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GASTROINTESTINAL PARASITES IN DANISH CATS

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Introduction
Gastrointestinal parasites, including protozoa, are known to cause diarrhea in animals and humans. The objective of this study was to investigate the prevalence and genetic variation of Cryptosporidium spp., Giardia spp. in cats from Zealand and to study possible risk factors associated with these infections.

Materials and Methods
Faecal samples and questionnaire data were collected from a total of 315 cats including 284 cats from 2 veterinary clinics and 2 shelters (study population), and 34 cats from 3 catteries (cases). Cysts and oocysts were quantified by immunofluorescence microscopy (IFA), and all samples positive by IFA underwent PCR amplification and sequencing of the 18S rDNA, hsp70 and gdh genes.

Results
Within the study population (n=284) the prevalence of Giardia and Cryptosporidium was 7.0% (n=20) and 6.7% (n=19), respectively. Eight of the cats were infected with both parasites (2.8 %). The prevalence among cats (n=34) in catteries was 47.1 % (n=16) for Giardia and 35.3 % (n=12) for Cryptosporidium. Nine of the cats were infected with both parasites (26.5 %). Significant risk factors associated with Cryptosporidium spp. infection were: Giardia spp. infection (study population), age (cases) and “cause for the veterinary consultation” (cases). Risk factors significantly associated with Giardia spp. infection were: Cryptosporidium spp. infection (cases), outdoor access (study population) and “other animals in the household” (study population). A significant positive association between level of (oo-)cyst excretion and clinical illness/diarrhea was found. Catteries had significantly more Giardia and Cryptosporidium infected cats compared to veterinary clinics and shelters. Molecular analyses of Giardia isolates revealed predominantly Giardia duodenalis assemblage F, but Giardia duodenalis assemblage A was also detected, whereas all Cryptosporidium isolates were identified as Cryptosporidium felis.

Conclusion
Infections with Cryptosporidium and Giardia represent a real problem among cats and especially in catteries where it, despite treatment and hygiene measures, can be difficult to control these infections. C. felis and G. duodenalis Assemblage A are capable of infecting humans, and close contact with cats is a potential source of infection, although the risk is currently considered to be low.