



Animal **Health** Trust  
Oncology Research Group

**Help research into  
melanoma, a cancer that  
affects dogs and people**



<http://www.eurolupa.org/>

The Animal Health Trust (AHT; <http://www.aht.org.uk/>) is a charity, and a research institute, that has been helping dogs, cats and horses for more than half a century. The AHT provides specialist veterinary clinical, diagnostic and surgical services, and is dedicated to the study of canine, equine and feline diseases.

The AHT Oncology Research Group needs the help of dog owners and breeders to collect samples for a project seeking to identify one, or more, inherited genetic mutations that may be responsible for some dogs having an increased risk of developing melanomas. The research is a collaborative project involving scientists from 6 centres in 4 countries, and is part of the European Union-funded LUPA project (<http://www.eurolupa.org/>), a 4-year initiative involving 20 veterinary schools from 12 European countries.

Melanomas are about 4% of all tumours in dogs, and arise from cells (containing the pigment melanin) that occur in the skin ('cutaneous melanoma'), in the mouth ('oral melanoma'), under toe nails ('ungual melanoma'), and in the eye ('ocular/uveal melanoma'). The tumours can occur in dogs of any age, but are most common in dogs of over 9 years old. The severity of a melanoma depends upon location, and >55% of cutaneous melanomas are benign. Oral melanomas are most likely to spread (to the lymph nodes and lungs). Surgery and radiotherapy (when surgery is not possible) are effective treatment options when a melanoma has not spread. Chemotherapy is not an effective therapy for tumours that have spread. A DNA vaccine to protect against melanoma has been undergoing safety trials at several centres in the United States. The DNA vaccine is designed to stimulate production of antibodies against a protein involved in the synthesis of melanin.

While melanomas occur rarely in many dog breeds, it is thought that some dogs (and some people) may carry genetic risk factors that increase their risk of developing these cancers. In the long term, it is hoped that the research to identify the one, or more, inherited genetic mutations will lead to the development of tests to identify dogs that carry the gene mutations conferring an increased risk. This information will be useful to vets as it will identify dogs who may benefit from careful monitoring for early detection of cancer, and thereby early treatment. These tests will also assist breeders to reduce the incidence of dogs affected with these cancers. The research will also increase understanding of how these tumours develop, ultimately assisting the development of new therapies.

Dr. Mike Starkey  
Oncology Research Group  
May 2009

Dog owners can help this project as follows:

A). If your dog has a suspected melanoma:

- If your vet is taking a blood sample for a clinical reason, ask the vet to save a surplus sample (1-2ml) in an EDTA tube

OR

Contact the AHT (contact details below) to request a cheek swab kit

- Ask your vet to collect a small piece (3-5mm cube) of the biopsy of the suspected tumour (normally removed for diagnostic histopathology) and send it to the AHT
  - If you have advance notice of your vet removing a biopsy, contact the AHT (contact details below) to ask for a special preservative ('RNAlater'), in which to collect the small piece of tissue, to be sent to the vet

OR

- Ask your vet to place a small piece of the biopsy of the suspected tumour in a freezer, and then ask the vet to contact the AHT (contact details below) to ask to be sent a special solvent ('QIAzol') in which to transport the piece of tissue

B). If your dog does not have cancer (and has not had cancer) and is **at least 7 years old**:

- If your vet is taking a blood sample for a clinical reason, ask the vet to save a surplus sample (1-2ml) in an EDTA tube

OR

Contact the AHT (contact details below) to request a cheek swab kit

- Please let us know if your dog develops cancer within the next 4 years

For any queries or more information about the project, please contact:

Dr. Mike Starkey (Tel: 01638 555603; E-mail: [mike.starkey@ah.org.uk](mailto:mike.starkey@ah.org.uk); Website: [http://www.aht.org.uk/science\\_oncology.html](http://www.aht.org.uk/science_oncology.html)).

To submit a blood sample, or request a cheek swab kit and/or an RNAlater/QIAzol sample tube (for a tumour biopsy), please contact: Lisa Jeffery (Tel: 01638 751000, extension 1214; E-mail: [lisa.jeffery@ah.org.uk](mailto:lisa.jeffery@ah.org.uk)).

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