



im3[®]

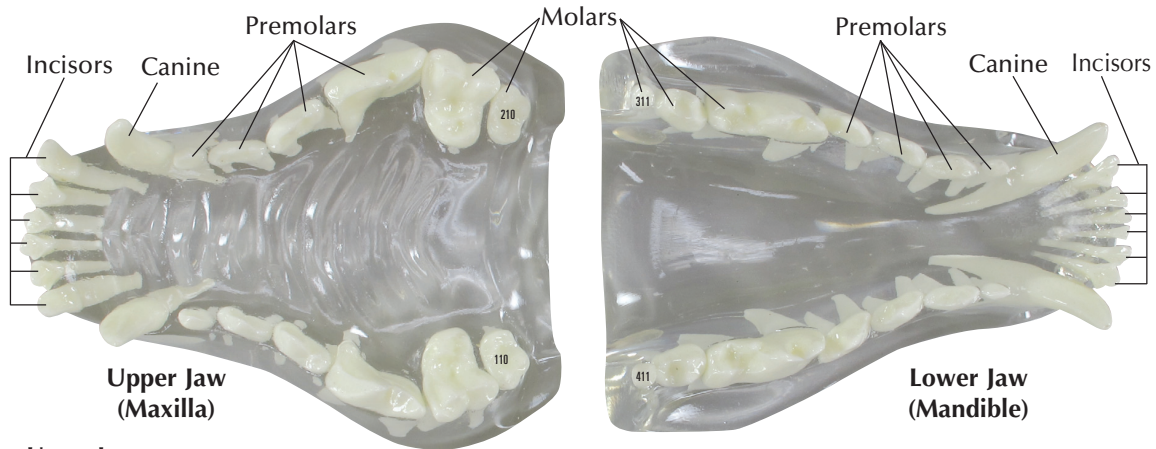
THE VETERINARY DENTAL COMPANY

A GUIDE TO **CANINE** AND **FELINE** DENTISTRY

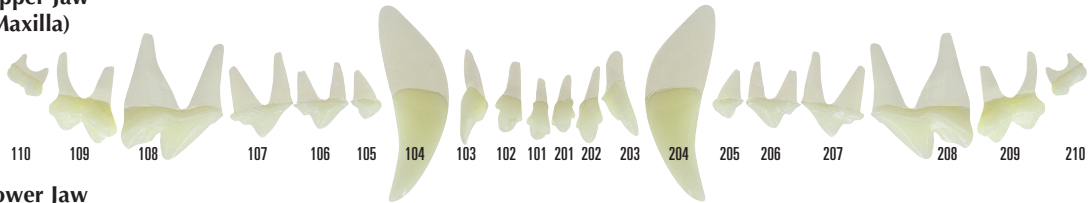
From the **GLOBAL** name in **VETERINARY DENTISTRY**

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iM3[®] CANINE JAW MODEL



Upper Jaw
(Maxilla)

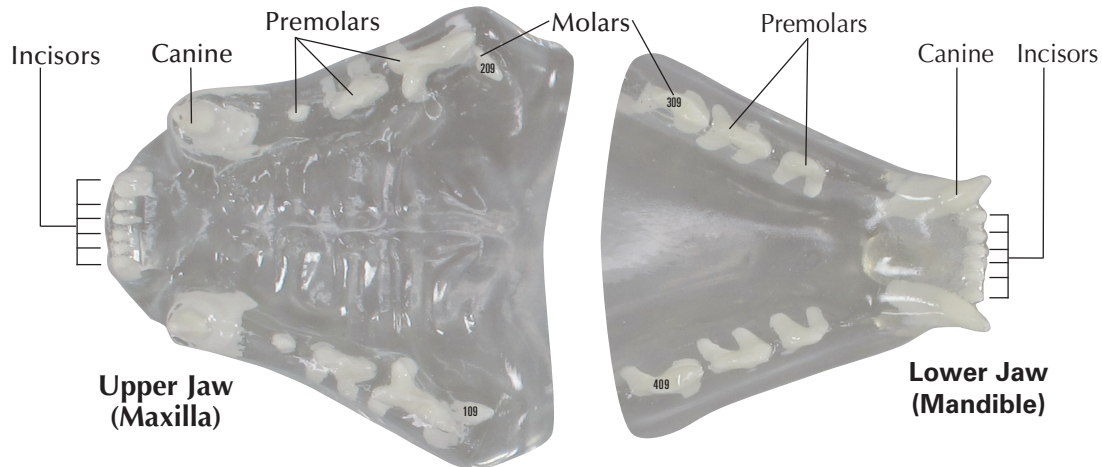


Lower Jaw
(Mandible)

