



PATIENT

Kevin Cahill

SPECIES

Canine

BREED

Bernese Mountain Dog

SEX

M

AGE

1 yr

WEIGHT

94 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Will Penn VH

REFERRING VET

Dr. Abouemara

INVOICE

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DATE

1/13/26

PRESENTING CLINICAL SIGNS

Presented- O noted heavy breathing. Decreased appetite. Possible cardiomegaly on rads. Received propofol and torb sedation for scan. No other medications noted. Hx of Lyme

Abnormal PE/Chem/CBC/UA Results: BUN 31; Creat 1.5; ALP 244

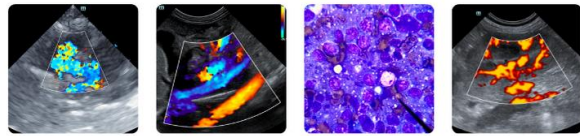
Patient sedated with Butorphanol and Propofol.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (M-Mode) | LA/AO (Heart Base; Swe) | FS (%) | EF (%) | EPSS (cm) |
|---------------------------|---------------|---------------|----------------|-------------------------|----------------------|--|--|
| NORMAL PARAMETER | 4.5-5.5 | <2.7 | 1.3 | Up to 1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | - | - | NM | 1.1 | 36 | 68 | 0.25 |
| CANINE CARDIAC PARAMETERS | HR (BPM) | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT (lbs) | LAD LA MAX 4 Chamber | 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 | 146 | 1.0 | 0.75 | 94 | 3.4 | 3.3 | - |

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 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. Normal measured LVOT velocity was noted. 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). Normal measured RVOT velocity was noted. No visible **pericardial** or free pleura fluid was noted. The



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cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

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Urinary System

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

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The prostate was enlarged in size with intact, symmetrical capsule contour. The margins of the gland were intact and able to be differentiated from the surrounding tissue. The prostatic parenchyma was mildly echogenic to heteroechoic without parenchymal mineralization. The prostate measured 5.2 cm x 4.5 cm.

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The left and right testicles were sonographically normal.

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No evidence of pathology in the area of the aortic trifurcation.

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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 6.9 cm in length.

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Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.59 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 0.56 cm width at the caudal pole.

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Spleen

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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.

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Liver/ Gallbladder

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The liver presented normal in size with possible borderline enlargement. Normal hepatic vascular volume was present. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. The cystic and common bile ducts were normal.

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty without evidence of retained ingesta, fluid, 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 were evident.

Free Abdomen

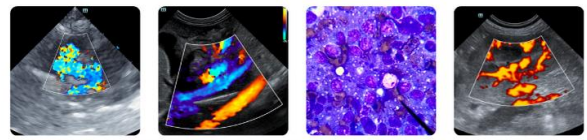
No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Benign prostatic hyperplasia
- Normal bilateral kidneys / adrenal glands
- Mild benign hepatopathy
- Normal gastrointestinal tract

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no evidence of cardiac or abdominal visceral pathology as an obvious cause of the patient's clinical signs. Correlation with urinary workup, given the patient's history, with consideration for screening C/S and UPC level, if clinically indicated, for renal staging is recommended. Musculoskeletal examination, if clinically indicated, may be considered. Gastrointestinal support is recommended.



