

3-D TOMO COMES TO DENTISTRY

New tool can lead to more clinical information and more actionable diagnoses.

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**WHAT MIE MEANS TO ONE DENTIST**

Dr. L. Stephen Buchanan talks about what is needed to meet today's challenges.

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**INVENTION, INNOVATION, REVELATION, REVOLUTION**

How dynamic navigation is leading the way into endodontics' future.

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Four days of endo



Colin O'Brady is the keynote speaker at AAE22 in Phoenix. The renowned endurance athlete is scheduled to speak Wednesday afternoon from 4:30 to 6 p.m. in the North Ballroom. Photo/Provided by Colin O'Brady, via Wikimedia Commons

By Fred Michmershuizen, Endo Tribune

How wonderful it is to be here in Phoenix for AAE22. From now until Saturday, endodontists can learn from some of the top experts in the specialty, visit with company reps offering the latest products and technology, and — perhaps most importantly — rub shoulders with each other, literally.

It's the first time in three years that those who save teeth have been able to gather in person under one roof. Welcome home.

The American Association of Endodontists has organized plenty of action for those who have come to its long-awaited reunion taking place here at the Phoenix Convention Center.

But first, the ground rules, as necessitated by the ongoing COVID-19 pandemic: Everyone (including service providers,

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Foundation for Endodontics announces \$500,000 pledge to benefit residents and academic leaders

The Foundation for Endodontics, the philanthropic arm of the American Association of Endodontics, has announced that Endo1 Partners has committed to a \$500,000 pledge.

This pledge will allow the foundation to further its mission, benefiting postgraduate endodontic residents and educators. Specifically, the five-year pledge will be applied each year to a new scholarship for residents, the Foundation for Endodontics & Endo1 Partners Annual Meeting Resident Development Scholarship, along with the Foundation for Endodontics & Endo1 Partners ADEA Scholar.

The goal of the Resident Development Scholarship is to financially assist residents in their final year of training who will present either oral research, poster research or a table clinic presentation.

The scholarship reimburses AAE annual meeting eligible expenses up to \$500. "It's important to us to take part in the educational support that prepares future dental professionals. Our commitment allows us to contribute to continued advancements in the industry while playing a role in their pending careers," said Dr. Matthew Haddad, co-CEO and co-founder, Endo1 Partners.

In partnership, the foundation and Endo1 Partners will sponsor one endodontic educator's participation in the American Dental Education Association Leadership Institute annually. The ADEA Leadership Institute helps to further develop dental faculty and enables a growing

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Endodontists attend a lecture presented by Dr. John J. Stropko at a previous AAE annual session. At AAE22, meeting attendees can partake in as many as 28.5 hours of C.E. offerings, which are divided into numerous educational tracks. Photo/Endo Tribune file photo

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exhibitors, AAE staff and guests) is required to provide proof of vaccination or proof of a negative test taken within 48 hours of arrival.

As of press time, it was not determined whether masks would be required, but AAE recommends all attendees carry a face covering at all times during the meeting, as masking requirements may change. Onsite testing is available for a fee.

Now that the vaxing and masking is covered, let's get back to the endo, shall we? The centerpiece of any AAE event, of course, is the education. Offerings include hands-on sessions, lectures, panel discussions and presentations offered right on the show floor.

This year, meeting attendees can partake in as many as 28.5 hours of C.E. offerings. The educational tracks are as follows: Clinical/Ethical Dilemmas ("Prickly Situations"); Interdisciplinary; Non-Surgical Root Canal Therapy; Pain; Practice Management/Teamwork; Surgi-

cal Root Canal Therapy; and Submitted Presentations. Check your meeting guide or visit aae.org/aae22 for a complete listing of course titles, speakers, times and locations.

For those unable to attend in-person, select session livestreams are available virtually.

"The AAE provides its members with the highest quality of continuing dental education programs and chances to hear from industry experts about new technologies, the latest in safety and health measures around COVID-19, pain management without the use of opioids and more," meeting organizers said in a press release issued before the event commenced.

