



Echinococcus and *Taenia* spp. PCR

PDS in conjunction with the Zoonotic Parasite Research Unit located at Dr. Jenkins' Lab in the Western College of Veterinary Medicine is pleased to now offer DNA testing for *Echinococcus* and *Taenia* spp., which are the most important tapeworms of companion animals in western Canada. Both species of *Echinococcus* in Canada, *E. multilocularis* and *E. granulosus*, are zoonotic, but pose different risks to human and canine health. *Taenia* spp. are not zoonotic and are very common in dogs or cats with access to wildlife (deer, rodents, rabbits...) or carcasses of sheep. Eggs shed in the feces of dogs and cats cannot be differentiated on appearance and animals can be infected with these tapeworms without testing positive for eggs on fecal flotation. It is important for owners and vets to know if *Echinococcus* is present in canine feces as this tapeworm can infect people. If you suspect that a dog may be shedding eggs of *Echinococcus*, handle the fecal sample very carefully and wash your hands well. Dogs and people, and to a lesser degree, pigs and horses, can be infected with *E. multilocularis* in the liver where it can cause severe disease called alveolar echinococcosis (AE). When there are suggestive lesions on medical imaging or microscopic indications of this parasite from biopsy material, we now offer definitive DNA diagnosis of AE based on fresh or frozen tissues, fluid aspirated from cysts, or in advanced canine AE cases, fluid aspirated from the abdomen. We can also confirm cystic echinococcosis lesions in lungs of cervids or livestock as *E. granulosus* (most commonly *E. canadensis* in Canada) using PCR. In most cases, results can be returned within 1-2 weeks, unless DNA sequencing is requested for species identification or epidemiological tracing. Refer to the following website for additional information on *Echinococcus multilocularis*:

[Echinococcus multilocularis - Learn About Parasites - Western College of Veterinary Medicine - University of Saskatchewan \(usask.ca\)](https://www.usask.ca/veterinary/learn-about-parasites/).

For test information please contact PDS (306-966-7316; email: dso@usask.ca) or search *Echinococcus* spp. / *Taenia* spp. on the PDS website ([Fee Guide \(pdsinc.ca\)](https://www.pdsinc.ca/)).