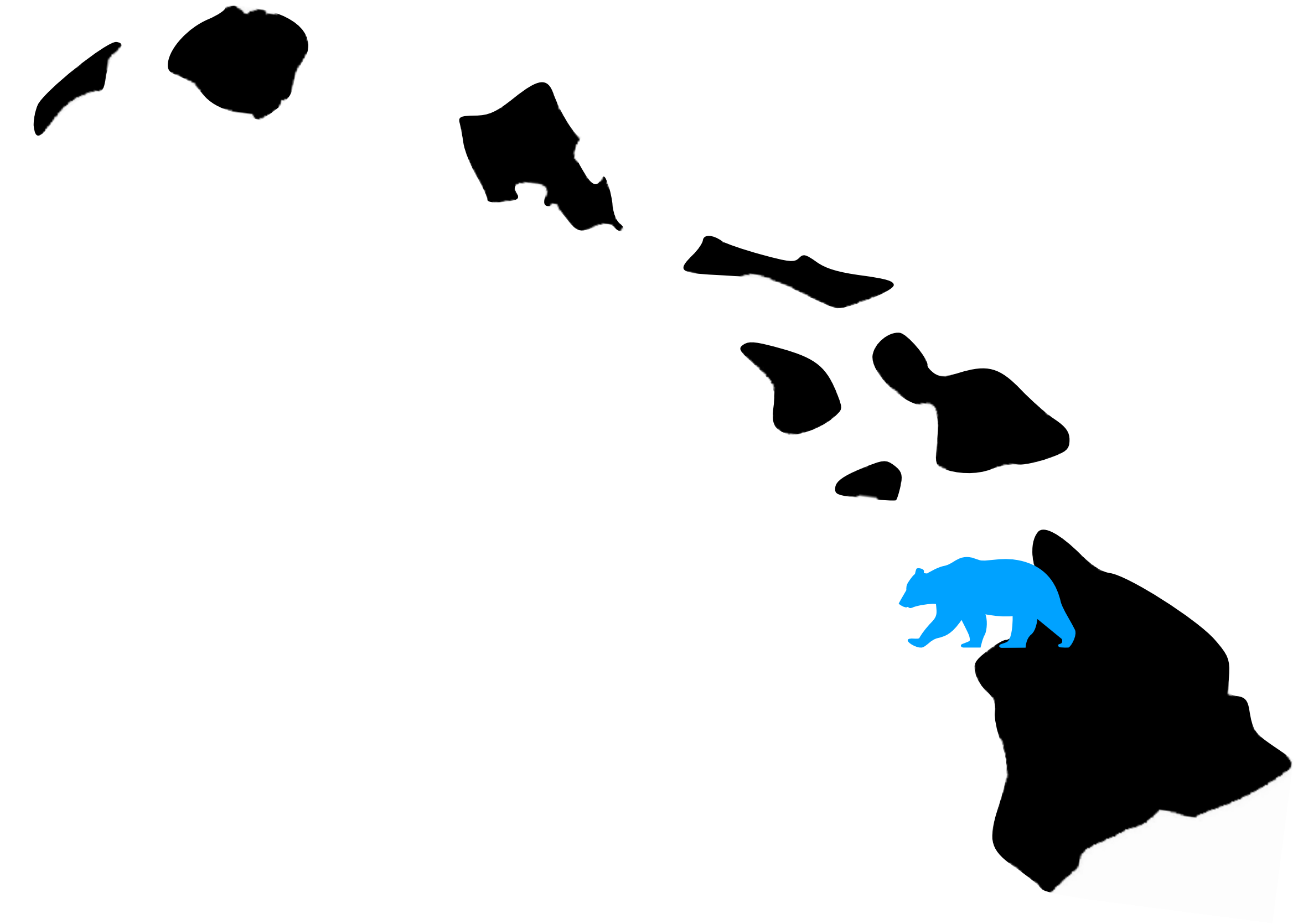
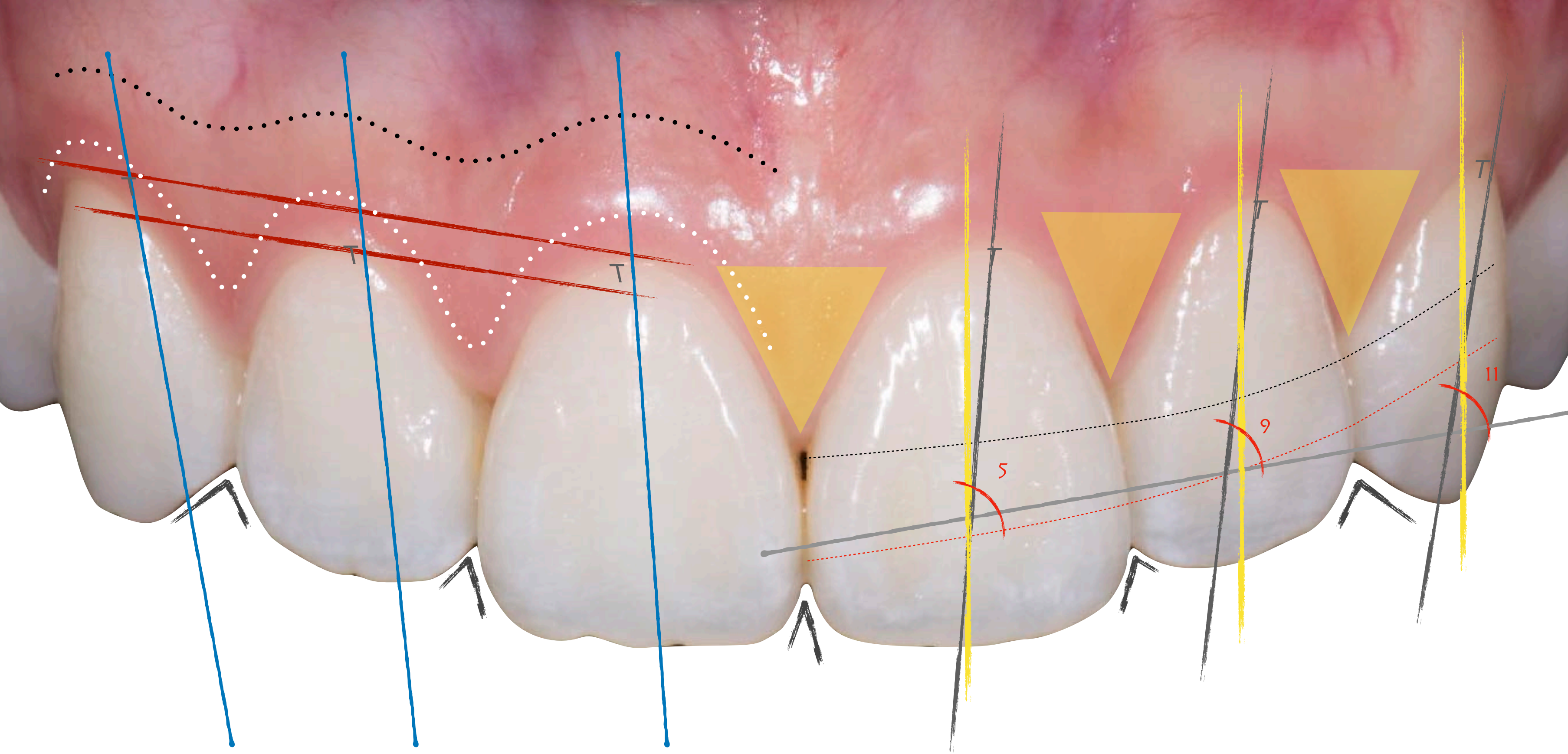


Techniques for Optimizing predictability of implant restorations in the esthetic zone.

Anatomically-Driven Transmucosal Approach
Introduction to Zirconia implants



Yair Whiteman DMD



Gingiva|Gingiva Tooth transition|Tooth

1. Tightly adapted firm and resilient attached gingiva
2. Coral colored, pink color
3. Stippling and gingival grooves
4. Volume
5. Gingival margin and Gingival grooves

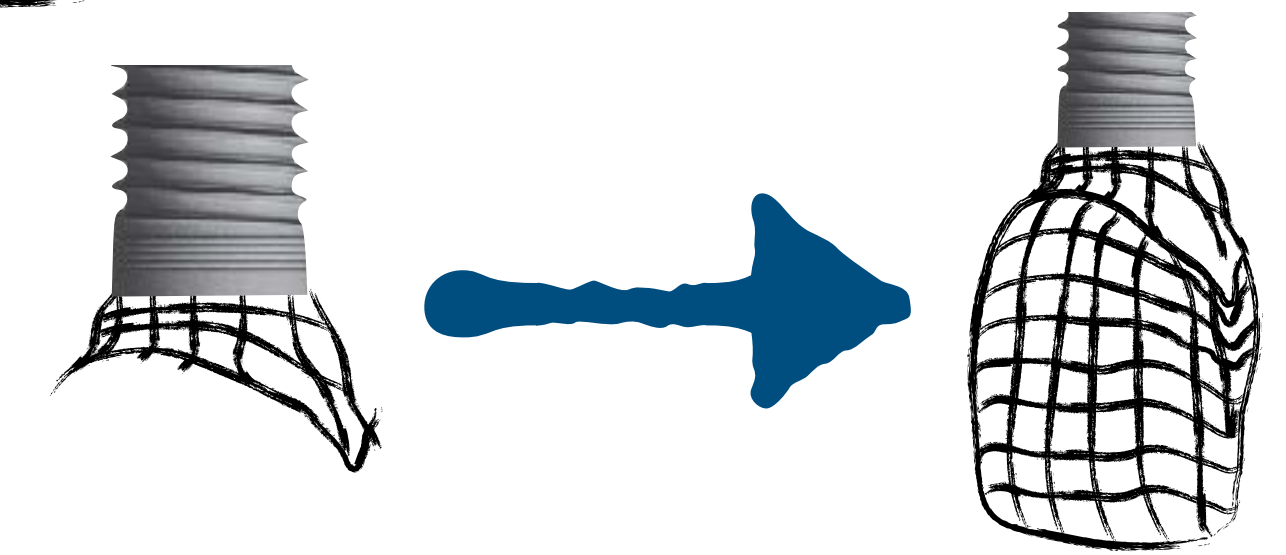
-
1. Gingival level and Gingival architecture
 2. Zenith position
 3. Interdental Papillae

-
1. Outline, contours, line angles and Characterization
 2. Tooth position and angulation
 3. Tooth/ Teeth dimension and proportion
 4. Incisal plane

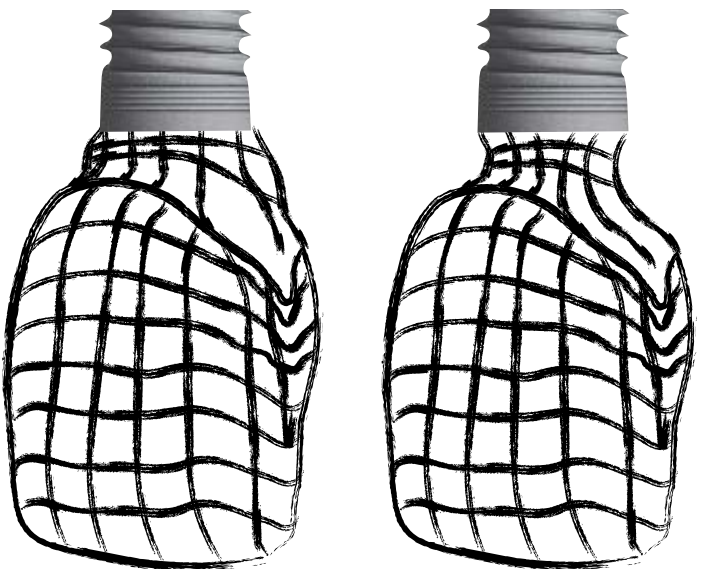
Immediate placement
Loading



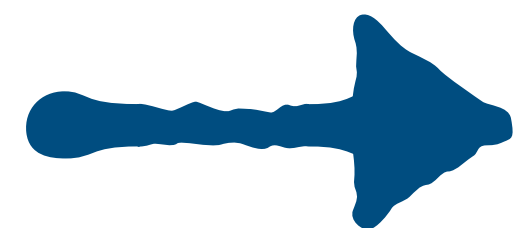
Immediate placement
1 stage

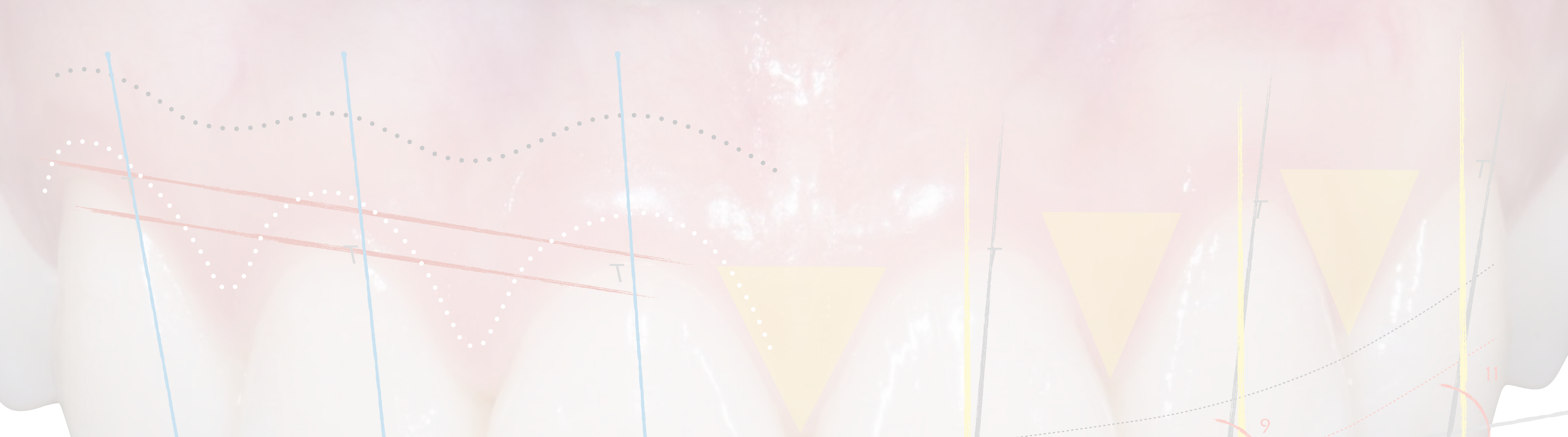


Immediate placement
2 stage



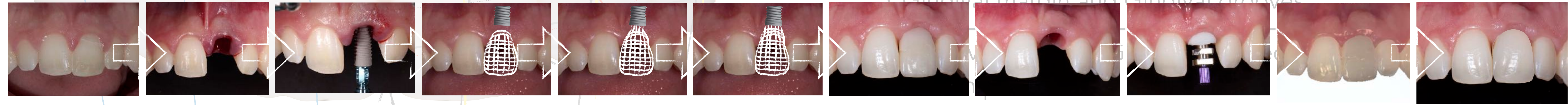
Delayed placement





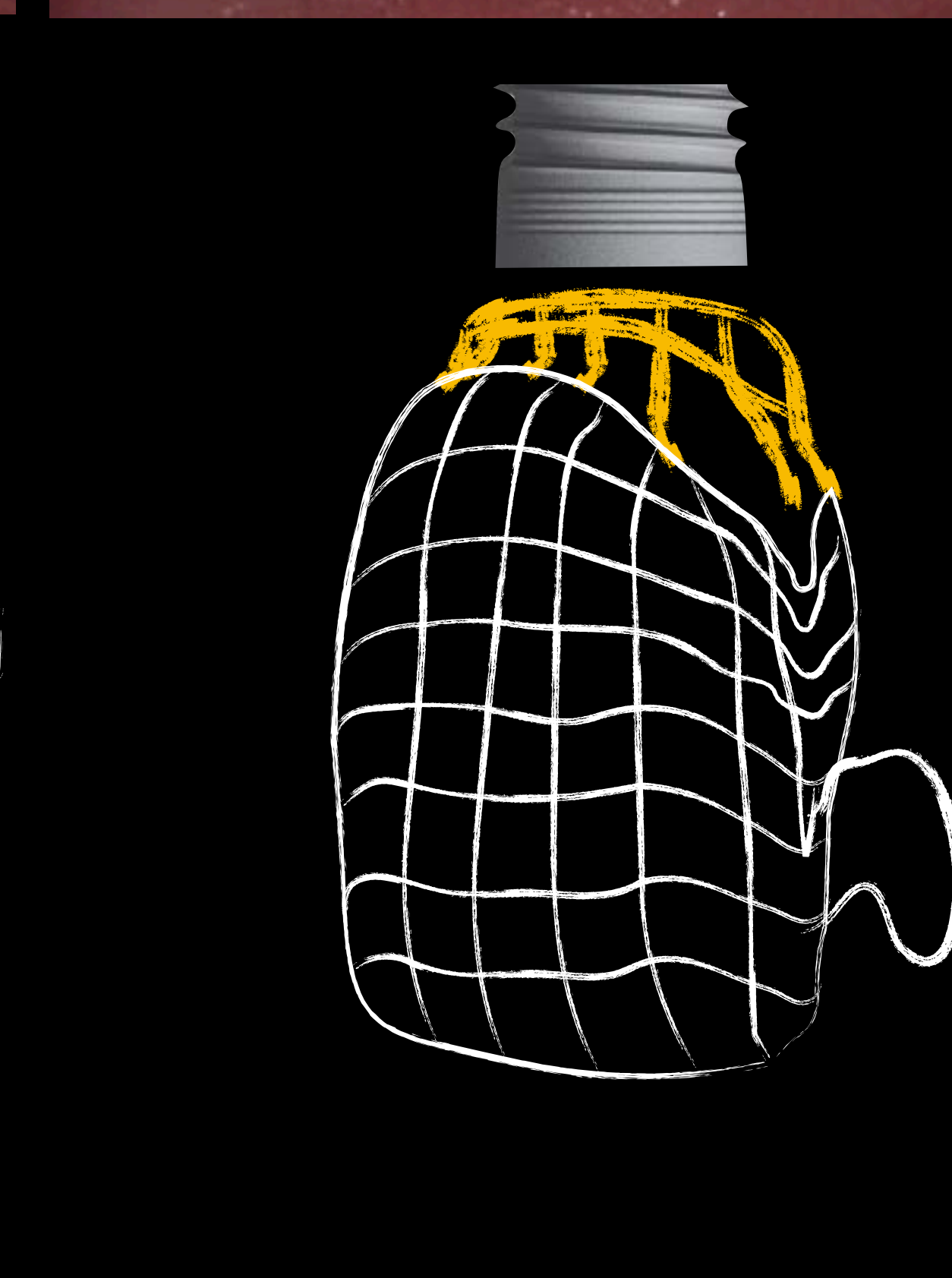
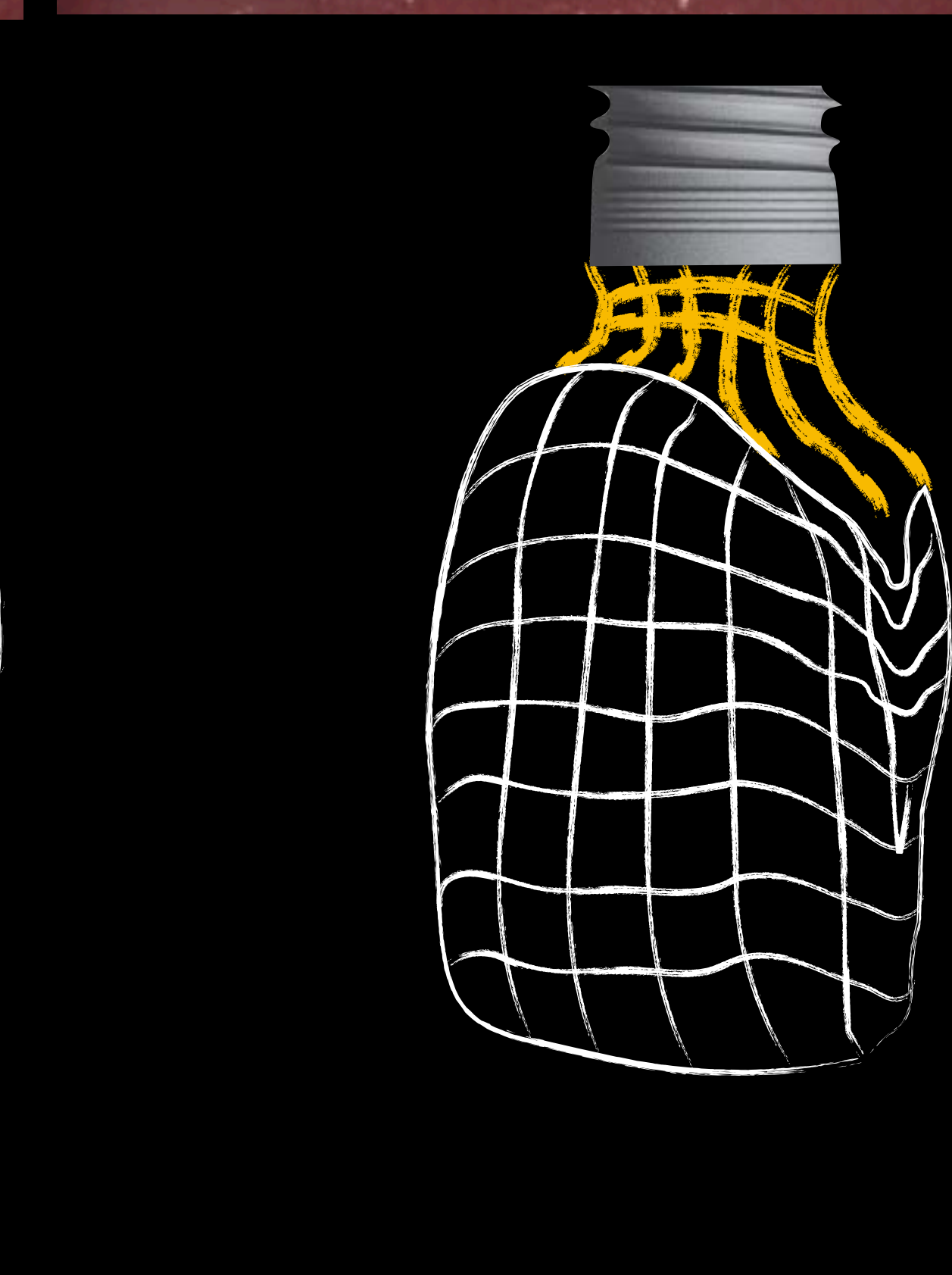
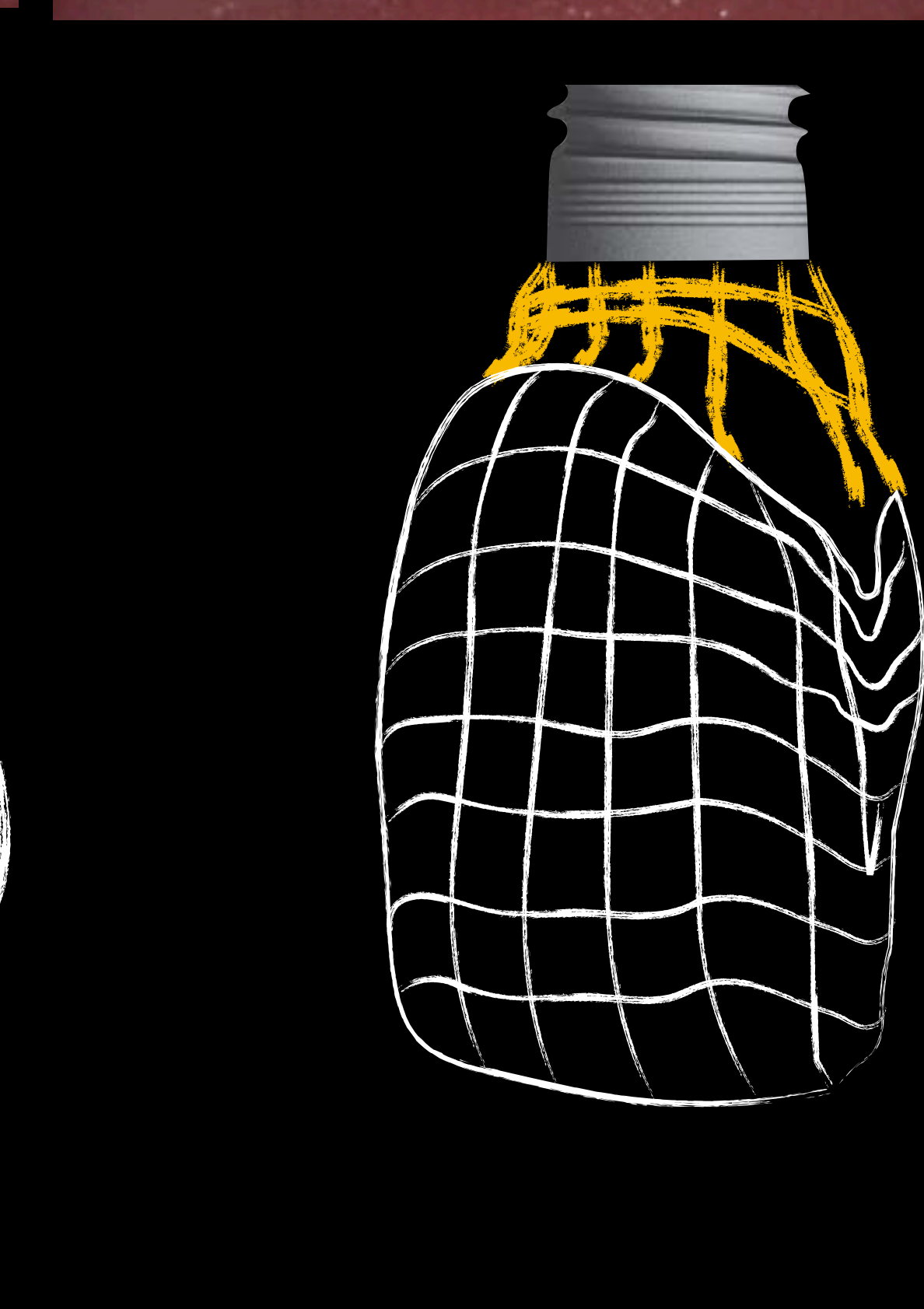
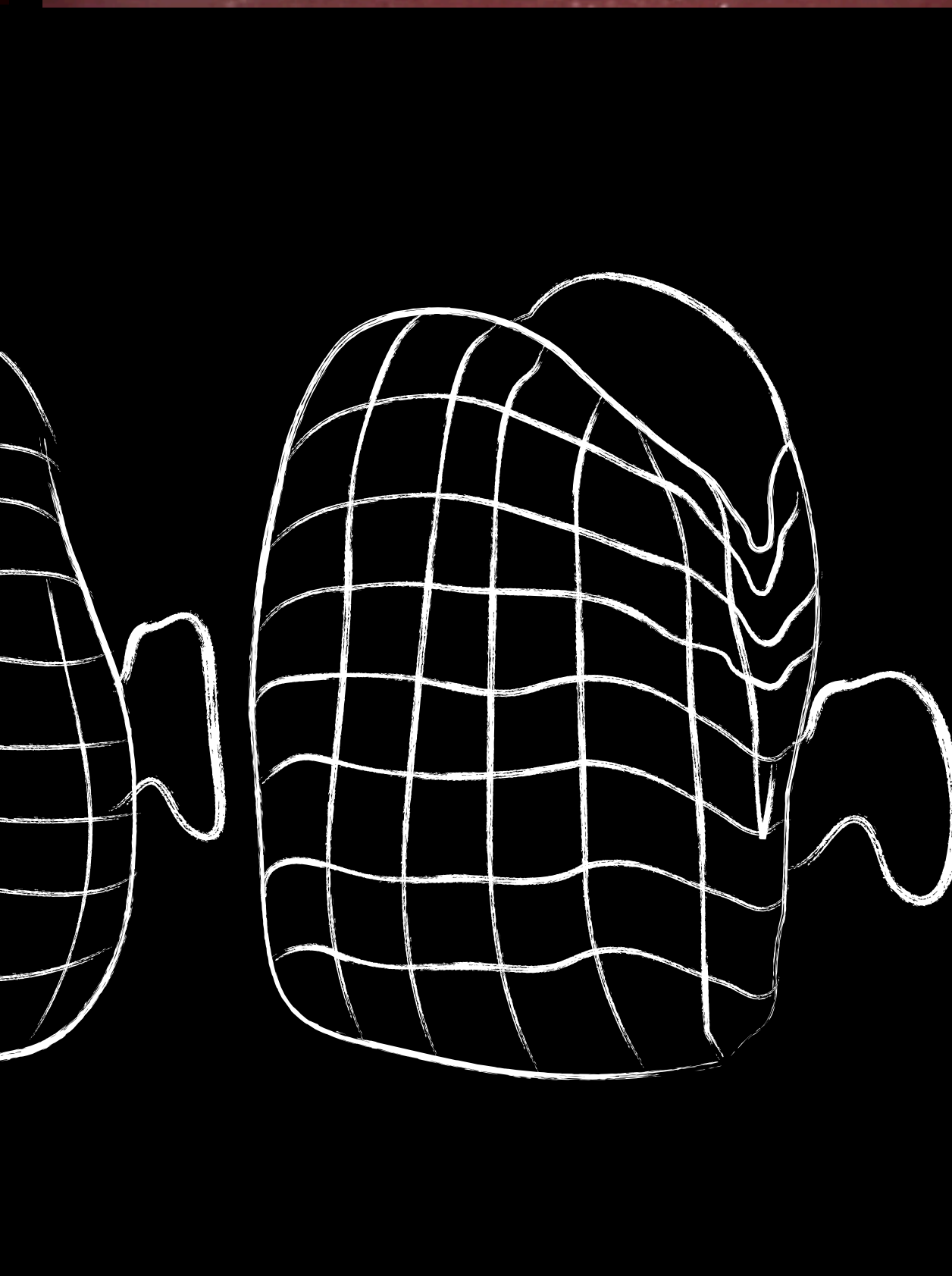
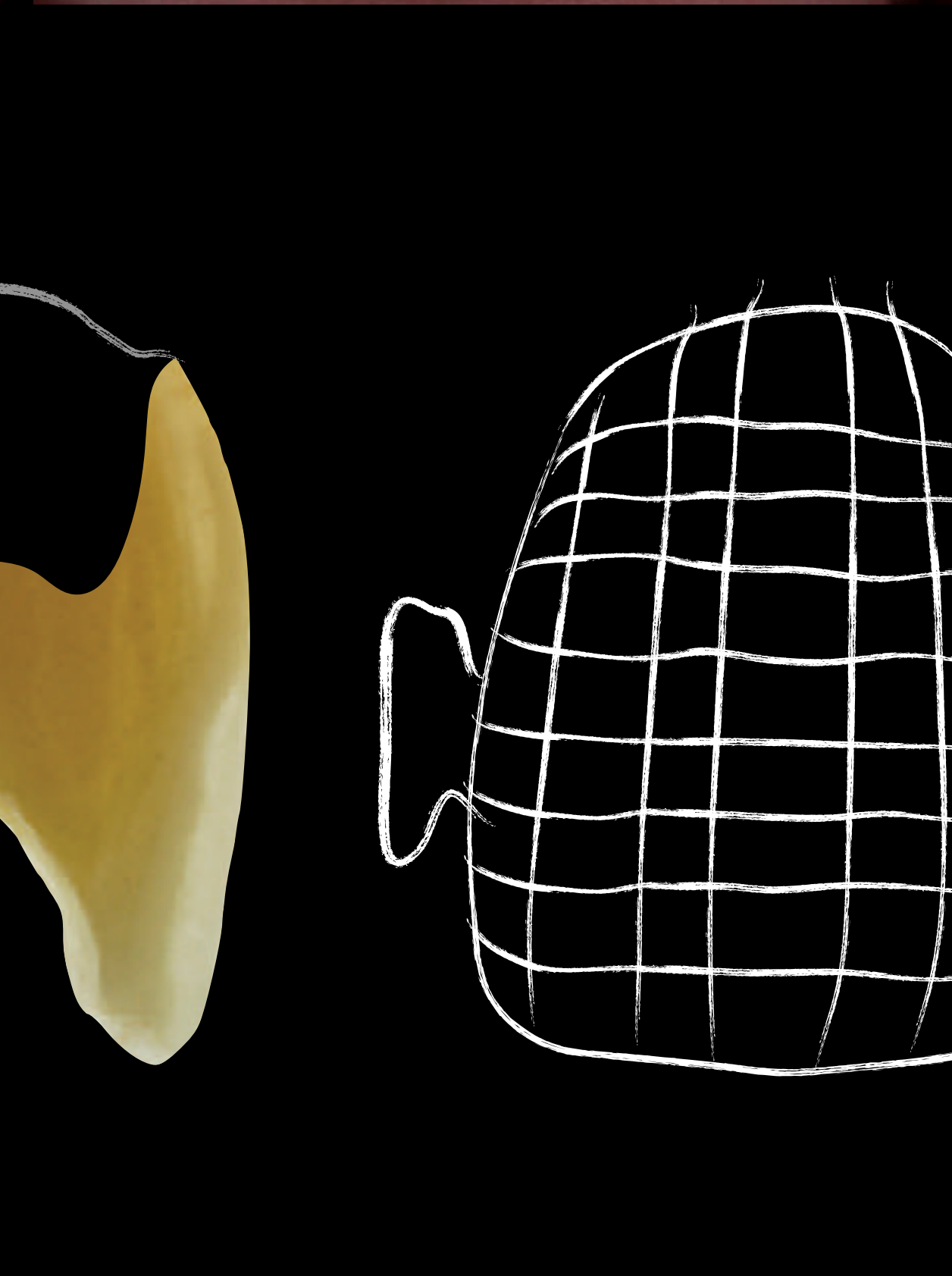
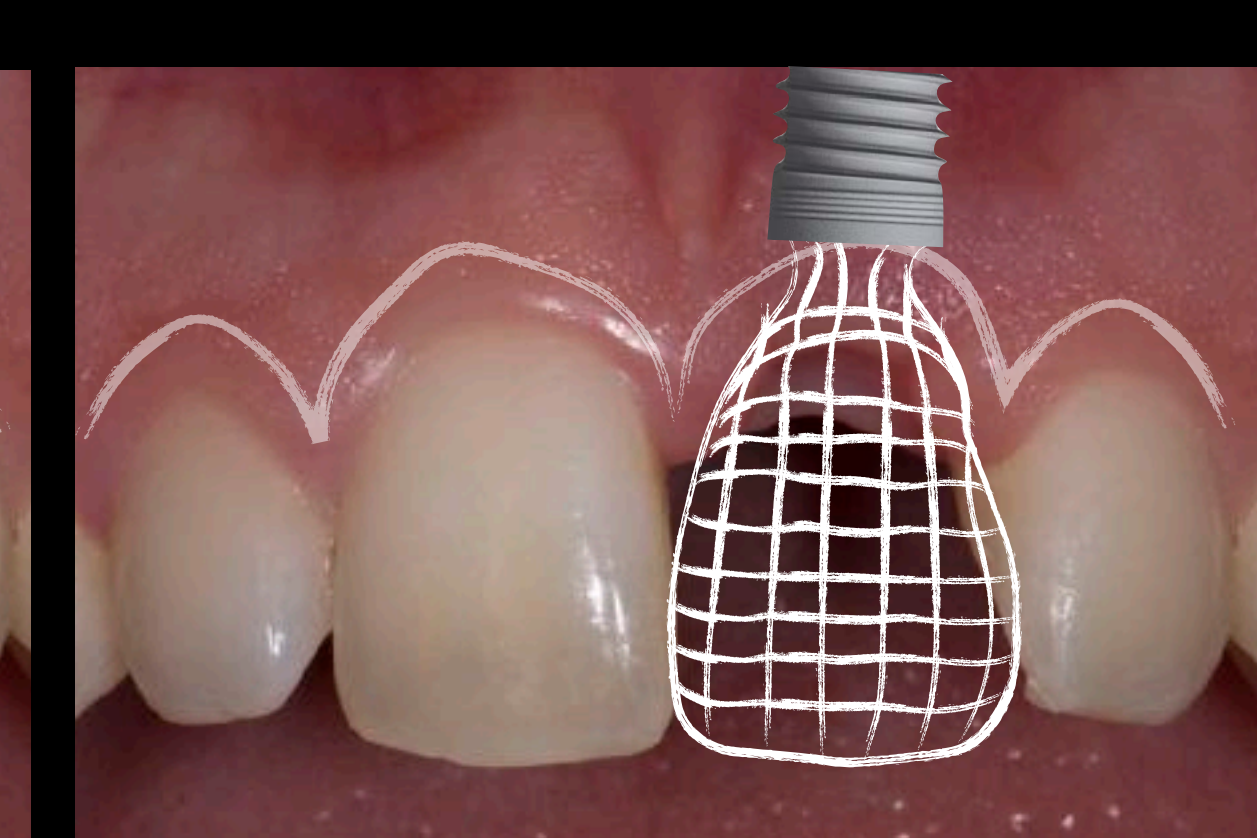
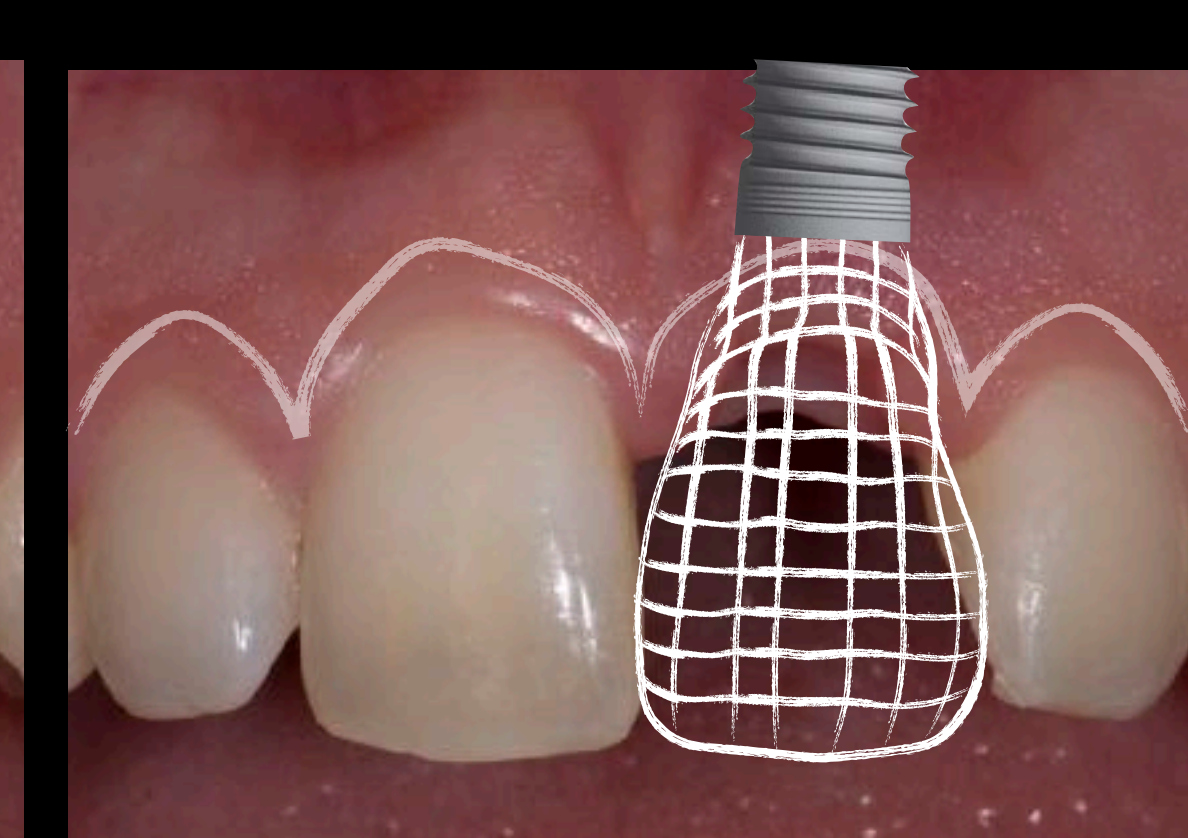
Gingiva|Gingiva Tooth transition|Tooth

