

A Two-Decade Survey of Feline Tumours (2000–2020) in Slovenia: Occurrence, Types, and Localization

Key words

cat;
tumour;
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Abstract: We performed a retrospective study of feline tumours diagnosed in Slovenia over a 21-year period (2000–2020), aiming to analyse their occurrence and related epidemiological features. We systematically reviewed histopathological reports from biopsies and necropsy specimens of cats submitted to the Institute of Pathology, Wild Animals, Fish and Bees at the University of Ljubljana Veterinary Faculty. Tumours were diagnosed in 901 cats, representing 28.99% of all feline submissions. The majority of tumours were malignant (741 tumours; 82.24%), while 17.76% (160 tumours) were benign. The most common tumour type was squamous cell carcinoma (20.53%), followed by lymphoma (17.20%), soft tissue sarcoma (12.76%), and mammary carcinoma (9.43%). The most commonly affected organ systems were the skin and subcutaneous tissues (44.40% of all tumours), the oral cavity (10.88%), and the mammary gland (10.54%). Tumours were more frequently found in female cats (553 tumours; 61.38%) than in male cats (348 tumours; 38.62%) and were most common in cats aged 10 to 12 years. Our findings are largely comparable with those of other similar studies.

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Introduction

Tumours are one of the leading causes of death in companion animals (1–4). Although cats are the second most common companion animal and have become an increasingly important focus in veterinary practice, feline tumours have received less attention than canine tumours. The number of publications on feline tumours is four to five times lower than those focusing on canine tumours (5).

Cancer epidemiology is a growing field of research and is recognised as a crucial and expanding area of investigation in veterinary medicine (6). Epidemiological studies of naturally occurring tumours in animals contribute not only to veterinary medicine but also to comparative oncology in both humans and companion animals (7). In comparative oncology studies, dogs are frequently used as models; however, cats offer at least equally valuable potential and, for certain tumour types, are even more suitable. For example, feline oral squamous cell carcinoma, one of the most common malignant tumours in cats, shares important

clinical and molecular similarities with human oral/oropharyngeal squamous cell carcinoma. Triple-negative mammary tumours in cats, which are more common than triple-negative breast tumours in humans, serve as a valuable model for the investigation of targeted therapies (1, 8). In Europe, studies on feline tumours remain limited. The Swiss Feline Cancer Registry, for example, provided data on 51,322 cats diagnosed with tumours between 1965 and 2008 (9). In Italy, a tumour registry was established for both dogs and cats in two provinces of the Veneto region, recording tumour incidence over a three-year period (10). The most recent study, conducted in Croatia, reported on feline tumours diagnosed between 2009 and 2019 (11). Following our recent retrospective study on canine tumours diagnosed in Slovenia over a 21-year period (2000–2020) (12), we aimed to conduct a similar study for cats to characterise the occurrence, tumour types, and distribution of feline tumours within the same geographical and temporal framework.

Materials and methods

The retrospective study was conducted at the Institute of Pathology, Wild Animals, Fish and Bees (institute) of the Veterinary Faculty, University of Ljubljana. The study analysed data on the occurrence of tumours in cats diagnosed between 1 January 2000 and 31 December 2020. The samples included biopsies submitted by veterinary clinicians for histopathological examination and samples collected during routine necropsies performed at the institute upon the request by pet owners or veterinary clinicians. Tumours diagnosed solely by cytological examination were not included in the study.

Tissue samples were routinely prepared according to standard histopathological protocols: fixed in 10% buffered formalin, embedded in paraffin, sectioned at a thickness of 4 µm, and stained with haematoxylin and eosin. In cases of poorly differentiated tumours, and with the consent of the owner or veterinarian, additional histochemical and immunohistochemical stains were performed according to the manufacturer's instructions and the institute's validated protocols.

To collect data from the archive, a standardised data collection form was created to record the following information: sex, age, breed, organ system in which the tumour was diagnosed, biological behaviour of the tumour, and specific type of tumour. To evaluate the age distribution of tumours, cats were divided into two-year age intervals as follows: 0 to 1.99 years, 2 to 3.99 years, 4 to 5.99 years, etc. For breed evaluation, the cat's breed was recorded as reported by the submitting clinician on the submission form. To evaluate anatomic distribution, each tumour was assigned to one of the following organ systems: 1) skin and subcutaneous tissue, 2) mammary gland, 3) genital system, 4) haemolymphatic system (including thymus, lymph nodes, spleen, and bone marrow), 5) endocrine and exocrine glands, 6) bones and joints, 7) respiratory system, 8) alimentary system (including oral cavity), 9) sensory system (including eyes and ears), 10) urinary system, 11) hepatobiliary system, and 12) cardiovascular system.