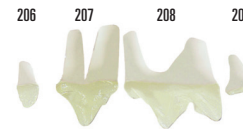
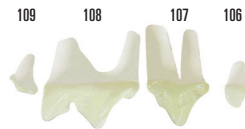


Tooth numbering follows Modified Triadan System

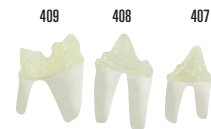
iM3[®] FELINE JAW MODEL



Upper Jaw (Maxilla)



Lower Jaw (Mandible)

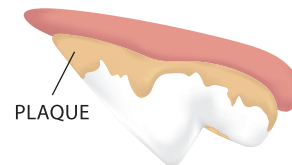


Tooth numbering follows Modified Triadan System

WHAT IS PERIODONTAL DISEASE?

Periodontal disease is caused by the build-up of plaque and tartar on the teeth. Plaque, which is mostly bacteria, forms a biofilm on the tooth surface and below the gum line and triggers an immune response that leads to inflammation (gingivitis). Left untreated, plaque and tartar can eventually result in infections, tooth loss and other serious health problems.

Gingivitis is the earliest stage of periodontal disease and is reversible and preventable. If left untreated this can progress to periodontitis, resulting in irreversible loss of the supporting structure of the tooth, surrounding tissue and bone.



Once dental disease progresses past Stage 1 into Stage 2, the damage is irreversible. This means that your pet may require tooth extractions or advanced dental procedures to repair damaged teeth.

REVERSIBLE

Stage 0: Clinically normal with no evidence of gingivitis or periodontitis

Stage 1: Gingivitis (gum inflammation) only without attachment loss of gum and supportive tissue

IRREVERSIBLE

Stage 2: Mild periodontal disease with <25% attachment loss of gum and supportive tissue

Stage 3: Moderate periodontal disease with 25-50% attachment loss of gum and supportive tissue

Stage 4: Advanced periodontal disease with >50% attachment loss of gum and supportive tissue

STAGES OF PERIODONTAL DISEASE

Periodontal disease is the most significant and common disease of the oral cavity in dogs^{1,2}. Despite its prevalence, periodontal disease is underdiagnosed².

Over time veterinary professionals have become more aware of how periodontal disease affects pets overall health and wellbeing. Our aim now is to provide prophylactic treatment, and minimise periodontal disease, rather than waiting until a problem presents, and advanced dental treatment is required.

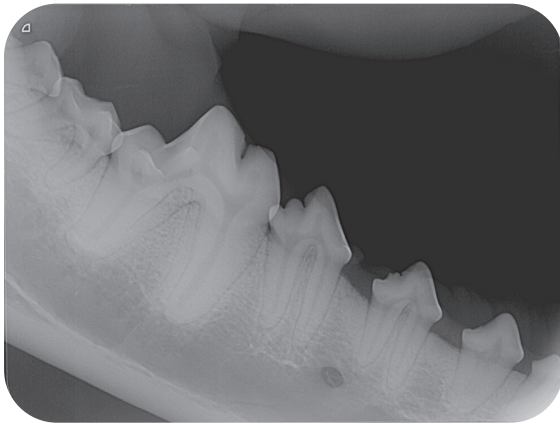


STAGE 0

Clinically normal with no evidence of gingivitis or periodontitis³.

