Cause of death database: owners' perspective

By Chiara Talamonti

DVM, MRCVS, MPhil candidate at Cambridge University

As most Society members are probably aware, there has been a longstanding collaboration between the Flatcoated Retriever Society and the Oncology team at the Queen's Veterinary School Hospital of Cambridge. The common goal has always been to acquire a better understanding of the biology of tumours in this breed and improve treatment options.

As part of this collaboration, an online 'Cause of death' database was set up in 2013. This database allows owners of deceased Flatcoated Retrievers to make a record of the history of their dog's illness and cause of death. This innovative mean of monitoring the breed's health has provided valuable data for the research promoted in the recent years.

Over 500 owners have offered precious information for the good of the breed when grieving the loss of their beloved pet. The effort made has been very much appreciated by everyone involved in the project.

An interesting aspect of this register is that it allows some insight into the owner's prospective thanks to the comments section. After registering the details of their pet's medical history and cause of death, owners have a chance to leave comments on their dogs, the project itself, and concerns for the breed.

Many concerns were raised about the incidence of cancer in these dogs, sadly the number of cancer-related deaths represents the 65% of the entries. Although we feel that there still may be some bias in these figures, with owners of dogs affected by cancer perhaps more likely to complete the Register than those dying of other causes.

Although owners were aware of the high incidence of cancer they were still committed to the breed. Often they reported they were still going to choose a Flatcoated Retriever as their next pet.

A lot of owners are engaged in improving the health of the breed as a whole. Most people who have owned Flatcoated Retrievers have such fond memories of their lovely character and loyalty that they do not feel driven away by the risk of tumours.

A large number of encouraging words were expressed for the work that has been undertaken to investigate histiocytic sarcoma in this breed. Some owners expressed impatience in finding out genetic causes and cures, so that the numbers of affected dogs might finally drop.

The owners of dogs affected from cancer have to face many challenges. Among these, coping with the sudden onset of the disease appears to be particularly stressful for the people and families involved. The shock of observing a happy playful dog suddenly collapse, or deteriorate rapidly is difficult to deal with. Often dogs go from carrying out their normal daily activities, such as eating and going for a walk, to being unable to stand. Owners are sadly faced with the prospect of losing their pet days or hours after a normal run in the park.

On the positive side, owners don't perceive a negative impact on the quality of life of their pets. Rarely suffering is described, often the dogs are said to be playing and wagging up to the last day.

When affected by tumour of the joint or deep muscle, such as histiocytic sarcoma, the owner's perception is of a general well-being. Comments such as "even when limping the dog was otherwise well" are common.

There is a lot of hope that the risk of cancer will be diminished through better knowledge of the causes.

At the moment the Oncology department is investigating the relationship between the immune system and cancer in Flatcoated Retrievers affected by histiocytic sarcoma.

In this project, we will be concentrating on identifying Regulatory T cells within the tumour and in the peripheral blood. These specific cells play a fundamental role in controlling levels of immune response. By doing so they avoid harmful auto-immune reactions.

Over the past decades studies in human oncology have shown that these cells decrease anti-tumoural activity of the immune system, allowing the tumour to grow and spread.

It has been demonstrated in previous studies that histiocytic sarcoma in Flatcoated retrievers have a prominent population of Regulatory T cells.

Through analysis of tumour and blood samples we are looking to investigate the role played by these cells in Flatcoated Retrievers with histiocytic sarcoma.

Cells within the tumour microenvironment appear to be responsible for pathways causing an elevation in Regulatory T cells. A better understanding of these pathways in histiocytic

sarcoma will allow to comprehend the relationship between immune system and cancer and help identify possible immunotherapy targets for future treatment.

Further information about the Cambridge University Flatcoated Retriever Project can be found on the Flatcoated Retriever Society website: http://www.flatcoated-retriever-society.org/images/pdf/2017/05/Health/TumourBrochure.pdf