

**PATIENT**

Franklin Coshenet

PRESENTING CLINICAL SIGNS

History: Presented on 5/24/21 for onset of respiratory distress. Muffled heart sounds. TFAST scan revealed pericardial effusion and a cardiac mass.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild volume pericardial effusion without obvious tamponade. Large mixed echogenicity mass likely stemming from the aortic root, although expansion to the surface of the right heart makes visualizing an origin difficult; 6.6 x 4.5cm in best viewed cross section. The remainder of the cardiac dimensions appear normal without significant valvular regurgitation. The LV function is mildly depressed, likely secondary to the mass. No obvious pleural effusion is visualized.

BREED

English Bulldog

CARDIAC CHART**SEX**

Male Neutered

AGE

4 years

WEIGHT

54.2lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Tom McNeill

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	NA	NA	1.0	1.2	23	46	0.4
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	110	0.6	1.0	24.6	3.1	3.5	2.7
*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

A large tumor is identified, likely associated with the aortic root; however, this is difficult to confirm given the size. An association with the right heart is also noted; however, the mass is quite expansive. Given the breed and size of the mass, a chemodectoma is considered more likely; however, hemangiosarcoma would be an alternative differential. The overall cardiac structure and function appear unremarkable with mild LV dysfunction, which is not surprising. Finally, no obvious evidence of tamponade is seen; however, this could develop imminently.

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Manhart

INVOICE

24425

DATE

5/25/22

The amount of pericardial effusion seen today is essentially mild without obvious tamponade. Two broad possibilities for the effusion origin could be considered. First would be a tumor bleed which is most likely, leading to hemorrhage into the pericardial space. The second explanation would be the tumor is compressing distal pulmonary vasculature and leading to right-sided

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congestive signs. Further evaluation is strongly recommended in this case, given the young age of the patient and extent of the mass. This includes referral for advanced imaging, including advanced echo, CT scan, etc.

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A pericardiocentesis is typically not clearly necessary without tamponade; however, a tap would certainly differentiate compression versus hemorrhage (ie blood versus transudate). If able to be performed at your facility, this may be beneficial from a diagnostic standpoint; however, this does carry risk without significant effusion.

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Effusion aside, given the size of the mass and location further tumor growth may lead to congestive signs such as, collapse, ascites or additional effusions. If this develops in the future, diuretic therapy may have to be utilized.

SEX

Male Neutered

Assuming the diagnosis is confirmed, the prognosis with cardiac chemodectomas is typically fair, with an MST of 1-2 years. This case carries a much more guarded to poor prognosis, given the size of the mass at time of diagnosis and development of effusion regardless of origin. The limiting factor is often recurrent hemorrhage or congestion. Other sequelae include impingement of cardiac blood flow secondary to tumor growth, or metastasis to the thorax or abdomen. Full systemic evaluation may be useful to screen for metastatic lesions. Finally, consultation with an Oncologist or Internist may be indicated to explore Chemotherapy and/or radiation treatment options.

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No cardiac medications are clearly indicated at this time prior to further evaluation. Over the counter herbal supplement Yunnan Baiyao (aka Yunnan Paiyao) may help decrease risk of bleeding, however true benefit is speculative (1 capsule PO BID

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Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

Patient will always be at risk for recurrent pericardial bleeds, development of arrhythmias and/or sudden death going forward.

PLAN

Highly recommend immediate referral for advanced imaging, diagnostic pericardiocentesis, abdominal workup, etc. to determine the best course of action. If declined, consider further evaluation including chest radiographs, a diagnostic tap (if able), and full systemic evaluation in house.

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Tom McNeill

IMAGES**HOSPITAL NAME**

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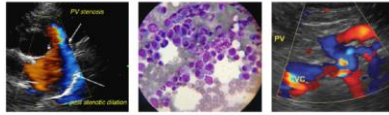
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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Thank you for this referral. 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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