

# A CEREC MTL Zirconia crown – Second upper premolar in 90 minutes

## Case Description

A 32-year-old male patient came to the clinic for a check-up after putting off going to the dentist for seven years. He presented with a large carious mesial lesion on tooth 15. The tooth showed asymptomatic apical periodontitis and a significant loss of tooth structure. The patient was motivated for treatment. First, the tooth was treated endodontically. A fiber post was inserted to build up the core. Finally, the tooth was to be restored with a crown. At the beginning of the restorative treatment, the patient received local anesthesia. While the anesthetic was taking effect, a preoperative scan was performed with CEREC Primescan. After preparation, another scan was taken. The CEREC Software provided effective support in defining the preparation margins. The restoration was then designed using the Biogeneric individual function. CEREC MTL Zirconia was the material selected because it promises both high strength and exceptionally good esthetics. The crown was milled in shade A3 in the CEREC Primemill in Fine mode. This process took about 12 minutes. The result was a restoration with a filigree crown margin. After polishing the occlusal surface, the crown was sintered in CEREC SpeedFire, which took approximately 21 minutes. For individualization, the crown was glazed with the DS Universal Stains & Glaze System. The interproximal surfaces and cervical areas that were in contact with the gingiva were left out of the glaze. Only polishing was performed in this area. Finally, the inner surfaces of the restoration were sandblasted with 50 µm aluminum oxide at a pressure of 2 bars and then vaporized. After cleaning, the restoration was incorporated and cemented in place. The treatment lasted around 90 minutes in total. The patient was pleased that he received a complete restoration in a single visit. He was very satisfied with the function and esthetics of the final result.

## Discussion

Together with the patient, the decision was made in favor of tooth-preserving treatment. The alternative would have been to extract the tooth and replace it with an implant or a bridge restoration. However, this was rejected due to the patient's young age.



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### Before:

A large carious mesial lesion on tooth 15. The tooth showed asymptomatic apical periodontitis and a significant loss of tooth structure.



### After:

Chairside-fabricated restoration designed using the Biogeneric individual function. CEREC MTL Zirconia was the material selected because it promises both high strength and exceptionally good esthetics.

## Clinical Images



Initial situation after endodontic treatment: the mesial wall was temporarily built up here with composite for rubber dam placement.

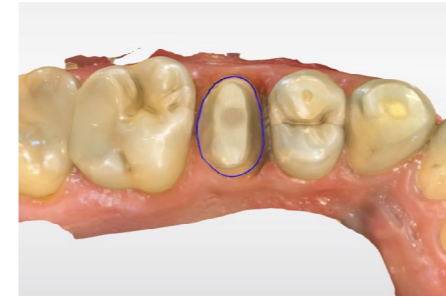


Final crown - buccal.



Final crown - occlusal.

## Workflow Images



Crown margination.

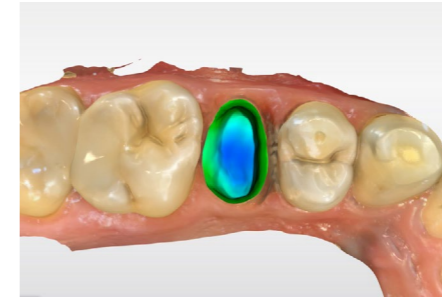
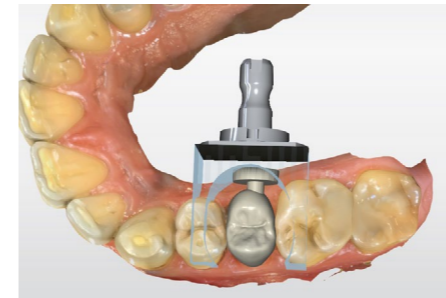


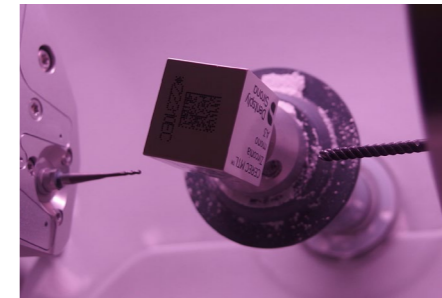
Image of crown preparation.



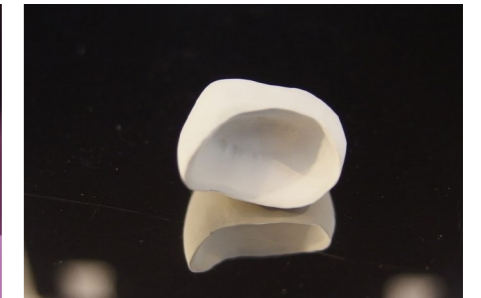
Design check - buccal.



Manufacture preview of final crown.



Crown milling with CEREC MTL Zirconia in CEREC Primemill.



The crown right before sintering.



The crown is placed in CEREC SpeedFire.



Final crown.