PLANMECA

CBCT FOR THE GP

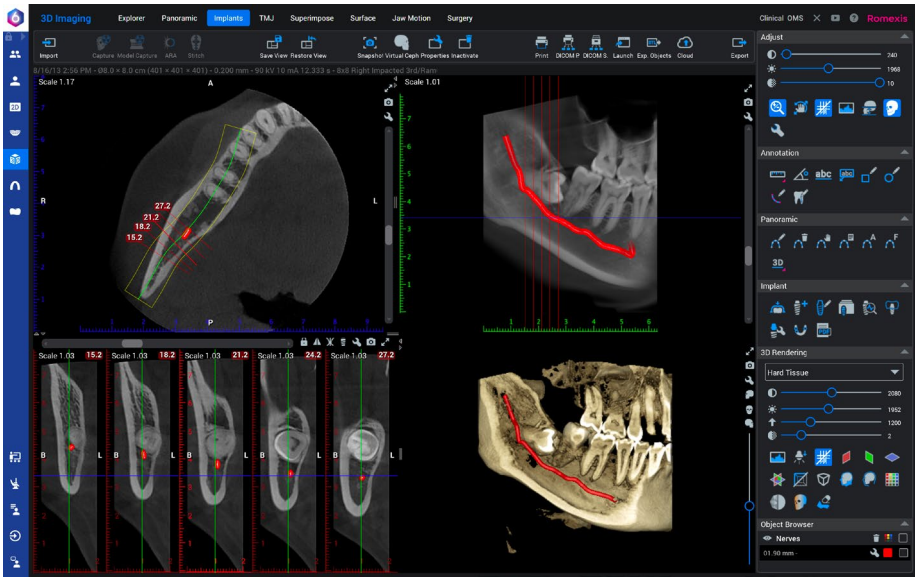
Making you better (and more profitable) at the dental procedures you already provide.

It's unarguable that CBCT technology has brought tremendous advantages to dentistry in terms of both diagnostics and treatment planning, especially for disciplines such as endodontics, implant planning and oral surgery. But what about 3D for general dentistry? Many argue that it's not necessary considering the historically higher levels of radiation associated with CBCT images. And some might even go as far as to say 2D imaging has been used successfully for years and there is no compelling reason to change.

Despite these two objections, there are a growing number of GPs who are incorporating CBCT imaging into their routine diagnostic workflow. Are they trailblazers? Do they do more advanced dentistry that justifies 3D? Or do they know something you don't? There will always be dentists that fall into the first two categories, but what about the others? Maybe they've discovered that CBCT imaging makes them better at doing the dentistry they are already doing, and it makes them more profitable.

Let's dive into how.

CBCT MAKES YOU FASTER



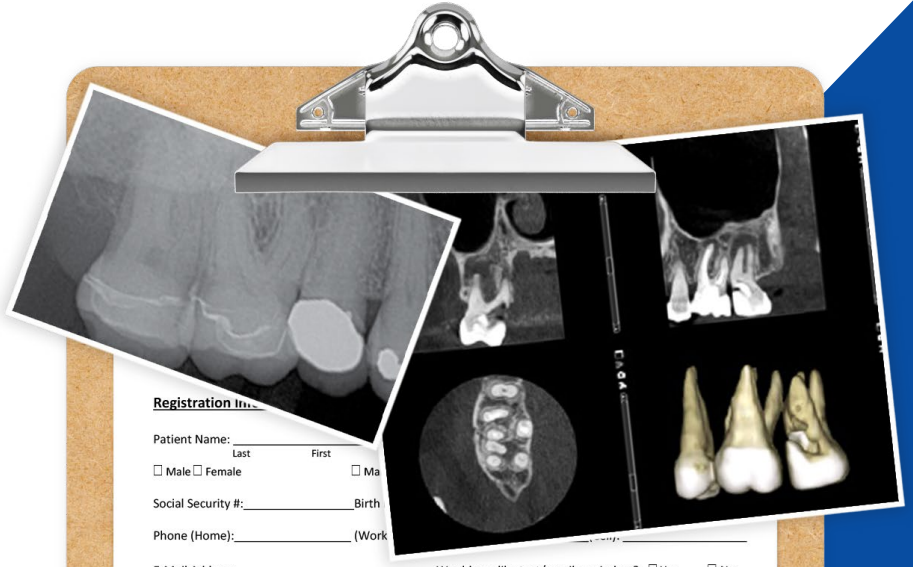
While there can be multiple treatment options, there is only one accurate diagnosis. While 2D imaging can lead to an accurate diagnosis it's often not very reliable. The underlying issue has to be substantially advanced in order to be detected. In early progression of disease, a patient may present with discomfort and intraoral radiographs can be inconclusive.