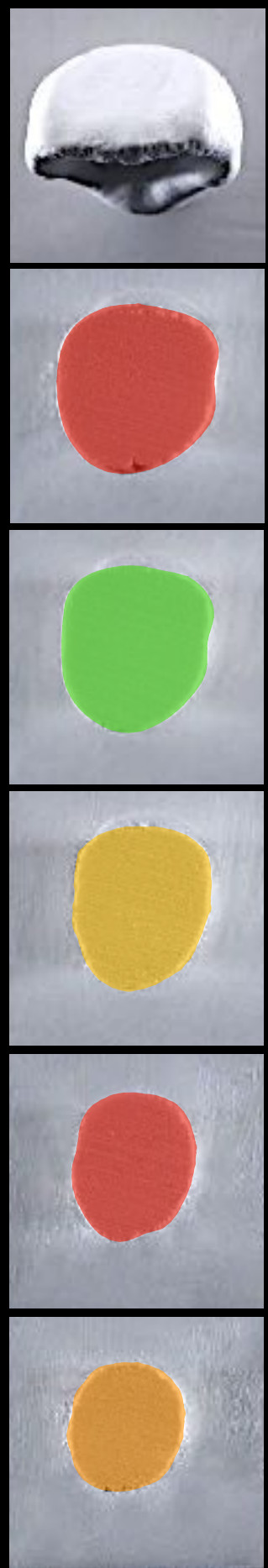
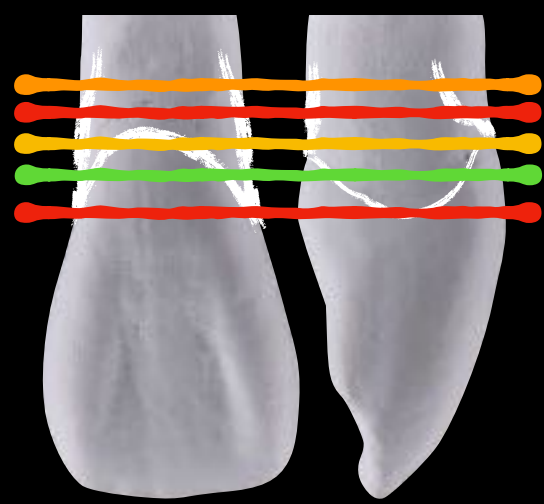
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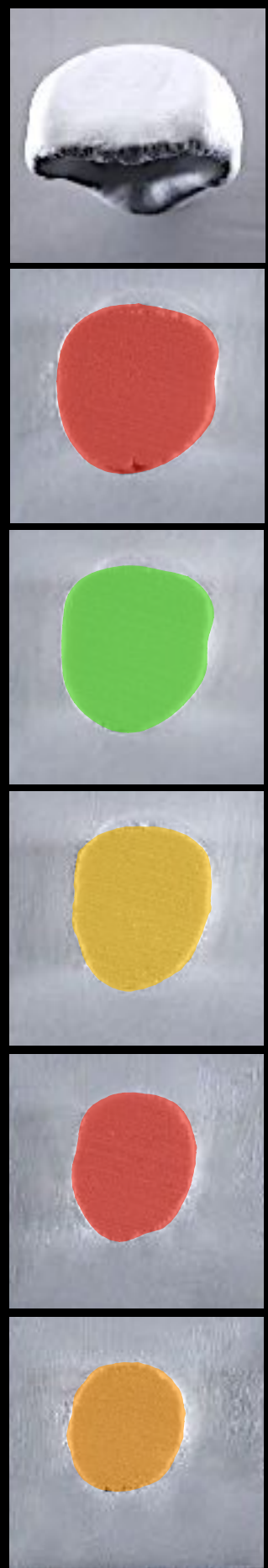
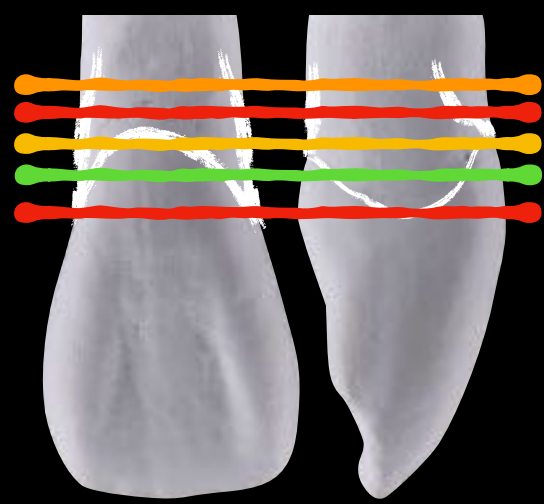


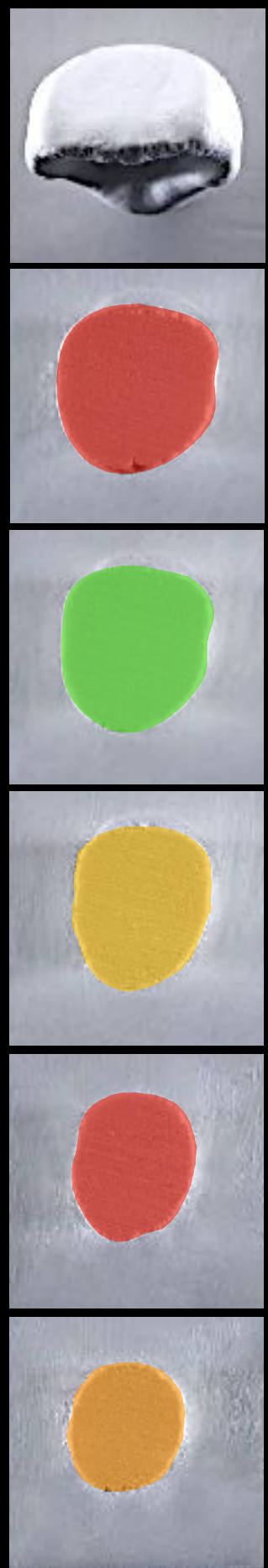
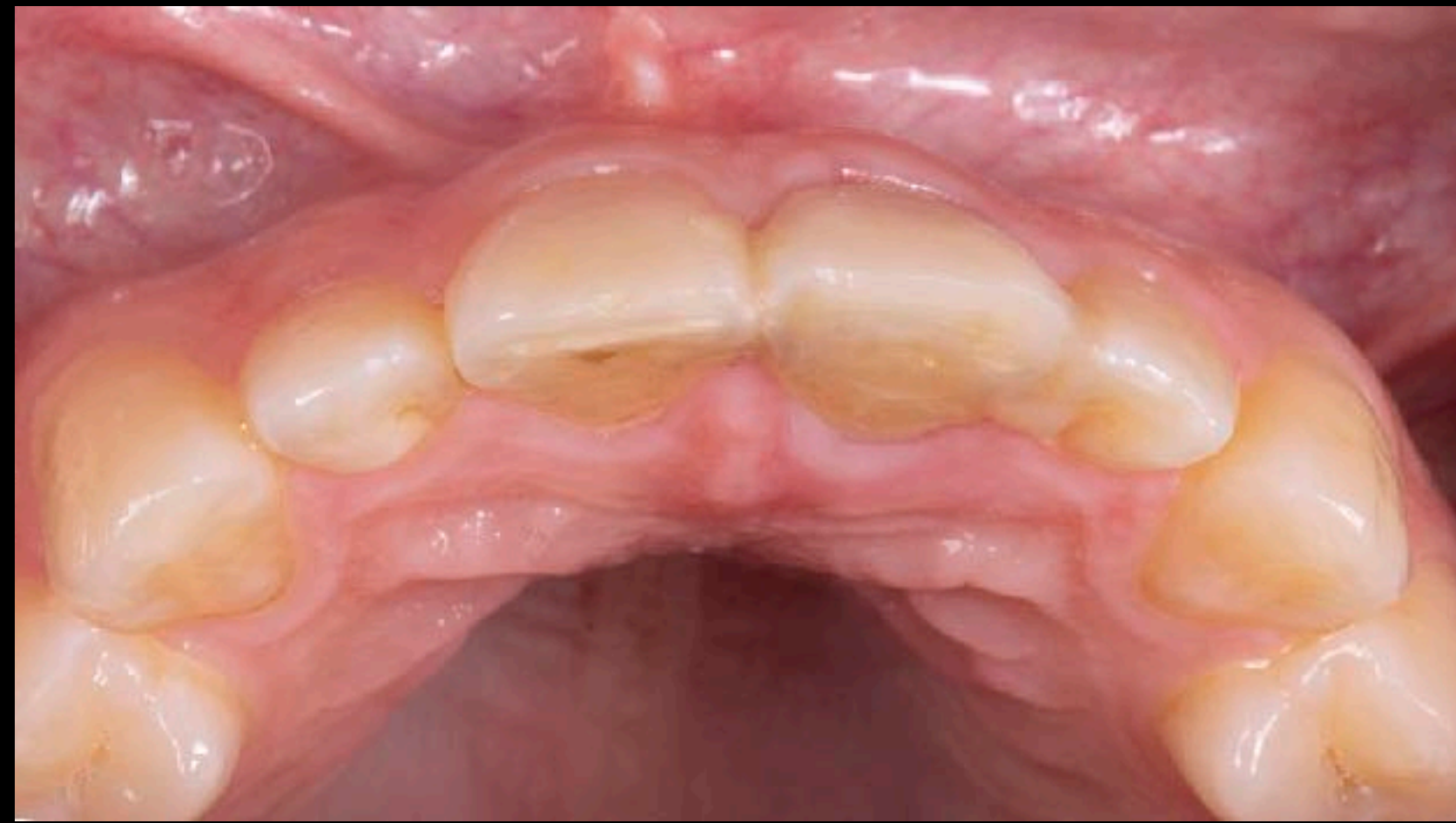
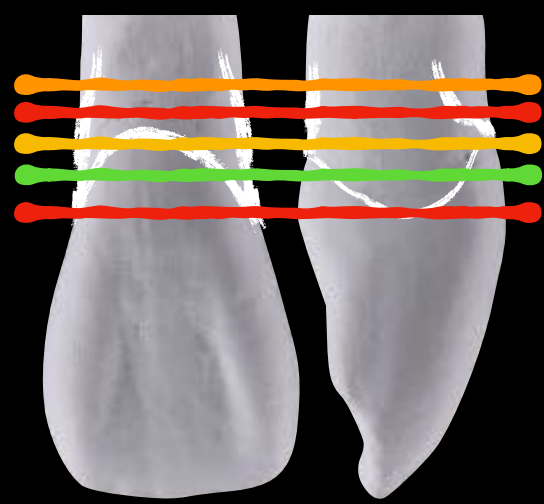
3. Interdental Papillae

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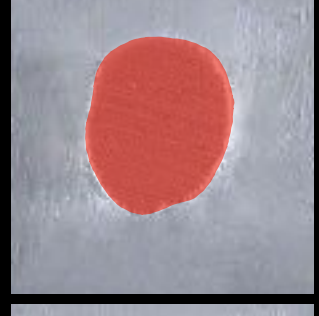
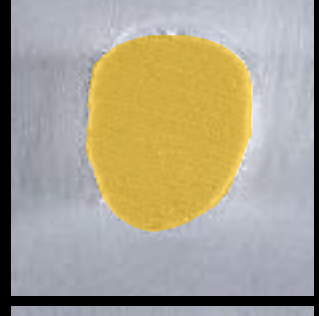
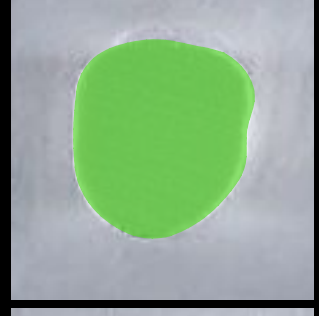
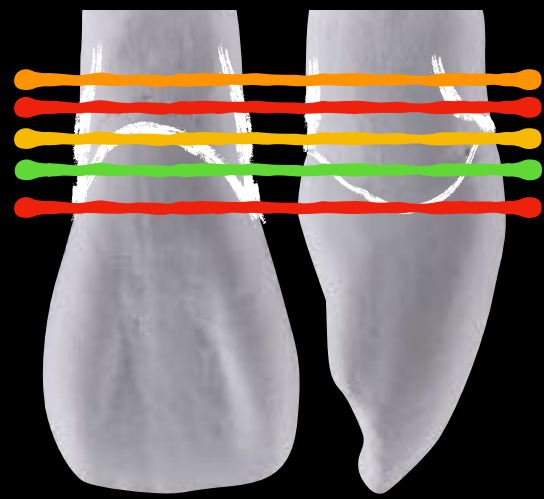


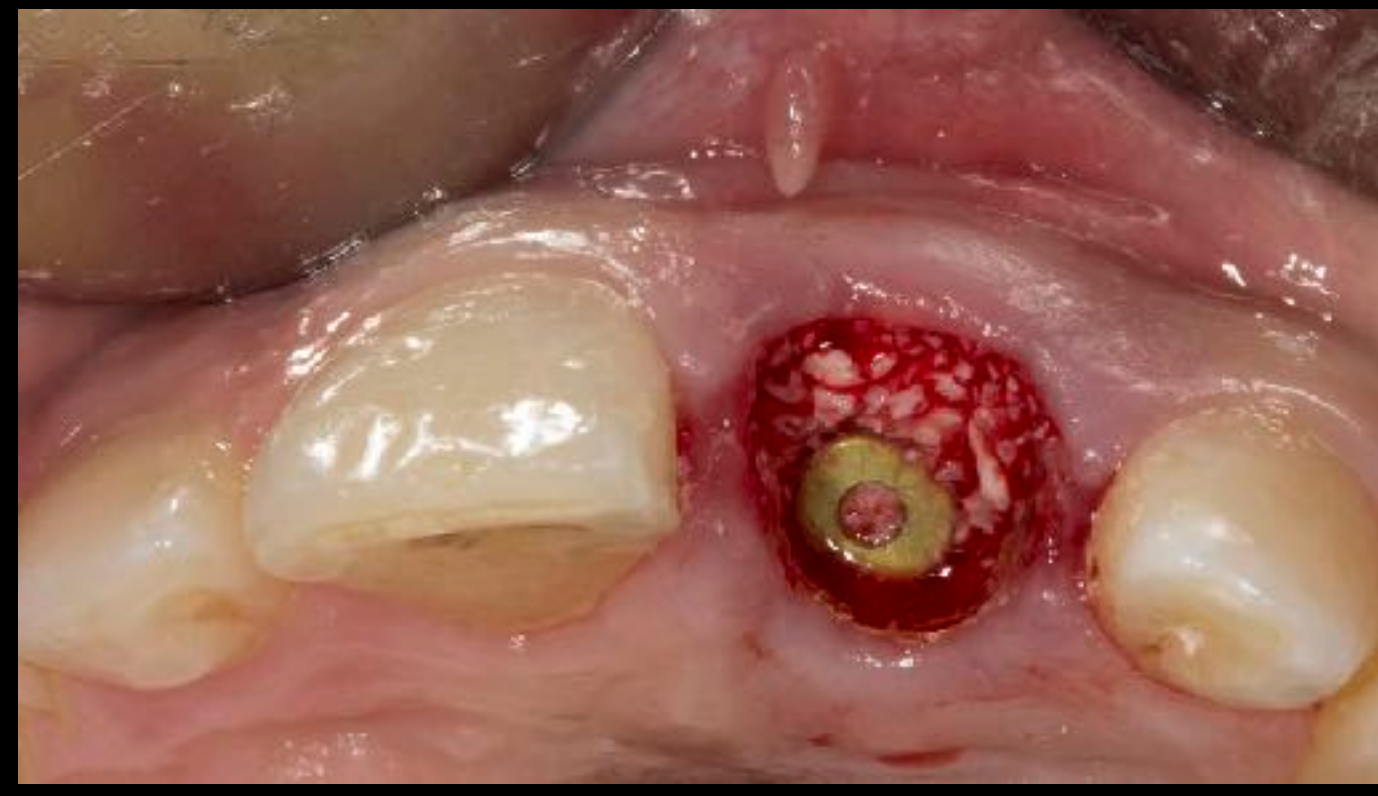
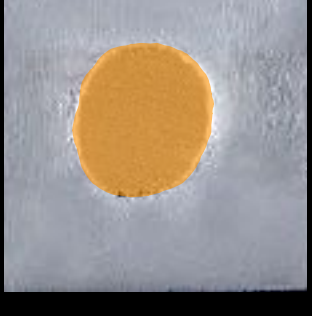
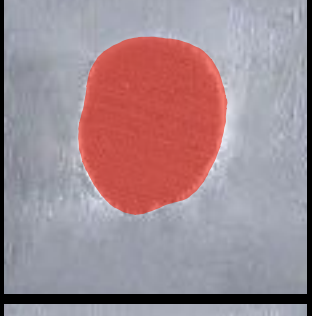
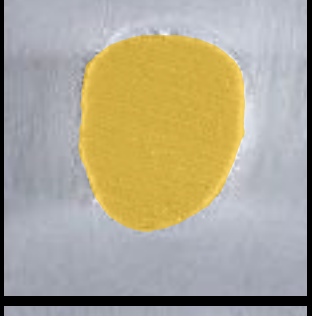
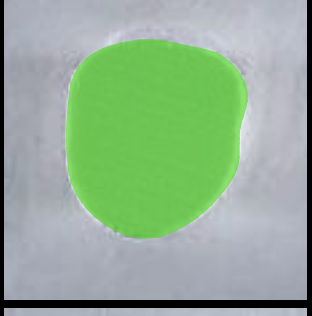
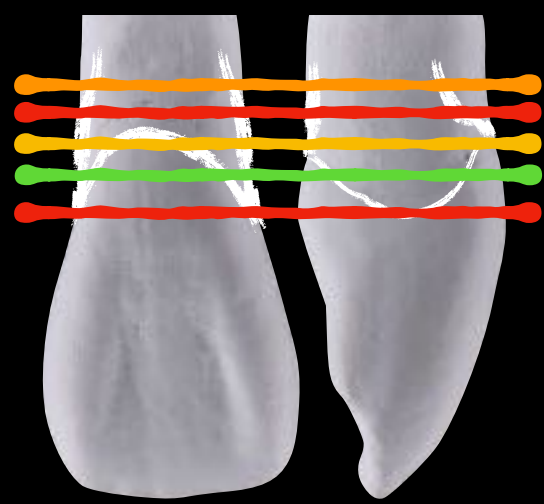