TREATMENT

- ➔ Daily homecare and bi-annual dental check ups recommended



STAGE 1

Gingivitis only without attachment loss*

CLINICAL SIGNS

- Bad breath
- Mild inflammation of gums

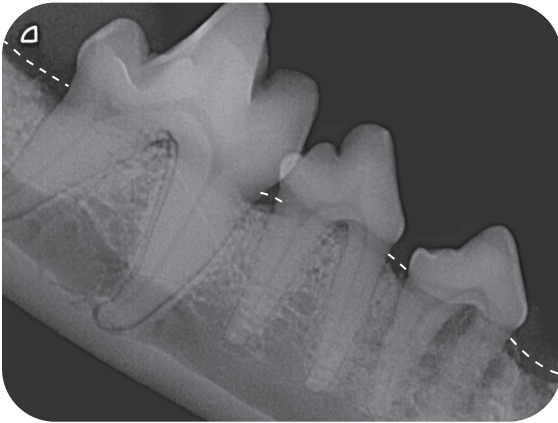


TREATMENT

- Professional dental cleaning under general anaesthetic
- Daily homecare¹

STAGE 2

Early periodontitis, up to 25% attachment loss*



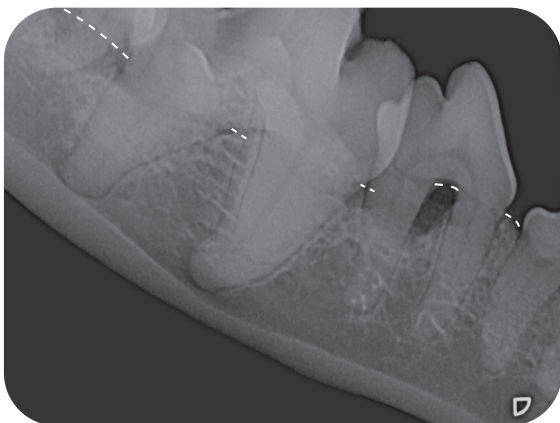
CLINICAL SIGNS

- ➔ Bad breath
- ➔ Mild inflammation of gums
- ➔ Build up of plaque
- ➔ Discomfort

TREATMENT

- ➔ Professional dental cleaning under general anaesthetic, which may involve sub-gingival scaling if pockets exist¹
- ➔ Daily homecare¹

----- Dotted line represents where healthy attachment level should be seen



STAGE 3

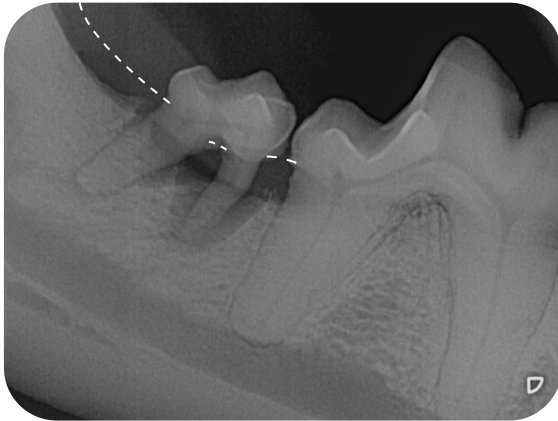
Moderate periodontitis with 25-50% attachment loss*

CLINICAL SIGNS

- Bad breath
- Moderate inflammation of gums and bleeding
- Discomfort or pain
- Tooth roots may become exposed
- **Bacteria which enters the blood stream may affect the heart, kidneys and liver**

TREATMENT

- Periodontal therapy as for stage 2
- Extraction(s) indicated due to guarded prognosis, especially if daily homecare¹ isn't possible



STAGE 4

Advanced periodontitis with >50% attachment loss*

CLINICAL SIGNS

- Bad breath
- Severe inflammation of gums and bleeding
- Discomfort or pain
- Tooth roots may become exposed
- **Bacteria which enters the blood stream may affect the heart, kidneys and liver**

TREATMENT

- As for stage 3, but further extraction(s) likely due to poor prognosis¹
- Daily homecare is essential¹

* as measured either by probing of the clinical attachment level, or radiographic determination of the distance of the alveolar margin from the cemento-enamel junction relative to the length of the root.