The category "solitary tumour" was applied to cats with one tumour, and "multiple tumours" to cats with two or more synchronous tumours of different histological types. If biologically identical tumours were found at different anatomical sites in the same cat, the case was classified as a solitary tumour.

Based on their histopathological characteristics, tumours were classified as benign or malignant. Tumours were classified according to the current classifications of tumours of domestic animals.

The collected data were analysed using Microsoft Office Excel and Python. All figures in the study were created using an online graphic design platform, and statistical analyses were carried out using the SciPy package. The Chi-square test, with $\alpha = 0.05$, was used to evaluate the relationships between tumour type and sex, tumour type and breed, and tumour type and age group.

Results

Detection rate of tumours

During the 21-year period from 1 January 2000 to 31 December 2020, the institute received a total of 3,108 feline submissions, with tumours diagnosed in 901 cats, representing 28.99% of all submitted samples. The number of diagnosed tumours in cats per year ranged from 10 cases in 2000 to 103 cases in 2018 (Figure 1). All cats included in the study were diagnosed with solitary tumours.

Biological behaviour of the tumours

The majority of tumours were malignant (741 cases; 82.24%), while benign tumours were diagnosed in 160 cases (17.76%). The proportion of malignant tumours was statistically significantly higher than that of benign tumours ($p < 0.01$).

Tumour types in cats

The most frequently diagnosed tumour was squamous cell carcinoma (185 cases; 20.53% of all tumours), followed by lymphoma (155 cases; 17.20%), soft tissue sarcoma (115 cases; 12.76%), mammary carcinoma (85 cases; 9.43%), mast cell tumour (53 cases; 5.88%), trichoblastoma (52 cases; 5.77%), lipoma (29 cases; 3.22%), apocrine adenoma (19 cases; 2.11%), melanoma (14 cases; 1.55%) and osteosarcoma (13 cases; 1.44%) (Figure 2).

Organ systems with tumours

The three most common organ systems with tumours were the skin and subcutaneous tissue (400 cases; 44.40%), the oral cavity (98 cases; 10.88%), and the mammary gland (95 cases; 10.54%). The least frequent were tumours of the genital (1 case; 0.11%), hepatobiliary (9 cases; 1.00%), and cardiovascular systems (1 case; 0.11%) (Figure 3).

The five predominant tumour types in the skin and subcutaneous tissue were soft tissue sarcoma (91 cases; 22.75% of all skin and subcutaneous tissue tumours), squamous cell carcinoma (76 cases; 19.00%), trichoblastoma (51 cases; 12.75%), mast cell tumour (44 cases; 11.00%), and lipoma (29 cases; 7.25%).

In the oral cavity, squamous cell carcinoma was the most commonly diagnosed tumour (68 cases; 69.39% of all oral cavity tumours), followed by soft tissue sarcoma (10 cases; 10.20%). The most common tumour types of the mammary gland were mammary carcinoma (85 cases; 89.47% of all mammary tumours) and mammary adenoma (10 cases; 10.53%).

The sex of cats with tumours

Tumours were diagnosed in 553 female cats (61.38%) and 348 male cats (38.62%). Statistical analyses showed that tumours were significantly more frequent in female cats than in male cats ($p < 0.01$).

