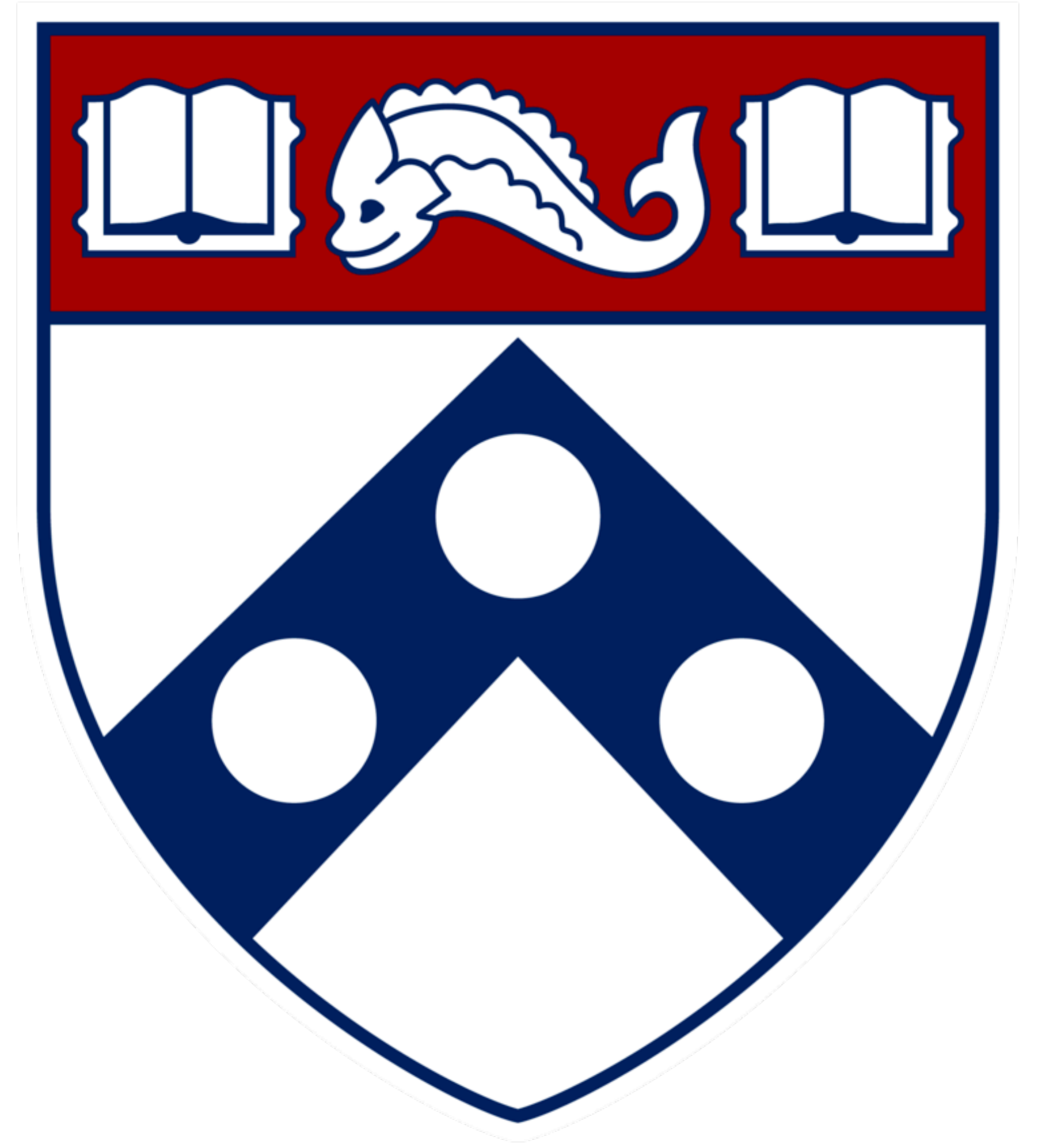
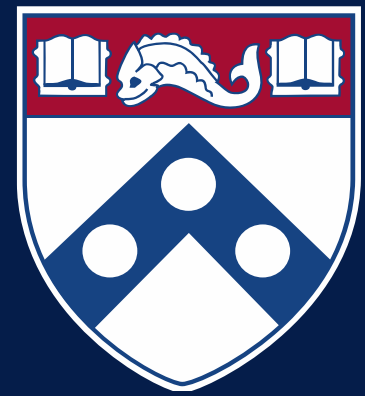


Flapless and Fully Guided Palatal Sinus Lift Approach and Simultaneous Implant Placement

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Introduction

Irregular sinus shapes at proposed implant sites pose challenges in implant dentistry. For example, an irregular shaped sinus could result in unnecessary bone removal if approaching in the conventional method. In order to achieve ideal prosthetic-driven implant placement, approaching from the thin lingual wall will allow for the minimum amount of bone to be removed. While guided surgery is widely utilized for implant placement, its applications extend to sinus augmentation, allowing precise osteotomy positioning. Furthermore, when only a small sinus elevation is needed, a singular guide can be used to place the implant and make the sinus lift osteotomy.



