



Digital Workflow For A Full Arch Monolithic Zirconia Bridge On Six iSy Implants With Guided Surgery

Osman Er¹, Mücahit Öksüz², Yelda Dikimciler²

¹ DDS, Private Practice, Istanbul, Turkey ² CDT, Istanbul, Turkey

Introduction

Function and esthetics are very important for all kinds of dental restorations. For a fixed implant restoration, the positions of the implants and the emergence profiles are very important to have a good result. CAD-CAM systems help us for planning, as well as preparing the guide for guided surgery and fabricating the final restoration. Digital Workflow for a monolithic zirconia bridge on six iSy implants is presented in this case report.



Figure 1: Initial Situation

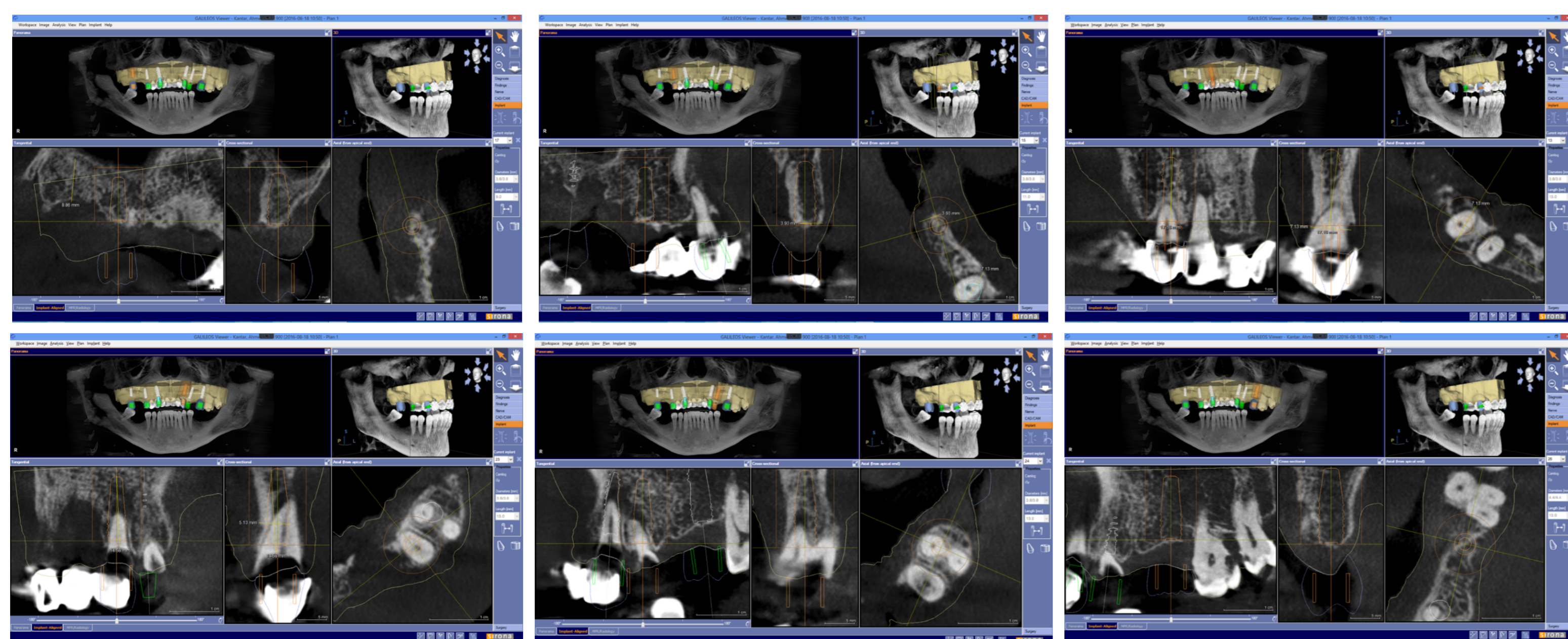


Figure 2: Implant Planning on GALLILEOS IMPLANT SW

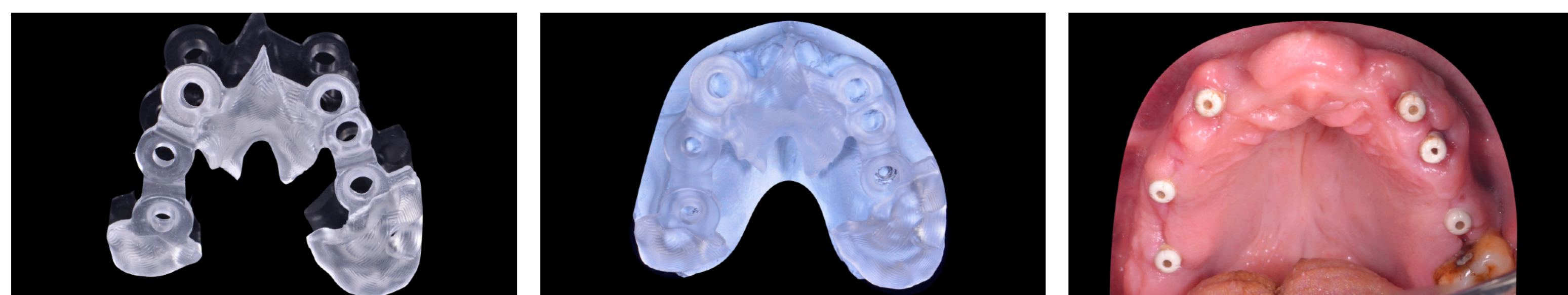


Figure 3: Surgical Guide

