

Skye Terrier Liver Disease

Update on current research

Researchers from the Department of Veterinary Medicine at the University of Cambridge have been investigating liver disease in Skye terriers for several years.

Colloquially known as Skye terrier hepatitis, we now know that this is not a typical hepatitis at all. As we are still working to understand the underlying pathology, we will simply refer to it as Skye terrier liver disease. We do know that the severity of the disease can vary. Some affected dogs show clinical signs from a very young age. Typical signs include fluid build-up in the abdomen and dark faeces. Jaundice (yellow colouration to skin and eyes) is uncommon. Many dogs recover with supportive care. On the other hand, some dogs live long and apparently healthy lives, only to find on post-mortem that their liver was affected.

Alongside clinical and pathological investigations, geneticists have been trying to uncover the genetic basis of liver disease in Skye terriers. Previously, we performed a whole genome association study to identify regions of the genome that may be associated with liver disease. In addition, we sequenced the whole genomes from two cases to identify the specific variants that might cause the disease. We now believe that liver disease in Skye Terriers is not caused by a single genetic variant. It is instead likely to be complex, caused by two or more genetic variants, and possibly with environmental influences as well.

We are currently investigating two genomic regions, including a promising candidate variant that is statistically associated with liver disease in the breed. However, the variant is also present at a high frequency in dogs for which we do not have any clinical information. Therefore, to determine if this variant is contributing to liver disease or is simply a benign genetic variant, we **need** to obtain as much information as possible about the dogs from whom we have samples. To that end, we will be contacting submitters of samples in our DNA archive. We strongly encourage anyone who receives a request from us to fully complete the survey at the link we provide.

For more information or to submit a sample from your Skye Terrier please visit <https://www.canine-genetics.org.uk/research/skye-terrier-hepatitis/>.