



PATIENT

Bear Vernick

SPECIES

Canine

BREED

Akita

SEX

NM

AGE

2

WEIGHT

128

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

INVOICE

13333

DATE

2/12/22

PRESENTING CLINICAL SIGNS

Can't stand falling over, shaking his head, owner thinks he feels hot, hasn't eaten since Thurs night

Patient sedated with Dexdomitor and Butorphanol

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				1.34	22.1	47.7	0.6
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	50	1.5	1.0		4.3	3.8	

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 subnormal for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. This is suspected to be secondary to sedation. 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	Urinary System
Bear Vernick	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.
SPECIES	
Canine	The area of the aortic trifurcation was free of pathology.
BREED	
Akita	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 7.5 cm in length. The right kidney measured 8.3 cm in length.
SEX	
NM	
AGE	Adrenal Glands
2	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 3.3 cm length x 0.55 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 3.0 cm length x 0.84 cm width at the caudal pole.
WEIGHT	Spleen
128	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.
INTERPRETED BY	Liver/ Gallbladder
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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. The cystic and common bile ducts were normal.
IMAGING PERFORMED BY	Gastrointestinal
Jenn	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.
HOSPITAL NAME	
Rockaway AH	
REFERRING VET	
Dr. Maniar	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.
INVOICE	
13333	Normal visible colon wall layers were present with apparent formed feces in lumen.
DATE	Pancreas
2/12/22	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.



PATIENT

Free Abdomen

Bear Vernick

No overt lymphadenopathy or peritoneal effusion was present.

SPECIES

Canine

BREED

Akita

SEX

NM

AGE

2

WEIGHT

128

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

INVOICE

13333

DATE

2/12/22

ULTRASONOGRAPHIC FINDINGS

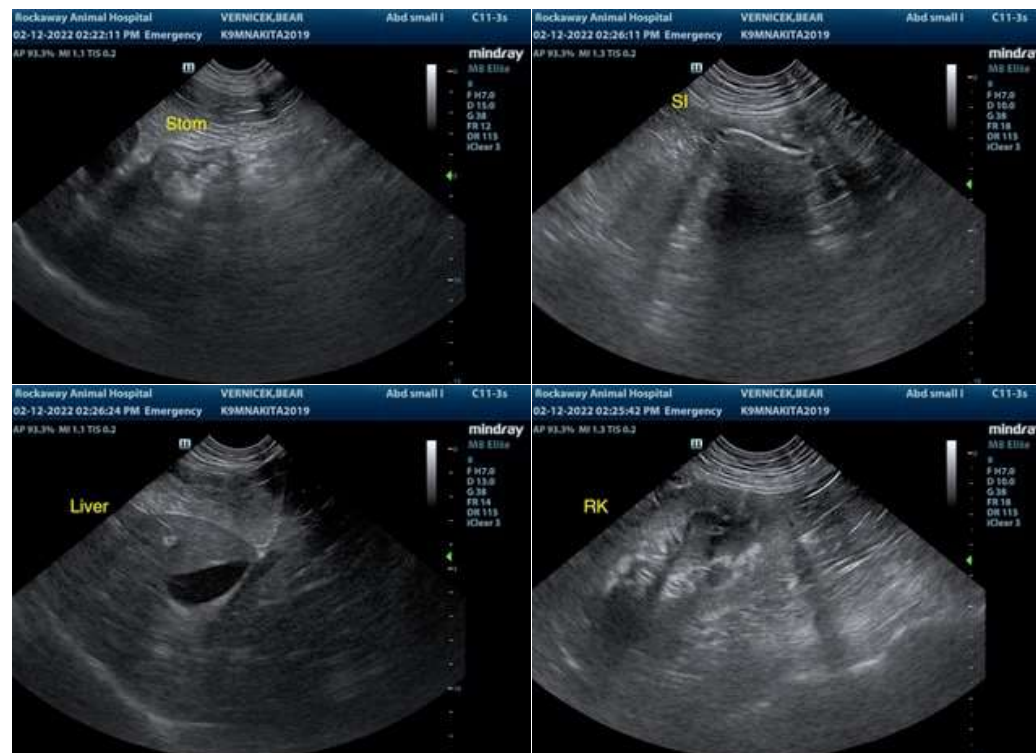
Primary Findings

- Overtly normal cardiac structure and function in light of sedation
- Sonographically unremarkable abdomen
- Sonographically unremarkable abdomen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of cardiomyopathy, given patient was sedated, as well as no evidence of abdominal visceral pathology as a definitive cause of the patient's clinical signs. Potential for nonobvious subnormal myocardial function cannot be definitively excluded, given the patient was sedated for the exam, yet is thought unlikely. Ideally, recheck echo If possible while not under sedation could be considered if clinical concern for cardiac disease.