Figure 4: Implants Placed

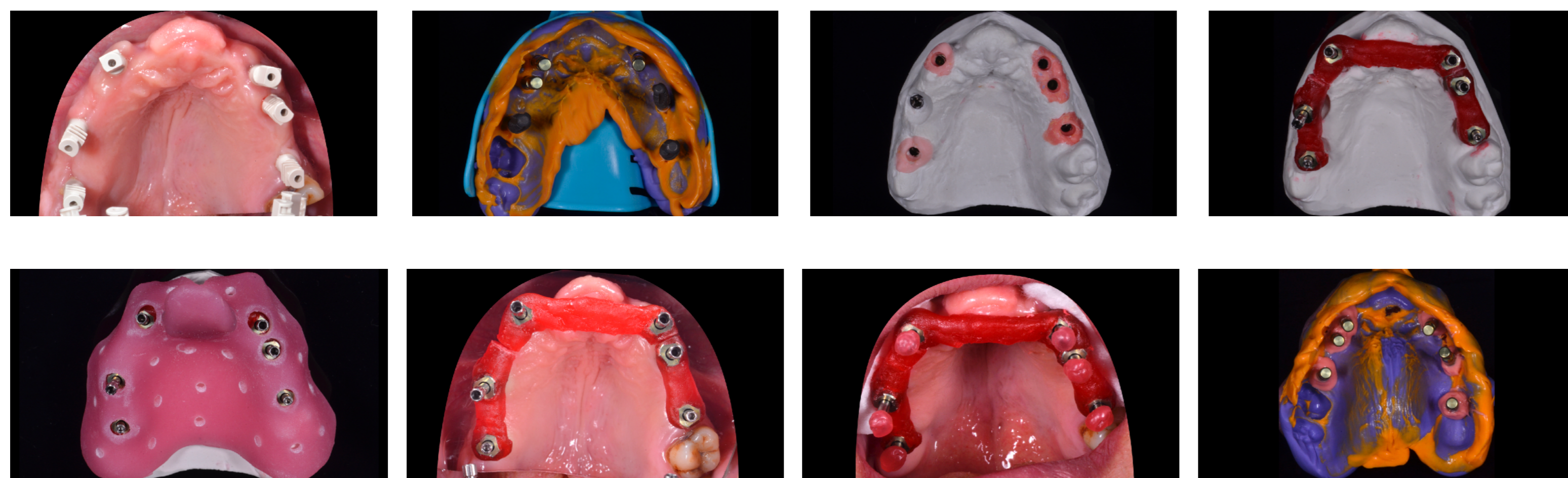


Figure 5: Impression Taking



Figure 7: Abutments and PMMA Temporary Bridge



Materials and Methods

The upper and lower jaws were scanned with CEREC AC Omnicam. The digital designs of the teeth were done with CEREC SW 4.4. They were exported with ".ssi" format to merge with the 3D X-rays of the upper jaw. The implants positions were planned on Gallileos Implant SW. The sleeves' platforms were positioned for the Camlog Guided Surgery Set. Then the plan was exported as ".cmg.dxd". The guide was designed on the "Inlab SW" and milled in MCX5 by Dentsply Sirona. The guided surgery was performed and 6 Camlog iSy implants were placed on 17, 15, 13, 23, 25, 26 where the bone was optimal. After the osseointegration period, silicone impression was taken with open tray technique. Then the impression was digitalized