

Veterinary Cardiac Genetics Laboratory

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To order swabs, please email [vgcl@lists.ncsu.edu](mailto:vgcl@lists.ncsu.edu)  
 or call (919) 513-3314 and provide for us:  
 -the breed you are testing  
 -the number of animals you are testing  
 -your full name and mailing address

Doberman Pinscher Dilated Cardiomyopathy(DCM) Testing

Dilated cardiomyopathy mutation (DCM) is a form of heart disease in the Doberman pinscher dog. It is an inherited disease, and our laboratory has identified two mutations responsible for the development of DCM. Dogs that are positive for both mutations are at the highest risk of developing DCM.

Owner Name: **Judith Buschmann**  
 Dog's Name: **Index vom Hellerwald** NCSU Doberman DCM2 Result: **Negative**  
 Born: **feb 12, 2010** Registration: **DZB 125297**

**Our current interpretations of the possible test results are:  
 NEGATIVE FOR BOTH DCM1(PDK4) AND DCM2**

**POSITIVE FOR DCM1(PDK4), DCM2, OR BOTH DCM1(PDK4) and DCM2**

The absence of both mutations in this dog indicates that the risk of developing DCM is low. It is still possible for your dog to get heart disease. However, your dog does not have either mutation known to cause DCM.

**POSITIVE FOR DCM1 (PDK4), DCM2, OR BOTH DCM1 and DCM2**

NCSU Doberman DCM 1 (PDK4) Result:	About 40% of dogs with this mutation will develop DCM. Dogs that are positive for only DCM1 will not necessarily develop significant heart disease.
Breeding recommendations:	Dogs are positive for DCM1 should NEVER be bred to a dog that is positive for NCSU DCM 2 since this will lead to dogs that are highest risk of developing DCM. Dogs that are positive homozygous for DCM1 should ideally not be bred
NCSU Doberman DCM 2 Result:	About 50% of dogs with this mutation will develop DCM. Dogs that are positive for only DCM2 will not necessarily develop significant heart disease.
Breeding recommendations:	Dogs are positive for DCM2 should NEVER be bred to a dog that is positive for NCSU DCM1 (PDK4) since this will lead to dogs that are highest risk of developing DCM. Dogs that are positive homozygous for DCM2 should ideally not be bred.
Positive result for Both NCSU DCM 1(PDK4) and NCSU DCM 2:	Dogs that positive for BOTH DCM1 & DCM2 are at a very HIGH risk of developing DCM and should be carefully monitored by your veterinarian for signs of disease. Annual evaluation by a cardiologist with an echocardiogram and Holter monitor after 3 years of age is recommended.
Breeding recommendations:	Dogs that are positive for both DCM1 & DCM2 are at the HIGHEST risk of developing DCM and should ideally not be bred since they can pass both traits on. They should never be bred to a dog that is positive for either test.



As always, breeding decisions should be made carefully. Removal of a significant number of dogs from the breeding population could be very bad for the Doberman Pinscher breed. Remember that dogs that carry this mutation may also carry other important good genes that we do not want to lose from the breed.