At this point, many dentists put the area of interest on a "watch", waiting for the condition to clear up or become more pronounced. This isn't great news for the patient. It prolongs their discomfort and lessens the chance for early intervention.

Additionally, the larger the issue, typically results in a larger bill and a more invasive treatment plan—a lose-lose for the patient. CBCT on the other hand provides you with all the information to make a diagnosis immediately with accuracy and confidence. No guesswork, no assumption, no waiting.

CBCT MAKES YOU BETTER

With 2D imaging you experience superimposition, distortion, magnification, inaccurate measurements, and misleading information about bone density. In fact, one study showed that CBCT imaging was **76-83% more accurate** depending on application.[1] And, when it comes to detecting a periapical lesion, the statistics are even worse with PAs accurately detecting a lesion only 24% of the time versus 100% with CBCT.[4]



Registration In...

Patient Name: _____
Last First

☐ Male ☐ Female ☐ Ma

Social Security #:_____Birth

Phone (Home):_____ (Work

E-Mail Address: _____ Would you like text/email reminders? ☐ Yes ☐ No

Home Address:_____
Street City State Zip

Employer Name:_____ Emergency Contact Name and Phone: _____

Please list other members of your immediate family who are patients in our office _____

_____

Referral Information

Can we thank someone for referring you?	**Or did you find us on your own?**
Family member _____	☐ Website
Coworker _____	☐ Yellow Pages
Friend _____	☐ Internet
Doctor _____	☐ Other _____

We love referrals! For each adult referral you send to us, we will send you a gift as our way of saying thank you! Refer 3 patients in a year and you will reach VIP status!

*(Does not include referrals of immediate family members. By law, excludes Medicaid)

Appointment Policy

We require 48 hours notice for appointment cancellations. Appointment changes without adequate notice may be subject to a fee of up to $50.00, payable by the patient and not the insurance company.

CBCT is a highly valuable tool in endodontic cases. 3D images show clinicians the number and location of roots and accessory canals of each tooth. This is imperative for successful treatment. Statistics show that 74% of first mandibular premolars have a single canal at the apical level, and a whopping 25.5% have two and the remaining have three![2]

Often, it's recommended three PAs be taken at different angulations to determine the root anatomy of a tooth. All this radiation could be avoided with a single CBCT image at a lower overall dose, allowing you to see the tooth in 360 degrees and properly treat the case with confidence.

60% of doctors changed treatment plans after reviewing CBCT image

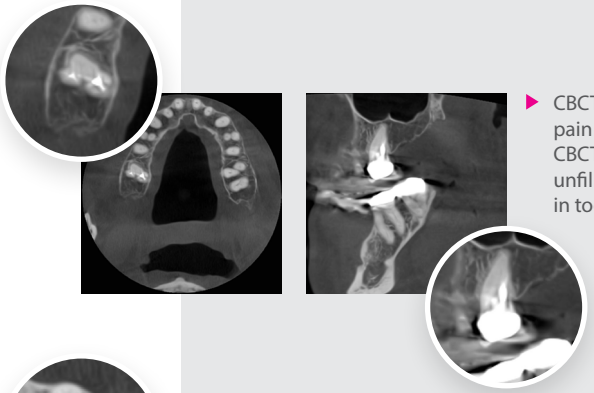
In a study by the Journal of Endodontics, treatment plans of 30 cases were developed using 2D periapical images. The same group of evaluators were then given a CBCT image of the same cases. Over 60% of the participants changed their treatment plan when they reviewed the 3D image. Additionally, a high level of misdiagnosis was noted in invasive cervical resorption and vertical root fractures using 2D imaging.[2]

Lastly, the dreaded surprise. In dentistry, there are no good surprises. It is easy for a 2D image to distort the amount of available bone in an ortho case, which may lead you to move a tooth with far too little supporting structure. Often, you'll find the dreaded surprise when the patient returns for a retreat or other complications down the road.

