



PATIENT Bigsby McManus	PRESENTING CLINICAL SIGNS History: Sudden onset respiratory difficulty and coughing - has responded to furosemide. Grade I-II soft systolic HM - audible both sides. Has been on duck and potato hypo diet for some time.
SPECIES Canine	RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Mild cardiomegaly. Concern for CHF.
BREED Staffordshire Terrier	ECHOCARDIOGRAM FINDINGS 2D, m-mode, color flow and doppler imaging is available. Severe left ventricular dilation with diminished systolic function. Decreased LV wall thickness with increased sphericity. Severe left atrial enlargement. The mitral valve appears normal in form and function, with no obvious prolapse into the left atrial lumen. Mild to moderate central mitral regurgitation secondary to annular stretch. Mild tricuspid regurgitation. Mild right atrial and ventricular dilation. TR velocity consistent with mild pulmonary hypertension. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; normal LVOT velocity. No aortic insufficiency. Normal pulmonic valve with trace pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors.
SEX Male Neutered	
AGE 8 years	

CARDIAC CHART

	CANINE CARDIAC PARAMETERS		LA/AO	LA/AO	FS	EF	EPSS	
	MR VMAX (m/s)	TR VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)	
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6	
PATIENT	5.4	3.2	1.9	1.8	11	20	1.1	
	CANINE CARDIAC PARAMETERS	HR	AV VMAX	PV MAX	BODY WEIGHT	LA	LVIDd	LVIDs
		(BPM)	(m/s)	(m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	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	NM	0.91	0.5		4.4	6.0	5.36	
*Normal chamber parameters expressed as a mean value (SD)					3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS					5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>					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

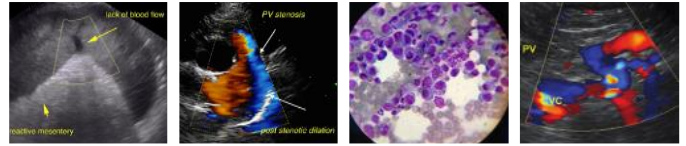
Unfortunately, this patient has significant cardiomyopathy and systolic dysfunction. This is causing dilation and volume overload of both the left and right heart resulting in insufficiency of the mitral and tricuspid valves. The severity of dysfunction and pump failure is severe, and the patient is at high risk for decompensating into congestive failure. Patient will always be at risk for

INVOICE
24117

DATE
5/10/22

HOSPITAL NAME
Mississippi Mills Animal Hospital

REFERRING VET
Dr. Van Campen



PATIENT	right and/or left-sided CHF, development of arrhythmias/syncope and/or sudden death going forward.
Bigby McManus	
SPECIES	Systolic failure can be primary in nature (DCM) or secondary to taurine deficiency, myocarditis, hypothyroidism, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. While primary disease is certainly possible, consider testing for primary causes that may be treatable. A troponin (cTnI) level can be submitted to further investigate infiltrative/inflammatory contribution (myocarditis). Additionally, a taurine level may be helpful (screen for malabsorption issue) given the recent correlation with grain free/boutique brand/exotic ingredient diets. Finally, further systemic evaluation for underlying infiltrative contribution such as neoplasia is also reasonable (abdominal ultrasound, etc.).
Canine	
BREED	
Staffordshire Terrier	
SEX	Regardless of cause, prognosis is guarded to poor at this stage in the disease process, with an average survival time of <6 months. The only treatable cause of systolic failure is diet/taurine deficiency, which is uncommon on commercially formulated dog foods. If the diet is of concern, highly recommend immediate diet change and taurine supplement regardless of blood taurine results. Please see the FDA website for more information.
Male Neutered	
AGE	
8 years	
WEIGHT	Immediate institution of full cardiac supportive medications is recommended as below given the severity of disease seen here, recent history and CXR results. Cases of systolic failure are at high risk for malignant tachyarrhythmias (such as VT or rapid AF) and sudden death, and this should be expressed to the owner. Activity restriction is advised, and a baseline ECG recommended.
30kgs	
INTERPRETED BY	Elective anesthesia is not advised due to high risk for complications.
Maggie Machen Lamy, DVM, DACVIM (Cardiology)	
IMAGING PERFORMED BY	Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, worsening labored breathing, abdominal distention, exercise intolerance or collapse episodes in the future. Monitoring of sleeping breathing rates at home is recommended to assess response to medications and recurrence of CHF in the future.
Mark van Campen, DVM	
HOSPITAL NAME	PLAN: Baseline BP/ECG recommended. Initiate aldosterone antagonist Spironolactone 1-2mg/kg PO q12h. Institute furosemide 1-2mg/kg PO q12h. Institute Pimobendan 0.3mg/kg PO q12h. Institute taurine 1000mg PO q12h. Consider diet change as discussed.
Mississippi Mills Animal Hospital	
REFERRING VET	Monitor a renal panel and blood pressure in 1-2 weeks to ensure tolerance. If BP >130mmHg, institute ACEI 0.5mg/kg PO q12h. Consider cTnI, taurine level, AUS as discussed above.
Dr. Van Campen	
INVOICE	A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical issues arise in the interim.
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PATIENT

Bigsby McManus

SPECIES

Canine

BREED

Staffordshire Terrier

SEX

Male Neutered

AGE

8 years

WEIGHT

30kgs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Mark van Campen,
DVM

HOSPITAL NAME

Mississippi Mills
Animal Hospital

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Dr. Van Campen

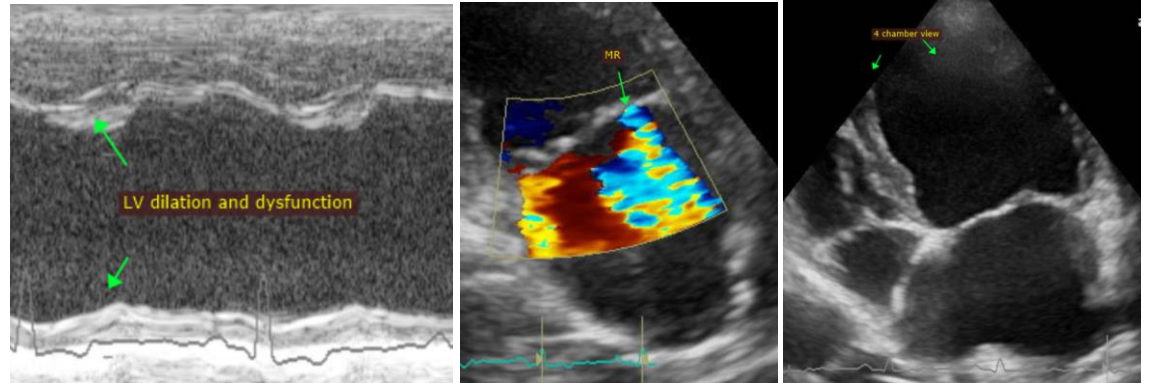
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IMAGES



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. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
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