Also not to be missed here at AAE is the General Session with Keynote Speaker Colin O'Brady, taking place Wednesday from 4:30 to 6 p.m. in the North Ballroom, where all of the main events at AAE22 will also take place.

O'Brady completed the world's first solo, unsupported and unaided crossing of Antarctica and is regarded as one of the world's best endurance athletes and

an expert on mindset. O'Brady will share his inspirational, thought-provoking story and will tell audience members what he has learned about the human mind and how to unlock human potential.

Other events of note include the President's Breakfast, featuring AAE President Dr. Alan S. Law, taking place from 8 to 9:30 a.m. Thursday. The General Assembly is from 8:30 to 9:45 a.m. Friday, and the Edgar D. Coolidge Awards Brunch is from 10:15 a.m. to noon Saturday.

Also not to be missed is the exhibit hall, located on Level 3, where company reps are eager to talk to you about their offerings. Show hours are Wednesday from 9:30 a.m. to 4:30 p.m., Thursday from 9:30 a.m. to 6:30 p.m. and Friday from 9:45 a.m. to 5:30 p.m.

All during the meeting, attendees can participate in the Endo Wellness Challenge, sponsored by EdgeEndo. Simply use your smartphone or fitness tracking device to count your steps and earn prizes, not to mention bragging rights.

So now that you have your "marching orders," it's time for you to go out and explore! Enjoy the meeting!

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ing pool of outstanding academicians to become academic leaders in dental institutions. Endodontic education drives the specialty forward, and supporting endodontists in leadership positions raises the profile of endodontics within institutions.

"An opportunity to influence education and research, combined with ADEA's dedication to providing the support and resources of future specialists in our field, serves as the foundation of our pledge," Dr. Daryl Dudum, co-CEO and

co-founder, Endo1 Partners, said.

According to the foundation, these awards will enable a growing pool of outstanding residents and academicians to achieve new heights.

About the Foundation for Endodontics

Founded in 1966 as the philanthropic arm of the AAE, the Foundation for Endodontics (a 501(c)3 charity) encourages and raises capital investment necessary to sustain and further develop the specialty. Over the years, both its mission and activities have evolved into four areas: research, education, access to care

and development. By focusing on these four concentrations, the foundation assists members of AAE in the pursuit of excellence in their field and furthers the vision of supporting endodontists in their efforts to save natural teeth whenever possible.

The foundation supports every accredited endodontic program in the United States and Canada, and offers funding to educators, residents and departments. For more information, visit foundation.aae.org.

(Source: Foundation for Endodontics)

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Checklist for MIE Treatment Objectives:

1. A sophisticated Rotary File System that conserves coronal dentin



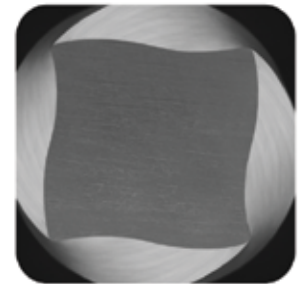
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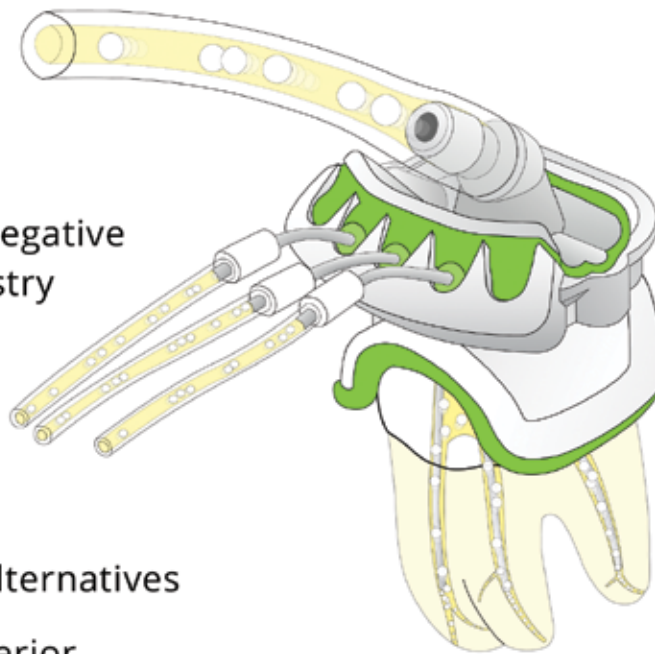
2. An Irrigation System that can clean small passageways efficiently



