Public Concerns about Dog Circovirus
An Update from Thomas Mullaney, Interim Director, Diagnostic Center for Population and Animal Health

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LANSING, MI - Across the internet and blogosphere, dog owners from one side of the country to the other are talking about the media reports on dog circovirus. (The virus was originally referred to as canine circovirus but has since been renamed dog circovirus.) Many of these media reports represent dog circovirus as some sort of canine plague that will soon be killing dogs coast to coast. Naturally dog owners are concerned about their pets’ health and well-being and would like to protect them. Based on our current evidence, dog circovirus is not cause for panic.

As it has just recently been discovered, there is still much to learn about dog circovirus. However, based on the initial research from California (published in Emerging Infectious Diseases) and the work currently underway here at the Diagnostic Center for Population and Animal Health (DCPAH), part of the Michigan State University College of Veterinary Medicine, it is not clear that circovirus causes significant disease on its own. Why? The virus has been found in the feces of healthy dogs with no signs of illness. In addition, the majority of dogs showing signs of illness that test positive for circovirus are also infected with other bacteria and viruses known to cause disease.

Prior to the discovery of dog circovirus, pigs were the only mammal known to be infected with a circovirus. With pigs, other bacterial or viral infections often increase the ability of circovirus to cause disease. In addition, secondary infections may occur as a result of immunosuppression.

Could dog circovirus enhance other canine infectious diseases? That’s what we are working to discover. As part of our investigation, pathologists and virologists worked together to identify old cases in which they suspected dog circovirus could have played a role. Based on our initial analysis, we found circovirus present in cases from as early as 2007. As we continue our retrospective analysis, it appears likely that we will find dog circovirus was also present prior to 2007. The virus went undetected in dogs for several years and probably longer. This supports the theory that dog circovirus exists as a subclinical infection, or as a co-infection with other well recognized pathogens.

Because of the likelihood for additional infections, we do not recommend testing solely for circovirus. Having a positive result for circovirus without knowing what, if any, other infections are present makes it difficult to interpret the results and develop an effective treatment plan. Veterinarians with questions about submitting samples for testing should contact DCPAH at 517.353.1683 or refer to our test catalog for more information.

The clinical signs that may be associated with circovirus in dogs include vomiting, diarrhea (possibly bloody), and lethargy. However, dog owners should be aware that these are very common signs with a wide variety of causes. If your dog shows signs of illness, see your veterinarian as soon as possible for diagnosis and treatment.
For example, in human medicine, people may suffer gastrointestinal symptoms as a result of norovirus, exposure to bacteria such as Salmonella or E. coli, parasites, food allergies, or a reaction to medication. Your doctor would need to talk with you and conduct tests to determine the cause for your specific illness and what treatment plan will work best to help you feel better as soon as possible. A comparable approach is needed when investigating animal illnesses.

It is important to note that there is still no evidence to-date that dog circovirus can be transmitted to humans or cause human disease. However, since many pathogens are transmitted from animals to humans, thorough hand-washing should be standard practice after handling animals, especially those showing signs of illness, or animal waste.

Pet owners are also encouraged to practice good sanitary practices such as not allowing their pet to come in contact with another animal’s excrement and to pick up after their own pets. Pet waste in public areas can spread many types of disease.

Additional information on dog circovirus, including links to resources developed by the American Veterinary Medical Association (AVMA), is available on the DCPAH website at animalhealth.msu.edu.