Screening blood pressure, as well as ECG assessment not under sedation, is recommended for potential arrhythmogenic disease. However, no overt arrhythmia was noted in the cardiac study. Thorough muscular/skeletal and neurological examinations are recommended. Correlation with full CBC / Chemistry panel and urinalysis is suggested.





PATIENT

Bear Vernick

SPECIES

Canine

BREED

Akita

SEX

NM

AGE

2

WEIGHT

128

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

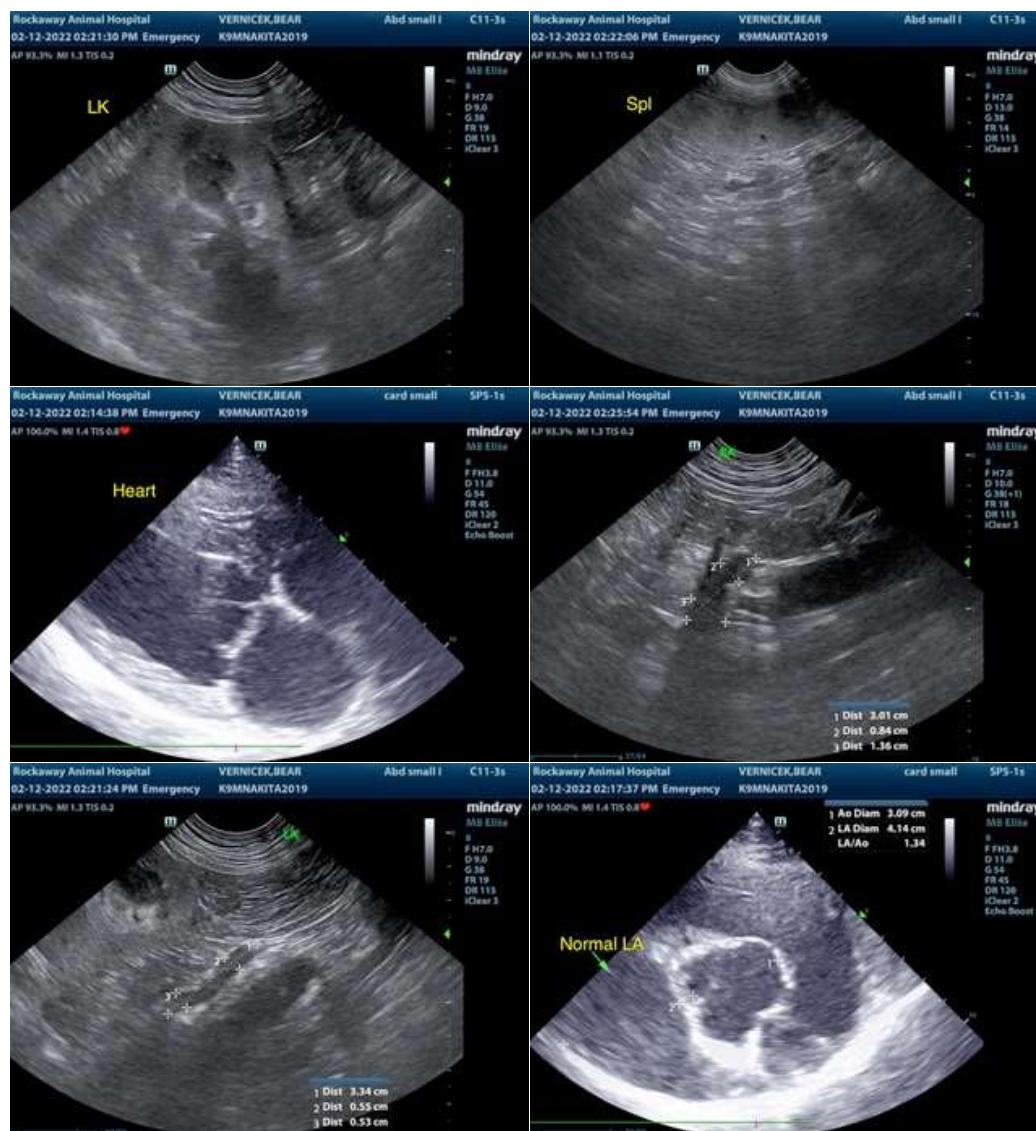
Dr. Maniar

INVOICE

13333

DATE

2/12/22



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.

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)
info@SonoPath.com