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## Replacement of failed tooth 16 (FDI) with Astra Tech Implant System® EV and Azento—Single tooth replacement solution

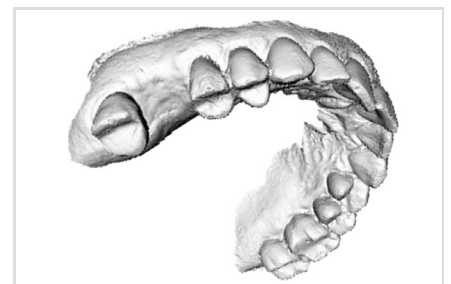
A 63-year-old woman presented to her general dentist with swelling and pain above tooth 16, four months after her gold crown broke off. The tooth was atraumatically removed. The site was grafted with Symbios® mineralized cancellous powder and protected for six weeks with a Symbios® OsteoShield® PTFE barrier membrane. Four months after extraction and grafting, prosthetically-based implant planning with Azento, using GALILEOS® CBCT and CEREC® CAD/CAM data, the procedure was performed. The custom healing procedure was chosen to help develop the soft tissue contours for the final prosthesis.



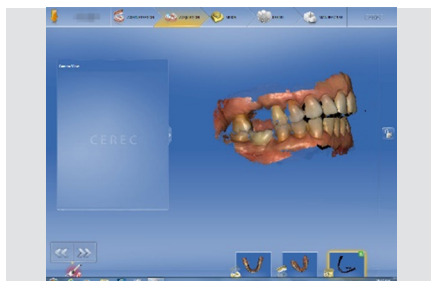
**1.** Pre-operative radiograph demonstrating periapical radiolucency and widened PDL space around the roots of tooth 16.



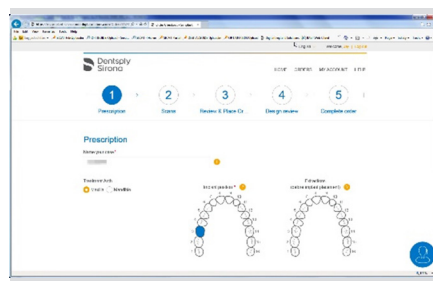
**2.** Four months after extraction and ridge preservation grafting, the edentulous space shows good bone volume and density needed for implant planning.



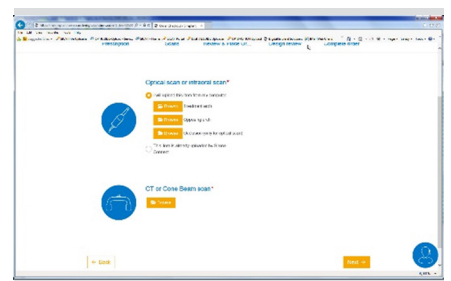
**3.** Digital rendering of maxillary arch and healed extraction site of tooth 16. Adequate ridge volume and keratinized tissue to allow for flapless implant surgery can be appreciated.



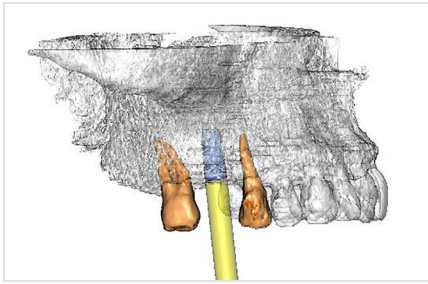
**4.** Digital impression of maxillary and mandibular arches in occlusion acquired with CEREC Omnicam. The CEREC Omnicam impressions are easily sent with a direct connection to the Azento portal.



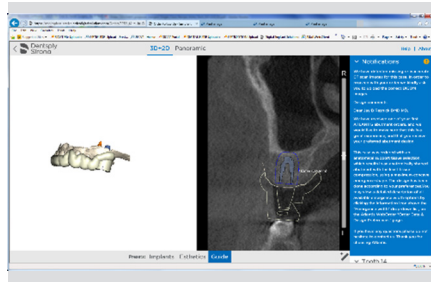
**5.** The Azento clinician portal facilitates efficient and easy case submission to Dentsply Sirona Implants for integrated implant and prosthetic planning.



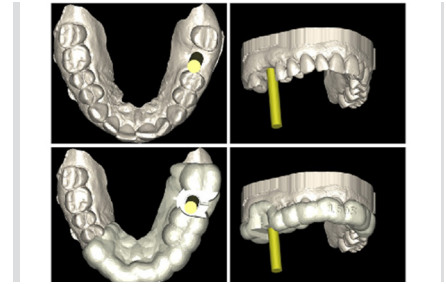
**6.** DICOM files from GALILEOS CBCT along with .stl files of both dental arches are selected and added to the order with just a few clicks of the mouse.



**7.** Within one business day of the case being submitted, Simplant technicians develop the prosthetically-based implant plan for approval by the clinician. Multiple views allow detailed assessment of the proposed implant position and prosthesis.



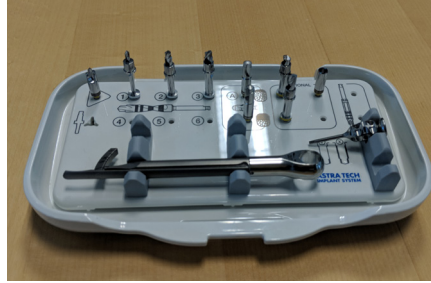
**8.** The Azento case viewer shows the implant position in the edentulous maxillary site as well as an interactive 3D view of the plan.



**9.** This detail view shows the axis of the proposed implant and relationship to the patient-specific Simplant SAFE Guide.



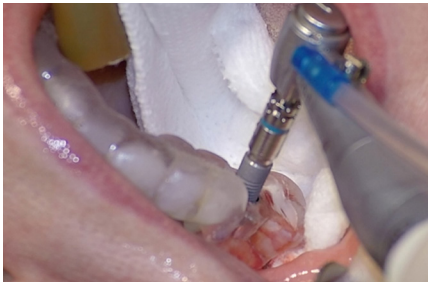
**10.** After case approval, the Azento solution arrives, containing the planned implant, Simplant SAFE Guide, drills, and custom healing abutment needed for fully-guided implant and restorative procedure.



**11.** The Small Tray EV, Surgical is used to stage the case specific drills and instruments for the procedure. The drills were delivered sterile with pre-assembled sleeves.



**12.** With the Simplant SAFE Guide in place, the final osteotomy is completed with precision and accuracy.



**13.** The implant is inserted through the Simplant SAFE Guide to control its position, angulation, and depth of placement, in accordance with the approved plan.



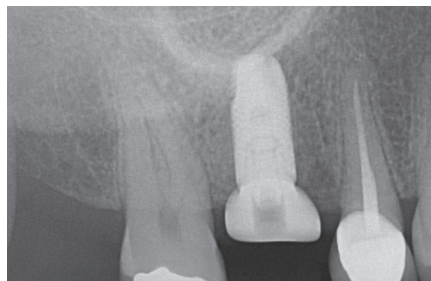
**14.** Once the implant has been seated to the proper depth, the insertion torque value is measured. The optimal value is 25 – 35 Ncm\*.  
\*Maximum torque 45 Ncm.



**15.** The OsseoSpeed EV implant in place, exactly as planned.



**16.** The Atlantis Healing Abutment is placed, with the abutment screw tightened with light finger force (5-10 Ncm).



**17.** Post-operative radiograph showing implant placement exactly as planned and the Atlantis Healing Abutment completely seated.



**18.** Clinical appearance at the four month post-operative visit, demonstrating good tissue health and support of the interproximal attached gingiva.