

Prime Collection
Clinical Cases



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Dear Readers,

Unique, fascinating and inspiring: With this booklet you are about to discover the new collection of Prime clinical cases. We are very pleased to share a variety of cases done with the latest generation CEREC system.

With CEREC Primescan, CEREC Primemill and CEREC SpeedFire restorations can be manufactured from a wide variety of materials at an extremely high speed. Quality has also reached a new level with precise designs, finely-milled surfaces and margins, and excellent accuracy of fit. Everyone who has experienced this innovation live quickly appreciates its value. This modern system is also incredibly easy and intuitive to operate.

The clinical cases presented here originated in the clinics and practices of expert users. We would like to take this opportunity to thank them sincerely for their critical and constructive support during the entire development process. Without them, it would not be possible to create the solutions that move you and dentistry forward every day.

By means of these clinical cases, your colleagues demonstrate the wide range of indications applicable for CEREC - from single-visit restorations to highly esthetic challenges and comprehensive oral rehabilitation. Be inspired and experience how this sophisticated and smart technology can support you in your work to make the treatment experience for your patients better, safer and faster.

What our expert users created with the newest CEREC generation really impressed us as the developer and manufacturer of the equipment. We invite you to share our enthusiasm for the variety of new opportunities! We wish you interesting reading and look forward to hearing from you about your own experiences with the all-new CEREC.

With our best regards,

Dr. Alexander Völcker
Vice President
Digital Solutions Marketing

Alisa Rittel
Director Global Brand Marketing
Digital Solutions

A CEREC Zirconia single crown – Tooth 16, in 82 minutes

Case Description

A 58-year-old male patient came into our practice with a large carious lesion on the distal surface of tooth 16. The tooth was previously restored with a CEREC onlay in 2003 with Vita Mark II ceramic. It was doing well, but the caries was large enough that a new restoration was indicated for the entire tooth. The large buccal abfraction was also a concern for the patient, so he wanted that covered as well. While waiting for the anesthetic, much of the digital work could already be completed. With the CEREC Primescan and the CEREC Primemill it is now possible to complete two workflow steps simultaneously. After scanning and creating the model, the margin was marked and approved and the proposal was completed. The CEREC software analyzed adjacent teeth to find the best anatomical shape that fit the patient. The milling strategies were calculated, and the proposal was displayed as it would be milled. The design for the molar was sent to the CEREC Primemill where the CEREC Zirconia block and the milling burs were ready to make a crown come to life. The entire time for milling was 4:22 minutes. Zirconia can be milled in Super Fast mode, resulting in sub-5-minute milling which reduces the overall process by approximately 10-15 minutes. Because the CEREC Primemill and the CEREC SpeedFire are seamlessly connected, the sintering cycle is automated and made very efficient. Standard sintering times can be as short as 18 minutes depending on materials and proposal design. The manufactured restoration was easily cemented with a resin-modified glass ionomer. Total treatment time was 1:22 hours, including preparation of the tooth and fabricating the restoration.

Discussion

The CEREC chairside system has always been known for its speed in delivering a restoration. In this particular case of a single unit, it requires usually just seconds of time to image the preparation. After imaging, the biogenic proposal takes about 15 seconds. The clinician may do minor adjustments and changes of occlusion at his or her discretion. Finally, at the point of cementation, the clinical procedure is fast because CEREC supports you in producing predictable outcomes with regards to the anatomy, interproximal contact, and occlusion. The advancing technologies in zirconias are bringing out better esthetics with every generation. The design of the restoration enabled the restoration to fit interproximally and occlusally without any adjustment.



Dr. Todd Ehrlich, DDS, FAGD
Austin, USA



Before:

Large carious lesion on the distal surface of tooth 16, with 16-year-old onlay.



After:

Highly esthetic full-surface zirconia crown.

Clinical Images



16-year-old onlay.

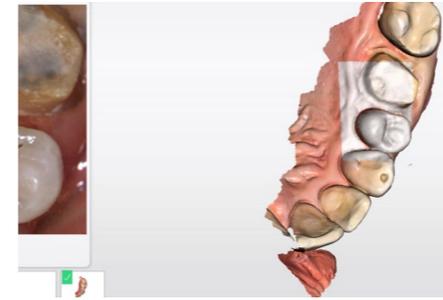


The manufactured restoration is ready for the patient and is cemented. The advancing technologies in zirconias are bringing out better esthetics with every generation. Being a blended translucent ceramic, the material is getting closer and closer to the optical characteristics of tooth structure.



This blended nature works extremely well on the buccal surfaces where the patient would likely be evaluating the esthetics.

Workflow Images



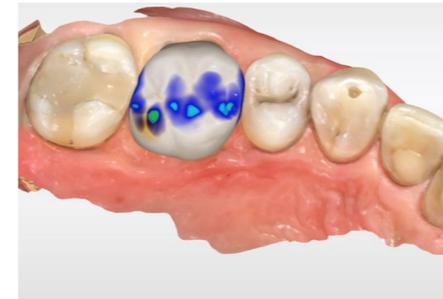
With the intuitive nature of the CEREC Primescan, the models are scanned efficiently. Much of the scanning was already completed prior to preparation.



After the margin has been marked and approved, the proposal is completed. The CEREC software analyzes adjacent teeth to find a very good anatomical shape that fits the patient. This is the biogeneric calculation, and it greatly reduces the amount of time of the design process.



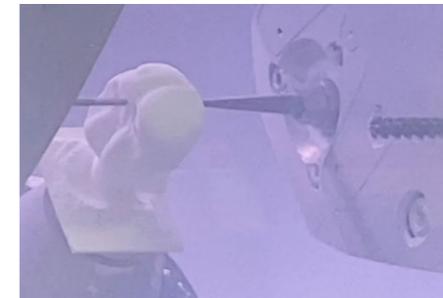
Aligning cusp tips and the flow of the occlusal table is totally customizable by the user for which a true custom restoration is produced for the patient.



