**Degenerative Myelopathy**

**What is DM?:**

Degenerative Myelopathy (DM) is the canine version of Lou Gehrig’s Disease or ALS (Amyotrophic Lateral Sclerosis). Paralysis starts with the hind legs and progresses forward through the body, eventually leading to death, usually respiratory failure unless euthanized earlier. There is no physical pain for the dog. It is a disease that presents later in life (8 – 15 years old depending on the source of the information).

**Mutant Genes:**

In 2009, researchers discovered a mutant gene that increases the possibility of developing DM. A dog with one copy of the mutated gene is a “Carrier”. A dog with two copies (one from each parent) is considered “At Risk”. A dog with no mutated genes is considered “Clear”.

**Mutant Genes in Cavaliers:**

In 2014, the mutated gene was discovered in the Cavalier King Charles Spaniel. The study included 73 Cavaliers of which 37% were “Carriers”, 49% were “At Risk”, leaving only 14% “Clear”. However, very few Cavaliers ever develop the disease. Logically, this means there is some other factor or factors (besides the mutated gene) that contribute to a Cavalier developing DM. Of significance is we don’t know how the 73 sample Cavaliers were selected. Perhaps they were already identified as potential victims of the disease.

**Affected Breeds:**

A correlation has only been established between having two copies of the mutated gene and developing DM for the following 17 breeds:

American Eskimo

Bernese Mountain Dog

Borzoi

Boxers

Cardigan Welsh Corgi

Chesapeake Bay Retrievers

German Shepherd Dog

Golden Retriever

Great Pyrenees

Kerry Blue Terriers

Pembroke Welsh Corgis

Poodle

Pug

Rhodesian Ridgeback

Shetland Sheepdog

Soft Coated Wheaten Terriers

Wire Fox Terrier

**Diagnosis:**

The parent breed club, the American Cavalier King Charles Spaniel Club, does not recommend testing for DM. I can only assume this is due to the extremely low prevalence of DM in Cavaliers. However, the data is extremely limited due to limited spinal cords for examination. Definitive diagnosis can only be made through examination of the spinal cord of deceased dogs. Any diagnosis prior to death is presumptive based on the process of elimination. If you believe your dog has DM, please contact me so I can help you contribute to research and the ultimate eradication of the disease in Cavaliers.

**Breeder Considerations:**

OFA.org states in part: “*An overly aggressive breeding program to eliminate dogs testing* [“At Risk” or “Carrier”] *might be devastating to the breed as a whole because it would eliminate a large fraction of the high-quality dogs that would otherwise contribute desirable qualities to the breed. Nonetheless, DM should be taken seriously. It is a fatal disease with devastating consequences for the dog and can be a trying experience for the owners that care for them. A realistic approach when considering which dogs to select for breeding would be to treat the test results as one would treat any other undesirable trait or fault. . . . “they should not over-emphasize the test results. Instead, the test result should be one factor among many in a balanced breeding program.*

**My Plan:**

Despite OFA’s guidance, I choose to put more emphasis on the test results. I am implementing a plan that will hopefully result in litters of DM clear puppies (as well as EFS/DE/CC clear) in approximately 4 years. I encourage other breeders to do the same. At a minimum, I urge you to test for DM and include the test results as a factor in your breeding decisions. That mutant gene is simply too prevalent in the breed to give it the same status as an overbite. My plan most certainly involves breeding “At Risk” and “Carrier” Cavaliers. That means for some time I will be producing “Carriers” and “At Risk” puppies along with “Clear”. Buyers will certify in writing that they have been informed of their puppy’s DM status.

I urge you to visit these sites to learn more:

[www.caninegeneticdiseases.net](http://www.caninegeneticdiseases.net)

OFA.org

Cavalierhealth.org

Buyer Certification:

Buyer certifies they have been informed of the DM status of their new puppy.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Buyer Signature Date