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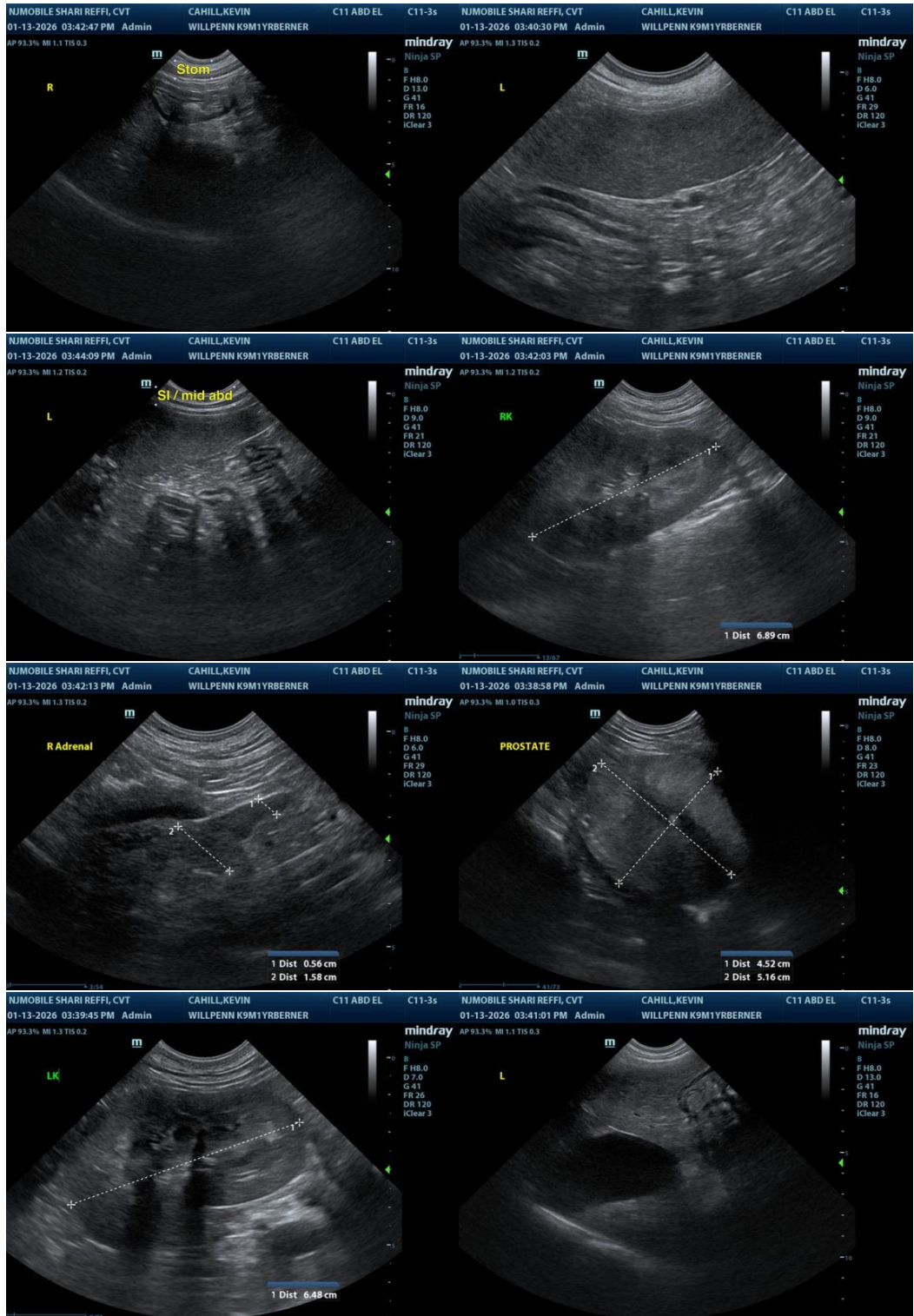
Dr. Abouemara

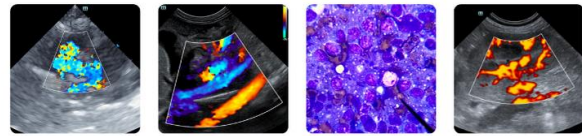
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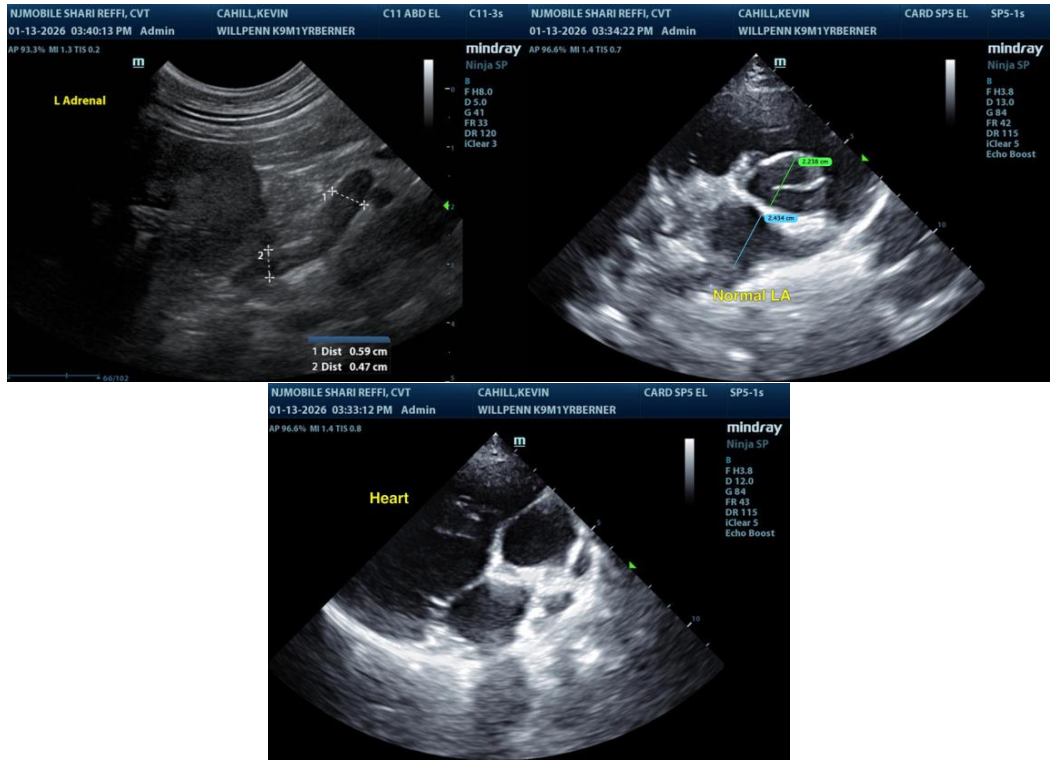
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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