

## **Importance of canine distemper virus (CDV) infection in free-ranging Iberian lynxes (*Lynx pardinus*)**

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Canine distemper virus (CDV) is a morbillivirus affecting canids and occasionally other carnivores. Large amounts of CDV RNA were detected in various organs of an Iberian lynx (*Lynx pardinus*) found dead in the Doñana National Park, South Andalusia, Spain. High viral loads were suggestive of CDV infection being etiologically involved in the death of the animal. Detection of CDV in an Iberian lynx is of great importance since this species is the most critically endangered wild feline species in the world: only about 200 individuals are left, living in 2 subpopulations in the Doñana area and in Sierra Morena, in the South of Spain. Blood and serum samples from different carnivores originating from the same region (Doñana) were analyzed. A stone marten (*Martes foina*) was found to be positive for CDV by RT-qPCR.

Phylogenetic analyses of the entire viral hemagglutinin (H)-gene and a part of the phosphoprotein (P-) gene from the CDV of the lynx and the stone marten showed high identity to each other and a very close relationship to the European lineage of CDV. Serological analyses revealed an anti-CDV antibodies incidence of 14.8% in 82 analyzed free-ranging Iberian lynxes. The incidence was higher in animals roaming in the Doñana area (23.4%) than in Sierra Morena (2.9%). A red fox and a stone marten also tested antibody positive. To reduce the CDV infectious pressure on this highly endangered wild felid population a mass dog vaccination should be envisioned.