Mapping the occlusion pattern is completed with just a few clicks. The touch screen interface of the CEREC Primescan makes the workflow intuitive for new users.



The milling paths are calculated, and the proposal is displayed how it will be milled. This is customizable as well.



The design for the molar is sent to the CEREC Primemill where the block and the milling burs are ready to make a crown come to life. The large burs mill in parallel while the crown form becomes visible. It almost appears like the crown is being released free of the confinements of the zirconia block! To finish up all of the fine detail, the two small burs take over. Being so small and sharp, these burs can make very detailed tertiary anatomy. The entire time for milling was 4:22.

An IPS e.max CAD single crown - Tooth 16, in 60 minutes

Case Description

A female patient, 47 years old, presented with a slightly intermittent sensitivity to cold at tooth 16. The clinical examination as well as the radiological findings indicated a large insufficiency of the composite filling with distal marginal ridge cracks, a lingual wall crack, and distal recurrent decay. The tooth was not sensitive either to percussion or palpation and showed no signs of apical inflammation. A cracked tooth syndrome was diagnosed. Due to the size of the filling and the caries to be treated, a core buildup and a full cuspal coverage ceramic crown restoration was planned. After local anesthesia with 4% Septocaine® (1:100k epi), we selected the material and the color for the restoration: IPS e.max CAD A3 MT. Prior to the preparation and design of the new restoration, my assistant prepared the CEREC Primemill by inserting the block and starting the pre-touch process. After the initial scan of the upper and lower jaw with CEREC Primescan, I removed the filling. This confirmed the initial diagnosis of a fracture in the lingual wall. Following the excavation, I applied a composite core build-up (3M Vitrebond, Empress Opaque, Ivoclar Vivadent). In this case, I was able to complete the preparation in a way that the enamel was retained in the buccal wall. Subsequently, I took a new digital impression with the CEREC Primescan. I then defined the preparation line in the digital model. The CEREC software provides excellent support in this respect. I was satisfied with the first restoration proposal, which I accepted without any changes. During the design phase I paid particular attention to the fissure height and contours, the correct occlusion and the contact points. After grinding with CEREC Primemill I crystallized and glazed the crown. I made a short final check and could place the crown using adhesive. The patient was very happy with her experience and grateful for being able to have her tooth restored with a permanent, strong, and highly esthetic crown in a single visit that took just over an hour. Since then, she has been completely free of symptoms.

Discussion

The clinical case demonstrates how quickly and efficiently the new CEREC Primemill allows a full-surface glass-ceramic crown to be fabricated chairside in a single session, while meeting the highest esthetic demands. I can no longer imagine practicing without CEREC Primemill.



Dr. Karyn M. Halpern DMD, MS
New York, USA



Before:

Large insufficiency of the composite filling on tooth 16 with distal marginal ridge cracks, a lingual wall crack and distal recurrent decay.



After:

Highly esthetic full-surface glass-ceramic crown.

Clinical Images



Patient presented with chief complaint of mild intermittent sensitivity to cold beverages and pointed to tooth 16.



The previous failing restoration was removed, and both mesial and distal recurrent decay was found and excavated. No pulp was exposed upon completed excavation. A composite core buildup was completed using a glass ionomer liner (3M Vitrebond) and composite resin (Empress Opaque, Ivoclar Vivadent).



After crystallizing and stream cleaning the restoration, the e.max CAD was prepared for bonding and bonded with resin cement.



The local parameter marginal thickness was adjusted to 100µm. The design phase was then completed with very little modification to the fissure height and contours. The design was evaluated for proper occlusion, contacts and contours.



Since the touch process had been completed in advance, the grinding began right away after the restoration was sent to the CEREC Primemill. The e.max restoration was grinded in 3:54 without any marginal chipping. The fit was checked and no further adjustments were needed.

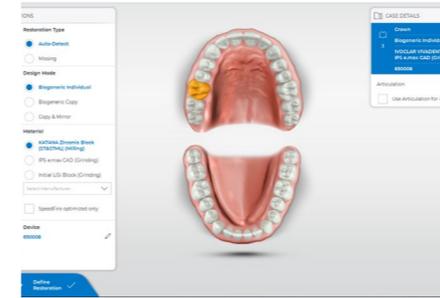


The restoration was then glazed and stained using Ivoclar Vivadent IPS e.max CAD Crystall Shades, Stains and Glaze Paste.

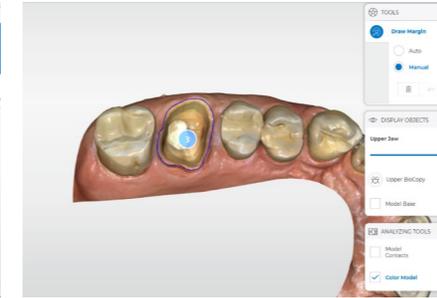


It was then crystallized in the Ivoclar Programat CS furnace.

Workflow Images



The patient information and the Administration Phase was completed, designating IPS e.max CAD for the restoration.



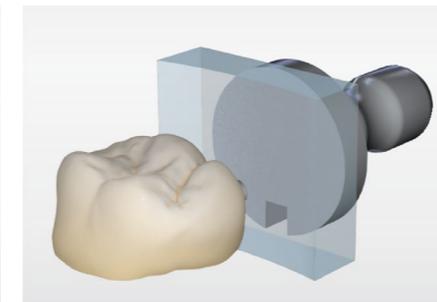
Auto margination was completed by the software and no modifications were needed.



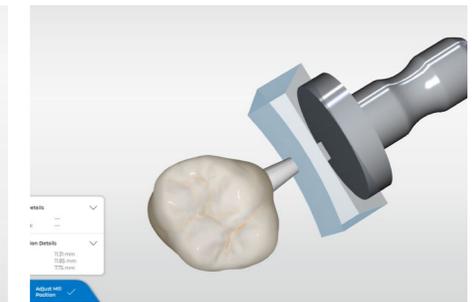
Design proposal.



