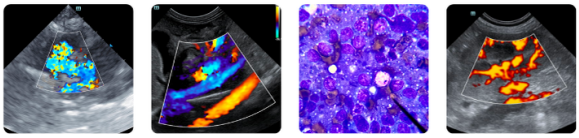


SonoPath FOSTERING THE ART OF VETERINARY MEDICINE™ www.thefocalzone.com info@thefocalzone.com 289.808.2608

PATIENT

Amber Carbone

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

12 years

WEIGHT

5.25 kg

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Hamilton Regions Veterinary Emergency Clinic

REFERRING VET

Dr. Yaseen

INVOICE

11190

DATE

1/29/2026

PRESENTING CLINICAL SIGNS

- 1- Congestive heart failure (exacerbated)
- 2- Acute respiratory distress (improving with treatment)
- 3- Hyperthyroidism (improving with diet)
- 4- Pericardial effusion
- 5- Abdominal effusion
- 6- Mild dehydration
- 7- Head twitches (chronic)
- 8- Electrolyte imbalance (hypokalemia, hypochloremia) (likely due to diuretics)
- Current Medications: Apoquel 3.6 mg: 0.5 tab every other day (for allergies) - Clopidogrel 75mg: 0.25 tab once daily - Furosemide 20 mg: 2 tablets daily (1 AM, 0.5 midday, 0.5 PM), increased to 3 tablets daily (1 AM, 1 midday, 1 PM; total 60 mg/day) since yesterday due to breathing difficulties, per cardiologist's recommendation. - Pimobendan 1.25 mg: Twice daily - Benazepril 5 mg: 0.25 tab twice daily (total 0.5 tab/day)

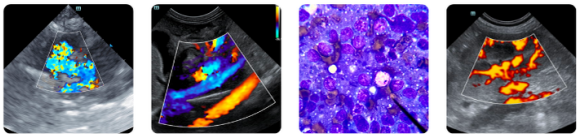
Abnormal PE/Chem/CBC/UA Results: A- Bloodwork - CBC: Reticulocytes 73.8 3.0 - 50.0 K/µL H Eosinophils 0.05 0.17 - 1.57 x10^9/L L - Chemistry: Creatinine 63 71 - 212 µmol/L L Urea (BUN) 16.0 5.7 - 12.9 mmol/L H Potassium 3.1 3.5 - 5.8 mmol/L L Na: K Ratio 49 Chloride 110 112 - 129 mmol/L L - Thyroid: tT4 49 (down from 101 two weeks prior after starting thyroid diet). Coag. Panel: Citrated Prothrombin Time (PT) 14.0 15.0 - 22.0 seconds L Citrated Partial Thromboplastin Time (PTT) 81.0 65.0 - 119.0 seconds B- TFAST: Pleural effusion noted on both thoracic hemispheres, no B-lines AFAST: Free abd. fluid noted in DH and scant fluid in HR site.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	5.25 kg	170	0.67	1.43	0.68	53%	87%
FELINE CARDIAC PARAMETERS	**LA/AO** (M-mode)	**LA/AO HEART BASE** (Sisson)	**LAD** LA MAX 4 Chamber		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	2.80	2.97	2.05		1.1	0.9	NM
Adapted from June Boon,Veterinary Echocardiography,1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The left atrium is severely enlarged. There are no distinct left atrial thrombi/clots or spontaneous echo contrast appreciated. The left ventricle is normal in dimension, with moderate hypertrophy, and no evidence of restriction. Left ventricular systolic function is normal, with adequate contractility based on fractional shortening and systolic left ventricular dimensions. The right atrium and ventricle are



SonoPath FOSTERING THE ART OF VETERINARY MEDICINE™ www.thefocalzone.com info@thefocalzone.com 289.808.2608

PATIENT

Amber Carbone

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

12 years

WEIGHT

5.25 kg

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Hamilton Regions Veterinary Emergency Clinic

REFERRING VET

Dr. Yaseen

INVOICE

11190

DATE

1/29/2026

subjectively normal in dimension and systolic function. The anterior and posterior mitral and tricuspid valve leaflets presented normal linear structure, extension in systole, and union in diastole with trace tricuspid regurgitation. There is no evidence of systolic anterior mitral motion documented. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural valvular integrity. The visible aorta is unremarkable. Pulmonary outflow tract assessment revealed normal valve structure, laminar flow, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency or pulmonary hypertension documented. There is scant pericardial, and mild pleural fluid noted.

ECG

There is a six-lead ECG with significant baseline artifact at a paper speed of 25mm/s available for review. The underlying rhythm is regular at an average rate of 170bpm. The rhythm appears to be sinus in origin with narrow QRS complexes. There is no overt/definitive atrial or ventricular ectopy and no conduction delay or block identified. This is most consistent with a normal sinus rhythm. If there is concern for an arrhythmia, consider adjusting paper speed and/or sedating in order to reduce baseline artifact.

