



PATIENT

Bella Nelson

SPECIES

Canine

BREED

NP

SEX

Female Spayed

AGE

9 years

WEIGHT

97lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

A. Nicastro, DVM

HOSPITAL NAME

Flowertown Animal
Hospital

REFERRING VET

Dr. Hawk

INVOICE

31679

DATE

7/5/23

PRESENTING CLINICAL SIGNS

History: Presented for exercise intolerance and distended abdomen developing over the past few days. Abdominal effusion- 2.5 L of transudate effusion tapped from abdomen – did not see any abnormal cells in sample. Grade 1-2/6 heart murmur. BP: 170mmHg.

-Abnormal PE/Chem/CBC/UA Results: HCT 36.1% Glob 2.4 g/dL

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. A soft tissue lesion is visualized (4.5 3.5cm in best viewed cross-section. The mass is associated with the heart base, near the level of the pulmonary artery bifurcation. Compression of the distal MPA/branches is suspected. Trace mitral regurgitation, mild thickening of the mitral valve. LV function is adequate. Left atrium is normal. LV is normal in diameter. RA/RV are mild to moderately enlarged. Mild TR. Velocity consistent with mild pulmonary hypertension. The pulmonic and aortic valves are normal in appearance. Normal LVOT velocity. Normal RVOT velocity. No AI or PI identified. No pericardial effusion. Hepatic congestion noted by sonographer.

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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	4.8	3.4	NM	1.3	43	80	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)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	2.0	0.7	44.0	2.4	3.7	2.1
*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

Primary cardiac neoplasia is identified leading to compression of at least the distal pulmonary artery. The size of the mass is distorting normal views making additional compressive issues certainly a possibility. Once a mass is compressing the vasculature, the patient is at extremely high risk for congestive signs as is seen here with accumulation of ascites. There is also mild mitral and tricuspid regurgitation without LA enlargement, which are hemodynamically insignificant at this time. The TR is likely secondary to compression with only mildly elevated pulmonary pressures documented. This is suspected to be an underestimation. No obvious additional issues are identified.



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Given the location of the mass, the likely diagnosis is a chemodectoma; however, a less common extra-cardiac tumor such as ectopic parathyroid, HSA, etc. cannot be entirely ruled out without a biopsy. The issue is more of a mechanical obstruction than true pulmonary hypertension, and Sildenafil will be of little benefit. The best we can do is remove effusions should they occur and use medications for congestive heart failure to help slow development of fluid accumulation. The compressive nature and/or possible early infiltration of the mass should be relayed as a grave prognosis, as the patient is already experiencing clinical signs that are certainly related (arrhythmias, labored breathing, etc.). Referral would be the gold standard in this case, given the severity of the findings and concurrent malignant arrhythmias. Advanced imaging including advanced echocardiography +/- thoracic CT scan would be helpful to fully understand the extent of disease. If declined, supportive care can be attempted for the short term; however, diuretics and cough suppressants are a band aid over a much bigger issue as the tumor continues to grow. Euthanasia should be considered in this case if quality of life is suffering.

Going forward there are some options for obtaining more information and palliating this type of cancer. Should the client elect to proceed, radiation and/or chemotherapy can be discussed with an Oncologist.

High risk will always remain for recurrent effusions (pericardial, pleural or abdominal) and development of arrhythmias/sudden death at home. Monitor at home for progressive abdominal distention, labored breathing and/or lethargy and collapse.

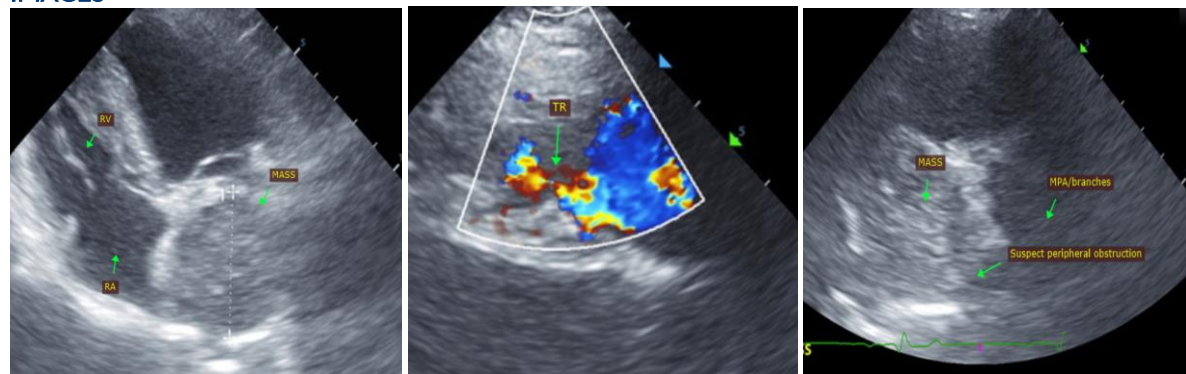
PLAN

Consider referral to a multi-specialty center for advanced evaluation. If declined, the following medications can be attempted: Administer Furosemide 1mg/kg PO q12h. Administer spironolactone 1-2mg/kg PO q12h. Administer Pimobendan 0.3mg/kg PO q12h. Administer further supportive care including Hydrocodone. Abdominocentesis as needed for comfort in the future.

A renal panel is recommended in 5-7 days, then every 2-3 months going forward.

A recheck echocardiogram to reassess mass dimension and heart size is recommended in 2-3 months.

IMAGES





PATIENT

Bella Nelson

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.

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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.

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

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