The design was evaluated for proper positioning, contours, occlusion, and contacts.



In the Manufacture Phase the sprue was automatically proposed on the lingual surface.



The restoration was then sent to the CEREC Primemill.

An IPS e.max CAD single crown - Tooth 26, in 75 minutes

Case Description

A 32-year-old male patient consulted my practice due to decay and a failing direct composite restoration on tooth 26. The treatment plan was to fabricate a full coverage crown for this tooth in a single visit. After infiltrative administration of anesthesia with Septocaine®, tooth 26 was prepared for a crown. The digital impression was then taken with CEREC Primescan and the crown was designed in CEREC SW 5.1. The initial software proposal was perfect and the design didn't need to be modified. For the crown we chose an IPS e.max CAD block shade A2 MT size 26. After placing the block in the CEREC Primemill, we initiated the pre-touch process, even though the crown had not yet been designed. The advantage of the pre-touch process is that my assistant can prepare the milling unit while I'm working in the patient's mouth and the fabrication process can begin as soon as the start button is pressed. With CEREC Primemill, the restoration was completed in a very short time. Due to the pre-touch step and the grinding protocol itself, the entire grinding process has become faster overall. After sintering and glazing in the CEREC SpeedFire, the crown was ready to be fixed with Calibra Ceram. In total, the treatment time was only about 75 minutes.

Discussion

Producing restorations in just one session is now faster than ever before. A quick and very accurate scan, manageable and intuitive design software, combined with a milling and grinding unit that completes a restoration in just a few minutes, makes for a significant increase in efficiency and greater patient satisfaction with my practice.



Dr. Dan Butterman
Centennial, USA



Before:

Tooth 26 presenting decay and a failing direct composite restoration.



After:

Highly esthetic and functional lithium disilicate ceramic crown.

Clinical Images



Pre-op tooth #26 with a failing composite restoration and recurrent decay.

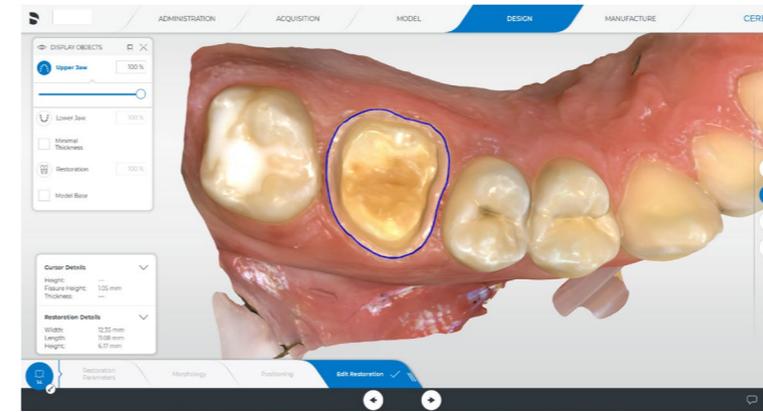


The old restorative material and the decay were removed, and the tooth has been prepared for a full coverage crown.

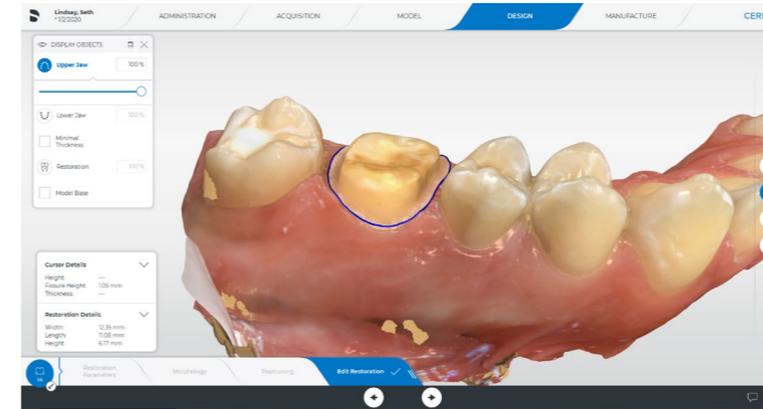


The final e.max crown bonded in place.

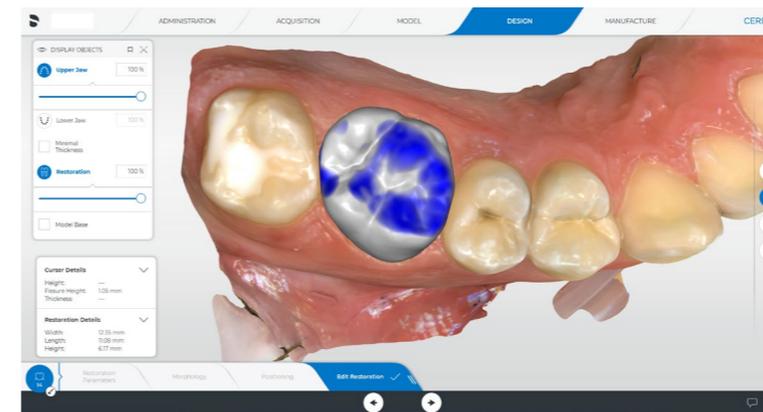
Workflow Images



Top view of the initial model with successful automargination.



Side view of the initial model. The margin did not need to be edited.



The initial crown proposal, no tools needed to be opened to edit this restoration because the initial proposal was perfect.

A Katana Zirconia STML single crown – Tooth 45, in 90 minutes

Case Description

A 21-year-old student came to my practice and wanted an esthetic solution for her tooth 45. She reported dissatisfaction with a root canal treatment done elsewhere and was very unhappy about the discoloration of the tooth now, which led to an inconsistent overall impression. For the patient, a temporary restoration was not an option, also for cost reasons. The x-rays, which had to be done because of the risk of a fracture or a trauma were unremarkable. In order to optimally cover the discoloration, it was necessary to use a slightly translucent material. We decided to use Katana Zirconia STML in shade A3 to perfectly meet the esthetic requirements. The crown was created with the classic CEREC workflow using CEREC Primescan for the digital impression, CEREC Software 5.1.1 for the design, and CEREC Primemill for milling the restoration. With the Fast mode the production time was only 8:35 minutes. The try-in of the sintered crown showed a very good fit. Before we permanently seated it with Calibra Cement, we individualized the restoration with stains and a glaze. Our goal was to fit the crown precisely into the overall tooth structure.

