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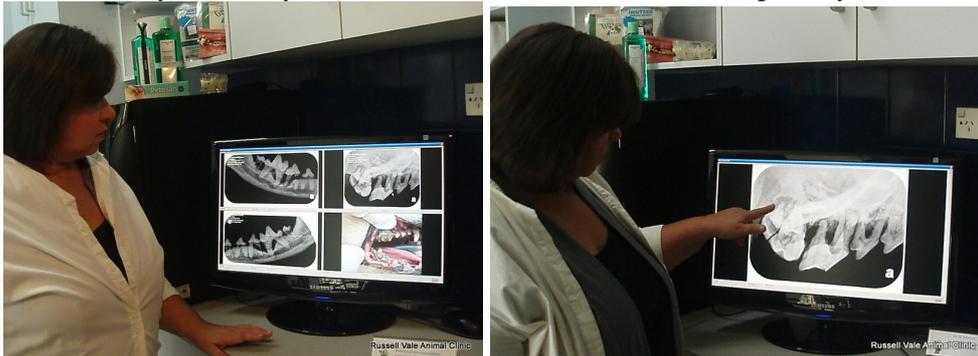


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## Basic Dentistry – Dental Radiography

I have put taking radiographs of pet's mouths at the time of dental work into the "Basic" category, as it is a basic part of dental assessment. Next time your vet looks in your pet's mouth and books it in for some dental work, please ask if they are going to be doing dental radiographs with intraoral film, and if not, then walk out and go elsewhere.

Just because I am the smallest vet clinic in town and we do dental radiographs routinely, do not assume that the bigger veterinary hospitals must do so... many don't do radiographs in Australia. It comes down to the desire of the veterinary hospital to work to a standard of veterinary care, and there is a minimum standard of veterinary dental work – unfortunately, it is only a recommended standard, not a compulsory one.



At Russell Vale vets, **all dental work at grades 2 and above include full mouth radiographs**, as this is essential in helping us identify disease that belongs underneath the gum or around the tooth itself. There have been many times when I have examined a pet with bad breath, look at the teeth, and think "not too bad but when you radiograph the mouth, it is clear where the problem lies and what needs to be done about it.

But some basic dental anatomy and concepts – dogs have 42 teeth (generally) and cats have 30 teeth (usually). This means the Pug has the same number of teeth as the German Shepherd. Some breeds we know will also like to throw "extra teeth" for good measure – like a Boxer – who can often have extra incisors or premolars. The problem with extra teeth or even normal numbers of teeth in small areas, is that crowding of teeth occurs, and this causes food to get trapped, and, well, you know the story – food trapped, bacteria ferment, infection, disease, etc etc.

I'll go through some exciting things I have found since we started taking dental radiographs. We started with film in 2006, and in 2009 upgraded to digital. We

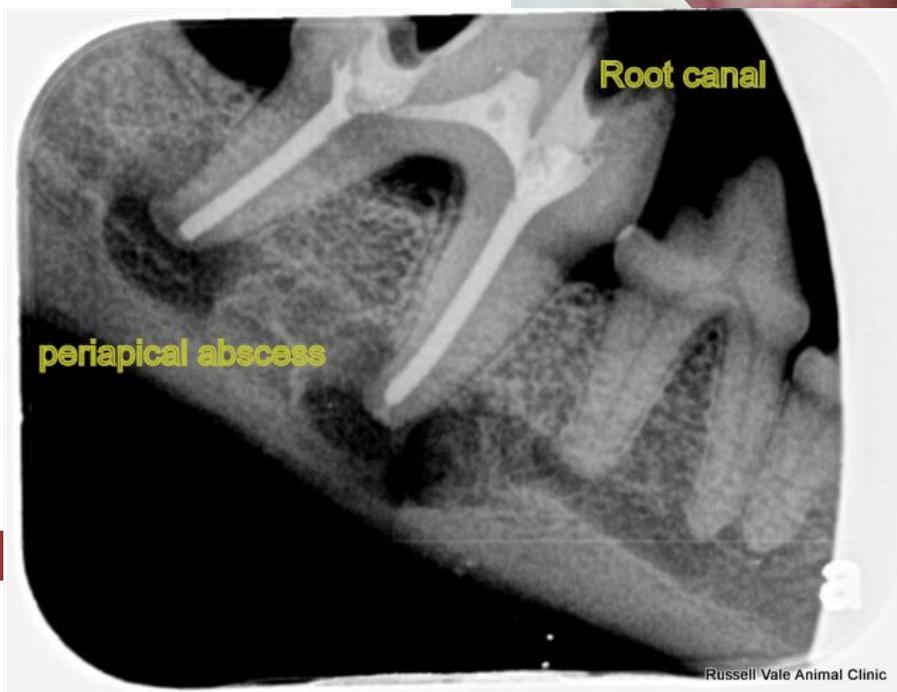
originally used our old big Xray machine, and now we have a dedicated dental xray machine.