Figure 1: Pre-op

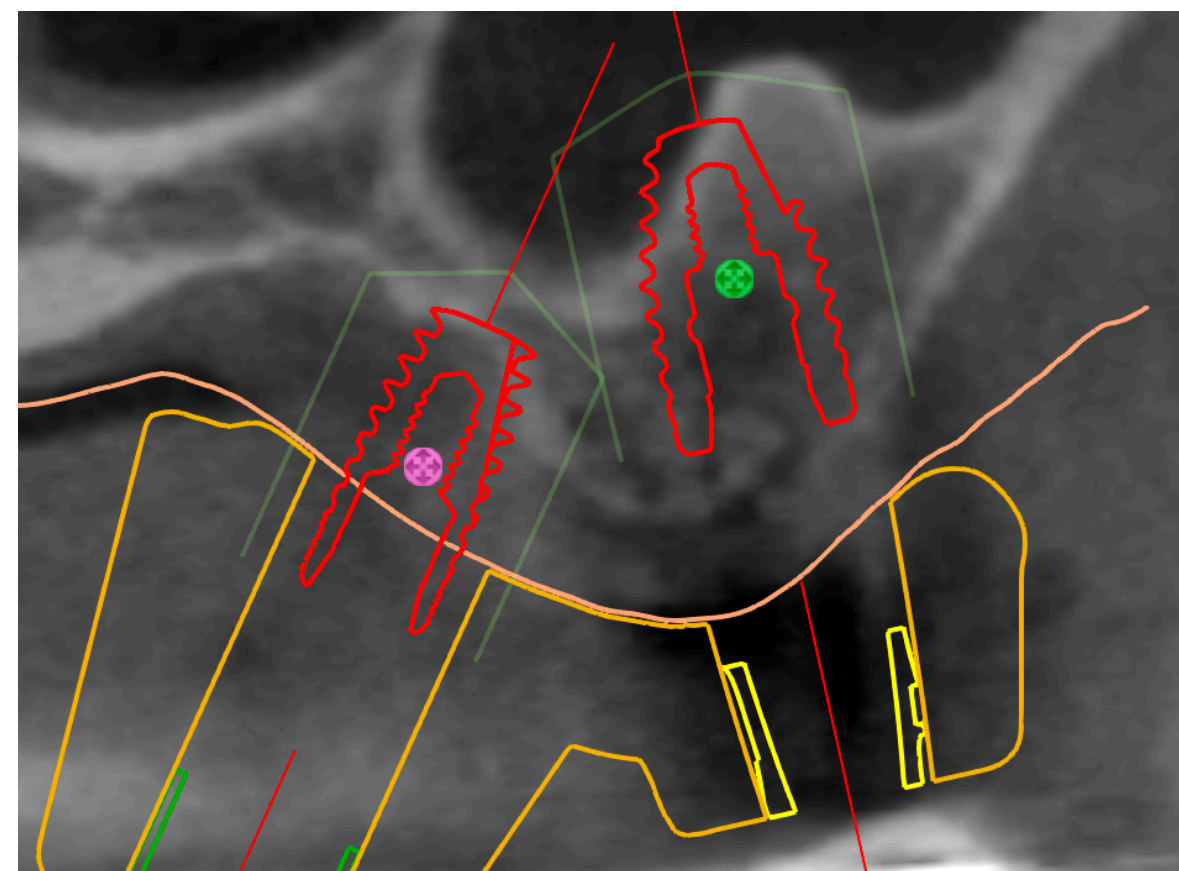
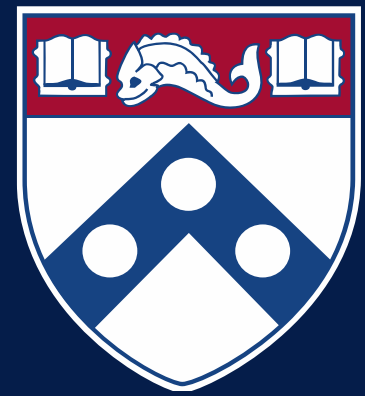