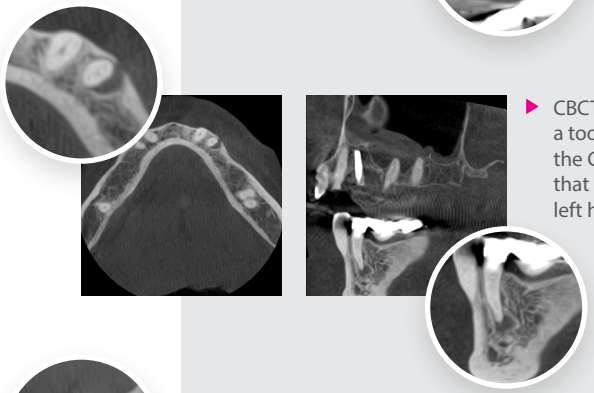
CBCT UNCOVERS MORE DENTISTRY

Uncovering more dentistry drives practice revenue and that unfortunately is often perceived as a negative. It's okay to want to be more profitable. What patient wants to see a dentist who is struggling to just get by? Patients want their dentists to be successful. That doesn't mean you should park the Maserati out front. But, having current technology and a stylish, thriving modern dental practice means something to patients when they seek out a dental provider.

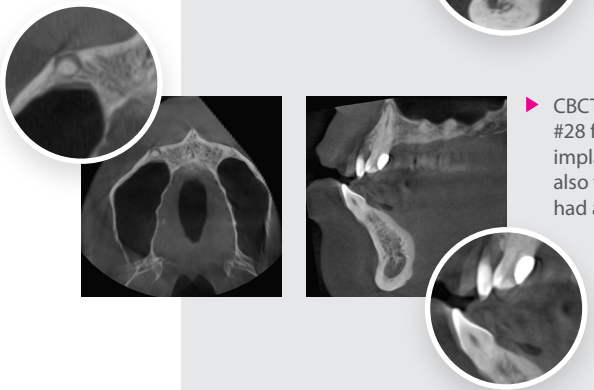
Secondly, CBCT owners aren't on a mission to look for additional dentistry to fund their children's college account. But uncovering pathology comes with the territory and that is to be revered. In a study of CBCT images, approximately 30% had some form of an incidental finding. Of that number, only 4% required immediate attention, 26% required follow up and the remaining were insignificant.[3]



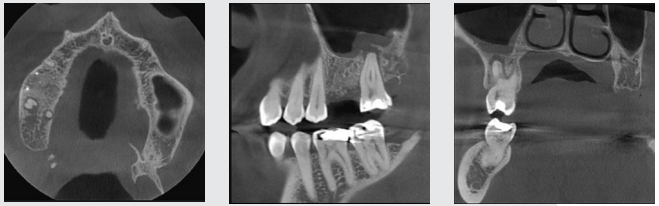
- CBCT was taken to evaluate pain in the lower left. The CBCT also uncovered an unfilled mesiobuccal root in tooth #3.



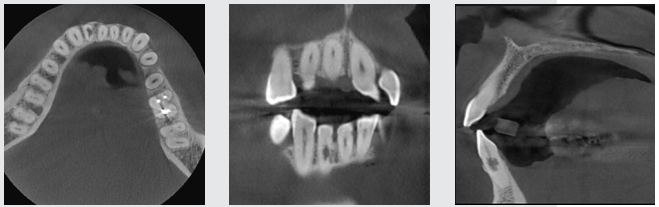
- CBCT was taken to evaluate a tooth in the upper right. In the CBCT it was also found that tooth #21 in the lower left had an apical lesion.



- CBCT was taken to evaluate #28 for extraction and implant. In the CBCT it was also found that tooth #6 had an apical lesion.



▲ These images reveal an apical lesion on tooth #3 from the axial, sagittal and coronal views.



▲ Additionally, the CBCT scan uncovered internal root resorption on #26 as seen in the coronal, sagittal and axial views.

CBCT PROVIDES INFORMATION FROM ALL DIMENSIONS

Another obvious benefit of 3D over 2D is the ability to view anatomy from all dimensions. Often pathology is easier to identify or confirm from an alternative view.

The CBCT image in this case was taken to aid in implant treatment planning. The doctor uncovered additional dentistry that allowed for earlier intervention and improved patient care.

Dr. Daron Clark, a general practitioner in Nashville, TN found arterial plaque in the internal carotid artery. The patient was referred to a cardiologist and has embarked on a healthier lifestyle. Although life saving discoveries like this aren't regular occurrences, they do happen and sometimes you literally can save a life.

