Crude incidence rate of malignant tumours in pet dogs: city of Rome

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In 2009, it was launched a three-year project for the monitoring of tumours in pet dogs living in a pilot area covering 4 boroughs of Rome: the project was coordinated by the Istituto Zooprofilattico Sperimentale Lazio e Toscana (IZSLT), in collaboration with the Local Health Unit 'Roma B' and 29 veterinary practitioners. In 2011, the dog population of this area was estimated as 26,345 (95% CI:24,247-28,443) dogs. The aim of the present study was to provide a reliable estimate of the annual crude incidence rate (IR) of primary malignant tumours (PMT) in pet dogs. From 2009 to 2011, practitioners submitted to the IZSLT tissue samples of dogs with suspected tumour for histology testing free of charge. Tumours were coded according to the ICD-O. In 2012, 4 of the practitioners provided the full list of dogs seen at least once at the respective practice over the study period, independently of the reason for medical examination. Because records from these lists and those from laboratory results had a field for the owner' address, it was possible to geocode and keep those falling into the pilot area. Assuming an open population in steady-state, the resulting number of dogs from the lists was taken as a representative sample of the entire dog population at risk, while the resulting number of dogs with PMT from the 4 practitioners was taken as the corresponding number of new cases: the IR was estimated accordingly. 102 PMT from as many dogs were submitted by the 4 practitioners. The average population at risk was 2,585 dogs: the IR of PMT was 1,315 (95% CI:1245-1388) per 100,000 dogs. The most common tumour was the mammary carcinoma. The IR appears greater than values commonly reported in literature. An accurate definition of the parameters was obtained by geocoding. It cannot be excluded the effect of selection bias, especially because data come from dogs that received veterinary care and the 4 practitioners were not selected randomly.