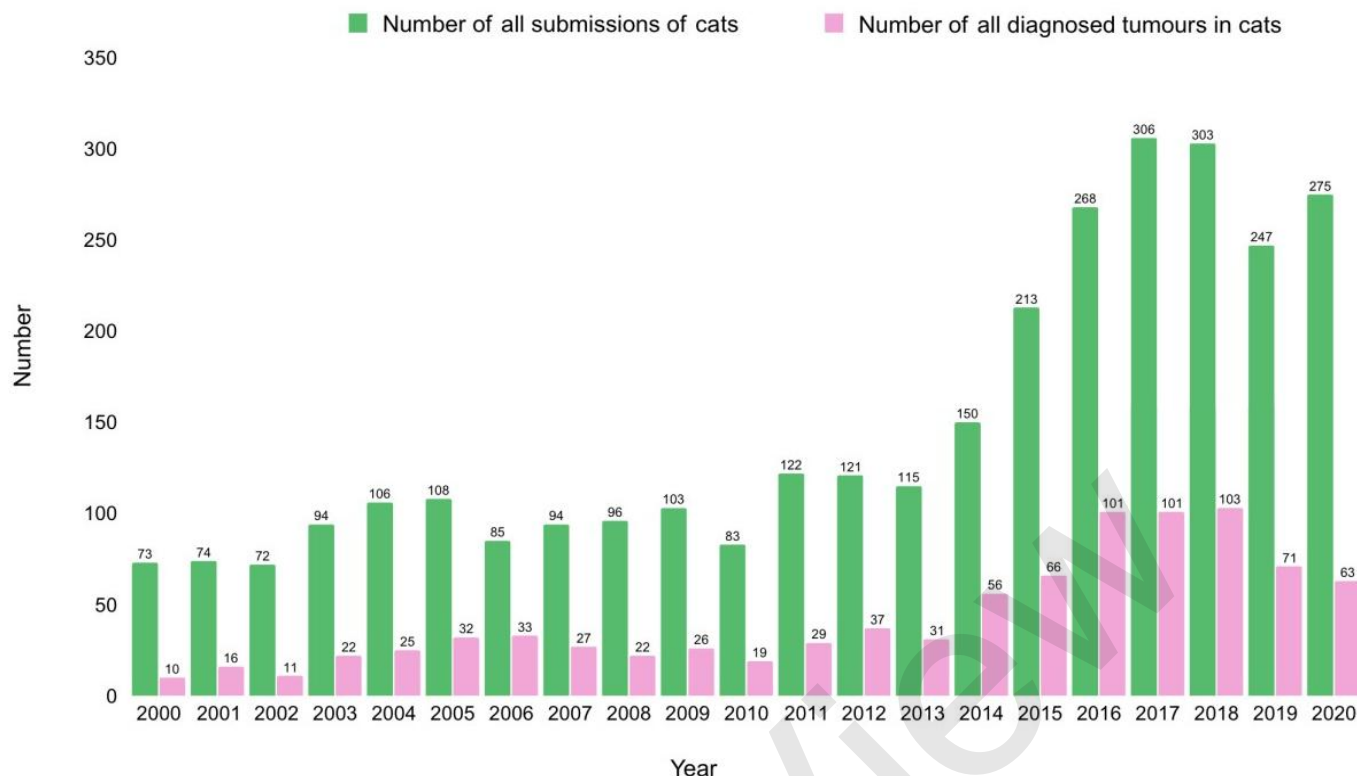


Figure 1: Data on the total number of feline submissions from 2000 to 2020 and the number of feline tumours

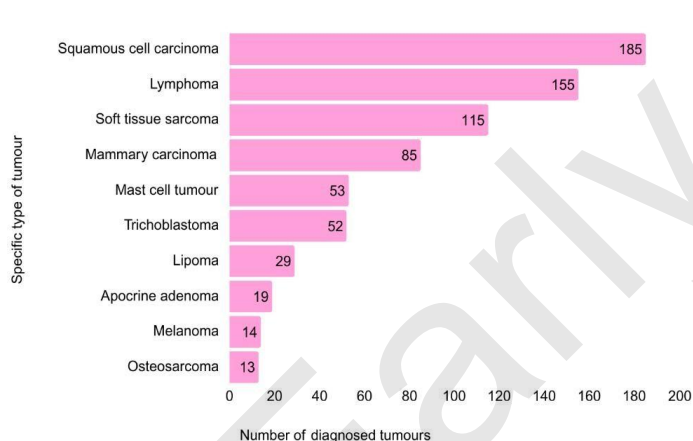


Figure 2: The most frequently diagnosed feline tumours in Slovenia from 2000 to 2020

Among female cats, squamous cell carcinomas were most frequently diagnosed (126 cases; 22.78% of all female cat tumours), followed by mammary carcinomas (81 cases; 14.65%), lymphomas (78 cases; 14.10%), soft tissue sarcomas (68 cases; 12.30%), trichoblastomas (30 cases; 5.42%), mast cell tumours (21 cases; 3.80%), lipomas (14 cases; 2.53%), apocrine adenomas (12 cases; 2.17%), mammary adenomas (10 cases; 1.80%) and melanomas (10 cases; 1.80%). Squamous cell carcinoma, mammary carcinoma, and mammary adenoma were significantly more frequent in female cats than in male cats ($p < 0.01$) (Figure 4).



