

PROGRESS REPORT



Using Advanced Imaging to Diagnose and Monitor Spinal Cord Disease

Dr. Phillipa J. Johnson, Cornell University, D18CA-310

Morris Animal Foundation-funded researchers are evaluating an advanced imaging technique to improve the diagnosis and monitoring of spinal cord lesions associated with canine degenerative myelopathy (CDM), a progressive spinal cord disease in dogs. Conventional MRI can't detect the lesions caused by CDM which makes the disease challenging to diagnose and monitor.

An advanced MRI technique called diffusion tensor imaging has been successful at detecting microscopic lesions in diseased spinal cords in humans. Researchers want to know if this technique also can detect spinal cord lesions caused by degenerative myelopathy in dogs. The team recruited dogs with presumed CDM as well as normal, healthy dogs without signs of neurological disease for comparison. The team currently is in the process of analyzing their data and expect to have preliminary findings by year-end.

Currently, CDM has no treatment, and often results in euthanasia within six to nine months of diagnosis. Dogs with suspected CDM are diagnosed based on clinical signs and by the process of elimination of other diseases. A way to confirm CDM diagnosis in a living dog will provide a way to monitor lesions for future studies. Researchers could potentially use this imaging technique to assess the effectiveness of new drug therapies in clinical trials for dogs with this devastating disease.

Thank you to the American German Shepherd Dog Charitable Foundation and other generous sponsors of this study!