with InEos X5 lab scanner. Then the bridge was designed and milled with PMMA disc as a temporary and a mock up. The occlusion was checked and the corrections were done according to the mock up and second and final design of the bridge was milled also with PMMA disc. It was examined in the mouth and the monolithic zirconia bridge was milled with "Incoris TZI C" disc. It was sintered, stained and glazed using Dentsply Sirona Universal Stain and Glaze. The final restoration was temporarily cemented in the patients mouth.

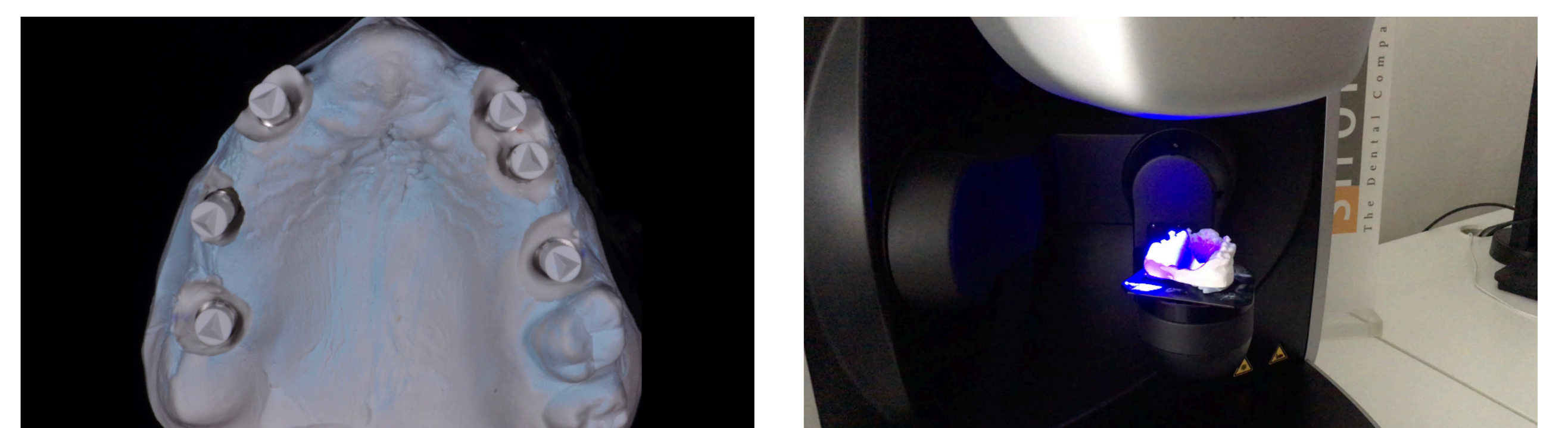


Figure 6: Impression Digitalization With InEos X5 Scanner



Figure 8: Monolithic Zirconia Bridge

Results and Conclusion

Digital Workflow helps clinicians and dental technicians for easier, faster and more precise implant treatments. This also helps the patient to have a more comfortable implant treatment.