Introduction

Welcome to "Genes Dogs and Cancer". This international conference will bring together renowned experts working on diverse aspects of biology, prevention, and treatment of cancer in dogs, with an emphasis on genetics and molecular biology. The objectives of the meeting are to provide a forum that will foster exchange of state-of-the-art research methods and recent findings that are advancing cancer research in dogs. We also hope to promote new collaborations between researchers, and between researchers and practicing veterinarians. These veterinarians play a very important role in cancer diagnosis, identification of multigenerational high-risk pedigrees, and clinical trials.

Due to advances in veterinary health care, dogs are living to older age when most cancer types occur with greater incidence. Cancer is now the leading cause of disease-related death in dogs, and as such, it has gained exceptional visibility and importance in our society. Genetic and environmental factors also have major effects on the temporal occurrence of cancer and are the basis of research on pathogenesis, prevention, diagnosis and treatment. Thus, a new emphasis has developed to learn more about genetic and environmental factors that influence cellular and molecular changes in canine cancer.

Dogs and people are susceptible to many of the same types of cancer and the natural history of many cancer types appear to be similar in both species. The shorter generational life span of dogs and the availability of extended pedigrees with detailed family histories, provides a unique opportunity to address causative issues of cancer that will be important for both dogs and people.

During the next two days, presentations will describe the search for heritable factors that contribute to cancer risk. We will look at the role of genes that control cell growth, cell death, and DNA repair in the origin and progression of cancer in dogs. We will also examine new molecular tests with high sensitivity and specificity that will improve our ability to diagnose cancers in dogs. And we will review the use of molecular tools to design and implement new treatment approaches that, when combined with the current inventory of cancer therapies, will render them more efficacious and less toxic. Moreover, we hope that the diverse background of participants at the conference will allow for interactions that address issues of importance to people who own dogs that are, or have been, affected with cancer. Finally, a very exciting aspect of this conference is the opportunity to host two plenary sessions and poster presentations where a talented group of young scholars, who will undoubtedly be at the forefront of cancer research for years to come, will present their most recent work. When we look at the people in attendance, we are confident that this conference will meet or exceed its stated goals.

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