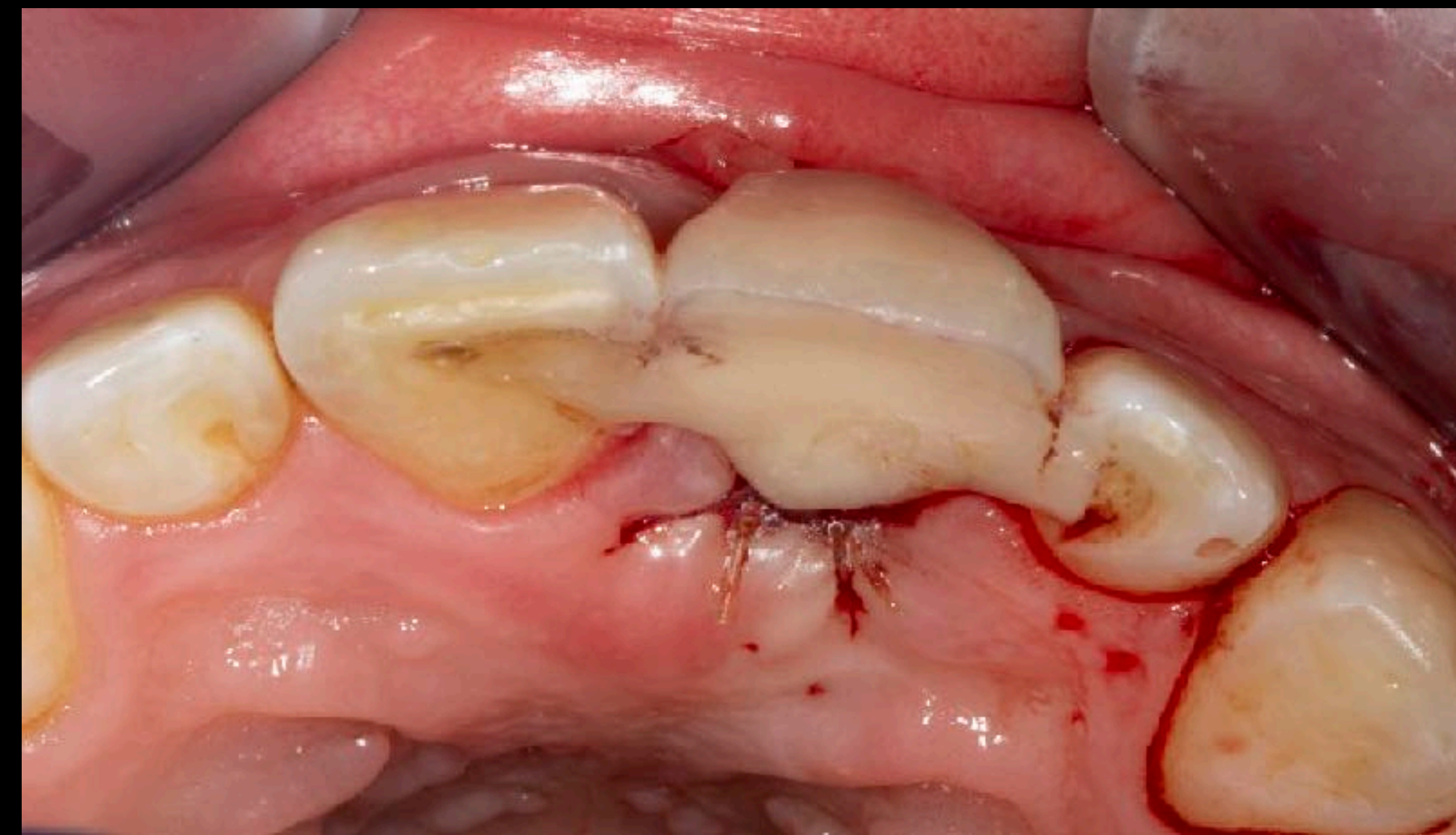
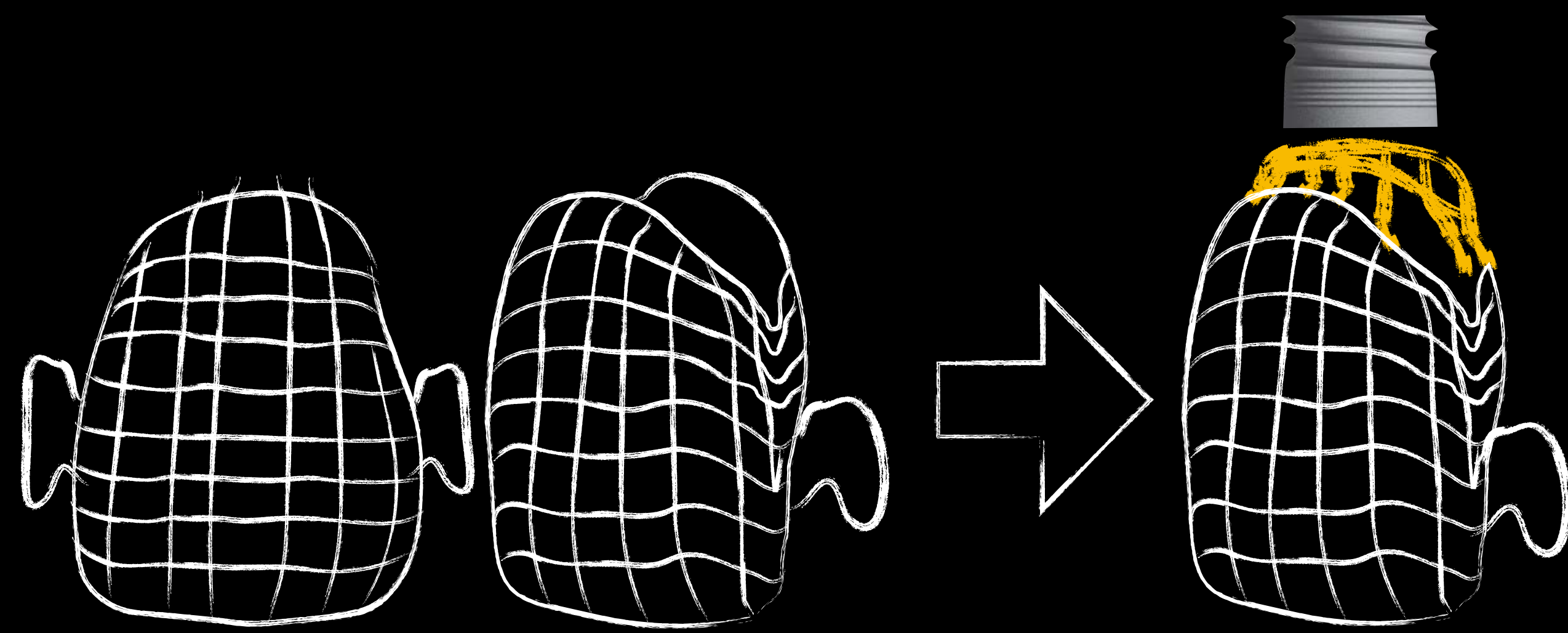
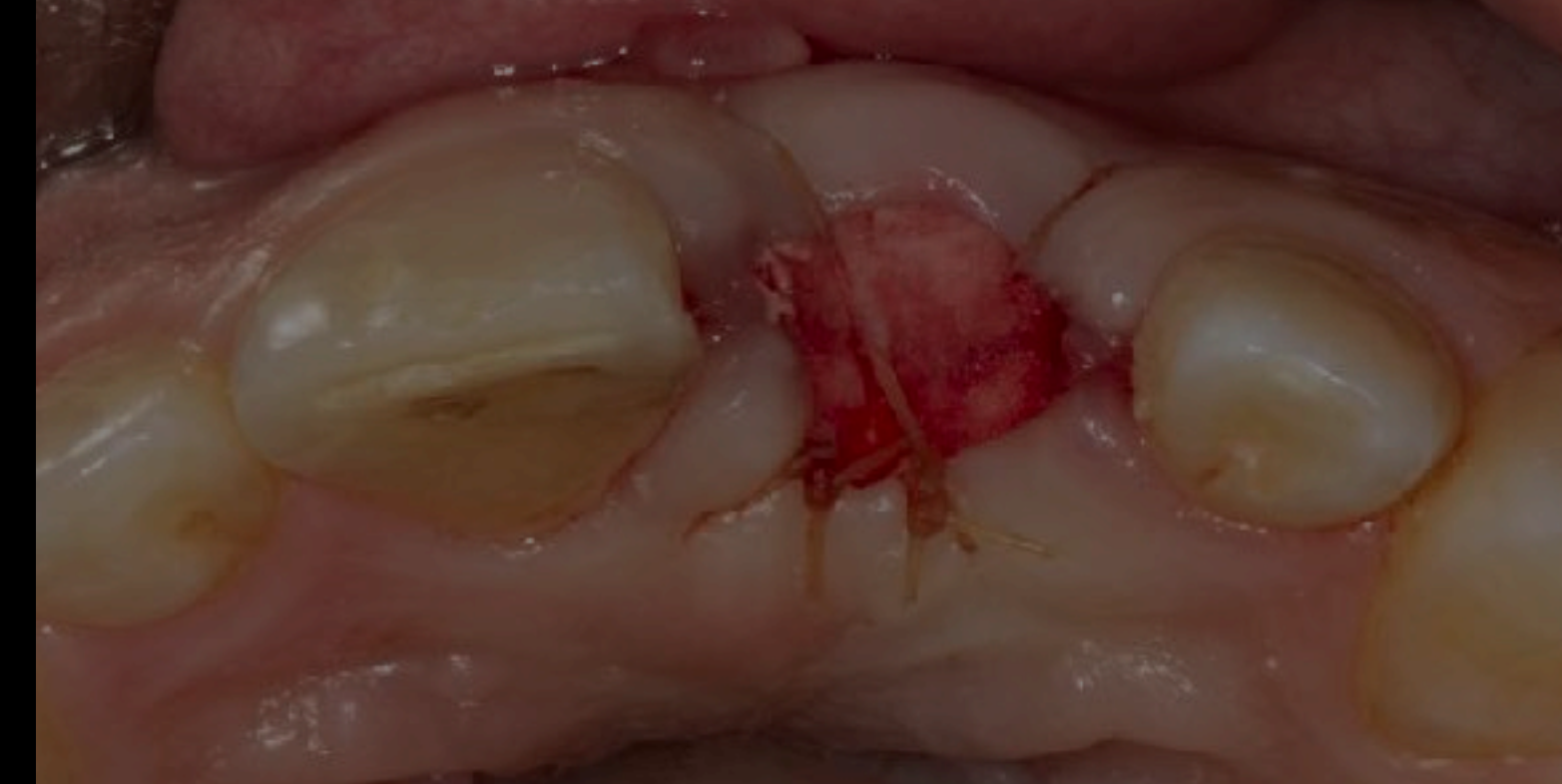
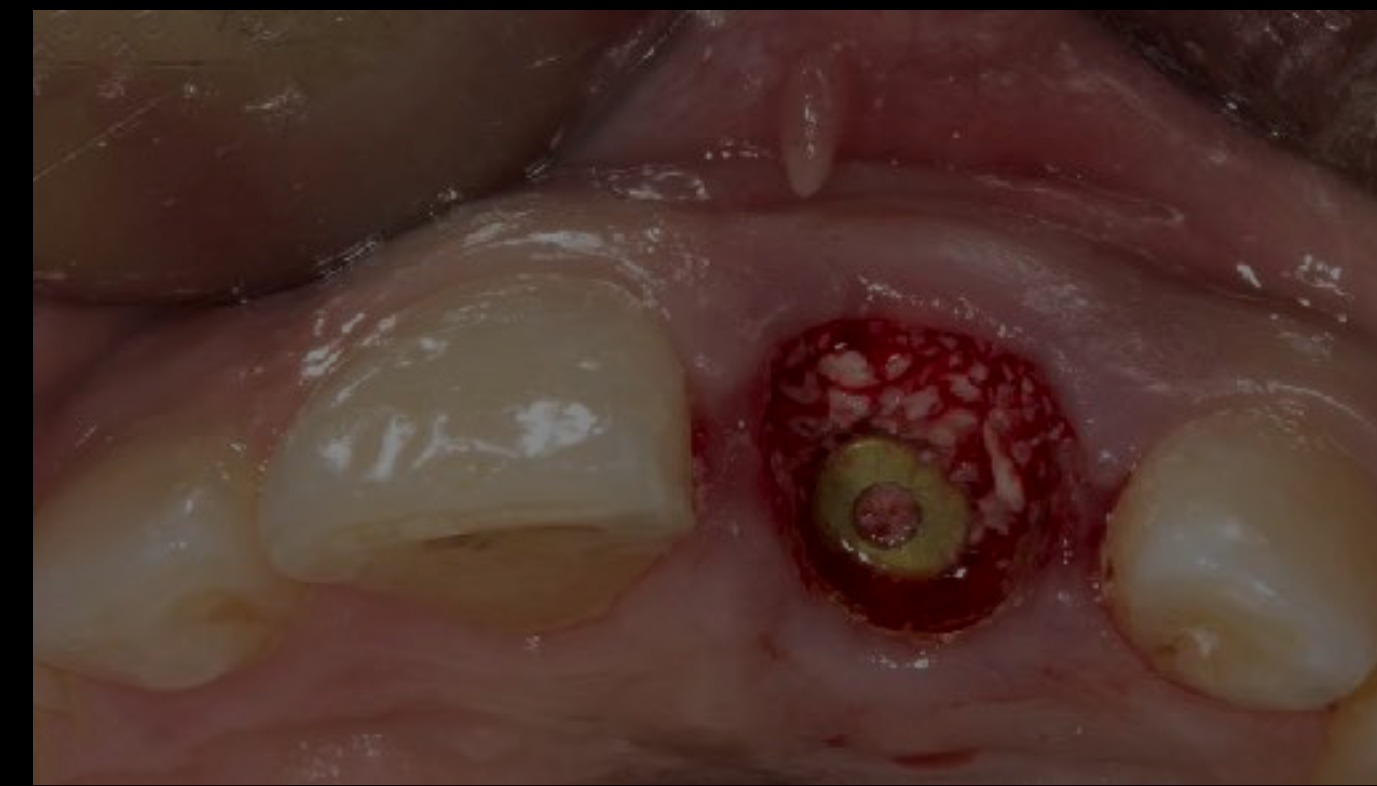
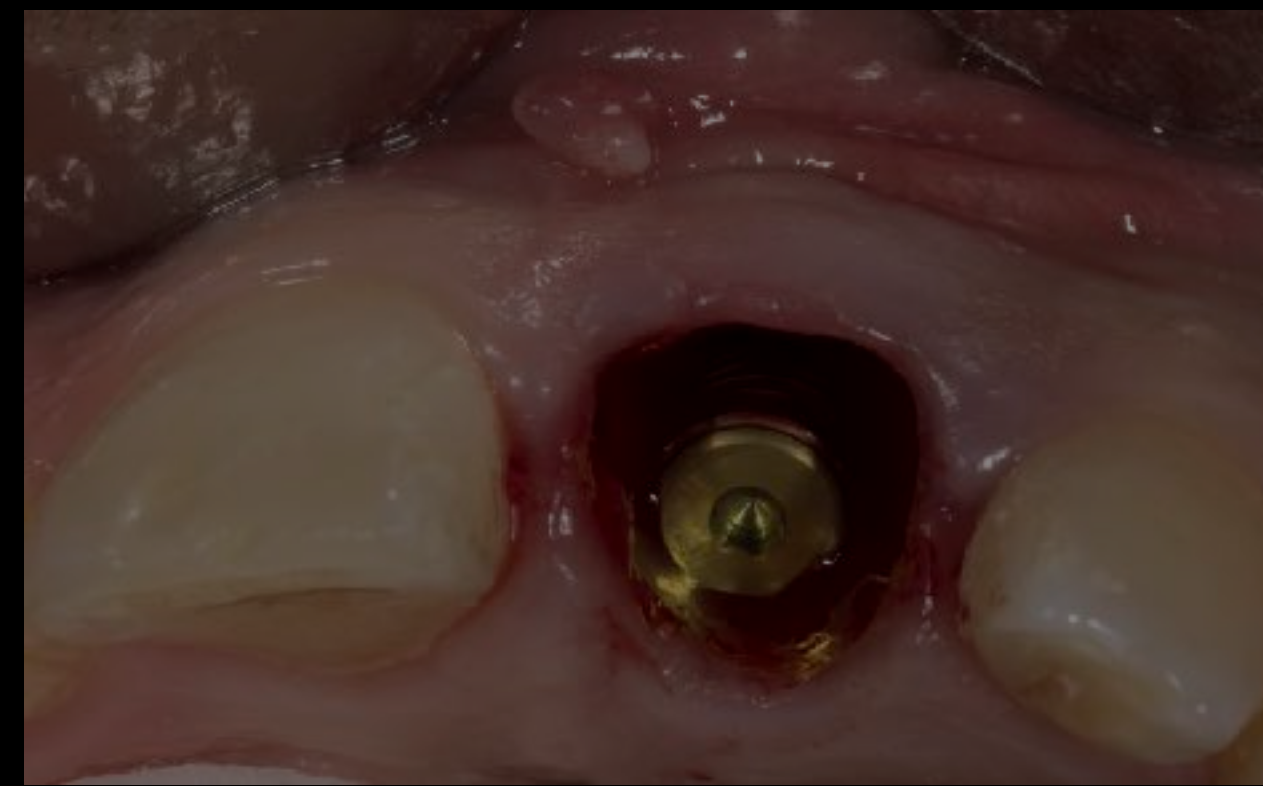
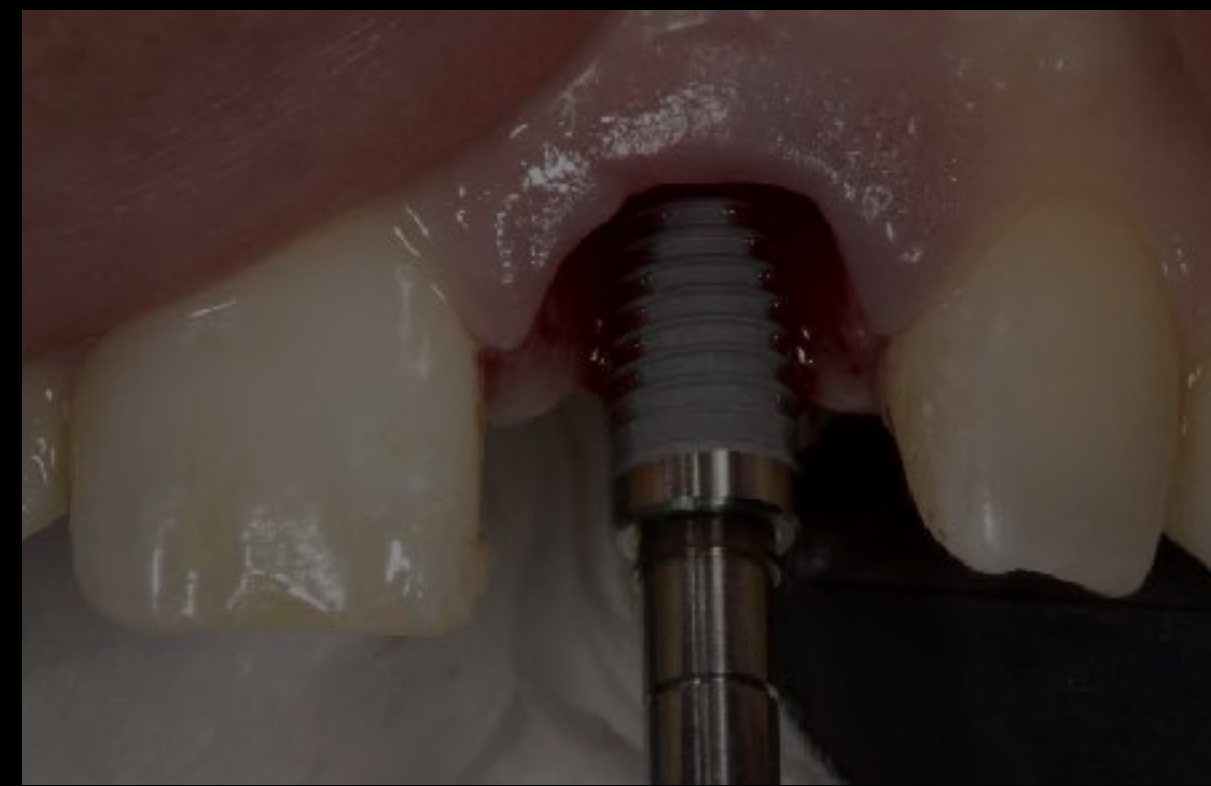
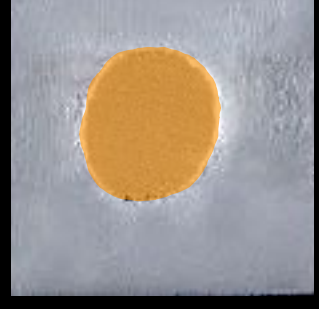
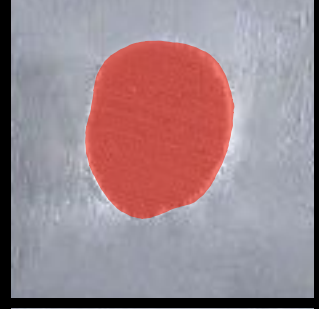
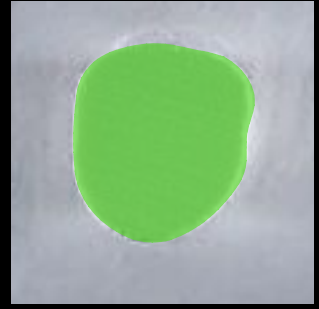
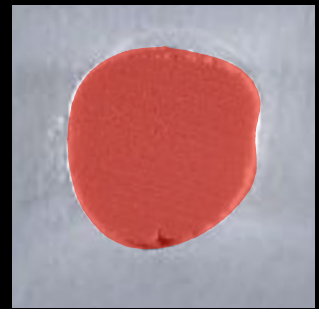
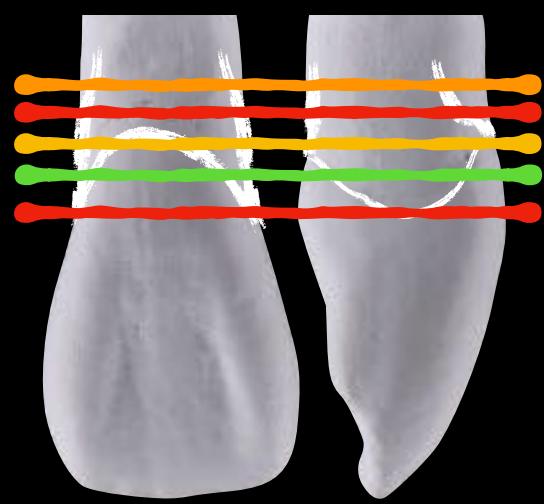


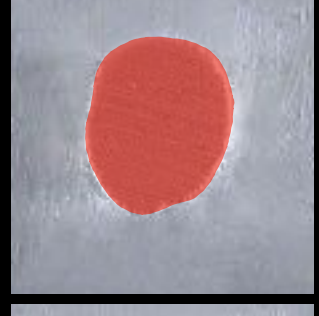
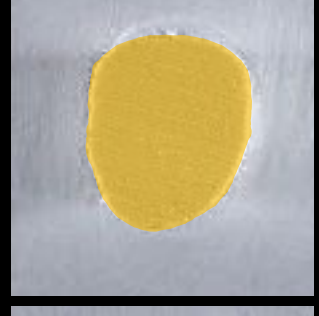
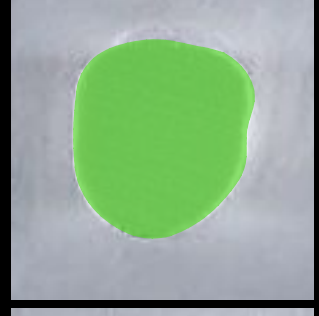
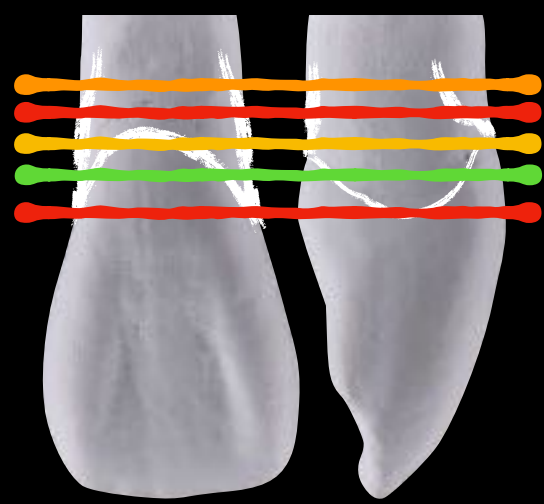


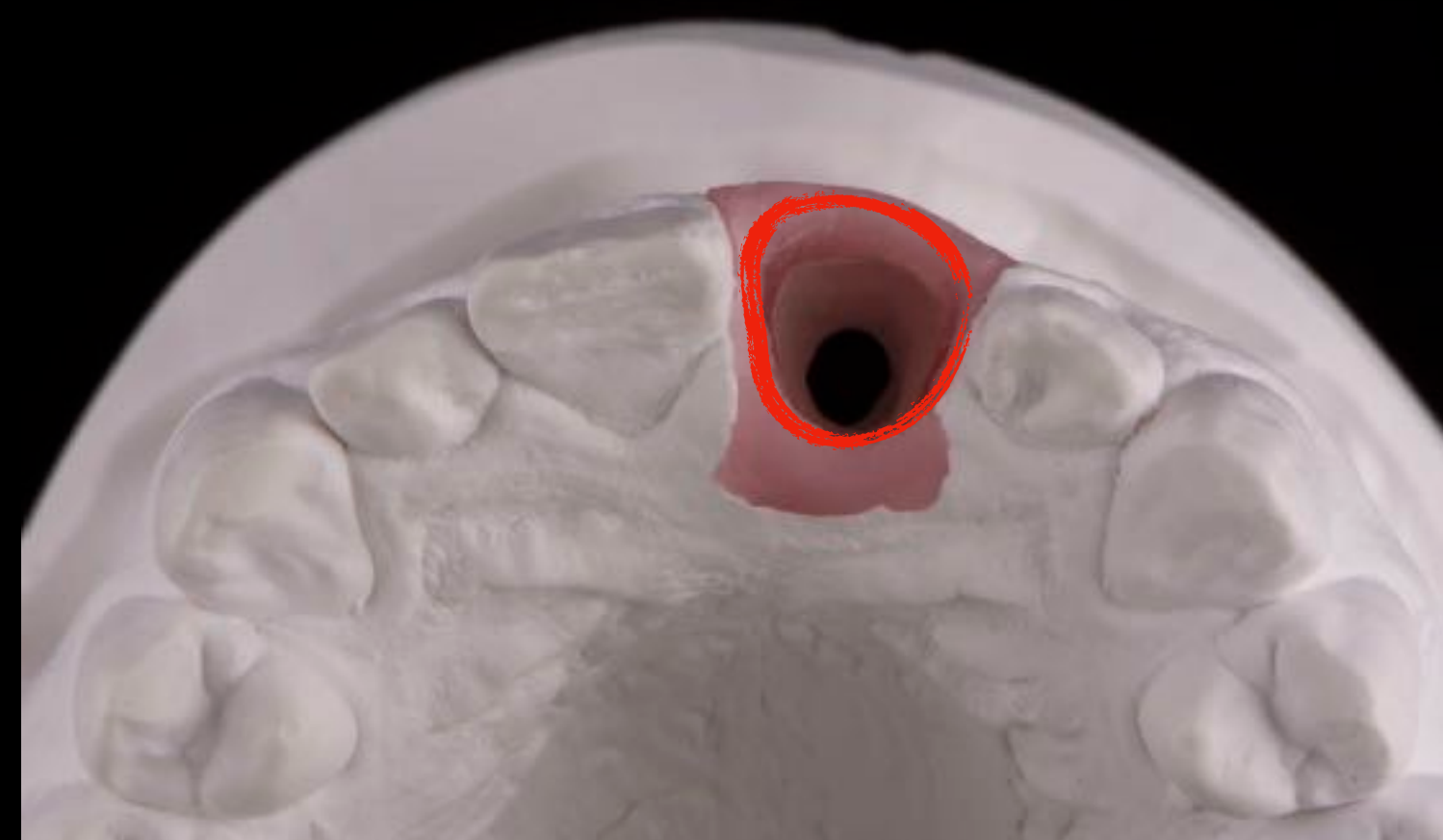
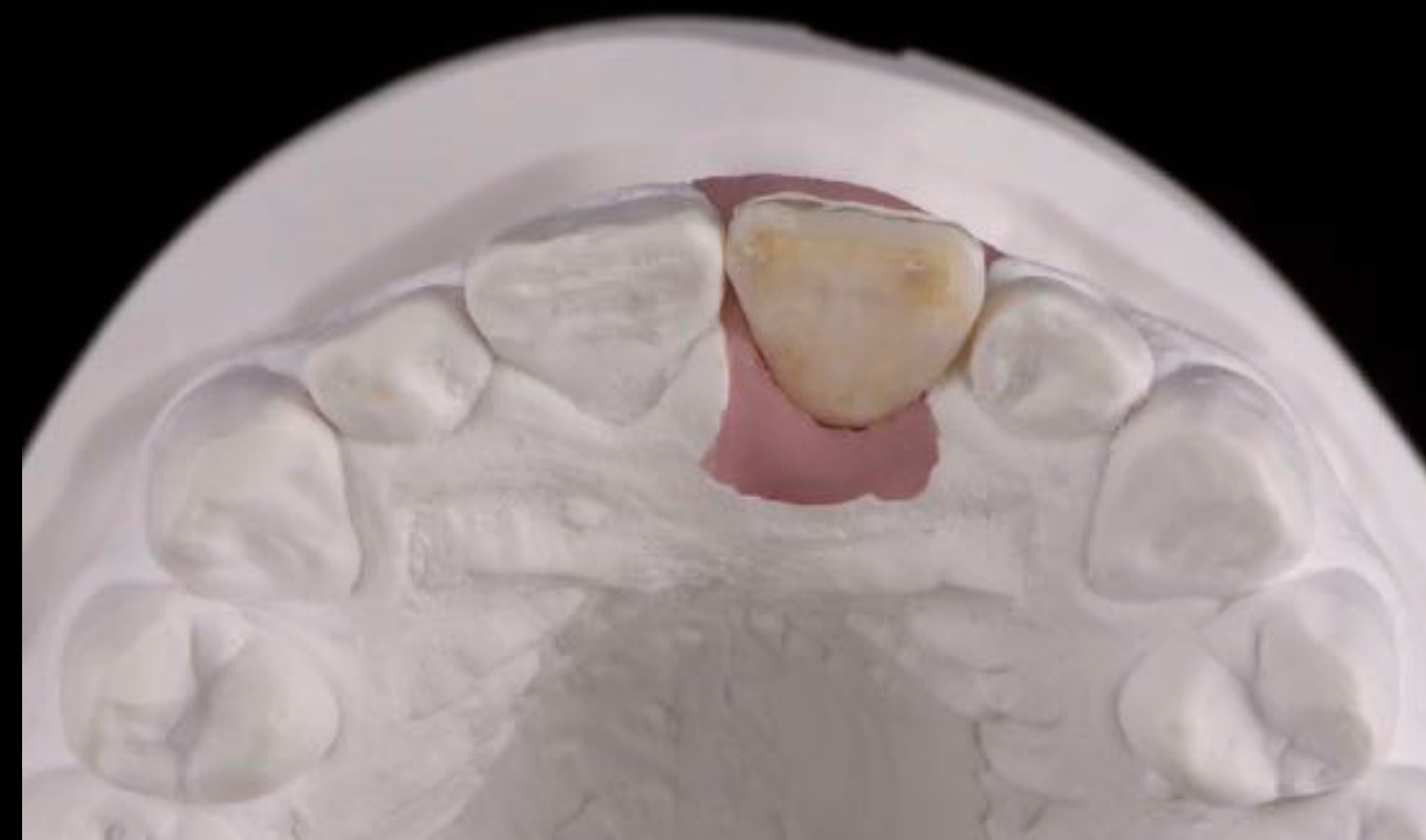
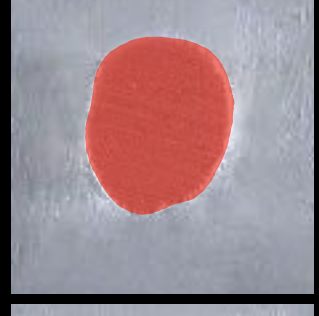
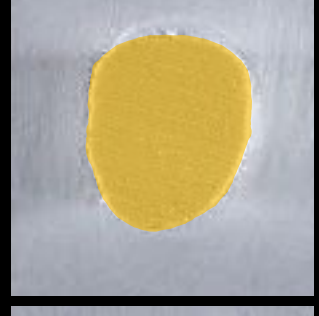
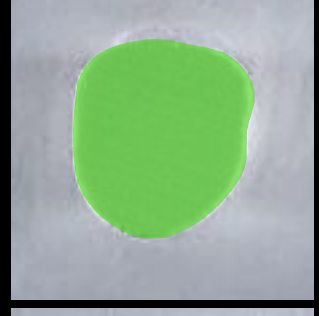
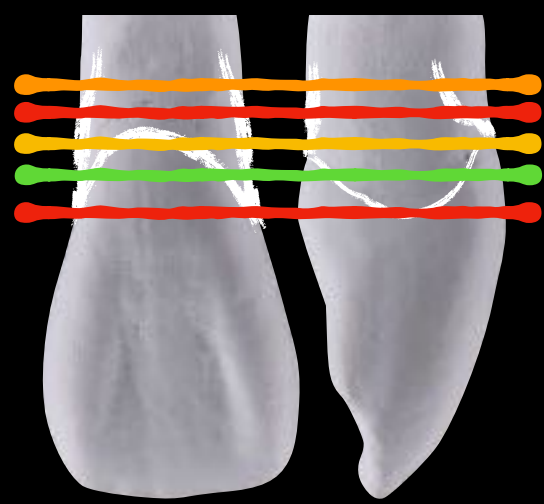
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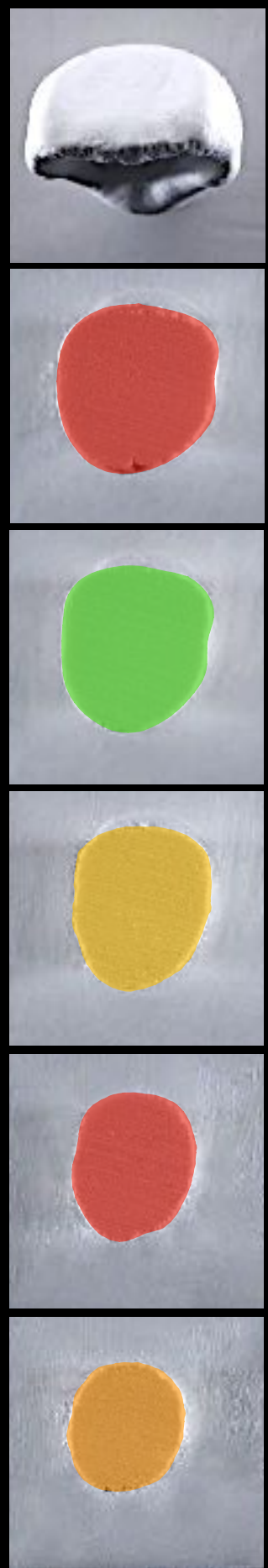
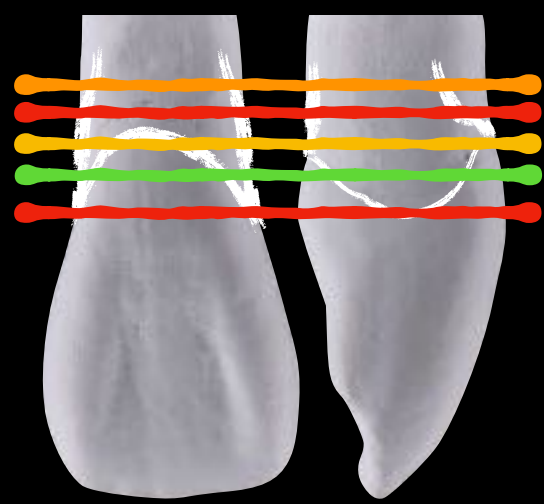


