defecation, mild stress leukogram pattern, and hepatic appearance, hyperadrenocorticism remains an important differential consideration, particularly pituitary-dependent disease. The adrenal findings themselves remain relatively subtle and should be interpreted cautiously.

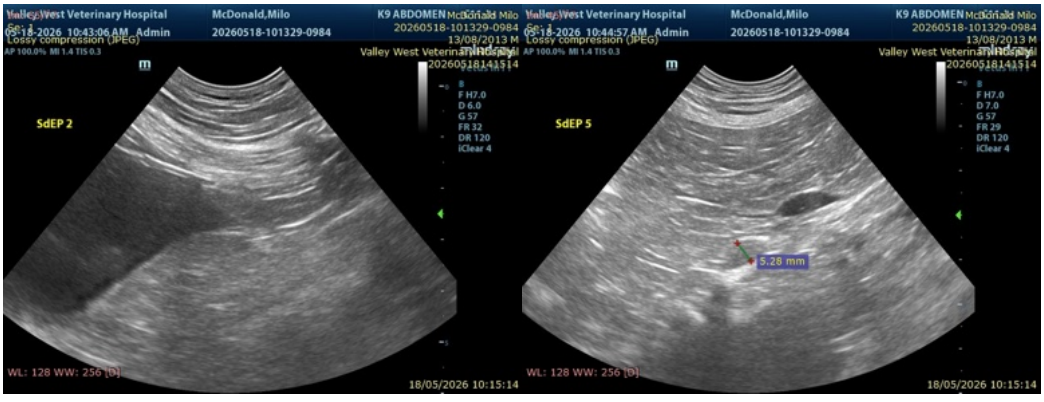
The pancreatic area does not demonstrate convincing ultrasonographic evidence of active pancreatitis despite the mild lipase elevation.

The small splenic nodules are most compatible with incidental benign age-related changes, including myelolipoma-like change and nodular hyperplasia.

Recommendations

- Correlation with endocrine testing for hyperadrenocorticism (low-dose dexamethasone suppression test or ACTH stimulation test) is recommended if clinically appropriate.
- Hepatoprotective therapy may be considered at the discretion of the attending veterinarian.
- Continued monitoring of liver enzyme activity and bilirubin is advised.
- If definitive characterization of the hepatic nodules is clinically important, ultrasound-guided hepatic cytology could be considered, recognizing the limitations of cytology in differentiating some benign versus well-differentiated hepatocellular lesions.

Final diagnostic and therapeutic decisions should be made by the attending veterinarian, who can best integrate these findings with the patient's clinical status.



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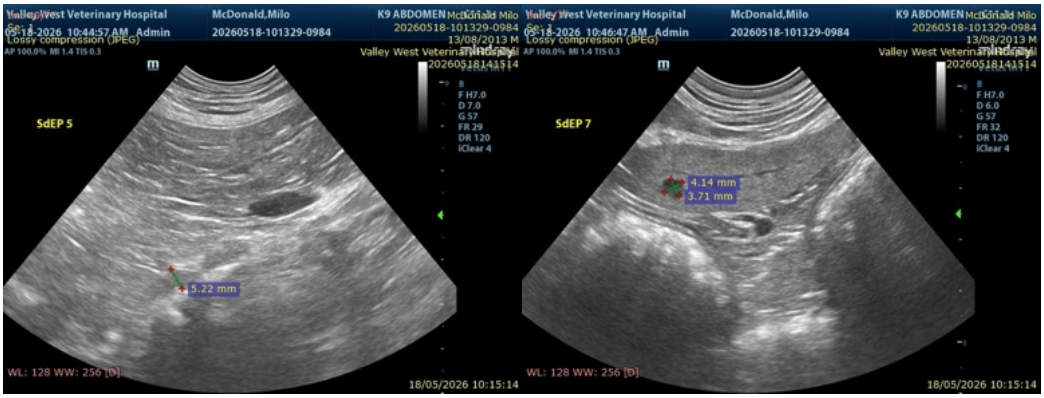

