



PATIENT

Moomoo Simmons

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

7 years

WEIGHT

15.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

VCA Feline

REFERRING VET

Dr. Fleming

INVOICE

23999

DATE

5/3/22

PRESENTING CLINICAL SIGNS

History: Presented for constipation 4-26 and dyspnea was appreciated. CXR showed marked cardiomegaly. Started on Plavix and Lasix. RR improved at home.
*Sternal exam due to RR/RE.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
Marked cardiomegaly. Concern for congestion.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 200bpm. The initial part of the tracing shows a tachycardia; regular with a HR of 250bpm. Low voltage complexes in all 6 leads. P waves are difficult to visualize and SVT is possible. MEA is indeterminate. Later in the tracing an irregular rhythm develops with HR range 130-250bpm; premature beats suspected although atrial fibrillation is not ruled out.

ECG diagnosis: Intermittent supraventricular arrhythmias; rule out sinus with APCs versus intermittent SVT versus atrial fibrillation (less likely).

ECHOCARDIOGRAM FINDINGS *Anatomic distortion limits standard image acquisition.

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly remodeled and hyperechoic. The endocardium also appears remodeled. The left atrium is mildly dilated. The right atrium is severely dilated. The right ventricle appears dilated with septal flattening. The mitral valve is normal in structure and mobility. Trace MR. Mild TR. Blood flow through the LVOT and RVOT is normal in velocity. Large volume pericardial effusion with spontaneous contrast. No obvious pleural effusion seen. Large hypoechoic soft tissue lesion seen within the pericardial space. Suspect compression of the distal pulmonary artery; however, this cannot be definitively determined. Origin cannot be definitively identified.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	7		0.46	1.26	0.56	52	90
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>		LVOT VEL <small>(m/s)</small>	RVOT VEL <small>(m/s)</small>	E max <small>(m/s)</small>
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	NM	1.5	1.5		0.9	0.8	NM

**Note: All measurements based upon multi-modal images and methods. An average value is reported.
Adapted from June Boon, Veterinary Echocardiography, 1998
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.*

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The most significant findings is a large soft tissue lesion within the pericardial space. This is highly unusual to see, and rule outs for this include a heart-based tumor (such as chemodectoma),



PATIENT

Moomoo Simmons

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

7 years

WEIGHT

15.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

VCA Feline

REFERRING VET

Dr. Fleming

INVOICE

23999

DATE

5/3/22

hemangiosarcoma, pericardial origin mass such as mesothelioma, or other cardiac neoplasia. Obstruction to flow through the main pulmonary artery is suspected given the appearance of the right heart, although visualization is less than ideal in this cat. The pericardial effusion is suspected to be due to a tumor bleed given the appearance of the effusion. The left heart is largely normal, with mild LA dilation.

The ECG is concerning, with intermittent supraventricular arrhythmias. The complexes are low voltage, making a definitive diagnosis elusive. However, the intermittent nature likely suggest treatment is unnecessary at this time. Reassessment is advised in the future, particularly should any associated symptoms develop (collapse, acute lethargy).

Given the unusual nature of these findings in this cat, **highly recommend referral in this case for further evaluation if elect to continue.** Next steps for diagnostics include possible FNA (high risk), diagnostic tap, thoracic CT scan (gold standard to fully understand the extent of the findings), and full systemic evaluation, including abdominal ultrasound. Regardless of definitive diagnosis, this is considered an end-stage situation as the mass is quite large and is likely compressing the pulmonary artery and obstructing blood flow. My assumption is the prior respiratory sings were due to secondary congestion from the mass compression, although difficult to prove. If referral is declined, continued cardiac supportive medications are recommended to hopefully postpone recurrent right-side congestion/compression. Discussion with the owner is advised.

Careful monitoring at home for development of any clinical signs is recommended, as **euthanasia should be elected if quality of life suffers.**

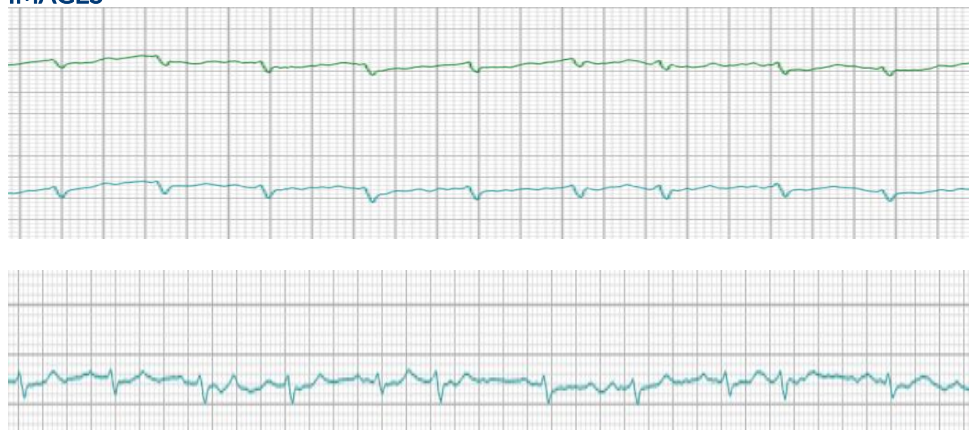
Prognosis is grave given a high risk for worsening congestion, development of effusions, development of arrhythmias and/or sudden death in the future.

