

PATIENT DISCHARGE SUMMARY

OSU Case Number: 000470989
Client: Teresa Sweeney
Patient: Highlander Wilma
Referring Veterinarian: Not Found
Date Admitted: 09/04/2018 **Date Discharged:** 09/04/2018
Patient Status: Released
Clinician: John Bonagura DVM, DACVIM

Columbus Small Animal 614-292-3551
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Business Office 614-292-1360
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Final Diagnosis: Normal feline cardiac examination - Normal cardiac auscultation
No evidence of congenital or acquired heart disease
Echocardiogram: Normal (no evidence of cardiomyopathy)

History and Clinical Problems: Highlander Wilma is two year old, female, Maine Coon Cat who was examined today at the OSU-Veterinary Medical Center **Cardiology Service** for a screening evaluation for congenital heart disease and for hypertrophic cardiomyopathy.

Diagnostic Procedures and Physical Findings: Mucous membranes and refill time: pink, <2 sec
Examination was focused on cardiac evaluation.

Physical examination of the heart and cardiovascular system was normal.
Heart rate, heart rhythm, femoral pulses, and precordial impulses were normal.
Heart sounds were normal; no gallop sounds were detected.
Cardiac murmurs were not detected during careful auscultation of the heart.

Diagnostic Tests

Echocardiography (two-dimensional and M-mode ultrasound imaging of the heart) to screen for (hypertrophic) cardiomyopathy. Note that Doppler Flow Imaging (color & spectral Doppler examinations) is not routinely performed in cats without a murmur but might be evaluated to support other imaging findings:

2D and M-mode imaging identified heart chambers of normal size with normal systolic function of the ventricles.
No congenital malformations of the heart were identified.
There was no subjective or objective (measurement) evidence of hypertrophic cardiomyopathy.

Recommendations and Instructions: Medications: As there is no evidence of heart disease, no medications have been prescribed at this time.

Activity: she can continue normal activities.

Diet: There are no dietary restrictions based on today's heart evaluation.

Prognosis: The current **prognosis for heart health is very good**. This screening examination did not reveal any evidence of congenital heart disease (birth defects) or acquired heart disease (such as hypertrophic cardiomyopathy, HCM). It should be appreciated that cardiomyopathies are classified as adult-onset, genetic heart diseases. These can develop later in life and for this reason the examination findings should be interpreted as "normal for this time frame".

Cats used for recurrent breeding should be re-evaluated at regular intervals (e.g., yearly) since HCM can develop later in life, even after a normal screening examination.

There are limited genetic tests available for identifying carriers and affected cats with HCM and these are only available for certain breeds (currently limited to the Maine coon cat and Ragdoll breeds). Please discuss with the cardiologist any questions you have about genetic testing in cats. When appropriate, we can refer you to laboratories that offer this service directly to breeders and cat owners. Currently, we recommend the genetic screening services available at North Carolina State University College of Veterinary Medicine. See: <https://cvm.ncsu.edu/genetics/submit-dna-testing/>

Even when a genetic test is available for a particular breed, that laboratory test is not sufficient as a single screening

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method. Cats with HCM can carry other genetic mutations that are not identified by available laboratory testing. As a result, the stethoscope (for auscultation) and ultrasound examinations of the heart (echocardiography) have been the most important methods for screening cats for obvious heart diseases such as HCM. It should be understood that minor or trivial heart (birth) defects might not be identified conclusively by cardiac ultrasound, and the echocardiographic criteria used for diagnosis of HCM in cats are not "black and white". In fact the measurement values used in different parts of the world for the diagnosis are different! As a result of this uncertainty, we emphasize to our clients that the echocardiogram is a good method for detecting moderate to severe HCM, but there are some cats where the ultrasound examination is "borderline". In these cases, a discussion should be undertaken with the cardiologist and breeders should review all of the other characteristics of that cat and plan follow up examinations. Additionally, genetic tests should be evaluated if available. The NT-proBNP test is another "biomarker" that can be performed at through family veterinarian's office (using IDEXX laboratories). Unfortunately, this test is most useful in cats with heart murmurs and more likely to be positive when there is moderate to severe heart disease. Like the echocardiogram, "borderline" cases of HCM will be more challenging to identify with certainty.

Next Appointment: If breeding is continued a reevaluation echocardiogram should be scheduled in approximately one year. You can discuss this with the cardiologist if you have any questions. Thank you for bring < NAME > to Ohio State Veterinary Medical Center Cardiology today. Please do not hesitate to contact us should you have any further questions.

Thank you. We appreciate your patronage. Your support of our programs is important. Please do not hesitate to contact us if you have any questions about our evaluation or instructions.

John Bonagura, DVM, DACVIM