

Directional Terminology⁹

The mouth has its own terminology related to location of tooth, direction in mouth, and position related to the tongue and cheeks. Learning this terminology will aid the veterinary technician in performing an oral exam and assisting the veterinarian. The following terms relate to the tooth surface (see Fig. 1.14):

- **Medial:** Toward the midline of the face
- **Distal:** Away from the midline of the face
- **Vestibular:** Toward the vestibule or lips (interchangeable with labial or buccal)

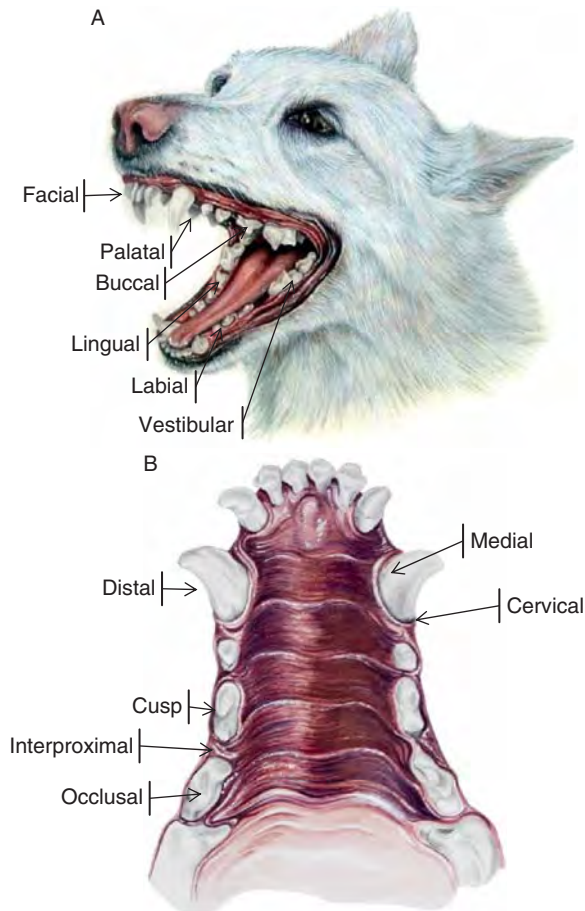


Figure 1.14 Directional terminology (Illustration by Brenda Gregory).

- **Labial:** Toward the lips, used for the incisors and canines
- **Buccal:** Toward the cheeks, used for premolars and molars
- **Facial:** Surfaces of rostral teeth visible from the front
- **Lingual:** Toward the tongue, used in the mandible
- **Palatal:** Toward the palate, used in the maxilla
- **Coronal:** Toward the crown of the tooth
- **Apical:** Toward the root of the tooth
- **Contact, proximal, or occlusal:** Toward adjoining teeth in same jaw
- **Interproximal:** Between two teeth
- **Cusp:** Point of the tooth
- **Cervical or neck:** Area of tooth where crown and root meet

Abbreviations

Abbreviations aid dental charting and record keeping. The two primary forms of abbreviation for tooth identification in veterinary dentistry are the proper identification sequence

and the Triadan system. Chapter 5 discusses abbreviations for oral pathology. The American Veterinary Dental College continuously updates abbreviations.

Proper Identification Sequence

This version of tooth identification involves using dentition (permanent or primary—indicated with small case “d” for deciduous), arch (maxilla/mandible, often upper/lower), quadrant (left or right), and tooth (using tooth formula abbreviations: I, C, PM, and M). The proper identification is, for example, the permanent mandibular left first molar using subscripts and superscripts, the shorthand is $1M$. The primary (deciduous) maxillary right third incisor is indicated as dI^3 .

