

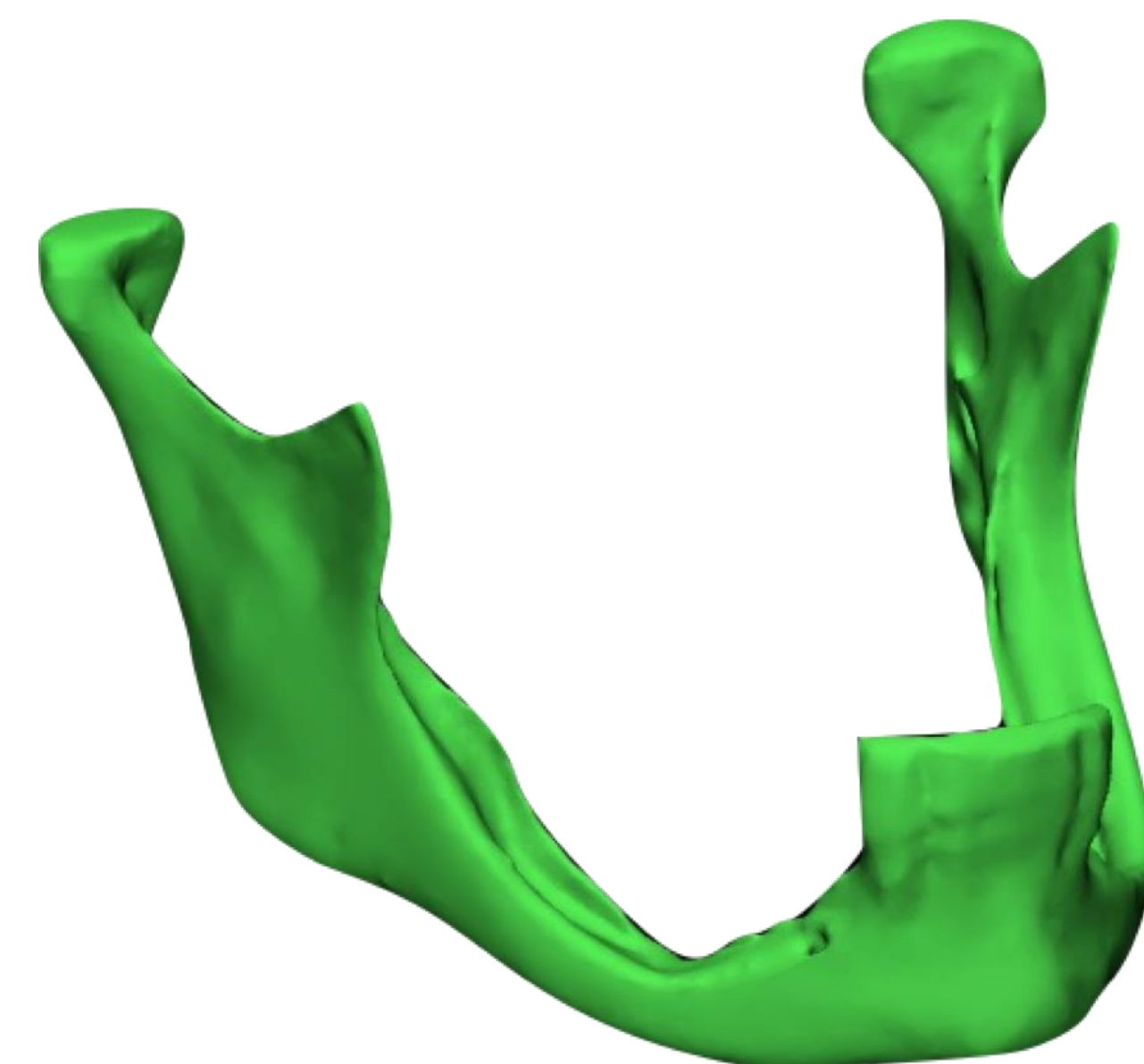
Vertical Ridge Augmentation Using Ceramic 3D-printed Customized Bone Block-associated rhBMP-2: a Report After Four Years Implant-supported Restoration Loading

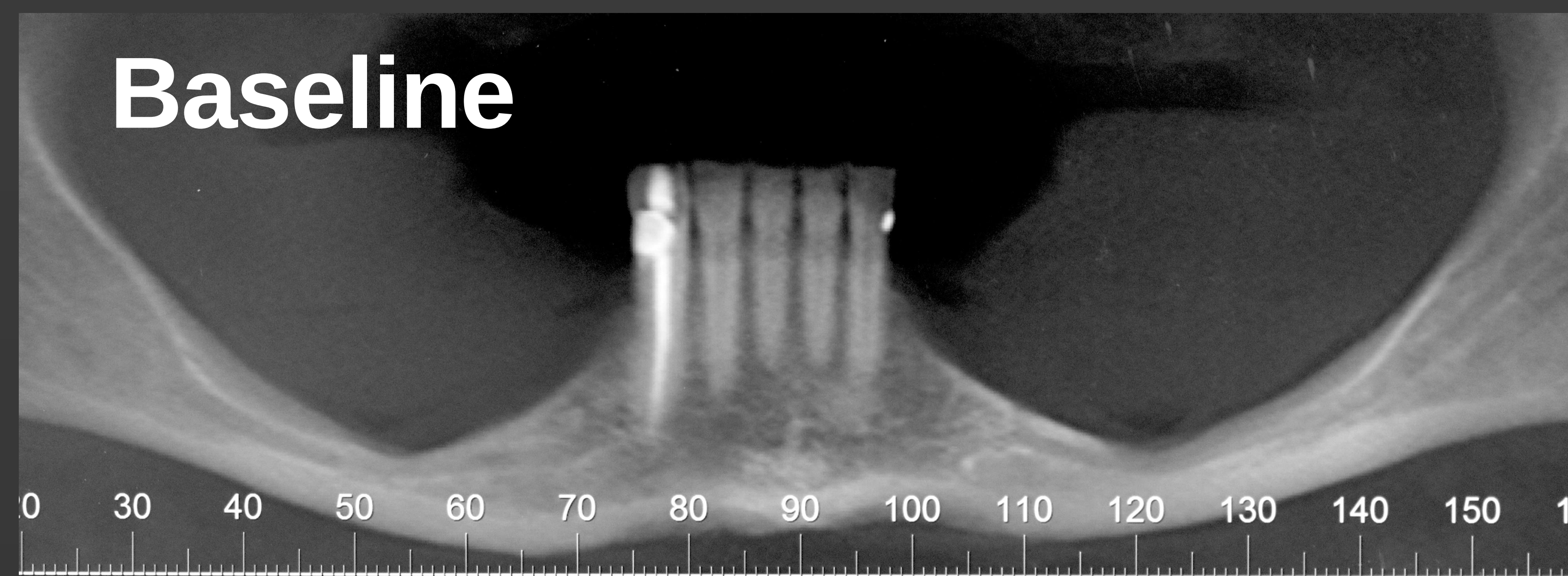