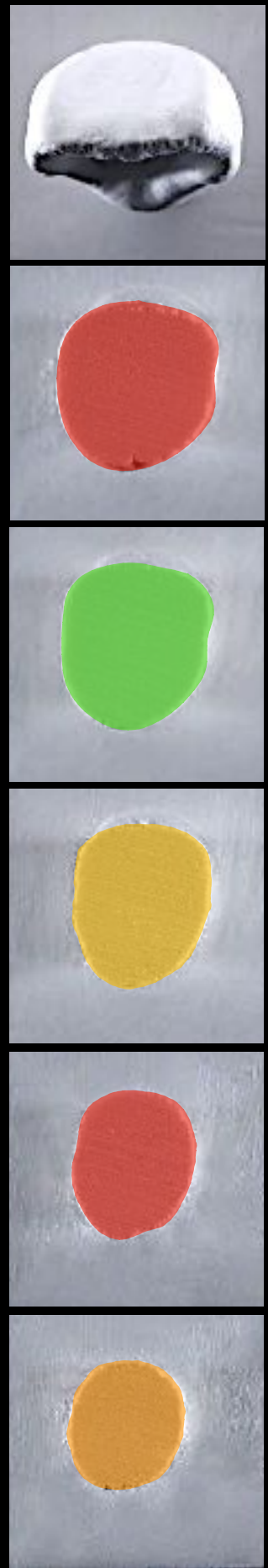
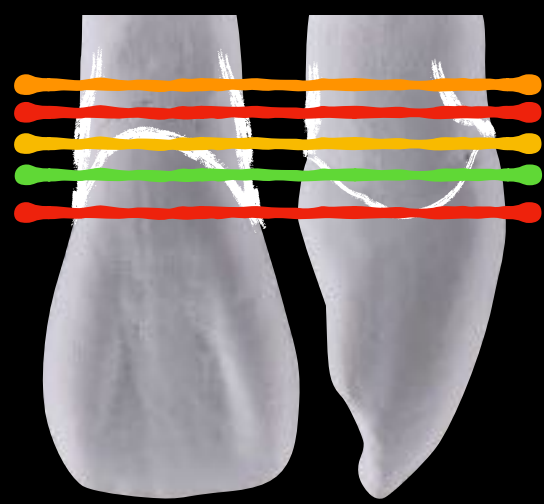


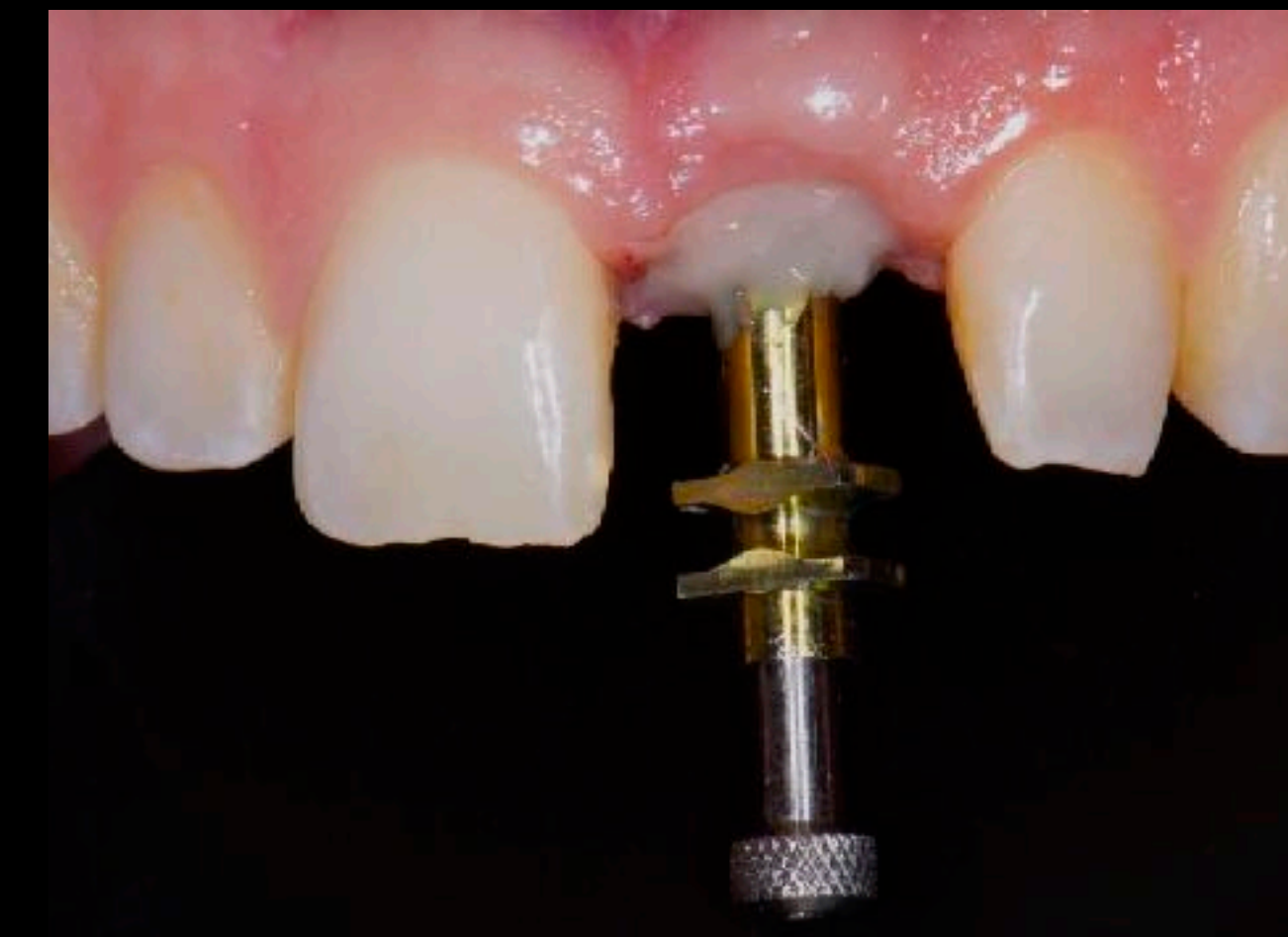
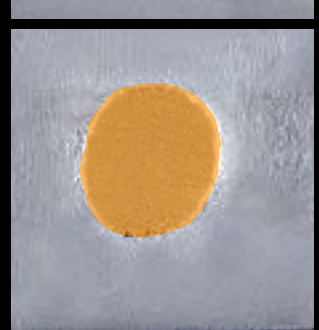
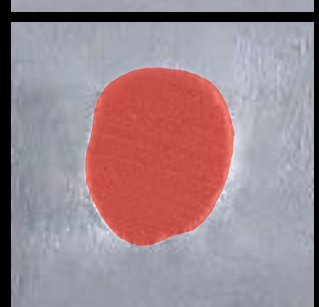
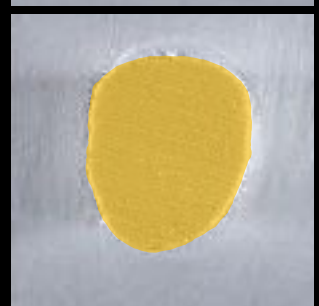
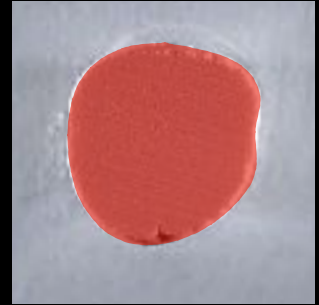
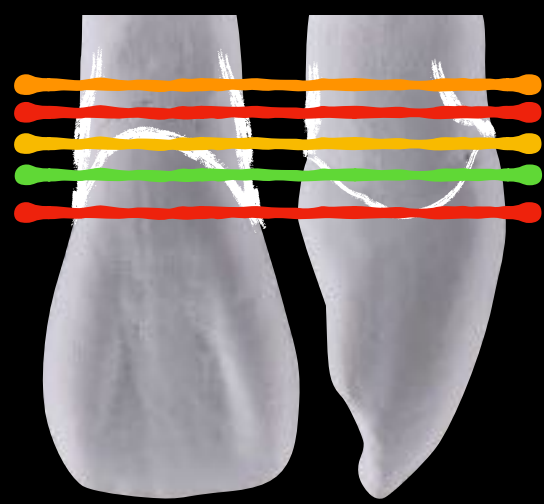


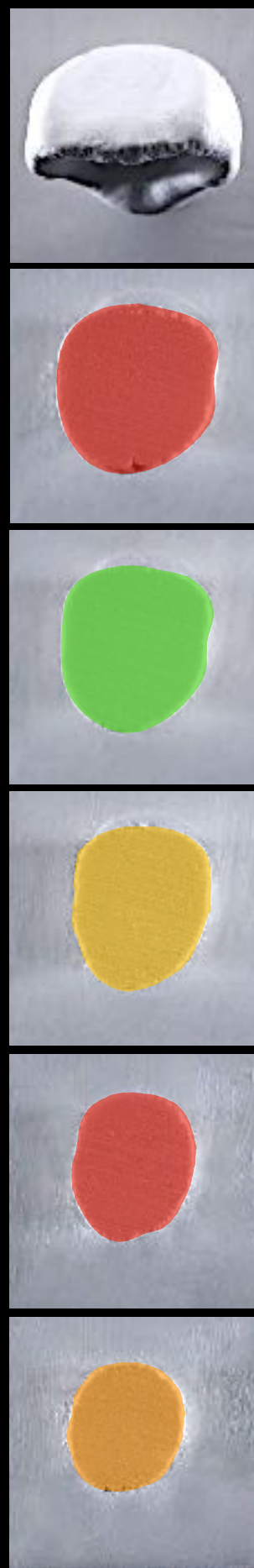
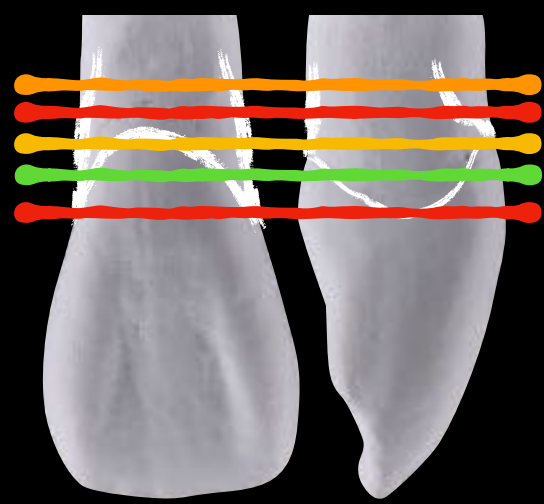


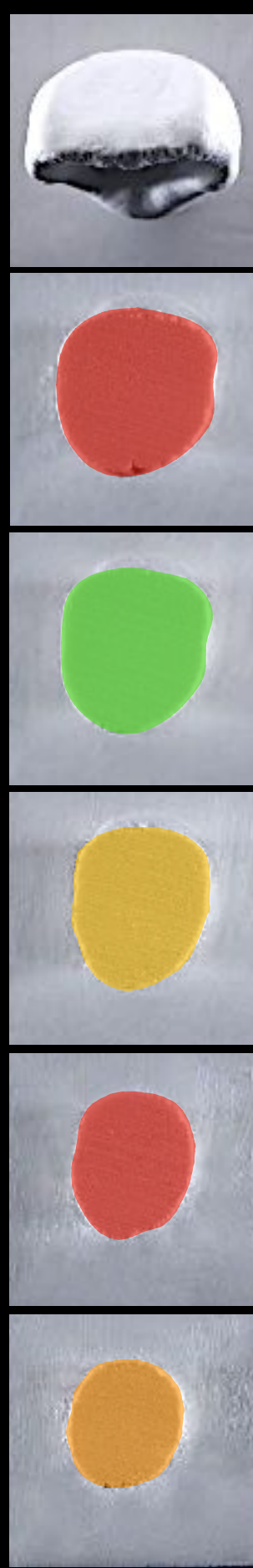
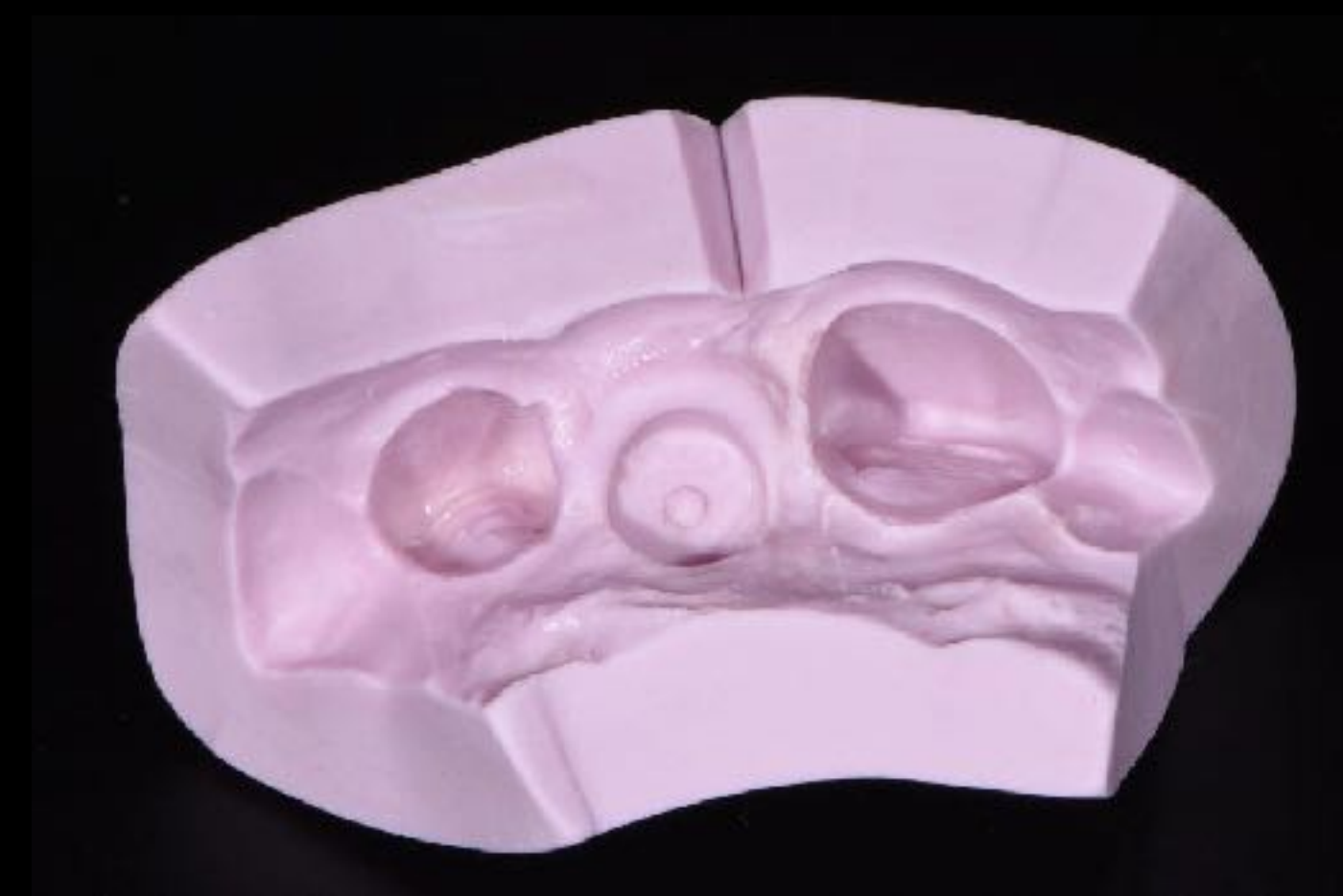
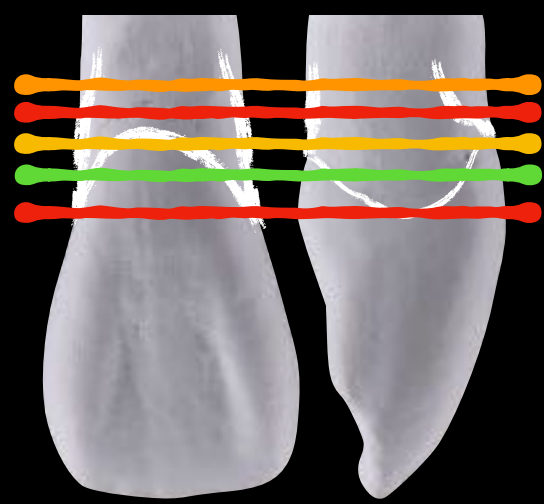


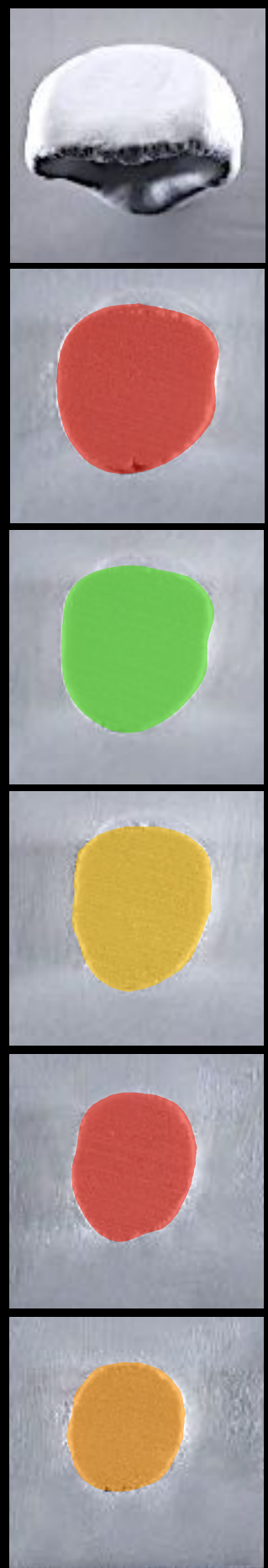
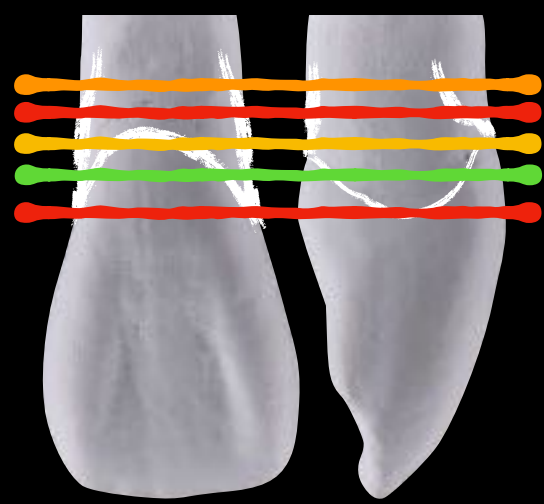


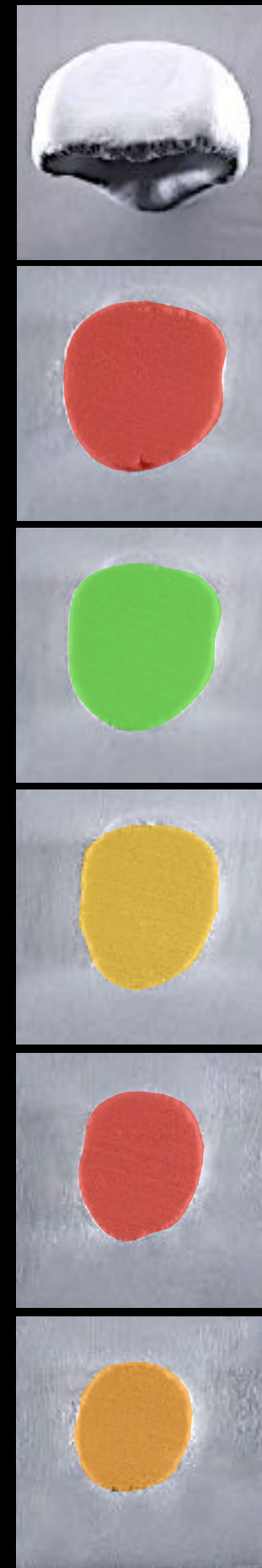
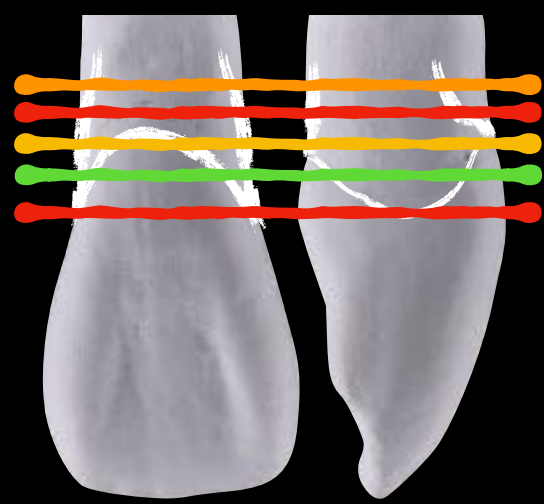


