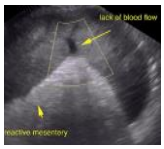
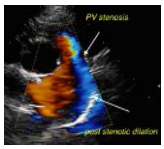
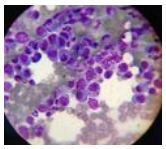
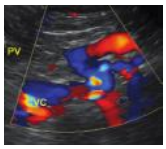
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Panda Greenwood

SPECIES

Canine

BREED

Heeler Mix

SEX

FS

AGE

5yr

WEIGHT

55lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Veterinary Hospital

REFERRING VET

Dr. Kim

INVOICE

11491ag

DATE

08/30/2022

PRESENTING CLINICAL SIGNS

Possible collapse/syncopal episode, lethargic, exercise intolerance. Hx of heart worm pos - on simparica, no immiticide tx. Small pocket of fluid by liver on spot probe. Current meds: Simparica trio

Abnormal PE/Chem/CBC/UA Results: Hgb 19.6, glucose 147, ALT 225, K 3.3

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

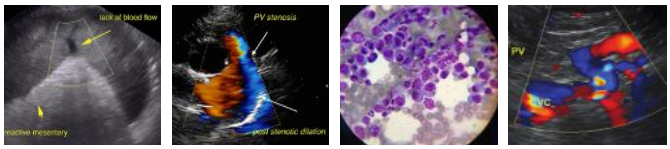
CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO** (Boon method)	**LA/AO** (Heart Base; Swe)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT			1.3	1.24	40.7	73.3	0.23
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV 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	144	1.5	1.2		3.3	3.3	

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 evidence of cor pulmonale or visualized heartworms in the main pulmonary artery. 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. No overt arrhythmogenic disease was observed.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm 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 were noted.



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

PATIENT

Panda Greenwood

SPECIES

Canine

BREED

Heeler Mix

SEX

FS

AGE

5yr

WEIGHT

55lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Veterinary Hospital

REFERRING VET

Dr. Kim

INVOICE

11491ag

DATE

08/30/2022

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 6.5 cm in length. The right kidney measured 6.2 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.60 cm width at the caudal pole and 2.3 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.46 cm width at the caudal pole and 2.3 cm length.

Spleen

The spleen exhibited normal size and contour with a primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. A solitary non-disruptive hypoechoic nodule was present in the medial parenchyma measuring 0.93 cm in diameter.

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 mild primarily dependent hyperechoic debris. 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 mild to moderate ingesta exhibiting subtle progressive distal acoustic shadowing 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.

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 was evident.