Jamil A. Shibli¹, Magda Nagasawa¹, Otávio Baptista², Sybele Saska³, Samy Tunchel³, Alberto Blay³

¹Dental Research Division, Guarulhos University (UnG), ²Brazil; Brazilian Army, SP, Brazil;

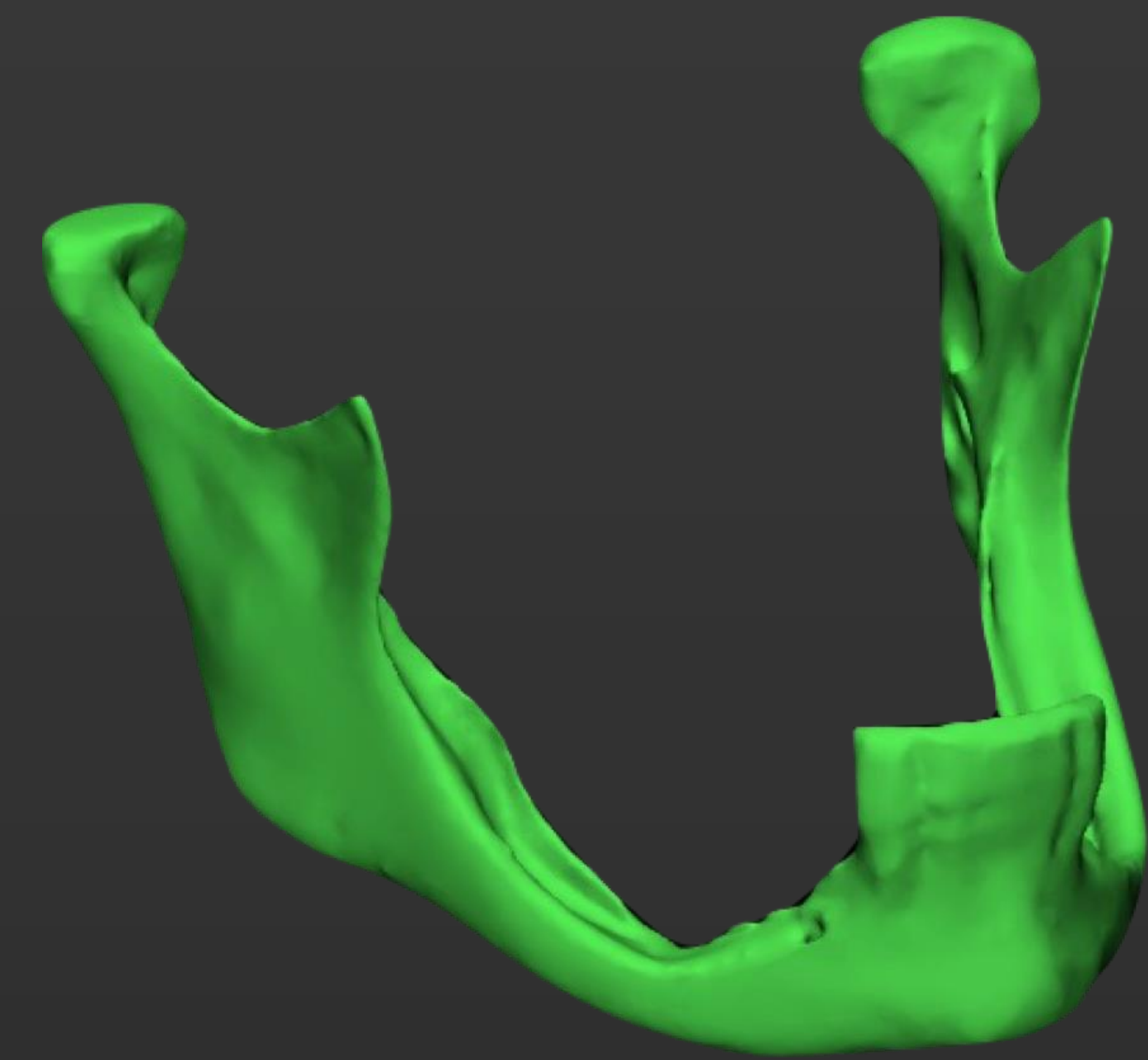
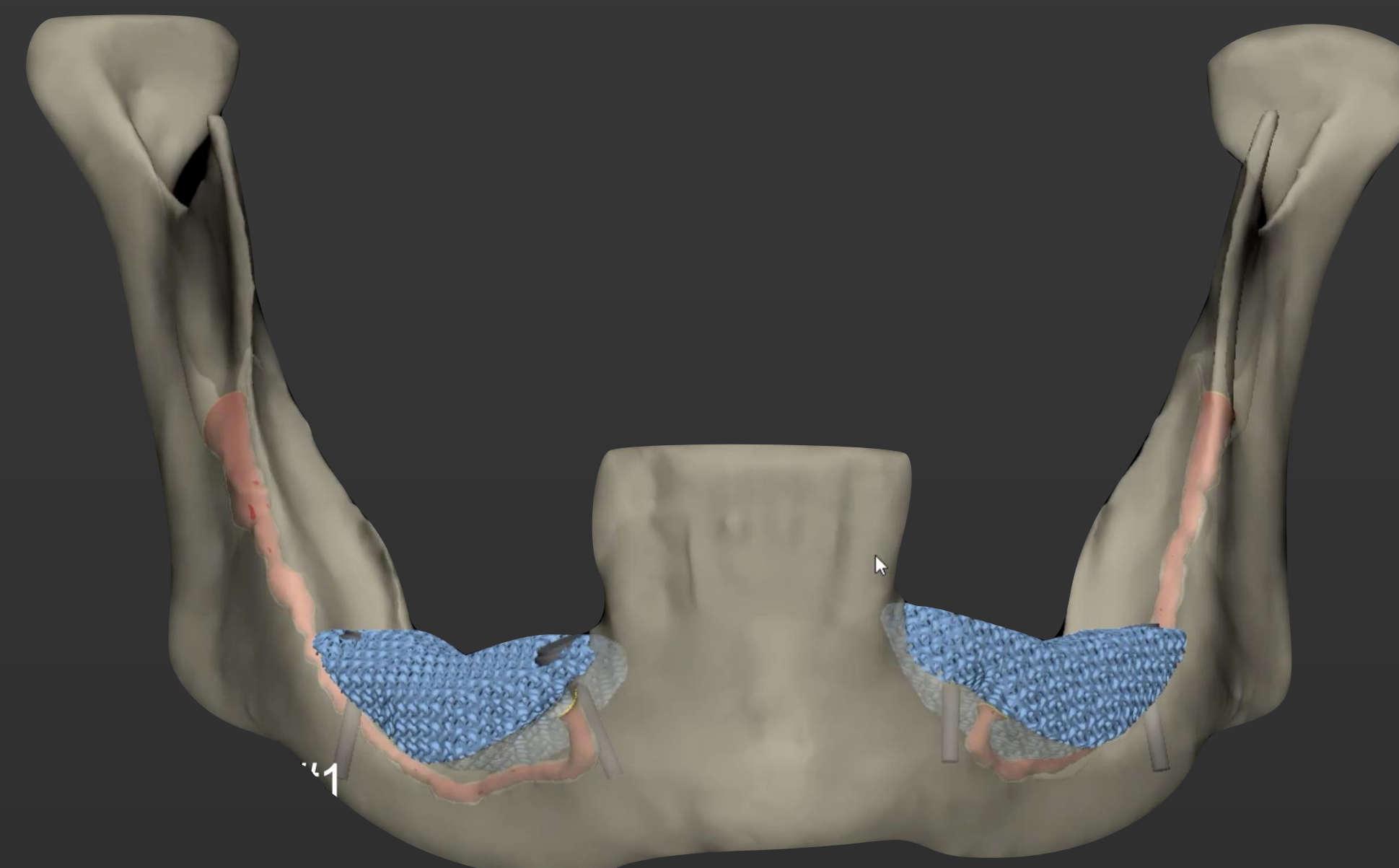
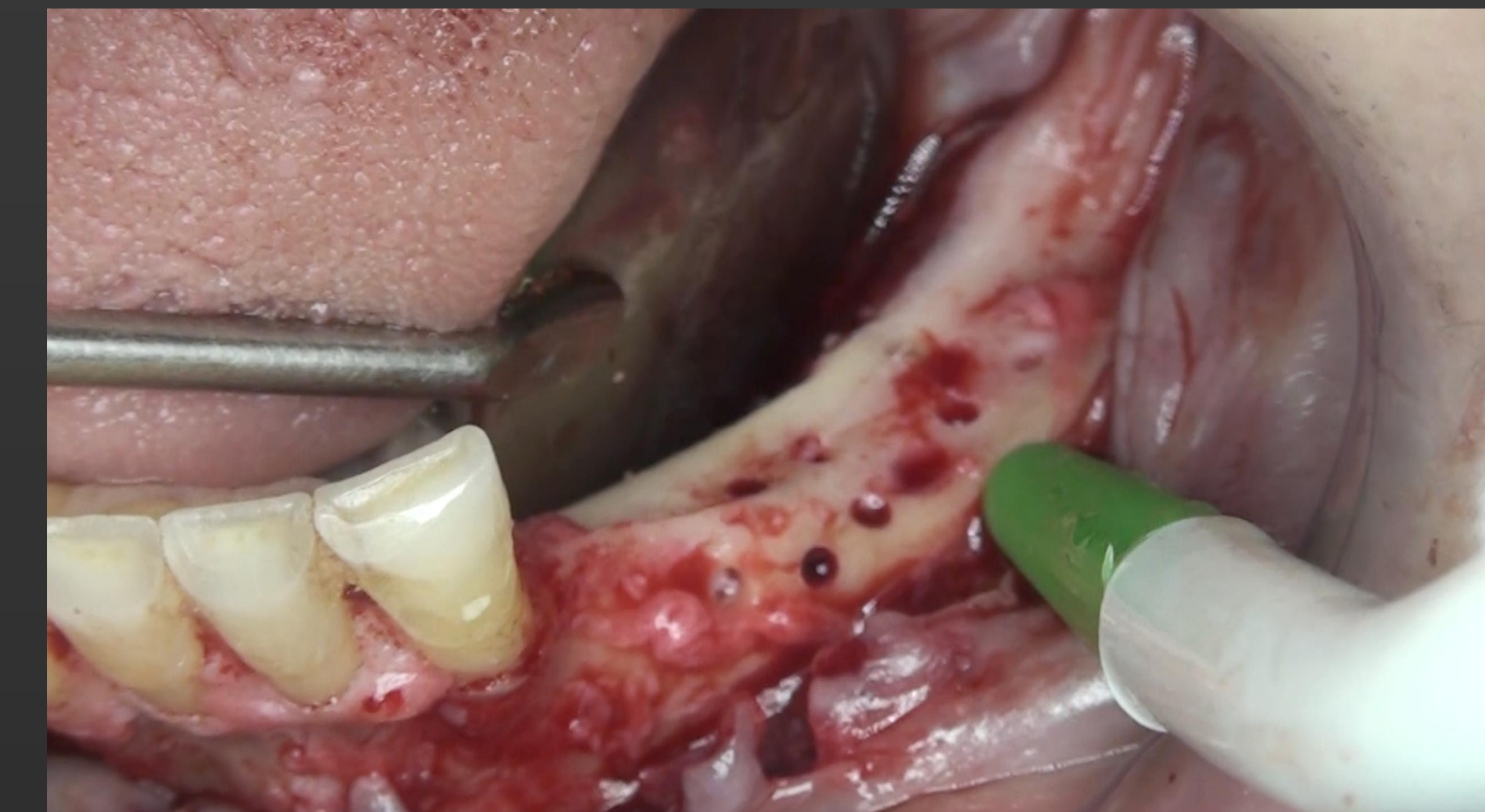
