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

IP Status: Issued US Patent; **Application #:** 14/410,260

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 high-grade, 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

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