References: 1. Bellows, J., et al (2019) 2019 AAHA Dental Care Guidelines for Dogs and Cats. J Am Anim Hosp Assoc, 55(2), 49-69.
2. Niemiec, B.A., et al (2017) World small animal veterinary association (WSAVA) Global Dental Guidelines. 3. American Veterinary Dental College. <https://www.avdc.org/Nomenclature/Nomen-Perio.html#periosgi> (Accessed 2nd July 2019).

Images courtesy of Dr Anthony Caiafa BVSc BDSc MANZCVS and Dr Kayoko Kuroda BVSc MANZCVS (Small Animal Dentistry and Oral Surgery)

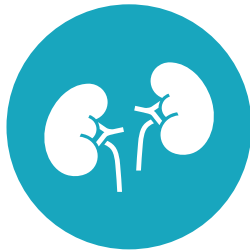
THE IMPORTANCE OF DENTAL CARE

Periodontal disease, affects much more than just the tooth. As periodontal disease progresses, bacteria grow and begin to enter the surrounding tissue.

If left untreated the infection results in discharge of debris, bacteria and toxins into the blood stream, which can affect the heart, kidneys, lungs and liver.



HEART



KIDNEYS



LUNGS



LIVER

Approximately 70% of cats and 80% of dogs will have dental disease by the age of three.



Humans have 32 adult teeth, while cats have 30 and dogs 42.



Pets require daily homecare and regular professional cleaning, just like humans.



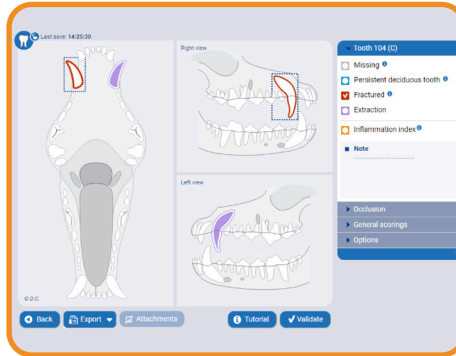
COMPREHENSIVE ORAL HEALTH ASSESSMENT AND TREATMENT (COHAT)

During consultation your vet can visually assess your pet's teeth, looking at build-up of plaque and tartar, gum recession or inflammation, wear on teeth and other visible abnormalities.

However, there are many aspects of your pet's dental health that cannot be assessed while your pet is conscious. During a professional dental clean, performed under general anaesthetic, your vet is able to do the following:



➔ Measure pocket depth around each tooth – which can indicate the health of surrounding supportive tissue.



➔ Chart your pet's teeth – the process of assessing and recording descriptions of each tooth. Your pet's dental chart allows the vet to track changes over time.



➔ Perform full mouth dental x-rays – there are many dental abnormalities which are not visible on oral examination. Dental x-rays are vital to detect abnormalities below the gum line.

THE IMPORTANCE OF DENTAL X-RAYS

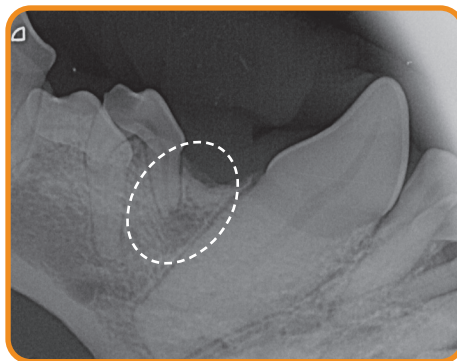
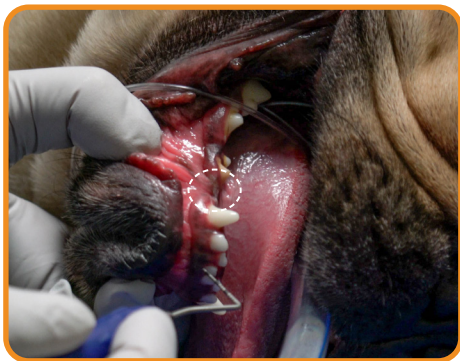
Studies have also shown that **up to 50% of dental abnormalities can be missed on visual examination alone!**

Performing dental x-rays allows your vet to assess the health of the entire tooth, not just what can be seen above the gum line. Periodontal disease affects the teeth as well as the surrounding attachments and bone. Dental x-rays can reveal underlying abnormalities and weakness or fractures in the jaw.



