**PATIENT**

Duke Bishnoi

**SPECIES**

Canine

**BREED**

Dachshund Mix

**SEX**

Neutered Male

**AGE**

8 Years 1 Month

**WEIGHT**

18.6 lbs

**INTERPRETED BY**

Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS

**IMAGING PERFORMED BY**

Vincent Ravancho CVT

**HOSPITAL NAME**

Englewood Veterinary Center

**REFERRING VET**

Dr. Ezik

**INVOICE**

15963

**DATE**

05/08/26

## PRESENTING CLINICAL SIGNS

Follow up on vacuolar hepatopathy, borderline bilateral adrenomegaly, prominent iliac lymph node from previous study. Newly noted Grade I systolic left sided murmur; normal EKG and rads. Current medications - Denamarin advanced, Ursodiol.

Abnormal PE/Chem/CBC/UA Results: T.P 8.5, Alb 4.1, Glob 4.4, ALT 205, ALP 549, Amy 6,099, Lipase >2000, normal cPLI and CBC. Resting cortisol 2.79 (N). USG - 1.085

## 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 | 5.8 | 2.0 | NM | 1.4 | 50 | 84 | 0.16 |
| **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 | 148 | 2.0 | 1.11 | 18.6 | 2.7 | 2.27 | -- |

### *Cardiac Presentation*

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Mitral and tricuspid insufficiency was noted. The **left ventricle** presented normal 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. 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.

### *Urinary System*

The **urinary bladder**, trigone, and pelvic urethra to a depth of 3.0 cm presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized,

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and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **residual prostate** measured 8.0 mm.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 4.51 cm in length. The right kidney measured 4.52 cm in length.

### *Adrenal Glands*

The **left adrenal gland** was 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 left adrenal gland measured 1.75 cm x 0.51 cm width at the cranial pole and 0.61 cm width at the caudal pole.

The **right adrenal gland** measured 2.1 cm x 0.93 cm width at the cranial pole and 0.51 cm width at the caudal pole. The right adrenal measurements differ from the prior sonogram owing to angular approach differences, but the right adrenal gland remains unchanged from the prior sonogram.

### *Spleen*

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

### *Liver*

The **liver** presented mildly enlarged with a mild amount of nonspecific remodeling. The gallbladder and common bile duct were unremarkable.

### *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.

## ULTRASONOGRAPHIC FINDINGS

- Stage B1 valvular disease.
- Unchanged liver- benign hepatopathy with minor remodeling.

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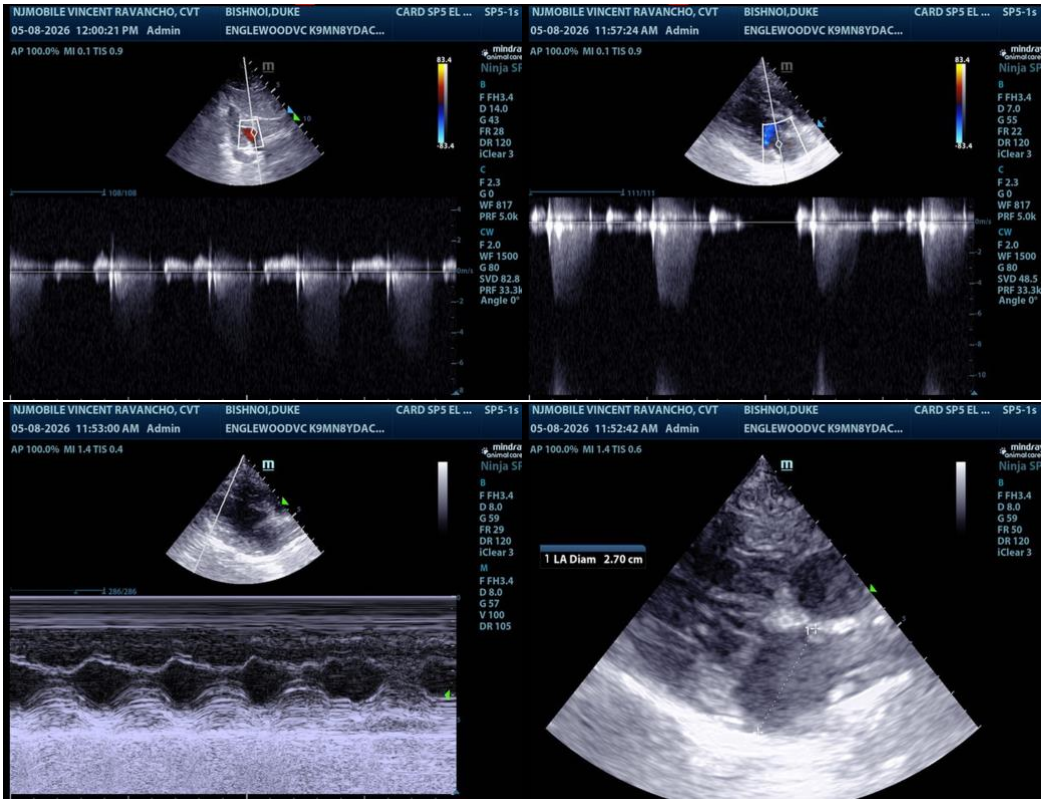
- Stable abdomen otherwise- expected change for this aged patient.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflo maintenance or similar protocol if anesthesia is desired. Blood pressure, EKG and chest radiographs are recommended if not already performed. Target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to reach this level. Recheck echocardiogram is recommended in 6-12 months, earlier if murmur grade increases or clinical signs initiate.