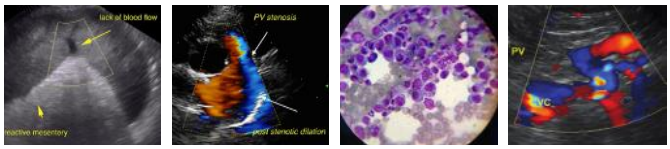
Free Abdomen

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary

- Normal echocardiogram



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

PATIENT

Panda Greenwood

SPECIES

Canine

BREED

Heeler Mix

SEX

FS

AGE

5yr

WEIGHT

55lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Veterinary Hospital

REFERRING VET

Dr. Kim

INVOICE

11491ag

DATE

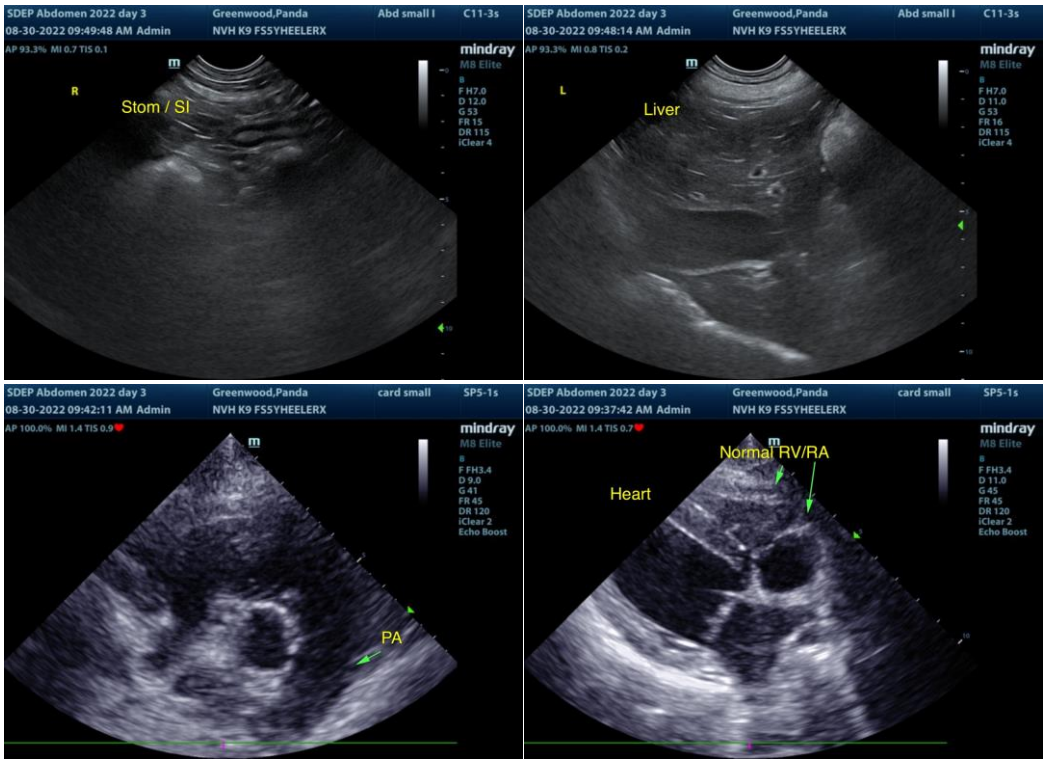
08/30/2022

- Non-specific splenic nodule
- Low grade hepatopathy
- Minor gallbladder debris (non-mucocele)
- Sonographically normal GI tract with mild gastric ingesta-potential post prandial presentation

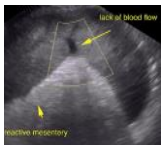
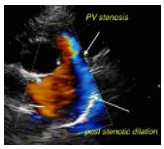
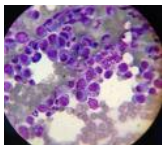
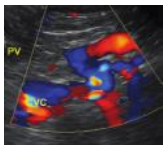
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, no evidence of significant cardiac pathology was present in this study as a definitive cause of the patient's clinical signs. No visualized heartworms were present. Potential for non-visualized heartworms deep in the pulmonary artery is possible given the patient's history. No indication for cardiac medication. The possibility of a paroxysmal arrhythmogenic event cannot be excluded. If continued episodes of collapse or syncope, a Holter monitor may be considered. Thorough neurological exam is recommended if not done.

Potential for low grade reactive or inflammatory hepatopathy given the ALT elevation is possible. No evidence of a portosystemic vascular anomaly was observed. Assuming normal clotting status and using a 25g needle a hepatic FNA is recommended for screening cytology to assess for evidence of inflammatory cells. Leptospirosis titer/PCR if potential exposure +/- bile acids to assess hepatic functionality could be considered. Hepatic functionality is likely normal given normal GLU level and assuming normal BUN, CHOL and ALB. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Panda Greenwood

