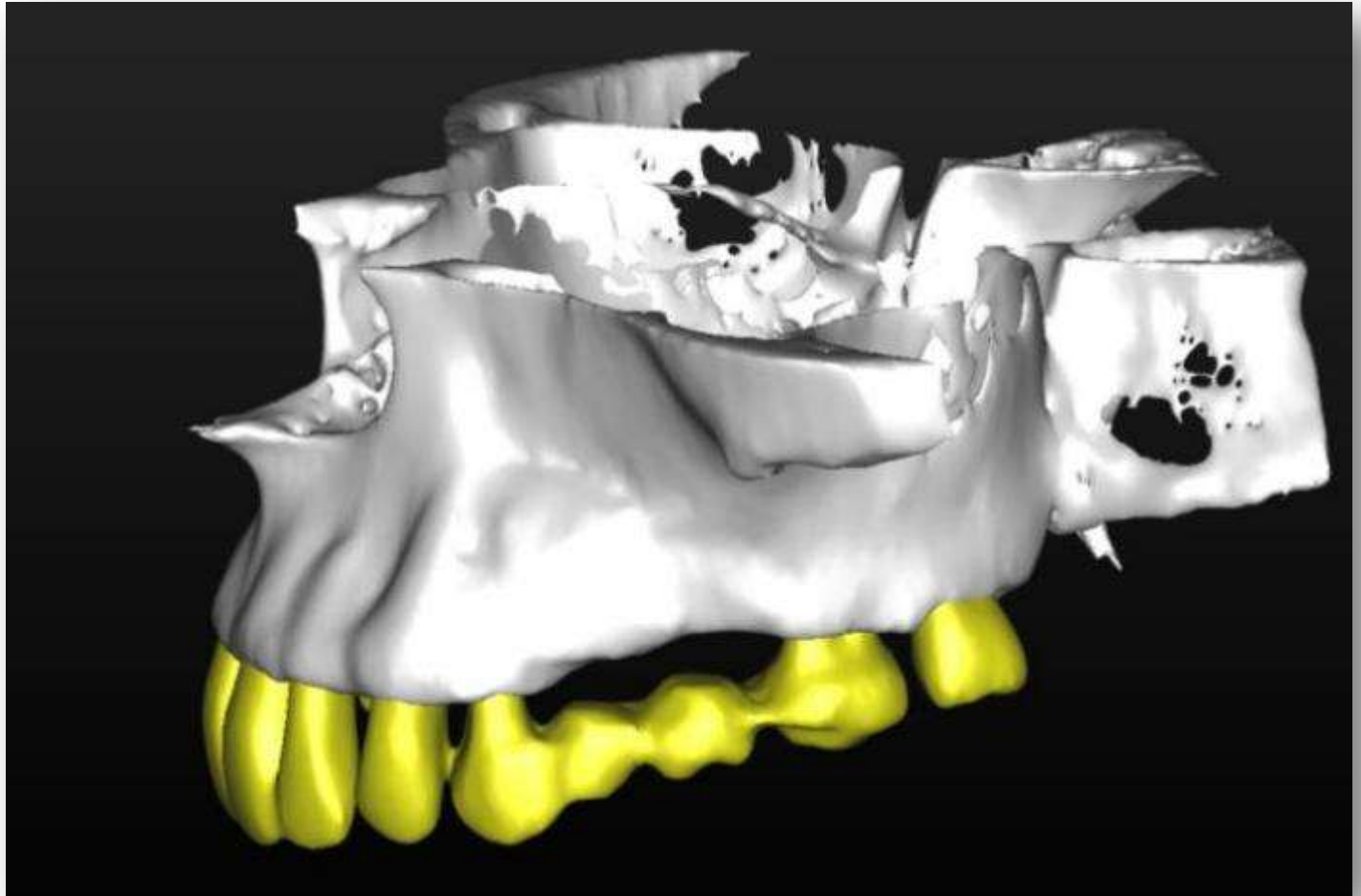


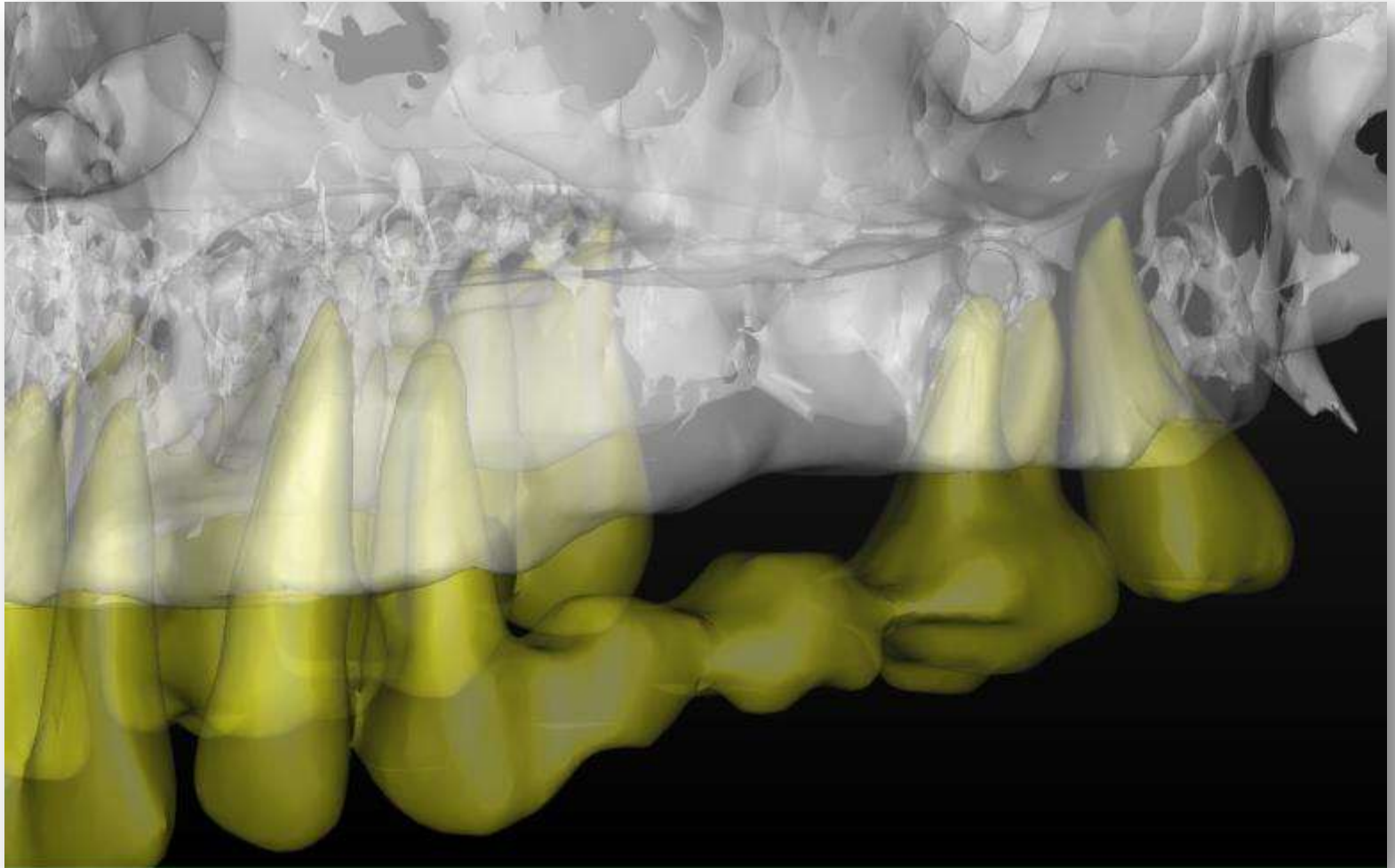
Case Report

**The advantages of guided
implant placement combined
with the unique characteristics of
The TAVDental Sirius implant**

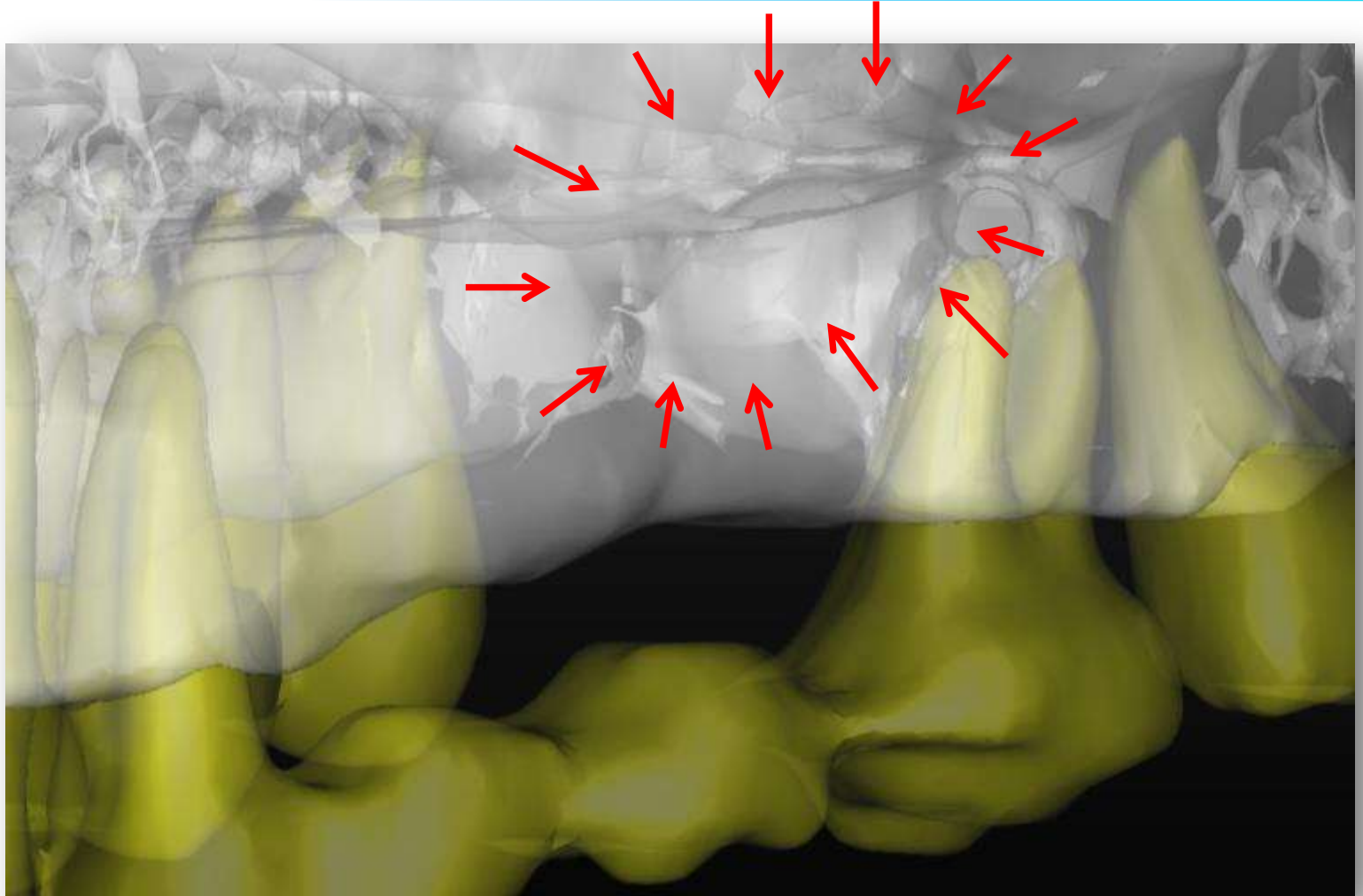
Area of 25 26 27 has undergone previous bone regeneration and is now ready for implantation



