

Utilizing a Conventional Dental Implant as Absolute Anchorage

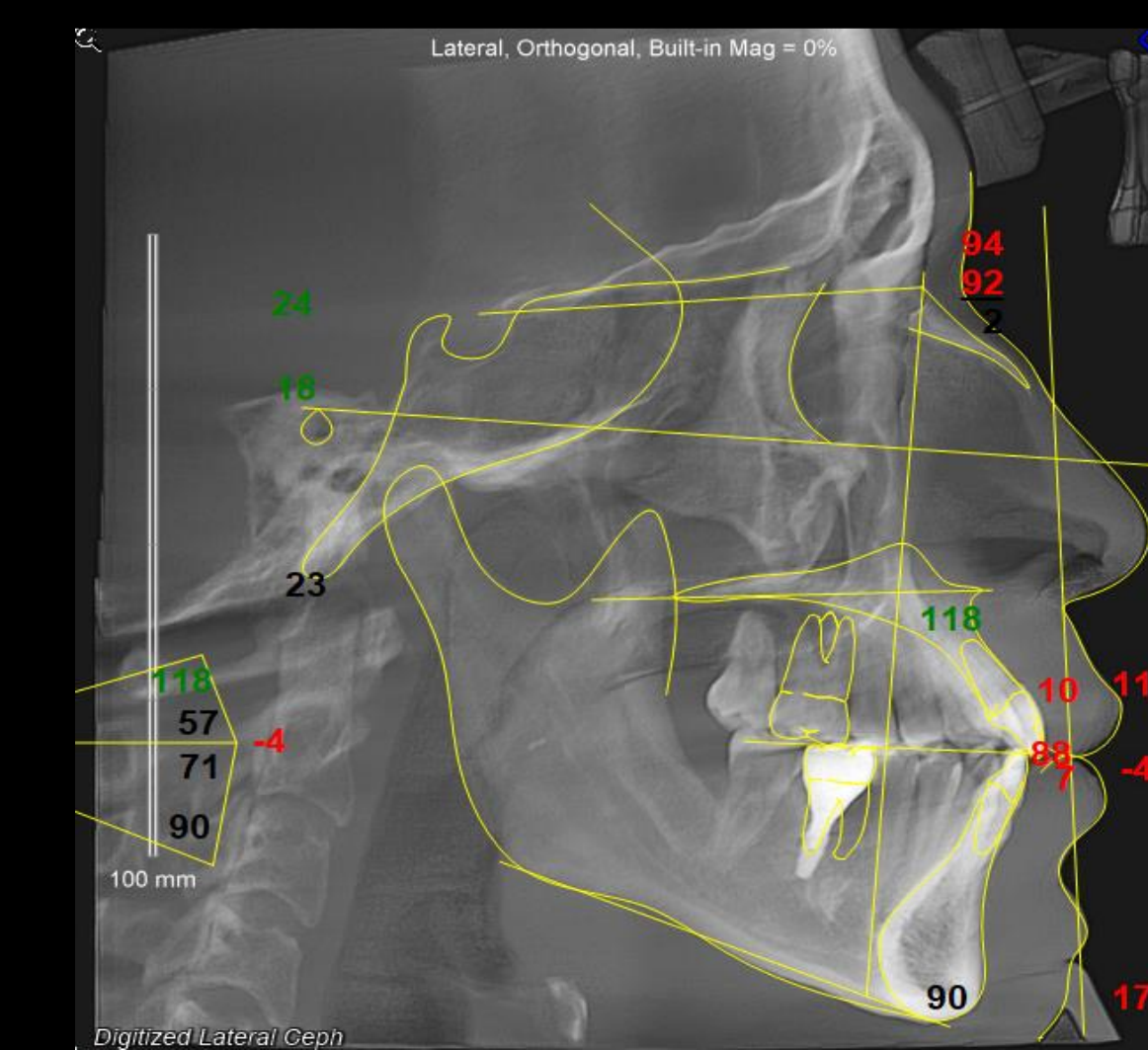
A Bracket Free Solution

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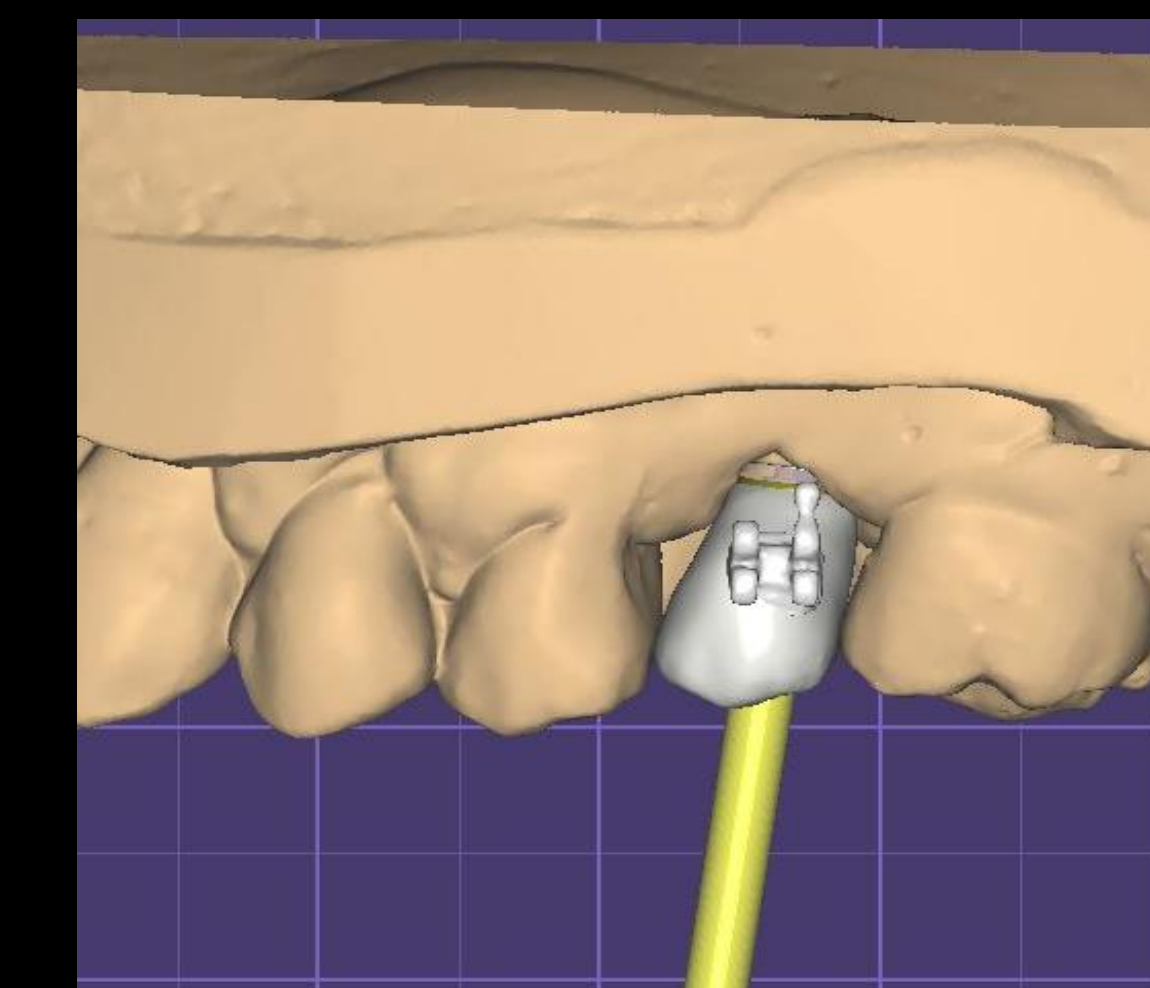
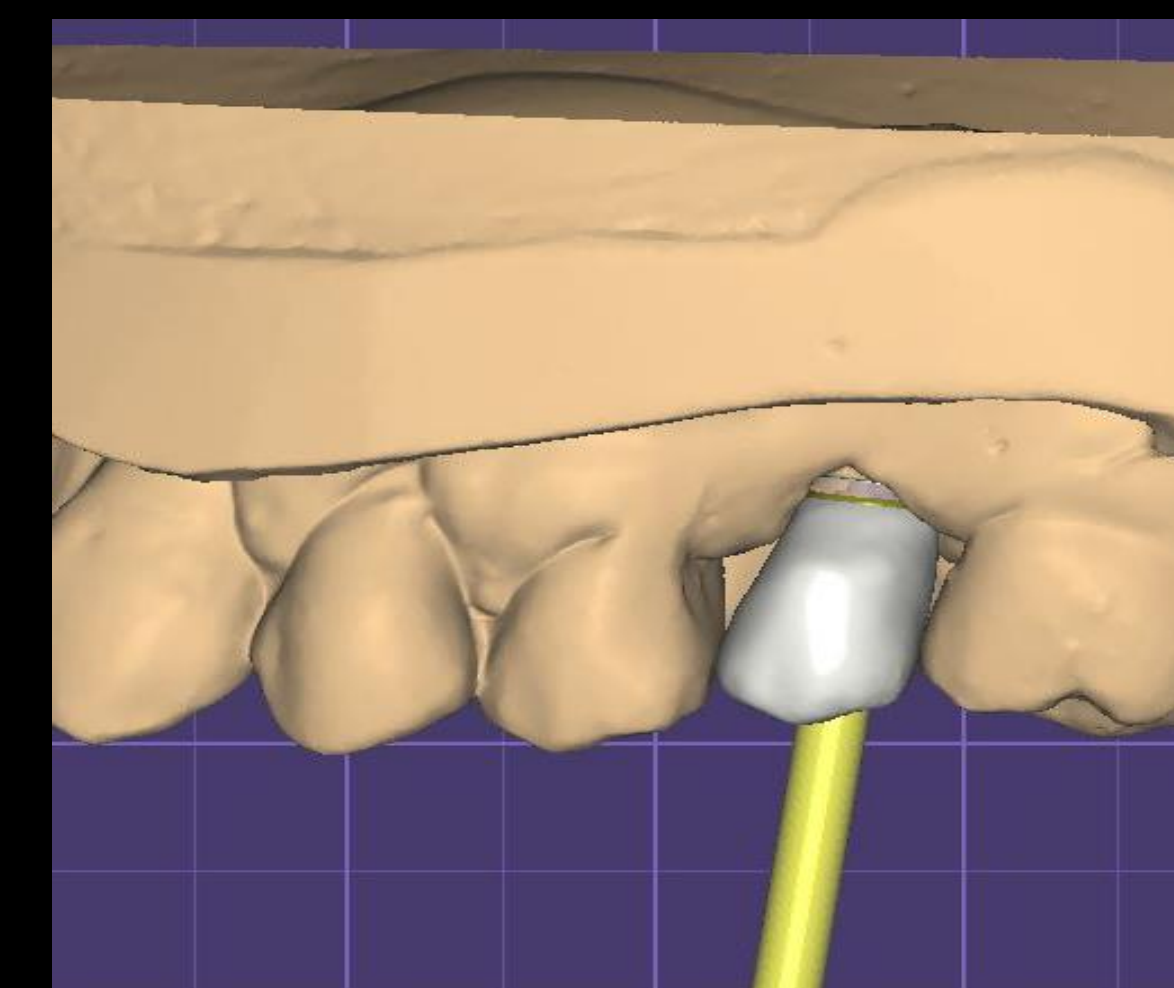
