

## Retrospective Evaluation of Vector-borne Infections in Cats Living in Germany (2012-2019)

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**Abstract :** Introduction: Blood-feeding arthropods transmit parasitic, bacterial, or viral pathogens to domestic animals and wildlife. Vector-borne infections are gaining significance due to the increase of travel, import of domestic animals from abroad, and the changing climate in Europe. Aims of the study: The main objective of this retrospective study was to assess the prevalence of vector-borne infections in cats in which a 'Feline Travel Profile' had been conducted. Material and Methods: This retrospective study included test results from cats for which a 'Feline Travel Profile' established by LABOKLIN had been requested by veterinarians between April 2012 and December 2019. This profile contains direct detection methods via polymerase chain reaction (PCR) for Hepatozoon spp. and Dirofilaria spp. as well as indirect detection methods via immunofluorescence antibody test (IFAT) for Ehrlichia spp. and Leishmania spp. This profile was expanded to include an IFAT for Rickettsia spp. from July 2015 onwards. The prevalence of the different vector-borne infectious agents was calculated. Results: A total of 602 cats were tested using the 'Feline Travel Profile'. Positive test results were as follows: Rickettsia spp. IFAT 54/442 (12.2%), Ehrlichia spp. IFAT 68/602 (11.3%), Leishmania spp. IFAT 21/602 (3.5%), Hepatozoon spp. PCR 51/595 (8.6%), and Dirofilaria spp. PCR 1/595 cats (0.2%). Co-infections with more than one pathogen could be detected in 22/602 cats. Conclusions: 170/602 cats (28.2%) were tested positive for at least one vector-borne pathogen. Infections with multiple pathogens could be detected in 3.7% of the cats. The data emphasizes the importance of considering vector-borne infections as potential differential diagnoses in cats.

**Keywords :** arthropod-transmitted infections, feline vector-borne infections, Germany, laboratory diagnostics

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