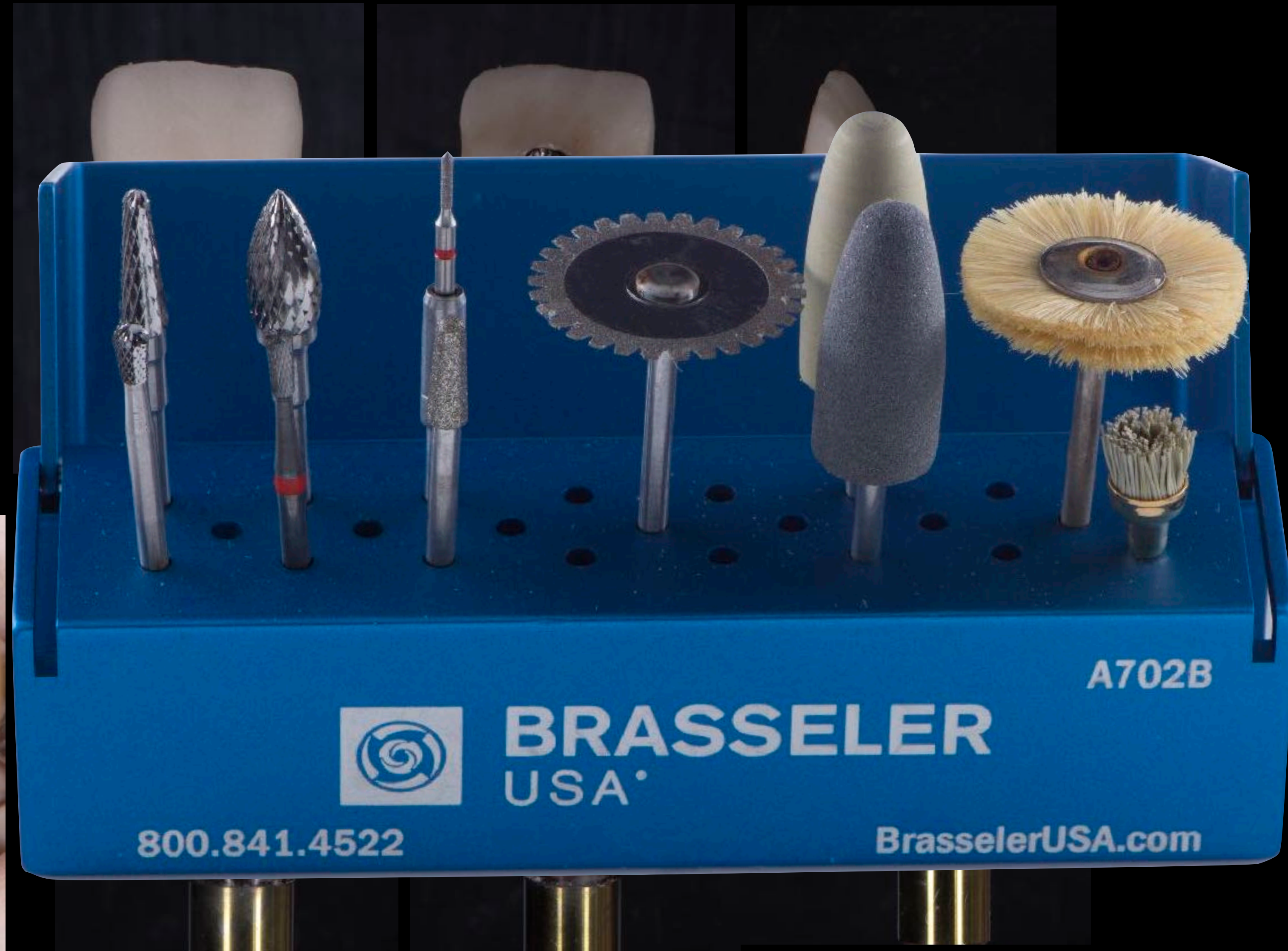
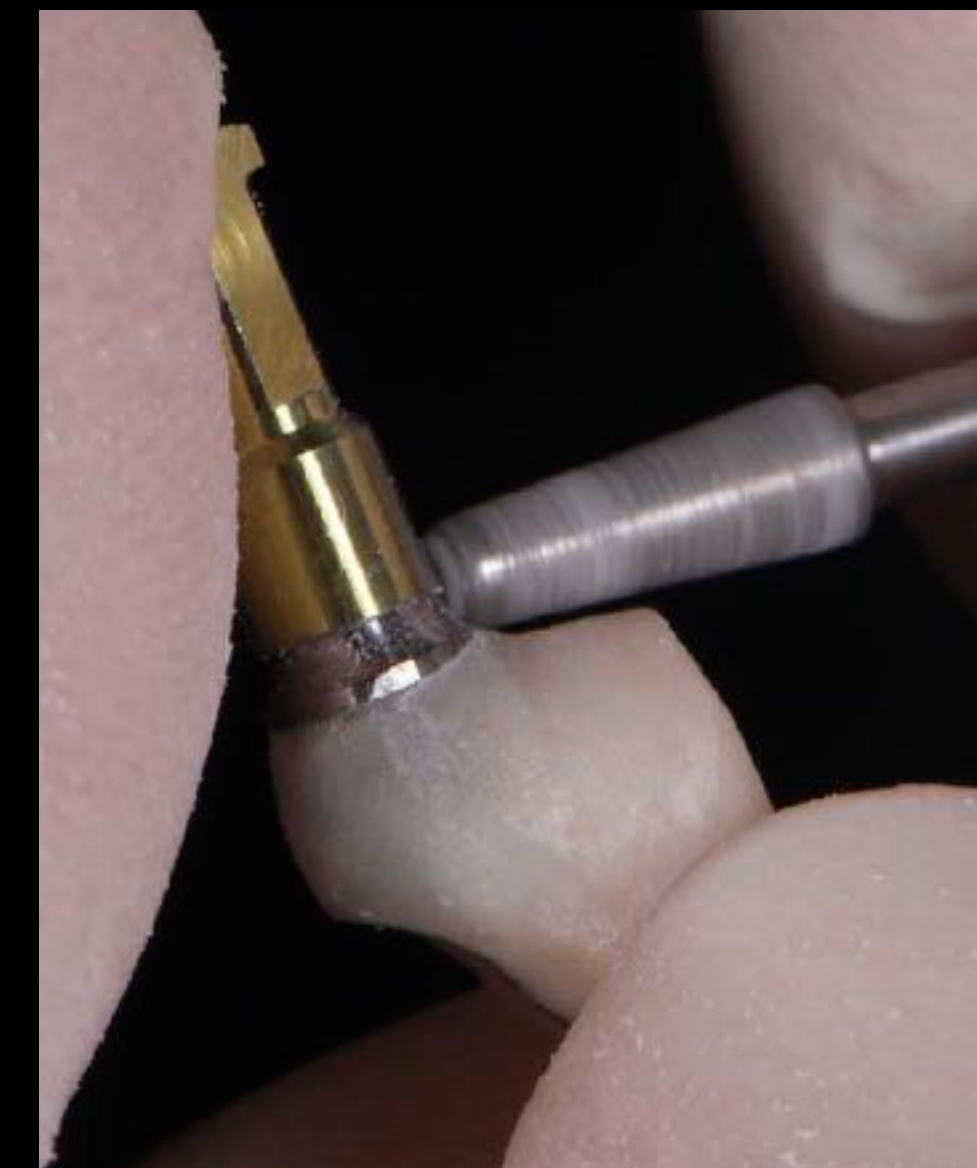
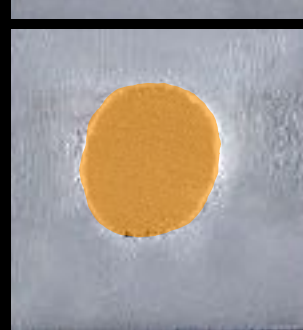
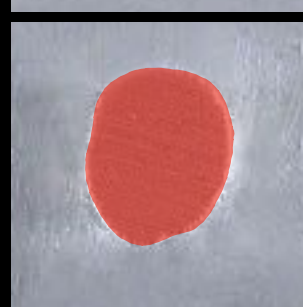
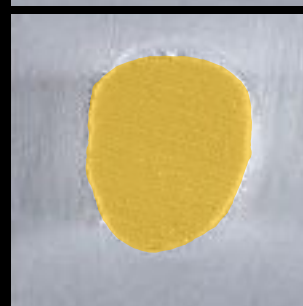
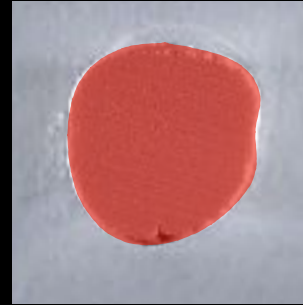
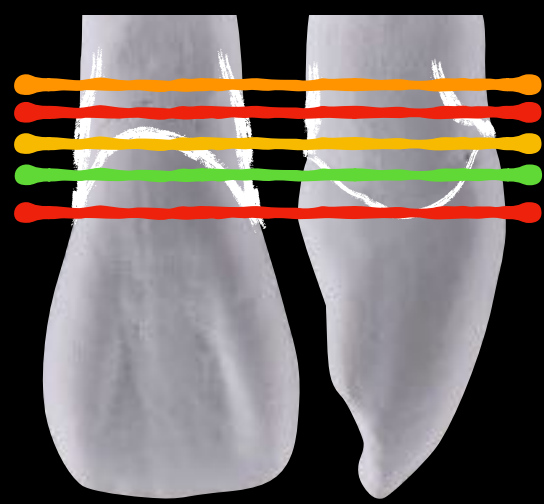


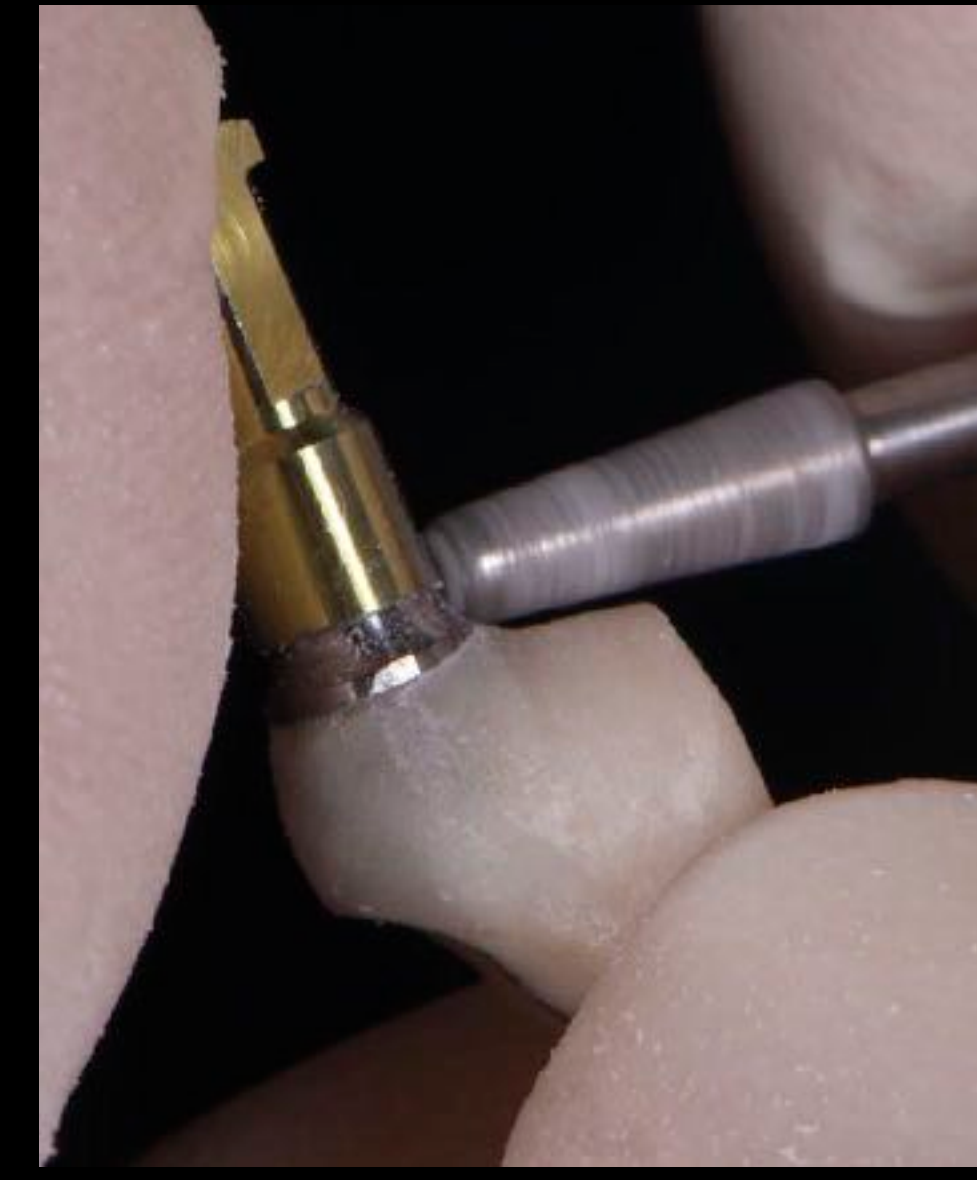
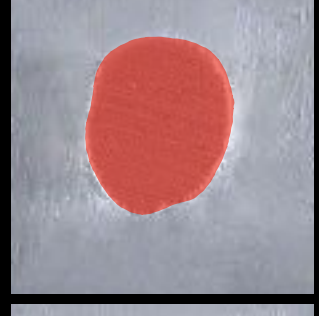
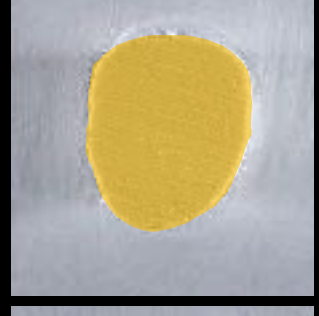
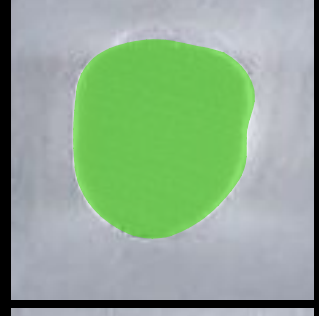
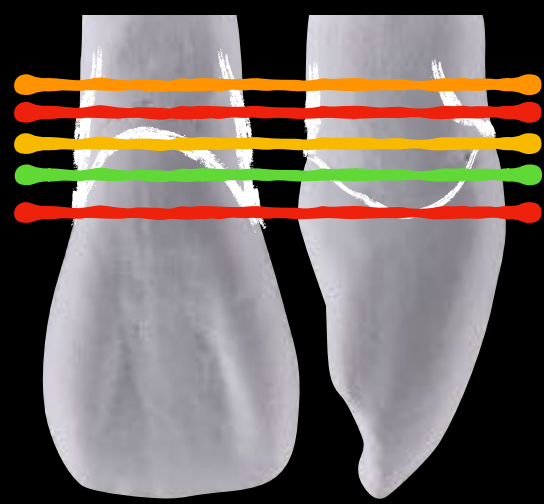


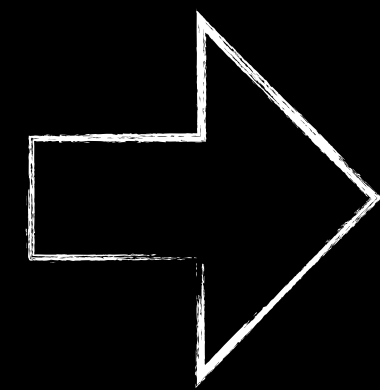
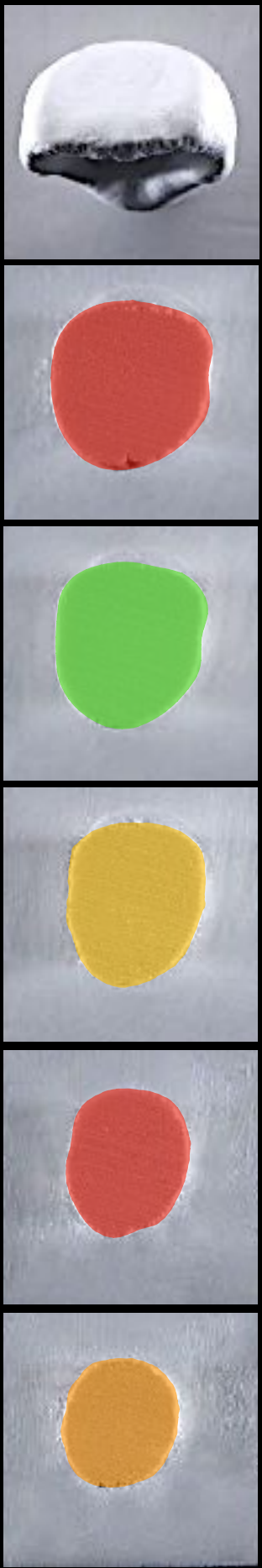
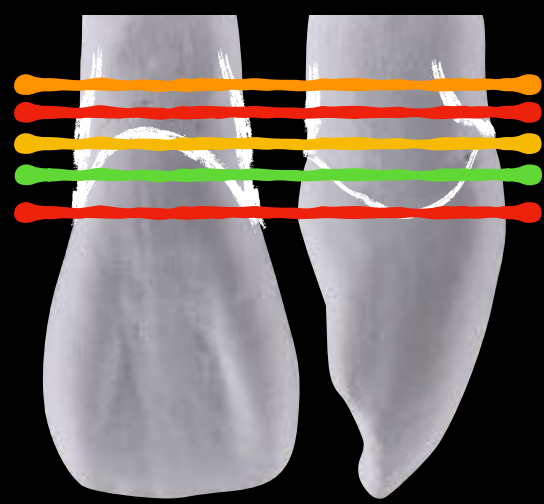


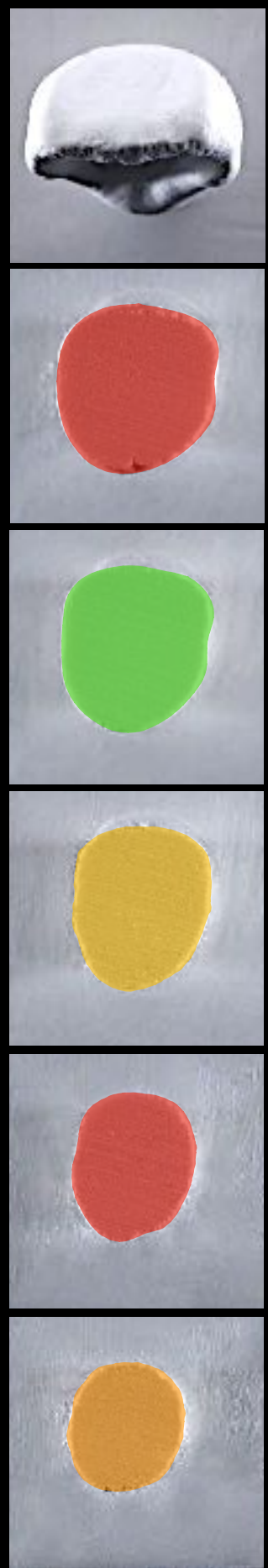
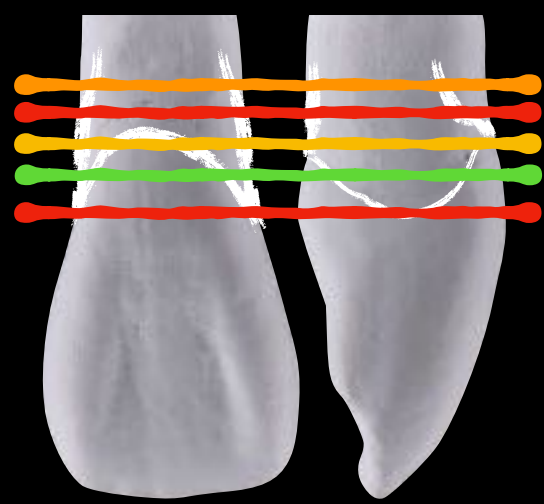


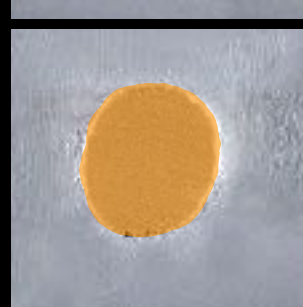
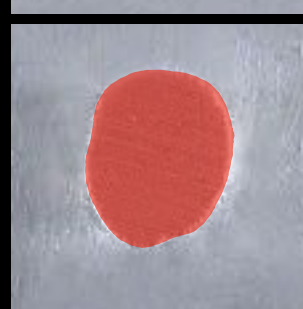
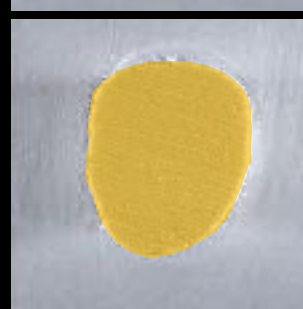
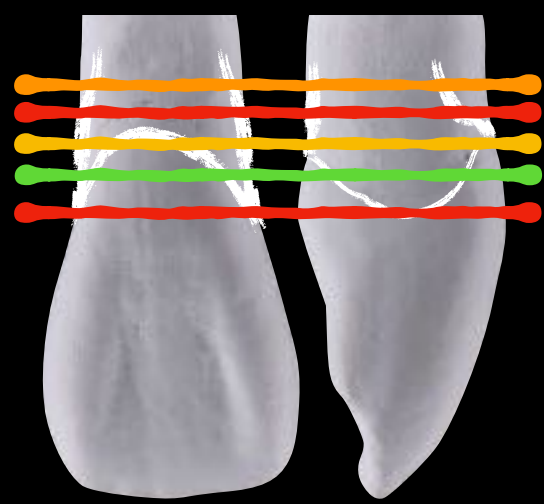


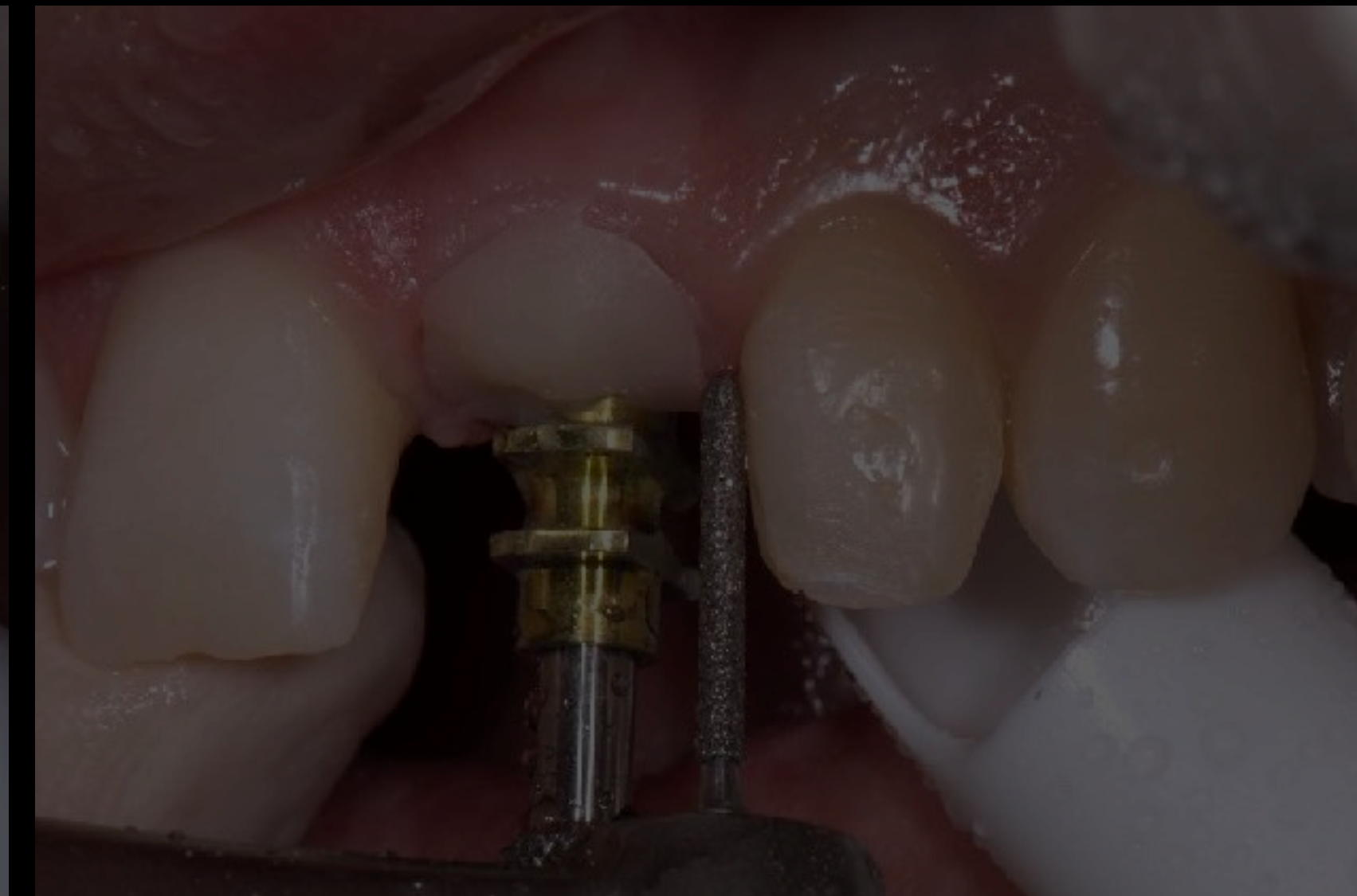
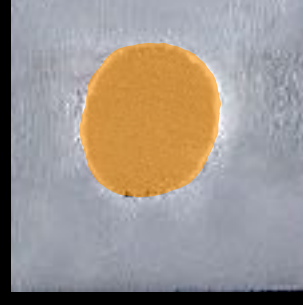
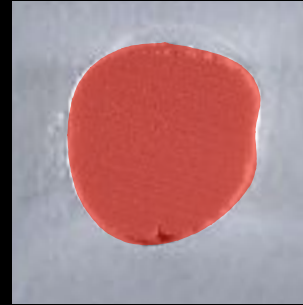
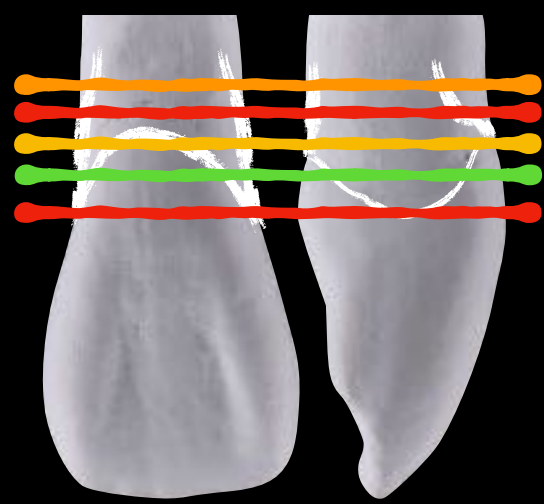


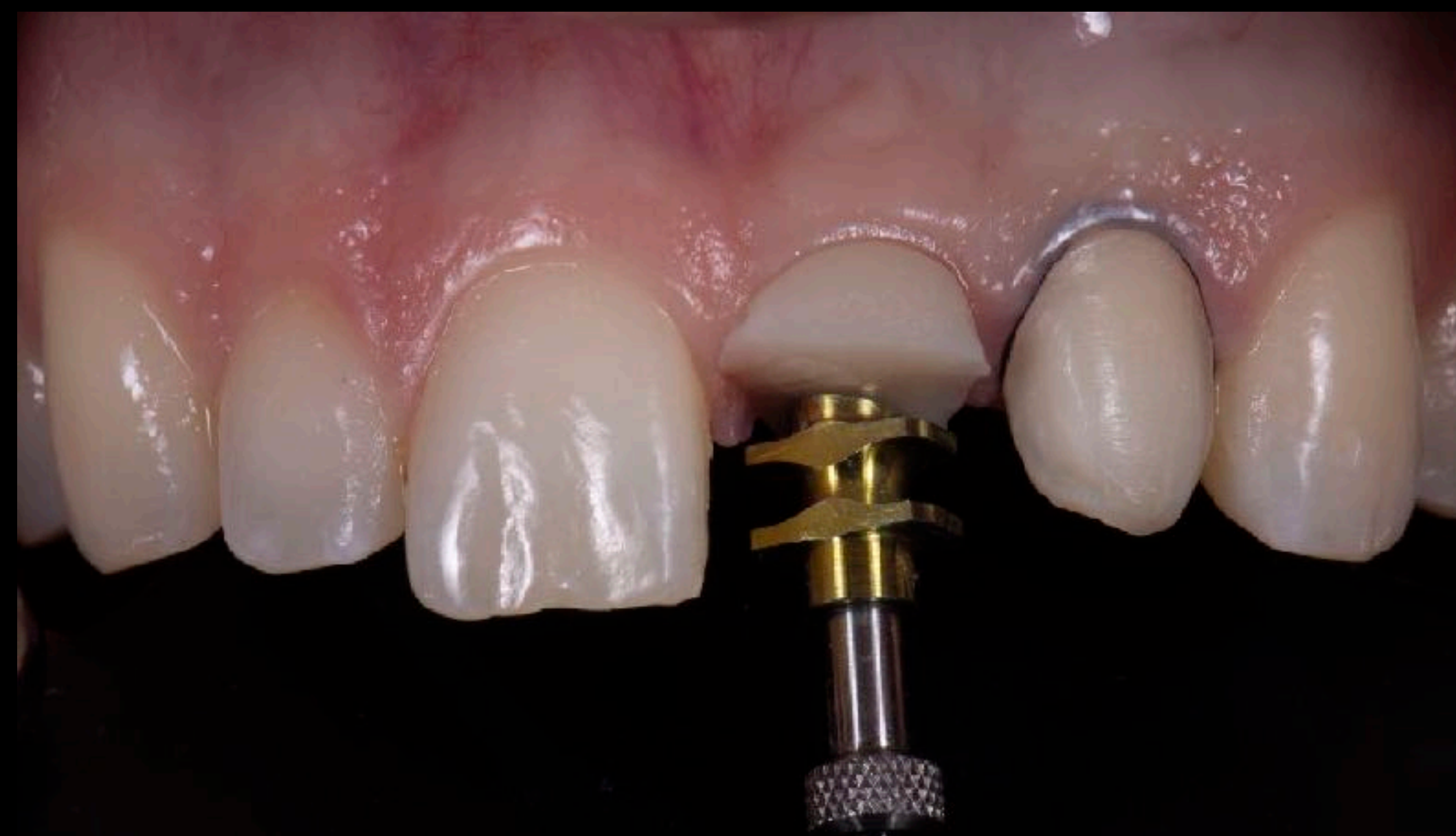
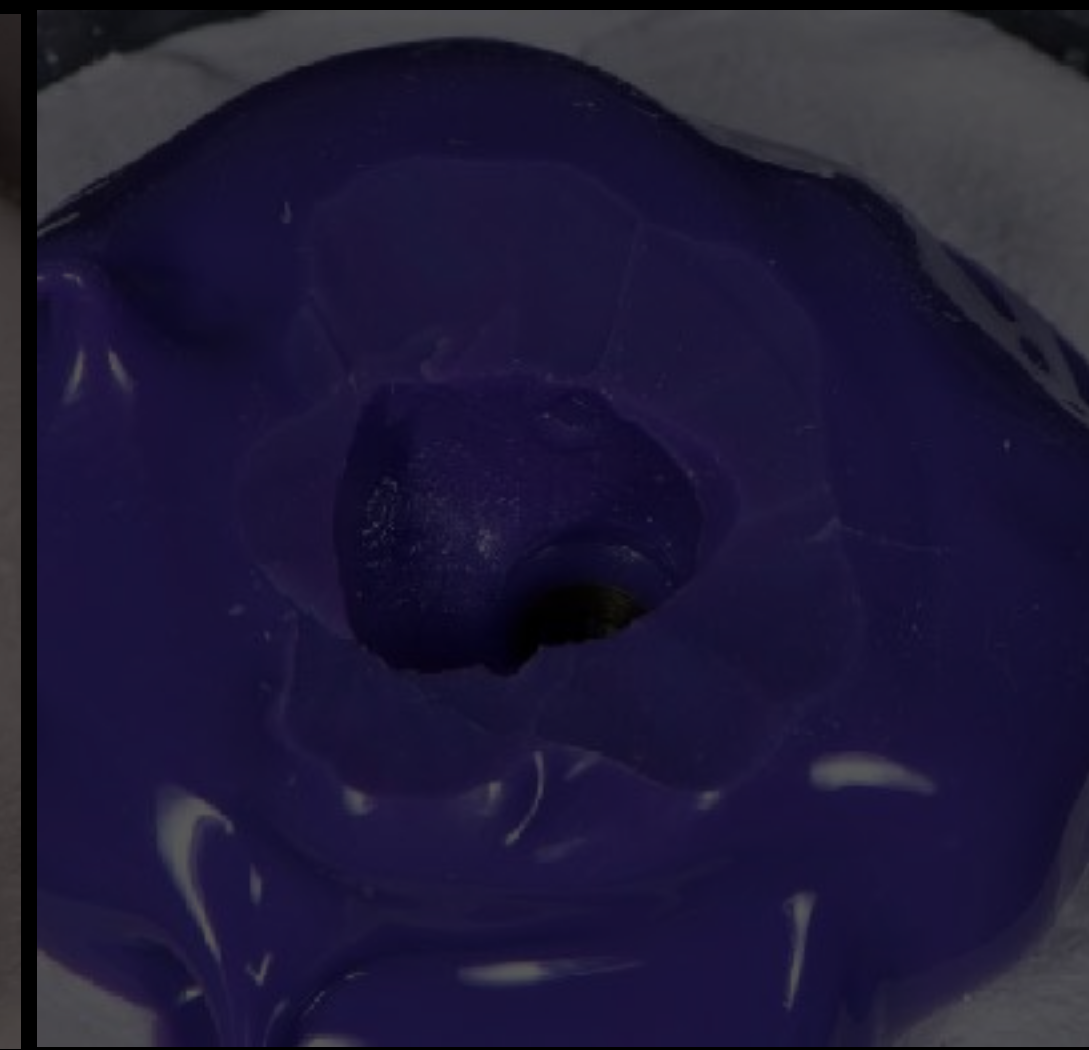
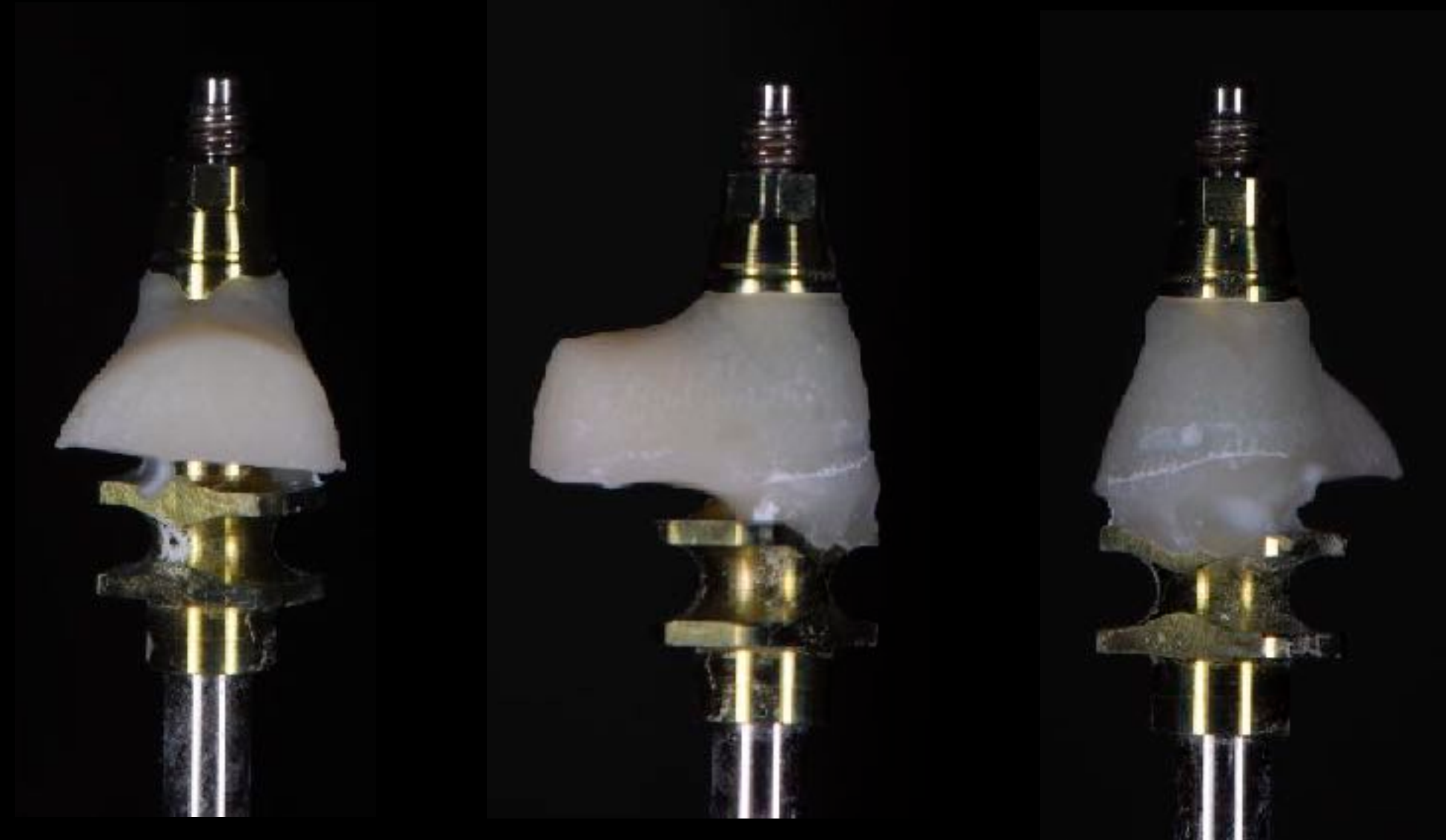
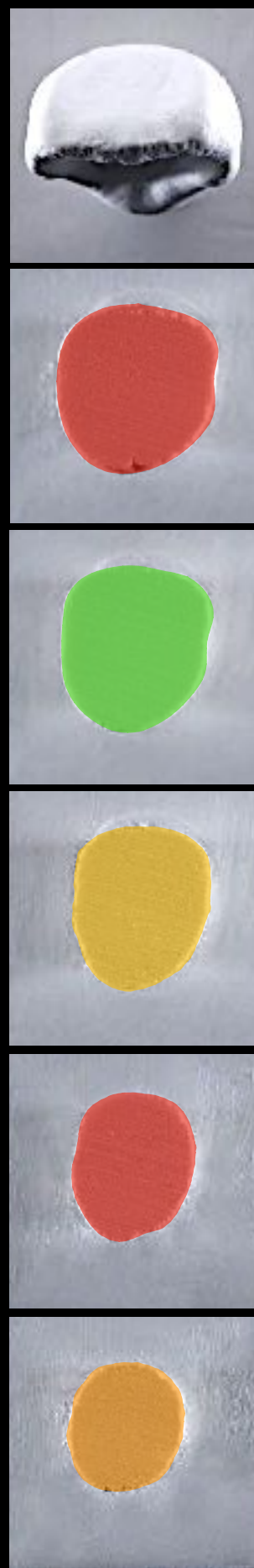
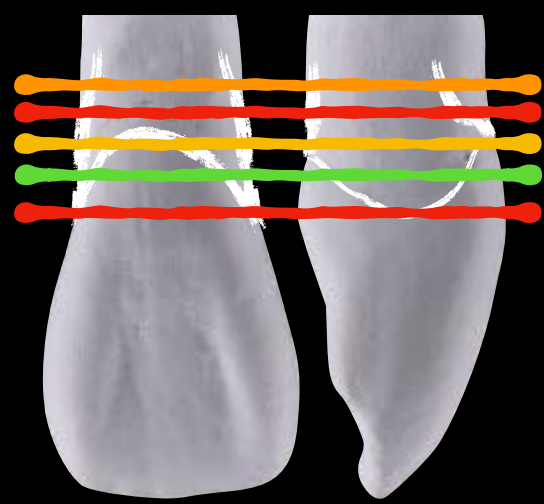


