Understanding DM DNA results

There are 3 results that your boxer could have from the DM DNA test:	AA = 2 affected genes Defined as At Risk for getting DM	AC = 1 affected gene and 1 clear gene Defined a Carrier & not expected to develop DM	CC = 2 normal genes Defined as Normal & not expected to develop DM
How did this happen? Each boxer will get 1 gene from each parent:	AA = 1 affected gene from each parent	AC = 1 affected gene and 1 clear gene from sire and dam	CC = 1 normal gene from each parent
Based on Dr. Coates, when is the boxer expected to get DM:	AA = Before 15 yrs. Of age*	AC = Probably Never*	CC = Probably Never*

*see 2nd page of this report.

What will each breeding scenario produce (using statistical genetics percentages)?

The AA boxer will donate an affected gene to each puppy.	AA bred to AA = 100% AA puppies	AA bred to AC = 50% AA and 50% AC puppies	AA bred to CC = 100% AC puppies
The AC boxer will donate an affected gene to 50% of puppies and a normal gene to 50% of puppies.	AC bred to AA = 50% AA and 50% AC puppies	AC bred to AC = 25% AA, 50% AC puppies and 25% CC puppies	AC bred to CC = 50% AC and 50% CC puppies
The CC boxer will donate a normal gene to each puppy.	CC bred to AA = 100% AC puppies	CC bred to AC = 50% AC and 50% CC puppies	CC bred to CC = 100% CC puppies

A "CC" boxer will have a greater value.

Explanation of Degenerative Myelopathy results:

NORMAL: This dog has tested normal (or clear) for the mutation known to cause Degenerative Myelopathy. It can only transmit a normal gene to offspring, and can be bred to a dog with any test result without producing affected offspring.

CARRIER: This dog has tested as a carrier for the mutation known to cause Degenerative Myelopathy. It will not develop clinical symptoms of DM, but it may transmit either a normal gene or an affected gene to offspring.

AFFECTED: This dog has tested as affected for the mutation known to cause Degenerative Myelopathy. It is at risk for developing clinical symptoms of DM at some point in its lifetime, usually after 8 years of age. We do not presently have a way to predict when symptoms may appear.