Triadan System

Adopted by the American Veterinary Dental College, the Triadan system identifies each tooth with a three-digit number. The first number indicates the quadrant of the tooth's location and its dentition (primary or permanent): maxillary right = 1 (5 for primary), maxillary left = 2 (6), mandibular left = 3 (7), and mandibular right = 4 (8). Based on the full dentition of a pig, second and third numbers follow sequentially with incisors being numbers 01, 02, and 03, canines = 04, premolars = 05, 06, 07, and 08, and molars = 09, 10, 11. Adult cats normally are missing the maxillary first premolar and mandibular first and second premolars. The numbering system remains intact and skips these missing teeth. An easy device for remembering the Triadan system is the canine teeth are always number 4 and the fourth premolars are always number 8. Using the above examples, the permanent mandibular left first molar is tooth 309. The primary (deciduous) maxillary right third incisor is tooth number 503. A cat's permanent right mandibular fourth premolar, even though it is the second premolar found in the mouth, is tooth number 408. Remember, cats normally are missing teeth 405 and 406 (Figs. 1.15 and 1.16).

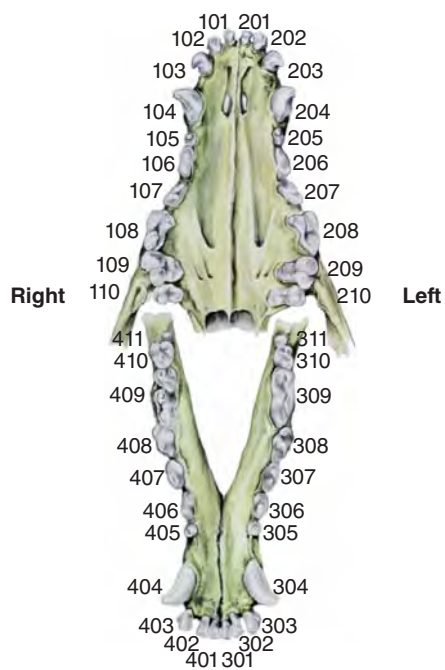


Figure 1.15 Canine Triadan tooth numbering system (Illustration by Brenda Gregory).

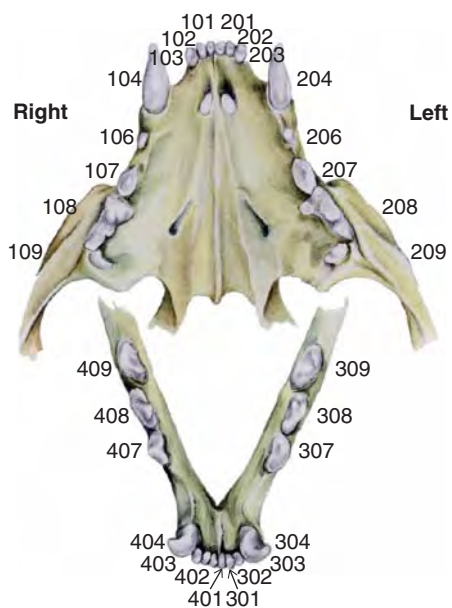


Figure 1.16 Feline Triadan tooth numbering system (Illustration by Brenda Gregory).

References

1. Evans, HE. 1993. *Miller's Anatomy of the Dog*, 3rd ed., Philadelphia: Saunders.
2. Wiggs, RB, Lobprise, HB. 1997. *Veterinary Dentistry Principles and Practice*. Philadelphia: Lippincott-Raven.
3. Gioso, MA, Carvalho, VGG, Holmstrom, SE (editors). 2005. *Oral Anatomy of the Dog and Cat, Veterinary Clinics of North America, Small Animal Practice-Dentistry*. Philadelphia: Saunders.
4. Budras, KD, McCarthy, PH, Horowitz, A, Berg, R. 2006. *Anatomy of the Dog, Fifth Edition*. Hanover: Schlütersche.
5. Gilbert, SF. 2006. *Tooth Development—Developmental Biology Eight Edition Online*. Sunderland, MA: Sinauer Associates.
6. Harvey, CE, Emily, PP. 1993. *Small Animal Dentistry*. St. Louis, MO: Mosby.
7. Theslaff, I. 2003. Epithelial-mesenchymal signaling regulating tooth morphogenesis. *Journal of Cell Science* 116:1647–1648.
8. Johnson, C. 2001. Mechanisms of tooth eruption, University of Illinois at Chicago Courses online: Oral Sciences.
9. Holmstrom, SE. 2000. *Veterinary Dentistry for the Technician and Office Staff*. Philadelphia: Saunders.