

Copper Toxicosis (CT) in Bedlington Terriers

Interpretation of linkage analysis

(0,1,2,3,4,5 are codes used by FKC)

Clear (code 0)

The linkage between the CT-gene and the DNA-marker can be established from both parents. The dog has inherited the DNA-marker linked to the normal ("healthy") gene from both of its parents. Thus, the dog will not transmit the CT-gene to its offspring.

Normal, genotype unknown (Possible carrier) (code 1)

The linkage between the CT-gene and the DNA-marker can be established from only one of the parents. The dog has inherited the DNA-marker linked to the normal ("healthy") gene from one of the parents. Since there is not enough information from the other parent, two possibilities remain: (1) the dog will not transmit the CT-gene to its offspring, or (2) there is a risk of 50 % that the dog transmit the CT-gene to its offspring.

Carrier (code 2)

The linkage between the CT-gene and the DNA-marker can be established from both parents. The dog has inherited the DNA-marker linked to the normal ("healthy") gene from one of the parents, but the CT-gene from the other. Thus, the dog will transmit the CT-gene to half of its offspring.

Carrier or affected (code 3)

The linkage between the CT-gene and the DNA-marker can be established from only one of the parents. The dog has inherited the DNA-marker linked to the CT-gene from one the parents. Since there is not enough information from the other parent, two possibilities remain: (1) there is a risk of 50% that the dog transmit the CT-gene to its offspring (carrier), or (2) the dog transmit the CT-gene to all of its offspring (affected).

Affected (code 4)

The linkage between the CT-gene and the DNA-marker can be established from both parents. The dog has inherited the DNA-marker linked to the CT-gene from both of its parents. Thus, the dog will transmit the CT-gene to all of its offspring. The dog has either acute, chronic or symptom-free copper toxicosis which may vary with age. Without medical treatment, the dog can at some stage of its life manifest symptoms of copper toxicosis.

Note!

Due to possible crossing-over between the CT-gene and the DNA-marker, the accuracy of this linkage analysis is approximately 95%.

Code 5 : Interpretation not possible because of missing information (not enough biopsy results useable for interpretation) . Typical for imported dogs and in lines where only DNA-tested dogs.