



# AHT Cancer Research

## How You Can Help

### Animal Health Trust study on the predisposition of certain dog breeds to developing cancers

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone number(s) \_\_\_\_\_

E-mail address if available \_\_\_\_\_

Breed of dog \_\_\_\_\_

Number of dogs \_\_\_\_\_

I would be willing for a qualified vet to collect a blood sample(s) from my dog(s)

I would be willing to collect a cheek swab from my dog(s)

*Please return this form to the Animal Health Trust by post, or by fax (details on the back of this leaflet).*



### Animal Health Trust

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Registered Charity No. 209642



Animal Health Trust

The Animal Health Trust's Oncology Research Group specialises in research into cancer in dogs, without using experimental animals. Instead we study samples collected by veterinary surgeons when diagnosing or treating naturally occurring cancer.

Cancer is a major cause of death in dogs, and certain breeds are much more susceptible than others. Within these breeds, some families are thought to be at particularly risk of developing cancer.

*If your dog is one of the breeds we are studying, you can help our valuable research.*





### *Genetic studies on the predisposition of pedigree dog breeds to developing certain cancers*

The inherited susceptibility to some cancers probably results from the combined effects of many modified genes, each of which alone confers a low to moderate increase in risk. The risk of developing a cancer is thought to increase according to the number of altered genes carried.

We wish to identify the genes that, when mutated, are associated with an increased risk of developing a common cancer. Individually, or in collaboration with other researchers across Europe, we are planning to investigate the genes associated with:

- haemangiosarcomas in German Shepherds
- histiocytic sarcomas in Rottweilers
- lymphomas in Boxers, Bulldogs and Bullmastiffs
- mammary tumours in Boxers, Cocker Spaniels, English Springer Spaniels and German Shepherds
- mast cell tumours in Boxers, Golden Retrievers, Labrador Retrievers and Weimaraners
- melanomas in Golden Retrievers, Poodles, Schnauzers and Scottish Terriers
- osteosarcomas in Irish Wolfhounds
- soft-tissue sarcomas in Golden Retrievers

We are undertaking a programme of research that, hopefully, will lead to the development of diagnostic tests to identify the gene alterations that confer increased risk. This would enable early identification and treatment of cancers and allow breeders to take this information into consideration when formulating their breeding programmes.

There are two common approaches to identifying the genes that are associated with disease.

1. focusing on families in which the disease has been shown to be inherited, studying an affected dog(s), its siblings, its dam and sire, and its grandparents.
2. comparing dogs which have the disease with unrelated animals of the same breed which are not affected by the disease.

In order to conduct our research, we need to collect DNA samples from as many dogs as possible, belonging to the 14 breeds listed above. These samples can be obtained either from cells gathered from the inside of a dog's cheek or, preferably, from a small volume of blood.

We need samples from dogs who have (or have had) one of the 8 cancers listed above and from dogs aged 5 years or older that have not had cancer.

Because blood sampling is regarded as an invasive procedure, we only ask owners to allow us to use a small portion of blood collected by their vet as part of a general health check, or for another medical reason. Cheek swabs can be easily collected by dog owners themselves.

*If you would like to take part in these studies, either by allowing your vet to save a surplus sample of blood or by collecting a cheek swab from your dog, please complete the attached form and return it to Dr Mike Starkey at the Animal Health Trust, either by post or by fax. If you have any questions, or would like further details, please contact Dr Starkey by telephone or e-mail. Contact details are on the back of this leaflet).*