Transparent view facilitates initial preview of implant site



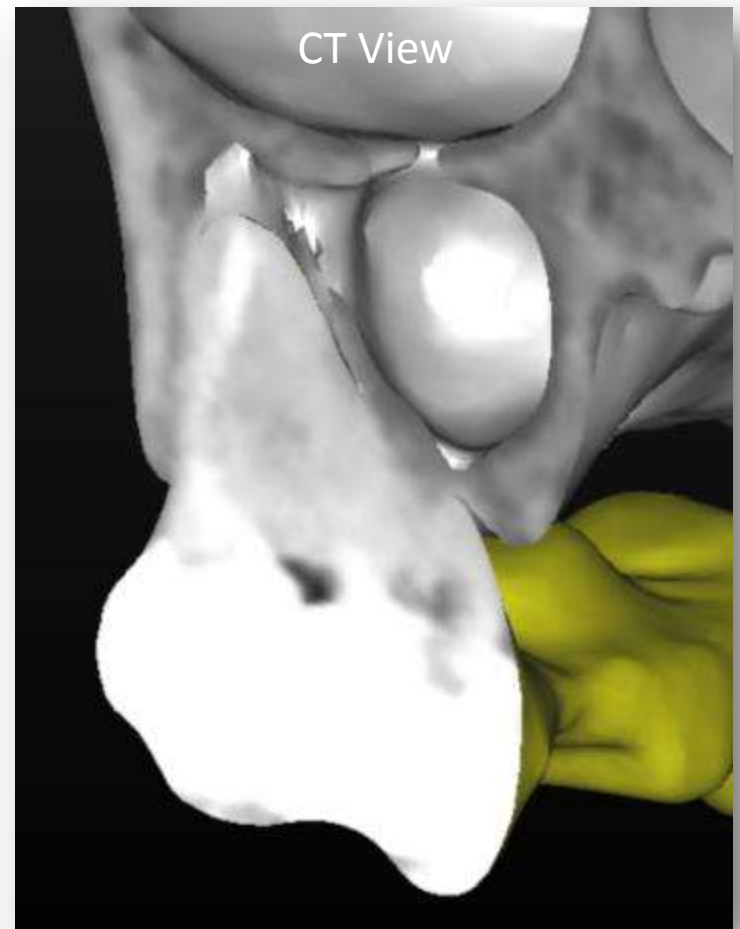
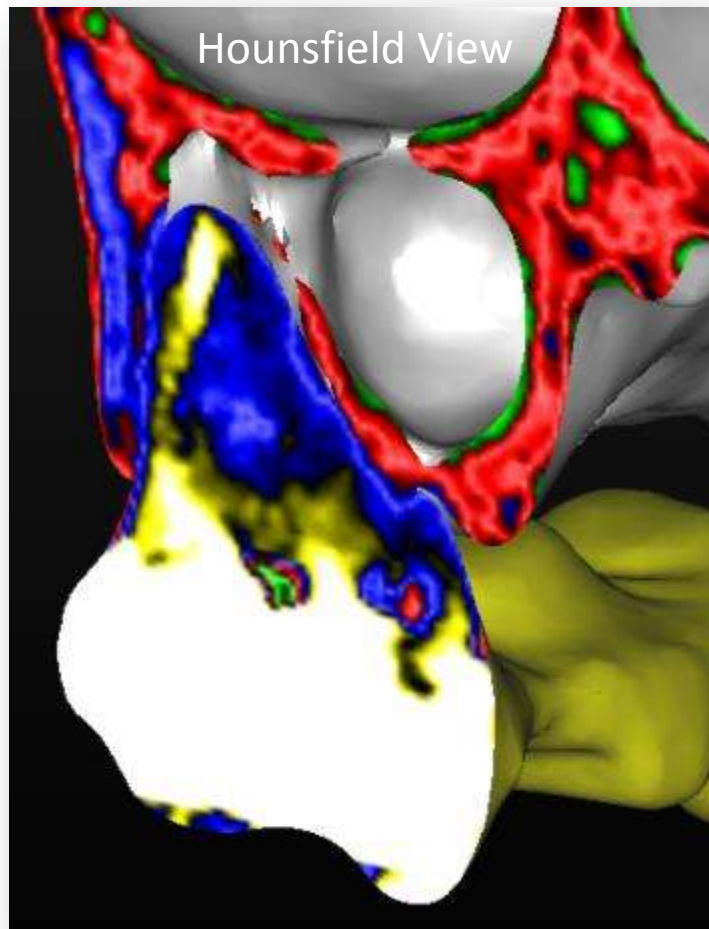
More detailed scanning of 3D bone anatomy reveals a large abscess associated with tooth 27, defect may result in insufficient bone volume for implant insertion at the time of surgery.



Axial view at the level of the bone defect related to tooth 27 reveals the size and position of the defect



3D sagittal view at the level of the bone defect related to tooth 27
Analysis with Hounsfield Unit interpretation enables to evaluate
bone hardness for further planning



PROBLEM Treatment with a cylindrical type of implant at the site of tooth 27 with the illustrated anatomical challenges compromises a predictable result, therefore more consideration must be given to implant design



SOLUTION selecting an implant design that can match the anatomical challenges arising in this case.

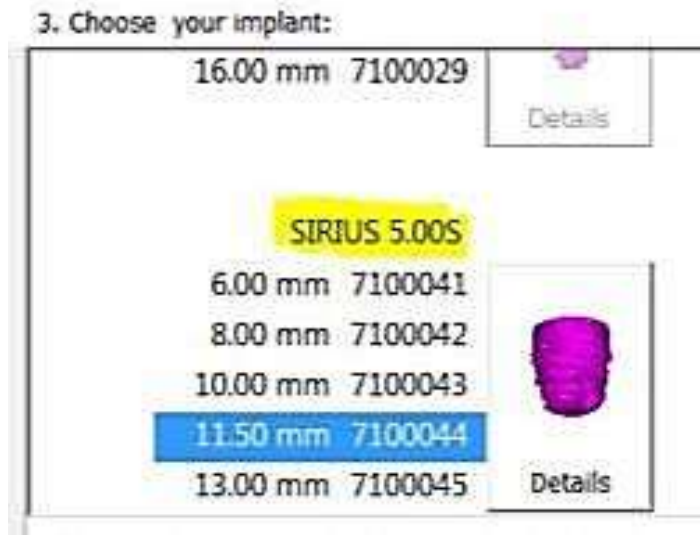
Apical threads designed for engagement and stability of the apical portion of the implant in minimal bone quantity

Rounded design of implant apical tip preventing perforation of anatomical structures

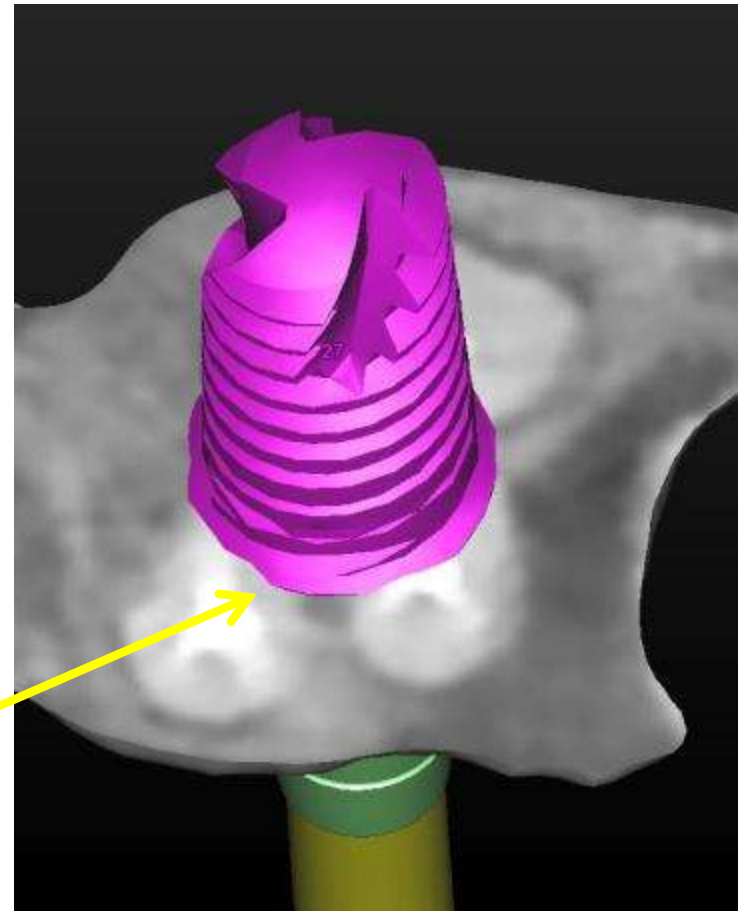


Increased diameter of threads at the cervical third for improved initial stability in extraction sites (socket)

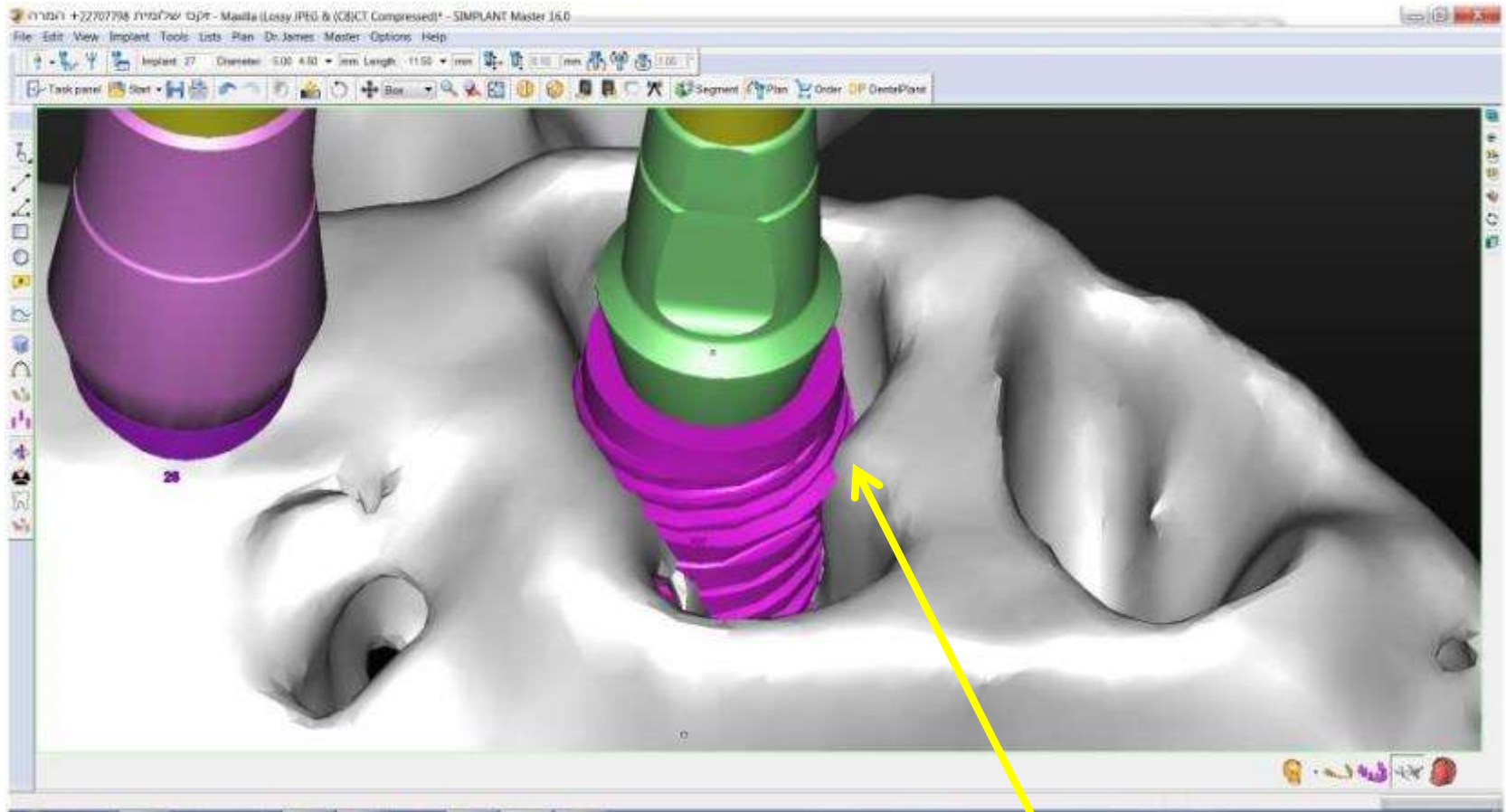
SOLUTION as illustrated in the axial view at the level of the cervical root level of tooth 27 demonstrating the benefits of the implant design



Increased diameter of threads at the cervical third for improved initial stability in extraction sites (socket)

