



## PATIENT

Libby Cox

## SPECIES

Canine

## BREED

Pitbull Mix

## SEX

Female Spayed

## AGE

8 months

## WEIGHT

40lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

Meredith Swart

## HOSPITAL NAME

Swart Veterinary  
Imaging

## REFERRING VET

Dr. Swart

## INVOICE

20823

## DATE

8/31/21

## PRESENTING CLINICAL SIGNS

History: Recent owner surrender at referring hospital. Tech at hospital has now adopted Libby. She originally presented for upper respiratory and heart murmur and prominent ascites were noted on exam. Patient has had very little veterinary care. Patient was surrendered to tech, and she has had her for about 1 week. A very large amount of serosanguinous fluid was tapper from p's abdomen.

-Current medications: 20mg Lasix BID.

-Abnormal PE/Chem/CBC/UA Results: Glob low at 1.5, alb normal at 3.1, phos high at 6,3, HWT neg,

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no obvious prolapse into the left atrial lumen. No mitral regurgitation. No left atrial enlargement. Normal LV diameter with adequate myocardial function. The LV wall appears normal. The tricuspid valve appears abnormal with moderate to severe TR seen. Tricuspid stenosis is not ruled out. The TR velocity is elevated. The MPA appears dilated with what appears to be a stenotic Post stenotic dilation is suspected. Unfortunately, PA outflow velocities are not measured; however, significant stenosis is suspected. Severe right atrial enlarged. Significant right ventricular hypertrophy and remodeling indicative of pressure overload. Fibrous thickening in the mid-RV is suspected in some views, although difficult to confirm. The aortic valve is normal in form and function. No obvious congenital shunts. No pericardial or pleural effusion identified.

## CARDIAC CHART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	NA	4.0	1.4	1.2	32	60	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	NM	0.9	NM	18.1	2.0	1.8	1.2
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The presumed diagnosis is severe PS with concern for an abnormal pulmonic valve. Velocity through the region is not assessed making this presumptive. The appearance of the RV and TR



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velocity are consistent with pressure overload which would support this diagnosis. A double chamber RV is suspected in some views, although difficult to confirm. Finally, the tricuspid valve appears abnormal with some degree of dysplasia and a significant tricuspid leak. A tricuspid stenosis is suspected as well, although not confirmed or ruled out on this image set. Further diagnostics are highly recommended with an attending Cardiologist (advanced echocardiography, bubble study, thoracic CT, etc.) and referral is strongly recommended. Surgical intervention may be possible depending on the diagnosis and may prolong lifespan.

If referral is not elected, Atenolol should be instituted based upon the presumptive diagnosis and severity of disease seen here. We must be careful not to drop the heart too far (careful dose titration recommended) as our goal is to maximize cardiac output particularly in CHF. Additionally, continued cardiac support including Lasix and Spironolactone is recommended.

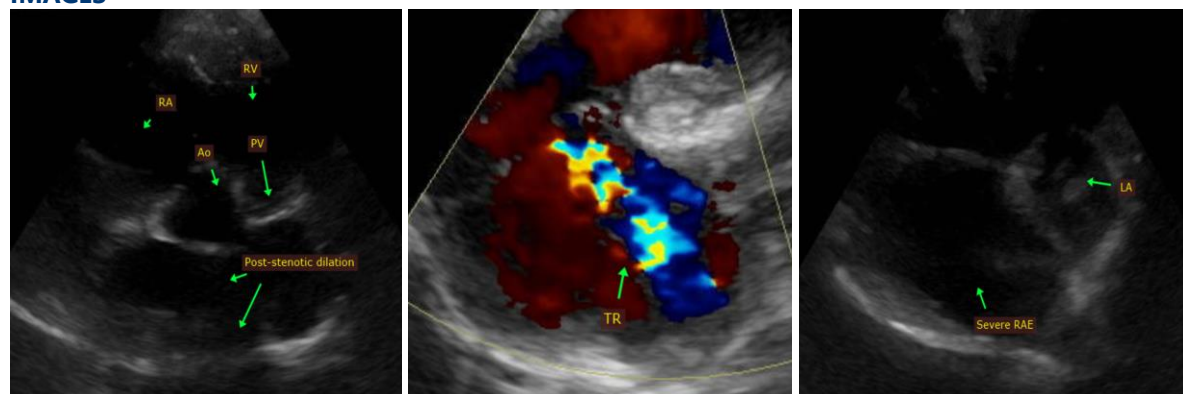
Monitor at home for labored breathing, cough, abdominal distention or fainting episodes. Moderate activity restriction is advised. Regardless of categorical diagnosis, patient's prognosis is poor at this juncture as CHF has developed, with risk for recurrent CHF, arrhythmias, and/or sudden death in the future. Abdominocentesis should be performed as needed, when the patient appears uncomfortable or inappetent.

## PLAN

Ideally, recommend referral. If declined, institute Atenolol 25mg tablets; Give ¼ tab once daily at night. Recheck heart rate in 5-7 days with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached. Continue Lasix 1-2mg/kg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h.

Reassess cardiac structure and function in 6 months, sooner if clinical signs arise.

## IMAGES



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

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.



**PATIENT**

Libby Cox

**Maggie Machen Lamy, DVM**  
**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**  
info@sonopath.com

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