



PATIENT

Cooper Murray

SPECIES

Canine

BREED

Mini Goldendoodle

SEX

MN

AGE

8 years

WEIGHT

25 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Marsh AH

REFERRING VET

Dr. Milwicki

INVOICE

13579

DATE

3/30/22

PRESENTING CLINICAL SIGNS

Elevated liver enzymes, suspect Hepatic or Splenic Mass Current meds: Fluoxetine, Trazodone, Hydroxyzine

Abnormal PE/Chem/CBC/UA Results: Glob 3.9, Alk Phos 2441, GGT 1219 UA: 4+ protein, trace occult blood, Urine/Protein Creatinine Ratio 5.7

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.1	1.26	45	78	0.15
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	140	1.2	0.96		2.8	3.0	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease.

Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.



PATIENT

Cooper Murray

SPECIES

Canine

BREED

Mini Goldendoodle

SEX

MN

AGE

8 years

WEIGHT

25 lbs.

Urinary System

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 5.3 cm in length. The right kidney measured 5.8 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.58 cm width at the caudal pole and 0.62 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.51 cm width at the caudal pole and 0.84 cm width at the cranial pole.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted. No splenic masses or nodules were noted.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Marsh AH

REFERRING VET

Dr. Milwicki

Liver/ Gallbladder

Isoechoic to mild nonhomogeneous, mild to moderately expansive mass was present in the mid ventral caudal liver extending ventrocaudally into the level of the gastric axis, measuring approximately 7.0 cm in diameter. The mass appeared to distort the associated hepatic capsule, yet without evidence of parenchymal escape. The hepatic parenchyma not involved with the mass exhibited normal echogenicity with mild to moderate coarse echotexture and potential minor parenchymal remodeling. The gallbladder was non-distended in size containing anechoic content with mild gallbladder debris. The gallbladder debris is considered incidental without evidence of significant cholestasis. The cystic and common bile ducts were normal.

Gastrointestinal

INVOICE

13579

DATE

3/30/22

The stomach presented intact wall layering with a normal wall layer ratio. The potentially exhibited mild dorsocaudal displacement owing to the liver mass. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.



PATIENT

Cooper Murray

SPECIES

Canine

BREED

Mini Goldendoodle

SEX

MN

AGE

8 years

WEIGHT

25 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Marsh AH

REFERRING VET

Dr. Milwicki

INVOICE

13579

DATE

3/30/22

Pancreas

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

Free Abdomen

No evidence of perihepatic or peritoneal free fluid was noted. No overt lymphadenopathy was present.

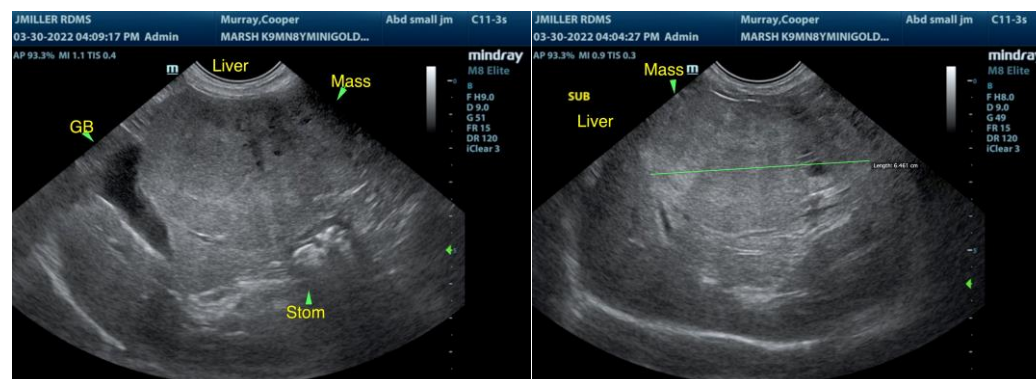
ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Ventrocaudal isoechoic mildly nonhomogeneous liver mass
- Sonographically unremarkable spleen
- Mild gallbladder debris (non-mucocele)- incidental

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The confirmed liver mass is nonspecific with potential considerations including hyperplasia, hepatoma, granuloma, malignant neoplasia, or other. Correlation with cytology of the hepatic mass obtained without complication during the ultrasound is warranted. Core surgical biopsy may be required for a definitive diagnosis.

Subjectively, the mass appears to be potentially amendable to surgical resection, yet the involvement of more than one liver lobe with an adjacent location to the gallbladder is likely. Pending cytology and/or additional sampling, further assessment, as well as surgical planning with abdominal CT if surgical options are a potential in this case may be considered. No evidence of intrahepatic or intra-abdominal metastasis was noted.