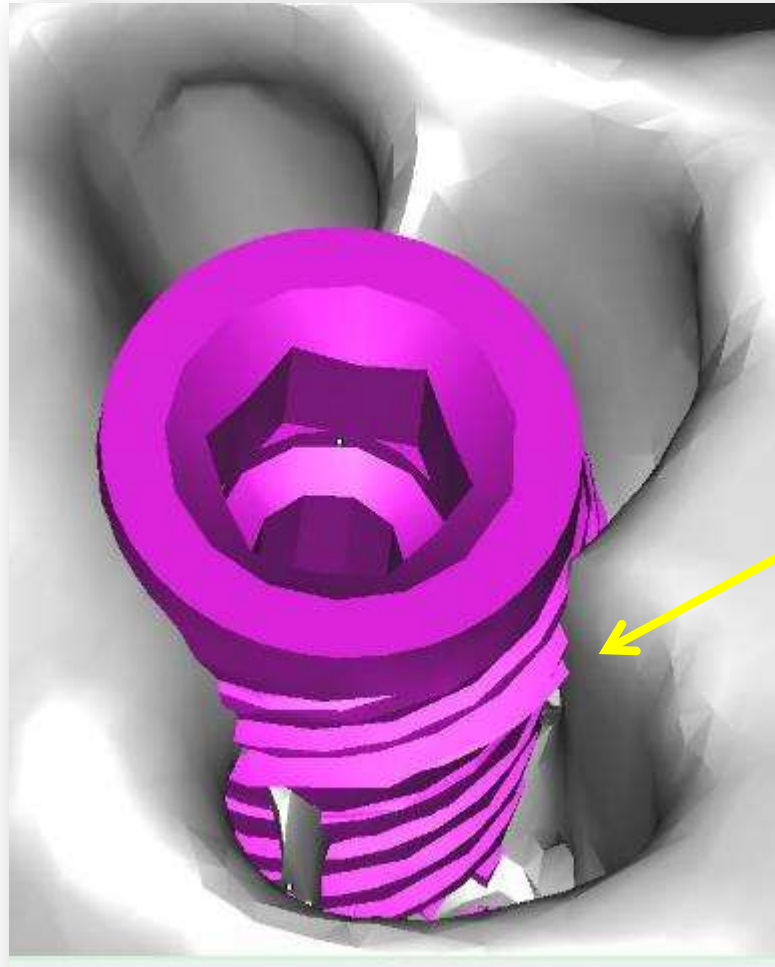


SOLUTION as illustrated in the 3D occlusal view at the level of the cervical root level of tooth 27 demonstrating the benefits of the implant design



Increased diameter of threads at the cervical third for improved initial stability in extraction sites (socket)

SOLUTION as illustrated in the 3D occlusal view at the level of the cervical root level of tooth 27 demonstrating the benefits of the implant design



Increased diameter of threads at the cervical third for improved initial stability in extraction sites (socket)

TAV Implants



Innovative design assures better primary stability in most complex cases.

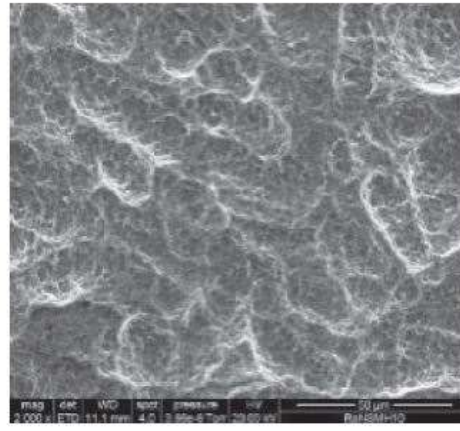
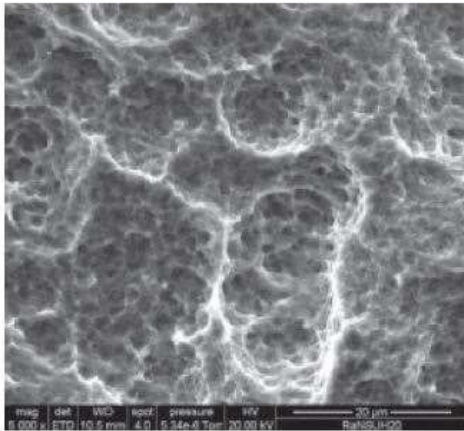
- ✦ **Macro and Micro threads** increase surface area and distribute axial forces.
- ✦ **Self- tapping threads** facilitate easy insertion and optimize primary stability.
- ✦ Implant geometry is based on **platform switching** that allows for biological space.
- ✦ Recommended for bone types D2, D3, D4.



MICRO Surface

Titanium grade 23 (Ti 6Al 4V ELI) is a highly successful material for the fabrication of dental implants, on account of its favorable combination of properties.

The surface roughness and micro-geometry of the titanium are achieved by blasting and acid etching.



The Micro roughness ($10\ \mu - 1\mu$):

- ♦ improves the interlocking between mineralized bone and implant surface
- ♦ improves the mechanical anchorage
- ♦ increases the envelope surface by 4



Image of Surgical guide



Image of Surgical guide showing perfect seating on adjacent supporting teeth



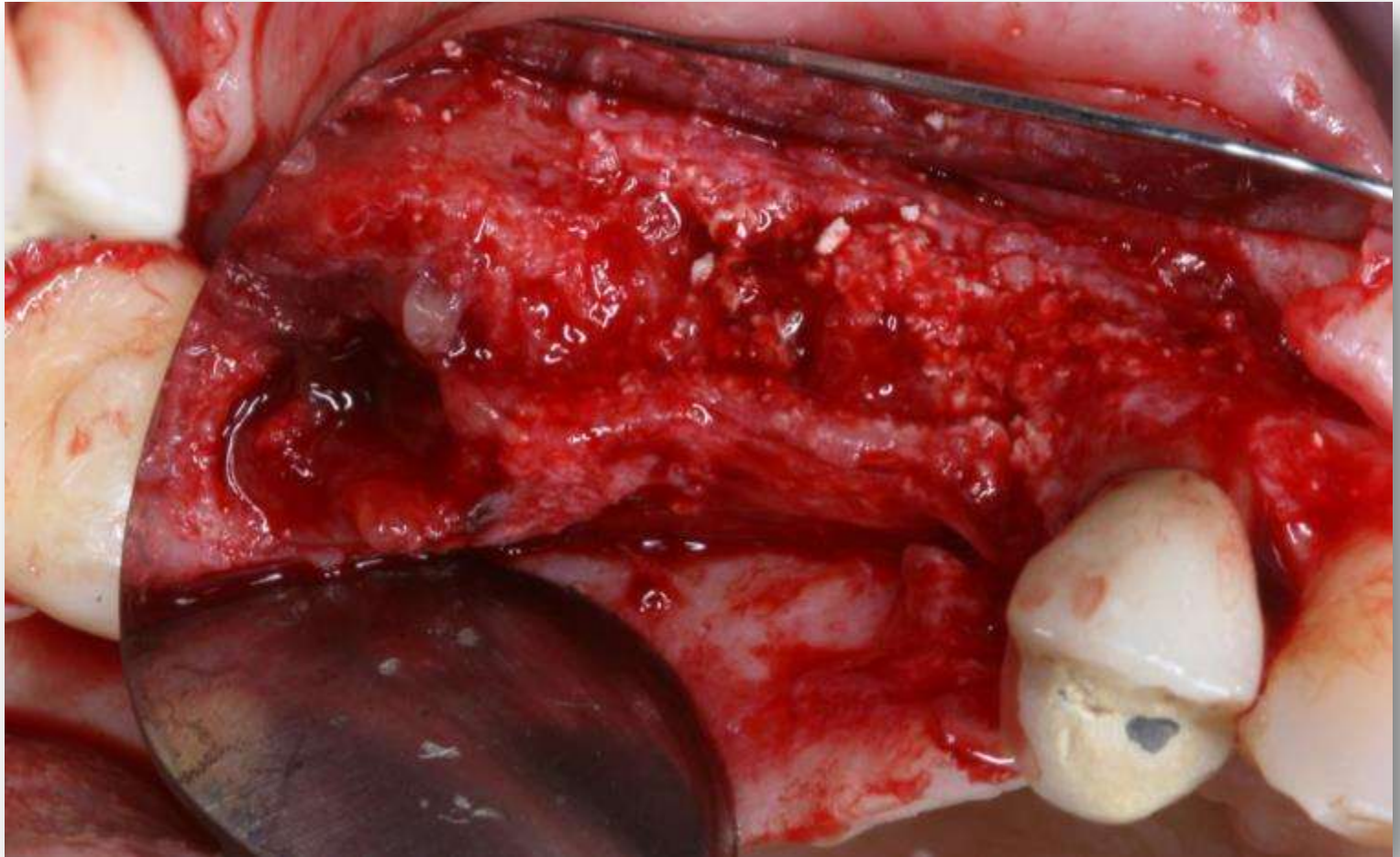
Image of Surgical guide showing perfect seating on adjacent supporting teeth



Image of Surgical guide showing removal of palatal “strip” to allow for better flap manipulation