Discussion

Thanks to the newly achieved CEREC workflow time, the restoration of this premolar was very well suited for the chairside treatment with zirconia, which took only about 90 minutes in total. We were able to use full contour zirconia, a material that has good properties for this area of the tooth and, thanks to the wide range of shades available, also offers sufficient results for esthetic requirements. We deliberately decided against a multilayer material in order to achieve the desired low translucency. The patient was very happy with the result.



Dr. Gertrud Fabel
Munich, Germany



Before:

Discolored tooth 45 as a consequence of a previous root canal treatment.



After:

Translucent zirconia crown with individualized finishing.

Clinical Images



Discolored root treated tooth.



Discolored root treated tooth.



First try in after sintering in CEREC SpeedFire.

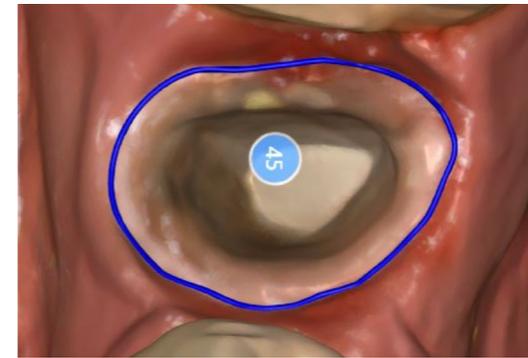


Final restoration with individualized finishing.

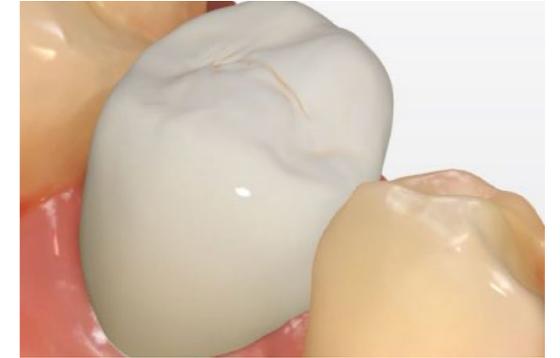


Postprocessing: stain and glaze by my dental assistant.

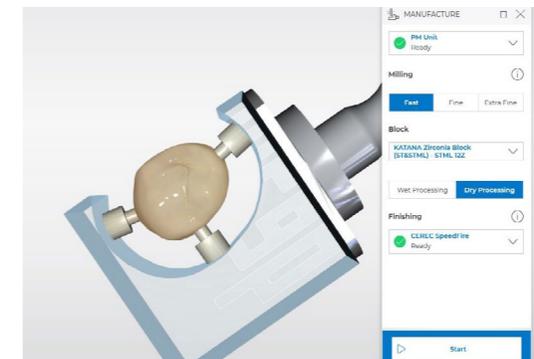
Workflow Images



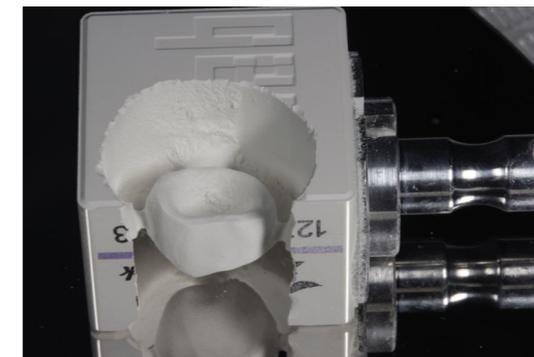
Preparation with enough space for material.



Construction.



Milling mode: fast - to have more time for postprocessing.
Material: Katana Zirconia STML A3.



Milling time 8:35 min.

A Katana Zirconia STML single crown – Tooth 26, in 90 minutes

Case Description

A 72-year-old patient came to my practice with a fractured metal-ceramic crown on tooth 26, which had previously been treated endodontically. The tooth was free of caries and oral hygiene was very good. Our plan was to maximize the resistance and retention shape and to fit the tooth with a new full zirconia crown. Since the remaining upper jaw had already been restored with IPS e.max CAD restorations, the translucency had to be adapted as well as possible. For this reason, we chose Katana STML as the material. The shade selection was carried out right after anesthesia. The result (A2) was then entered into CEREC Primemill. After completing a bonded buildup, we started the preparation for the zirconium crown. We prepped to the gumline with a 1.0 mm modified shoulder (Winter Shoulder) and reduced occlusally by 2.0 mm to guarantee the final restoration had accurate anatomy and at least 1.0 mm thickness. We refrained from using a retraction thread. After preparation, the lower jaw, upper jaw and buccal bite were recorded with CEREC Primescan in Acquisition Phase. The CEREC Software 5.1.1 gave an excellent initial proposal and only a few adjustments were necessary. Extra Fine milling mode was utilized to achieve the highest detail and esthetics. This is a feature of CEREC Primemill that allows the dentist to use a 0.5 mm finishing bur to create extra detail and trueness when required for a particular clinical scenario. We needed approximately 24 minutes for the milling process and achieved a truly excellent result. We started the sintering process immediately afterwards without any further adjustments, and it was finished after 18 minutes. After sintering, the functional surfaces were polished and then stained and glazed in the CEREC SpeedFire. We cemented the restoration conventionally using resin modified glass ionomer. The total treatment time was about one and a half hours.

Discussion

The final restoration fit excellently and needed no post-cementation adjustments. The great thing about the Extra Fine Milling mode is that it provides us with the option to create additional detail. The CEREC Primemill not only brings speed to the appointment, but also versatility in milling strategies. In this case we chose the Extra Fine milling mode to achieve maximum esthetics and attention to details as possible.