Figure 3: The frequency of tumour occurrence in different organ systems and the most common tumour types for each organ system

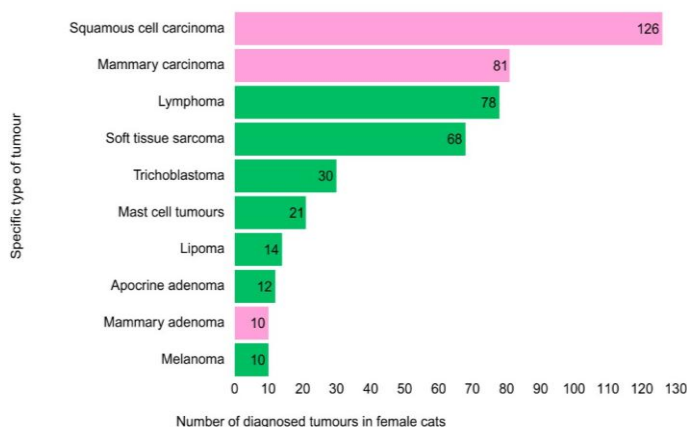


Figure 4: The most frequently diagnosed tumours in female cats. Pink bars indicate a statistically significant association between sex and tumour type ($p < 0.01$)

The most frequently diagnosed tumours in male cats were lymphomas (77 cases; 22.13% of all male cat tumours), squamous cell carcinomas (58 cases; 16.67%), soft tissue sarcomas (47 cases; 13.51%), mast cell tumours (32 cases; 9.20%), trichoblastomas (22 cases; 6.32%), lipomas (15 cases; 4.31%), ceruminous adenocarcinomas (9 cases; 2.59%), apocrine adenomas (7 cases; 2.01%), basal cell carcinomas (5 cases; 1.44%) and osteosarcomas (5 cases; 1.44%). Ceruminous adenocarcinoma was significantly more frequent in male cats than in female cats ($p < 0.01$) (Figure 5).

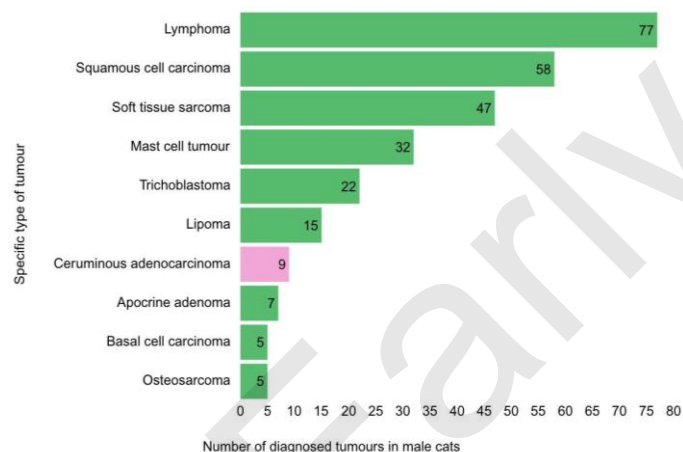


Figure 5: The most frequently diagnosed tumours in male cats. The pink bar indicates a statistically significant association between sex and tumour type ($p < 0.01$)

In female cats, the organ systems most frequently affected by tumours were the skin and subcutaneous tissue (238 cases; 43.04% of all female cat tumours), followed by the mammary gland (91 cases; 16.45%), oral cavity (59 cases; 10.67%), sensory system (50 cases; 9.04%) and haemolymphatic system (25 cases; 4.52%).

In male cats, the skin and subcutaneous tissue were also most commonly affected (162 cases; 46.55% of all male cat tumours), followed by the sensory system (41 cases; 11.78%), oral cavity (39 cases; 11.21%), alimentary system (23 cases; 6.61%) and haemolymphatic system (16 cases; 4.60%).

Breeds of cats

Breed information was available for only 338 cats with tumours (37.51%). Tumours were diagnosed in 11 different cat breeds, most commonly in domestic shorthair cats (276 cats; 30.63%), followed by breeds with fewer cases: Persian cats (30 cats; 3.33%), Maine Coons (15 cats; 1.66%), British Shorthairs (6 cats; 0.66%), Exotic Shorthairs (5 cats; 0.55%) and Siamese cats (3 cats; 0.33%). The number of purebred cats with tumours was too small for valid statistical analysis.

The age of cats with tumours

Information on the age of cats with tumours was available for 819 cats (90.90%). The ages of these cats ranged from 3 months to 20 years. Most tumours were observed in cats aged 10 to 12 years (171 cases; 18.98%), 12 to 14 years (161 cases; 17.87%), and 8 to 10 years (127 cases; 14.10%) (Figure 6). The average age of cats with a tumour was 9.91 ± 3.91 years. The ages at which malignant and benign tumours occurred were similar. The average age of cats with benign tumours was 9.51 ± 3.78 years, and for malignant tumours, 9.99 ± 3.94 years.