Here are some of the common dental abnormalities diagnosed by dental x-ray:

Missing Teeth



➔ This is generally considered a genetic problem and is more common in small breed and brachycephalic dogs.

No action is required, but it is essential to determine whether the tooth is missing, unerupted or impacted by performing dental x-rays.

THE IMPORTANCE OF DENTAL X-RAYS

Unerupted or Impacted Teeth



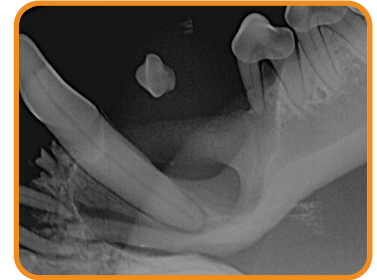
Canine teeth appear to be missing on visual examination.



X-rays show the teeth are not missing but impacted.



Patient with a dentigerous cyst, due to an impacted tooth (305).



The dentigerous cyst has caused a large amount of bone loss, visible on dental x-ray.



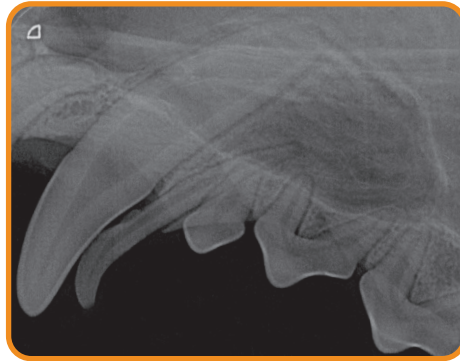
These teeth have not erupted through the gum line, due to underdevelopment, misalignment or a blockage such as bone, tooth, or an area of thick, firm gingiva. The tooth itself may appear malformed or normal.

Unerupted and impacted teeth may cause dentigerous cysts to form and result in the surrounding bone and teeth being affected. If left untreated dentigerous cysts can become infected, cause disfiguration and even result in jaw fracture.

Extraction of unerupted or impacted teeth is usually required.

THE IMPORTANCE OF DENTAL X-RAYS

Persistent Deciduous Teeth



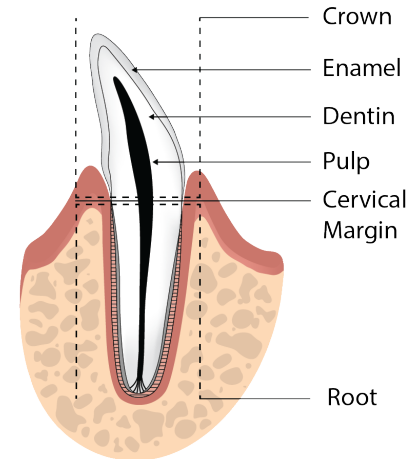
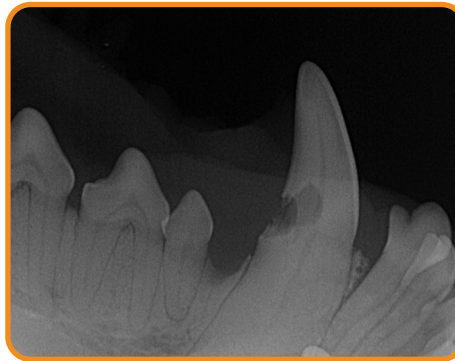
➔ Persistent deciduous (baby) teeth, also known as retained teeth, are those which are still present after the adult tooth has erupted. This usually occurs when the root of the deciduous tooth incompletely resorbs, which would normally allow the tooth to fall out.

Persistent deciduous teeth can cause the adult tooth to erupt at an abnormal angle and lead to overcrowding or malposition of the tooth, causing an abnormal bite. Foreign matter, such as hair and food, may also become trapped between the adult and baby teeth, causing gingivitis and eventually periodontitis.

Generally, the adult teeth will have erupted by 6-7 months of age and at this point in time if your pet has retained teeth, they will require extraction under general anaesthetic.

