

CECS UPDATE
FROM DR. GARY JOHNSON, University of Missouri 9/11/13

To Border Terriers owners:

I want to apologize to Ms Kris Blake, and to those she contacted on the internet, for not making myself clear during a recent conversation. Ms Blake wanted to know how the CECS research was going and I told her we were currently looking at a mutation in a sodium channel gene as a potential cause of CECS in Border Terriers. I should have emphasized that the sodium channel gene mutation was one of several hundred candidate mutations identified so far in Border Terrier whole-genome sequence data and that we cannot predict how long it will take to identify the specific mutation (or mutations) responsible for CECS. Apparently I gave Ms Blake the erroneous impression that we had already established that the sodium channel mutation caused CECS.

Except for the genes on the X chromosome in male dogs, all dogs have two copies of each gene – one inherited from their mother and the other from their father. We evaluate the candidate mutations as causes of CECS with DNA tests that distinguish the dogs that have the mutation in both genes, the dogs with both a mutant gene and a normal gene, and the dogs with two normal genes. If a candidate mutation is a cause of CECS, most or all of the dogs with that mutation in both genes should suffer from CECS.

SAMPLES NEEDED:

In this effort, we could use additional DNA samples from CECS-affected Border Terriers and their normal relatives. We would prefer to get EDTA-anti-coagulated blood samples as an abundant source of high quality DNA. Directions for donating blood samples from your dogs can be found in our website: www.caninegeneticdiseases.net. Nonetheless, the cost of having a veterinarian draw the blood sample and the shipping charges may be too high for some Border Terrier owners. As an inexpensive alternative, we can also make use of samples collected by the dogs' owners on cheek swabs and stored on cards that can be returned to us by regular US mail. If you would like to donate DNA by this method, contact Liz Hansen by email (HansenL@missouri.edu) and she will send directions and a kit with the swab and card.

Sincerely,
Gary S. Johnson, DVM, PhD
University of Missouri