Dr. Mike Skramstad, DDS
Orono, USA



Before:

Fractured metal-ceramic crown on tooth 26, which had previously been treated endodontically.



After:

Translucent full zirconia crown for an esthetic result with maximum resistance and retention shape.

Clinical Images



Preop tooth #26



Extra Fine milled crown out of milling unit



Preparation tooth #26



Prepolished crown before sintering



Final restoration using Extra Fine milling and Katana STML tooth #26

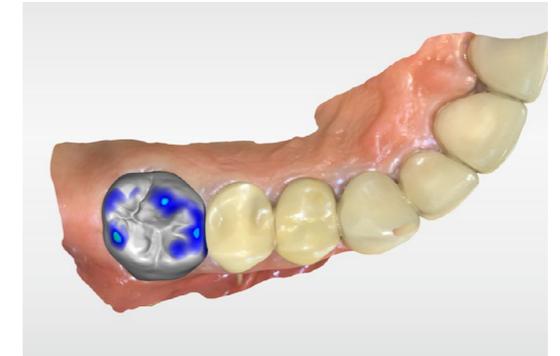


Final stain and glaze

Workflow Images



Auto Margination



Proposal Design Phase



Extra Fine milling Setup

A CEREC Tessera inlay - Tooth 26, in 100 minutes

Case Description

A 42-year-old female patient came to my practice with mild pain and a bothersome feeling when chewing on tooth 26. On examination, a fractured ceramic restoration was revealed, but no secondary caries. The patient remembered having received this inlay 12 years ago. It consisted of a leucite-reinforced glass-ceramic, which was adhesively cemented. The patient wanted a replacement of the inlay made of tooth-colored material that would last as long as possible. A chairside manufactured inlay made of a modern lithium disilicate material (CEREC Tessera) was planned. It offers a strong combination of improved fracture strength (700 MPa) and translucency, enabling a reduced minimum material thickness of 1.0 mm for adhesively cemented posterior restorations. The good esthetic properties and short processing times predestined CEREC Tessera for this indication. First, the fractured inlay was removed. Subsequently, the margins were finished with fine-grained diamond instruments. The retraction cord placed on the mesial approximal surface was used to control moisture and shift the preparation margin. This was followed by intraoral scanning with CEREC Primescan, inlay design in the CEREC SW 5.1.2 and grinding with CEREC Primemill. The grinding process in "Fine" mode took just over ten minutes. The subsequent try-in focused on checking the occlusal contacts. This was possible because the material was ground out in a pre-crystallized stage. After application of a glaze spray, the restoration was sintered in CEREC SpeedFire with the single-stage glaze program lasting four and a half minutes. The restoration was cemented using the total-etch technique with a universal bonding agent (Prime&Bond active) and a self-adhesive cement (Calibra Universal). No further occlusal adjustments were necessary. Thanks to the exceptional chameleon effect of CEREC Tessera, the restoration blended perfectly with the natural dentition. The patient was very satisfied with the esthetic result.

Discussion

The chairside restoration of the tooth in a single visit proved to be a particularly effective and comfortable solution for this patient, as her commute to the practice was around 50 kilometers. CEREC Tessera was used, a material that offers improved fracture resistance compared to other high-strength glass-ceramics. The rapid sintering cycle further shortened the overall treatment time, enabling the patient to receive a highly esthetic and final restoration in just 100 minutes.



Dr. Sven Rinke
Hanau, Germany



Before:

Fractured ceramic restoration made from a leucite-reinforced glass-ceramic after a clinical service time of 12 years.



After:

Chairside-fabricated restoration made from an advanced lithium-disilicate ceramic CEREC Tessera.

Clinical Images



12-year-old inlay.

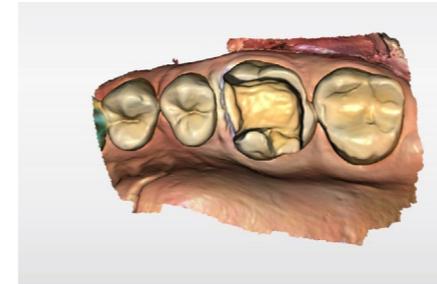


Preparation for a ceramic inlay and placement of a retraction cord prior to intraoral scanning.

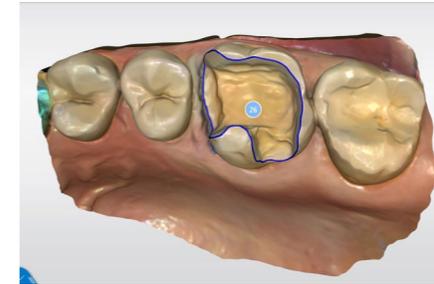


Adhesively luted CEREC Tessera inlay. The inlay was luted with the total-etch technique in combination with a universal bonding agent (Prime&Bond active), and a dual-curing composite cement (Calibra Ceram).

Workflow Images



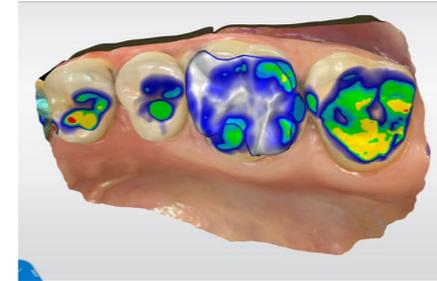
Intraoral scan of the upper and lower jaw using CEREC Primescan.



The preparation limit was automatically detected and marked by the CEREC software.



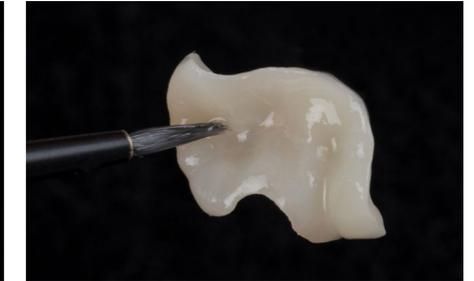
Design proposal generated with the function "biogeneric individual".