PATIENT

Cooper Murray

SPECIES

Canine

BREED

Mini Goldendoodle

SEX

MN

AGE

8 years

WEIGHT

25 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Marsh AH

REFERRING VET

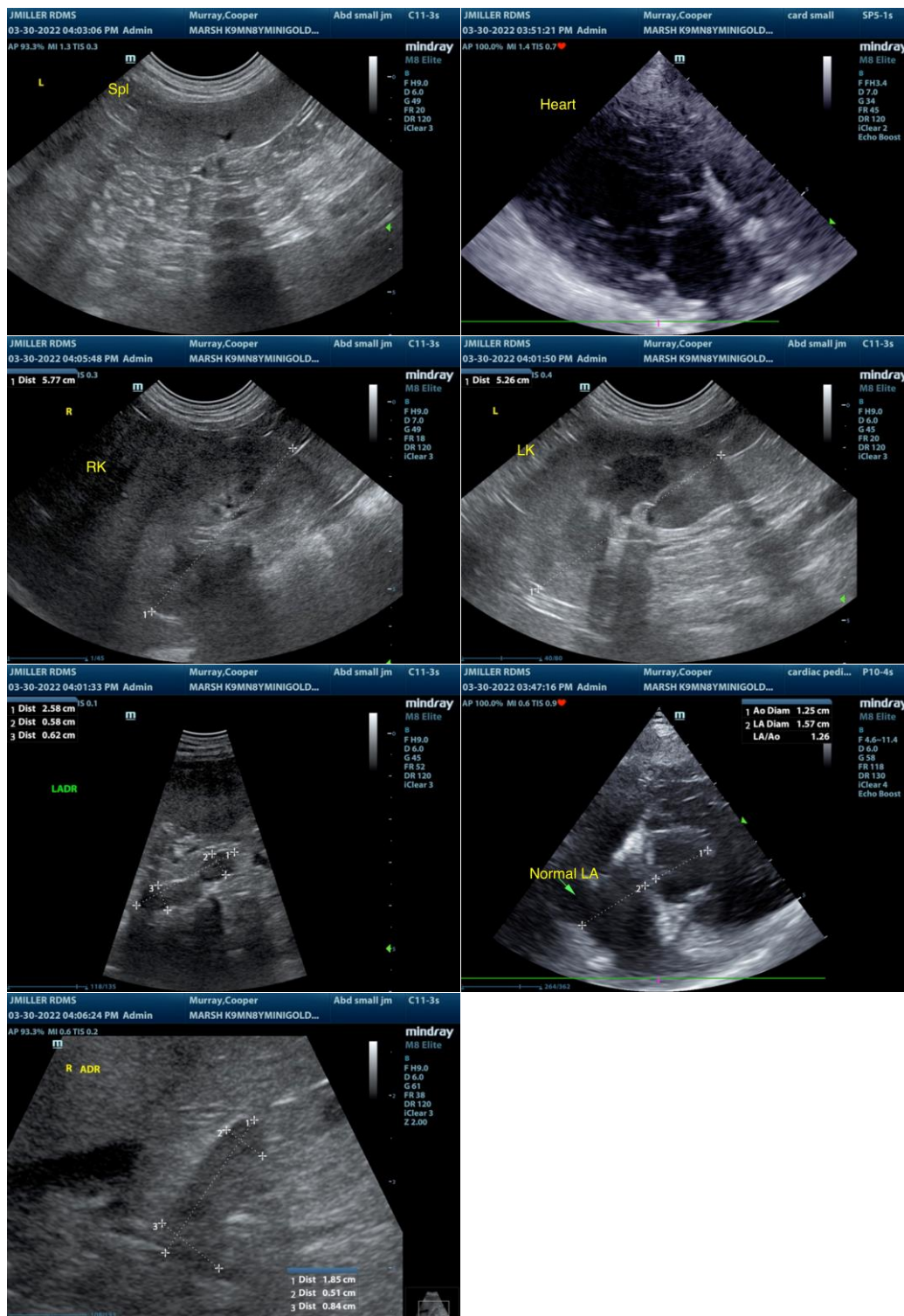
Dr. Milwicki

INVOICE

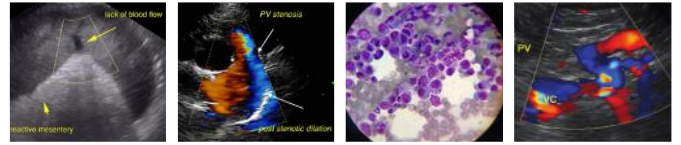
13579

DATE

3/30/22



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.



PATIENT

Cooper Murray

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.

SPECIES

Canine

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com

BREED

Mini Goldendoodle

SonoPath CT Services are offered at the Blairstown Animal Hospital. Blairstown, New Jersey. More information can be found at

SEX

MN

<https://sonopath.com/resources/sonopath-teleconsultation-services-and-sdep-certification/sonopath-ct-services>

AGE

8 years

WEIGHT

25 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

**IMAGING
PERFORMED BY**

Jessica Miller

HOSPITAL NAME

Marsh AH

REFERRING VET

Dr. Milwicki

INVOICE

13579

DATE

3/30/22