Figure 2: CBCT with planned implant placement and sinus access



Figure 3: Guide in position



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Materials and Methods

A 59-year-old female patient presented at the University of Pennsylvania School of Dental Medicine for implant placement at site #15. CBCT analysis revealed that the proposed implant location encroached upon the palatal aspect of the sinus, necessitating a sinus lift. Given the sinus' unique morphology, a flapless, guided palatal approach was developed. An intraoral scan was conducted, and the CBCT data was merged with the scan to create a customized surgical guide. A tapered implant was placed in a fully guided method. On the palate, an amnion chorion membrane was placed at the exposed palatal site to promote soft tissue healing.



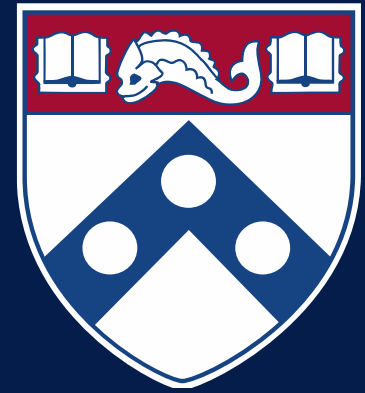
Figure 4: Palatal access



Figure 5: Palatal access through guide



Figure 6: Implant placement



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Results and Conclusion

Results: This innovative approach resulted in a successful sinus lift and simultaneous implant placement, minimizing trauma to the patient and achieving an excellent clinical outcome.

Conclusion: The flapless and fully guided palatal sinus lift technique demonstrates a valuable strategy in managing complex sinus anatomies during implant procedures, promoting patient safety and enhancing healing.