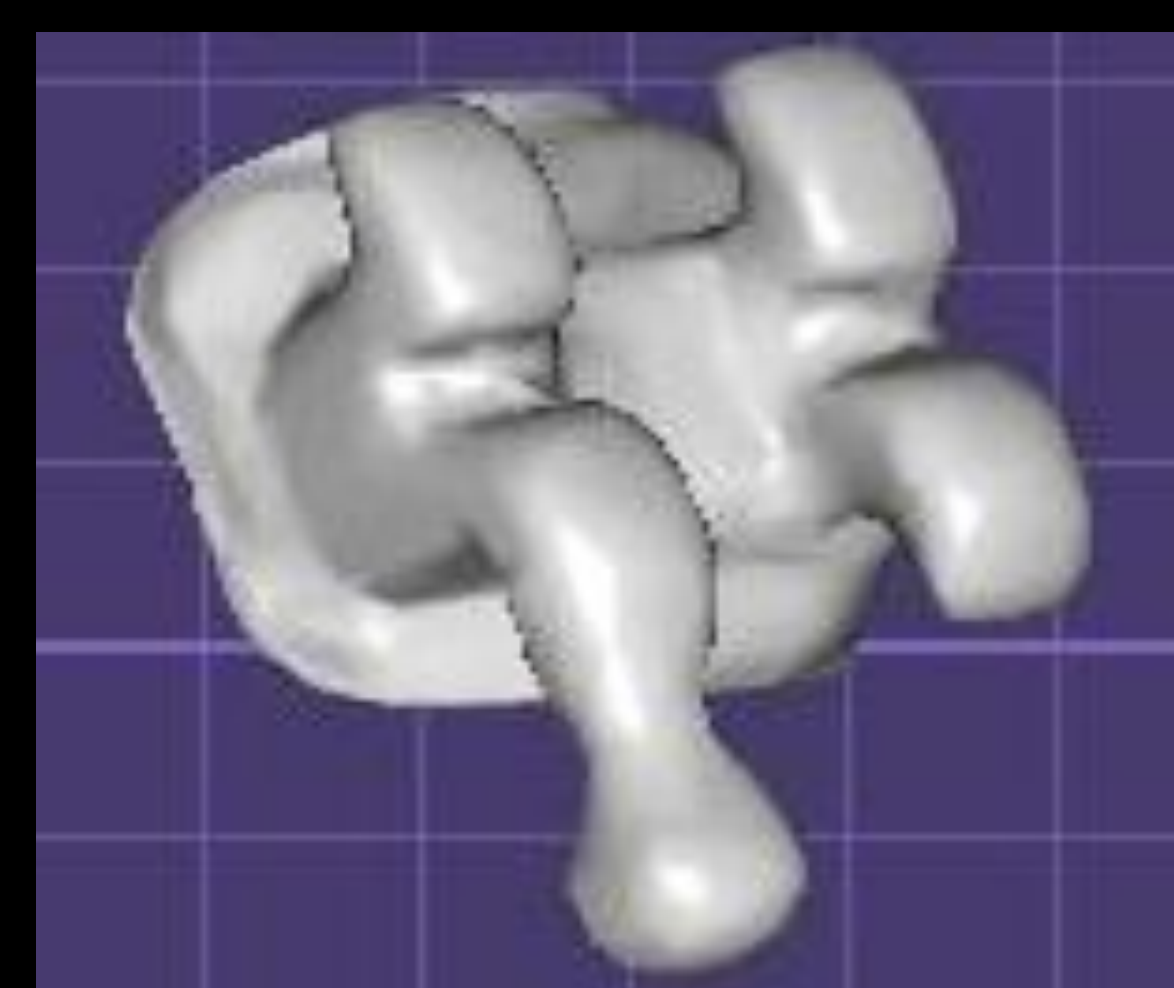
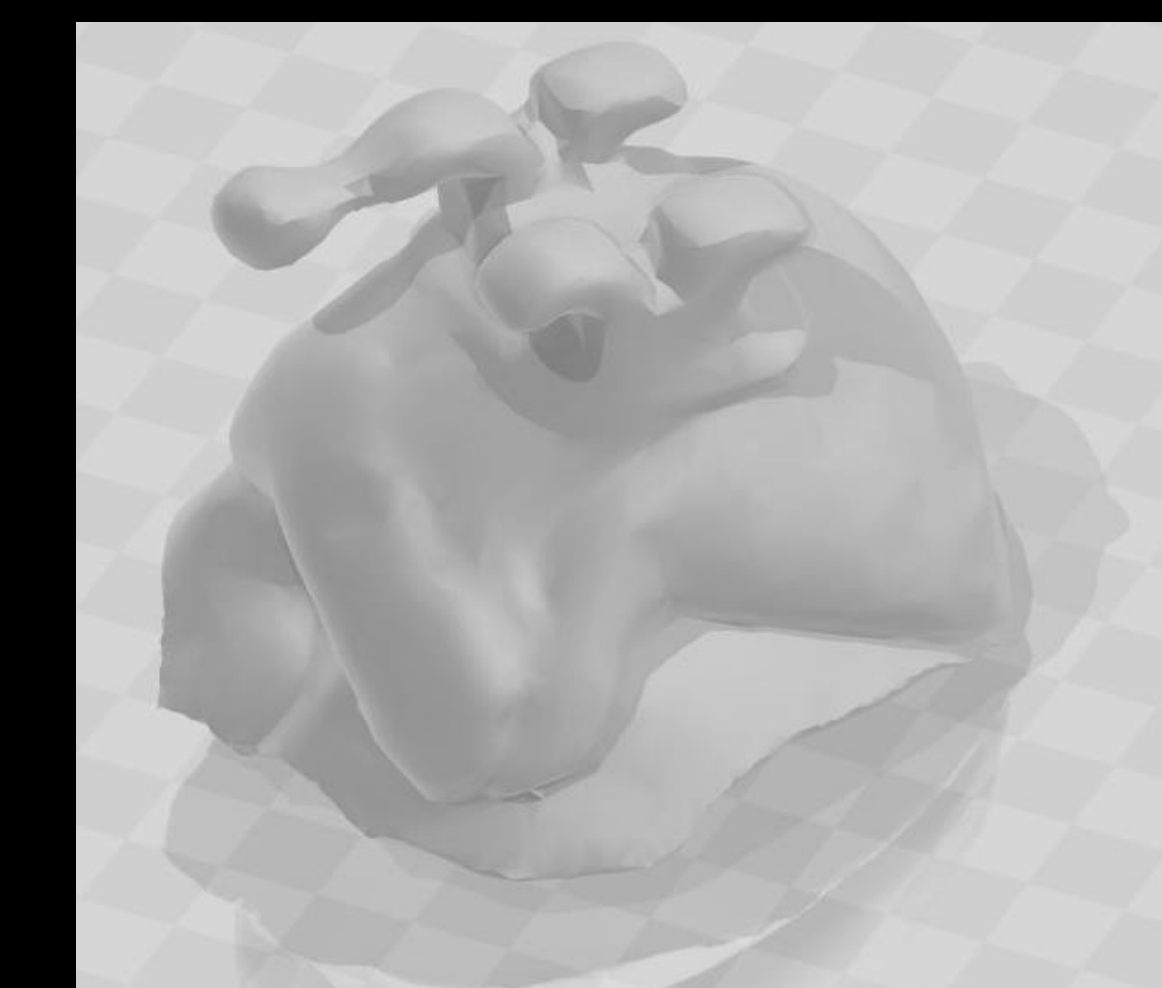


Introduction: Treating active-duty service members present unique challenges with patients moving, deploying, and serving in austere environments where routine dental services become inaccessible. In this clinical scenario, discontinuity of care led to limited restorative space preventing the restoration of a dental implant. The same problem, however, presented a solution in which the same dental implant was used as absolute anchorage to perform focused orthodontics limited to one natural tooth to create the space needed for a definitive prosthesis.

Treatment Plan: The patient elected a focused orthodontic treatment plan to distalize, de-rotate, and intrude #15, creating space for an implant crown. A lateral cephalogram was traced and a wax-up completed to determine the required restorative space. To maintain the current occlusal scheme, maxillary/mandibular aligners were used during the course of treatment.