THE IMPORTANCE OF DENTAL X-RAYS

Canine Tooth Resorption

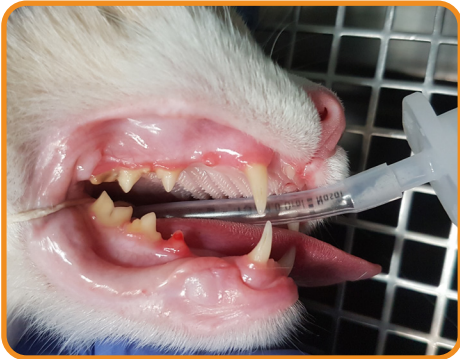


These are areas in which there is destruction of tooth structure, and when left untreated, results in nerve (pulp) exposure. Once the pulp is exposed, and bacteria allowed to enter, a tooth root abscess can form. Resorptive lesions often occur at or below the gum line and can be difficult to diagnose without dental x-rays. There are several types of resorptive lesions and the cause in most cases is unknown.

When treating resorptive lesions the affected tooth must either be extracted or have crown amputation. Crown amputation involves removing the visible part of the tooth down to the jaw bone, and suturing the area closed, allowing the body to continue to resorb the root of the tooth. Management of tooth resorptions will depend on whether the resorption is occurring in the root or cervical margin of the tooth.

THE IMPORTANCE OF DENTAL X-RAYS

feline Tooth Resorptions



➔ Feline tooth resorptions are caused by the cat's own cells destroying the tooth from beneath the enamel. They are a very common occurrence and studies have shown that at least half of cat's will have one or more lesions in their lifetime. The affected teeth can be very painful and sensitive as the nerve may be exposed, or the destruction of the tooth causes weakness and therefore fracture of the tooth.

Signs of feline tooth resorption may include bad breath, inflammation of gums, reluctance to eat, changes in eating habits (chewing on one side or refusing to eat dry food), drooling, and pawing at their mouth.

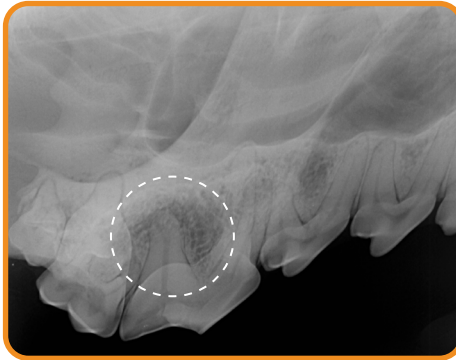
As feline resorptive lesions are caused by the cat's own cells, the most common treatment option is to remove the affected tooth or teeth. In some circumstances, crown amputation and intentional root retention is an acceptable treatment.

THE IMPORTANCE OF DENTAL X-RAYS

Tooth Root Abscess



Complicated crown fracture of tooth 108 discovered on oral examination



Dental x-rays revealed a tooth root abscess.



The abscess led to a cutaneous draining sinus. Pets with a tooth root abscess can present to vet clinics for facial swelling or draining sinus as the first visible sign.