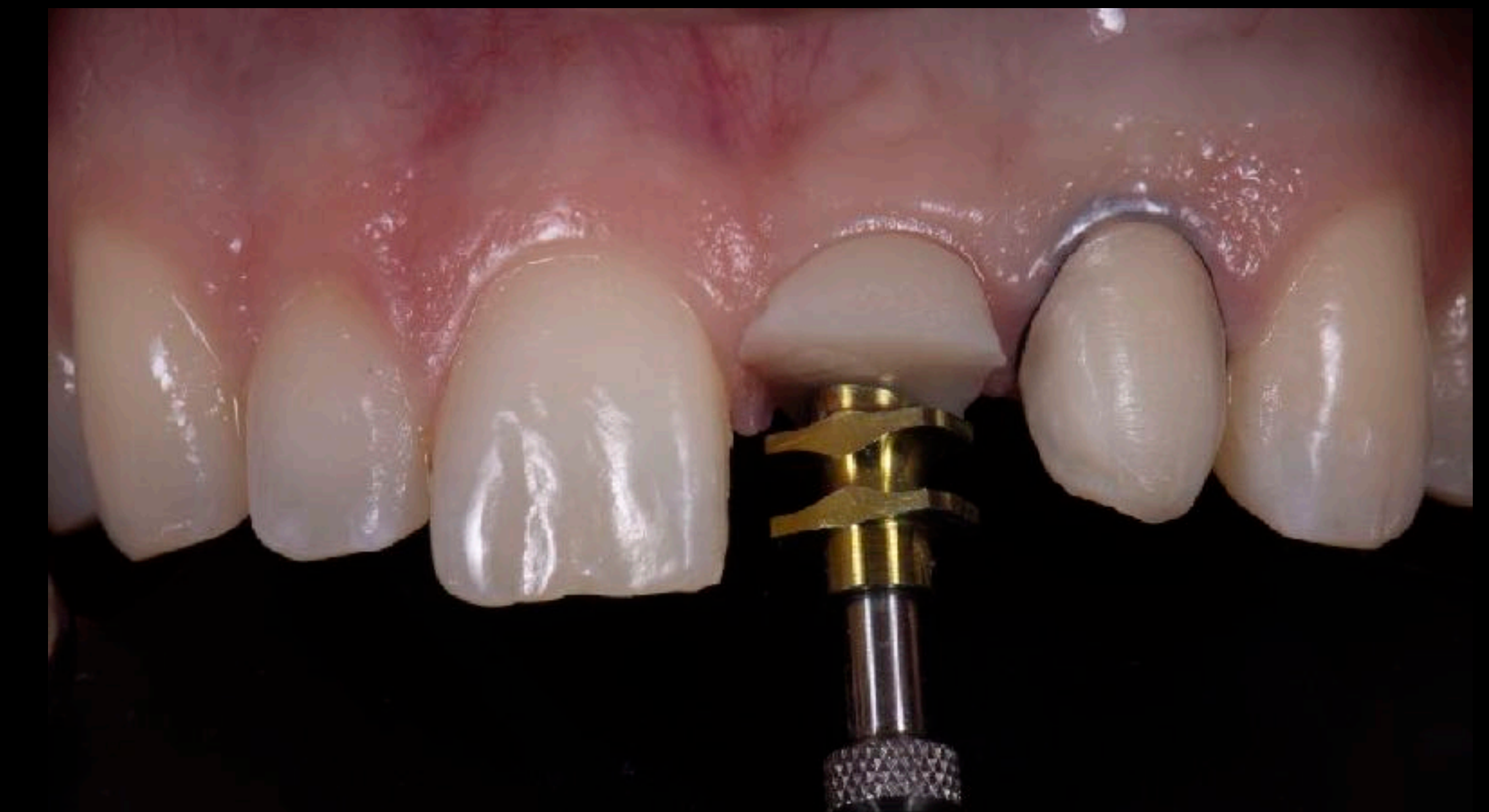
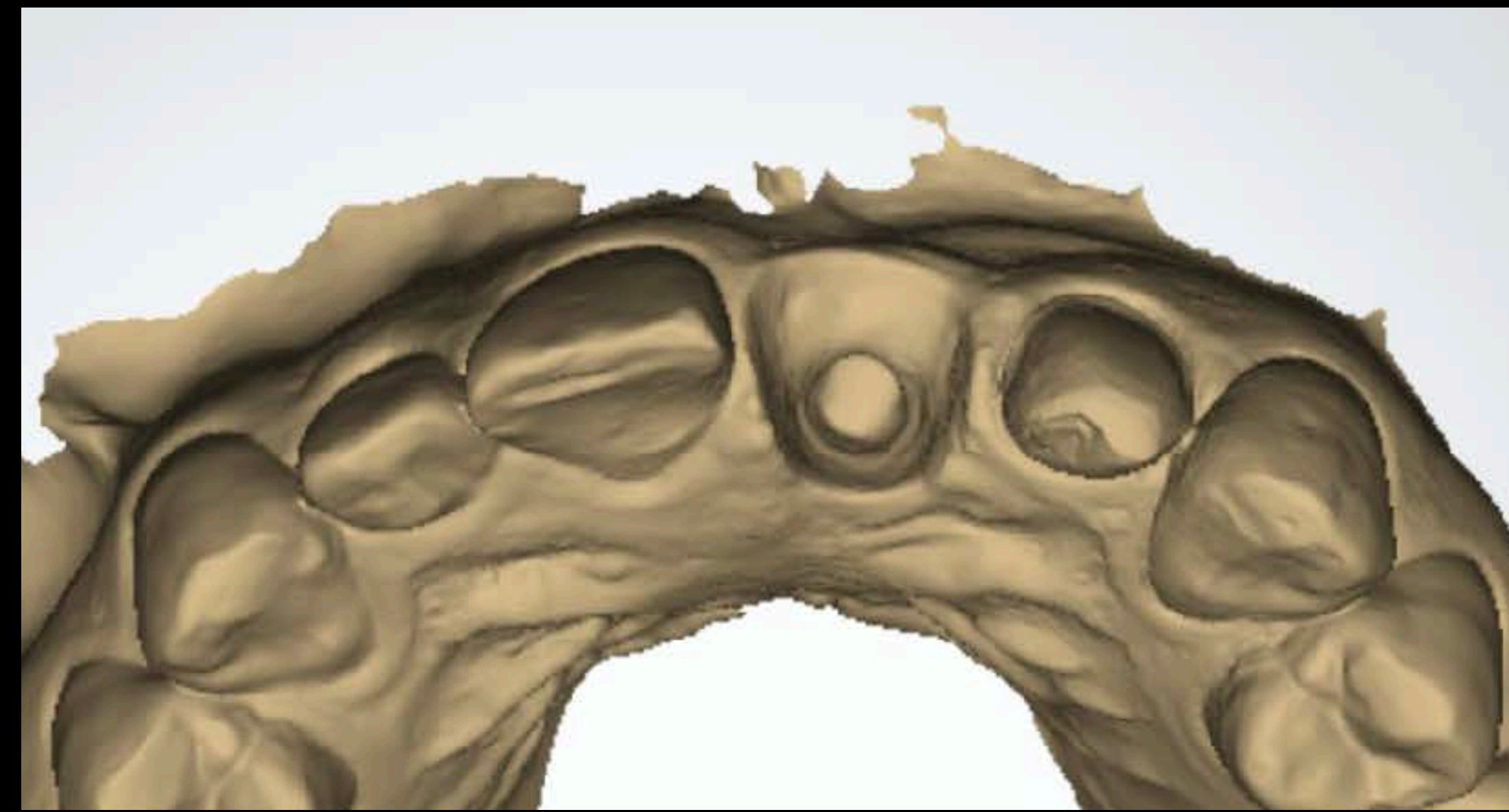
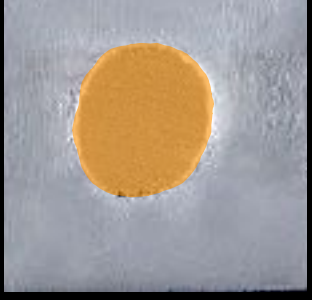
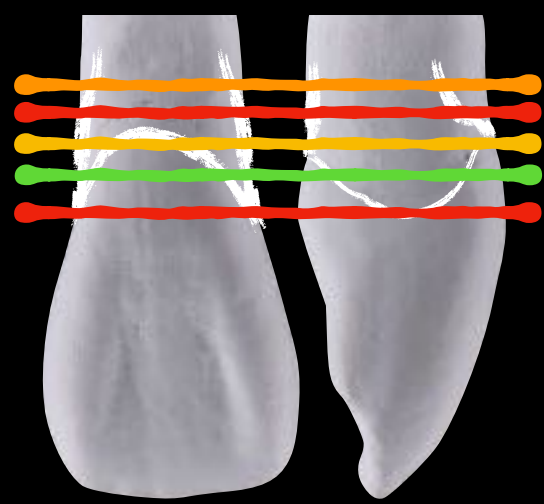


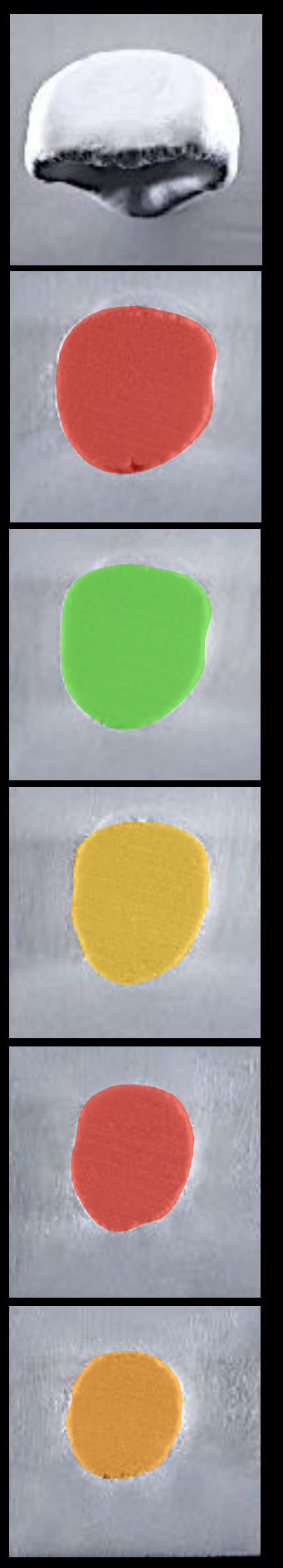
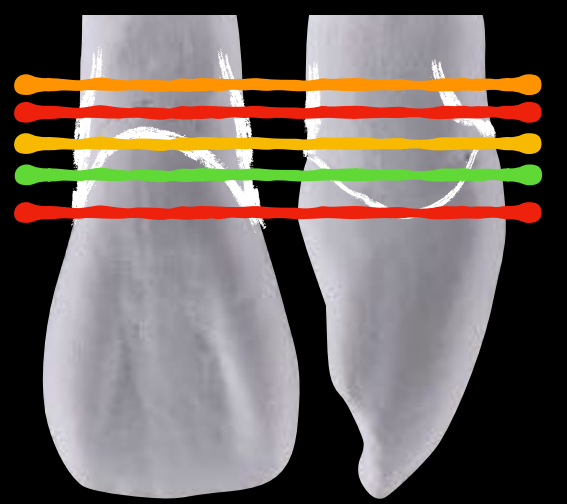


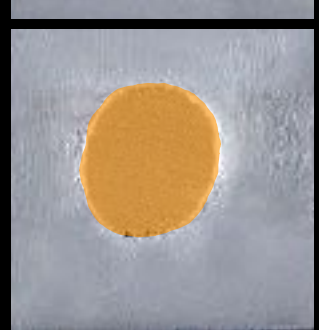
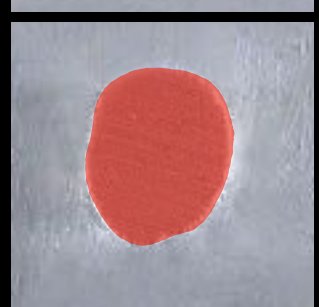
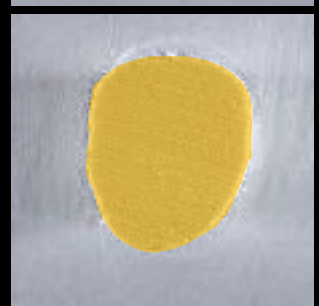
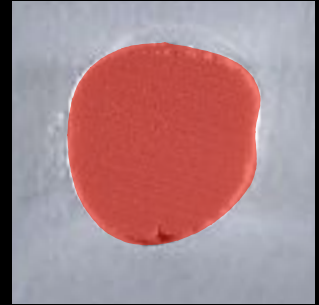
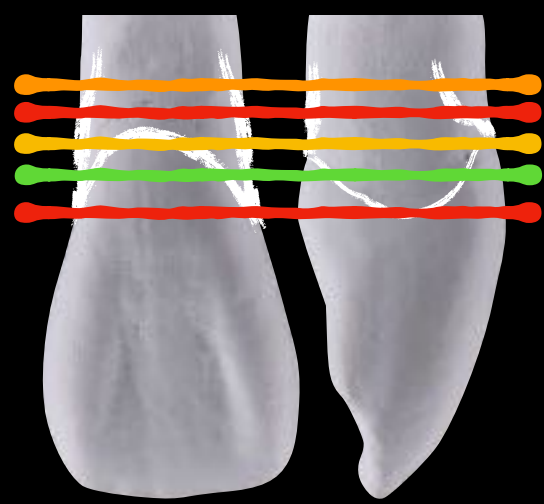








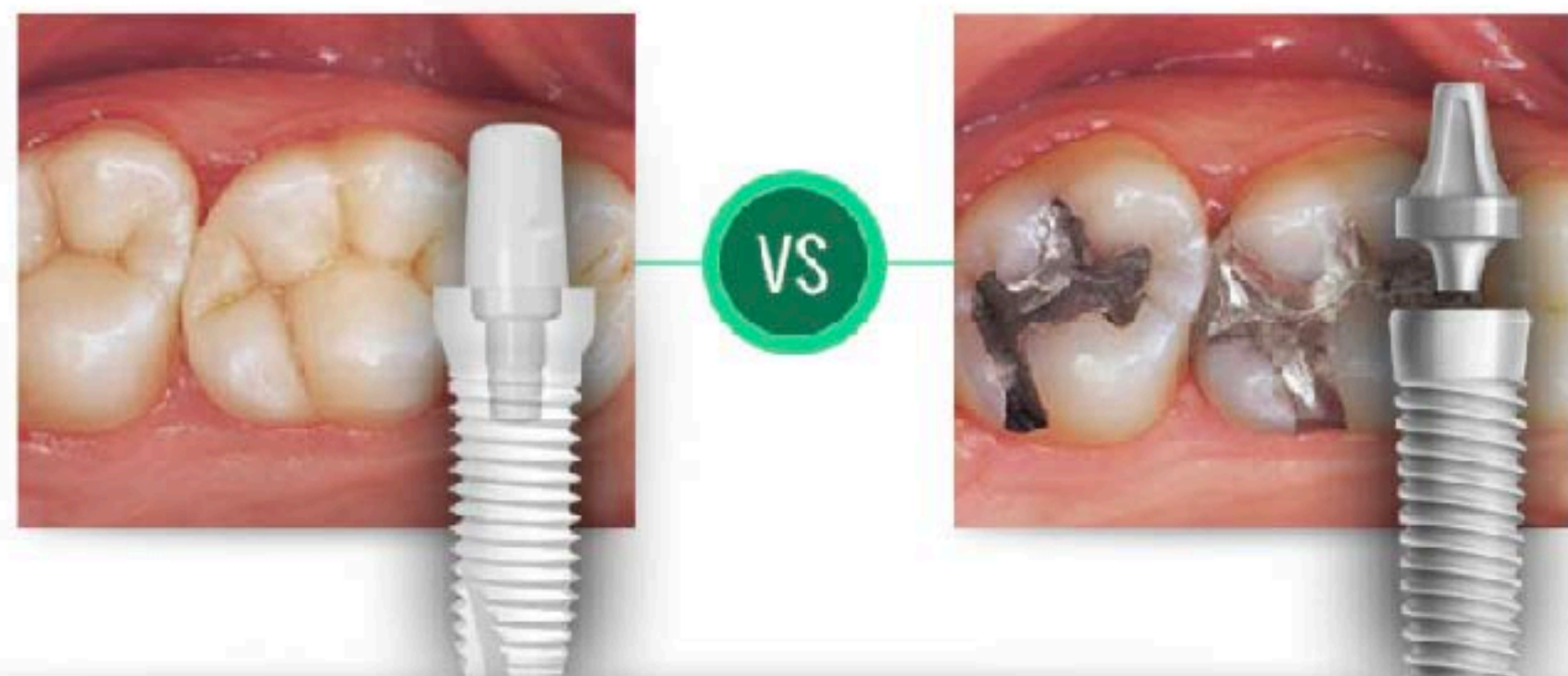




Are Zirconia implants a worthy alternative to Titanium?

Are Zirconia implants a worthy alternative to Titanium?

WHY DO YOU WANT METAL IN YOUR MOUTH WHEN A HEALTHIER, NATURAL OPTION EXISTS?



Metal-free, ceramic dental implants are now a great alternative to traditional metal implants.

The benefits of ceramic (zirconia) dental implants include:

- 100% metal-free
- Highly esthetic, naturally white color
- Bacteria and plaque resistant
- Less allergy potential

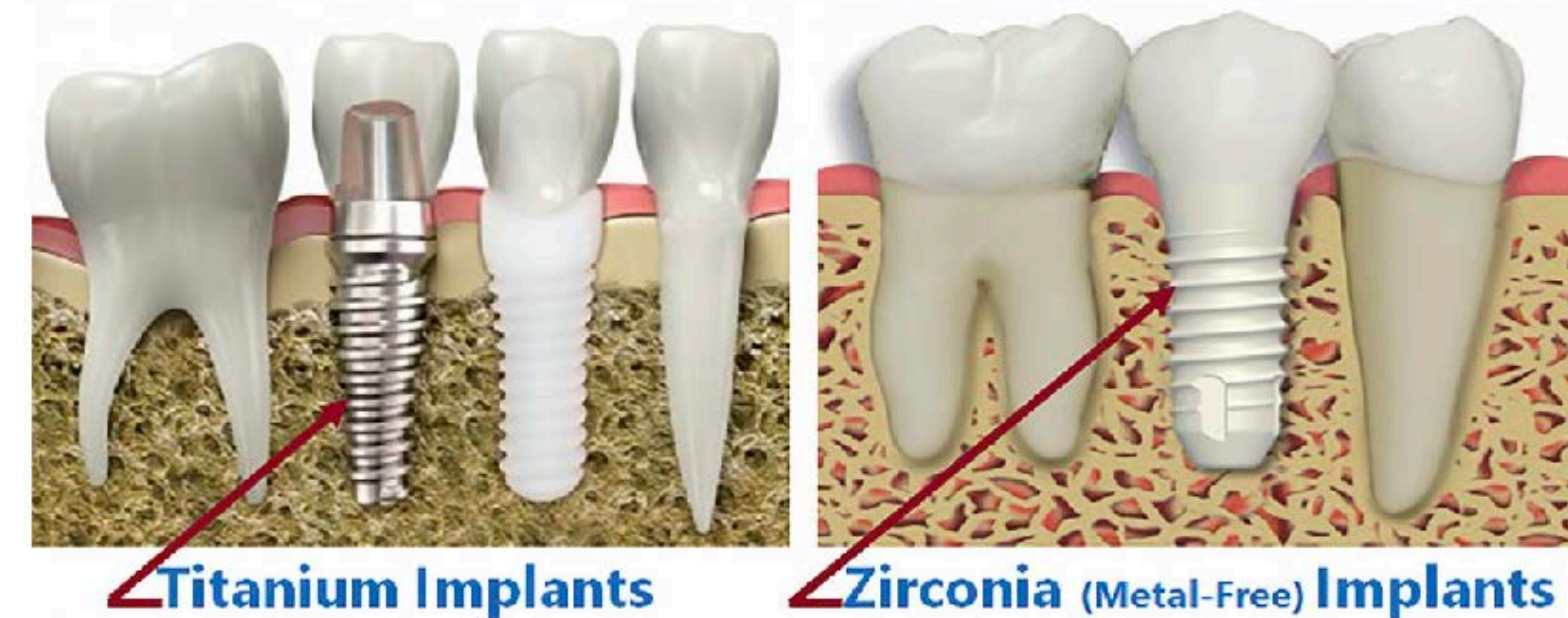
CALL NOW!

5 REASONS TO CHOOSE ZIRCONIA DENTAL IMPLANTS

- 1). PERMANENT
- 2). STABLE
- 3). SAFE
- 4). NON-METAL
- 5). ATTRACTIVE

The graphic features a smiling woman's face in the background. In the foreground, there is a circular inset showing a white zirconia implant and a metal implant side-by-side for comparison.

Titanium Implants Vs. Ceramic Implants



The Common Characteristic of Zirconium Implants & Titanium Implants

- **BIOCOMPATIBLE:** Zirconium is an inert material with very low allergic potential.
- **STRONG:** The flexural strength of the Zirconia dental implant is close to 1200 MPa.
- **OSSEOINTEGRATIVE:** Zirconia implants have proven high level of osseointegration (meaning to provide optimum integration with the bone), confirmed in numerous studies in Germany and the United States, although not as high as Titanium.

Are Zirconia implants a worthy alternative to Titanium?

Hot topics related related to Zr implants... is Zr a suitable alternative

Allergies/hypersensitivity and corrosion,

Biologic data

Osseointegration,

Soft tissue response

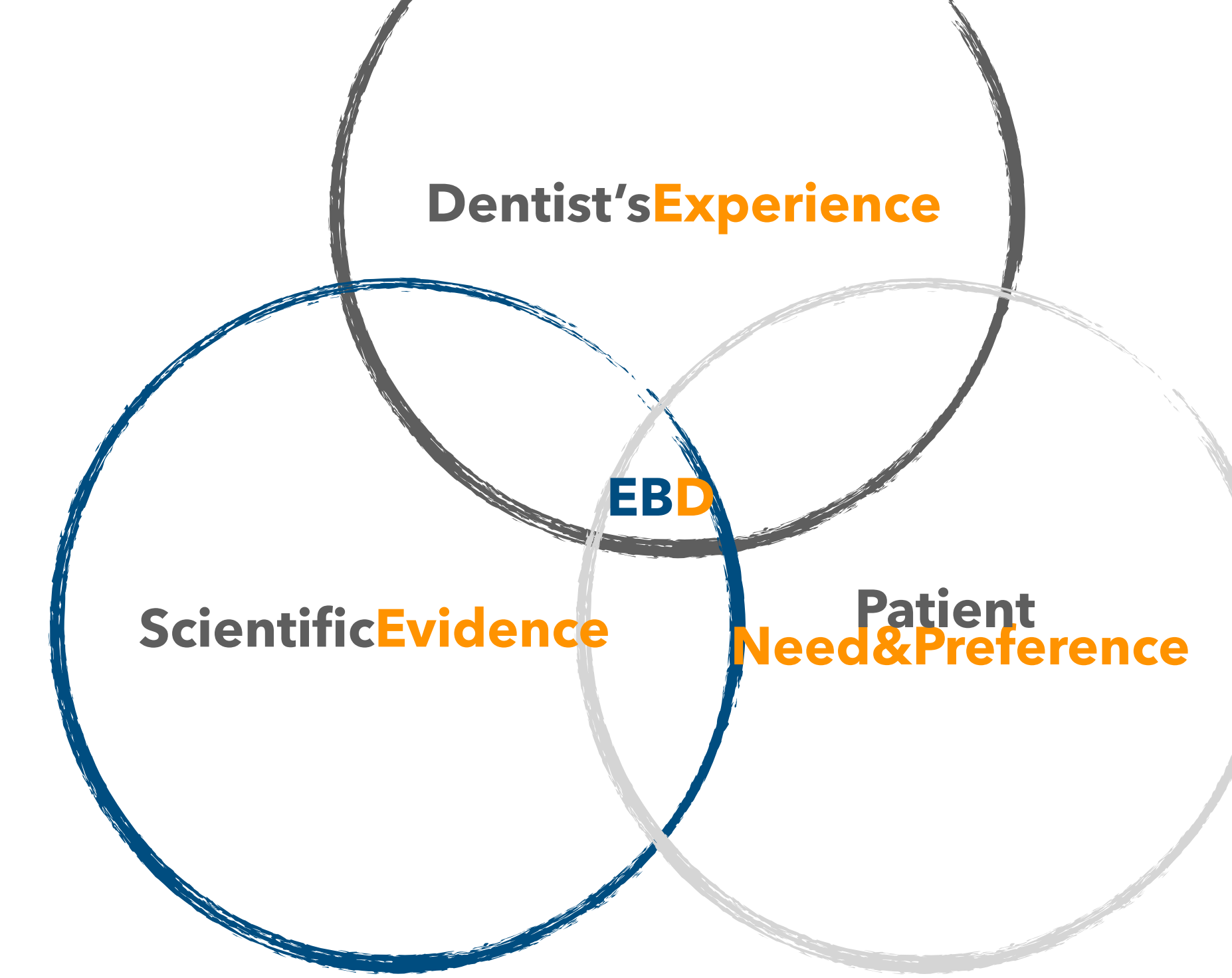
Evaluation of materials

Physical and mechanical properties

Mode of failure.