SPECIES

Canine

BREED

Heeler Mix

SEX

FS

AGE

5yr

WEIGHT

55lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Veterinary Hospital

REFERRING VET

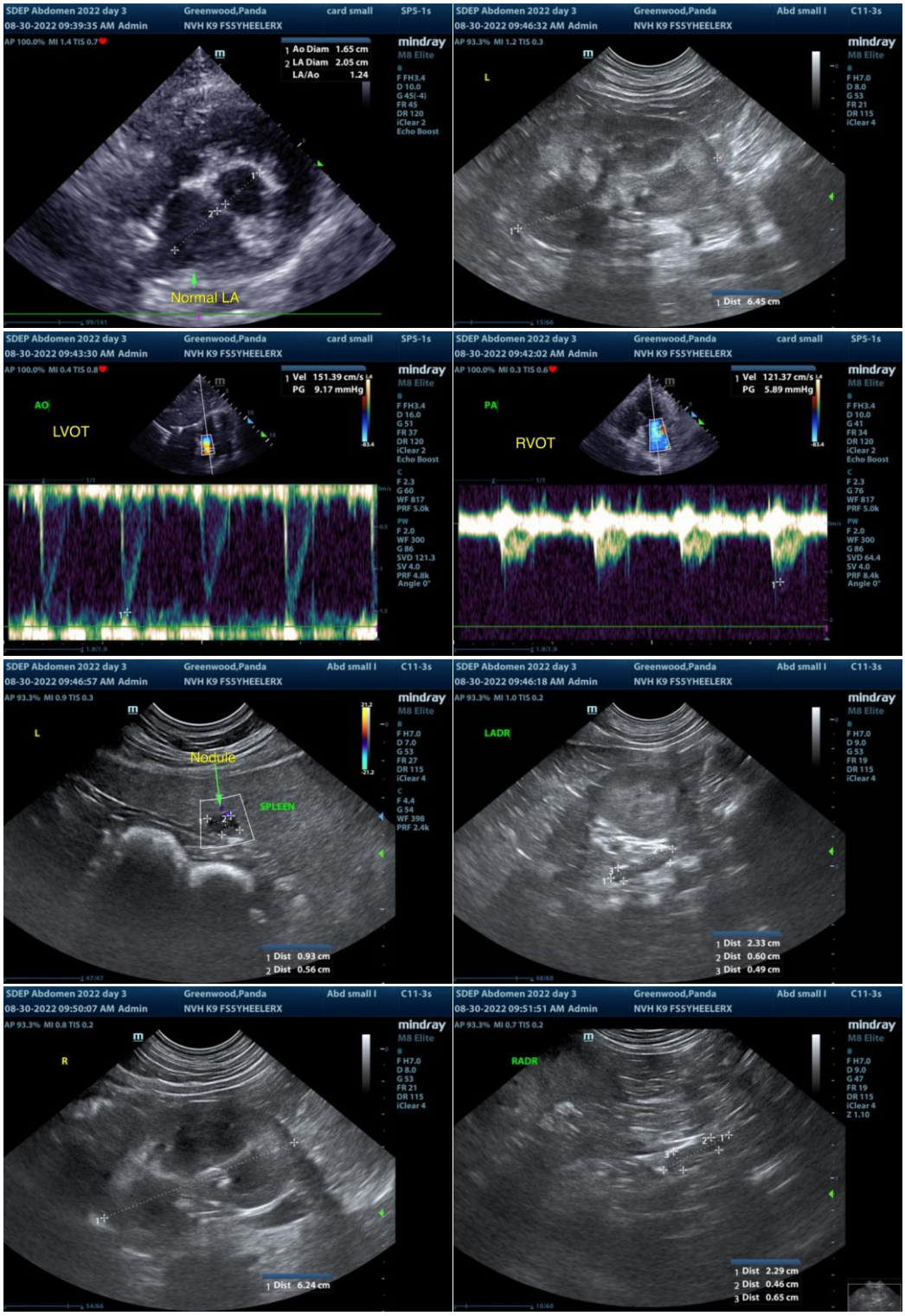
Dr. Kim

INVOICE

11491ag

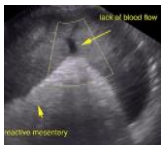
DATE

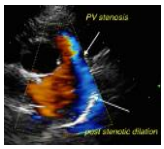
08/30/2022

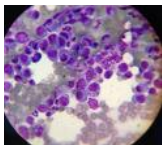
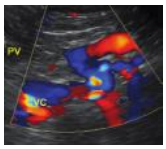


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I





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

PATIENT

Panda Greenwood

SPECIES

Canine

BREED

Heeler Mix

SEX

FS

AGE

5yr

WEIGHT

55lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Veterinary Hospital

REFERRING VET

Dr. Kim

INVOICE

11491ag

DATE

08/30/2022

can be of any further assistance please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com