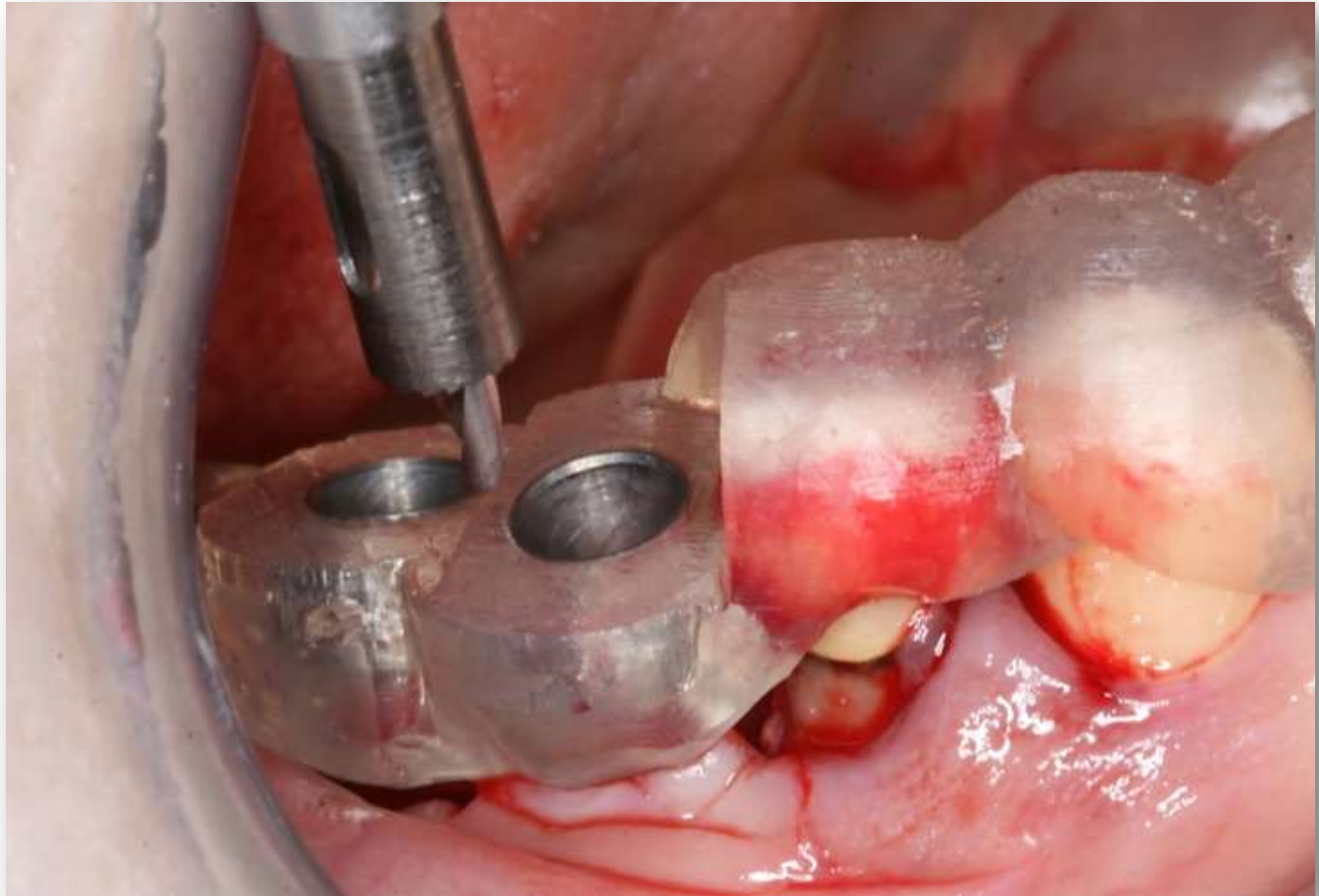


Clinical image of surgery
Exposure of bone site



Clinical image of surgery

First Drill: Trephine



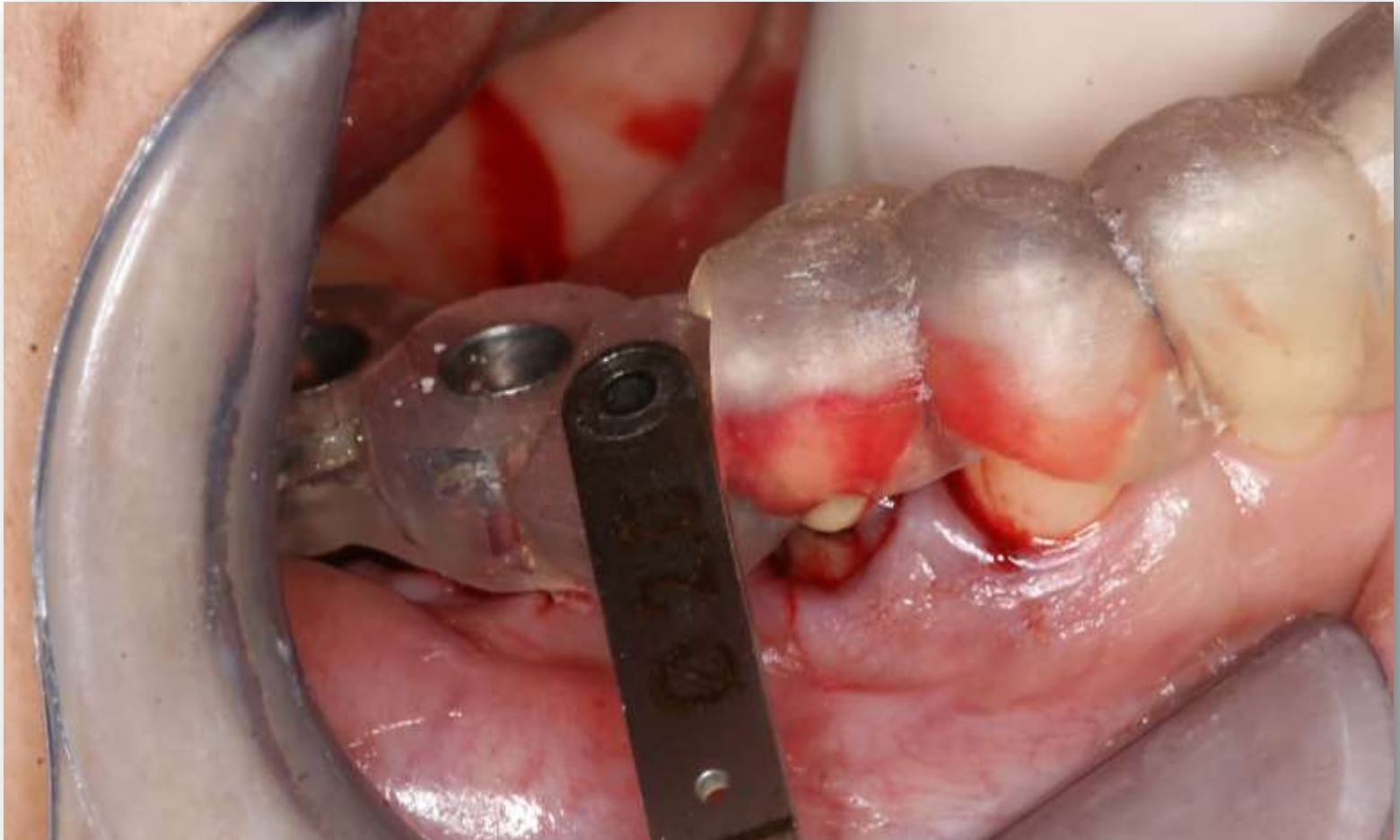
Clinical image of surgery

First Drill: Trephine



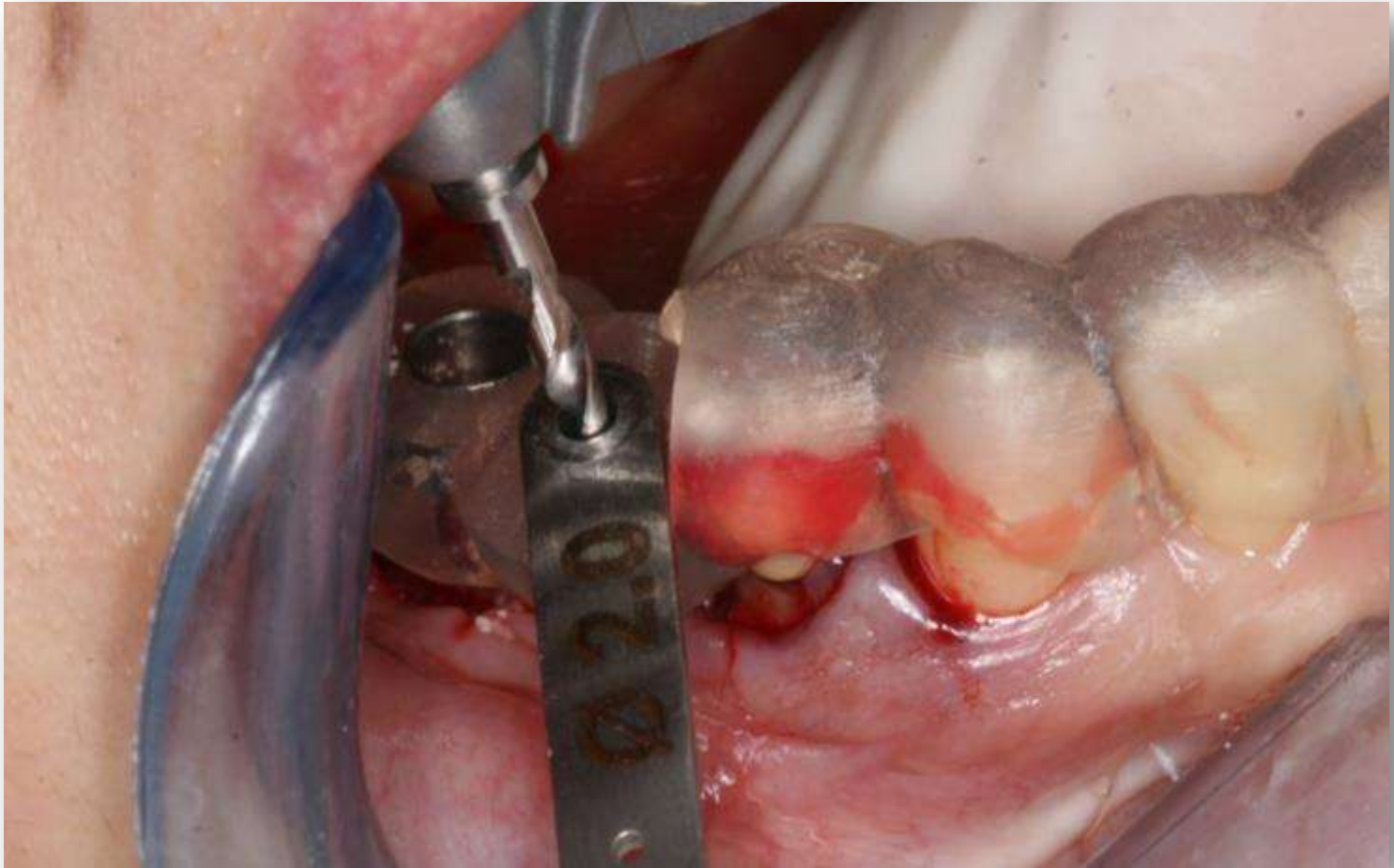
Clinical image of surgery

Second Drill: 2mm Pilot



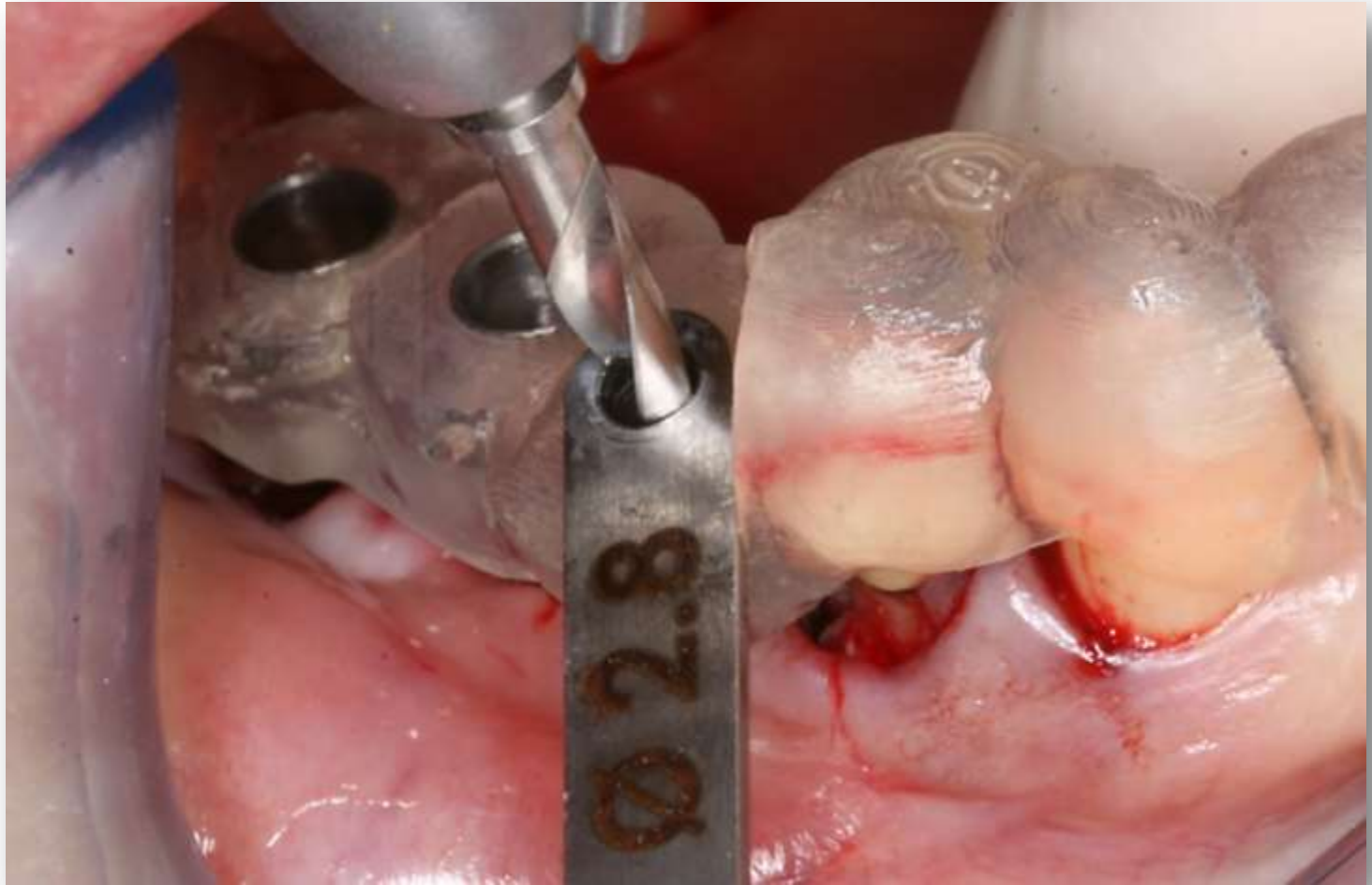
Clinical image of surgery

Second Drill: 2mm Pilot



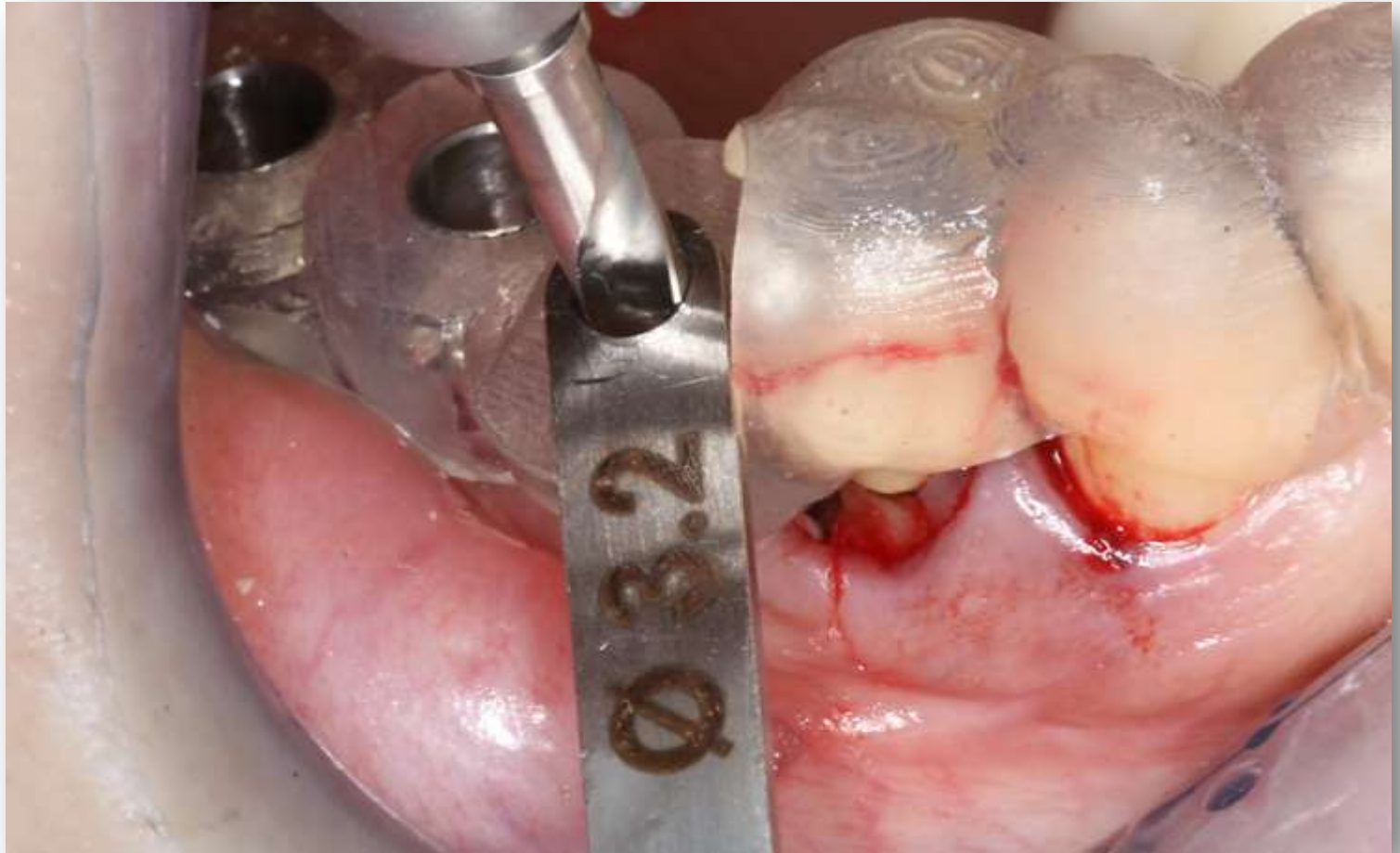
Clinical image of surgery

Third Drill: 2.8 mm



Clinical image of surgery

Third Drill: 3.2 mm

