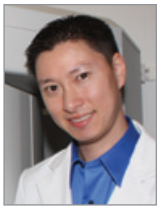
Implementing Cone Beam Technology—3-D Made Easy



By Ryan Lee, DDS, MS

As a resident in Oral and Maxillofacial Radiology, I was introduced to Cone Beam CT technology, an imaging method with the potential to revolutionize dental diagnosis and treatment planning. Cone Beam 3-D eliminates superimposition seen in traditional 2-D radiography and provides much more detailed images. Many general dentists and specialists, even if they take their own scans, look to radiologists to ensure that no pathology is being missed. As a radiologist, I knew I could fulfill this need by establishing an imaging practice. Recently, with the opening of COR Imaging (Center of Oral Radiology) in Honolulu, Hawaii–my dream became a reality.

I needed to choose a machine that could do it all—from implant planning to orthodontics and pathology, but at a competitive price. I chose the i-CAT®, for scan speed and ease of use. The standard scan acquisition takes 8.9 seconds, and reconstruction is 30 seconds. The included software is great for panoramic reconstructions as well as multi-planar reconstructions, cross-sectional views of the maxilla and mandible and the TMJ.

At first, I was concerned with the ease of integration, implementation of the system, and its compatibility with third-party software. It was comforting that most 3-D imaging software is i-CAT compatible. Company support and longevity was also very important; I didn't want to make such a large investment with a younger company. I felt I made the right decision by choosing a company with a well-established, global reputation.

Installation was confined to a painless half-day. Although I provided a special room for my Cone Beam unit, it only needs less than 20-square feet of floor space. The machine's smaller footprint can still fit into offices where space is at a premium.

After installation, the i-CAT certified trainer spent 1½ days teaching me all of the machine's applications. Because of my background in radiology, I already understood the basics, and he provided good insight into its many capabilities. He demonstrated how easy it was to use i-CATVision™ software.

As with all new equipment, we had to fine-tune the i-CAT. When a glitch came up with a part, my local Henry Schein Sales Consultant had it replaced and running again very quickly. I'm happy to report that my early apprehension about the level and availability of customer support was unwarranted, and I have found Henry Schein and Imaging Sciences knowledgeable and responsive.

As a referral center, my focus is delivering images to my referring dentists. Doctors receive the scan and the software (via CD or electronically), along with a printout of the area of interest, and a radiology report. Dentists use the printout along with i-CATVision software to facilitate diagnosis, planning, and better patient education to help increase treatment acceptance.

Cone Beam CT technology offers so much more than implant planning. In the future, this technology will only expand, and I believe will one day become the standard of care. I plan to attend educational events, such as the 3rd International Congress on 3-D Dental Imaging to hear about new applications and studies on this technology. From surgical and endodontic applications to airway assessment, Cone Beam helps clinicians see it all.

Dr. Ryan Lee graduated from the University of the Pacific School of Dentistry in San Francisco in 2001, and has worked as a private practitioner in California and Hawaii. He specialized in Oral and Maxillofacial Radiology for three years at the University of Texas Health Sciences Center in San Antonio before returning home to Honolulu.