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Fifty-six percent of Americans plan to drink fewer sugary drinks, cut back on candy/sweets or reduce coffee or tea consumption. Photo/@konarska, freeimages.com

AAE survey reveals Americans eating fewer sweets, resolving to prioritize oral health

It's no surprise that cases of cracked teeth and dental-related injuries have risen throughout the pandemic — and it may be due in part to pandemic-related stress wreaking havoc on oral health.

According to a November 2021 survey fielded by the American Association of

Endodontists, 81 percent of American adults wish they had taken better care of their natural teeth. More than half (55 percent) wish their parent(s) had instilled better oral hygiene habits when they were younger, and 43 percent admit tooth pain or oral health issues negatively affects their productivity or ability to focus.

In other findings, more than a quarter (26 percent) of Americans feel others would find them more attractive and about one in six (16 percent) feel they would have a more active dating life if they took better care of their teeth.

However, there is hope: 76 percent intend to prioritize their oral health in 2022. And they're not just thinking of themselves, as nearly seven in 10 (69 percent) would consider giving a toothbrush (electric or manual) to someone for a gift.

Other findings:

- 66 percent plan to brush or floss their teeth more often.
- 56 percent plan to drink fewer sugary drinks, cut back on candy/sweets or reduce coffee or tea consumption.
- 36 percent want to improve the appearance of their teeth.
- 19 percent will resolve to quit or reduce teeth grinding.

AAE President Dr. Alan S. Law said: "Major tooth pain can strike at any time or place, and it's critically important that patients seek treatment from a skilled dental specialist right away when this happens. AAE's recently improved online directory can help patients more easily connect with an endodontist in their area when they need relief from tooth pain, want to save their natural teeth via root canal treatment or need to receive immediate care for other dental-related emergencies."

The AAE commissioned Atomik Research (a division of 4media group) to conduct an online survey of 1,004 American adults. The makeup of the sample is statistically representative of the U.S. population based on the national census data regarding gender, age and geographical regions.

The margin of error for the overall sample (N=1,004) fell within +/- 3 percentage points with a confidence interval of 95 percent. Fieldwork took place between October 14-18, 2021. Atomik Research is an independent market research agency.

(Source: American Association of Endodontists)