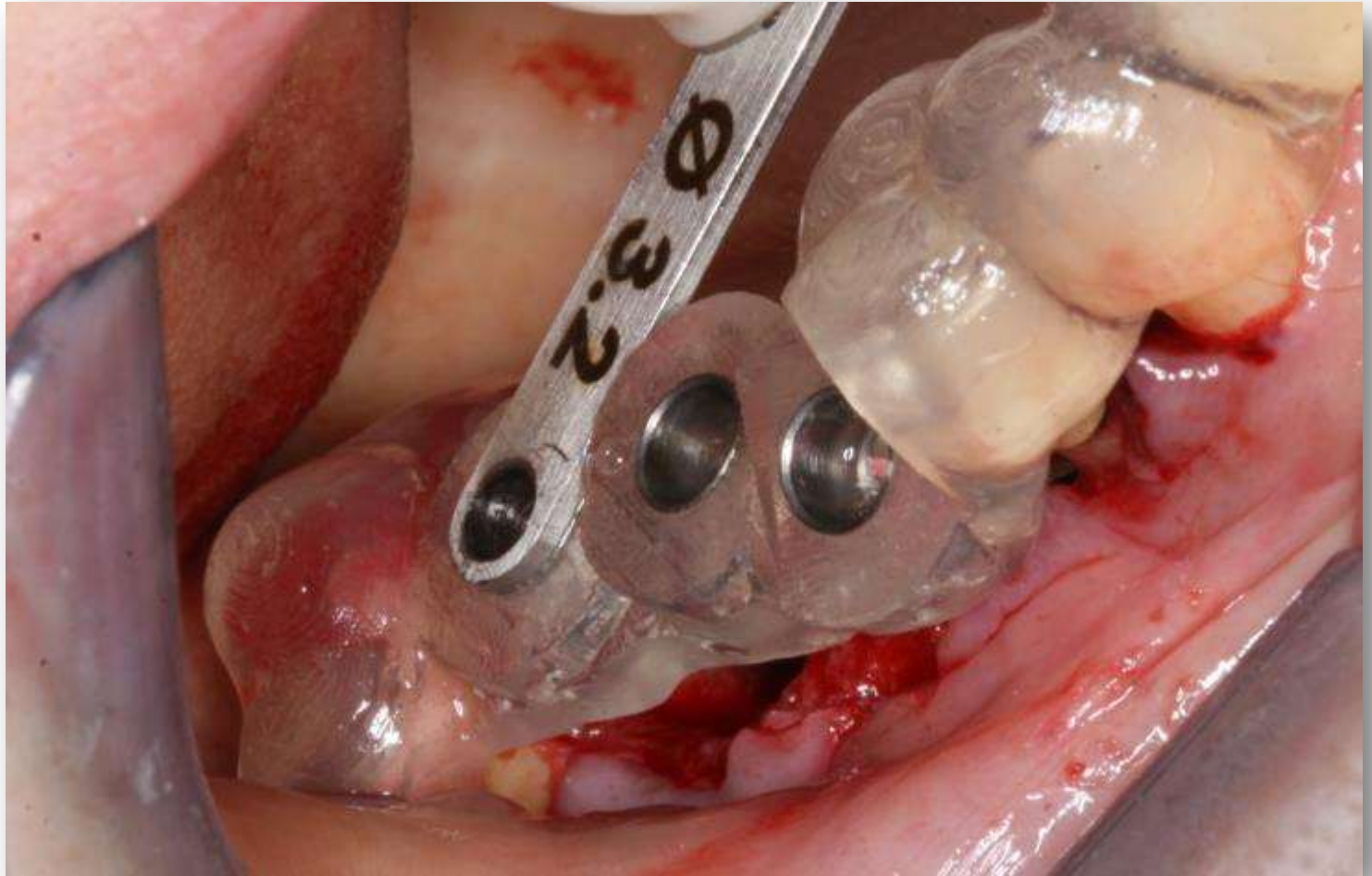


Clinical image of surgery

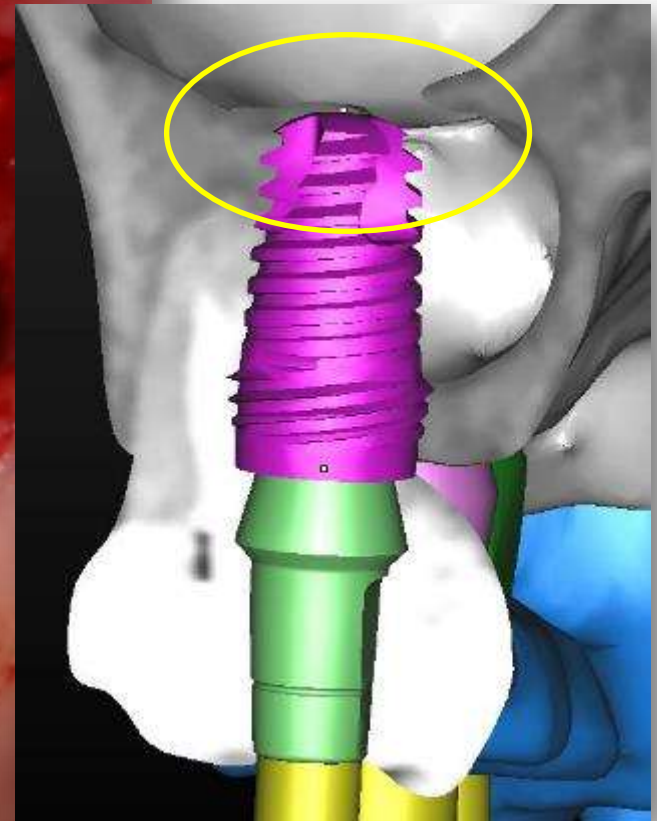
Fourth Drill for Final diameter preparation for implant insertion



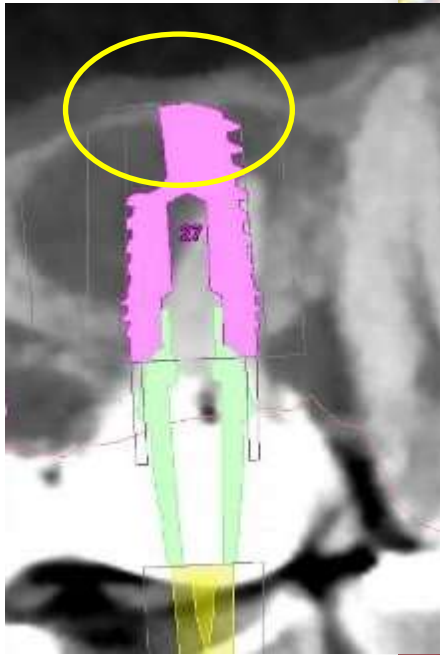
Using the surgical guide makes it possible to prepare the exact apical drilling planed position at the cortical sinus floor bone for implant 27



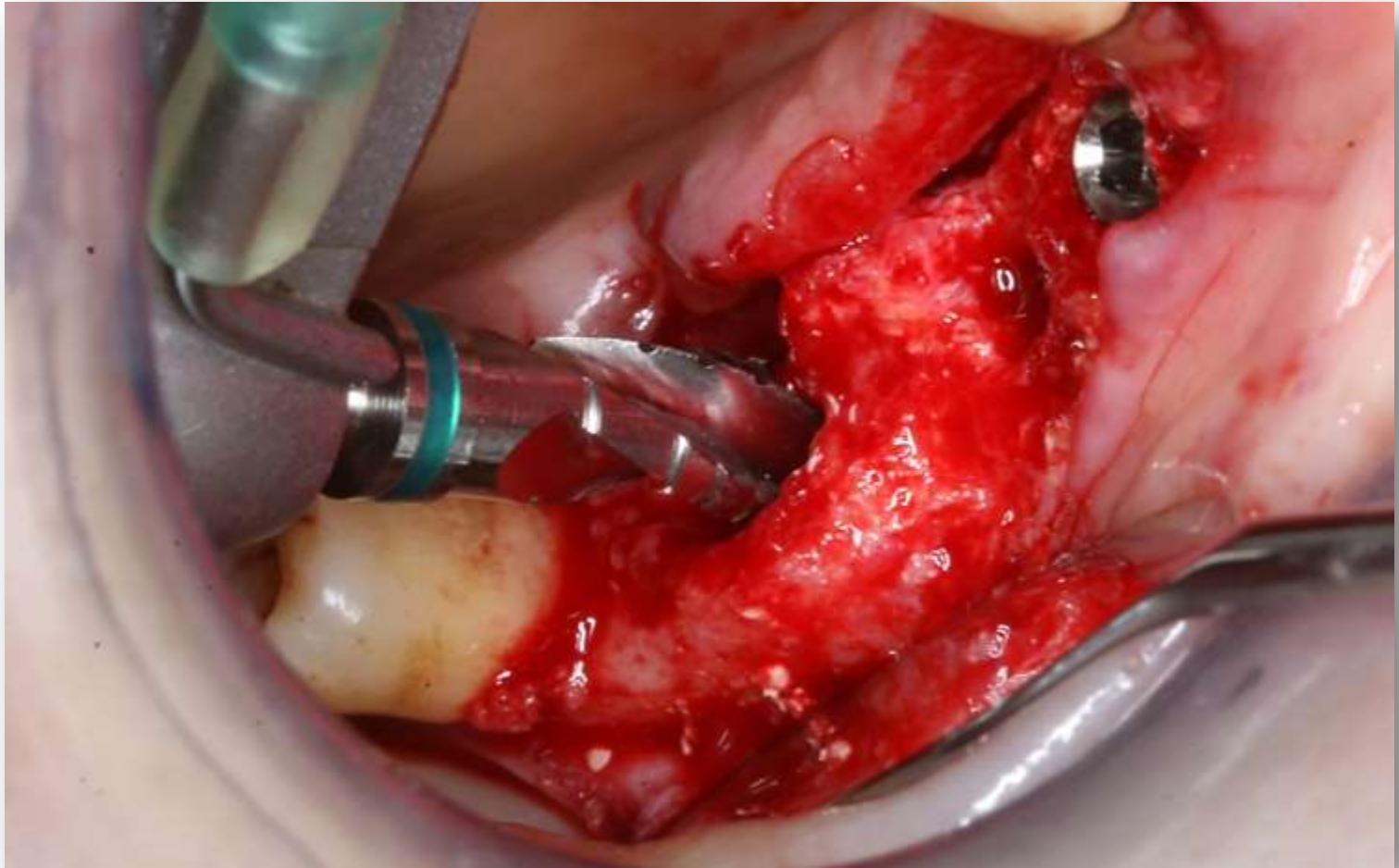
Using the surgical guide makes it possible to prepare the exact apical drilling planed position at the cortical sinus floor bone for Implant 27



