

## Results of Allele Frequency Test

Wendy Tobijanski (EFG) and Lynne Fraser (GOITA) who are the Breed Health Co-ordinators for the UK Glen of Imaal Terrier Clubs would like to make the following statement on Degenerative Myelopathy:

Following the AGMs of both the Enthusiasts and Fanciers of the Glen and the Glen of Imaal Terrier Association, at which the membership was informed of the results of the Allele which was undertaken by the BHCs with assistance from geneticists at the Royal Kennel Club. We were expecting a fuller, more in depth report from the RKC but the following is what we received and we would now like to share their results with the wider Glen family.

### Report from the RKC:

*Based on the information you have provided, we have estimated the mutation frequency to be around 15%, which translates to an estimated 1 in 4 dogs being a carrier. So, we do know that the mutation exists in the breed at relatively high frequency.*

*But we now have the second question relating to the evidence for the causality of the mutation on the clinical disease. As you will know, our standard procedure requires that the association between the mutation and the disease is confirmed in the breed for which test is to be recorded in our database. In this case, we acknowledge that there is little chance that Glen of Imaal Terrier will be included in a scientific publication on DM, due to the breed's small population. As such and as promised, we have taken all available evidence to the Health Standard Advisory Panel – an independent group of veterinarians and geneticists who advise us on difficult cases such as yours.*

*Unfortunately, due to the complicated relationship between this mutation and clinical disease across a number of breeds, the Panel decided that there is not enough data available for the RKC to recognise the SOD1 test for DM in Glen of Imaal Terrier. The Panel recommended continued data collection by the breed community, with particular emphasis on information relating to clinical disease.*

*Please do keep us informed and should you have written evidence on the clinically affected dogs homozygous for the mutation available, please do let us know, and we will be happy to take it back to the Panel.*

We have, so far, managed to collect around 90 DNA test results so thank you to everyone who tested and shared their results with us, apologies to those we had to pester a little! The dogs selected for the study covered most, if not all, of the current breeding dogs in the UK and the widest possible range of genetic diversity. To collect so many results for dogs of unique parentage was something we were told we couldn't achieve, it was impossible, but we did it!

The information from the RKC is about those dogs only.

From all the results collected 79% are clear, 19.5% carriers and 1.5% at risk. We do not have any living dogs tested "at risk".



So where does this leave us?

Based on the foregoing, it is obvious that we need to keep collecting data from our Glen owners which means that you will all be asked to keep testing your dogs for DM, as well as PRA crd3 which are recommended by both Clubs. Until we have managed to get enough evidence to present to the RKC, we will be unable to confirm whether the existing SOD 1 gene test is the correct one for our breed. At the moment it is the only one available and widely used in many breeds.

We strongly recommend all dogs used for breeding are tested.

Please do not use untested stud dogs or allow untested bitches to use your boys, this is the only way forward to prevent problems.

When buying a puppy insist on seeing the test results for all recommended tests for both parents, good breeders are happy to supply these.

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