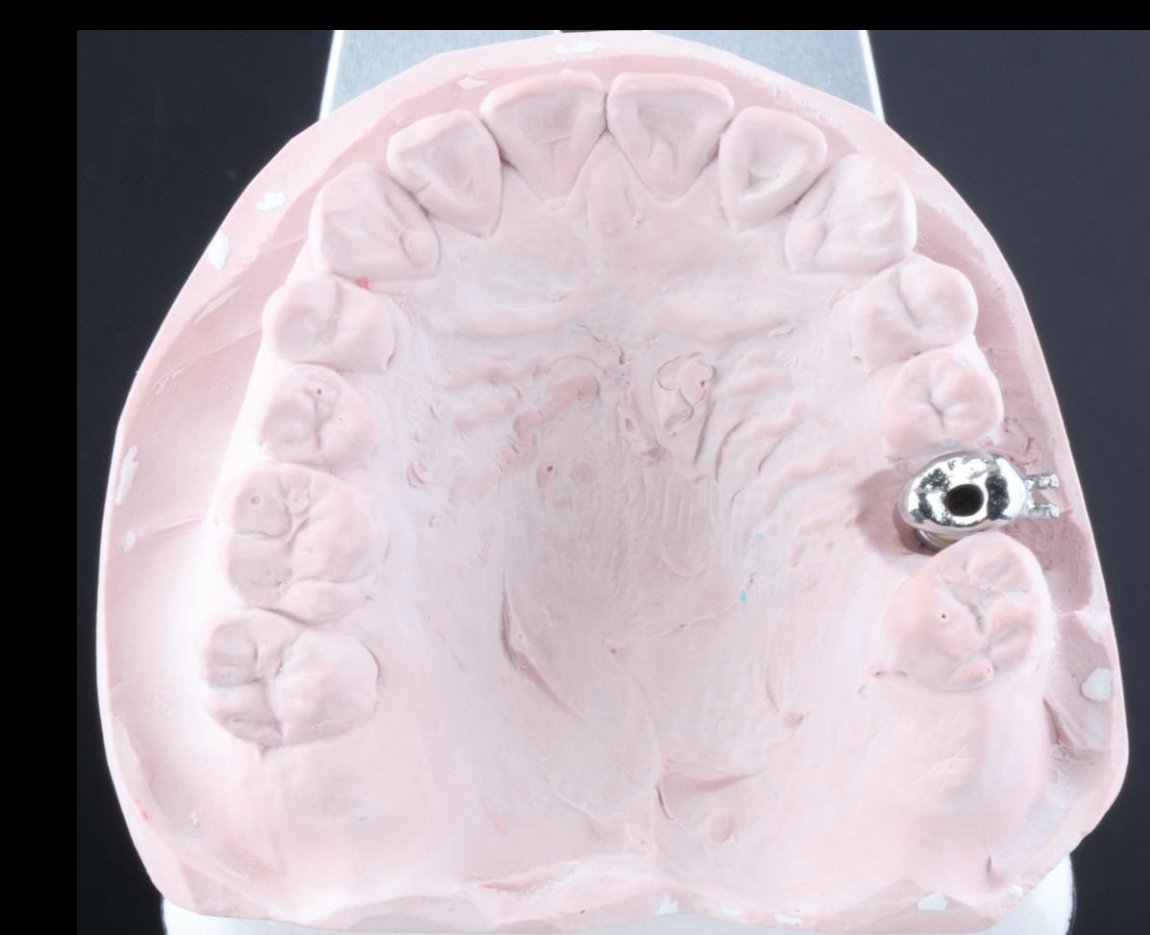
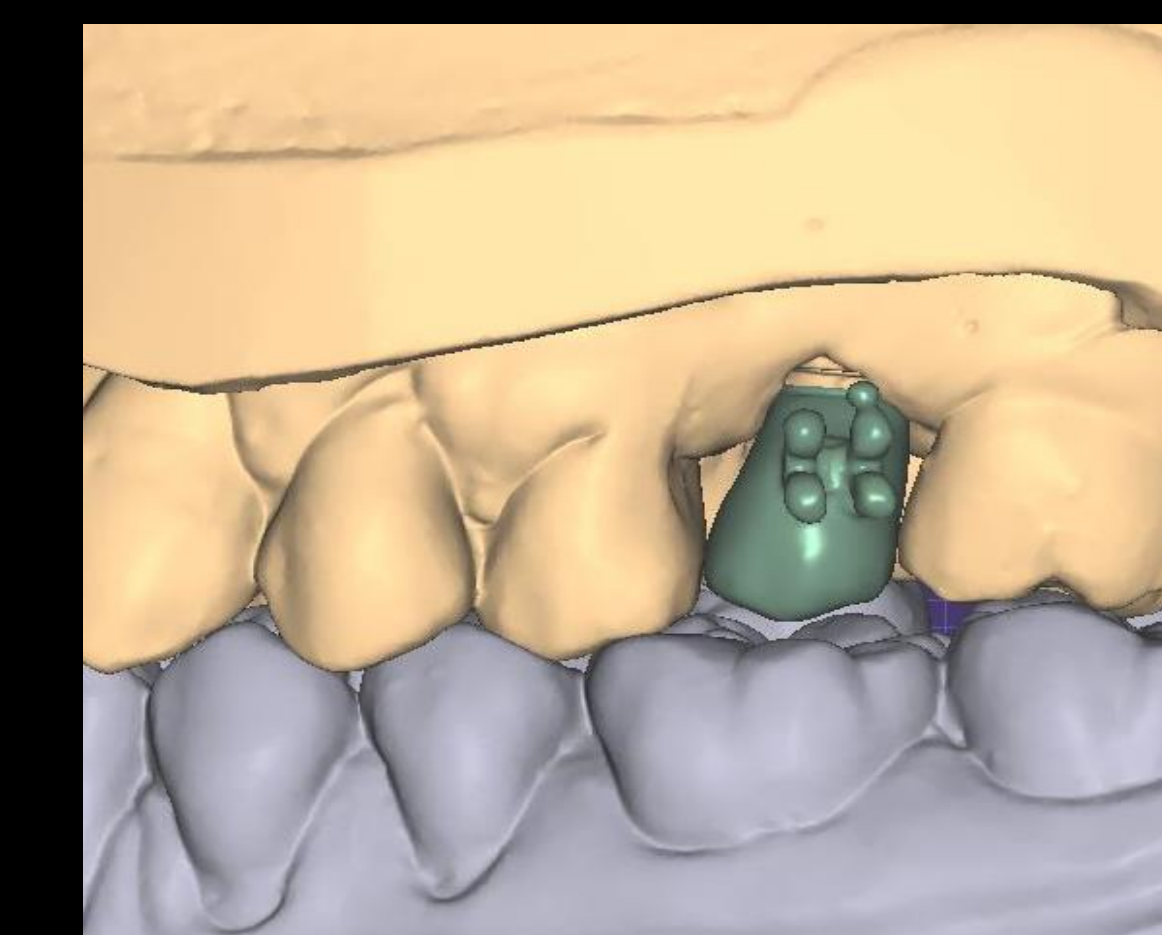


Design, fabrication, and treatment rendered: An orthodontic bracket was scanned with a desktop scanner, digitized, and imported into 3D CAD/CAM software. An implant crown was designed, and the digitized bracket was merged with the crown.



Clinical Presentation: 28 year old US Marine presented with a chief concern of “my implant can’t be restored.” Patient had a 5mm diameter, internal hex, endosseous implant placed at site #14 in 2018 that has yet to be restored due to overseas deployments. Mesial tipping of #15 has since limited the restorative space for an implant crown.

The customized dental implant crown was 3D printed in cobalt chromium and cemented to a titanium base.



Conclusion: A conventional implant can be used for absolute anchorage to achieve focused orthodontic goals and obtain adequate restorative space for a definitive dental prosthesis.

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