Slight modification of the design proposal was needed to adjust the occlusal contacts.



Restoration milled from an advanced lithium-disilicate ceramic (CEREC Tessera) in CEREC Primemill.



For the final crystallization process, a glaze firing (DS Universal stain & glaze) is mandatory.



The internal surface of the inlay restoration is etched with a 5% hydrofluoric acid for 30 seconds.



A silane coupling agent (Calibra Silane, Dentsply Sirona) was applied prior to adhesive luting of the restoration.

Four IPS e.max CAD single crowns – Teeth 12-22, in 4 hours

Case Description

A 53-year-old patient came to my practice with problems in her front teeth. The examination revealed inadequate fillings on teeth 12-22 and an uneven gingival line on 12 and 11. The patient turned down the option of a surgical adjustment. In addition to the aforementioned problems, the contour of the incisal edges was severely eroded and inconsistent. The patient suffered from these esthetic issues and she hardly dared to smile. We planned to restore the four teeth in one session with single crowns. Due to the C3 tooth shade, I decided to make her restorations with IPS e.max CAD, a lithium disilicate ceramic. The restoration of 23-26 would be adjusted later to achieve consistent esthetics. The patient explicitly asked for this. For the restoration, I followed the classic CEREC protocol. In the virtual model I slightly corrected the automatically marked preparation margins and made an intraoral comparison. I then designed the crowns chairside. We fabricated all four crowns in succession with the CEREC Primemill. It took approximately ten minutes in the Fine mode for each one. The crowns were smooth and esthetically pleasingly structured as planned. After glazing and individualization, the crowns could be sintered in the CEREC SpeedFire. To create even greater optical transparency, enamel was simulated with blue ceramic stain. After sintering, the restorations were fitted once again, prepared with phosphoric and hydrofluoric acid as well as silane and adhesively bonded under the rubber dam and teflon tape for contact point isolation in two sections with Prime&Bond active and Calibra CERAM adhesive and then trimmed. After an occlusion check, the new crowns received a final polish. In the end, the total treatment time took less than 4 hours and resulted in a patient very satisfied with the esthetic results and with her new beautiful smile.

Discussion

For anterior teeth, particularly high esthetic requirements apply. These requirements can also be met very well with ceramic-veneered metal or ceramic crowns. However the disadvantage is that a conventional impression and a temporary restoration would have been necessary until the final restoration was completed in a lab. Not all patients can cope with this, especially in the anterior region. In addition, the restoration with all-ceramic crowns did not require subgingival preparation to cover the margin and no dark metal shadows disturbed the esthetics. With CEREC Primescan and CEREC Primemill patients receive a high-quality all-ceramic restoration faster than ever before.



Claudia Scholz
Kiel, Germany



Before:

Inadequate fillings on teeth 12-22, an uneven gingival line on 12-11 and incisal edges severely eroded.



After:

Four highly esthetic and individualized lithium disilicate ceramic crowns.

Clinical Images

Insufficient fillings in the upper front and abraded incisal edges. The crowns 23-26 were made several years ago alieno loco and should be replaced with the next procedure.



Also from palatal the teeth 12-22 had a secure distraction.

The irregular line of the gingival margin.



After anesthesia the teeth were prepared.



After cementation with Prime&Bond and Calibra CERAM, lateral view.



After adhesive cementation with Prime&Bond and Calibra CERAM, front view.

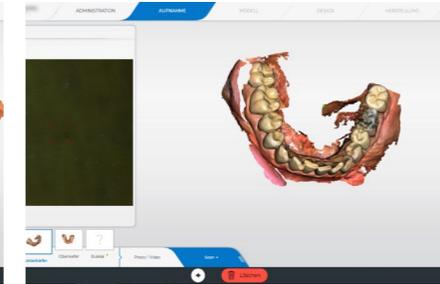


After cementation with Prime&Bond and Calibra CERAM, palatal view.

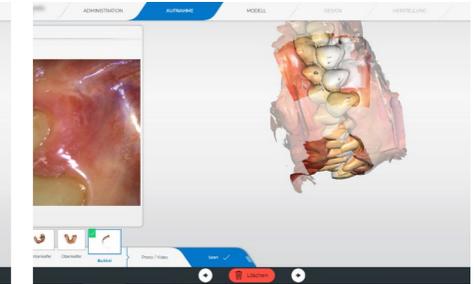
Workflow Images



The scan of the upper prepared jaw.



The scan of the lower jaw.



Buccal occlusion.



The system showed a perfect preparation line.



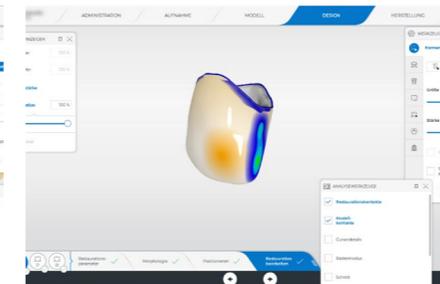
Only minimal corrections of the preparation line were made.



Preparation analysis to identify potentially problematic areas. In this case there were none.



The construction from the labial side.



The design of the proximal contact point.