**Root tips** – in these cases, the teeth have fractured naturally, usually by chewing bones, or had dental work and the vet failed to remove all tooth roots (which is easy enough to do if you don't realize it at the time).



The xray to the left is a classic example of many things going wrong in a pet's mouth. This one has root tips, which was only picked up through radiographs alone. We ended up removing them as once we looked closer, you could see a small hole in the gum line. This Xray also picked up areas of bone loss at the tooth root base (often called a tooth root abscess, although not totally correct terminology)

**Tooth root abscesses** – My most classic cases are ones which look great on the crown, no tartar, minimal plaque, but the most god awful smell coming from the mouth, or worse, the infection is so bad it causes the jaw to be like wet sponge, and easily fracture on chewing food.



the disease?

This is a photo and a

radiograph of the same dog (Oscar) taken on the same day.

Oscar has now had a root canal, but can you spot the disease by just looking at the tooth in the photograph?

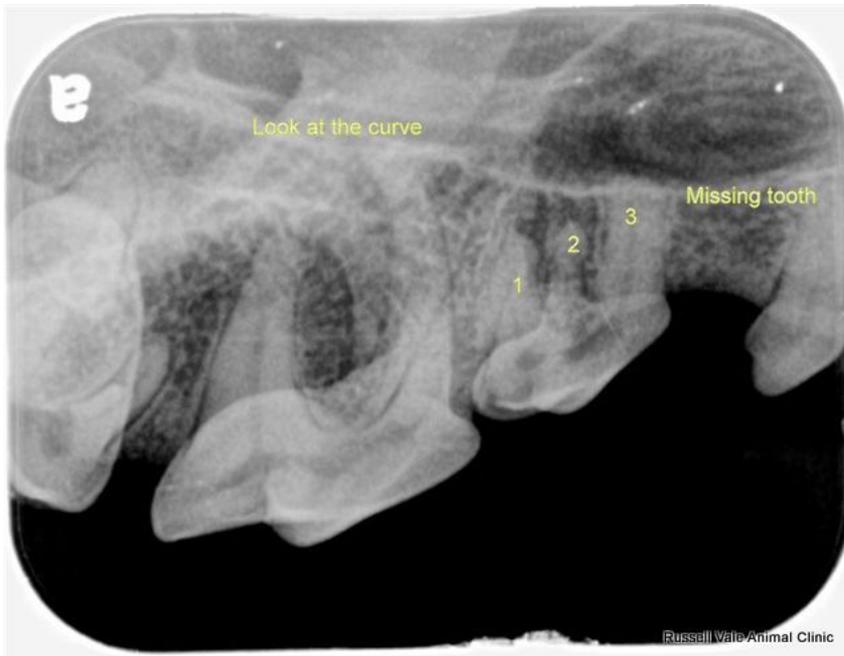
Oscar was very painful in his jaw but he was still eating well, and appeared to be behaving normally. A root canal (through Sydney Pet Dentistry) was done as the jaw was unstable, and would've completely fractured through. With a root canal and medication, jaw stabilized enough for the tooth to be removed with no broken jaw. A happy Oscar!

**Unerupted teeth** - at each examination, I mentally count the teeth of the pet, and if I see missing teeth, I tell the owners and advise dental radiographs. Most owners scoff at me and say its not necessary, which is strange, as why would I advise something that wasn't necessary? Ah well, this is why – unerupted teeth can cause a cyst to form underneath the gum, called a dentigerous cyst, and removal of these teeth is preventative (if no cyst exists, and curative if one does).



The radiograph above shows an unerupted first premolar in a Beagle called Clancy. The first premolar is actually lying on its side. On the gum surface, it looked like he was missing a tooth, but radiographs tell a different story.

**Three rooted teeth** which normally have two roots - the radiographs below are from the same dog. Rolly is a 7 year old Shih Tzu who came in for a “dental”. In the radiograph on the left you can see that Rolly has three roots to the third premolar (he is actually also missing his second premolar), compared to the radiograph on the right where he has the usual two roots.