ULTRASONOGRAPHIC FINDINGS

- These findings identify LV hypertrophy, in the absence of an outflow tract obstruction, consistent with hypertrophic cardiomyopathy (HCM). The presence of significant left atrial dilation makes CHF a likely explanation for the clinical/radiographic signs.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Continued therapy for CHF is indicated, to include Lasix (20 mg, 10mg, 10mg), Vetmedin (1.25mg BID), enalapril/benazepril (2.5mg q24, assuming normal blood pressure and kidney function), Plavix (18.75mg q24) +/- rivaroxaban (2.5mg q24), with the addition of spironolactone (6.25mg q24). A systemic blood pressure is recommended to rule out systemic hypertension as a contributing cause for the left ventricular hypertrophy. A repeat evaluation is recommended in 1-2 weeks, at which time the blood pressure, chemistry, thoracic radiographs should be repeated. A repeat echocardiogram, blood pressure, chemistry, and thoracic radiographs are indicated in another 3-6 months, or sooner if the condition worsens.

Anesthesia considerations:
Anesthesia should be avoided until signs of congestion have resolved. If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. If an ACE inhibitor (enalapril, benazepril) or spironolactone is being given, it should not be administered on the morning of general anesthesia. Other cardiac medications should be administered per the normal dosing schedule. Anesthetic IV fluid use should be limited to < 3 ml/kg/hr and, if IV fluid therapy is administered during the procedure, a 1 mg/kg dose of IM Lasix should be administered when the patient is awake and standing in recovery. A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Premedication with an opioid (i.e., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition with mild dietary

PATIENT

Amber Carbone

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

12 years

WEIGHT

5.25 kg

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Hamilton Regions Veterinary Emergency Clinic

REFERRING VET

Dr. Yaseen

INVOICE

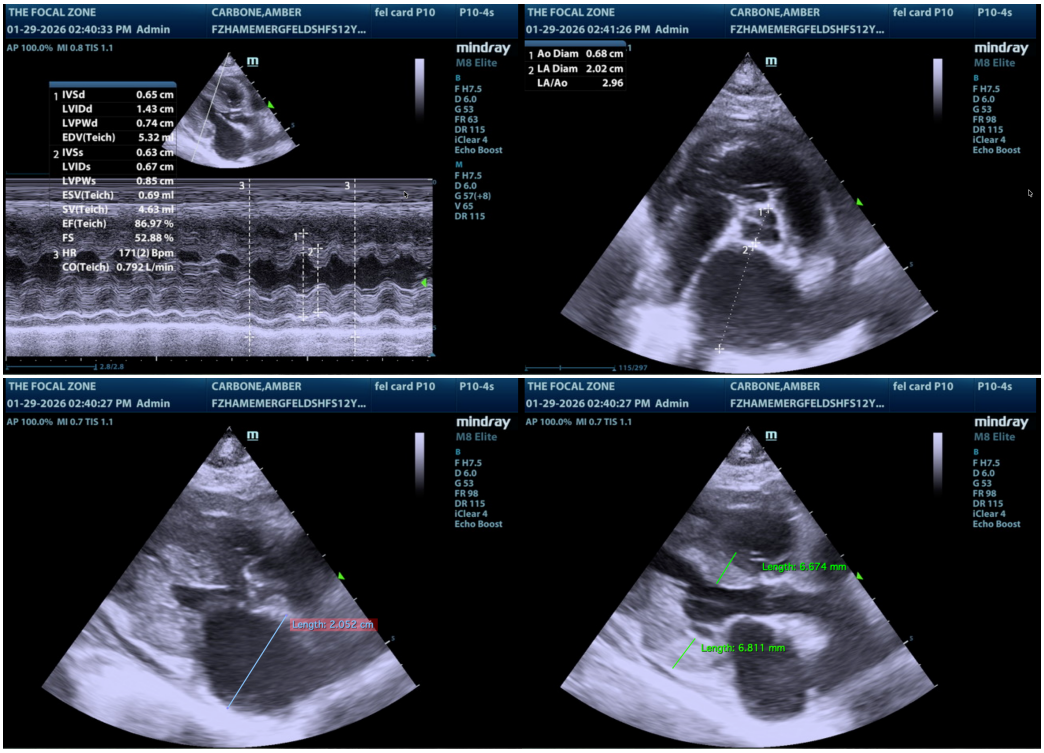
11190

DATE

1/29/2026

sodium restriction (<100 mg/100 kcal) is recommended. Consider omega-3 fatty acid supplementation.

Activity:
Avoid strenuous activity.



The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. 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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com