TGen-Ethos underscore need for setting high standards in veterinary cancer diagnostics

May 22 2019

Credit: CC0 Public Domain

Ethos Veterinary Health, Ethos Discovery, and the Translational Genomics Research Institute (TGen), an affiliate of City of Hope, announced today that they have developed a highly accurate test for the

diagnosis of canine lymphoma.

In a study published in the *Journal of Veterinary Internal Medicine*, Ethos and TGen found that their test, called ePARR, was more than 90 percent accurate among a range of lymphoma sample types.

TGen conducted genetic analysis of more than 180 dogs with naturally occurring cancer to confirm if they had lymphoma, and then determine exactly what type of lymphoma, which is a common and aggressive cancer in dogs.

"An ongoing need exists for robust validation of molecular diagnostics in veterinary medicine. This study is an example of exhaustive validation of one such molecular test," said Dr. Will Hendricks, an Assistant Professor in TGen's Integrated Cancer Genomics Division, and one of the study's co-senior authors. "Overall, ePARR is more than 90 percent accurate across sample types and diagnostic settings."

The study authors suggest that such tests could be even more accurate if testing facilities adopted more uniform testing techniques, established uniform high performance standards, and made their results more readily available to the general research community.

"In the veterinary diagnostic area, there is a need for methodological consistency and transparency. Each lab has their own methods for how to run the same test," said Dr. Chand Khanna, Chief Science Officer of Ethos Veterinary Health, and also a co-senior author of the study. "Our validation of ePARR included over 180 dogs and a broad diversity of sample types, including cell pellets, air dried aspirates, and formalin-fixed paraffin-embedded tissues."

Shukmei Wong is a TGen Senior Research Associate in the Hendricks Laboratory, who conducted the study experiments and is a co-author of

the study, said: "I hope this paper will inspire more reporting of assay methods and metrics, and help drive the creation of reference standards and more consistent protocols in diagnostics in veterinary medicine."

Dr. Sam Stewart, Science Commercialization Fellow at Ethos Veterinary Health, agrees: "It is truly unique to see such complete rigorous validation of a molecular assay in this field, and we hope this standard of transparency and quality will be followed by others. As a Critical Care doctor, I am proud to offer this high level of quality in a diagnostic assay to my patients."

Molecular level investigations into dog DNA could someday not only improve the health of dogs with cancer, but also help contribute to a better understanding of cancer in humans, as well.

More information: E. J. Ehrhart et al, Polymerase chain reaction for antigen receptor rearrangement: Benchmarking performance of a lymphoid clonality assay in diverse canine sample types, *Journal of Veterinary Internal Medicine* (2019). DOI: 10.1111/jvim.15485

Provided by The Translational Genomics Research Institute