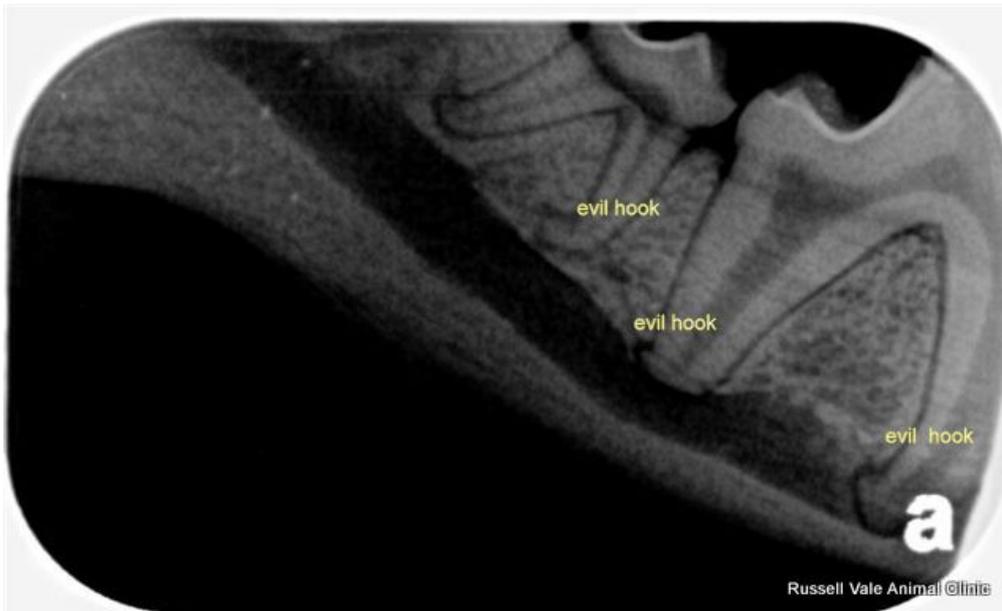
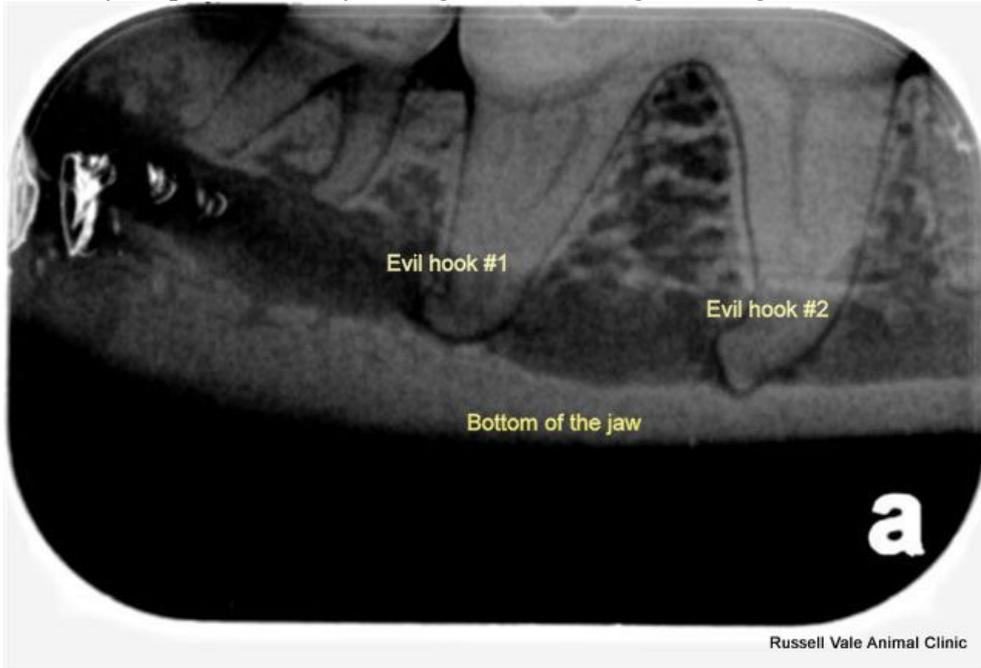
Now if this tooth needed extraction, and the vet didn't realize and removed two roots, then poor Rolly could've been left with a root still in his head. The owner is aware now, and luckily Rolly gets great dental care with us, so hopefully he gets to keep his teeth for a long long time!



**The evil hooks** on some teeth makes me shiver when I think of colleagues trying to remove these without knowing what's underneath the gum line. And it is a good

reminder to clients on why we can't just "yank them out" like the good 'ol human dentist does.

The upper teeth can have a curve on them (like the radiograph above), and sometimes they have an actual bend near the root tip. These teeth were not designed to come out easily – this is why extracting teeth is not cheap in pets, and this is why I want to keep teeth in your pet's mouth by talking about brushing, cleaning, no bones etc etc.



Hope you enjoyed this little excursion in to dental radiographs and why dental radiographs are important every time your pet is to have an anaesthetic to have their teeth and gums assessed..

And I hope you understand why dental radiographs should be part of basic veterinary dental care for your pet.

Dr Liz April 2012

Disclaimer: The information written is current at the time of writing.