Ten VITA Suprinity PC single crowns – Teeth 15-25, in 2 sessions

Case Description

A 62-year-old female patient came into my dental office for a check-up and dental cleaning. She has been a patient in the practice for seven years and now complains that she hardly dares to smile. She was dissatisfied due to discoloration and wanted to improve her smile. In the first session, all the information and data for the CEREC Smile Design process was recorded: thorough anamnesis, conversation on the treatment goal, clinical examination. In addition to communication, documentation is an important success factor. An intraoral scan with the CEREC Primescan was taken to create a 3D model - the basis for a mock-up. This was then used to make the final decision for the planned treatment with the patient. A full arch scan was taken for preparations and from mock-up, adding to a Biocopy folder. A very important step was to set the model axis and insert axis for best grinding results. After the initial proposal, the CEREC Smile Design application was activated to finalize the design of the restoration using the patient's face and smile. We used a grid in the software to align the teeth to a suitable length. VITA Suprinity PC was selected for the crowns from tooth 15 to 25. Suprinity is a zirconia-reinforced, high-strength glass ceramic with high esthetics because of the integrated translucency, opalescence and fluorescence. In the Fast mode of the CEREC Primemill it took an average of six minutes to grind a single restoration. After removing the block, the interproximal line angles as well as the form of the tooth were contoured, creating the ideal emergence, shape, texture, and form. Restorations were finished and polished and showed passive fit in the printed model. Afterwards, all ten crowns were crystallized. In order to achieve a highly esthetic result, the crowns were individualized with stains. Restorations were fixed using adhesive (Clearfil Universal Bond Quick, Panavia SA Cement Universal, Kuraray Noritake).

Discussion

The patient wanted a beautiful smile. As teeth 15 to 25 are all visible, the decision was made to use a highly esthetic ceramic for all 10 of them. Due to the extensive consultation and the implementation with a mock-up, the restoration was carried out in two sessions with CEREC. The patient was very satisfied with the result.



Dr. Daniel Vasquez
San Diego, USA



Before:

Patient, dissatisfied with her smile due to tooth discoloration.



After:

Ten highly esthetic single crowns individualized with stains.

Clinical Images



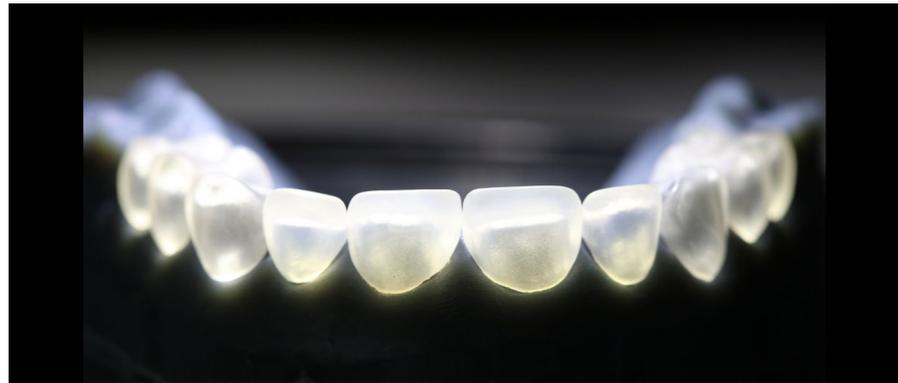
Initial situation



Initial impressions: CEREC Primescan was used for the creation of 3D printed models, the key for ideal mock-ups. - CEREC Digital Study models and Bite registration (MIC or CR).



Emotional mock-up is transferred to patient teeth, after patient approval we were ready to start the proposed treatment.

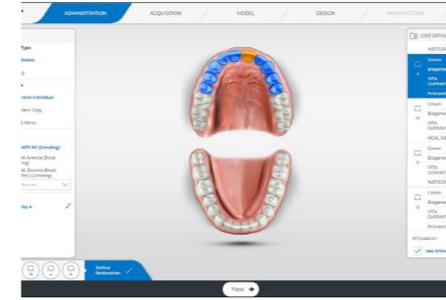


Restorations are finished, polished and passively fitted in the printed model. Next step is crystallization of the zirconia-reinforced, high-strength glass ceramic, all 10 restorations will be placed in the VITA SmartFire oven.

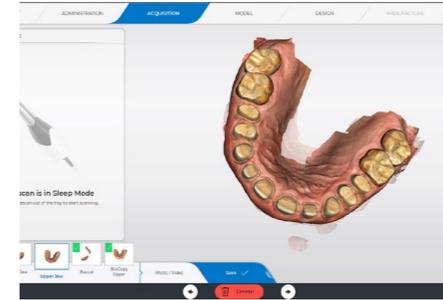


Final restoration.

Workflow Images



Open CEREC 5.1.1 Software and on Administration phase we add restorations and the material to be used in this case was selected: VITA Suprinity PC.



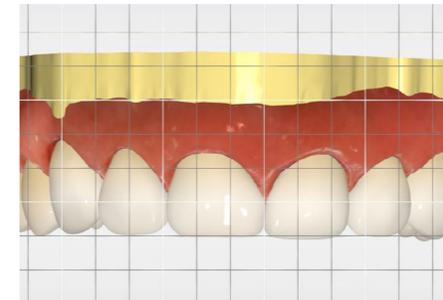
Full arch scan was taken of the preparations, and from mock-up adding a Biocopy folder.



Setting the model axis and insertion axis are key for best grinding of restorations in the manufacturing phase.



Upper and lower digital models articulated ready for Design phase.



Restoration proposal, using grid to align teeth to length.



After the initial proposal, the CEREC Smile Design application was activated to finalize the design of the restoration using the patient's face and smile.



Design tools are used to do small touchups in the CEREC Smile Design application.



The new CEREC Primemill was used for the grinding of the restorations. Entering block information using the CEREC Primemill digital touchpad.



Vita Suprinity PC was selected for the restorations. Suprinity is a zirconia reinforced, high-strength glass ceramic with strength of 541MPa. Precise results thanks to material blanks with high edge stability and most important I like the high esthetics thanks to integrated translucency, opalescence and fluorescence.