For those of you who are concerned about liability with CBCT systems, I have unwelcome news. You're liable for all the anatomy in any radiograph including a 2D pan. If you're responsible for the information in an x-ray image, it is best to have one that is detailed, accurate, and easier to interpret. It doesn't mean you have to know everything about reading CBCT scans, you just have to know when something looks suspicious and send it to a radiologist for a report. It's neither difficult nor expensive.

Dr. Austin Westover, a general practitioner in Winchester, VA had an adolescent patient in for an orthodontic workup. He noticed a thickening on the temporal bone and sent the scan to a radiologist. It was diagnosed as a fibrous dysplasia. The patient now sees an ENT to monitor the condition. In this case, the scan has potentially saved the child's hearing.

LESS REFERRALS OUT, MORE DOLLARS IN

CBCT allows you to make sound decisions. It's not about taking on all cases you typically would have referred to a specialist once you install a 3D unit. It's about helping you make intelligent decisions regarding which cases to keep, knowing you can reasonably predict a successful outcome, and which ones require a specialist.

> *I've had conversations with doctors about the results of this imaging and sometimes they don't seem to believe me," said Dr. Clark. "It's a reaction I totally understand because I had to experience it to believe it too. I discovered so much more asymptomatic pathology in our current patient base by changing our imaging. It really allowed me to take much better care of my patients.*

INCREASE PATIENT ACCEPTANCE

Not only are 3D images easier for you to read, but they are easier for your patients to understand too. Seeing infection around the apex of a tooth is clear on a CBCT image. On a PA, it could appear as a faint edge only perceptible to the trained eye.

Patient's also appreciate that their dental practice has invested in the latest technology for their care. In fact, some will leave a practice if they feel the equipment is outdated.

THE GROWTH FACTOR

Everything until now discussed doing more of what you already do and with the patients you already have. Now we will talk about personal and professional growth.

Advanced Treatment Services

With the addition of 3D imaging, a world of new possibilities open: implants, airway, orthodontia and TMD. Although each of these areas requires additional education, many dentists discover a renewed passion for dentistry, not to mention adding a new revenue stream to the practice. These may not apply to you today, but as your practice evolves you will never be limited by your imaging technology if you have 3D CBCT.

Additionally, dentists with CBCT are able to successfully treatment plan more complicated cases, which is extremely rewarding and typically highly profitable.

Attracting New Patients

For many patients, having a doctor who they can trust to manage all of their oral health needs is invaluable. Not only are they happy, but they are likely to refer family and friends accounting for 70-80% of the new patients in your practice.[5]

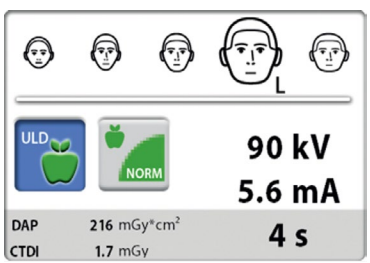
WHAT ABOUT RADIATION?

While no one argues about the accuracy of 3D imaging or the fact that you can do more and see more with CBCT, they do argue about its widespread use and site the concern over excess radiation for the patient. What if it was *less*?

While most CBCT manufacturers tout a low dose option or "quick scans," these images achieve the goal of lowering radiation but they sacrifice image quality. This trade-off might be acceptable for certain diagnostic tasks such as an interim assessment of treatment results.[5]

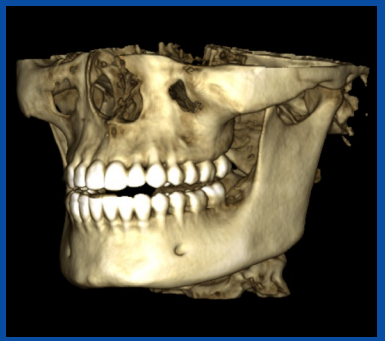
The challenge is, if you can only obtain a diagnostically valuable image at higher doses, can you justify using CBCT imaging? According to governing bodies such as the ADA, if you can't, you shouldn't use it. So, how are general practitioners taking CBCT scans on their patients for routine care?

It's simple. Planmeca has perfected the low dose image with Planmeca Ultra Low Dose™ technology. Planmeca reduces patient radiation in an entirely different manner and produces images with no statistical reduction in image quality[9]— and it's a game changer. Planmeca ULD can be applied on low resolution image settings through normal resolution and endo resolution settings, providing dramatically reduced patient exposure levels.