Esthetics, and optical properties; More complex question than color.... emergence profile, ability to control tissue, Ability to modify, availability of hardware for excellent prosthetic outcome.

Long term follow up, success rate.



Conclusions

At present, the following conclusions can be drawn regarding zirconia dental implants:

- Through *in vitro* and *in vivo* studies, zirconia has managed to earn its place as a valuable alternative to titanium. From a biological point of view, zirconia presents with interesting assets. It has demonstrated a low affinity to bacterial plaque, small amounts of inflammatory infiltrate and good soft-tissue integration. These properties might lower the risk for peri-implant diseases.
- The biomechanical properties of zirconia implants were assessed in numerous experiments with success. However, early failure rates of zirconia implant systems developed and tested so far were generally higher compared with titanium implants. Solid data on long-term outcomes are scarce. Technical failure as a result of fracture of the material is a sensitive issue and a critical factor for usability and acceptance in daily practice.
- There is room for further technical progress of currently available zirconia implant systems. Two-piece implant systems with screw-retained abutments are desirable for several reasons, although are technically challenging because of limitations in the materials. Further innovation will undoubtedly lead to enhanced biomechanical characteristics, allowing use of new solutions that are presently too high-risk. Enhanced strength could enable novel designs of implants, reconstructions and the parts connecting the two.
- More clinical investigations need to be carried out to identify all relevant technical and biological factors with impact on success and patient satisfaction. At present, the evidence for a final verdict is still incomplete, and the field is still changing in many ways. Patients are aware of the availability of zirconia implants on the market and we need to be ready to respond to their demands.

CONCLUDING REMARKS

- Titanium dental implants are still the irreplaceable gold standard and mostly recommended for patient' use. However, several issues have led to seeking adjuncts to this material in order to simplify and enhance aesthetic outcome of immediately placed dental implants in the aesthetic zone.
- Due to outstanding mechanical, biological and aesthetic characteristics of zirconia dental ceramics, this material was found to be a good candidate to fulfil this purpose.
- *In vitro* and *in vivo* research finding support the use of zirconia dental implants, however, this need to be substantiated by long term well-structured randomised controlled trials.
- The presented novel design of zirconia dental implants (By *White Implants Development Corp B.V.*) in this cases report is based on valid scientific basis and may be considered as a new approach to optimise aesthetic outcome of immediate replacement technique in the aesthetic zone. It seems to promote and maintain optimum soft and hard tissue health and architecture. Yet, extensive *in vitro* and clinical studies should be carried out to validate its' use.

5. Conclusion

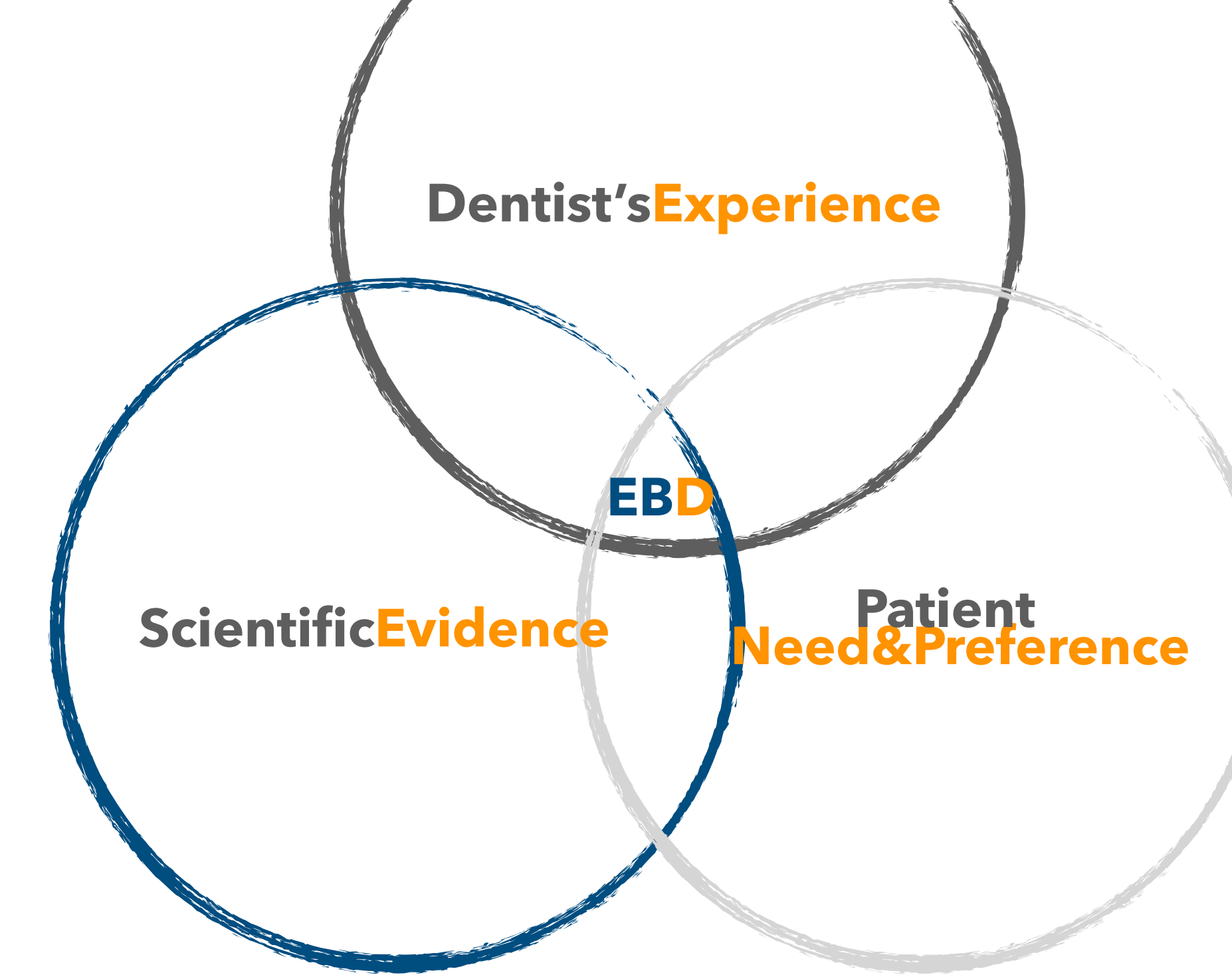
Although the current evidence shows that one-piece zirconia implants have a very good clinical outcome, long-term clinical studies are still needed to support their clinical use.

Compared to the one-piece design, clinical evidence regarding two-piece zirconia implants remains insufficient to justify their clinical use. Further questions regarding the selection of the abutment material, screw type and retaining method remain unanswered.

As no long-term evidence was identified to support the use of a specific restoration material (lithium disilicate or zirconia), the current use of such materials seems to be based on clinicians' preferences.

Our conclusions...;

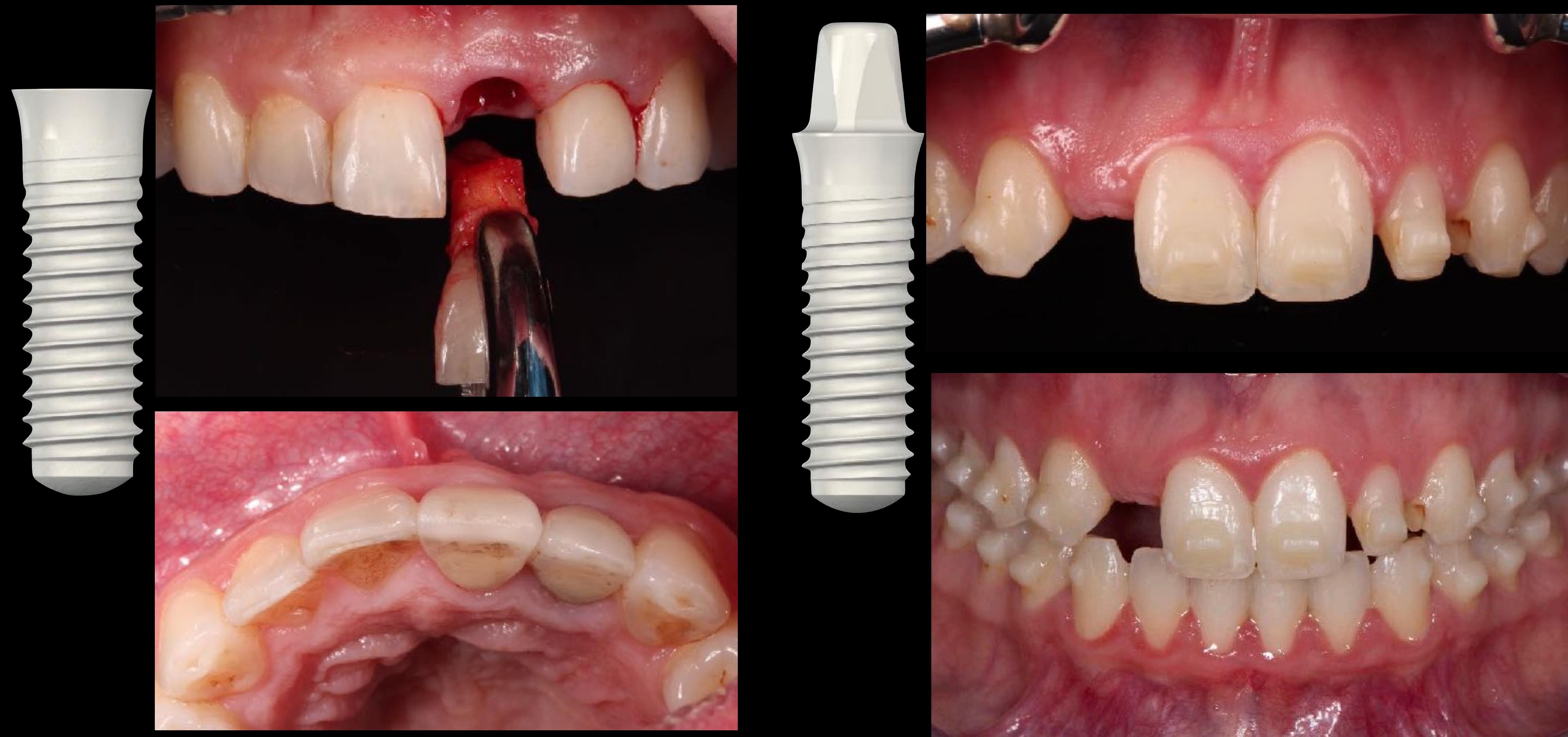
- Dentist experience
- Case selection,
- Patient request and compliance
- Use high quality reputable implants manufacturers,



a. Posterior Zirconia Implant supported restoration restoration

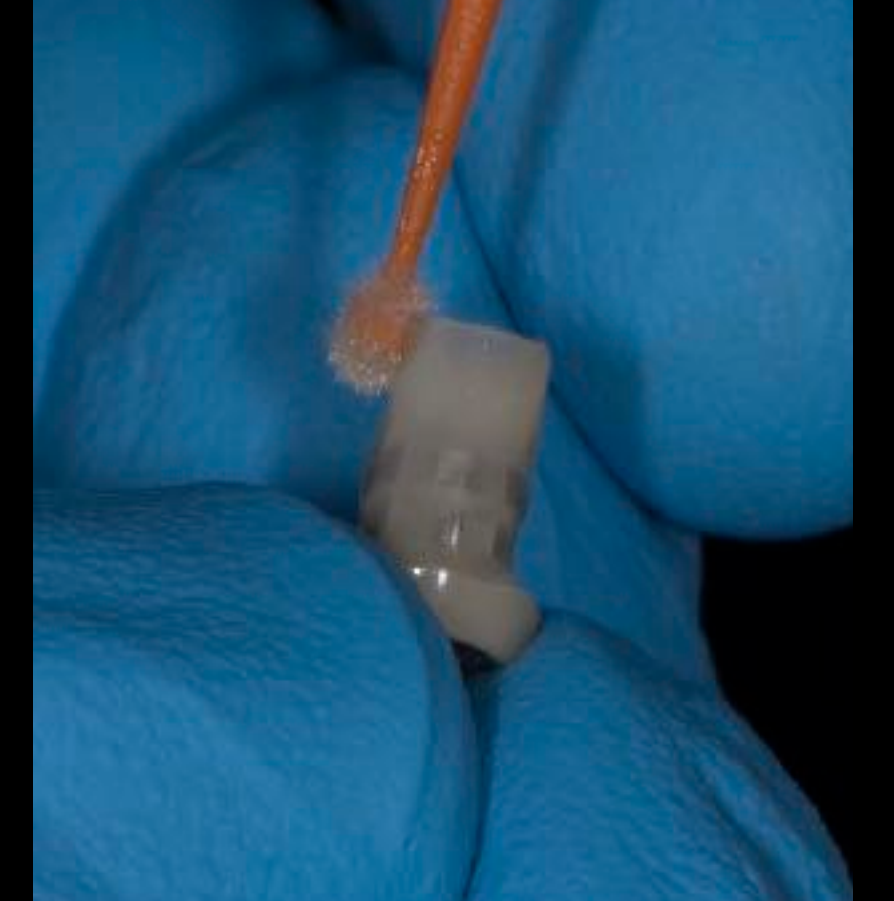
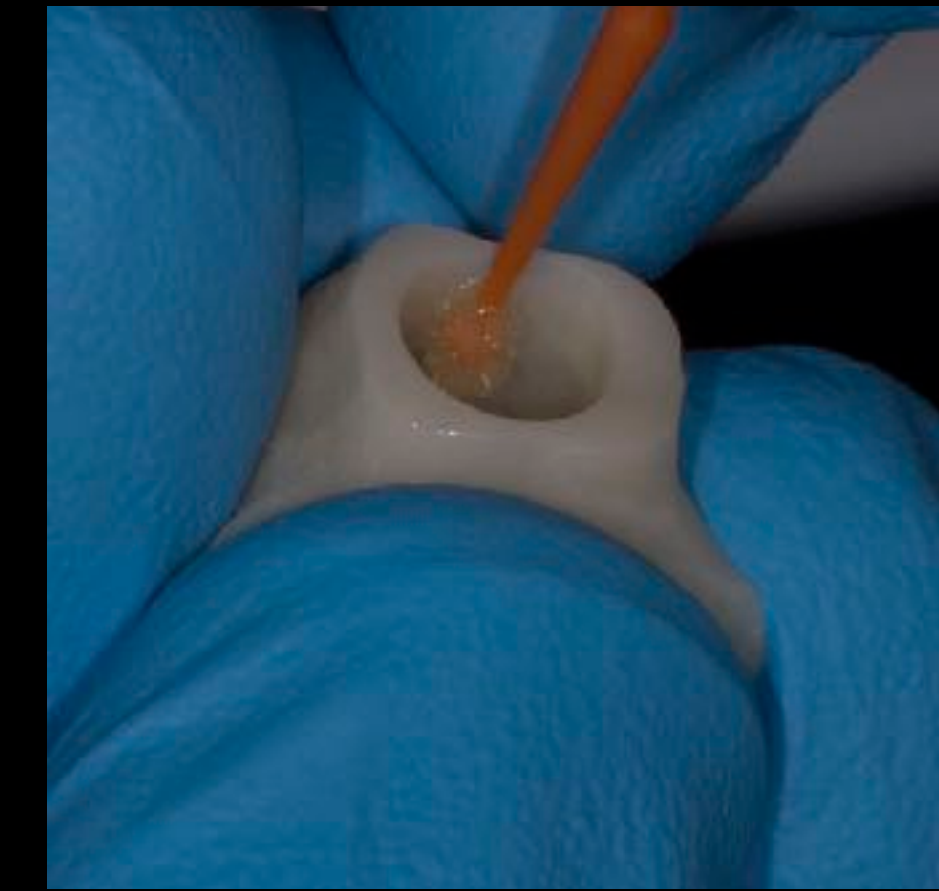
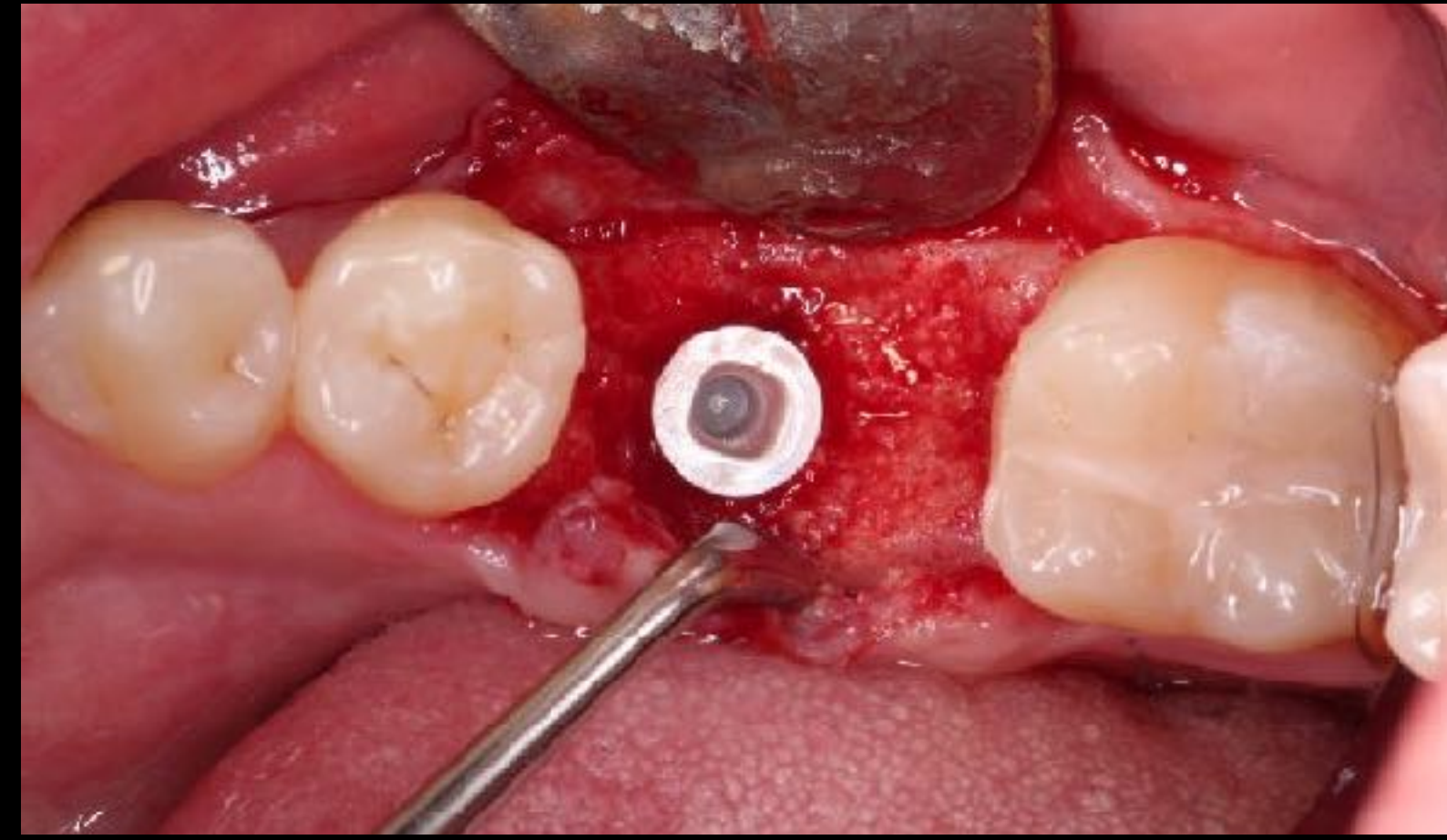
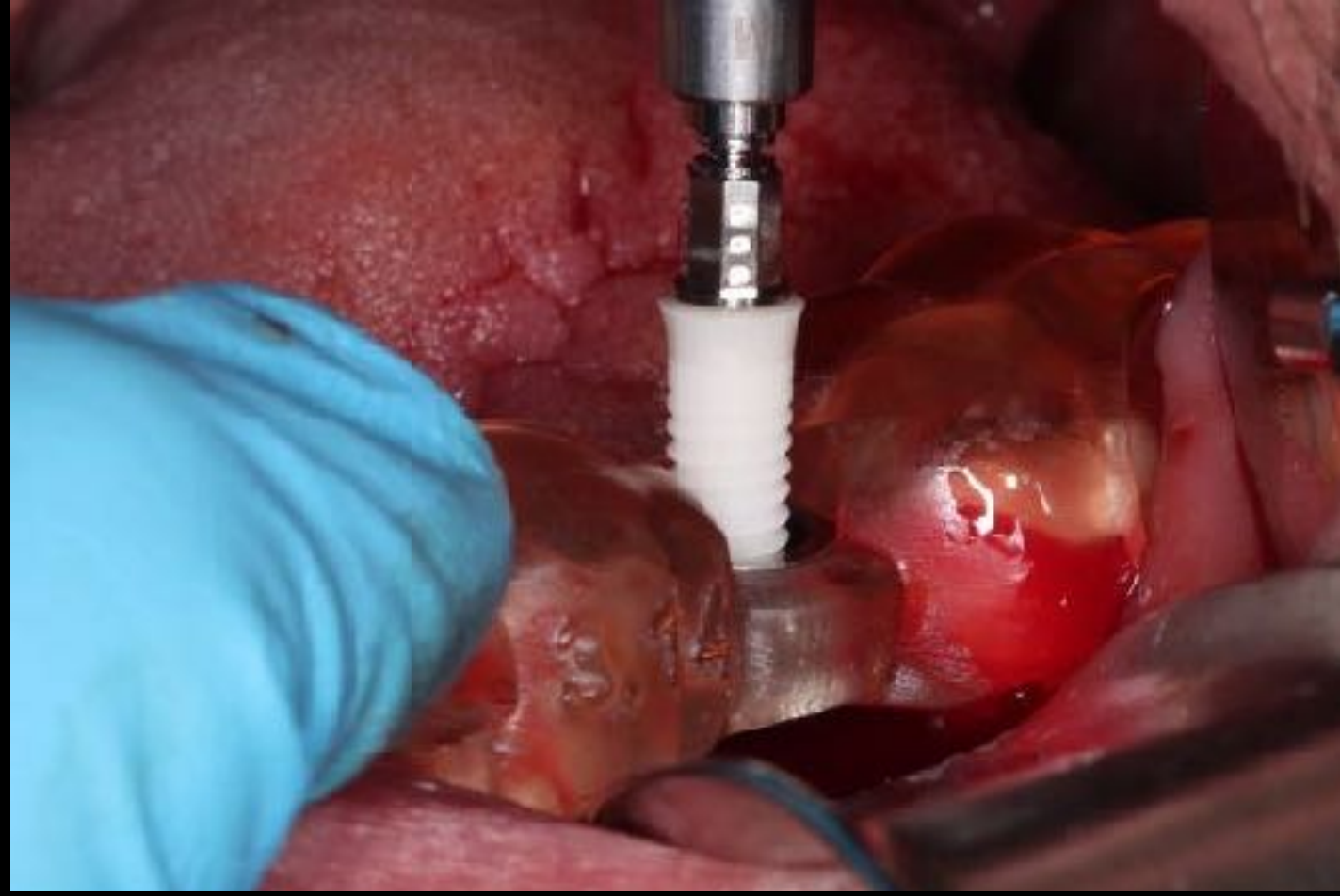