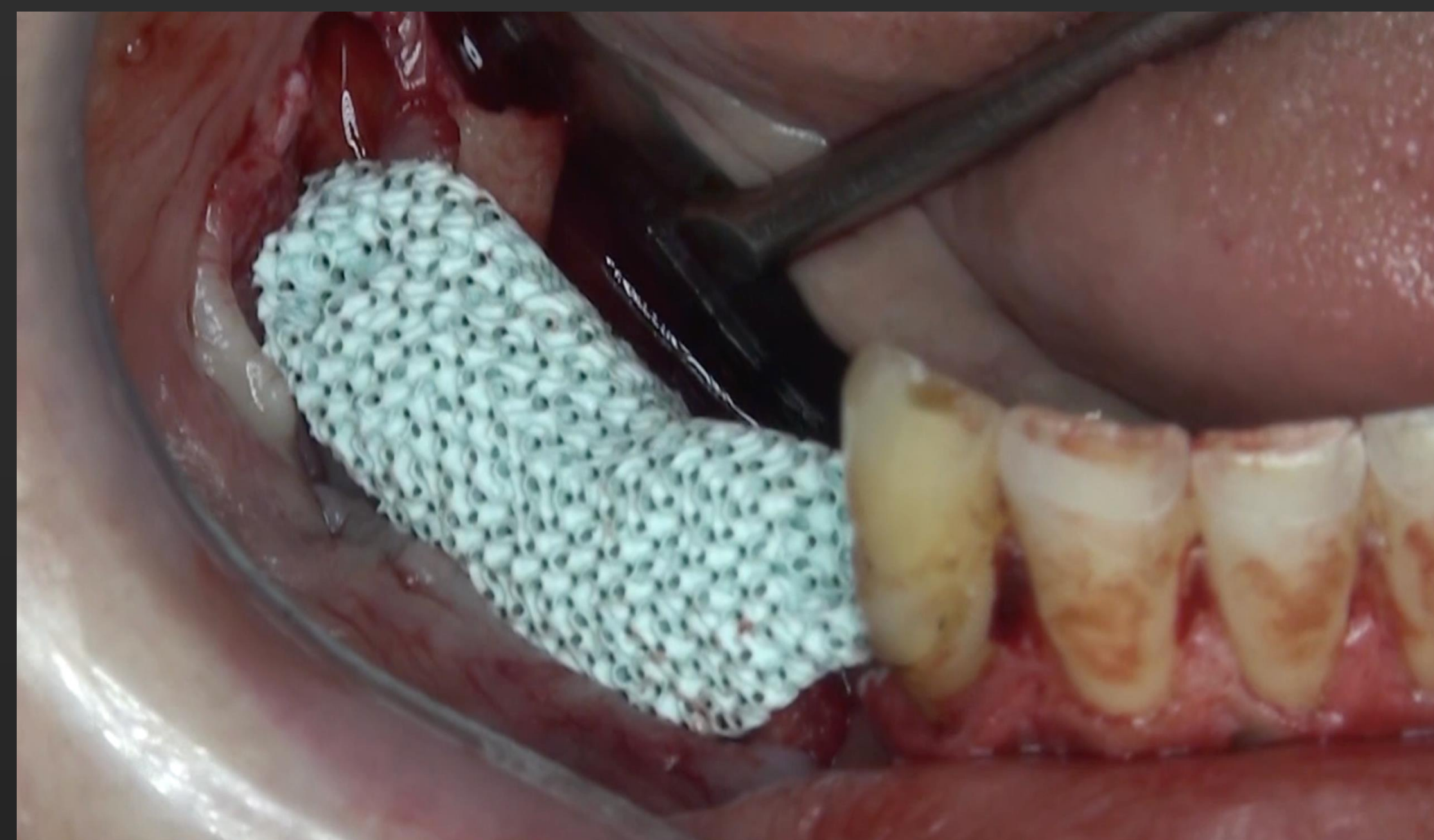
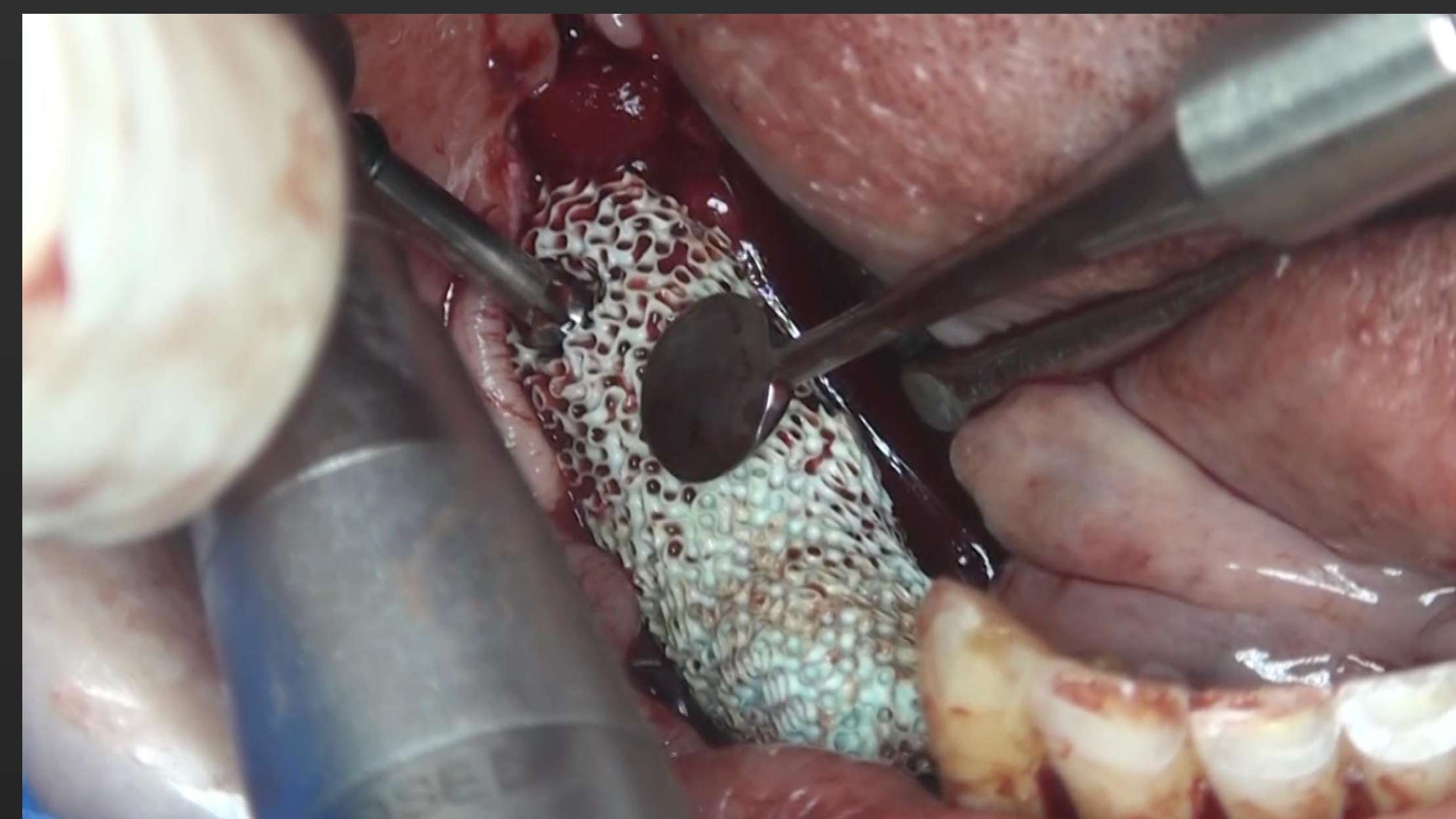
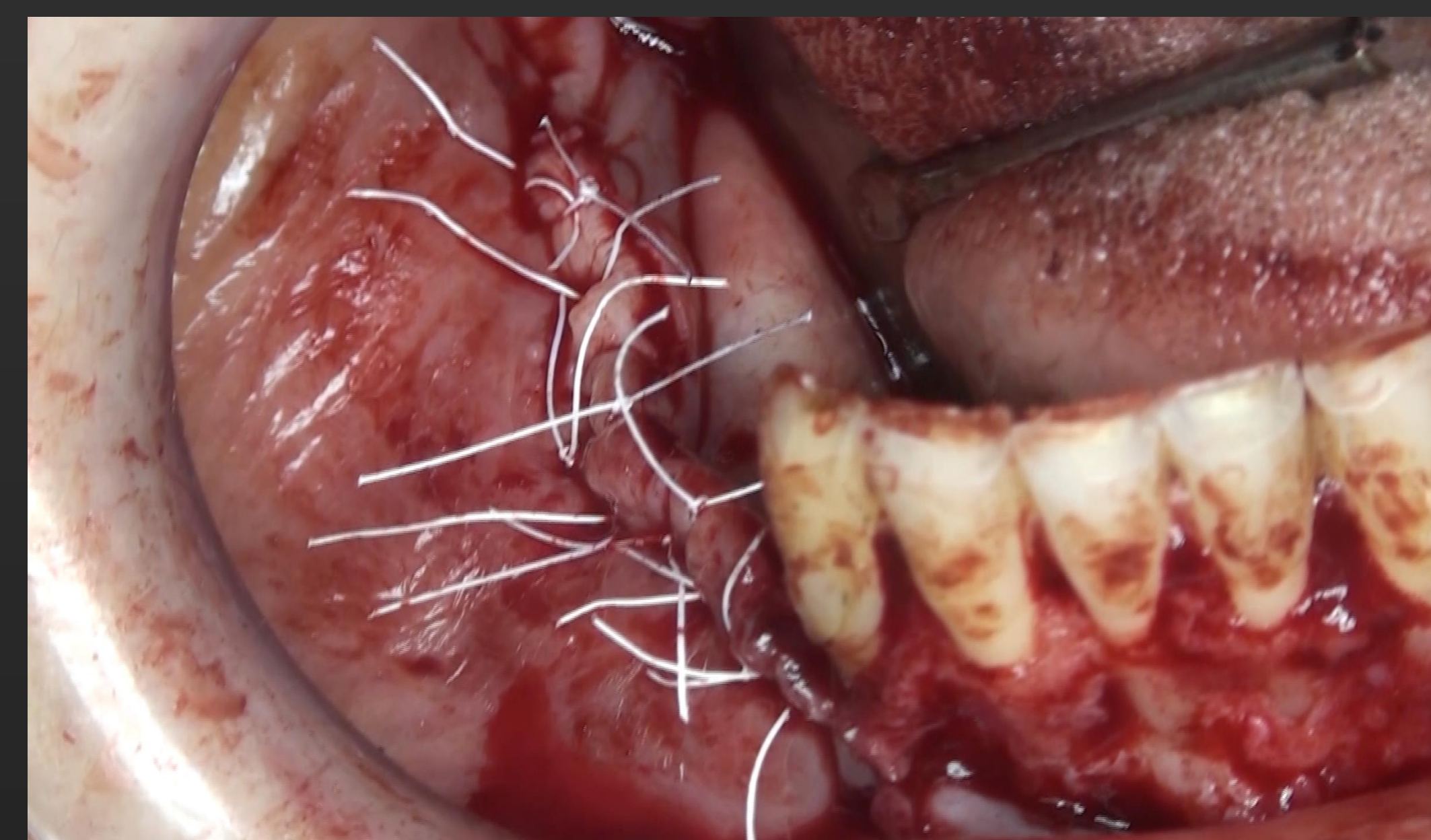
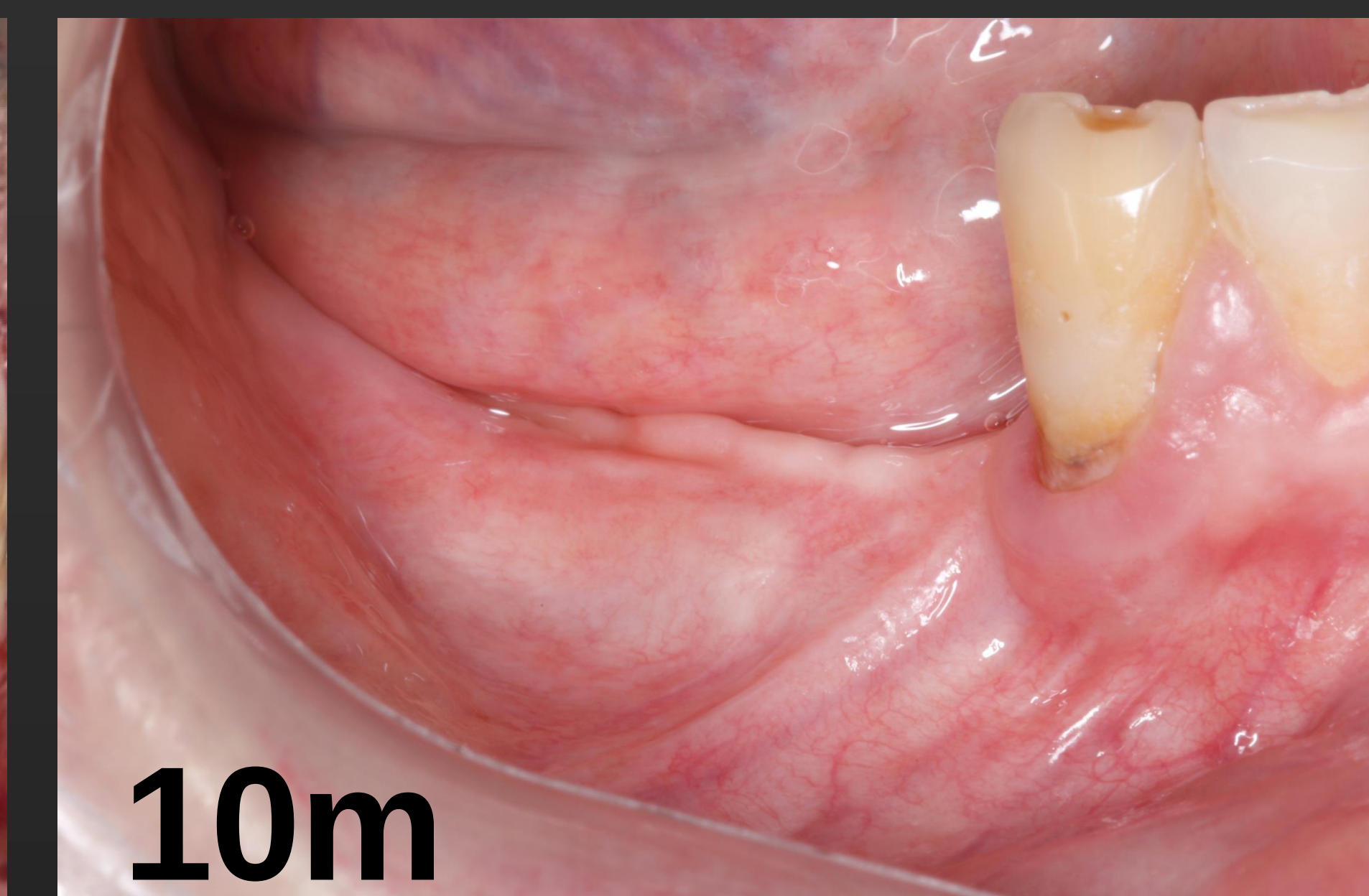
³Plenum Bioengenharia, Jundiai, Brazil

AIM: Vertical bone augmentation in the posterior mandible is a challenge due to its unique