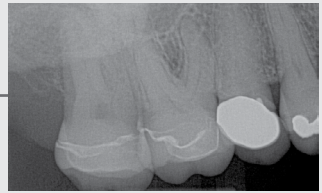
Dr. Michael Young operates a general practice in Michigan and he regularly talks about how Planmeca 3D imaging is causing a paradigm shift in general dentistry.

Like a panoramic image, Dr. Young takes a 20x10 cm 3D volume uisng Planmeca ULD. This field-of-view is same as seen in a panoramic image. He uses this scan to detect any underlying pathology. But for Dr. Young's patients, he has only prescribed 10 µSv of radiation. This is comparable to a single 2D intraoral PA. Planmeca ULD provides clinicians peace of mind knowing they can now use the best, most accurate diagnostic imaging tool on all their patients. And unbeknownst to many clinicians, if you prefer seeing anatomy in 2D, you can render any 2D image from a single CBCT scan.



So, not only is this better for his patients from a radiation safety standpoint, it's better for them because doctors can see so much more about the patient's oral health and detect pathology earlier opening the door to less invasive treatment.

Benefits of Planmeca ULD don't stop there. Some clinicians with Planmeca 3D systems utilize the small volume sizes as a "3D PA". Often clinicians take two PAs in order to diagnose an issue. A typical PA delivers about 9 µSv[10] and taking two doubles the dose at 18 µSv. Even on an endo resolution setting using Planmeca ULD, clinicians can acquire an incredibly detailed image with a 360-degree view of the tooth at only 17 µSv or a normal resolution image at only 10 µSv using Planmeca ULD.



Take up to 2 intraoral periapical images (25% accurate[1]) 9-18 µSV.

Order a 3D PA ø4x5 cm, normal resolution ULD at 10 µSv.

Knowledge is Power

CBCT imaging provides you with a completely different profile of your patient's oral health and with Planmeca, you have peace of mind incorporating this advanced tool into everyday imaging protocols.

With Planmeca CBCT imaging, you can:

- Diagnose quickly and confidently
- Uncover pathology early in disease progression
- Increase opportunity for less invasive treatment
- Reduce patient radiation exposure
- Increase treatment acceptance
- Attract new patients and gain more referrals
- Increase practice production
- Offer more advanced services
- Renew your passion for dentistry

Now is the time to meet with a Patterson representative and bring Planmeca 3D into your practice.

Schedule a Demo

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1 Radic J, Patcas R, Stadlinger B, Wiedemeier D, Rücker M, Giacomelli-Hiestand B. Do we need CBCTs for sufficient diagnostics?-dentist-related factors. Int J Implant Dent. 2018 Nov 16;4(1):37. doi: 10.1186/s40729-018-0147-1. PMID: 30443865; PMCID: PMC6238012. | 2 Jonathan Ee, Mohamed I. Fayad, Bradford R. Johnson, Comparison of Endodontic Diagnosis and Treatment Planning Decisions Using Cone-beam Volumetric Tomography Versus Periapical Radiography, Journal of Endodontics, Volume 40, Issue 7, 2014. | 3 William C. Scarfe, BDS, FRACDS, MS, Section Editor, Oral and Maxillofacial Radiology, http://dx.doi.org/10.1016/j.oooo.2014.01.002 | 4 Detection of periapical bone defects in human jaws using cone beam computed tomography and intraoral radiography, S. Patel, A. Dawood, F. Mannocci, R. Wilson, T. Pitt Ford. First published: 28 April 2009. https://doi.org/10.1111/j.1365-2591.2008.01538.x | 5 https://marketplace.ada.org/blog/dental-marketing/dental-referrals/how-to-get-more-referrals-from-your-patients | 6 https://www.sciencedirect.com/science/article/abs/pii/S0889540613007749 | 7 Gijbels F, Jacobs R, Bogaerts R, Debaveye D, Verlinden S, Sanderink G. Dosimetry of digital panoramic imaging. Part I: Patient exposure. Dentomaxillofac Radiol. 2005 May;34(3):145-9. doi: 10.1259/dmfr/28107460. PMID: 15897284. | 8 International Atomic Energy Agency https://www.iaea.org/resources/rpop/health-professionals/dentistry/radiation-doses | 9 According to “Dosimetry of Orthodontic Diagnostic FOVs Using Low Dose CBCT Protocol” by JB Ludlow and J Koivisto. | 10 Ludlow JB, Davies-Ludlow LE, White SC. Patient Risk Related to Common Dental Radiographic Examinations. JADA 2009; 139;1237-1243