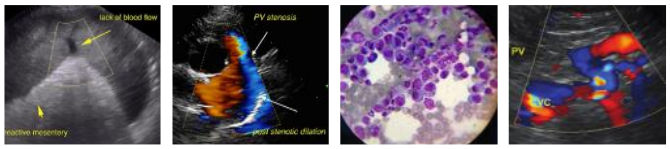
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Gizmo Gyori

SPECIES
Canine

BREED
Chihuahua

SEX
MN

AGE
10yr

WEIGHT
7.4lb

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

IMAGING PERFORMED BY
Shari Reffi CVT

HOSPITAL NAME
Budd Lake Animal Hospital

REFERRING VET
Dr. Verhalen

INVOICE
12372ag

DATE
12/05/2022

PRESENTING CLINICAL SIGNS

Presented 12/2 for lethargy, weight loss, inappetence, diarrhea and pyrexia, temp 104.5. Recheck temp 12/3 103.5, today 105.0 F. Ate a little on Sat. am. Grade III/VI murmur.

Current meds: Metronidazole, Proviable, Probiotic, Entyce , Clavamox.

Abnormal PE/Chem/CBC/UA Results: WBC 31 (15 H); NEUT 27590 (10600 H); BANDS 310 (300 H); MONOS 2170 (840 H); ALB 2.3 (2.7 L)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

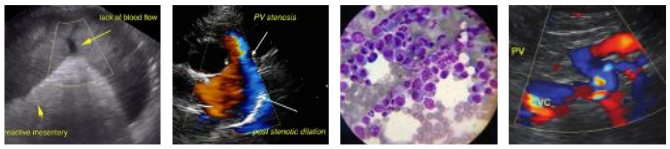
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	5.0	<2.0	1.3	1.3	38.4	72	0.25
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (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				
PATIENT	116	1.1	0.72		2.1	2.1	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. 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 or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic 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. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral



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

PATIENT

Gizmo Gyori

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

10yr

WEIGHT

7.4lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Budd Lake Animal Hospital

REFERRING VET

Dr. Verhalen

INVOICE

12372ag

DATE

12/05/2022

papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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 3.7 cm in length. The right kidney measured 3.8 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate appeared normal and free of pathology. Minor incidental residual prostate urethral dilation was present.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.54 cm width at the caudal pole and 0.47 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 0.47 cm width at the caudal pole and 0.54 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.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with moderate non-dependent mildly congealed uniform echogenic debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained minor retained non-shadowing ingesta/chyme with no signs of ileus, obstruction or foreign material.

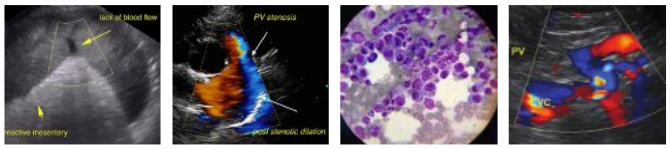
The small intestine presented intact generalized prominent wall layering with mildly prominent mucosa layer. Segmental to generalized pinpoint hyperechoic mucosal specking to minor mucosal fogging was present. Non-obstructive duodenojejunal ileus was present. The duodenum wall measured 0.34 cm width. The jejunum wall measured 0.23 cm width. The descending colon wall measured 0.30 cm width.

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Nonformed to soft fecal matter was present in the colon lumen with lumen dilation

Pancreas

The pancreas was normal in size with areas of capsule asymmetry and heterogeneous to mildly mixed echogenic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
SonoPath.com
1-800-838-4268 info@sonopath.com



PATIENT

Gizmo Gyori

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

10yr

WEIGHT

7.4lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Budd Lake Animal Hospital

REFERRING VET

Dr. Verhalen

INVOICE

12372ag

DATE

12/05/2022

Free Abdomen

No omental masses or peritoneal effusion was present.

Focally enlarged mesenteric and medial iliac lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of lymph node size was 0.69 cm in diameter.

