



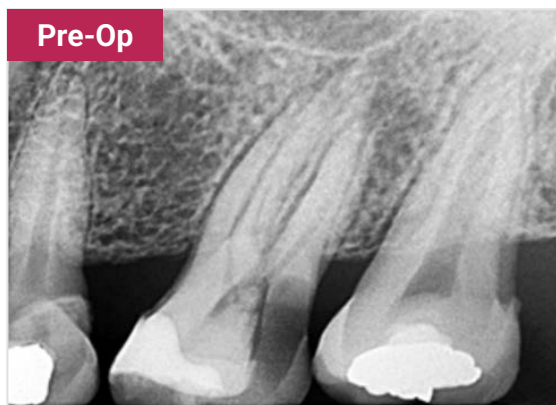
Endodontic therapy aims to eliminate infected or necrotic pulp tissue and establish a hermetic seal of the root canal system to prevent microbial re entry and support periapical healing. Calcium silicate–based bioceramics have gained prominence as advanced endodontic materials due to their excellent biocompatibility and bioactivity.

ZenSeal™ Pro is a calcium silicate–based bioceramic sealer formulated with tricalcium silicate, dicalcium silicate, and a zirconium oxide radiopacifier dispersed within a hydrophilic organic matrix. This composition yields a highly flowable, easy to handle material that offers enhanced radiopacity, dimensional stability, and favorable biological performance. The mineral components share chemical similarity with mineral trioxide aggregate (MTA), a benchmark material known for its osteogenic and regenerative potential.

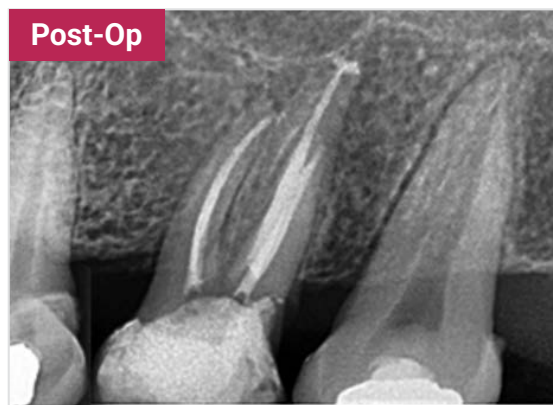
Upon exposure to moisture within the canal environment, ZenSeal™ Pro undergoes hydration reactions that form calcium silicate hydrate (C S H) gel and calcium hydroxide. These hydration products create a stable, insoluble sealing matrix with minimal shrinkage. The controlled release of calcium ions and the resulting sustained alkaline pH (>11) contribute to antimicrobial activity and facilitate favorable biological interactions, including biomineralization along the canal walls.

ZenSeal™ Pro’s hydrophilic paste consistency, low film thickness, and high flowability support complete canal coating and effective penetration into complex anatomical spaces. The incorporation of zirconium oxide ensures excellent radiographic visualization without compromising physicochemical properties.

Optimization of the system extends beyond the sealer itself. When paired with the ZenSave™ tip, the delivery of **ZenSeal™ Pro** is further refined. The ZenSave™ tip is a pre-bend, trimmable syringe delivery tip designed to allow clinicians greater control and precision during placement of the sealer into the root canal. In addition, the tip’s design significantly reduces post use paste waste, enabling more applications per syringe and improving material efficiency.

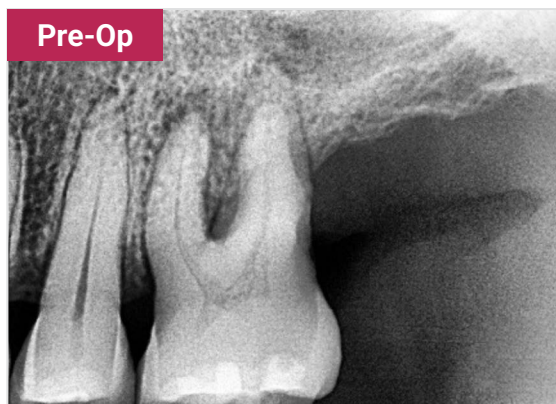


Pre-Op



Post-Op

**Tooth #14 with an existing mesio occlusal (MO) restoration and a distal carious lesion extending into the pulp chamber.
Root canal treatment (RCT) performed using ZenFlex™ files and ZenSeal Pro™ bioceramic sealer.**



Pre-Op



Post-Op

**Tooth #14 presenting with a periapical lesion.
Root canal treatment (RCT) performed using ZenFlex™ files and ZenSeal Pro™ bioceramic sealer.**