



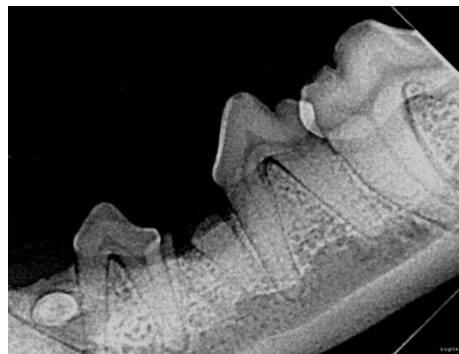
“MISSING TEETH” AND DENTIGEROUS CYSTS

When an oral exam reveals missing teeth, it is important to determine if those teeth are truly absent. Teeth that are impacted or broken with root fragments left behind pose a significant risk to your pet’s oral health.

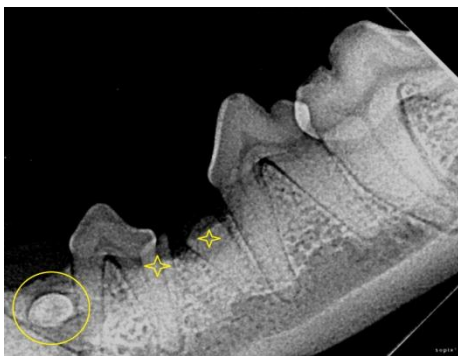
Let’s start with missing teeth: Normally a dog should have 42 permanent teeth and a cat should have 30 permanent teeth. All of the permanent teeth are generally erupted by 6 months of age. Teeth that have not erupted could be impacted under soft tissue or bone, or just never developed. Dental radiography is essential to make that distinction.



Here is a photo of a dog missing the mandibular 1st premolar and 3rd premolar.



This is a dental radiograph of the same area.



The circle shows an impacted and malpositioned 1st premolar. The stars show root fragments of the 3rd premolar

Why is this important? Root fragments can harbor bacteria and create painful and destructive infections in the bone. These roots should be extracted. Impacted teeth can form ***dentigerous cysts***.

Dentigerous cysts form around the crown of an impacted tooth. The tissue that surrounds the tooth when it is forming normally ruptures during tooth eruption. When that tissue remains intact it can secrete fluid, creating a cyst that expands and destroys the bone surrounding the impacted tooth. As this cyst expands, it damages surrounding teeth and bone, potentially causing the jaw to fracture.

The most commonly impacted tooth is the mandibular 1st premolar, and dentigerous cysts may be visible as a blue-tinged swelling under the gums.



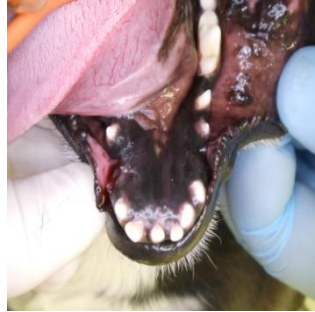
Three photos of a young dog with both mandibular 1st premolars impacted with dentigerous cyst formation. Note the blue-tinged swelling behind the canine teeth.

The radiographs below reveal the impacted 1st premolars, with extensive bone damage on the left mandible.





Left side, 6 year old dog missing both mandibular canine teeth



Front of mandible



Right side showing missing canine



These are the radiographs from the same patient. The stars show that both canine teeth are impacted, and the circles show the areas of bone destruction and teeth damaged as a result of the cyst. This patient is at great risk for a fractured mandible.

How are dentigerous cysts treated? The impacted tooth is surgically exposed and extracted, along with any adjacent teeth that are damaged. This can be very difficult for large teeth impacted in damaged bone. After the tooth is extracted, the lining of the cyst is removed, and sent in for pathology if possible. The vast majority of these are benign, but there have been reported cases of malignant transformation of the cyst lining. Some patients need recheck dental radiographs in a few months to ensure that the bone is fully healed.

Other “missing” teeth can be impacted under thick gum tissue. These teeth may be saved by surgically excising the overlying tissue to expose the crown of the tooth. These teeth may never fully erupt if the soft tissue impaction is not relieved at a young age.

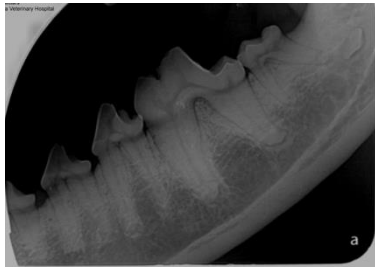


This dog is missing the 3rd and 4th premolars, but dental radiographs reveal a fully formed 4th premolar impacted in soft tissue and at an abnormal angle, shown in the surgical image on the right.

He also had significant periodontal disease with bone loss requiring extraction of the premolars and molars

Impacted teeth may occur in other teeth, even in the same patient, so a thorough “tooth inventory” with intraoral radiographs should be a part of every patient’s oral exam.

It is common for impacted teeth to be positioned abnormally, some are even inverted:



This mandibular 3rd molar is inverted and lacking a root. The dark line around the crown is the beginning of a dentigerous cyst



This mandibular 4th premolar is fully formed but inverted with early cyst formation around the crown