# Canine Lymphoma Prognostic Classification (20120065, Dr. Jaime Modiano)

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### **Identifying Canine Lymphoma Subtypes**

A new test classifies canine lymphoma into one of three prognostically significant subtypes:

B cell, high-grade T-cell or low-grade T-cell. Knowing the immunophenotype and histologic
"grade" of a given tumor helps determine an appropriate course of treatment, as these three
subtypes have significantly different outcomes and respond differently to various treatments.

# **Reverse Transcriptase PCR technology**

By using quantitative reverse transcriptase-polymerase chain reaction (qRT-PCR) technology to compare relative expressions of two different genes, a tissue sample obtained through fine-needle aspiration or biopsy can be classified as either T-cell or B-cell. Another comparison of two more biomarkers further refines T-cell diagnoses into two histologic "grades" – either highgrade, more aggressive tumors, or low-grade, more indolent tumors.

### BENEFITS AND FEATURES OF PROGNOSTIC CLASSIFICATION OF CANINE LYMPHOMA:

- Provides critical information not available from current cytology techniques
- Helps vets and pet owners in deciding cancer treatment options
- Minimally-invasive fine-needle aspirations require less patient material and may be more cost effective than routine biopsies
- Based on current technology already available in most large diagnostic laboratories
- Future prospects encouraging for expanding test to other cancers, such as bone cancer, or to other species, such as humans

Phase of Development - Proof of Concept

### Researchers

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## Category

Agriculture & Veterinary/Veterinary Medicine

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