MADGiC: Making Advanced Discoveries in Golden Cancers

Golden retrievers have been one of the most popular breeds in America for decades, but unfortunately these dogs also have one of the highest incidences of cancer. Hemangiosarcoma and lymphoma account for more than 30 percent of the deaths in this breed. Although breed susceptibility to cancer was first reported 30 years ago, the relationship between inherited traits and susceptibility for these cancers is still not known. The Golden Retriever Foundation and Morris Animal Foundation are funding MADGiC (Making Advanced Discoveries in Golden Cancers), a study that aims to discover and characterize heritable and somatic cancer mutations in golden retrievers. The three-year, $1 million project will examine heritable (genetic) traits that contribute to risk and progression of hemangiosarcoma and lymphoma in golden retrievers. The long-term goal is to understand what causes these diseases. Because both cancers occur with such high frequency, reducing their incidence (while retaining the positive phenotypes of the breed) will be a complex task, but the development of reliable genetic tests would allow breeders to build programs whereby high-risk combinations of factors could be avoided. In addition, effective strategies could be developed to control and treat hemangiosarcoma and lymphoma in golden retrievers and other dogs, and as importantly, what is learned from this research also may be applicable to develop effective prevention and treatment strategies for these diseases in people.

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