WASHINGTON STATE UNIVERSITY

Veterinary Cardiac Genetic Laboratory

EVALUATION FOR THE MAINE COON FELINE HYPERTROPHIC CARDIOMYOPATHY CARDIAC MYOSIN BINDING PROTEIN C MUTATION

TEST TYPE: THE MUTATION PREDOMINANTLY FOUND IN MAINE COONS

Hypertrophic cardiomyopathy is the most common form of heart disease in the cat. In many breeds it is an inherited disease. Our laboratory has identified a mutation responsible for the gene in some cats. However, it should be noted that in human beings with the same disease, there are many different genetic mutations which can cause this disease. It is likely the same in the cat.

Very importantly, the absence of the mutation in this cat DOES NOT mean that it will never develop the disease. It means that it does not have the only known mutation that can cause the disease in the cat at this time. In the future, additional mutations may be identified that may be tested for as well.

Cats that are positive for the test will **not necessarily** develop significant heart disease and die from the disease. Some cats will develop a very mild form of the disease and will live quite comfortably. We recommend annual evaluation by an echocardiogram and discussion with a veterinarian for treatment options if hypertrophy develops.

Importantly, breeding decisions should be made carefully. At this time we have observed about 33% Maine Coon cats that we have tested carry at least one copy of the gene. Removal of all of these cats from the breeding population could be very bad for the Maine Coon breed. Remember that HCM affected cats also carry other important good genes that we do not want to lose from the breed. We recommend not breeding the homozygous cats and, if needed, breeding heterozygotes to unaffected cats to decrease the risk of producing affected cats. As we move forward we should try to select more and more negative kittens from these lines to use for breeding. Keep in mind that we are continually learning about this disease and recommendations will be altered as we obtain more information.

Date: 5/20/2008 Submitter Name: Liz Hansen
Cat ID: 5129 Cat Breed: Maine Coon
Cat Name: Witchcraft Flash Fire
Microchip Number (optional):

Test result for the DNA submitted for the above cat is: Negative

Result Based on the following sample(s) submitted for this cat: 2 Cytology Swabs

Definition of Possible Results:

Negative: Negative for the HCM mutation

Mutant / Normal: Positive Heterozygote for the HCM mutation. Heterozygotes have 1 copy of the mutated gene and 1 copy of a normal gene

Mutant / Mutant: Positive Homozygote for the HCM mutation. Homozygotes have 2 copies of the mutated gene and may have a greater likelihood of showing severe signs

Kathryn M. Meurs, DVM, PhD, Professor
Richard L. Ott Chair of Small Animal Medicine and Research
Washington State University- College of Veterinary Medicine
PO Box 605, Pullman, WA 99163-0605 • 509-335-6038 • FAX: 509-335-3745 • vcgl@vetmed.wsu.edu