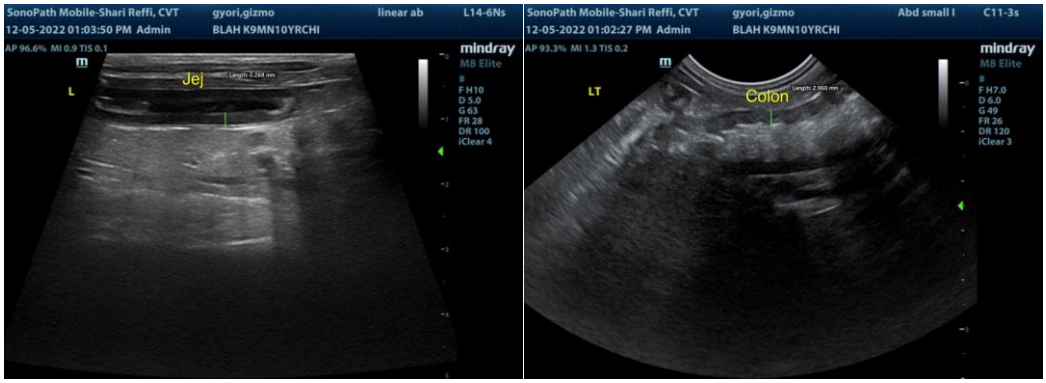
ULTRASONOGRAPHIC FINDINGS

- Compensated mitral valve disease (ACVIM B1)
- Enterocolopathy-IBD, PLE, infectious enterocolitis, occult neoplasia all possible
- Mildly prominent non-homogeneous pancreas-suspect chronic to chronic active pancreatitis and benign parenchymal remodeling
- Intermittent benign/reactive mesenteric and medial iliac lymph nodes-probable reactive hyperplasia or lymphadenitis secondary to inflammatory enterocolic disease
- Moderate non-dependent congealed gallbladder debris-possible early gallbladder mucocele

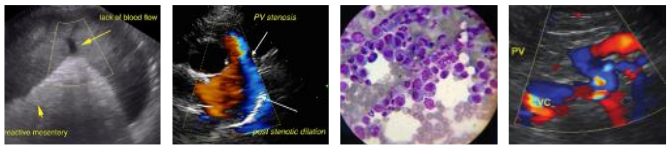
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The lack of left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is relatively low at this time and, without current clinical signs, indicates that medical therapy is not required at this stage. Prognosis at this stage is variable and serial sonographic monitoring is recommended with a recheck echocardiogram in 6 months, sooner if clinical signs suggestive of heart disease develop.

A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Endoscopic enterocolic biopsies are likely ideal for a definitive diagnosis. Empirically as needed GI support, increased bacterial spectrum with metronidazole/enrofloxacin combination, high colony count probiotic, empirical cobalamin supplementation, broad spectrum deworming even if fecal testing is negative and dietary therapy which may include novel protein or hydrolyzed diet with assessment of clinical response would be reasonable. A recheck sonogram is suggested if persistent GI signs and weigh loss despite empirical therapy.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Gizmo Gyori

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

10yr

WEIGHT

7.4lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Budd Lake Animal Hospital