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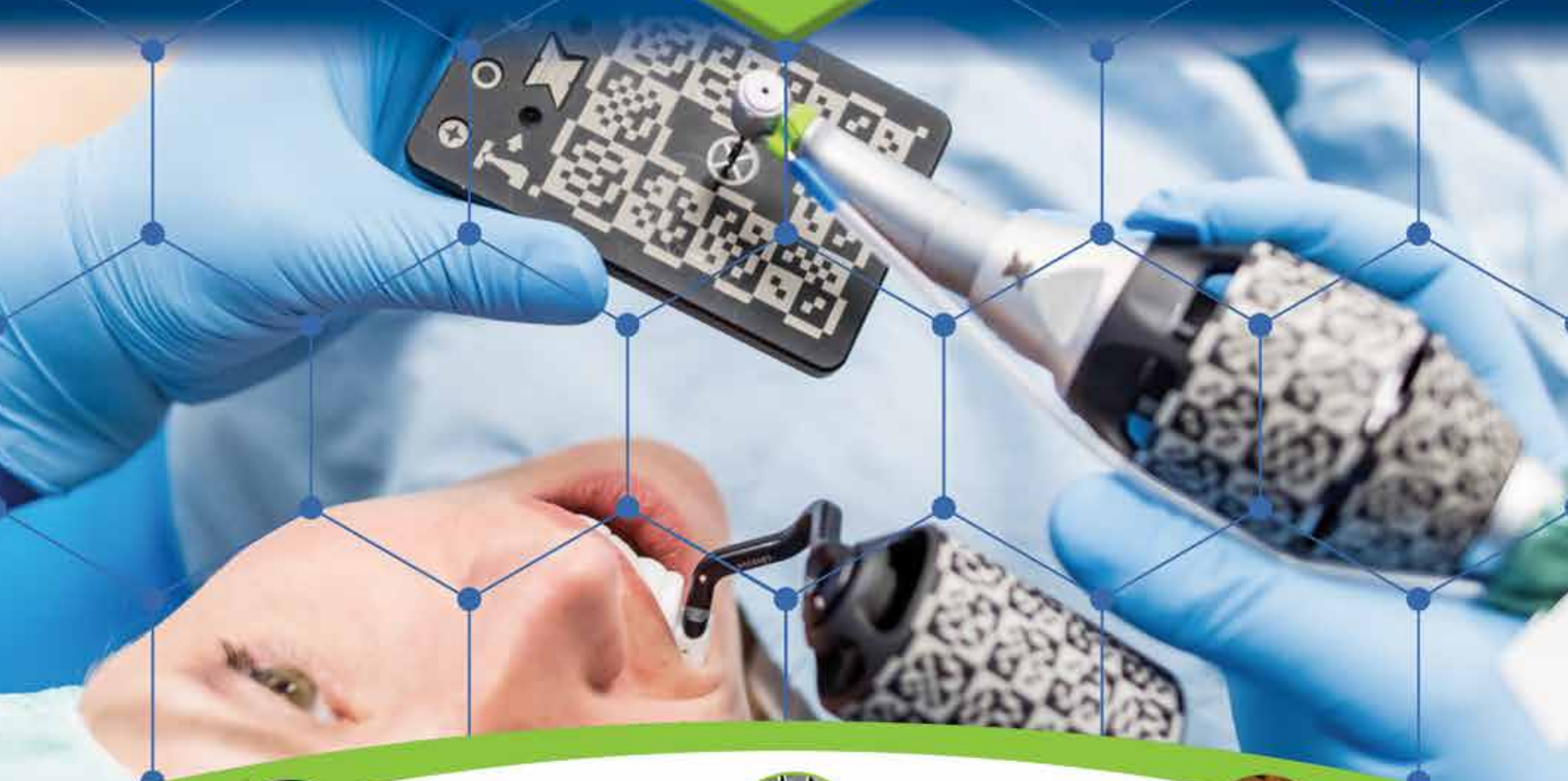
Achieve less
invasive access
and prep of
calcified and
hidden canals

Reduce
intra-operative
imaging and
save time

LOCATE
AND ACCESS
ENDODONTIC
TOOTH STRUCTURES
MORE PRECISELY

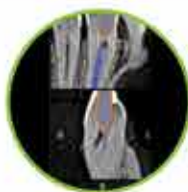
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Introducing Triton, the all-in-one irrigation solution

By Brasseler USA Staff

Despite the introduction of several unique devices to aid in endodontic irrigation, the fact remains that NaOCl is buffered when it comes into contact with inorganic dentinal debris.

EDTA aids in dentinal debris dissolution, but it also buffers NaOCl, so clinicians must use high volumes of multiple irrigation solutions, which requires additional steps, irrigants, syringes and needles.

But now there is a solution with Triton, according to Brasseler USA. Triton is a patent pending all-in-one irrigation solution that allows for synergistic and simultaneous dissolution of organic and inorganic debris.

According to the company, Triton permits the clinician to use lower volumes of irrigation solution and ensures maximum clinical efficiency. Unlike traditional irrigants or other 2:1 solutions, Triton works differently by avoiding the use of EDTA and CHX altogether.

