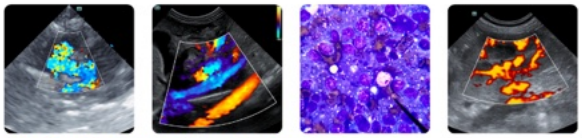


PATIENT
Nimue Stevens

SPECIES
Canine

BREED
Great Dane

SEX
Spayed female

AGE
8 years

WEIGHT
112 lbs

INTERPRETED BY
Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Whippany VH

REFERRING VET
Dr. Enoch

INVOICE
68946

DATE
11/24/25

PRESENTING CLINICAL SIGNS

History: Elevated LE's. Wellness echo (no murmur or arrhythmia appreciated) Hx incontinence.
Current Meds: Incurin 1mg every 2-3 days; Trazodone PRN; (Torb/Propofol administered for scan).
Abnormal PE/Chem/CBC/UA Results: TP 8.4; Glob 5.0; ALT 120; ALP 246; TBili 0.4; 4dx: Lyme (+) ; Anaplasma (+)

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

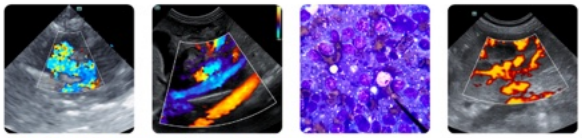
The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial **mitral** insufficiency was noted. The **left ventricle** presented normal volumes, yet subnormal contractility noted. The **left ventricular outflow** tract demonstrated 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** insufficiency was noted at 2 m/sec. 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. Arrhythmogenic activity was noted.

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO	LA/AO (Heart Base)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	None	2.0	1.1	1.4	25	59	0.7
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT**	**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	80	1.0	0.9	112 lbs	4.3 max	4.6	

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.



SonoPath www.SonoPath.com info@sonopath.com 800.838.4268

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The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 8.45 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 3.04 x 0.75 cm at the cranial pole and 0.52 cm at the caudal pole. The left adrenal gland measured 0.6 cm at the caudal pole and 0.4 cm at the cranial pole.

Spleen

The **spleen** was mildly enlarged and folded upon itself cranially. Mild, heterogenous parenchymal changes were noted.

Liver

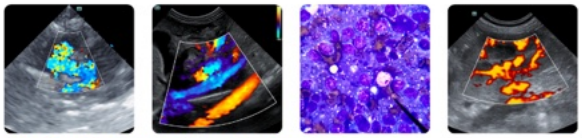
The **liver** revealed diffuse, hepatic remodeling with coalescing, micronodular changes. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.



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ULTRASONOGRAPHIC FINDINGS

Trivial mitral and tricuspid insufficiency with hypocontractility.

Arrhythmogenic activity.

Coalescing micronodular hepatic changes. Differentials include systemic disease with effector organ hypocontractility such as hypothyroidism, Addison's and abdominal pathology.

Heterogenous splenic changes. No overt masses noted. Differentials on the spleen include pronounced hyperplasia versus emerging round cell neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Thyroid assessment is warranted as well as screening for Addison's. There was no evidence of significant structural cardiac disease noted. Holter monitor would be ideal given the arrhythmia.

Bile acid profile is warranted if any crusting skin lesions are present. The hepatic presentation could be consistent with hepatocutaneous syndrome. 25-gauge FNA of the spleen and liver would be ideal in this patient.

The amount of remodeling in the liver is moderate. I do recommend bile acid elevations; however, prior to any intervention EKG or Holter monitor would be ideal as well as thyroid work-up and potential screening for Addison's with baseline cortisol given the hypocontractility of the heart. No cardiac medications are recommended in this patient.

There are multiple issues in this patient, I would start with defining the arrythmia and any systemic cause of hypocontractility such as hypothyroidism and Addison's if not already performed followed by bile acid profile and FNA of the spleen +/- FNA or core biopsy of the liver. Assessment for crusting skin lesions are also indicated.

Internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at http://spa.sonopath.com/.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services