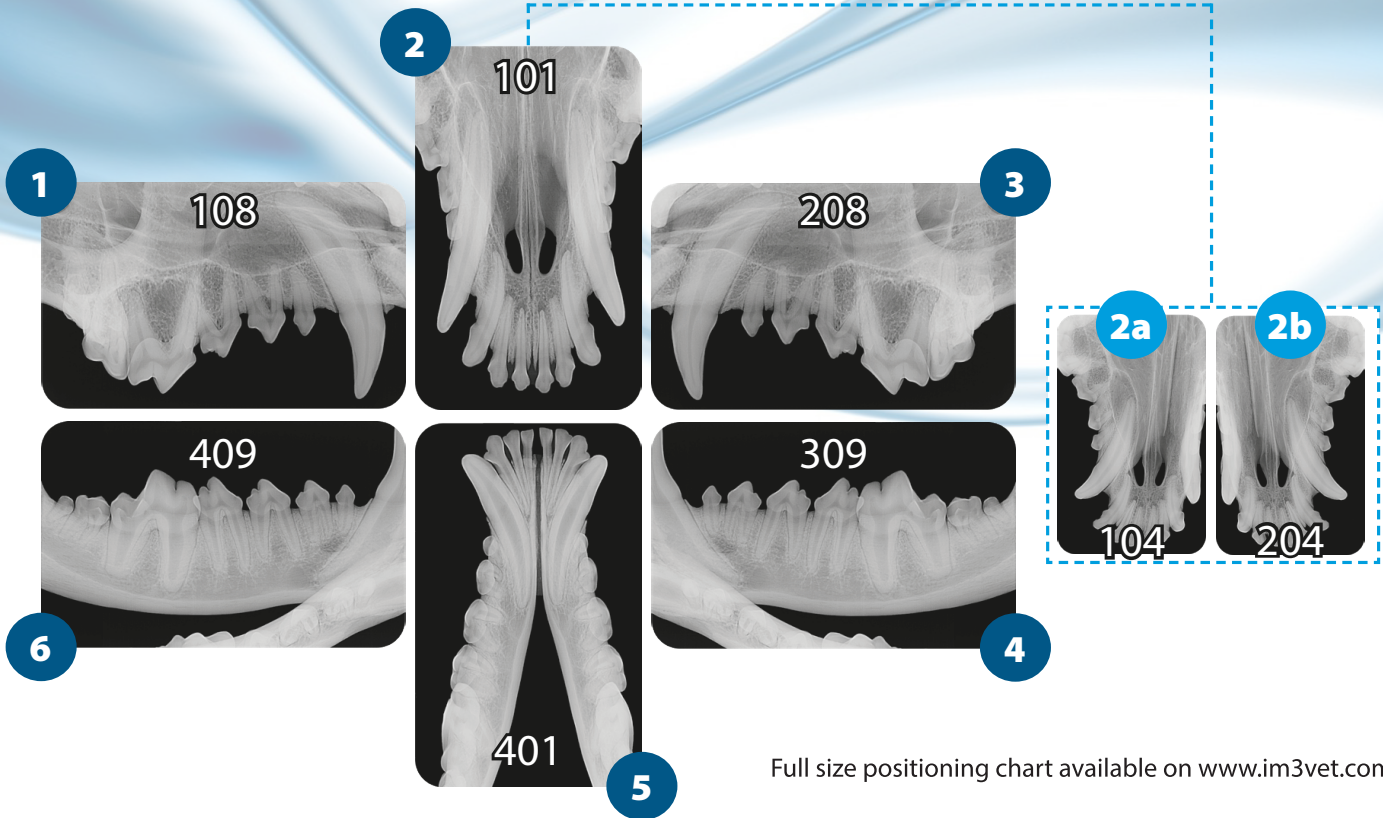


Tooth root abscess are caused by bacteria entering the root canal of the tooth which leads to a painful infection. This occurs when the tooth is damaged either by trauma or periodontal disease, and the pulp within the tooth is exposed.

There are two options for treating a tooth root abscess. The tooth either requires root canal therapy, where the infected pulp of the tooth is removed, the canal is sterilised and filled with dental material, or tooth extraction. It is essential in these cases to treat the infection and medically manage the pet's pain as well.