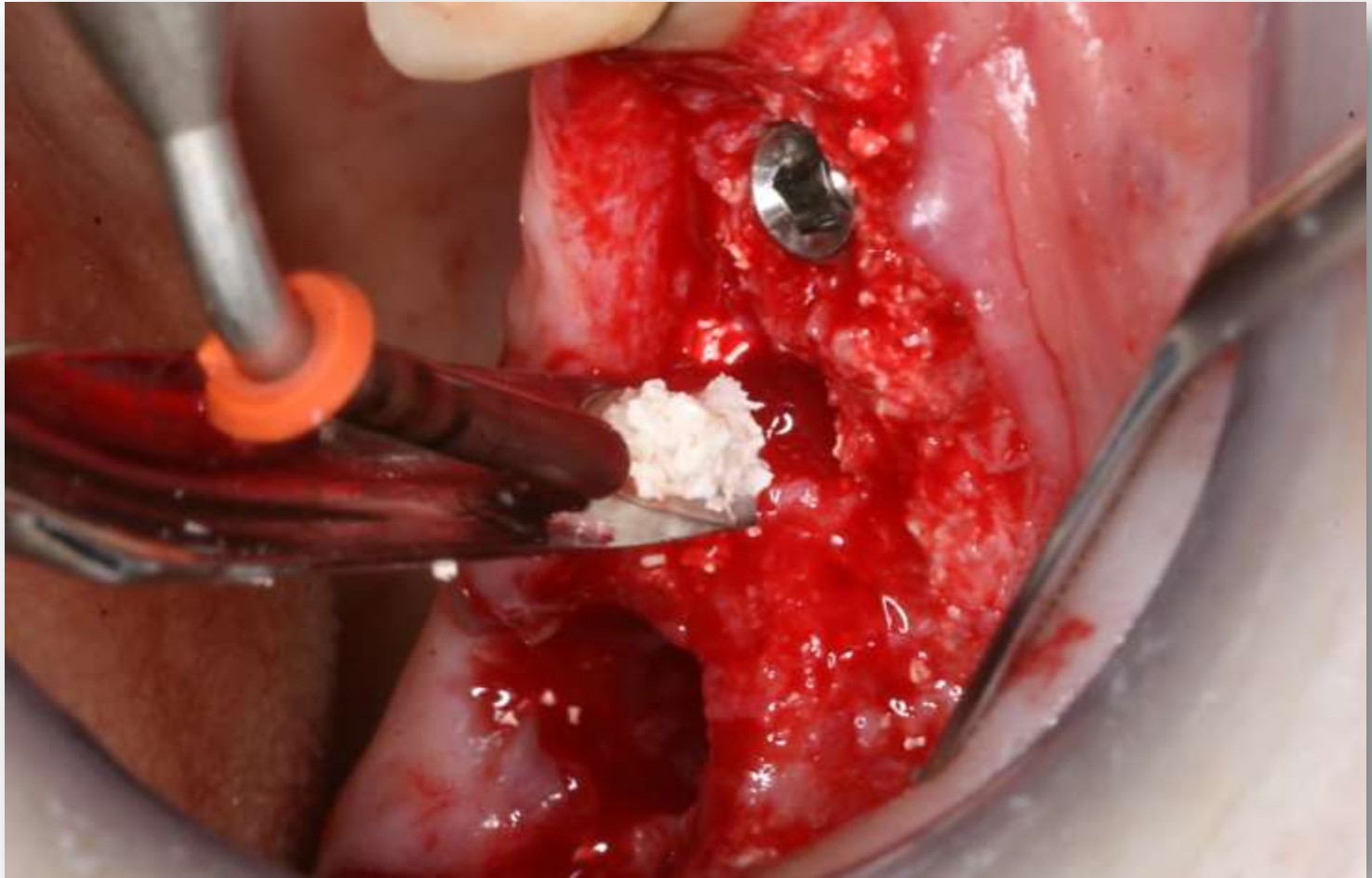
Using the surgical guide makes it possible to prepare the exact apical drilling planned position at the cortical sinus floor bone for implant 27



Final Drill for Final diameter preparation to allow proper engagement of Special apical threads of the Sirius Implant 27



Application of sinus augmentation material through drilling preparation of teeth 26 & 27