REFERRING VET

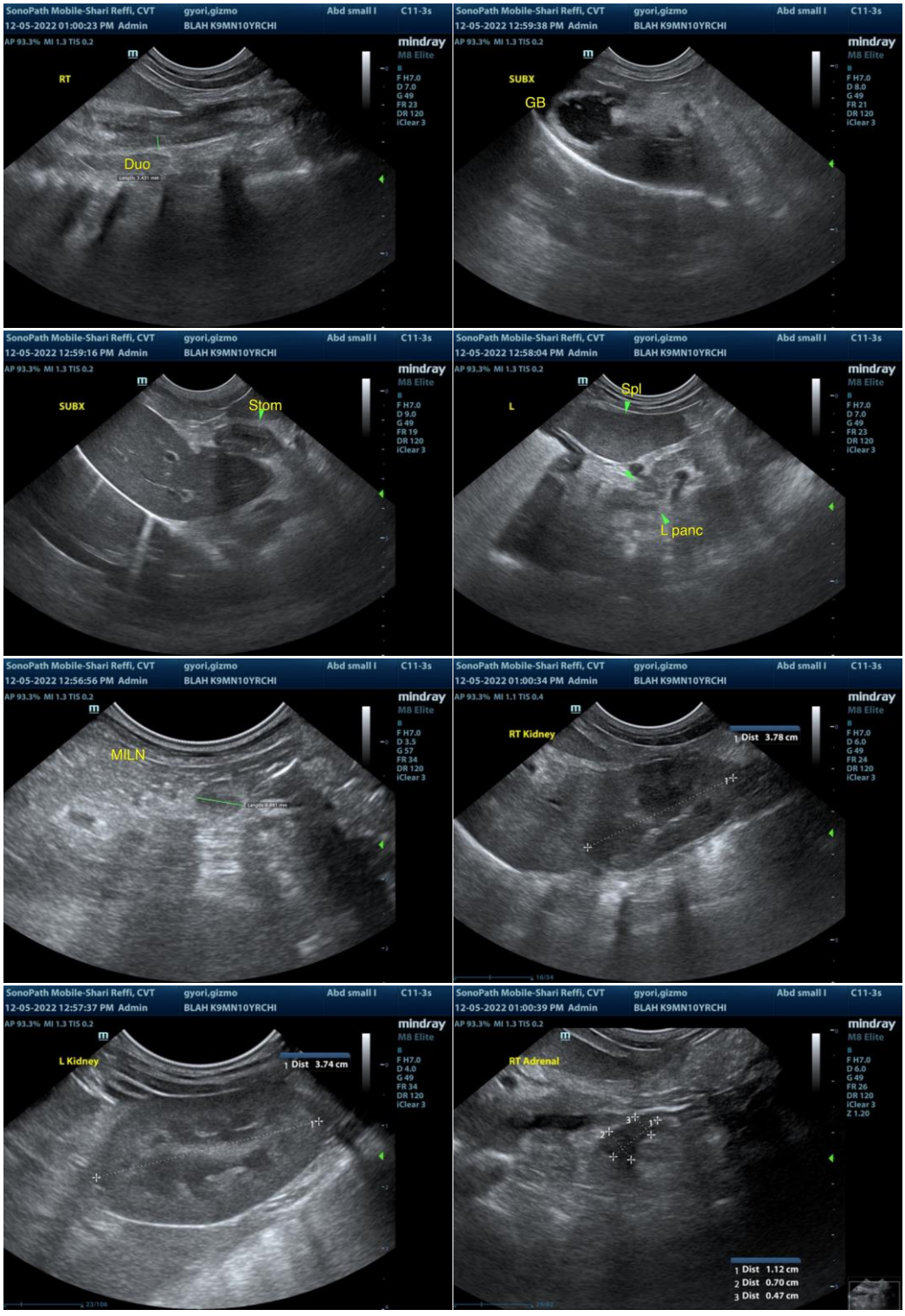
Dr. Verhalen

INVOICE

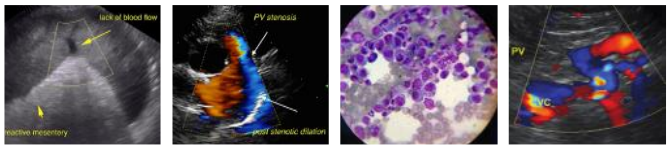
12372ag

DATE

12/05/2022



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Gizmo Gyori

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

10yr

WEIGHT

7.4lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Budd Lake Animal Hospital

REFERRING VET

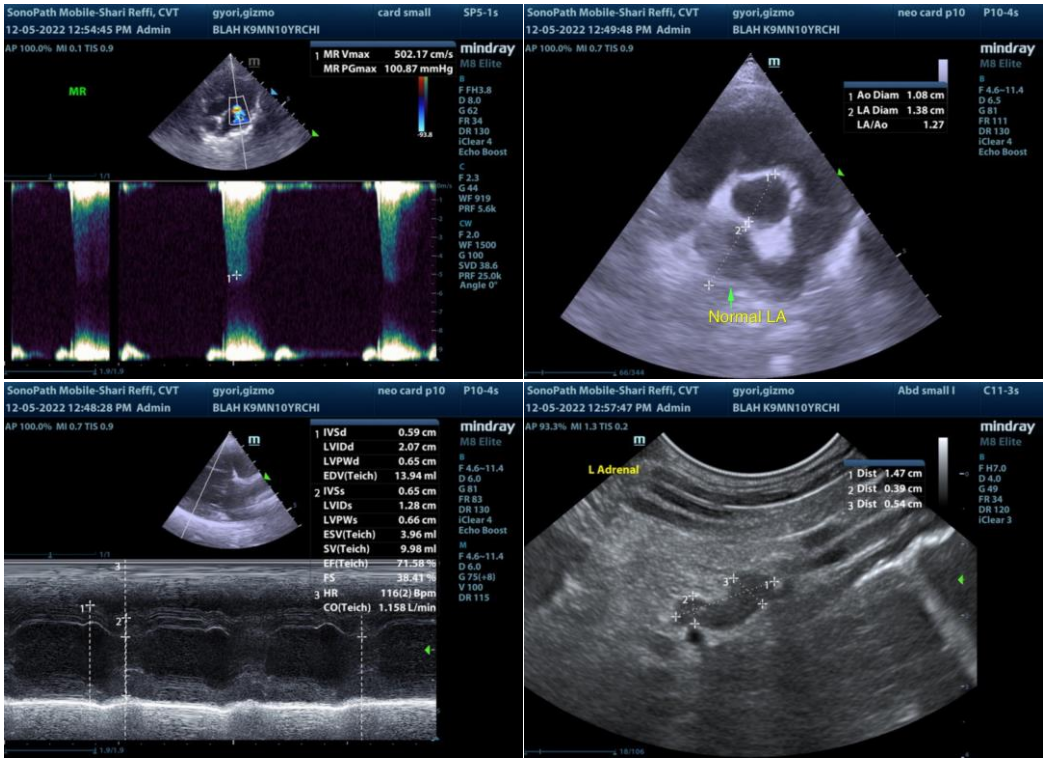
Dr. Verhalen

INVOICE

12372ag

DATE

12/05/2022



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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
mac.daniel@sonopath.com