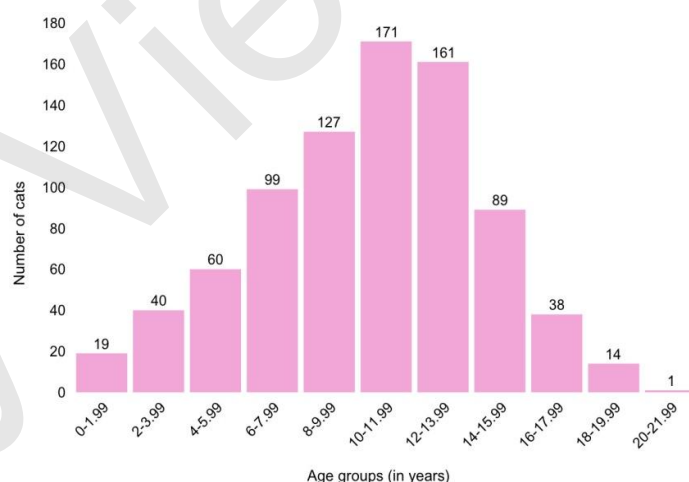


Figure 6: The number of diagnosed feline tumours by age groups

In all age groups except 14 to 16 years, lymphoma and squamous cell carcinoma were among the three most common tumours. Lymphoma predominated in cats up to 8 years, while squamous cell carcinoma was the most frequent tumour type in cats aged 8 to 18 years. Mammary carcinoma was among the three most common tumour types in cats aged 12 to 16 years (Table 1).

Statistical tests revealed significant associations between age and certain specific tumour types ($p < 0.01$). Lymphoma was significantly more common in cats up to 4 years and between 8 and 10 years of age, while mast cell tumour was significantly more common in cats aged 2 to 4 years ($p < 0.01$). In the 8 to 12 year age group, mammary carcinoma was significantly more common, although it was not among the three most common tumours in this group. Similarly, in cats aged 6 to 8 years, osteosarcoma was significantly more common, despite likewise not being among the top three tumour types. The ages at which tumours occurred in

male and female cats were similar. The average age of male cats with tumours was 9.57 ± 3.9 years, and for females, 10.14 ± 3.49 years. The average age of male cats with benign tumours was 9.80 ± 3.49 years, while for females it was 9.40 ± 3.98 years. Malignant tumours occurred in male cats at an average age of 9.51 ± 3.98 years and in female cats at 10.30 ± 3.89 years.

Table 1: Distribution of the most frequent tumour types by age group and sex

Age group (years)	Sex (number of cases; %)	Most frequent tumour types	Number of cases by tumour type (% within age group)
0–1.99	Male (9; 47.37%) Female (10; 52.63%)	Lymphoma* Squamous cell carcinoma Mast cell tumour	8 (42.11%) 4 (21.05%) 3 (15.79%)
2–3.99	Male (18; 45.00%) Female (22; 55.00%)	Lymphoma* Mast cell tumour Mammary carcinoma	7 (17.50%) 6 (15.00%) 5 (12.50%)
4–5.99	Male (26; 43.33%) Female (34; 56.67%)	Lymphoma Squamous cell carcinoma* Soft tissue sarcoma	16 (26.67%) 11 (18.33%) 7 (11.67%)
6–7.99	Male (46; 46.46%) Female (53; 53.54%)	Lymphoma Soft tissue sarcoma Mast cell tumour	14 (14.14%) 14 (14.14%) 12 (12.12%)
8–9.99	Male (43; 33.86%) Female (84; 66.14%)	Squamous cell carcinoma Lymphoma* Soft tissue sarcoma	29 (22.83%) 25 (9.69%) 15 (11.81%)
10–11.99	Male (79; 46.20%) Female (92; 53.80%)	Squamous cell carcinoma Lymphoma Soft tissue sarcoma	37 (21.64%) 26 (15.20%) 16 (9.36%)
12–13.99	Male (54; 33.54%) Female (107; 66.46%)	Squamous cell carcinoma Lymphoma Mammary carcinoma	39 (24.22%) 26 (16.15%) 22 (13.66%)
14–15.99	Male (31; 34.83%) Female (58; 65.17%)	Squamous cell carcinoma Mammary carcinoma Soft tissue sarcoma	20 (22.47%) 17 (19.10%) 15 (16.85%)
16–17.99	Male (16; 42.11%) Female (22; 57.89%)	Squamous cell carcinoma Soft tissue sarcoma Lymphoma	5 (28.95%) 5 (13.16%) 3 (7.89%)

Legend: * statistically significant association between the age of the cat and the tumour type