Ankylos implant placement and two CELTRA DUO crowns – Teeth 12 and 22, in 180 minutes

Case Description

A 22-year-old female patient came to my practice. The medical history revealed that teeth 12 and 22 were missing due to dental agenesis and had been replaced by implants. This solution did not please the patient at all. She hid her smile and felt inhibited around company. She wished to be able to laugh again with confidence. Restorations in the anterior region pose a particular challenge, especially from an esthetic point of view. In this case, the absence of teeth 12 and 22 and the bone loss caused by the first implants, which had not been optimally placed, also had to be taken into account. After their removal, augmentation with a bone graft and a collagen membrane (Bio-Oss, Bio Gide, Geistlich) was necessary. In a second surgical step six months later, two Ankylos implants (A9) were inserted and a soft tissue graft was placed. The patient then received chairside fabricated temporaries. After a further three months, I provided the patient with a final CEREC restoration. I took a digital impression with CEREC Primescan in conjunction with the TiBase Ankylos CEREC GH2, including scan post and scan body, and then designed two crowns in the CEREC software which fit perfectly into the patient's dentition. Both crowns were then ground from a Celtra Duo HT block in shade A1 using CEREC Primemill. After staining and glazing in the CEREC SpeedFire, the restorations were cemented onto a custom zirconium abutment (InCoris Meso with TiBase), milled in the CEREC Primemill and sintered in the CEREC SpeedFire. These steps were carried out in a single visit, which lasted a total of approximately 180 minutes.

Discussion

For an adequate result from a functional and esthetic point of view, the removal of both previous implants was unavoidable. The treatment options were an orthodontic gap closure, a restoration with bridges or two single-tooth restorations with implants and chairside fabricated crowns, the latter of which the patient preferred. In the end, she was able to receive two completely new restorations in only three visits and was very happy with her new smile.



Dr. Fernando Peixoto Soares
São Paulo, Brazil



Before:
Initial situation

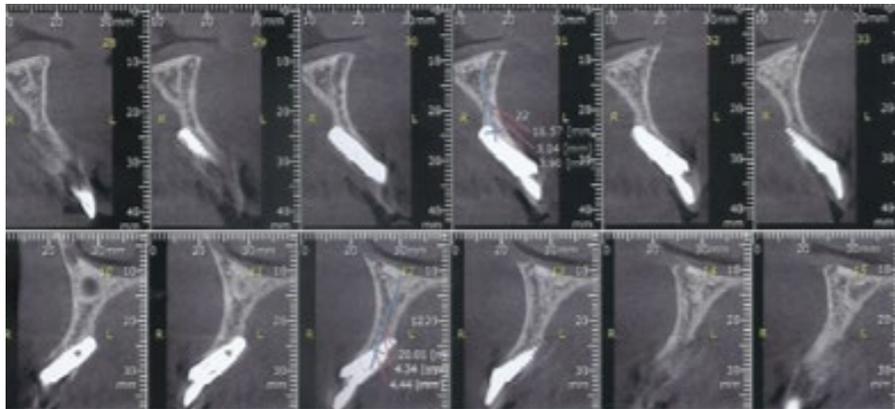


After:
Final smile

Clinical Images



Initial situation



The 3D-Xray demonstrates the sub optimally placed implants.



Nine months after removal of the old implants and three months after placement of the new implants. Scan of the new implant position with scan posts.

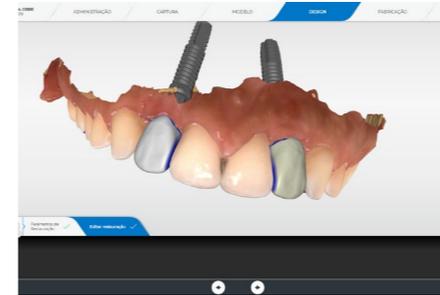


Final restoration of teeth 12 and 22.



Final situation

Workflow Images



Design of the crowns in the CEREC Software.



Milled zirconia abutment.



Adjustment of the CELTRA DUO crown on the InCoris meso abutment.

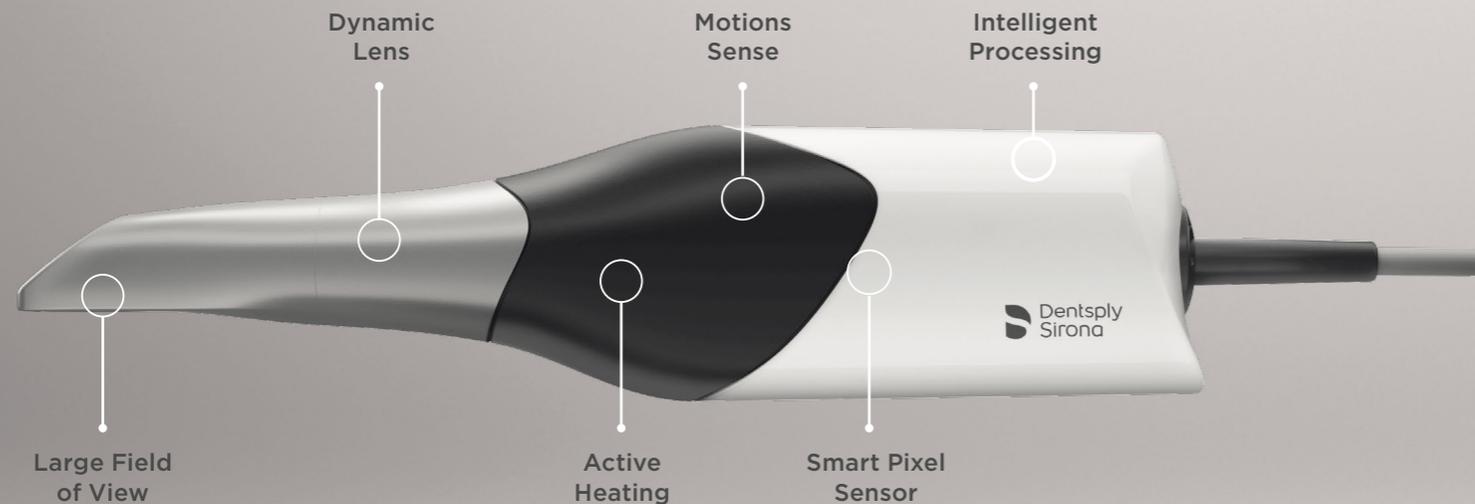


Marking for the esthetic adjustment of the crowns.

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