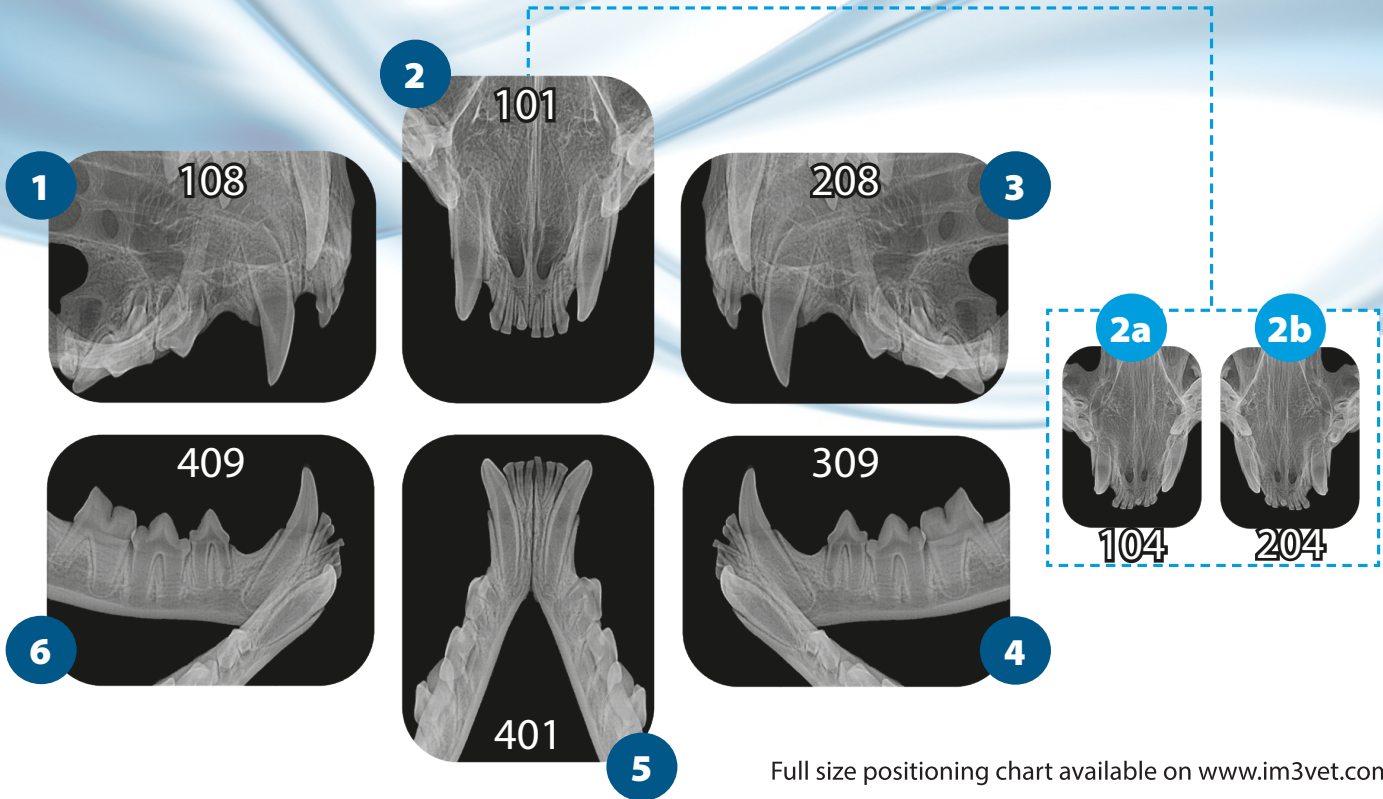


CANINE DENTAL X-RAY FULL MOUTH SERIES



Full size positioning chart available on www.im3vet.com.au

FELINE DENTAL X-RAY FULL MOUTH SERIES



THE IMPORTANCE OF DENTAL HOMECARE

The most effective way to clean your pet's teeth at home is combining mechanical and chemical cleaning, in the same way humans do – daily brushing. However, when first introducing your pet to dental homecare, brushing their teeth may be difficult if they are unfamiliar with this practise.

With that in mind Oxyfresh developed the Dental Cleaning Kit and Dental Water Additive. The Cleaning Kit Gel can be used with or without brushing, and is tasteless and odourless.



DENTAL WATER ADDITIVE

This makes it the perfect product when introducing your pet to dental homecare. The Gel can be applied to the gums and works to eliminate bad breath at the source, as well as reduce plaque and tartar build up, with its patented blend of Oxygene and zinc.

A finger brush is supplied in the **Oxyfresh Dental Cleaning Kit** and once your pet is comfortable with the Gel being applied, you can slowly introduce mechanical cleaning with brushing.

If brushing your pet's teeth is not possible, then try **Oxyfresh Water Additive**. Simply add one capful to your pet's drinking water daily to reduce plaque and tartar, soothe gum and mouth irritation and eliminate bad breath.



DENTAL CLEANING KIT