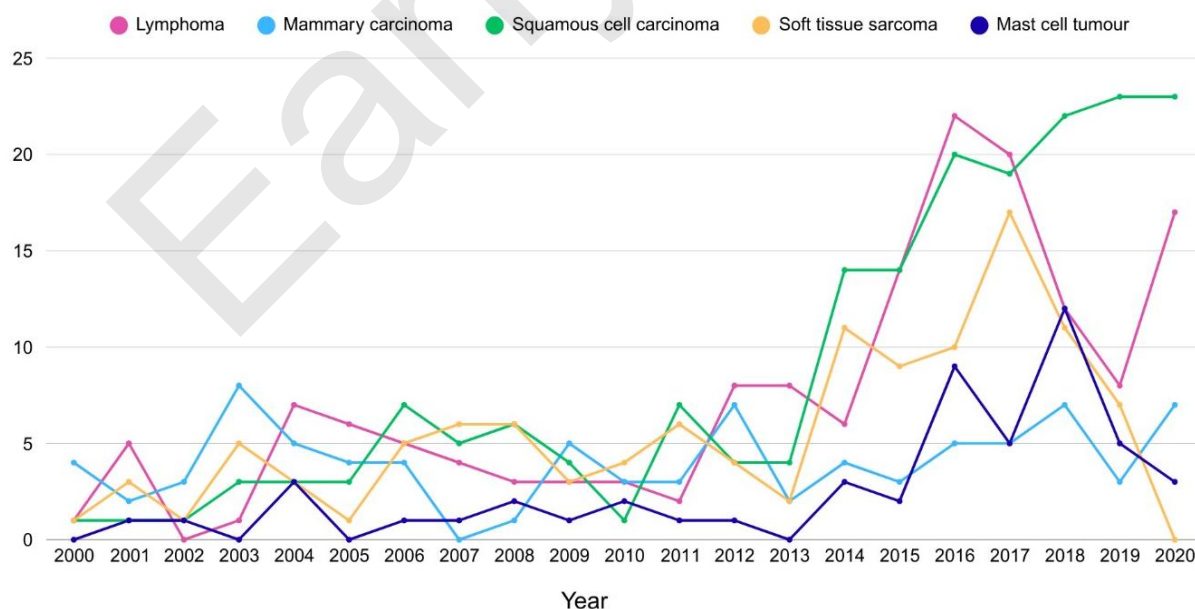


Figure 7: Temporal trends in the diagnosis of the five most common feline tumours

Temporal trend in the occurrence of tumours

Analyses of temporal trends for the five most common feline tumours showed a marked increase in the number of squamous cell carcinoma cases from 2014 onwards. The number of mammary carcinoma cases remained stable throughout the years, regardless of the number of samples received. Similarly, soft tissue sarcoma and mast cell tumour cases showed no significant change in frequency during the study period. The number of lymphoma cases increased sharply between 2013 and 2016, followed by a decline and then an increase in 2020 (Figure 7).

Discussion

From 2000 to 2020, the institute received 3,108 feline submissions for histopathological examination or necropsy, with tumours diagnosed in 901 cases (28.99% of submissions). In comparison, our previous study on dogs reported 15,584 canine submissions, of which 7,423 (48.60%) were diagnosed with tumours (12). These data indicate not only a much lower number of feline submissions compared to canine submissions during the same period, but also a lower relative proportion of tumour diagnoses in cats. Other studies on the occurrence of tumours in cats have also reported significantly fewer samples and lower numbers of diagnosed tumours in cats (10, 13, 14). Ciaputa et al. reported that tumours in cats made up only 12.32% of tumours diagnosed in domestic and exotic animals (13). In Brazil, 92% of tumours (1813 cases) were found in dogs and only 4% (82 cases) in cats (14). The lower number of cat biopsy submissions, and consequently fewer diagnosed tumours, may be because that cats are brought to veterinarians less frequently and their owners, on average, report less willingness to pursue and pay for advanced diagnostics (e.g., histopathological examination) and treatment (15–18). Similar to our findings, Huber et al. (11) analysed 2,338 cat samples and found tumours in 28.1% of cases. In some other countries, higher proportions of tumours among all feline submissions were reported: 34.79% in Switzerland (9) and 55.5% in Portugal (19). These differences in the proportion of tumours among all submissions may be due to various factors, such as breed and age distribution of the study population, sample size, data sources, and study methods (11).

The number of samples received gradually increased over the years. In 2000, we received 73 feline samples, and from 2015 onwards, this number increased to over 250 per year. A sharp increase occurred in 2014, and by 2017, the number had doubled compared to before 2014. We believe the reasons for the increase in cat samples and tumour cases are similar to those listed for dogs in our previous study: changes in the work of our histopathology laboratory, as we began to proactively approach veterinarians with changes in reporting, faster results, regular biennial training on the importance of histopathology, cytopathology and immunohistochemistry, a strong emphasis on teaching students, and our publications on these topics (12). Other factors listed among the causes of the increased incidence of canine tumours – the constant growth of the population, the availability of diagnostic methods,

longer life expectancy, the changing role of animals in society, a higher standard of living, a greater number of veterinarians, and possibly environmental factors (20) – probably also contributed to the increase in submissions and diagnosed cases of feline tumours in Slovenia. Interestingly, a similar 2.5-fold increase in cases from 2014 to 2017 was also reported in Poland (13).