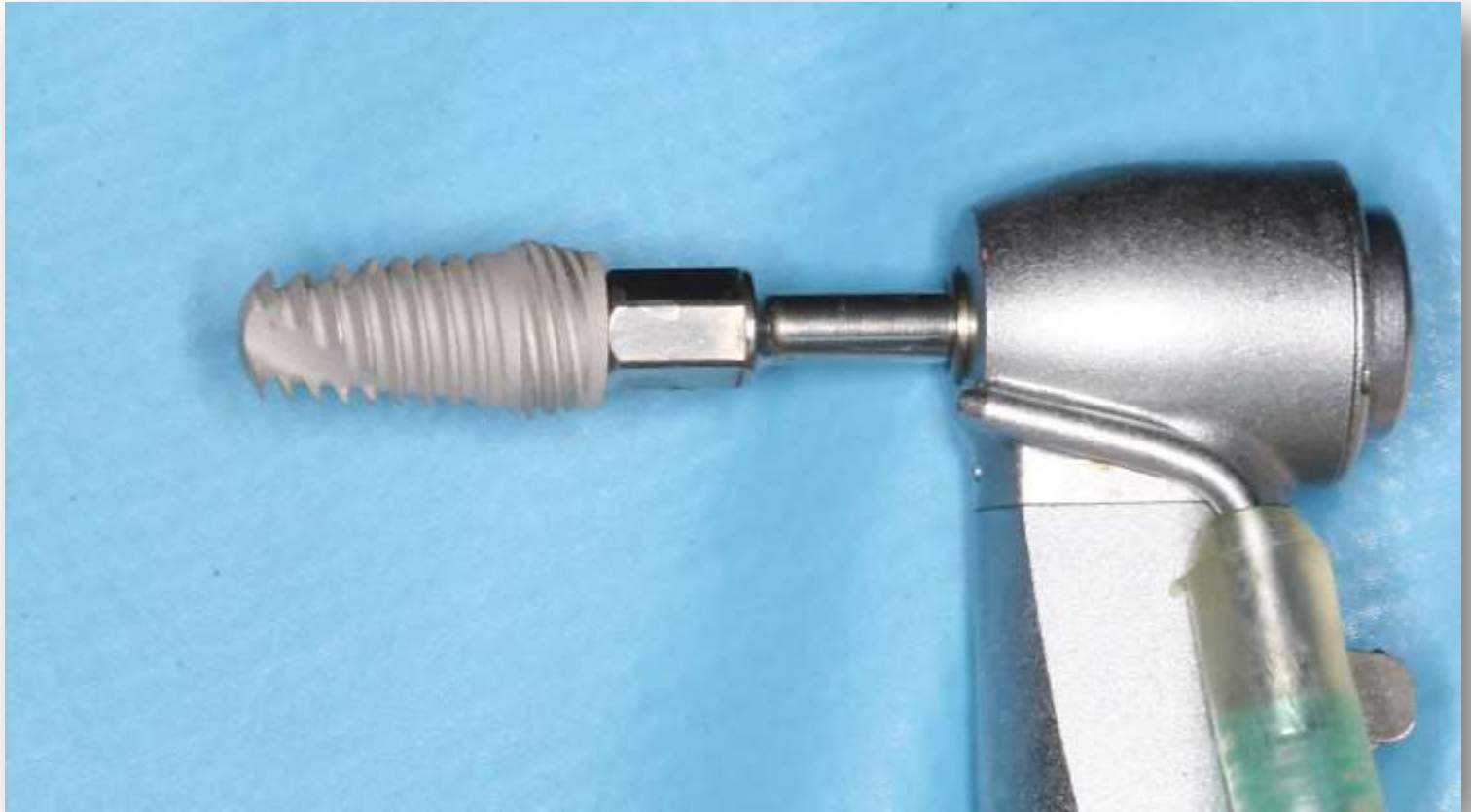
Insertion of implant 27

Use of Tav Sirius implant 11.5mm length x 5.00mm diameter to fit designated site



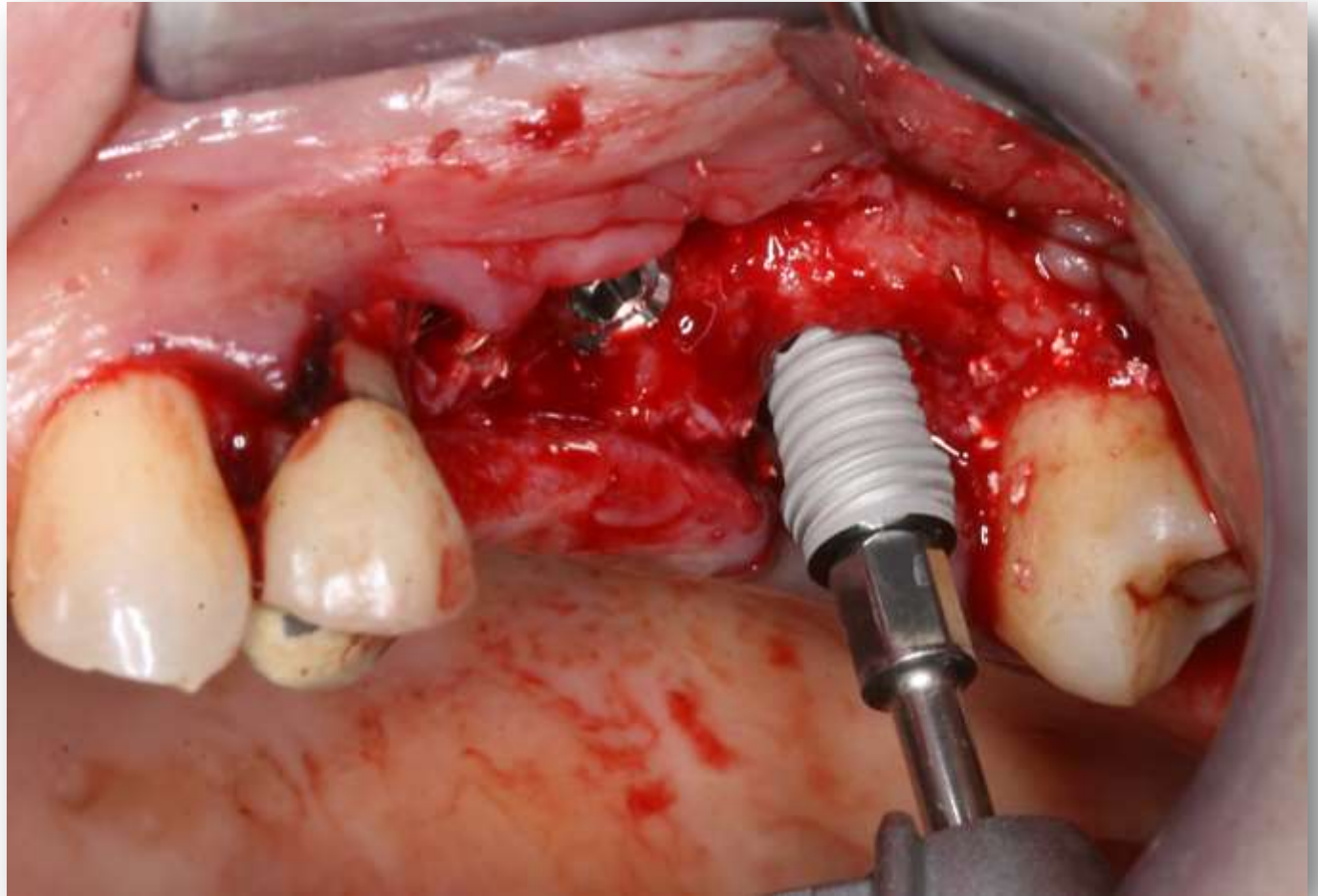
Insertion of implant 27

Implant firmly connected to special design handpiece Tav mount



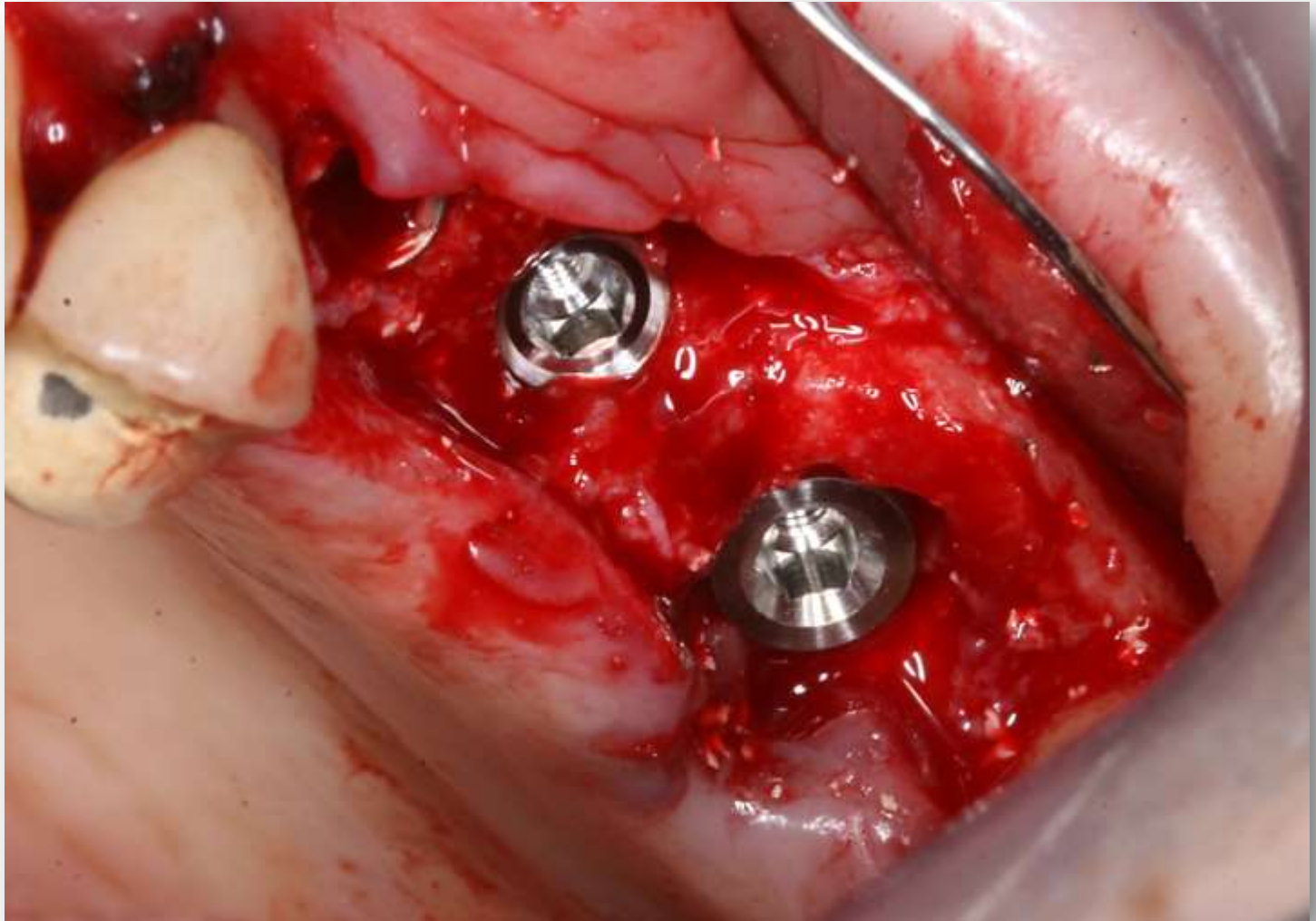
Insertion of implant 27

Use of Tav Sirius implant 11.5mm length x 5.00mm diameter to fit designated site

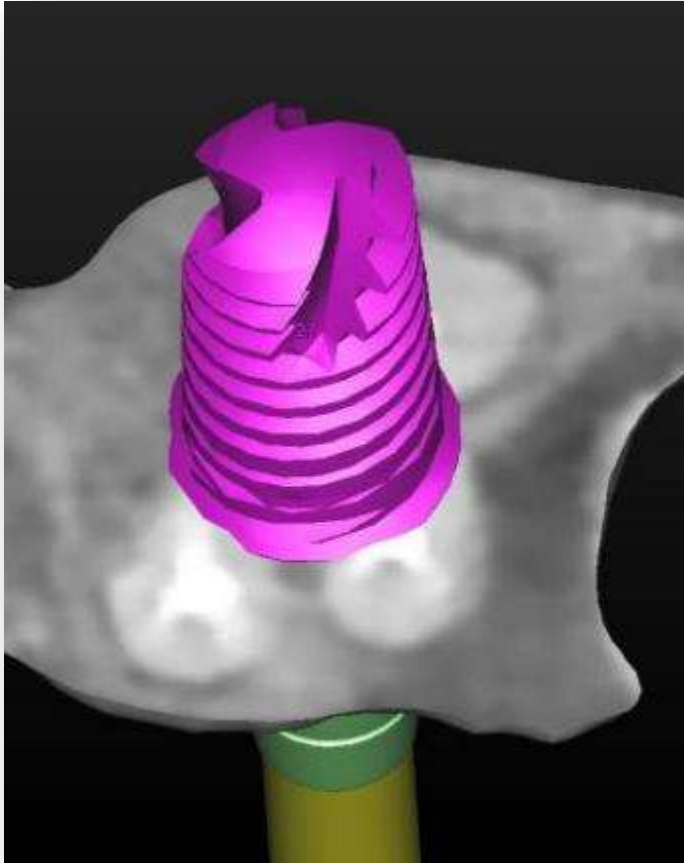


Insertion of implant 27

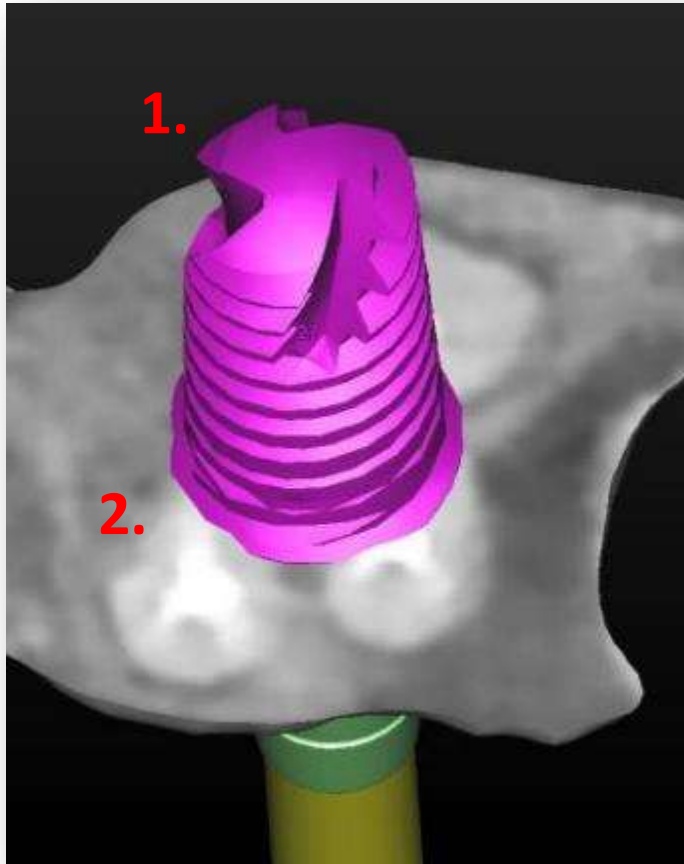
Use of Tav Sirius implant 11.5mm length x 5.00mm diameter to fit designated site



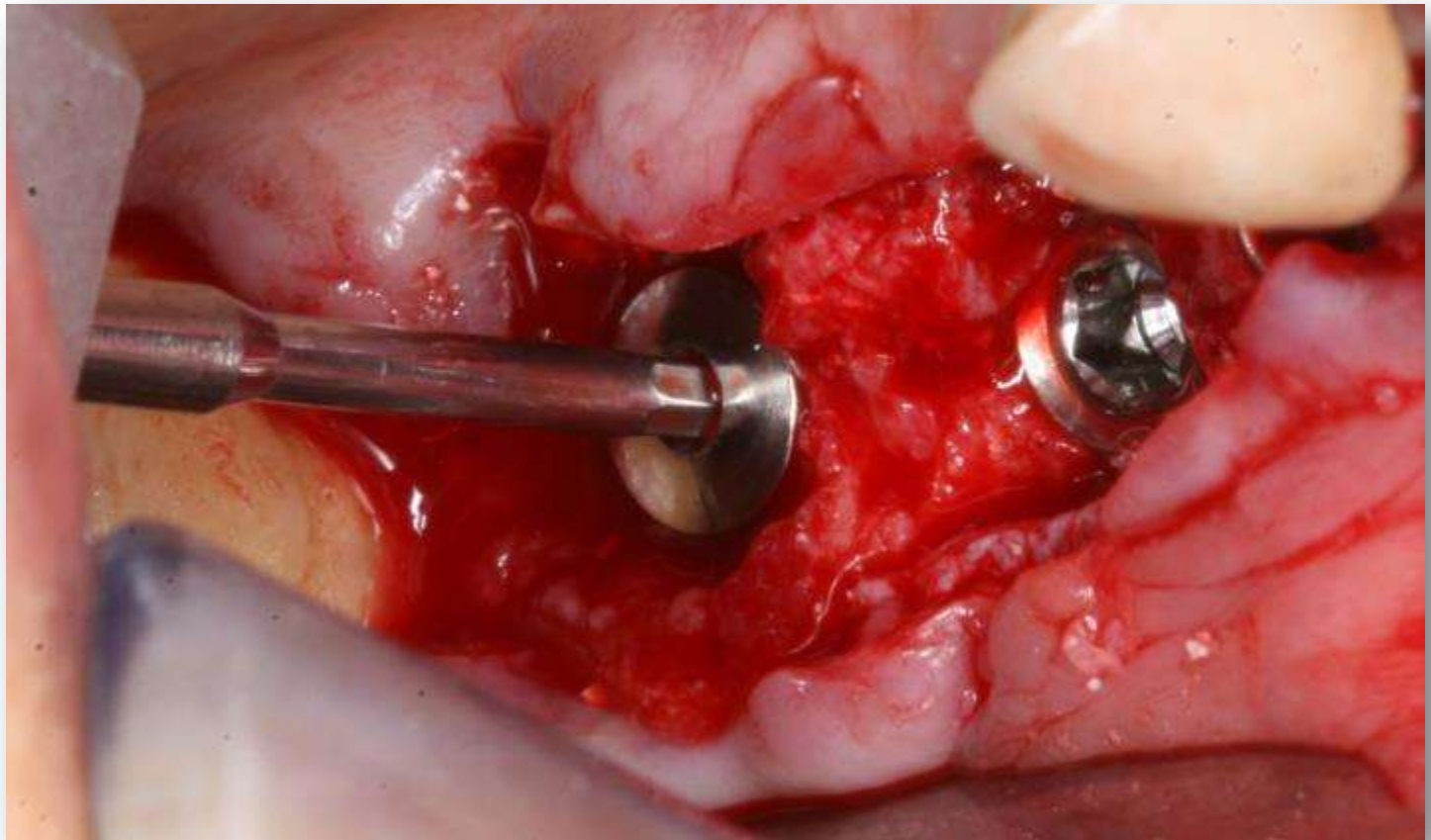
Final positioning of hex orientation during validation of initial stability and torque establishment