By using a lower concentration of NaOCl and a patent-pending proprietary



Testimonial and images/Provided by Brasseler USA

blend of surfactants and gentle chelating agents, Triton is the first irrigant to deliver all of the benefits of NaOCl, EDTA and CHX in a single-step all-in-one irrigation solution. The non-NaOCl components in Triton proactively dissolve the dentinal debris, allowing for a lower concentration of NaOCl (also included in Triton) to be exposed to organic debris without as

Here in Phoenix

Visit booth No. 713 to learn more about Brasseler USA's latest innovations and to take advantage of exclusive AAE22 show specials.

much buffering.

With Triton, the company asserts, irrigation is no irritation at all.



PORTRAY brings 3-D tomo to intraoral imaging

By Surround Medical Systems Staff

Intraoral tomosynthesis is now available to dentists nationwide. The PORTRAY System is the first stationary intraoral tomosynthesis X-ray imaging device to receive 510K premarket clearance from the FDA and is the result of two decades of discovery, innovation and development.

With the power of 3-D tomo, dentists can obtain more clinical information, resulting in more actionable diagnoses. The power of intraoral tomosynthesis imaging has been optimized to give the dentist more information about teeth, root conditions and bony structures.

The PORTRAY System has been designed to fit into a space similar to that of a conventional 2-D intraoral imaging device. It deploys a faster sensor that acquires images from an array of focal spots.

The PORTRAY System uses a complex algorithm to create a volume of images that can be scrolled through in 0.5 mm "slices," revealing internal tooth condi-



The PORTRAY System is the first stationary intraoral tomosynthesis X-ray imaging device to receive 510K premarket clearance from the FDA. Photo/Provided by Surround Medical Systems

tions such as fractures and caries. With the power of 2-D synthetic imaging, the

image can also be rotated to open interproximal contacts.

Here in Phoenix

To learn more about 3-D tomo, the PORTRAY System and Surround Medical Systems, stop by the booth, No. 124.

The dentist will not have difficulty reading the 3-D tomo X-rays: If you can read a 2-D X-ray, you can read a PORTRAY System X-ray.

Workflows for technical staff are similar to conventional 2-D intraoral imaging. Tomosynthesis has been long used in other fields, such as mammography, with greater clinical effect than that of 2-D.

3-D tomo should not be confused with CBCT, as it deploys an entirely different imaging method and generates intraoral images with greater resolution.

The PORTRAY System is offered by Surround Medical Systems.

Dr. Enrique Platin, retired professor at The Adams School of Dentistry, University of North Carolina at Chapel Hill, said in a statement: "In 70 years, this is the first viable X-ray device that changes how clinicians see dental structures on intraoral images."

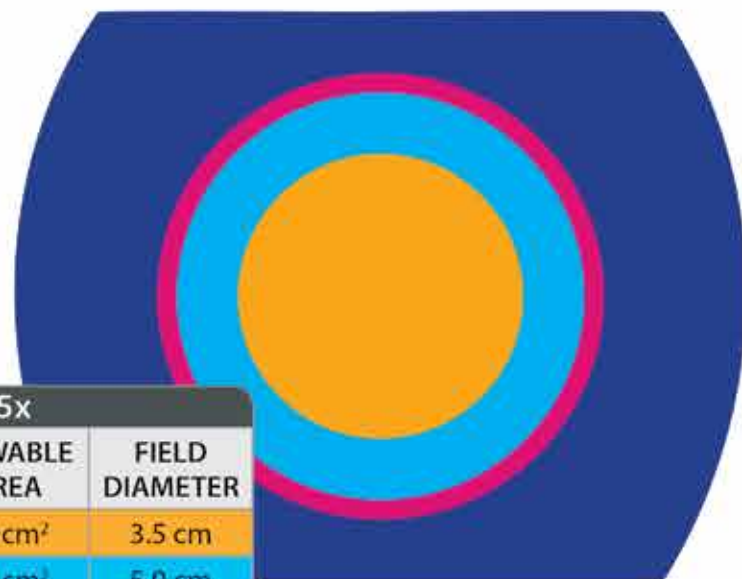


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X-Guide is the first navigation system approved by FDA for navigated endodontics

By X-Nav Technologies Staff

The X-Guide® Dynamic Navigation system has gained worldwide popularity for delivering surgeons the ability to perform more accurate and precise dental implant procedures compared to freehand surgery, according to X-Nav Technologies, the company behind the technology.