In Slovenia, malignant tumours predominated among feline tumours (82.24%). These results are consistent with other European studies. In Croatia, 85.7% of feline tumours were malignant (11); in Switzerland, 80.32% (9), and in Poland, 75.11% (13). Vascellari et al. (10) found that cats had 4.6 times more malignant than benign tumours. Previous studies have also reported notable species differences in tumour malignancy. Pinello et al. (21) reported that malignant tumours were more common in cats (78.7%) than in dogs (46.2%), indicating that cats have four times higher odds of developing a malignant tumour compared to dogs. In Slovenia, a similar pattern was observed, with cats showing a higher proportion of malignant tumours (82.24%) than dogs (58.81%) (12). The underlying cause of the higher prevalence of malignant tumours in cats remains uncertain; species predisposition has been suggested (11, 22, 23).

The most common feline tumours in our study were squamous cell carcinoma (20.53%), lymphoma (17.20%), soft tissue sarcoma (12.76%), mammary carcinoma (9.43%), mast cell tumour (5.88%), and trichoblastoma (5.77%). These tumours also ranked highest in other studies, although with some variation in order and proportions (11, 14, 24). For example, in Croatia, mammary adenocarcinomas were most common, while in Brazil and northern Italy, they were the second most common (10, 14). Similar to our findings, squamous cell carcinoma was the most frequent tumour in cats in Mexico, with lymphoma as the second most common (25). Other studies categorised tumours by tissue origin (epithelial, mesenchymal, lymphoid, unclassified) (9, 13), making direct comparisons difficult. Graf et al. (9), analysing data from 1965–2008, found that epithelial tumours were most common (43.06%), followed by mesenchymal (27.98%) and lymphoid (21.28%) tumours. Similarly, in Poland, epithelial tumours predominated, representing 54.83% of cases (13).

Tumours were most frequently found in the skin and subcutaneous tissue (44.40%), the oral cavity (10.88%), and the mammary gland (10.54%). These results are comparable to other studies, although some reported alimentary tumours among the top three (11, 13). The locations in cats closely match those in dogs, suggesting similar aetiological factors. The highest number of cases of skin and subcutaneous tumours can be explained by the fact that lesions in these locations are more easily noticed by owners and are usually more accessible for sampling than those in other locations, such as the thoracic cavity, cranium or other internal organs.

Among skin and subcutaneous tumours (400 tumours; 44.40%), a high proportion, namely 71.10%, were malignant. Results from other studies are similar. In the Veneto region (Italy), skin tumours comprised 55.1% of feline tumours, 68.2% of which were malignant

(10). A UK study reported 52.7% malignancy (24), and Switzerland reported 76.1% (9) for tumours at this location.

In the oral cavity, we found 98 tumours (10.88%), with squamous cell carcinoma being by far the most common (69.39%). Bertone et al. (26) reported that this tumour type accounts for 70–80% of feline oral tumours. Proposed risk factors include exposure to tobacco smoke, flea collars, canned food, canned tuna fish, and living in rural or outdoor environments (26–28).

Mammary gland tumours accounted for 10.54% of all feline tumours in our study, with 89.47% being carcinomas. Other studies reported even higher percentages of mammary gland tumours: 12% in Brazil (14), 17.2% in Croatia (11), and 44.35% in Poland (13). This aligns with previous reports, which show that the vast majority of feline mammary tumours are malignant, with reported rates of 85–95% (11, 21, 29, 30). The factors related to mammary tumours in cats remain less clear compared to dogs. However, most studies have highlighted neutering status. One of the key risk factors is the age at which an ovariohysterectomy is performed (5). Spaying before the first heat significantly reduces the risk, with each subsequent heat cycle increasing it (31). Unfortunately, no data on the spaying status of cats were available in our study, so no correlation between the number of mammary gland tumours and spaying status could be assessed. Some studies have also reported a breed predisposition for mammary gland tumours, particularly in Siamese cats (32–34). In our study, only three Siamese cats with tumours were recorded, none of which had a mammary tumour; this number was too low for statistical analysis.

In our study, tumours in female cats predominated, accounting for 61.38% of all tumour cases. This result is comparable to other studies, including 55.4% reported by Huber et al. (11) and 62.84% reported by Ciaputa et al. (13). However, sex predisposition cannot be reliably assessed due to insufficient data on the proportion of males and females in the population.

