



## PATIENT

Ranger Barkocy

## SPECIES

Canine

## BREED

Lab x

## SEX

Neutered Male

## AGE

9

## WEIGHT

48.8

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jenn

## HOSPITAL NAME

Rockaway Animal  
Hospital

## REFERRING VET

Dr. Daly

## INVOICE

71717

## DATE

11/12/25

## PRESENTING CLINICAL SIGNS

Grade 3/6 HM weight loss coughing lethargy irregular rhythm , readily reducible hacking cough , crackles wheezes , cardiomegaly Current meds Vetmedin

## 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	6.0	2.5	>2.0	2.33	40	--	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	~120	--	0.8	48.8	6.7	6.2	--

### Cardiac Presentation

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. Prolapse of the anterior mitral valve leaflet noted. 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 or chamber overload. **Tricuspid** insufficiency noted, velocity is likely underestimated at 2.5 m/sec. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Significant arrhythmia noted in this patient.

### 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 were noted. Ureteral papillae were normal.



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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 his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 5.6 cm.

### **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 1.7 cm x 0.58 cm at the caudal pole and 0.62 cm at the cranial pole.

The region of the **right adrenal gland** was imaged, no evident pathology.

### **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 passive congestion pattern with dilated hepatic veins. The gallbladder itself was unremarkable.

Pleural effusion noted through the diaphragm.

### **Gastrointestinal**

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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

- Left- and right-sided heart failure with arrhythmia.
- Passive congestion liver pattern owing to right-sided failure.
- Pleural effusion.
- Age related renal changes.
- Partially full stomach.



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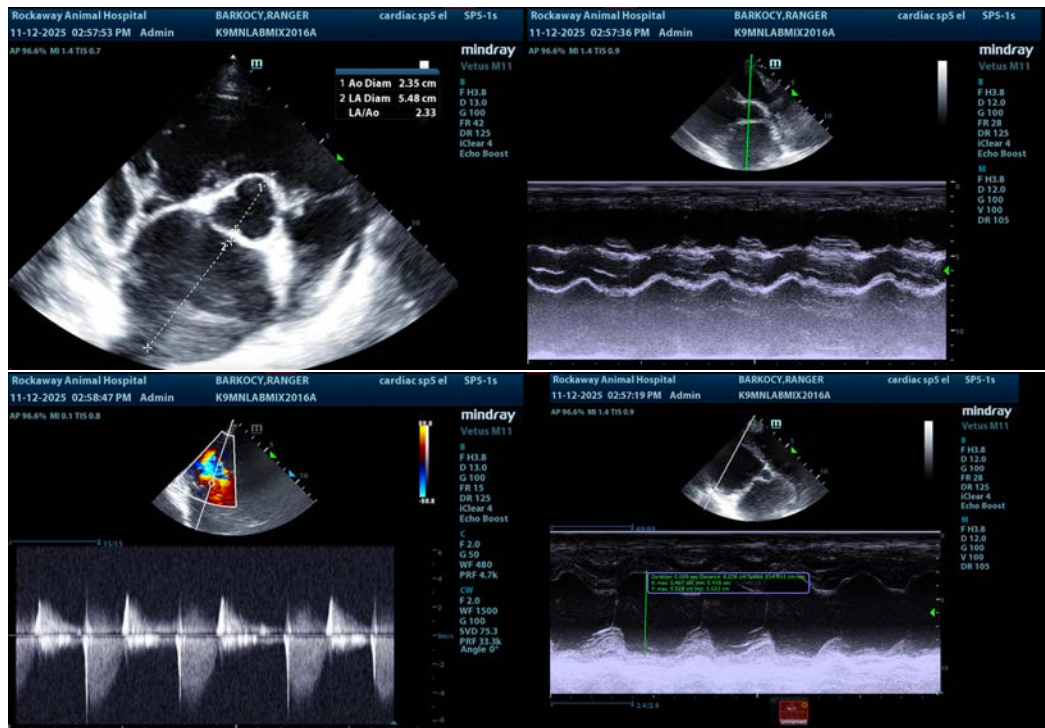
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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Typically, pleural effusion in dogs is not caused by heart failure. A separate thoracic process may be playing a role in this patient. Continuing with Pimobendan and adding Lasix at 3-4 mg/kg BID, ACE inhibitor 0.5 mg/kg SID progressing to BID, and Spironolactone at 1-2 mg/kg BID. However, chest CT may be appropriate, given the pleural effusion, as concurrent extracardiac thoracic disease may be present. Prognosis is extremely guarded. This patient is at risk for sudden death.





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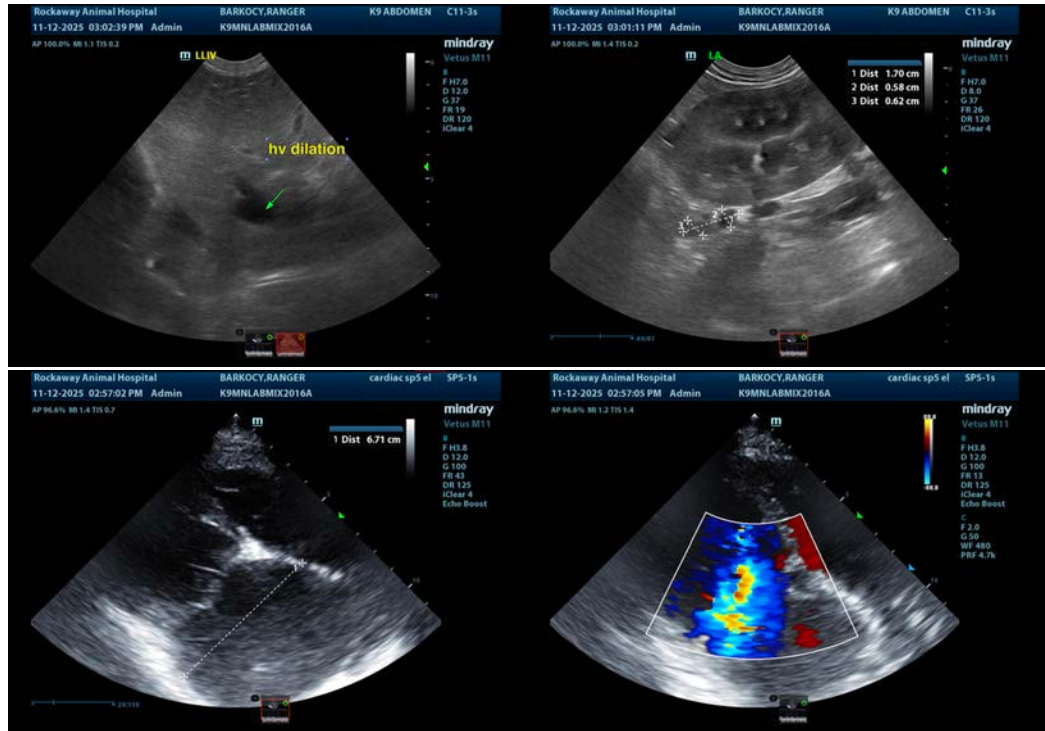
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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