No evidence of abdominal pathology.



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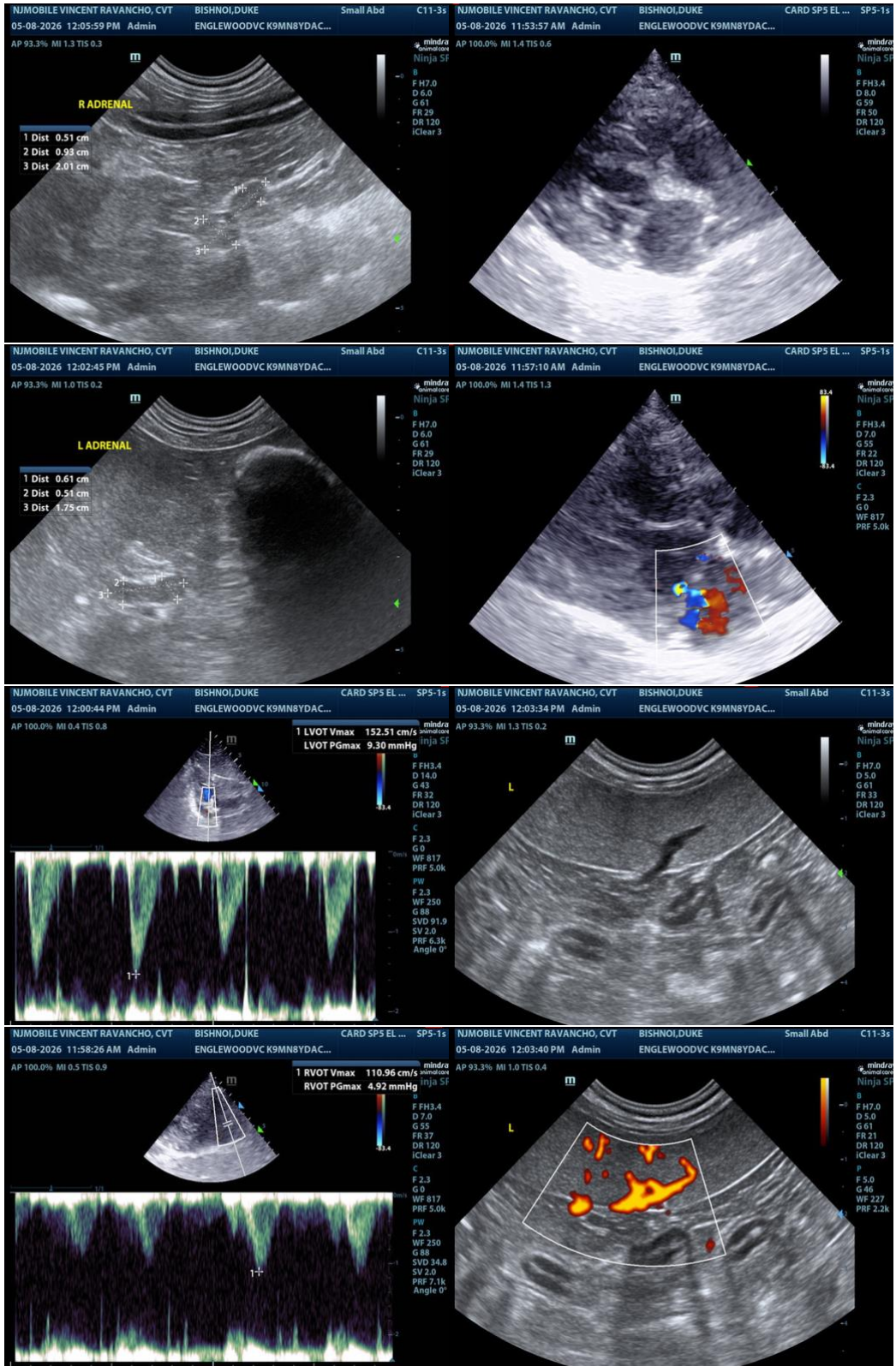

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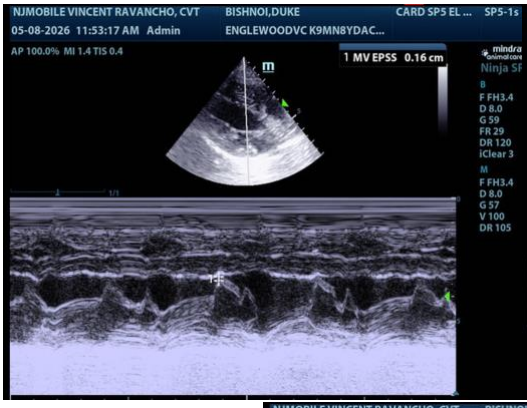



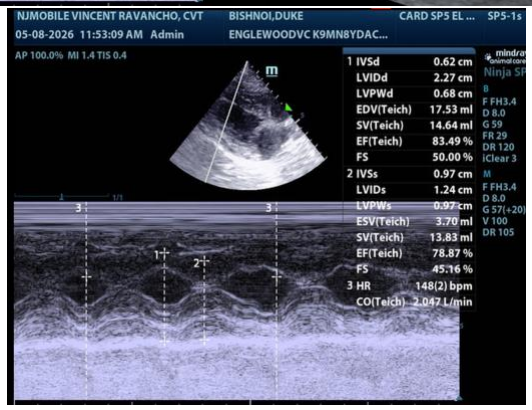


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Eric Lindquist,** DMV, DABVP(CFM), Cert. IVUSS,

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