anatomy. Recently, many 3D printed techniques have been developed to produce customized bone grafts, aiming to reduce morbidities and increase the previsibility of the surgical procedure. This patient report shows the use of a customized 3D-printed bone graft to increase the bone height in the posterior mandible after 4 years of follow-up of the implant-supported restoration

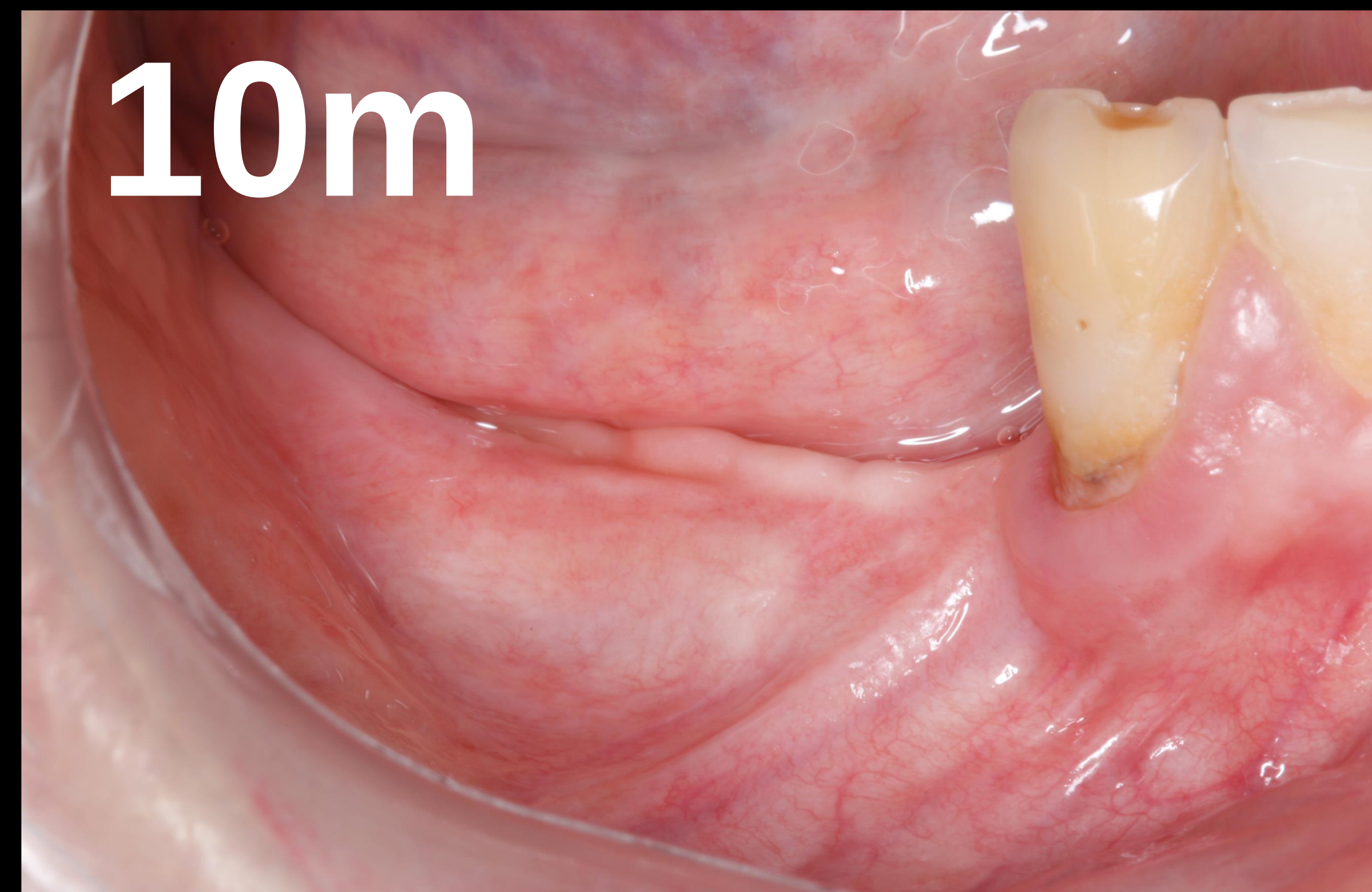
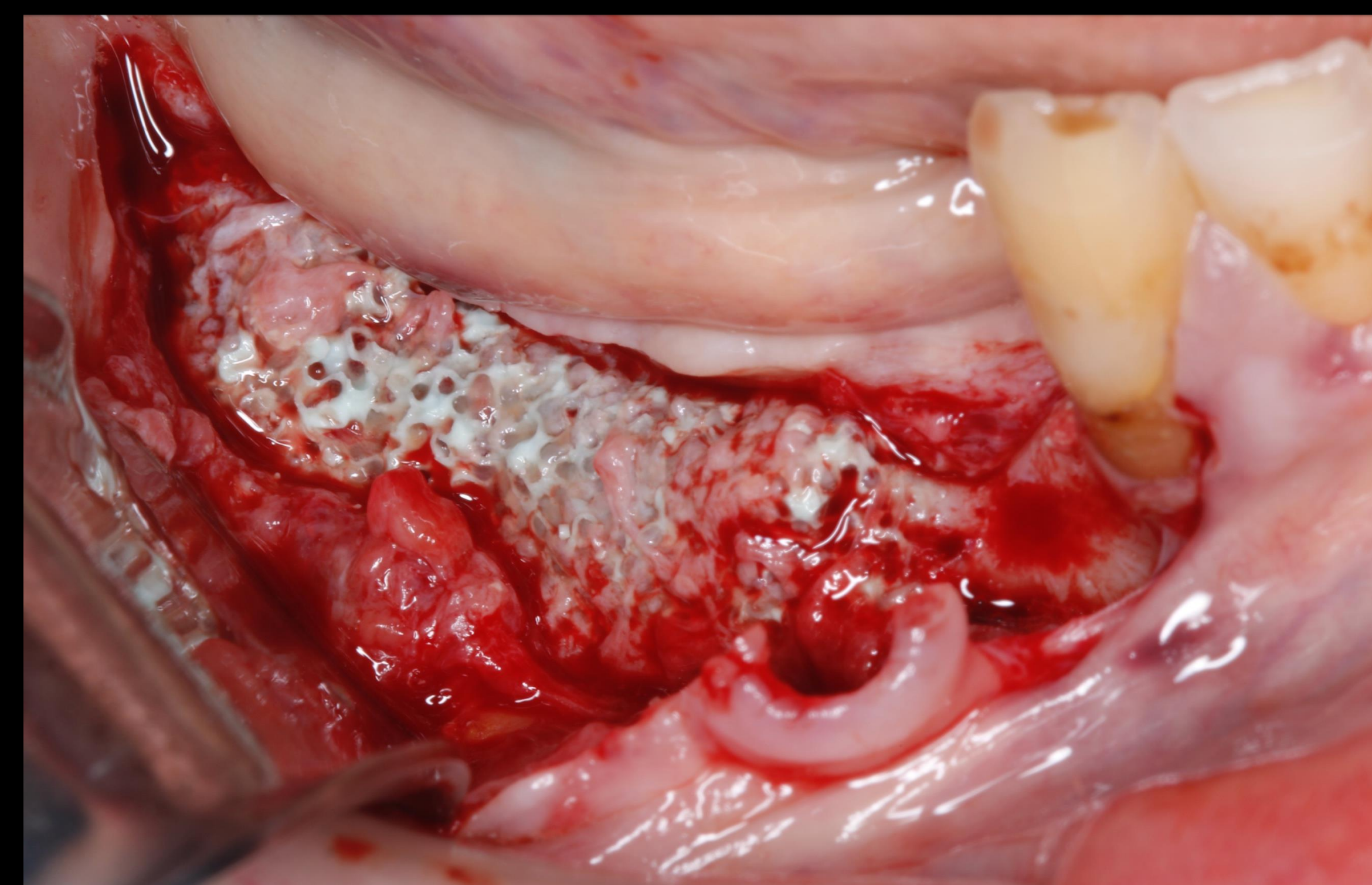
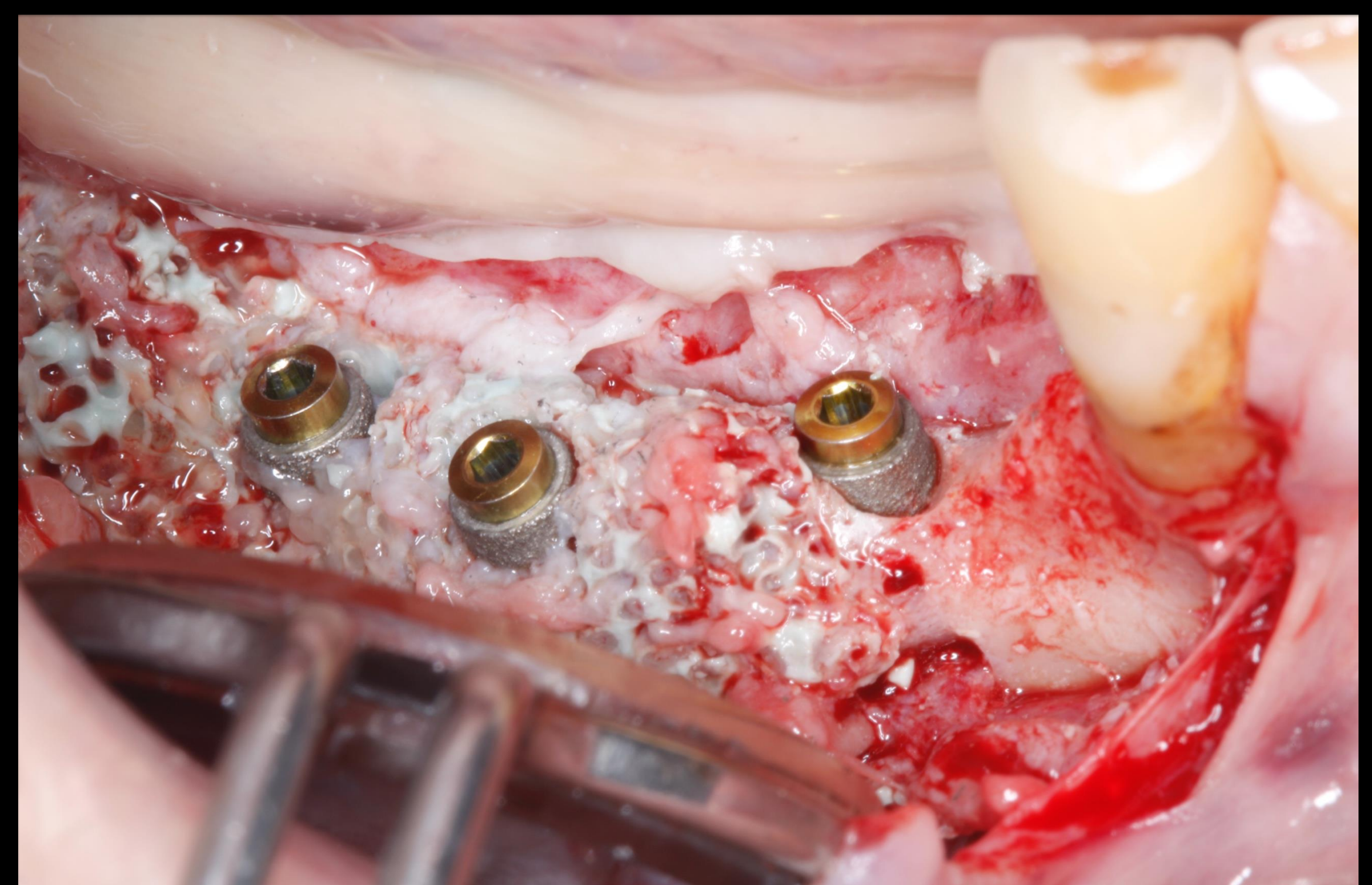
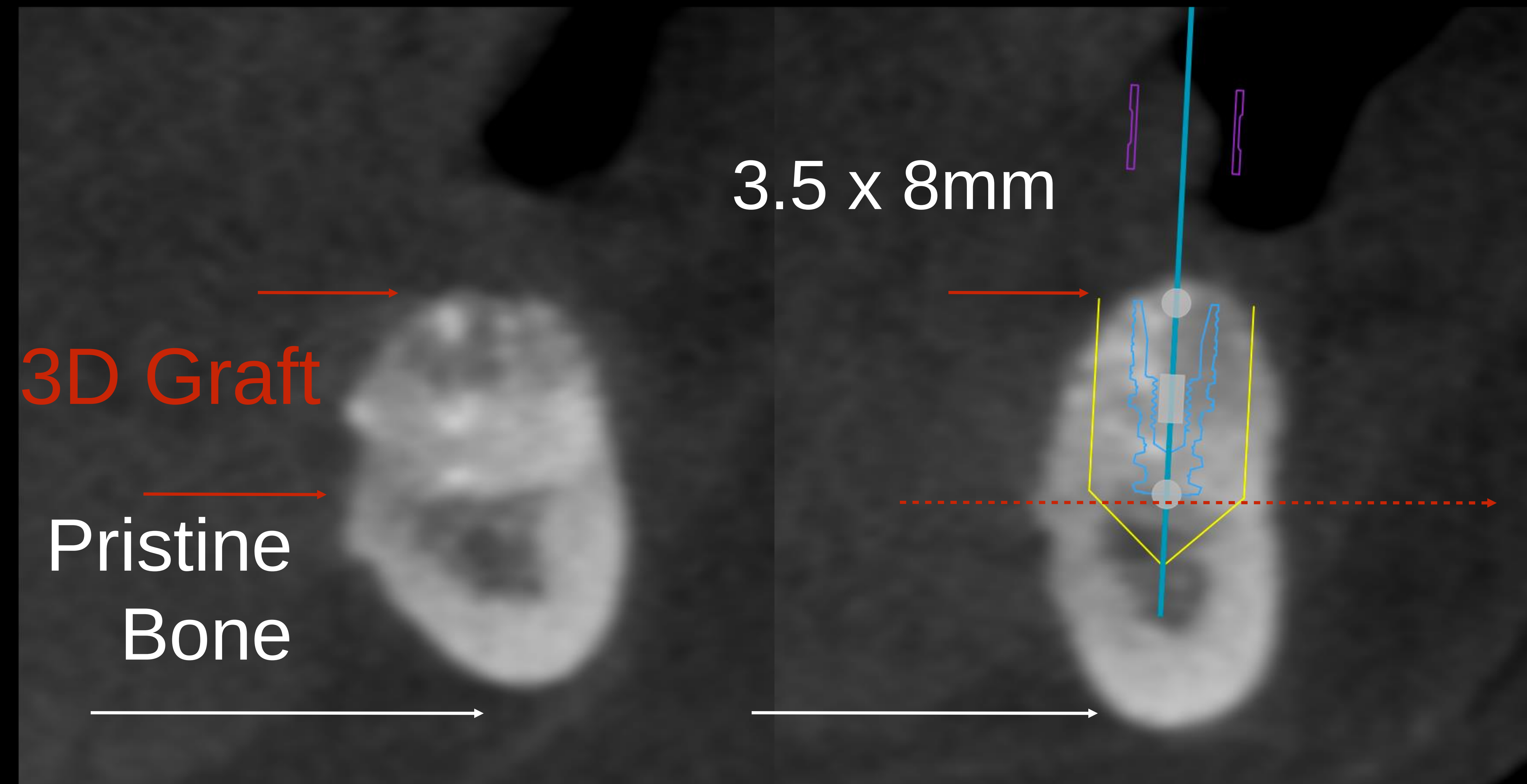
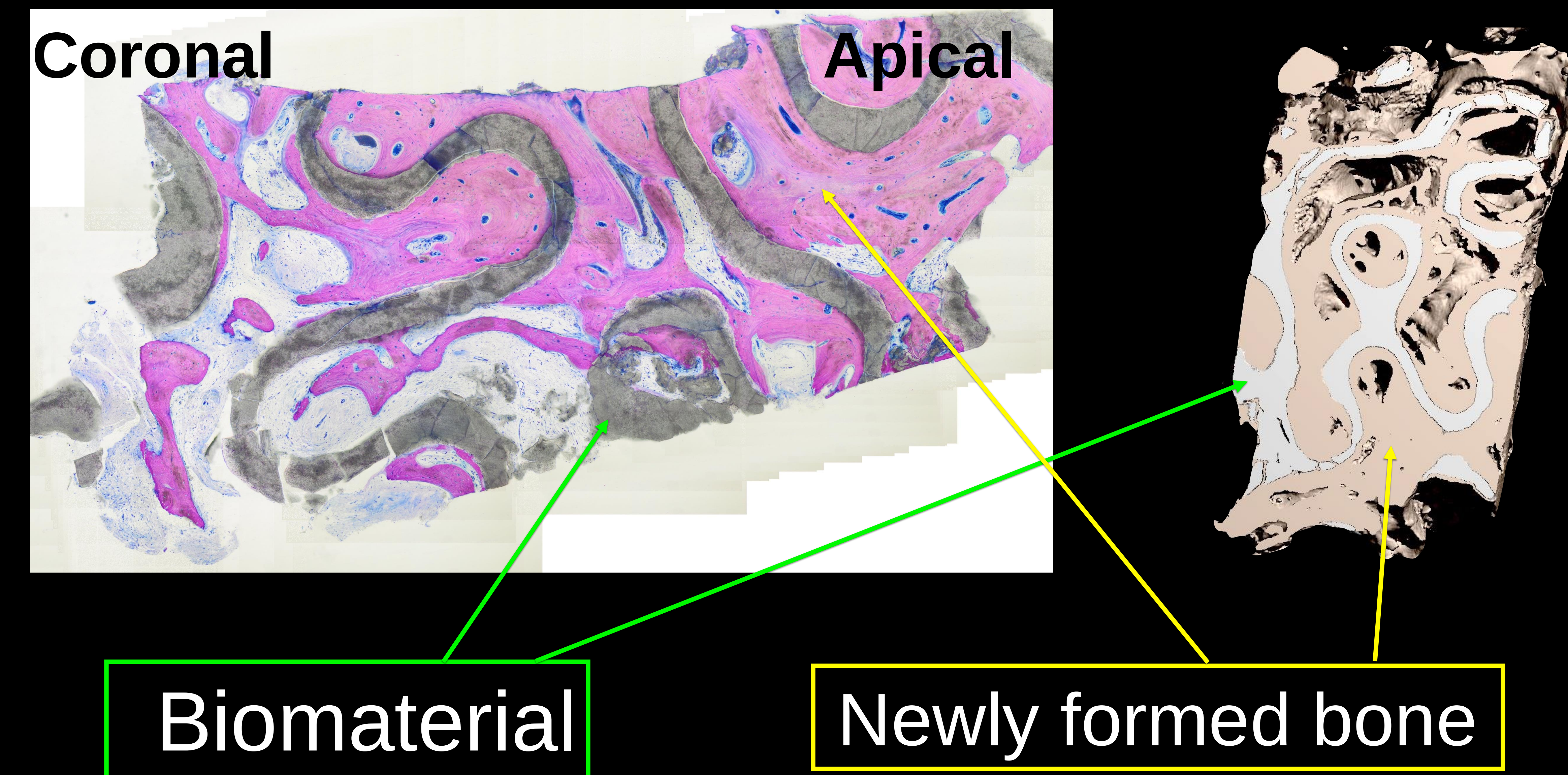