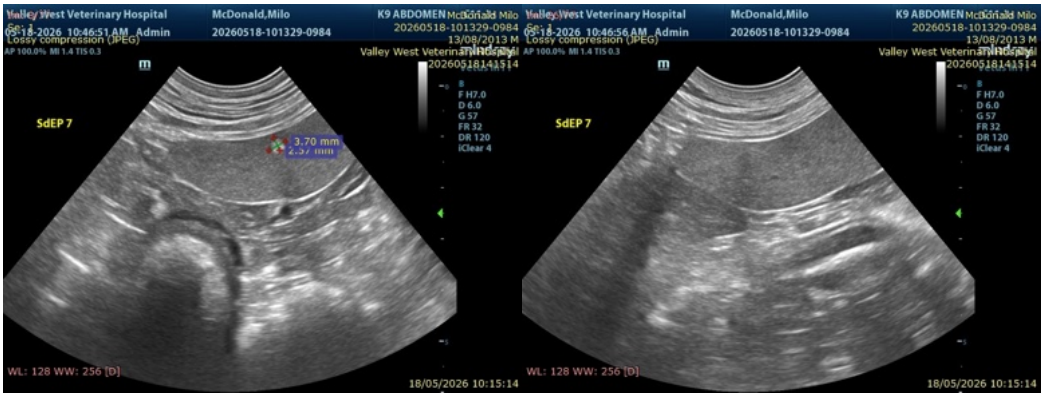

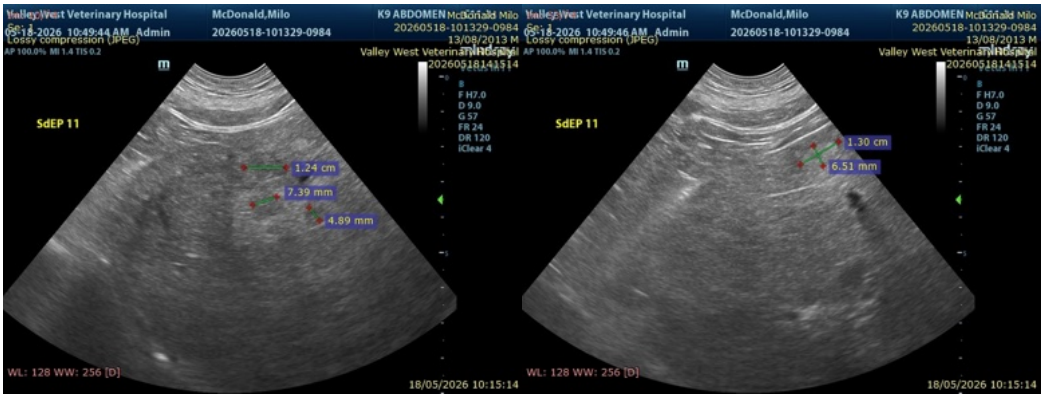

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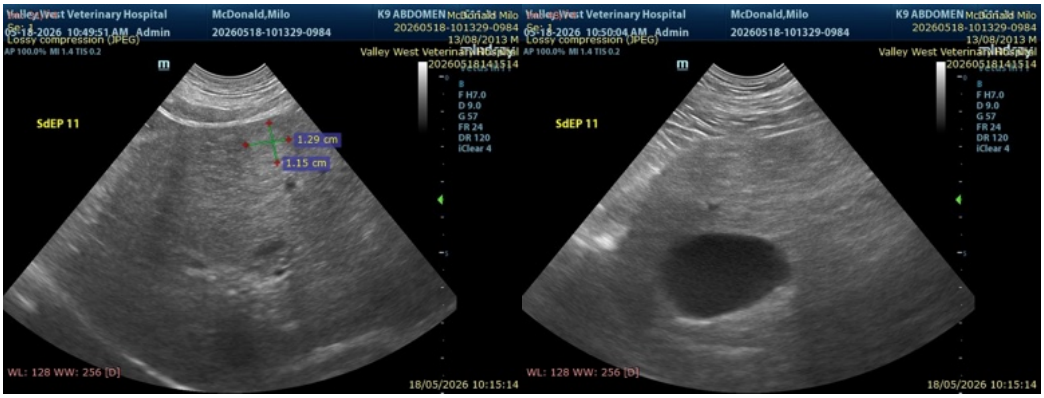

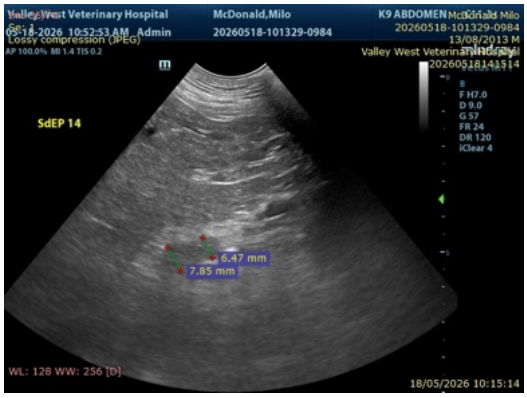

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

info@SonoPath.com