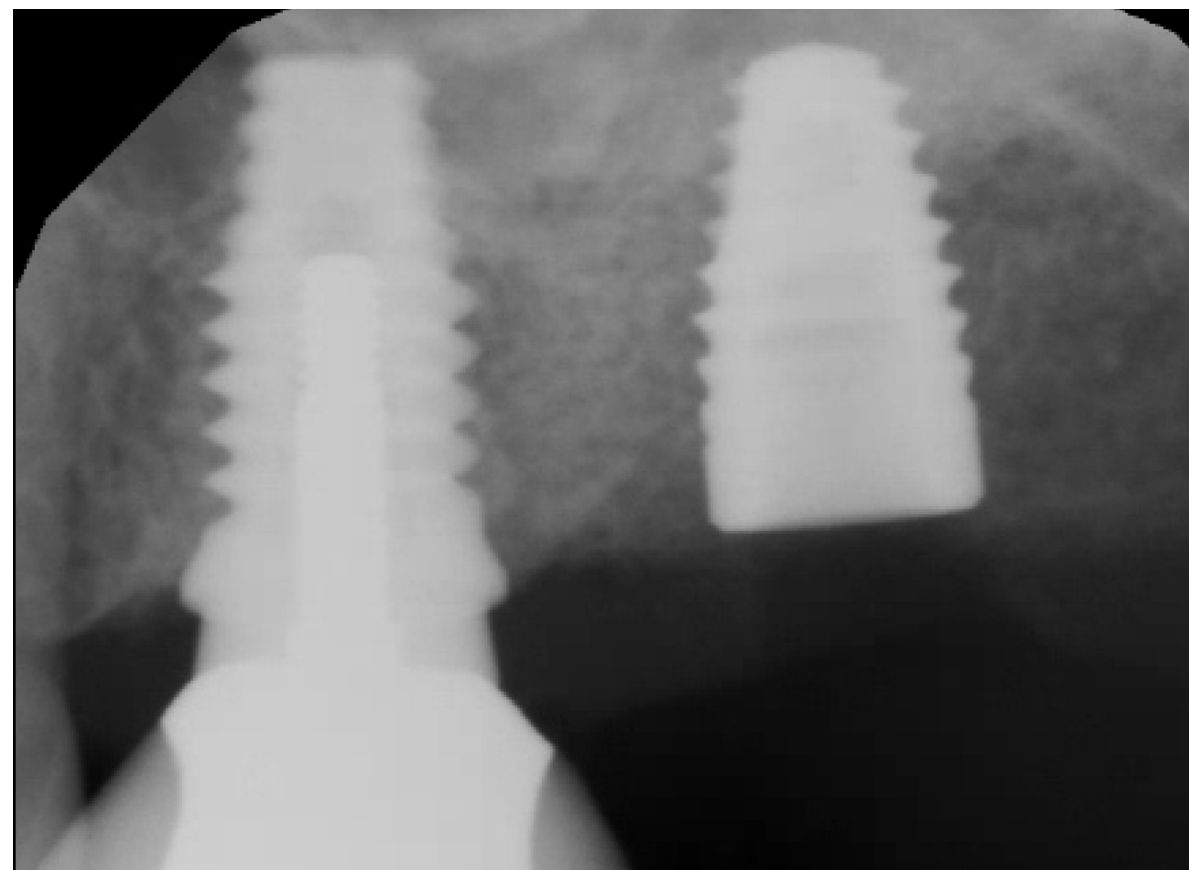


Figure 7: Immediate post-op radiograph



Figure 8: Immediate post-op, 2 week post-op, 3 month post-op, and second stage post-op

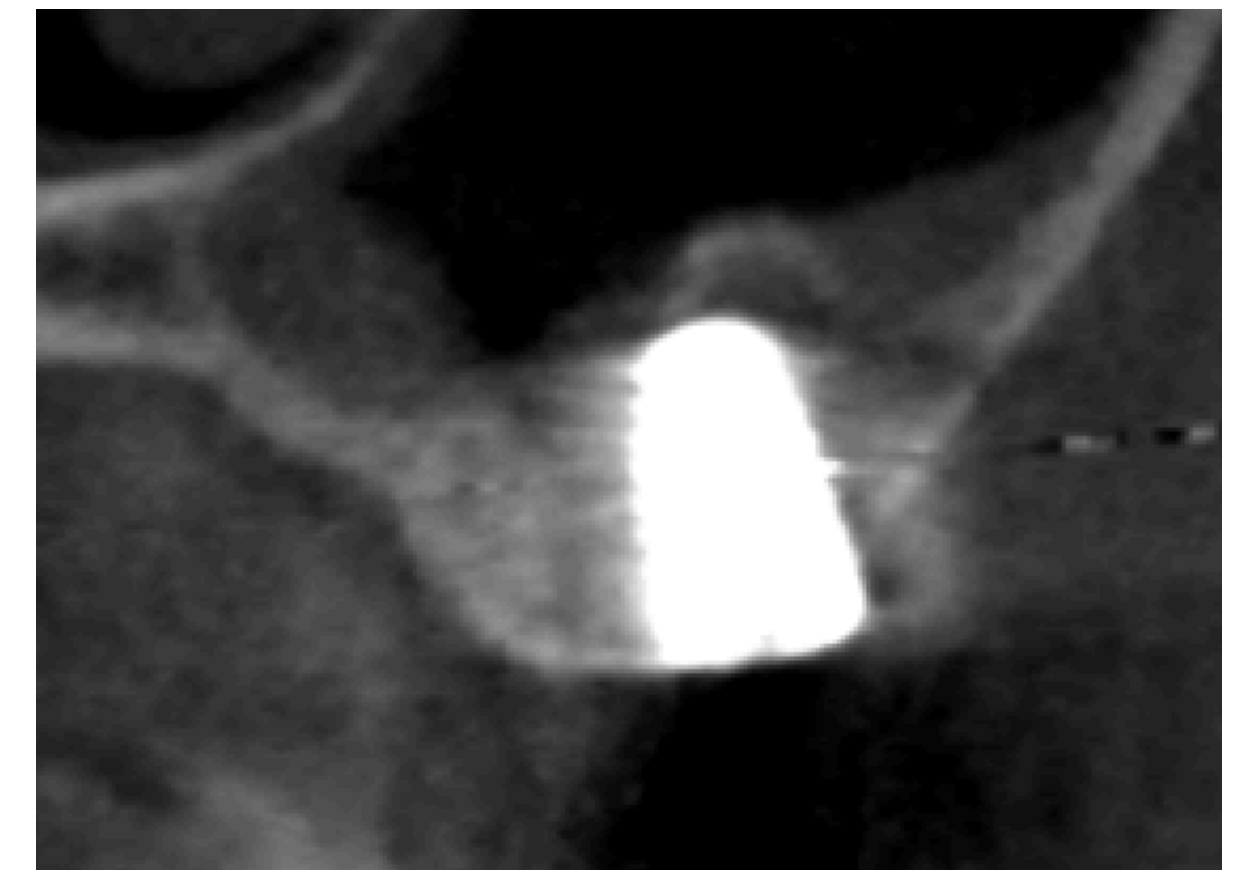


Figure 9: Post-op CBCT