In fact, more than 175,000 dental implants have been surgically placed using the X-Guide system.

Now, patients and dentists can benefit from achieving more precise and minimally invasive access to tooth structures needing endodontic treatment — such as calcified canals, apicoectomies and molar access of affected teeth.

“X-Guide dynamic navigation is an extremely accurate solution to a common endodontic challenge: calcified root canal systems,” said L. Stephen Buchanan, DDS, FICD, FACD, of Santa Barbara, Calif. “With X-Guide, I can perform minimally invasive root canal therapy (RCT) with much more predictability and less stress.”

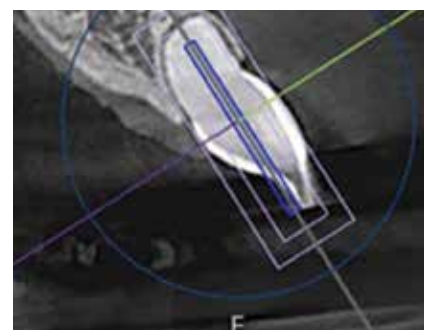
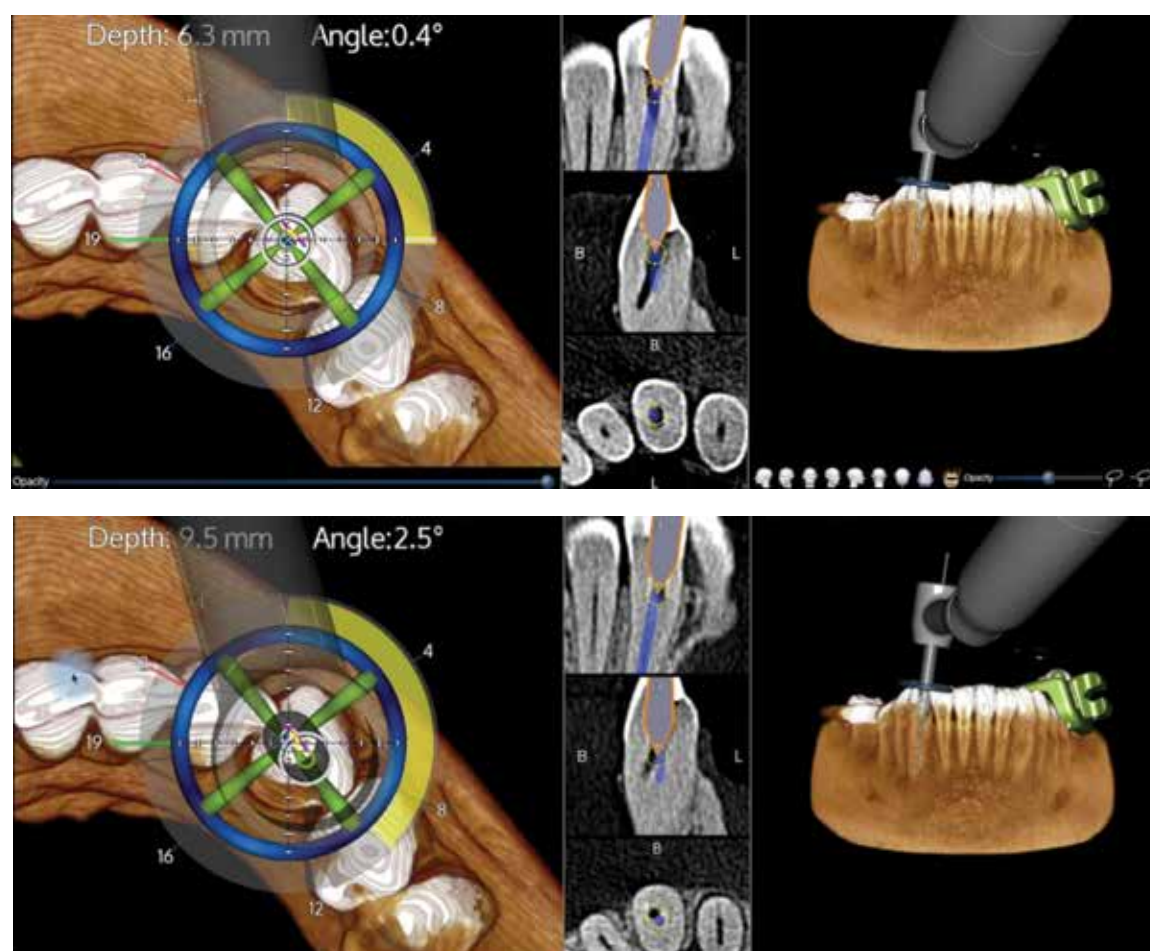
Using the X-Guide’s patented X-Point technology, the dentist gains a live view of the patient’s 3-D anatomy to guide drill movements during surgery to precisely navigate their drill to an exact access location for more effective endodontic procedures.

