GENOMIC MARKERS IN CANINE MAMMARY TUMORS

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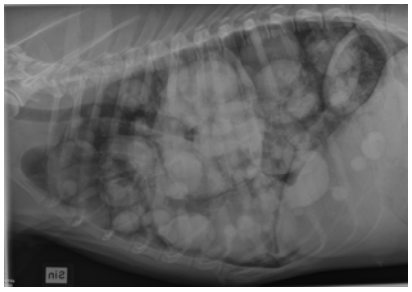
AIM

We aim to identify the genetic risk factors for mammary tumors in dogs



Thorax radiograph of a metastasized Mammary Tumor

Canine mammary tumors are used as a comparative model for human breast cancer. This study could hopefully lead to the development of genetic tests for mammary tumors that could be used to eliminate carriers from breeding to reduce the morbidity and mortality

MATERIALS AND METHODS

We are collecting blood samples from affected and unaffected dogs in breeds with increased incidence of mammary tumors.

Genomic DNA will be prepared from the blood samples and will be used for genotyping across the genome. This will allow us to associate regions of the DNA related to disease.

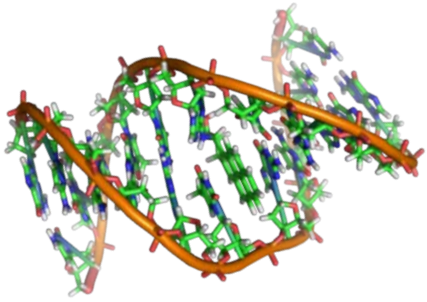
When a small region has been identified, DNA from affected and unaffected dogs will be resequenced to identify the exact disease mutation(s).

INTRODUCTION

The dog genome sequence is highly homologous to the human genome and will be of major importance in finding new disease mechanisms that can be extrapolated to humans.

FUTURE

Mapping of other cancer genes. Blood samples will be collected from breeds affected with other forms of neoplastic diseases using the same protocol.



RESEARCH GROUP

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The Eli and Edythe L. Broad Institute
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