

Why I INVESTED

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Zak R. James, DMD

Forged using proprietary FireWire NiTi Heat Treatment, which provides exceptional flexibility and resistance to cyclic and torsional fatigue.

Closely follows the anatomy of the canal, reducing the risk of ledging, transportation, and perforation.

Predictably unwinds before separation, giving providers a chance to more safely remove and discard the file.

Reduces treatment variability, contributing not only to clinical efficiency but also to the financial sustainability of the practice.

Improving Outcomes With Cutting-Edge Tools

The EdgeFile® X7 system supports endodontic precision and practice growth

When Zak R. James, DMD, reflects on his path into endodontics, it's clear that his clinical philosophy was shaped not only in lecture halls and laboratories but also in clinics for the underserved, where preserving natural teeth often meant working with limited resources in the face of immense patient need. A South Carolina native, James graduated summa cum laude from Clemson University Honors College and earned his DMD from the Medical University of South Carolina in Charleston. After completing a general practice residency at the Harvard School of Dental Medicine, he fulfilled a National Health Service Corps scholarship by providing care in federally qualified health centers across the Carolinas, including in Myrtle Beach and Gastonia.

It was during this time that James recognized a pattern. Despite a clear clinical demand, endodontic care was either unavailable or unsustainable in many public health settings. "Initially, my interest in endodontics grew out of necessity more than desire or interest," he says. That necessity soon became a passion, and he went on to complete his specialty training at the University of Texas Health Science Center at San Antonio, where he also conducted award-winning research under Kenneth Hargreaves, DDS, PhD. Today, as a diplomate of the American Board of Endodontics, James practices at Afton

Endodontics in Concord, North Carolina, where he recently became a partner.

The philosophy at Afton Endodontics is grounded in evidence-based care, professional collaboration, and patient-centered service. "We treat one patient at a time," says James, noting that the practice motto—gentle care, expert precision—is more than just a slogan. With five operatories equipped with Zeiss OPMI pico microscopes, and a dedicated marketing and referral coordination team, the practice delivers a full spectrum of endodontic services in a fee-for-service model. From primary molar therapy and microsurgery to regenerative endodontics and resorption repair, their scope of practice reflects not only technical capability but also a deep respect for the value of natural dentition.

One key investment that supports that mission is the EdgeFile® X7 system from EdgeEndo. James began using EdgeFile X7 during his residency in San Antonio, where residents were responsible for purchasing their own files. "We were provided with complete freedom of choice," he explains, "and my co-residents and I quickly gravitated toward the EdgeFile X7 rotary files." The decision was driven by a combination of clinical performance and affordability. "As residents, we liked these files for their shape memory, flexibility, safety, and durability—and the free shipping didn't hurt either," he says.



The EdgeFile X7 system, which features FireWire NiTi Heat Treatment, and corresponding gutta-percha points.

Now, several years into private practice, EdgeFile X7 remains James' file system of choice. The files are forged using FireWire NiTi Heat Treatment, which gives them exceptional flexibility and resistance to cyclic and torsional fatigue. "Edge X7 has the most superior flexibility and shape memory of any files I've used," he says. James also appreciates the system's safety profile. "Although many NiTi systems characteristically separate abruptly, the X7 predictably unwinds before separation, giving providers a chance to remove and safely discard the file."

That peace of mind translates directly into clinical confidence, especially when navigating complex or tortuous anatomy. "I don't have to worry about taking a 30.04 diameter X7 down a tight, calcified curved canal," he explains. "With other systems, I might be concerned about transportation or separation." Although the X7 may not be the most aggressive file in terms of cutting, James sees that as a worthwhile trade-off. "The design sacrifices a bit of cutting efficiency, but it allows for extreme flexibility and safety," he says. "The files just seem to 'find their way' down canals that even small hand files can't readily negotiate."

Ultimately, this predictability and performance have an impact on more than just the success of procedures. They also affect patient satisfaction and the overall efficiency of the practice. In a private practice setting,

particularly one that is not in-network with insurance providers, outcomes and patient confidence are crucial. "I'm not aware of any evidence for improved success rates for specific rotary systems," says James. "But what the X7 provides is predictability, peace of mind, and ease of use—attributes that contribute to success, particularly during a busy clinical day."

The introduction of matching gutta-percha points designed specifically for the EdgeFile X7 system has only enhanced that experience. "With the new EdgeFile X7 Gutta Percha Points, I immediately found that there is no guesswork in how to obturate," James reports. "They seat with good apical tug-back at working length and consistently to my reference point. I need fewer gutta-percha points now because these essentially fit any shape that I prepare—the first time and every time."

James emphasizes that although his obturation technique is largely sealer-based (using bioceramic sealers for hydraulic condensation), the matching gutta-percha cones still make a difference. "They don't necessarily change my apical sealing technique, but they improve consistency and reduce the variability in seating a cone to length," he says. That reduction in variability contributes not only to clinical efficiency but also to the financial sustainability of the practice because fewer wasted materials and streamlined workflows support both

patient throughput and profitability.

For clinicians who are considering switching to the EdgeFile X7 system, James offers a clear endorsement. "As someone who has used the X7 system since

the beginning of residency and gradually eliminated other files from my sponge, I can say with confidence that I have no intention of changing file systems," he says. James believes the system is suitable for both novices and experienced endodontists alike. "I would fully endorse X7 to any provider and challenge him or her to produce a system with a greater overall cost benefit and safety profile."

As for best practices, James recommends starting with the instructions for use but notes that the system allows for a high degree of adaptability. "The beauty of this file is that it's highly adaptable," he says. "Providers have a lot of grace in choosing to mix and match files to achieve the workflows they desire." James also stresses the importance of cleaning the flutes after every pass and maintaining copious irrigation, which are essentials for any rotary system but especially important in preserving the performance and longevity of the EdgeFile X7 files.

Ultimately, James' investment in EdgeFile X7 reflects his broader commitment to precision, safety, and evidence-based care. From community health clinics to a thriving private endodontic practice, his approach has always centered on giving patients the best chance to preserve their natural teeth—comfortably, safely, and predictably. "In the end, the best way to provide successful endodontic care is to acquire a masterful understanding of the science of endodontics so that you can deliver definitive, pain-free treatment," James says. "EdgeFile X7 supports that mission every step of the way."

To request a product sample for evaluation, please visit: <https://edgeendo.com/product-evaluation/>.