New tools in the X-Guide software make navigation easy to integrate into the endodontic workflow, such as the virtual Prep feature for planning and following an ideal drill path, integration with high-speed handpieces and X-Mark virtual registration for small, medium and large field-of-view CBCTs.

Combining 3-D imaging with X-Guide navigation allows dentists to locate and access endodontic tooth structures more precisely, which is useful to:

- achieve less invasive access and prep of calcified and hidden canals.
- minimize damage to anatomical structures.
- preserve tooth structure.
- reduce intra-operative imaging and save time.
- perform minimally invasive apicoectomy and root-end access.

“The X-Guide Dynamic Navigation System has not only provided a solution to



A look at the X-Guide software’s new virtual Prep path tool.

the calcified tooth, it may also be used to reduce structural weakening of teeth through minimally invasive endodontic procedures,” said Dr. Charles Maupin, DDS, of Lubbock, Texas.

Several studies have been published showing the evidence-based clinical advantages of navigated endodontics using the X-Guide system.

According to a study conducted by the University of Maryland School of Den-

Here in Phoenix

To learn more about the X-Guide Dynamic Surgical Navigation for single implants, full arch reconstruction and endodontics, stop by the booth, No. 526, or go online to www.X-NavTech.com.

tistry: “The dynamic navigation system was more accurate and more efficient in root-end resection in a cadaver model than the freehand technique. The dynamic navigation system has the potential to be a safe and reliable technological addition to endodontic microsurgery.”¹

Dr. Frederico Martinho, DDS, M.Sc., PhD, and clinical associate professor, said: “Our recent studies with X-Guide focused on minimally invasive access cavity, post removal, locating calcified canals and endodontic microsurgery. It has the potential to improve accuracy and reduce surgical time and operator mishaps.

“Both the endodontic residents and I were able to quickly master the technology — the learning curve was not steep

for novel or experienced endodontists.”

“As X-Guide surgical navigation became an integral part of dental implant surgery, it was clear that expanding access to our technology could improve provider capabilities and patient experiences with endodontic procedures. I’m proud of our talented team of clinical and engineering masterminds for being able to deliver the benefits of surgical navigation to more dental professionals,” said Edward Marandola, president, CEO and co-founder of X-Nav Technologies.

To read more about the benefits of X-Guide Dynamic Surgical Navigation for single implants, full arch reconstruction and endodontics, visit www.X-NavTech.com.

Reference

1. Accuracy and efficiency of guided root-end resection using a dynamic navigation system: a human cadaver study. O Dianat, A Nosrat, B Mostoufi, J B Price, S Gupta, F C Martinho. PMID: 33368371, DOI: 10.1111/iej.13466.

Using the X-Guide’s patented X-Point technology, dentists can gain a live view of a patient’s 3-D anatomy to guide drill movements during surgery to precisely navigate their drill to an exact access location for more effective endodontic procedures. Photos/Provided by X-Nav Technologies



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