The clinical image shows a circumferential bone gap around the implant platform, implant initial stability is achieved by two bone engaging sites,
1.apical threads and **2.**special increased diameter cervical threads



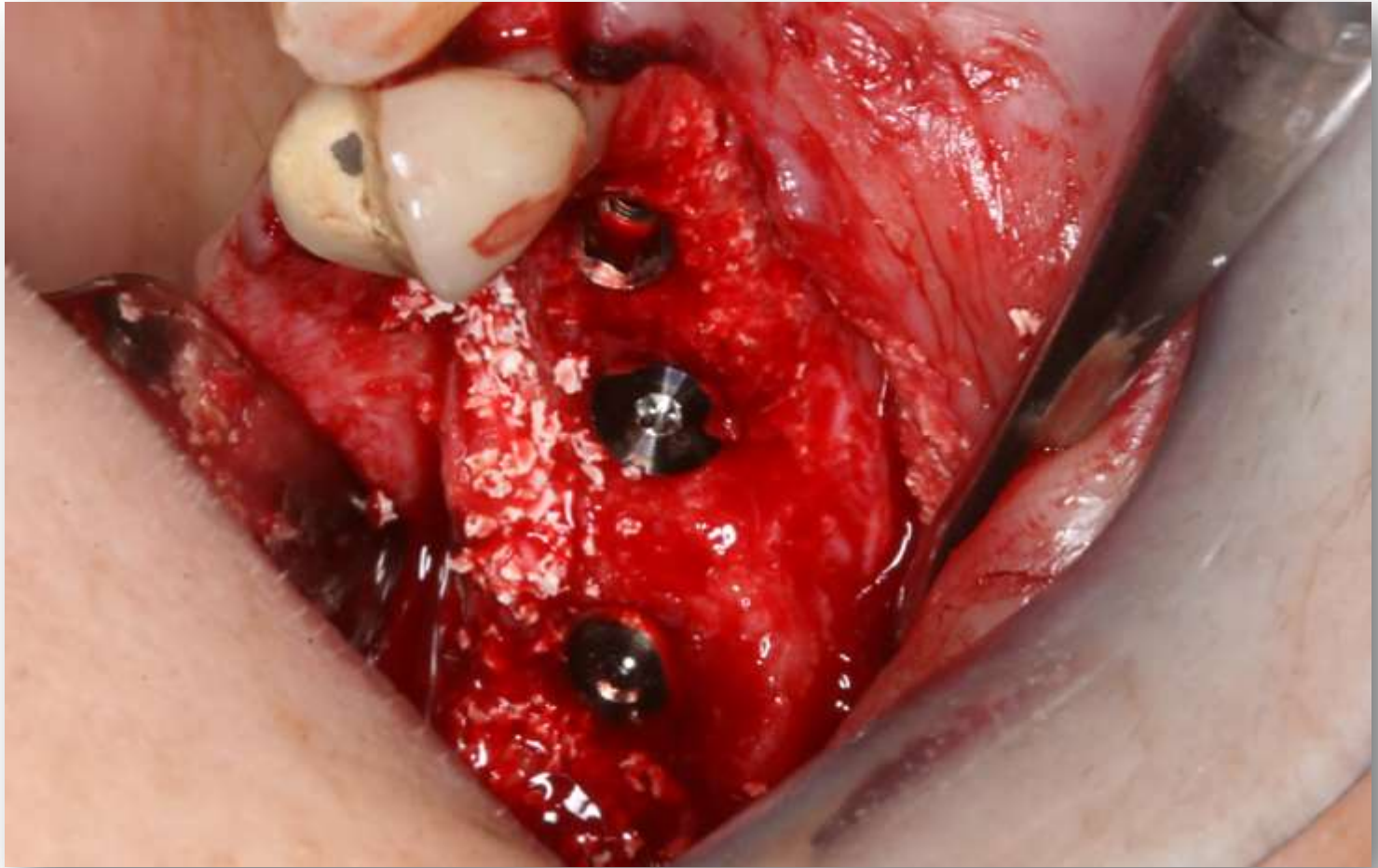
Seating of cover screw by a torque control instrument



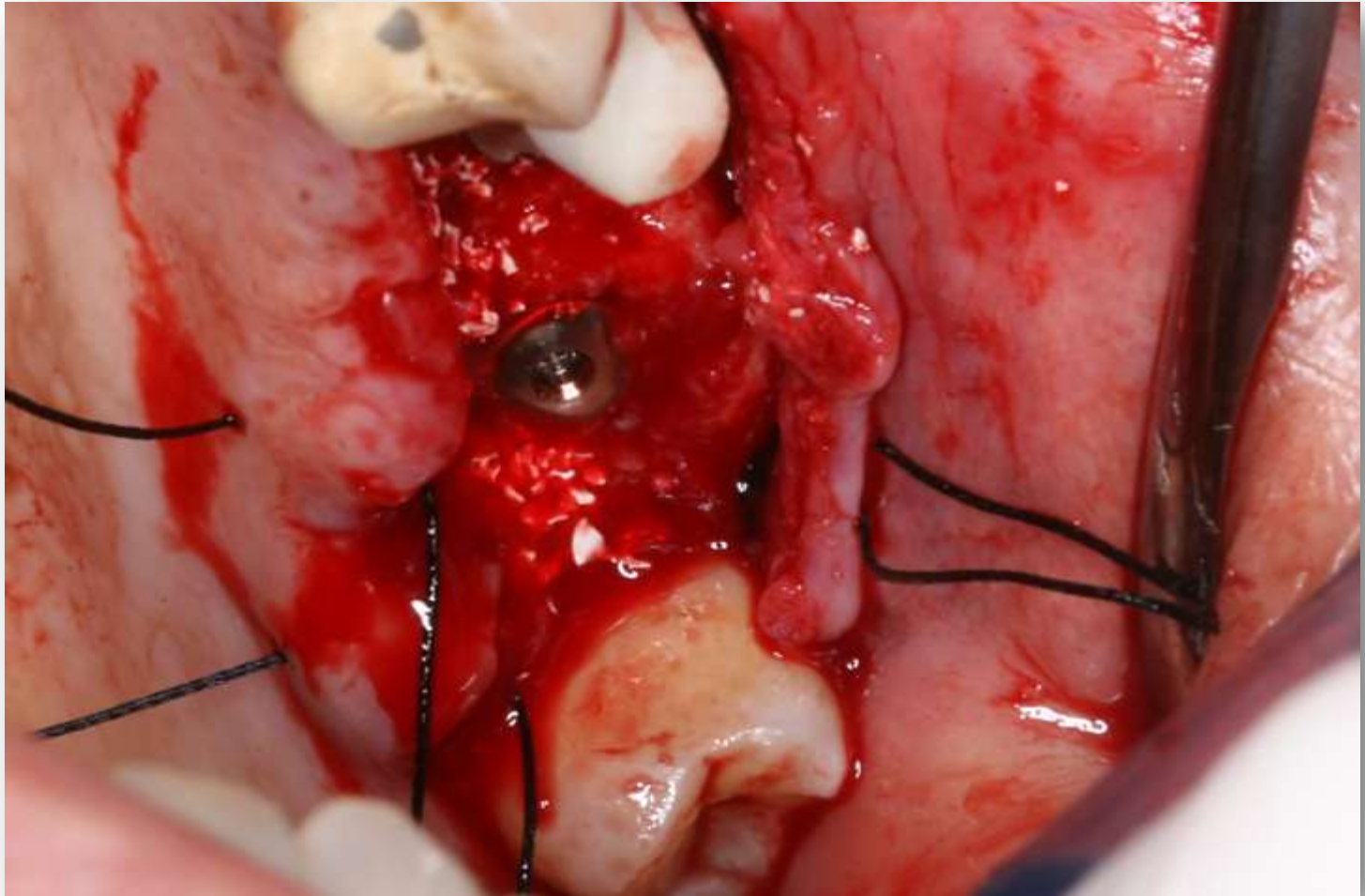
Use of ReadyGraft by Life Net as grafting material for circumferential implant augmentation



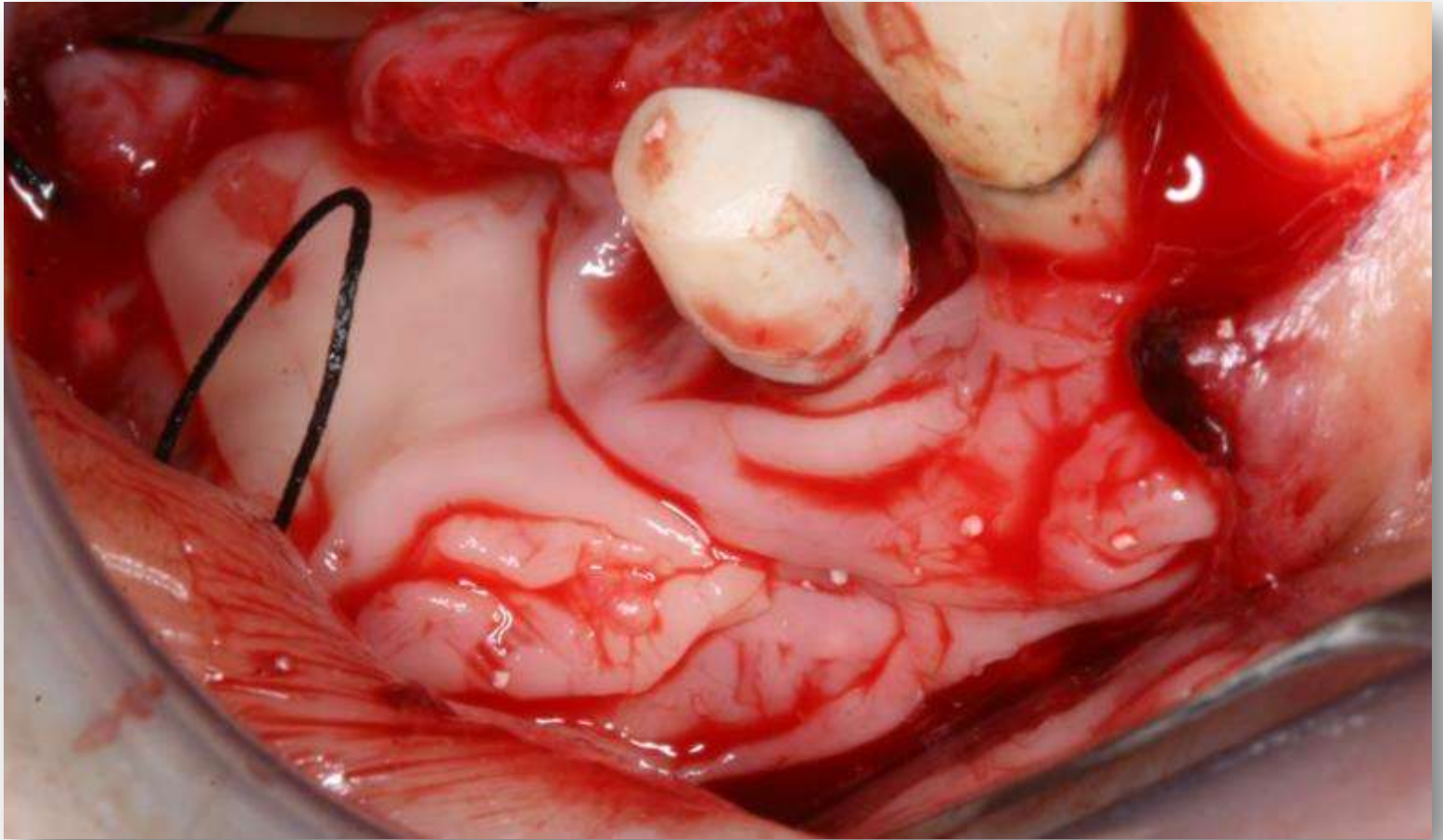
Use of slowly resorbable augmentation material for ridge volume preservation



Preliminary Suturing



Application of Collagen membrane and PRF



Completion of temporary acrylic crown on implant 25



Validation of Sinus augmentation and Sirius implant placement 27