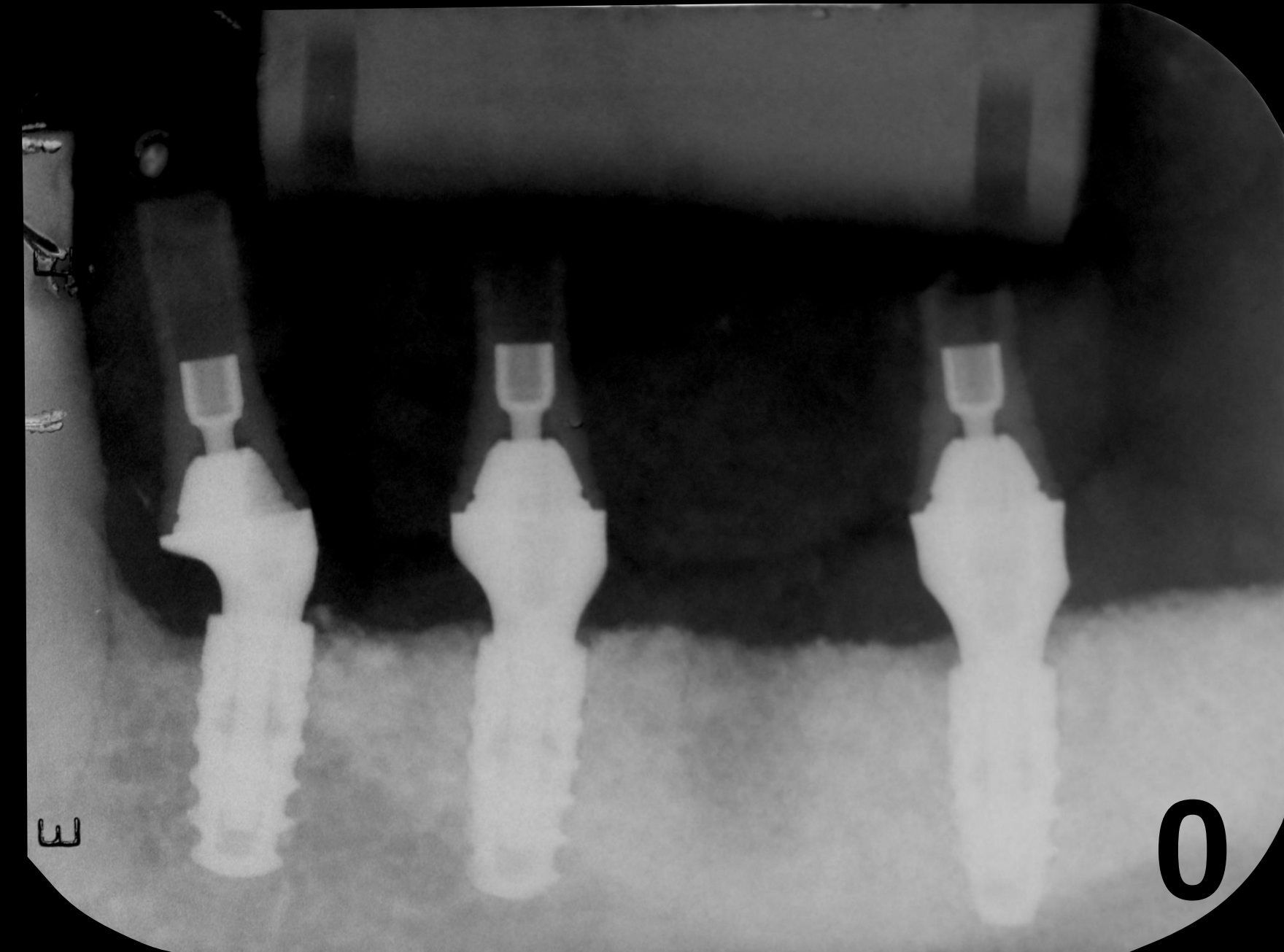
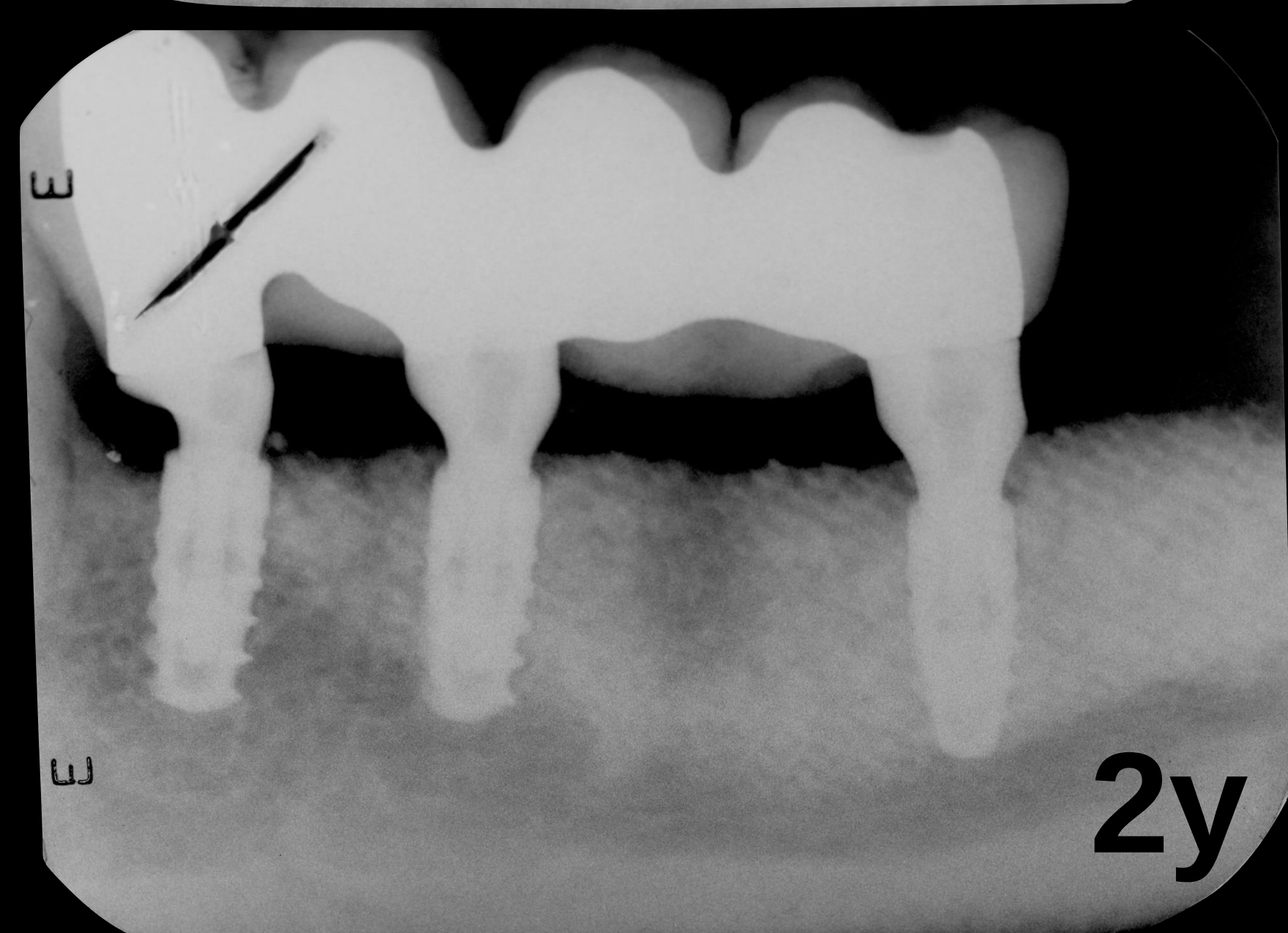
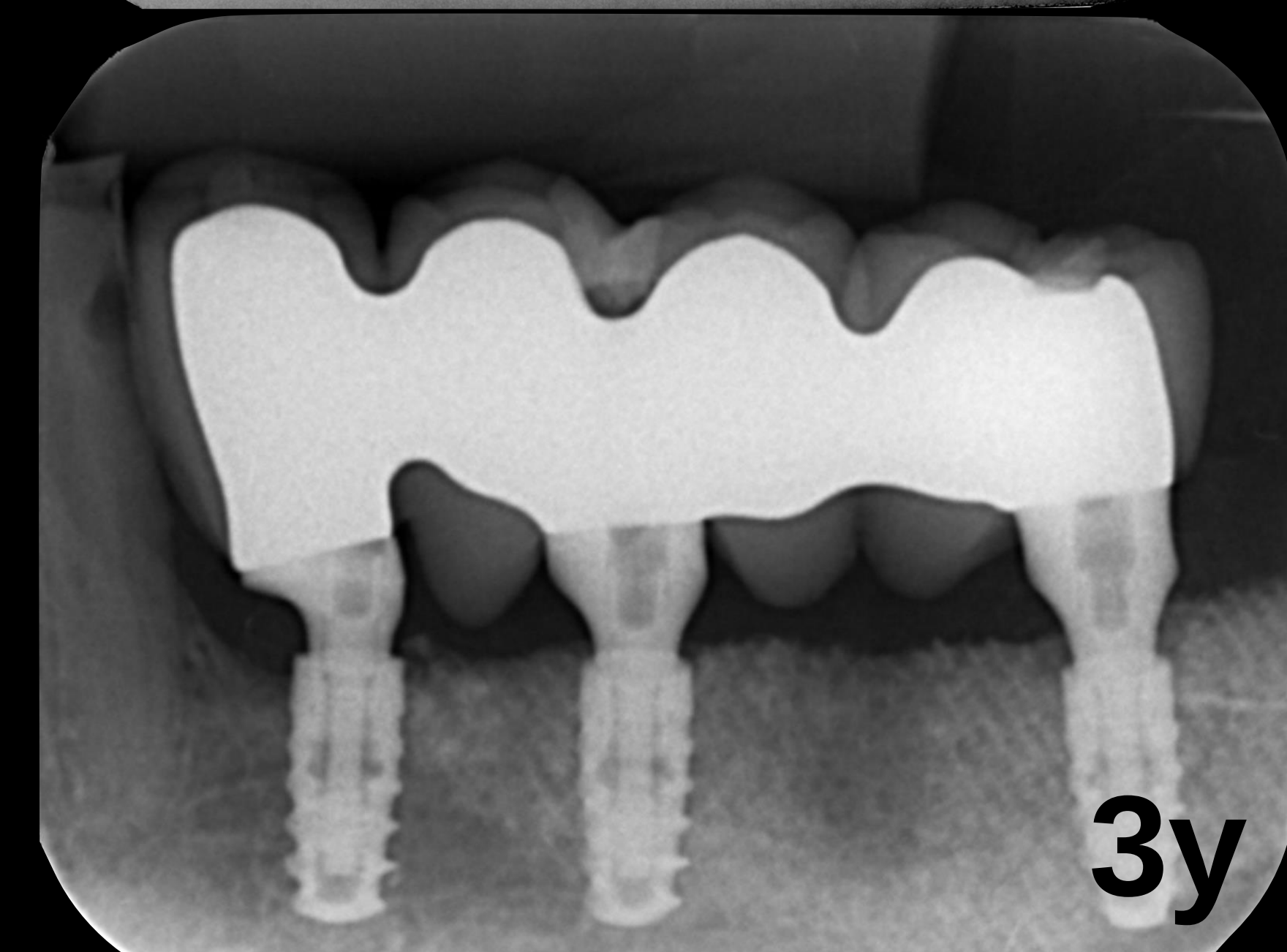
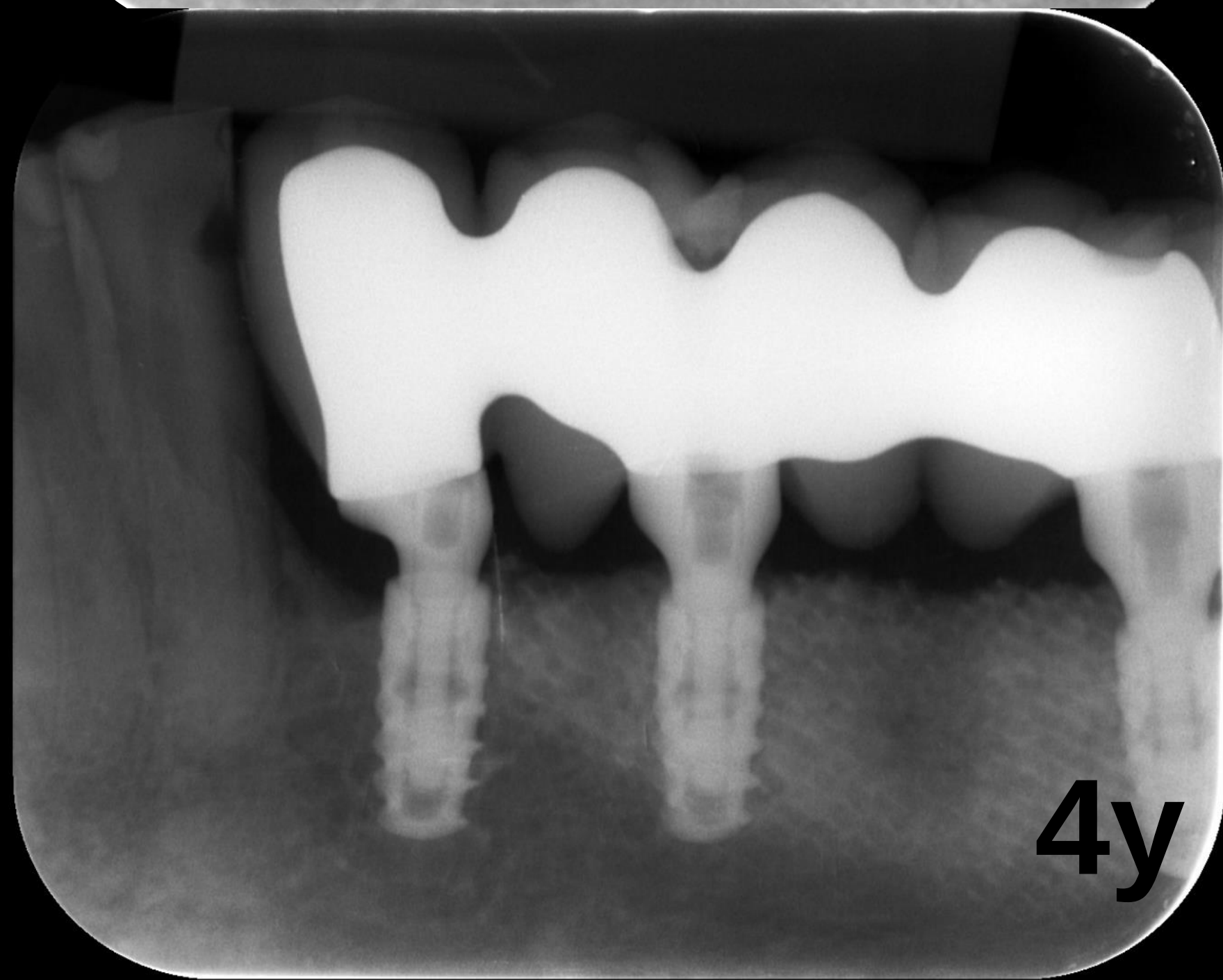
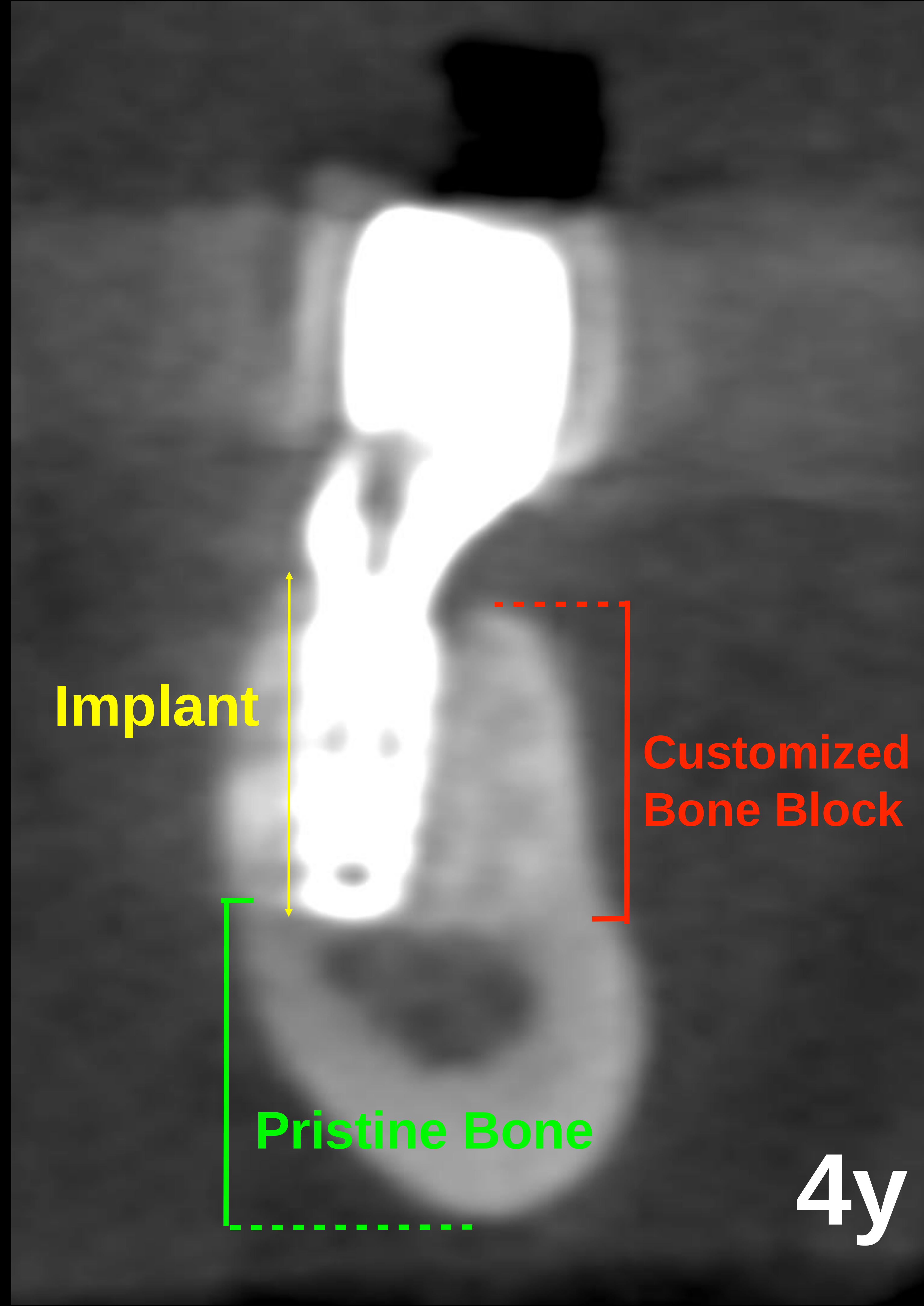


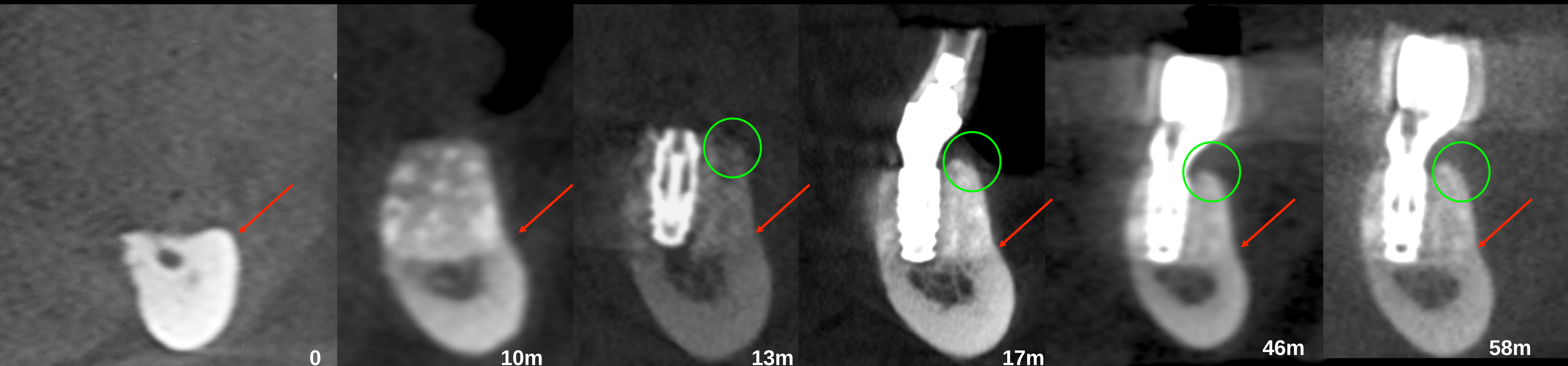