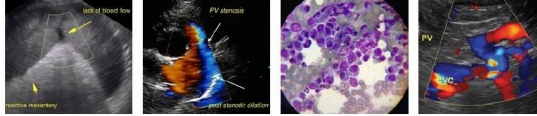
PLAN

Consider referral versus euthanasia. If declined, medical recommendations as follows: Administer Lasix 1-2mg/kg PO q12h. Institute Pimobendan 1.25mg PO q12h. Continue Plavix as prescribed.

If referral is declined, recommend recheck echocardiogram in 2-3 months to reassess lesion, sooner if clinical signs arise.

IMAGES





PATIENT

Moomoo Simmons

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

7 years

WEIGHT

15.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

VCA Feline

REFERRING VET

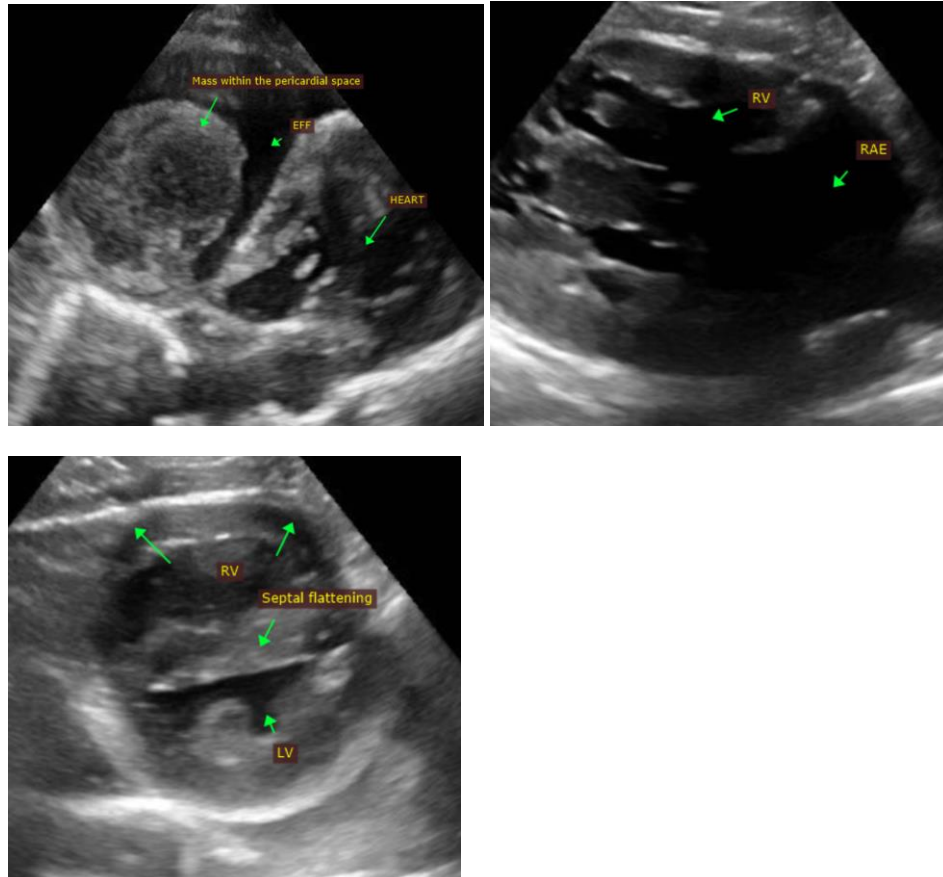
Dr. Fleming

INVOICE

23999

DATE

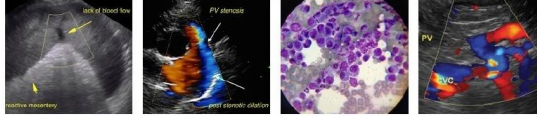
5/3/22



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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com



Portable Animal Western Sonography, Inc.

IMAGING PERFORMED BY
pawsonography@gmail.com  530-786-8340

PATIENT

Moomoo Simmons

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

7 years

WEIGHT

15.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

VCA Feline

REFERRING VET

Dr. Fleming

INVOICE

23999

DATE

5/3/22