



How should we define dog breeds in clinical medical records?



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Introduction & Aim

In Italy, declaring a dog as purebred without pedigree documentation constitutes fraud under the Consumer Code (Legislative Decree 206/2005) (1). Dogs lacking documented genealogy should be classified as “breed-type” rather than purebred.

At the Veterinary Teaching Hospital of the University of Pisa, breed information is recorded at first admission based on owner declarations.

The aims of this study were to:

- identify the breeds most frequently recorded in the hospital database;
- evaluate, among dogs with a recorded microchip number, the proportion registered in the ENCI studbook;
- assess the proportion of ENCI-registered dogs carrying an affix/prefix (kennel name).

Materials and Methods

This retrospective study included all dogs newly registered at the Veterinary Teaching Hospital, Department of Veterinary Sciences, University of Pisa, Italy, between January 1st, 2021, and December 31st, 2025.

Data collected included:

- declared breed;
- sex;
- date of birth;
- microchip number.

Breed names were standardized to correct misspellings and unify synonymous breed designations. The most frequently represented breeds were identified.

For the eight most common breeds, recorded microchip numbers were searched in the ENCI Online Studbook (Libro Genealogico Online, <https://www.enci.it/libro-genealogico/libro-genealogico-on-line#>) to verify pedigree registration and the presence of an affix/prefix.

Results

Between 2021 and 2025, 9,147 dogs were newly registered; microchip numbers were available for 5,537 dogs.

The most frequently represented breeds are shown in Figure 1. Microchip numbers recorded among the most common breeds were Labrador Retriever: 392/576; Poodle (all varieties): 265/401; Golden Retriever: 259/390; Jack Russell Terrier: 192/333; German Shepherd Dog: 183/312; French Bulldog: 169/266; Dachshund (all varieties): 145/240; Chihuahua: 130/223.

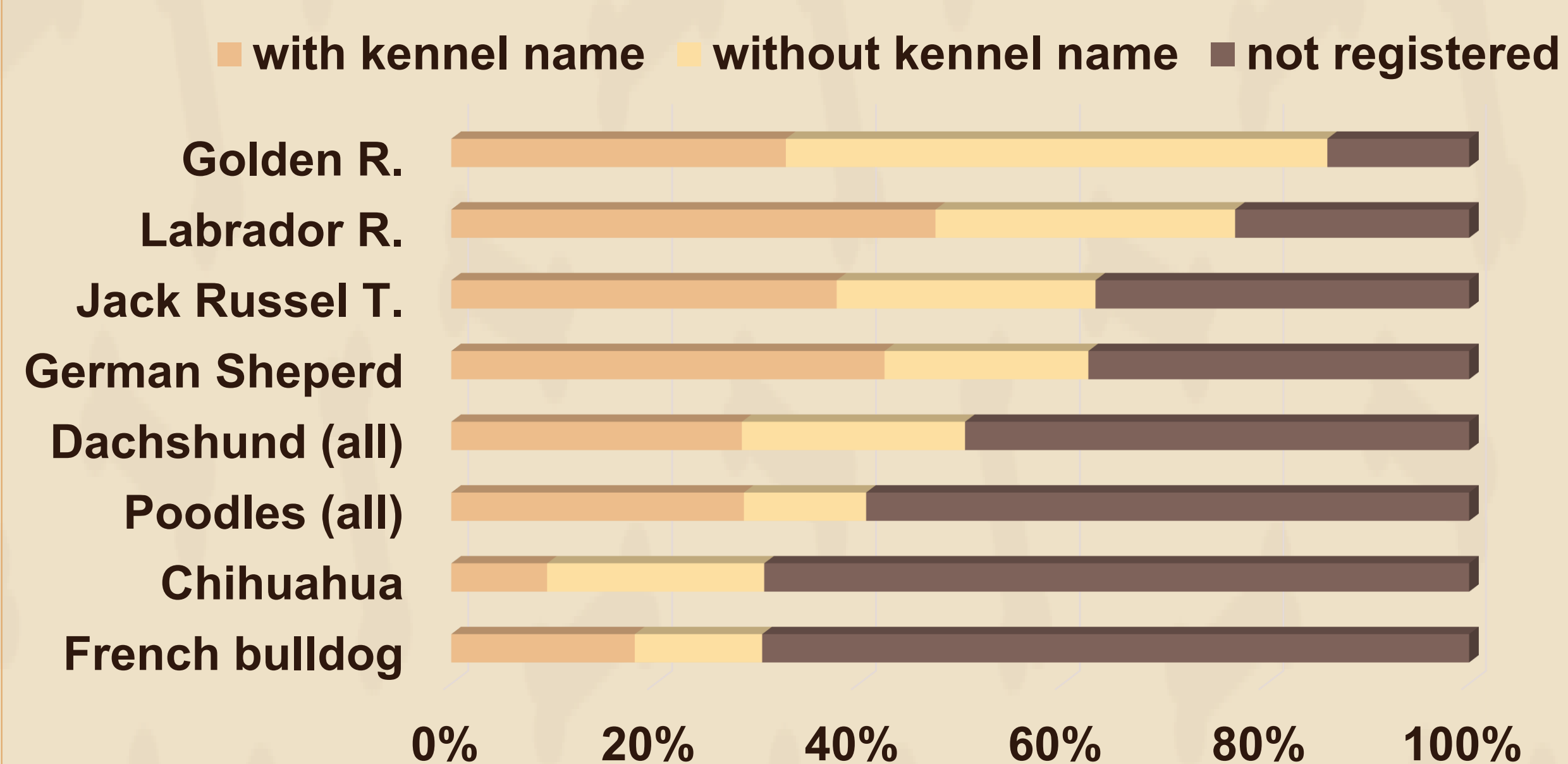
The proportion of dogs identified in the ENCI database differed significantly between large and small breeds (74.6% vs 45.5%; $\chi^2 = 155.7$; $P < 0.0001$).

Detailed results for the most represented breeds are reported in Figure 2.

Figure 1. Number of dogs registered as mixbreed or in the eight most numerous breeds



Figure 2. Proportion of dogs registered in the ENCI online studbook with and without a kennel name and of dogs not present in the ENCI database



Discussion and conclusions

Despite mandatory microchipping in Italy for all dogs, its number was not always registered in the clinical files: more attention is needed.

Marked differences were observed among breeds in the proportion of dogs officially registered in the ENCI studbook.

A considerably higher proportion of unregistered dogs was identified among small breeds (55%) and especially for French Bulldogs and Chihuahuas (roughly 70% for both breeds), which are very popular and easier to breed in households. This suggests that the true origin of many of these dogs, recorded in clinical files as purebred, remains uncertain. Similarly, differences were described between KC registrations and demographic studies on Yorkshire Terriers (YTs) presented to primary veterinary care (2). In the same study, YTs had a median adult bodyweight of 5 kg, while the maximum bw in the standard is 3.2 kg.

These findings are relevant because retrospective clinical studies rely heavily on breed information recorded in medical records. Misclassification of dogs as belonging to a specific breed may introduce bias into research results. Furthermore, the contribution of ethical breeders and kennel club selection programs may not be adequately reflected if data collection is not correct.

Standardized guidelines for breed identification and recording in veterinary clinical settings and for research studies would therefore be advantageous.

References – 1. <https://www.enci.it/>; 2. O'Neill, D.G., Witkowska, S.D., Brodbelt, D.C. et al. Yorkshire Terriers under primary veterinary care in the UK – demography and disorders. Companion Anim. Health Genet. 12, 6 (2025). <https://doi.org/10.1186/s40575-025-00145-y>