We had breed data for only 37.51% of cats. Tumours were most common in domestic shorthair cats (276 cats; 30.63%) and Persian cats (30 cats; 3.33%); in other breeds, tumours were diagnosed in fewer than 20 cases. Comparison with other studies is limited by the data available in our study and the inconsistent use of proper feline breed terminology. Terms such as “Domestic Shorthair,” “European Shorthair,” “mixed breed,” and “non-pedigree” are often used interchangeably to describe non-pedigree cats, although their precise definitions may vary between countries and classification systems. Ciaputa et al. (13) reported that 84.56% of tumour-affected cats were mixed breeds; the most common purebreds were Maine Coons (4.18%) and Persian cats (2.60%). Huber et al. (11) also found that tumours were most frequent in non-pedigree cats (72.1%). In Portugal, European Shorthairs were most commonly affected (64.2%), followed by Siamese (6.1%) and Persian cats (5.8%) (35). The number of purebred cats in our study was too small for meaningful statistical analysis.

Most tumours occurred in cats aged 10 to 12 years (18.98%), followed by those aged 12 to 14 years (17.87%) and 8 to 10 years

(14.10%). These results are consistent with other studies, which also reported that middle-aged to older cats are most affected: 9 to 12 years in Poland (13), 6 to 10 years in Brazil (14), and 7 to 15 years, with a peak at 10 years, in Croatia (11).

The findings were probably affected by the relatively small proportion of cats over 14 years of age in the study population compared with the other age categories.

This study has several limitations, primarily due to its retrospective design and limited data sources. The number of tumour cases submitted and diagnosed provides only an approximation of the true burden of feline tumours in Slovenia: some cats with tumours are never presented to veterinary clinicians, in others tumours are excised but not submitted for histopathology, and some tumours are assessed by cytology alone or sent to laboratories abroad. The accompanying data on sex, age, breed, and organ system in which the tumour was diagnosed are often incomplete, limiting some analyses (e.g. associations with neutering status and breed). Furthermore, incidence rates for feline tumours could not be calculated, as microchipping was not mandatory for cats in Slovenia during the observation period, and no centralised pet registry existed for this species.

Future work should focus on prospective studies with more comprehensive and standardised data collection, for instance including detailed information on breed, neutering status, housing condition (indoor, outdoor, mixed), food (dry, wet, mixed), and potential environmental risk factors, to gain a deeper understanding of the epidemiology of feline tumours and to improve prevention, diagnosis, and treatment strategies. Understanding the epidemiology of tumours in animals contributes to the broader field of comparative oncology, supporting the One Health approach, which fosters collaboration between veterinary and human medicine in addressing shared tumour risks and mechanisms (36).

In conclusion, we emphasise the importance of cats, both as patients deserving greater attention in veterinary medicine and as valuable models for advancing comparative oncology studies.

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Pregled tumorjev pri mačkah v Sloveniji v dveh desetletjih (2000–2020): pojavljanje, tipi in lokalizacija

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Izveček: Opravili smo retrospektivno raziskavo tumorjev pri mačkah v Sloveniji, ki smo jih diagnosticirali na Inštitutu za patologijo, divjad, ribe in čebele Veterinarske fakultete Univerze v Ljubljani v 21-letnem obdobju (2000–2020). Namen raziskave je bil preučiti pojavljanje tumorjev in nekatere njihove epidemiološke značilnosti. V raziskavo smo vključili rezultate histopatoloških preiskav bioprov sprememb v različnih tkivih in organih, ki so jih poslali lečeči veterinarji, ter vzorce, odvzete pri raztelesbah mačk. Tumorje smo diagnosticirali pri 901 mački, kar predstavlja 28,99 % vseh prejetih vzorcev. Večina tumorjev je bila malignih (741 tumorjev; 82,24 %), benignih pa 17,76 % (160 tumorjev). Najpogostejše diagnosticirani tumorji so bili ploščatocelični karcinom (20,53 %), limfom (17,20 %), sarkom mehkih tkiv (12,76 %) in karcinom mlečne žleze (9,43 %). Tumorje smo najpogostejše ugotovili v koži in podkožju (44,40 % vseh tumorjev), ustni votlini (10,88 %) ter mlečni žlezi (10,54 %). Pogostejše smo jih ugotovili pri samicah (553 tumorjev; 61,38 %) kot pri samcih (348 tumorjev; 38,62 %). Najpogostejše smo jih ugotovili pri mačkah, starih od 10 do 12 let. Rezultati naše raziskave so večinoma primerljivi z rezultati drugih podobnih raziskav.

Ključne besede: mačka; tumor; starost; pojavljanje; retrospektivna raziskava; Slovenija