# **Tooth Resorption in Dogs and Cats**

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Tooth resorption is simply the destruction of a tooth by odontoclasts (cells similar to osteoclasts) that results in bony replacement of tooth structures - the exact etiology remains a mystery. When we think about tooth resorption, we naturally think of the feline dental patient. While tooth resorption is the most common dental disease in cats (60% over 6 years old), our canine companions suffer from this malady as well. One study suggests that more than 53% of canine patients show radiographic evidence of tooth resorption (called idiopathic root resorption). It is most common in older and large breed dogs.

## Assessment

Many lesions are large and easy to see on awake oral examination, especially on feline patients. Canine tooth resorption may present as a pinkish-purple area on the crown and may only be seen on radiographs. Both may have lesions that are covered in calculus or hyperplastic gingiva and only found under anesthesia using the explorer side of your periodontal probe. In either case, intraoral radiographs are essential to establish the extent of the lesion as well as determine appropriate treatment.

#### **Classifying lesions**

Tooth resorption is classified by location of the resorption (Types 1-3) and by severity of the resorption (Stages 1-5). **Type 1:** 

Radiographically, the tooth and periodontal ligament space appear normal; however there may be focal or multifocal areas of radiolucency within the tooth.



## Type 2:

Radiographically, there is a narrowing or loss of some part of the periodontal ligament space as well as decreased radiopacity of part of the tooth.



## Type 3:

Radiographically, this lesion is a combination of Type 1 and Type 2 - there is a narrowing or loss of the periodontal ligament space, areas of radiolucency within the tooth, and decreased radiopacity in other areas of the tooth.



Stage 1: Mild loss of cementum and/or enamel.



## Stage 2:

Moderate loss of cementum and/or enamel AND dentin, but that does not extend into pulp cavity.



Stage 3:

Severe loss of cementum, enamel, and dentin extending into the pulp cavity - tooth retains its integrity.



#### Stage 4:

Severe loss of dental hard tissue extending into the pulp cavity - tooth has lost most of its integrity.



- Stage 4a Crown and root equally affected.
- Stage 4b Crown more severely affected than root.
- Stage 4c Root more severely affected than crown.

#### Stage 5:

Remaining dental hard tissues appear as irregular opacities on radiographs and are completely covered with gingiva.



#### Treatment

Surgical extraction is the treatment of choice for most stages of tooth resorption. Crown amputation with intentional root retention is ONLY an option on Type 2 lesions WITHOUT any evidence of periapical, periodontal, or other soft tissue disease (i.e. stomatitis). All extraction sites should be closed with soft, absorbable suture such as Vicryl<sup>™</sup>. Restoration of any resorbing teeth is ill-advised since the process is progressive – this is considered a waste of time and money. A "wait and see" approach may be taken only when there are radiographic changes to the root but no clinical changes on oral examination.

#### References

Peralta S, Verstraete F, Kass PH. (2010). American Journal of Veterinary Research. 71(7):784-93. American Veterinary Dental College. (2012). Veterinary Dental Nomenclature. Retrieved June 20, 2012 from http://www.avdc.org. Photos Copyright AVDC.org. Used with permission.