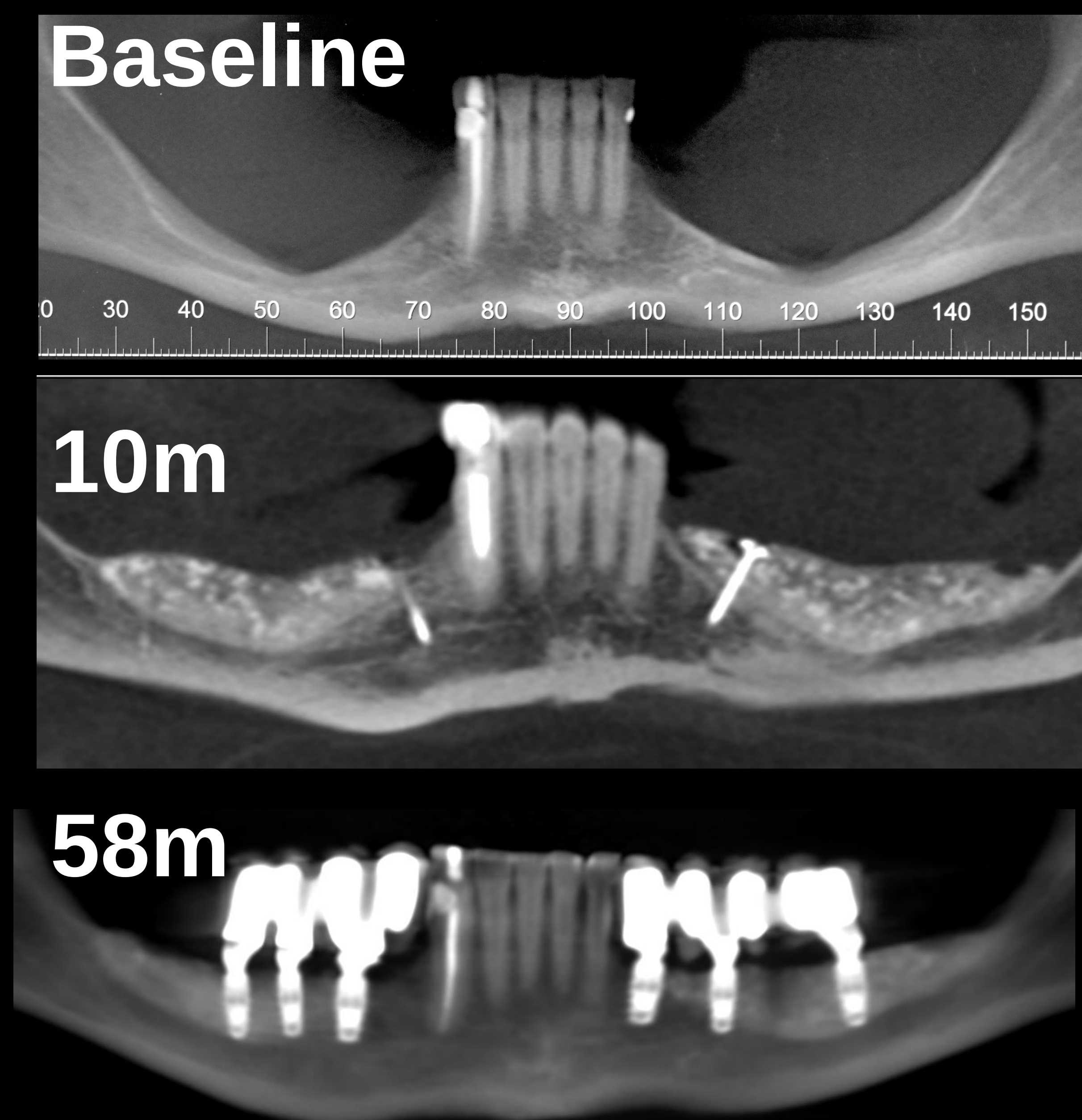
- Female, 56y, ASA I, lost their teeth since 22 years old
- Periodontally healthy teeth
- **Vertical Ridge Augmentation**



- Using the DICOM files, the customized printed bone block (7mm height and 5mm length) was manufactured using the SLS process with HA. The recipient bed was prepared and the block was soaked with rhBMP-2 and fixed with Ti screws. The re-entry was after 10m







Conclusion: The use of a 3D customized bone block associated with rhBMP-2 resulted in stable bone formation over 58 months (48 months post-implant loading).