Prevalence of FeLV and viral subtypes in feral cats

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Objectives: The high concentration of feral cat colonies in Portugal is one of the main factors for Portugal showed the highest prevalence of the Feline Leukemia Virus Infection (FeLV) in Europe. Progressive infection is known to still be high especially in Southern Europe. In addition to the viral load, the subtypes are determining factors in the development of the various syndromes associated with this disease: neoplasms (FeLV-B is associated with lymphomas and leukemias), bone marrow disorders (FeLV-C mainly associated with anemias), immunosuppression and immunoproliferation. This study aimed to determine the prevalence of FeLV and identify the circulating viral subtype in feral cats in the Lisbon area.
Material and methods: This prospective study was conducted at the Veterinary Teaching Hospital of the FMV-ULusófona, from November 2022 to January 2023. Blood samples from 131 domestic cats from Lisbon area were enrolled. All samples were tested for p27 antigen detection and proviral DNA by qPCR. For the detection of FeLV subtypes (A, B and C) nested PCR was performed.
Results: The results showed that at the time of enrolment, 8.4% (n=11/131) of the cats tested positive for FeLV using p27 antigen and qPCR for proviral DNA. Considering the proviral DNA load, 83.3% (n=10/11) of the FeLV infections were classified as "likely progressive infection" (>$4.0x10^5$ copies/mL). For the remaining animal, the FeLV infection was classified as "likely regressive infection" (≤$4.0x10^5$ copies/mL).
In this study, the most common FeLV subtype was FeLV-A (45.4%, n=5/11), followed by FeLV-B and combination AB (27.3%, n=3/11 for both). FeLV-C subtype was not detected.
Conclusion: The results of the present study indicate that the prevalence of FeLV prevalence in this group of was not higher than we expected. However, to the best of our knowledge, this is the first study to research FeLV subtypes in Portugal. Further studies are needed.

Keywords: Cats, FeLV, Subtypes.
Funding: This project was funded by the FMV-ULusófona – SUBgrFeLV (2022-2023).