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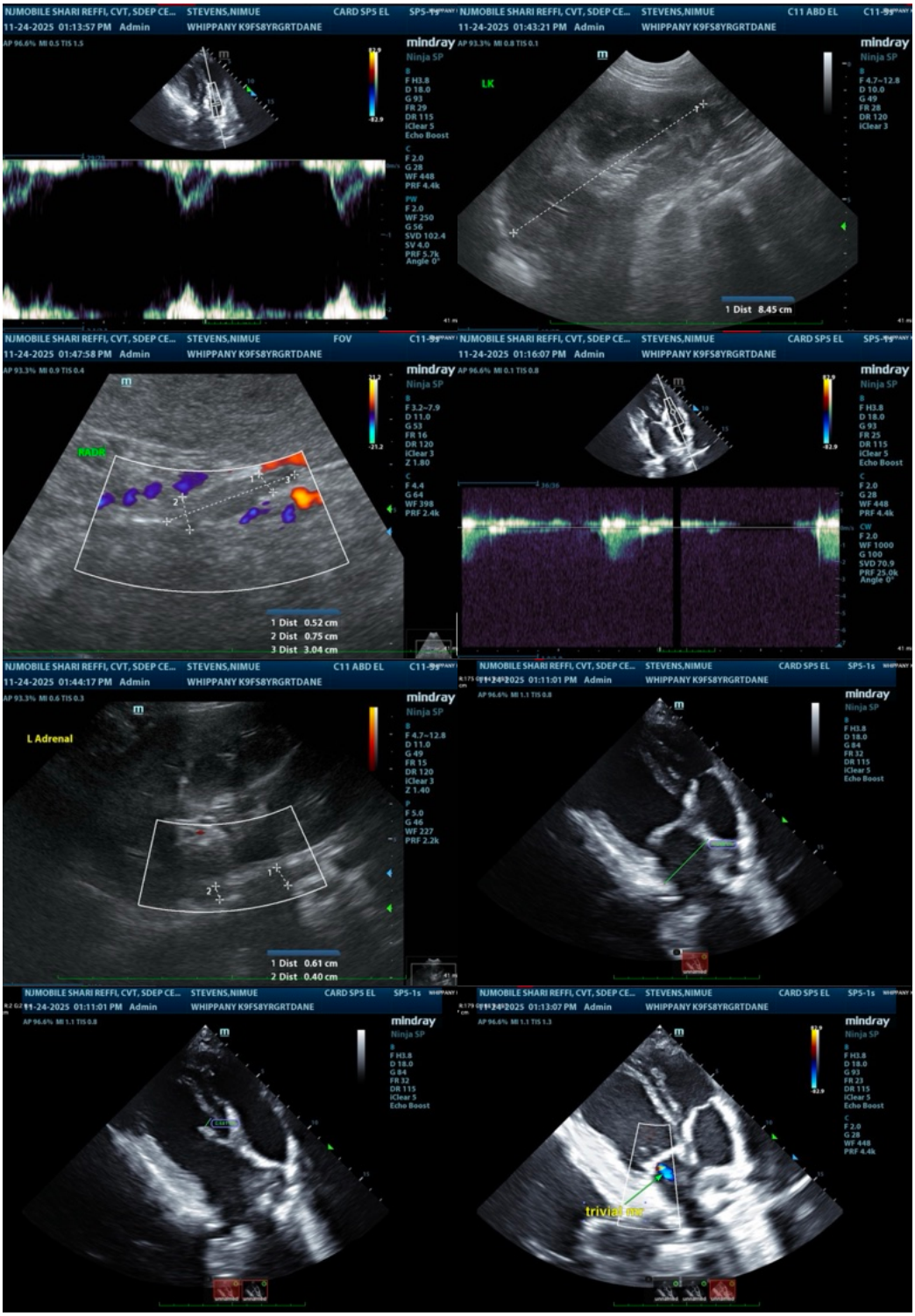
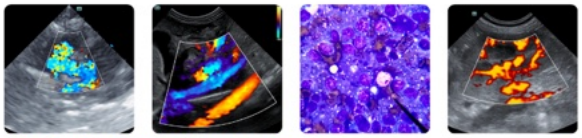


New Jersey Mobile
FUELED BY SONOPATH VETERINARY ULTRASOUND



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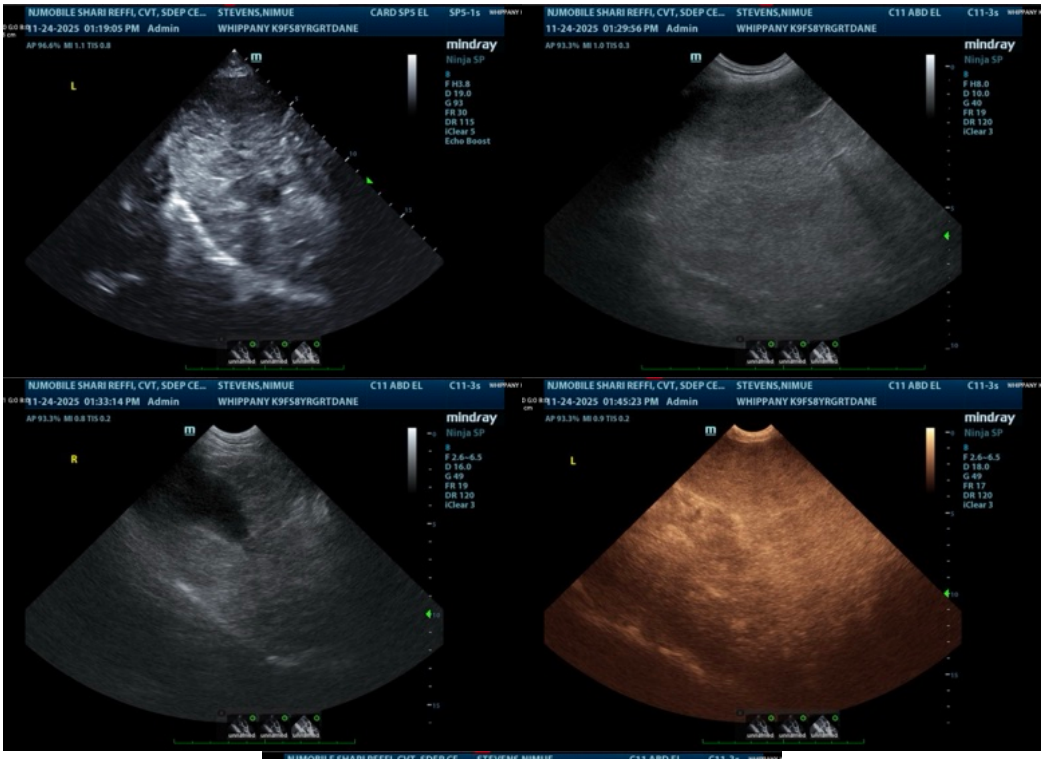

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

Info@SonoPath.com