



**PATIENT**

Cookie McGovern

**SPECIES**

Canine

**BREED**

Boxer

**SEX**

Spayed Female

**AGE**

10 Years

**WEIGHT**

66 Pounds

**INTERPRETED BY**

Bradley Harris, DVM,  
DACVECC, DACVIM  
(cardiology)

**IMAGING PERFORMED BY**

Karen Ebersole DVM  
DABVP (Canine &  
Feline)

**HOSPITAL NAME**

Scanvet

**REFERRING VET**

Dr. Ouelette

**INVOICE**

36215

**DATE**

3/14/26

**PRESENTING CLINICAL SIGNS**

- Recent onset rear end weakness
- Skipped beats noted on exam
- CardioPet confirmed VPCs and rec. echo
- Current meds - ThyroTabs 0.4mg BID
- Abnormal PE/Chem/CBC/UA Results: PE: Irregular rhythm throughout auscultation, some runs of more normal beats but routinely abnormal. No audible murmur. Good muscle mass. No lameness or rear limb pain noted. CBC/Chem - WNL T-4 - 3.7 Cardiopet ECG - • Average Heart Rate: 117-142 bpm • Rhythm: Sinus rhythm with VPCs • Other: VPCs have left bundle branch block morphology. No abnormal ECG measurements.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	BW	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	30	120	4.10	2.64	1.41	4.0	2.82
CANINE CARDIAC PARAMETERS	FS	EPSS	PV V MAX (m/s)	AV V Max (m/sec)	MR Vmax	TR Vmax	RPA distensibility (normal >30%)
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	30	0.0	1.0	1.4	NM	NM	NM

**ECG Interpretation**

The underlying rhythm is sinus in origin with a varying R-R interval and average heart rate of 120bpm. The majority of the QRS complexes are supraventricular in origin with consistent P-Q intervals. There are occasional QRS complexes that are prolonged in duration (>70ms), suggesting a ventricular origin. There are several possible ventricular couplets, but this cannot be completely differentiated from baseline artifact. There is no evidence of atrioventricular block or atrial ectopy identified. This is most consistent with an underlying sinus rhythm with ventricular ectopy.



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## Cardiac Presentation

The left atrium is normal in dimension. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are normal in dimension, with normal systolic function. The anterior and posterior mitral valve leaflets are appropriately thin with adequate apposition, intact chordae, and there is no significant prolapse. There is no significant mitral regurgitation identified. The tricuspid valve leaflets are appropriately thin with adequate apposition, intact chordae, with trivial tricuspid regurgitation and no evidence of pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, and appropriate diameter and distensibility. There is no pulmonic and no aortic valve insufficiency identified. There is no visible pericardial, pleural, or free peritoneal fluid documented. No evidence of hepatic venous congestion is noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

## ULTRASONOGRAPHIC FINDINGS

- These findings identify a ventricular arrhythmia in the setting of a normal echo. Given the breed, the most likely explanation is arrhythmogenic right ventricular cardiomyopathy (ARVC) of Boxers. Boxer ARVC (also called Boxer Cardiomyopathy) is a hereditary disease that affects the heart muscle. ARVC can result in arrhythmias, syncope/fainting, sudden death or the development of congestive heart failure. However, it is possible that the arrhythmia could be related to an unidentified intra-abdominal lesion (e.g., of the spleen and adrenal glands).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

At this time, there are several options, to include (1) do nothing now, and simply monitor for progressive changes, especially as the dog is asymptomatic, (2) consider the merits of having a Holter performed to determine if the severity of the arrhythmia warrants therapy, or (3) go ahead and start therapy with sotalol (1-2 mg/kg orally every twelve hours), recognizing the reality that there is no current evidence documenting the ability of antiarrhythmics to reduce the risk of sudden death. If therapy is started (either with or without a Holter), a repeat echo, ECG (+/- repeat Holter) and BP would be recommended to in 2-4 weeks to monitor for benefit/adverse effects of therapy. Otherwise, a repeat evaluation should be performed in another 3-6 months to determine if the arrhythmia has worsened.

### Anesthesia considerations:

No special considerations are necessary.

### Diet:

No special considerations are necessary. Any high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina is reasonable.

### Activity:

No special considerations are necessary.



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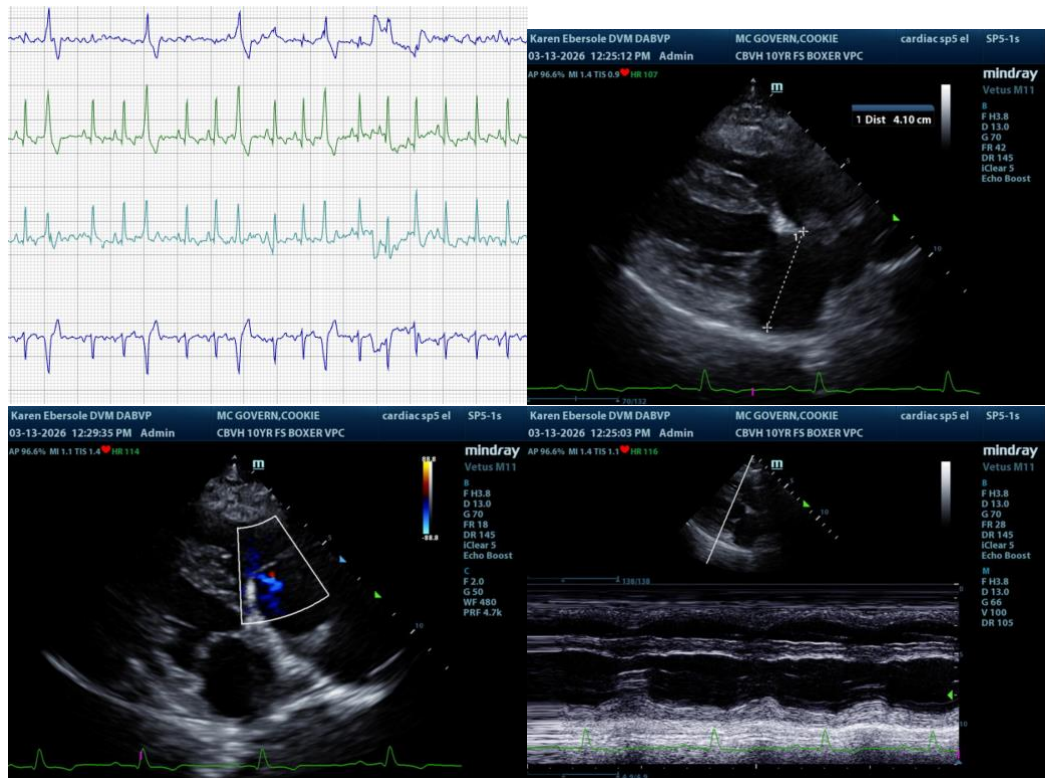
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Bradley Harris, DVM, DACVECC, DACVIM (cardiology)**

[info@SonoPath.com](mailto:info@SonoPath.com)