

CANINE OSTEOSARCOMA EARLY DETECTION - THE COED STUDY

Jaime Modiano VMD, PhD

Perlman Professor of Oncology and Comparative Medicine
College of Veterinary Medicine University of Minnesota

Kelly Makielski DVM, MS, DACVIM(SAIM)

College of Veterinary Medicine University of Minnesota

Goal: Develop a predictive blood test to identify high-risk individuals for osteosarcoma across six large and giant breeds.

- Enrollment: A total of 370 dogs were enrolled in the COED study, including 74 Irish Wolfhounds.
- Status: Comprehensive sequencing is underway, paired with continued health surveys to track long-term clinical outcomes.
- Disease Prevalence in IWs: Reported health outcomes in IW include cancer (31%), respiratory disease (11%), and heart disease (10%).
- Primary Malignancies: Osteosarcoma, mammary tumors, and lymphoma represent the most frequent cancer diagnoses within the IW cohort.
- Mortality Data: To date, 48 of the 74 enrolled IWs are deceased, with a median age at death of 7.6 years (range 5.4 - 10.7 years); 26 IWs remain alive (35%).
- Impact: By integrating longitudinal health outcomes with sequencing, we aim to identify specific biological signatures that precede a diagnosis of osteosarcoma and other illnesses impacting the Irish Wolfhound. This allows for earlier clinical intervention, more informed breeding decisions to reduce disease prevalence, and the eventual development of targeted therapies to extend the healthy lifespan of the Irish Wolfhound.