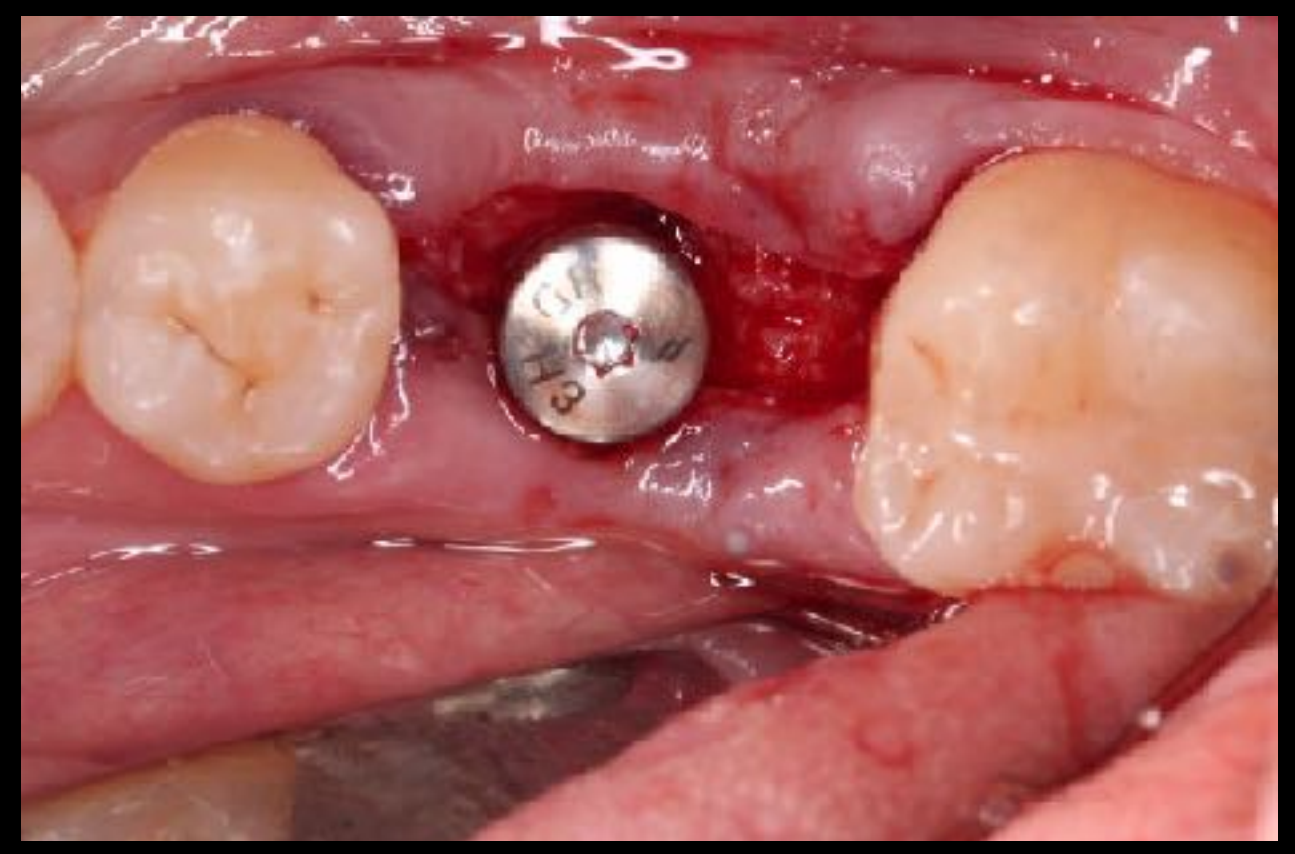
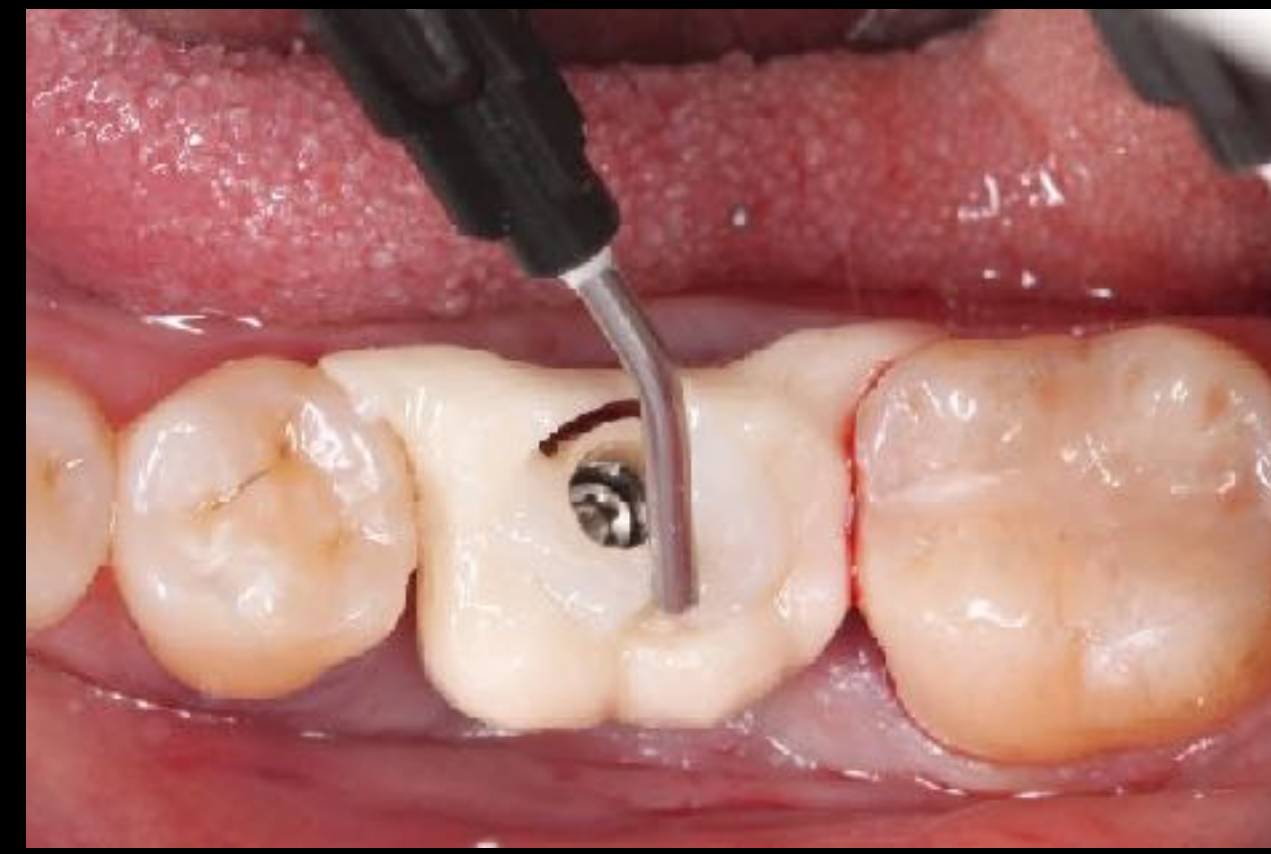
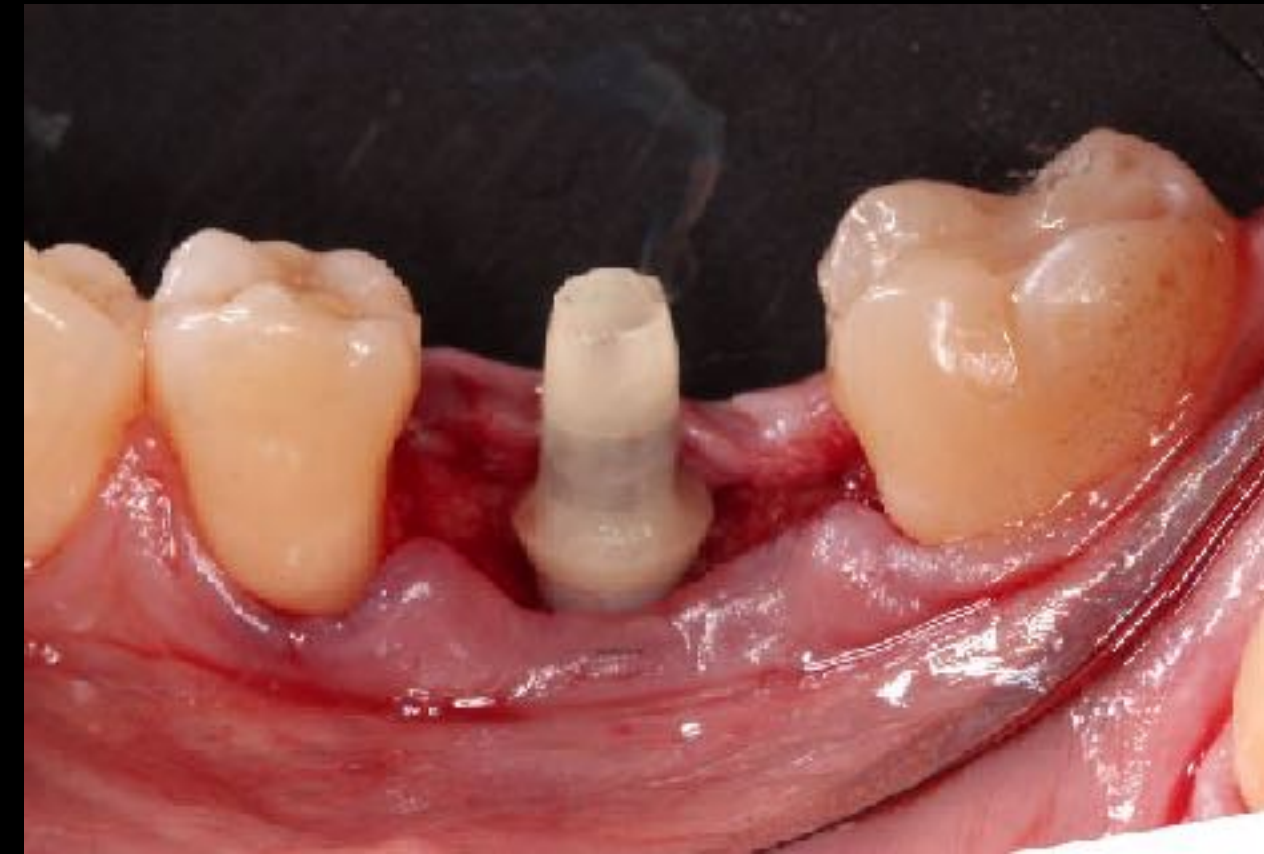
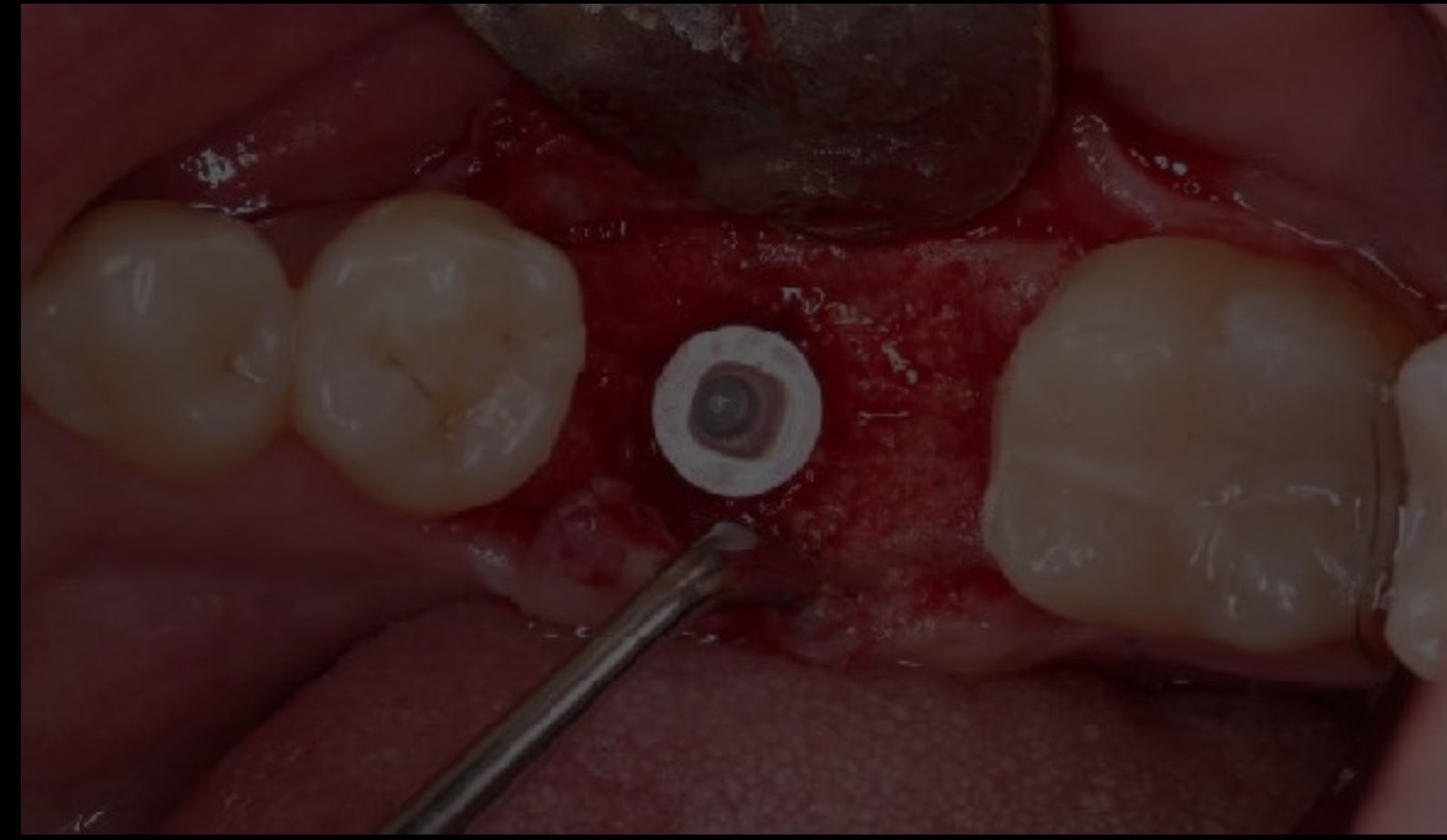
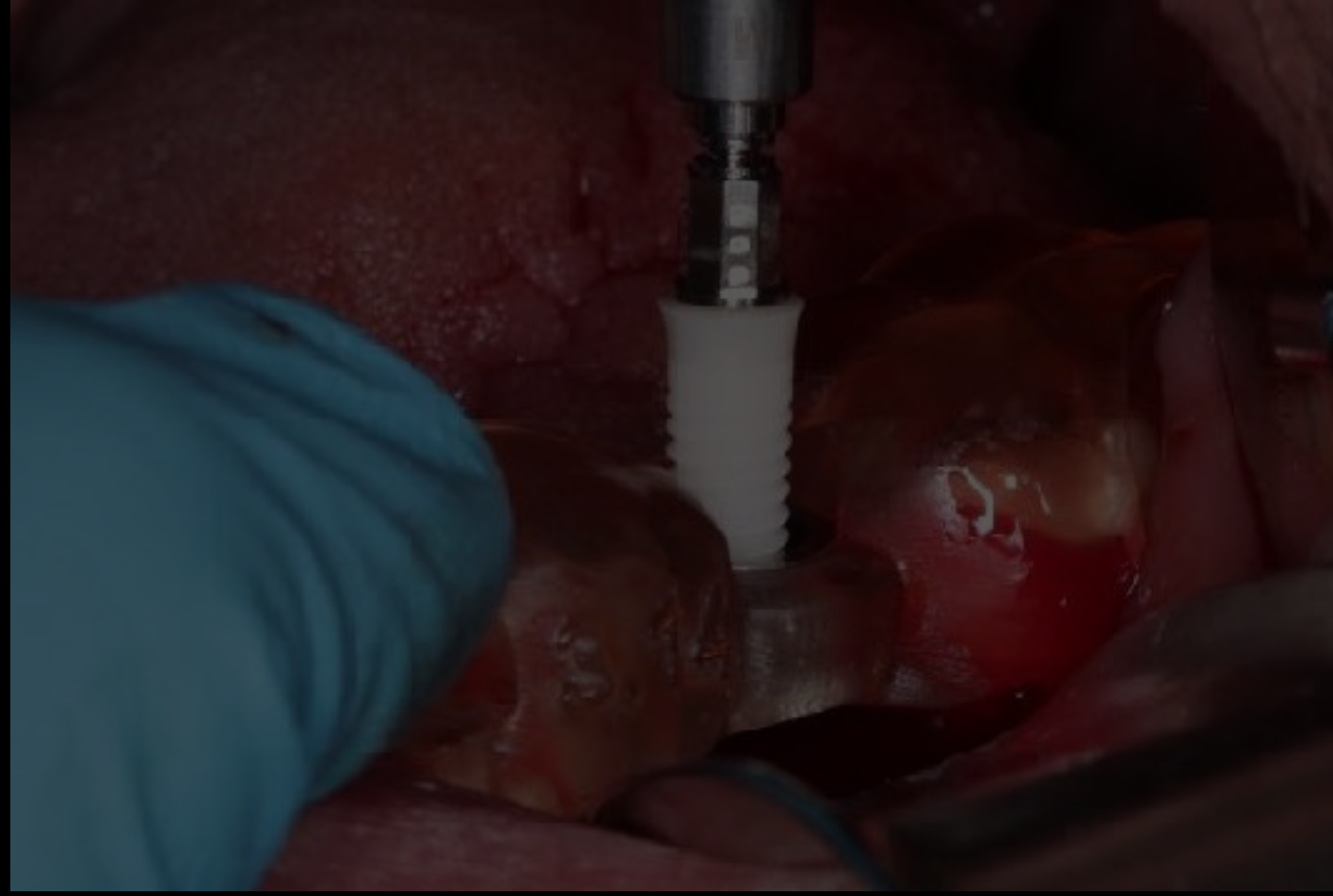
a. Anterior Zirconia Implant supported restoration restoration

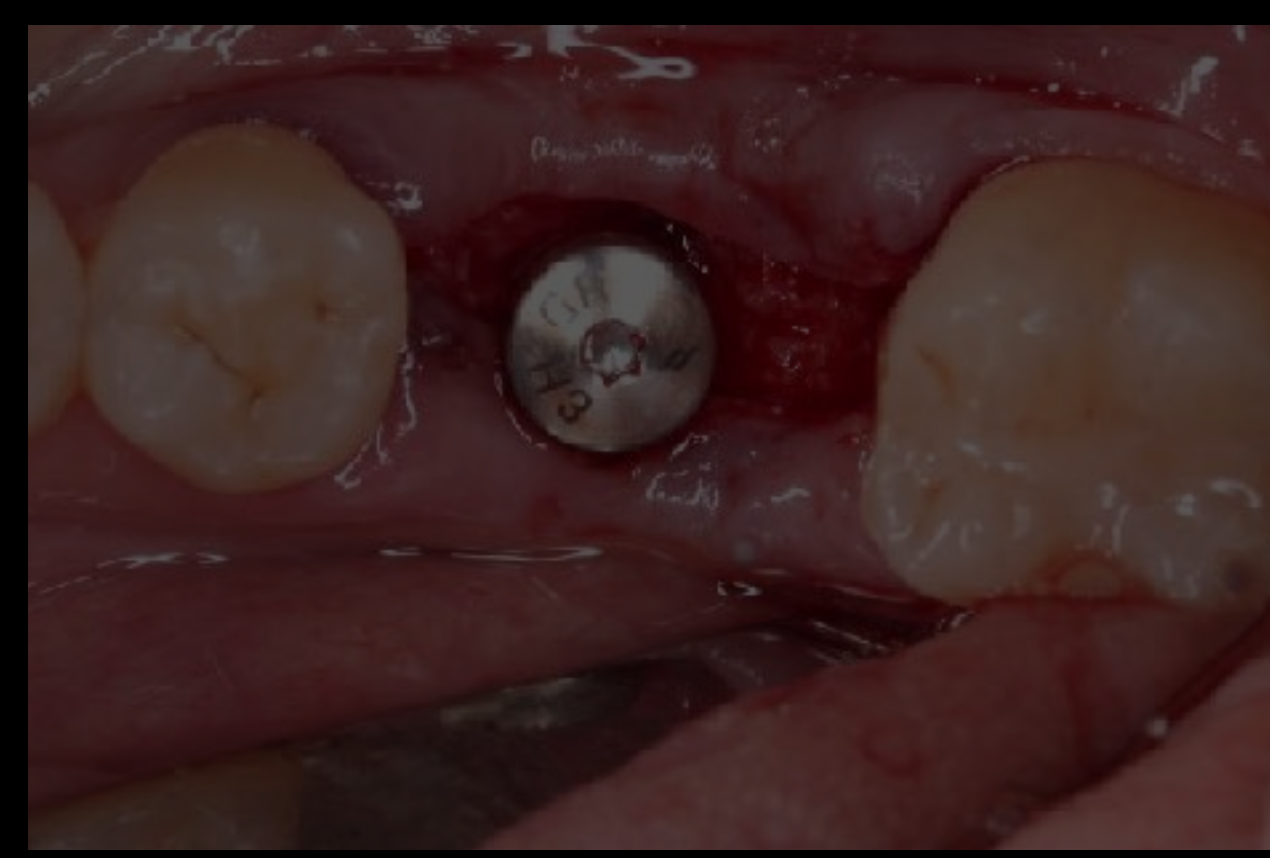
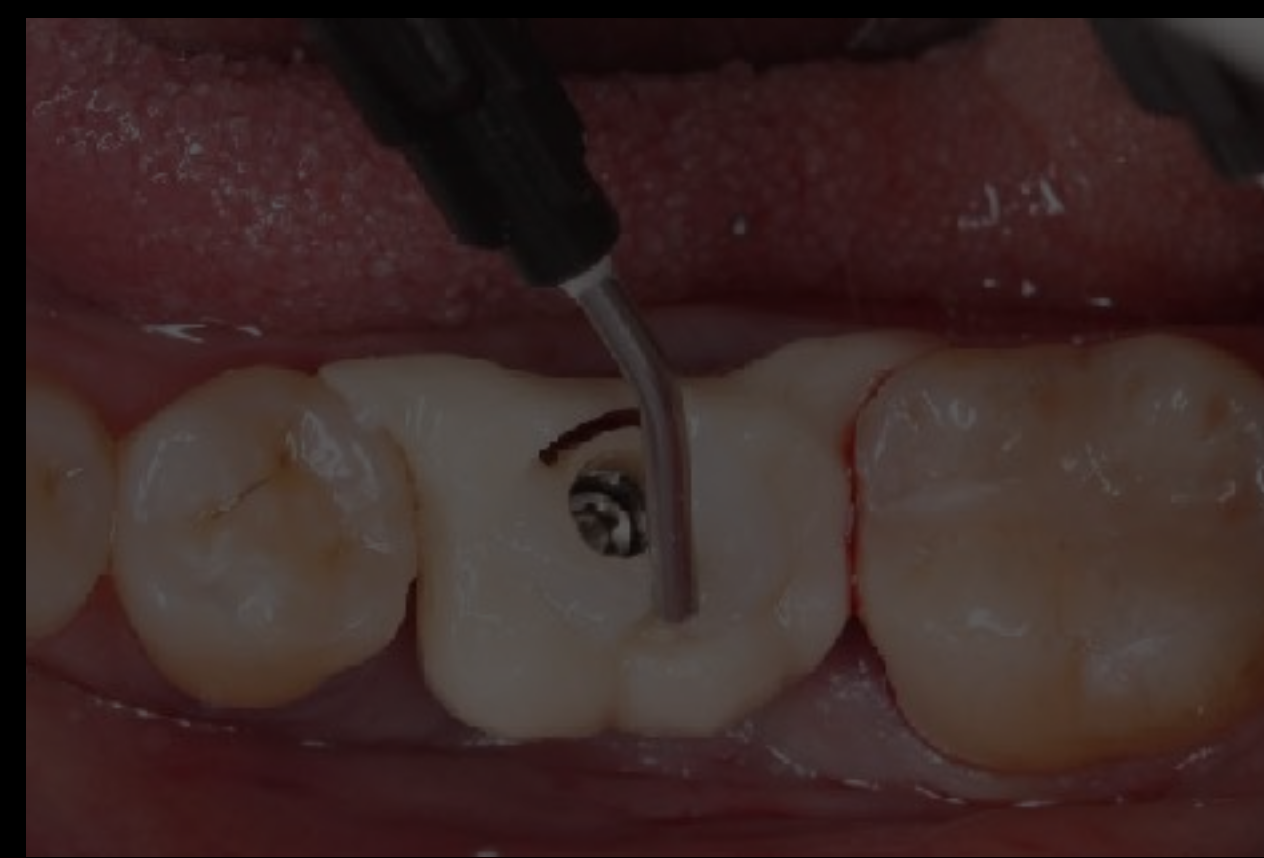
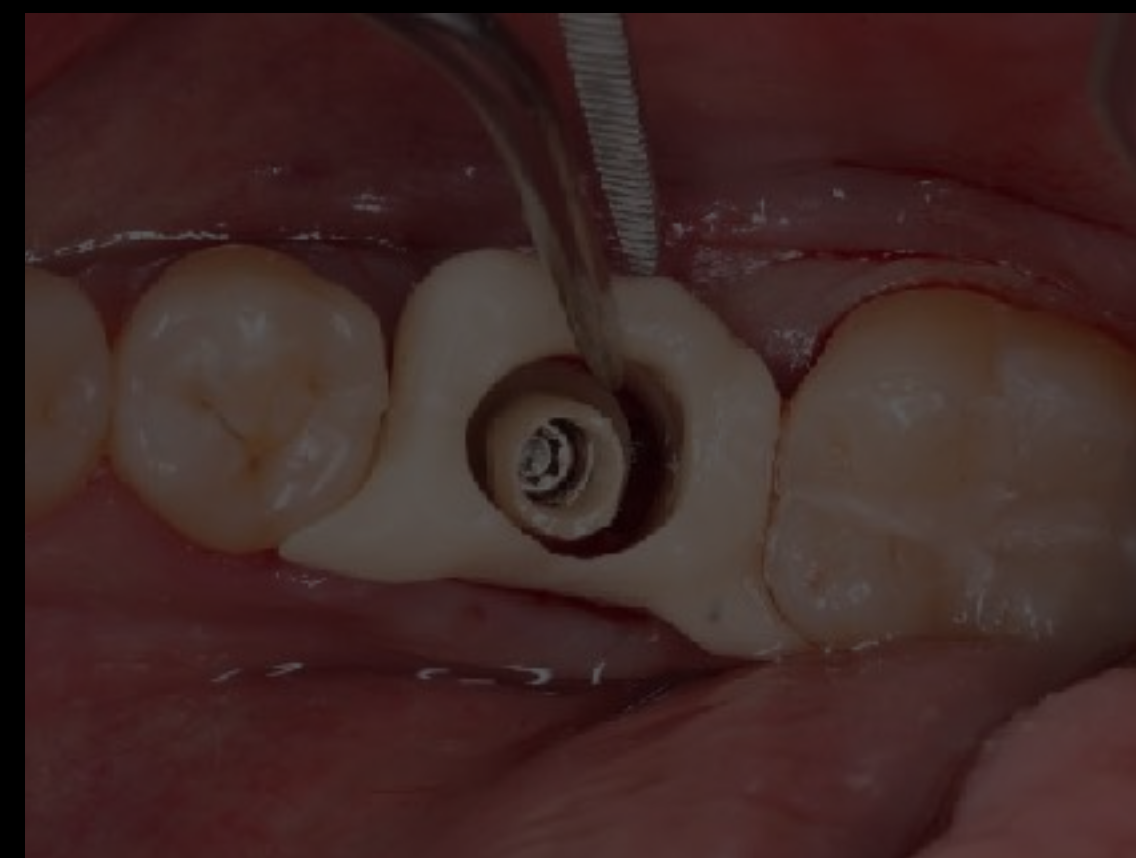
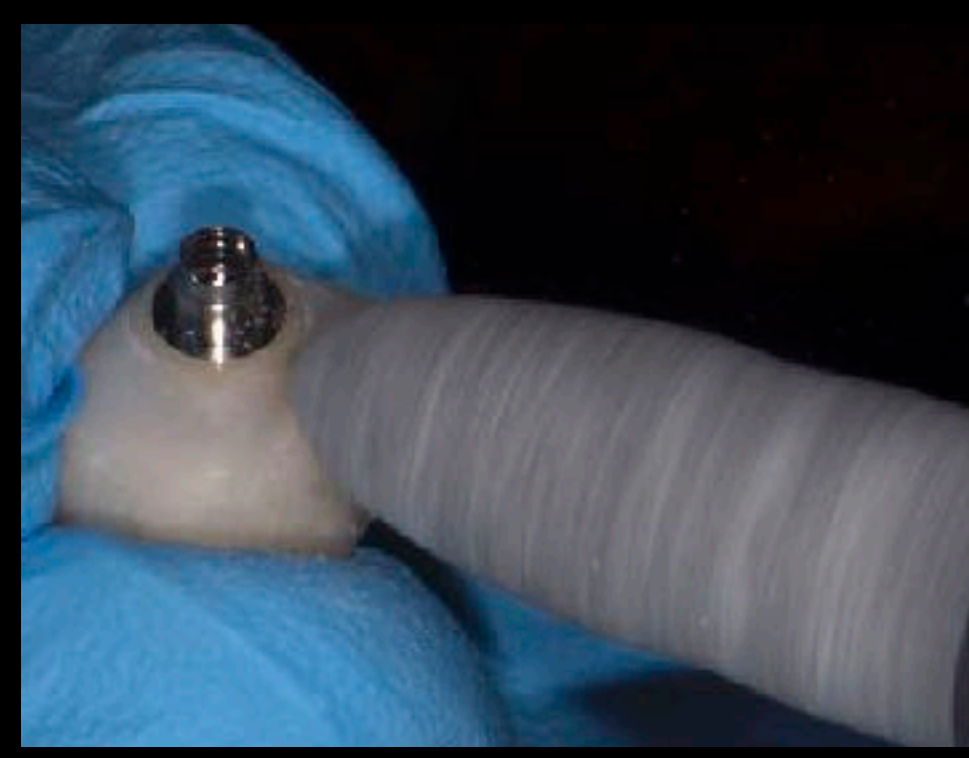
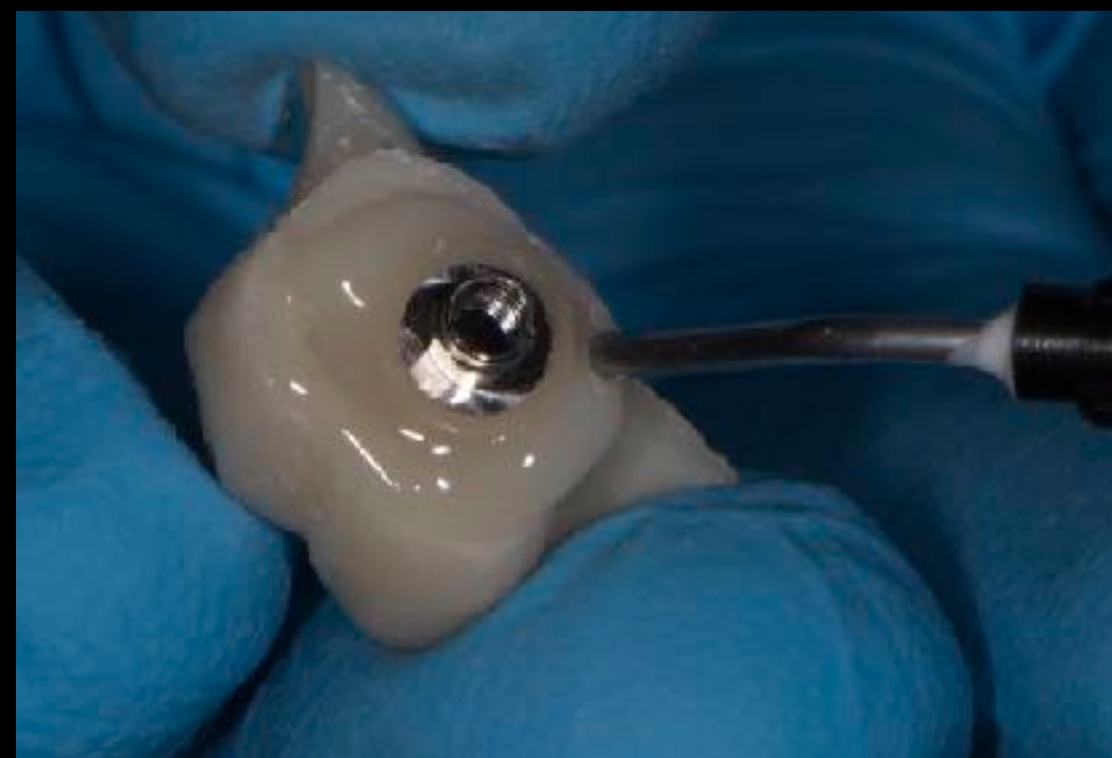


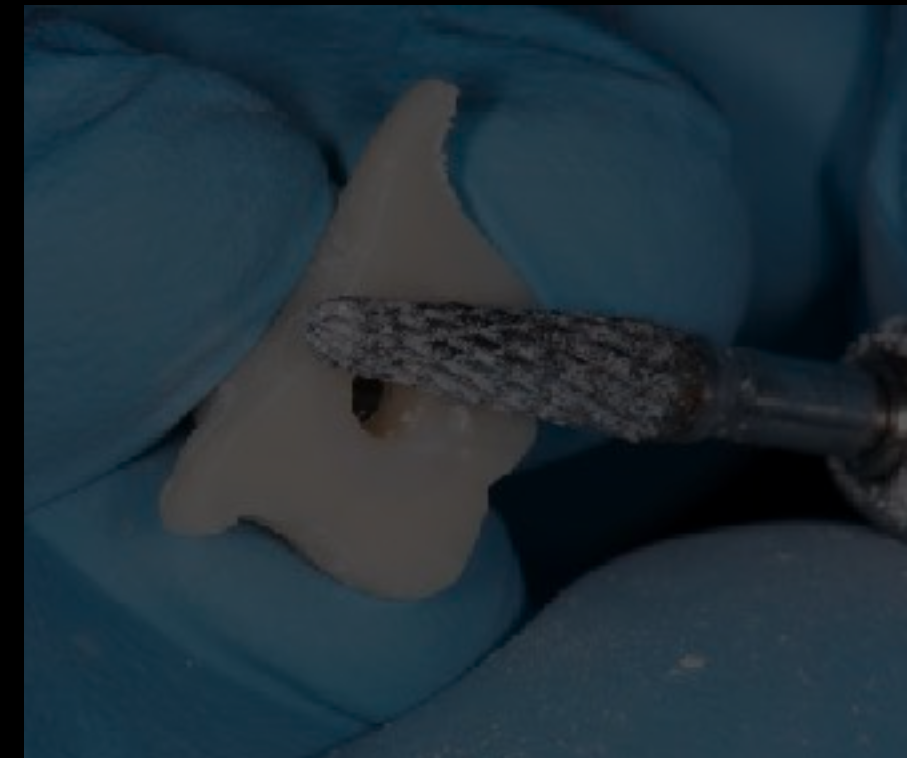
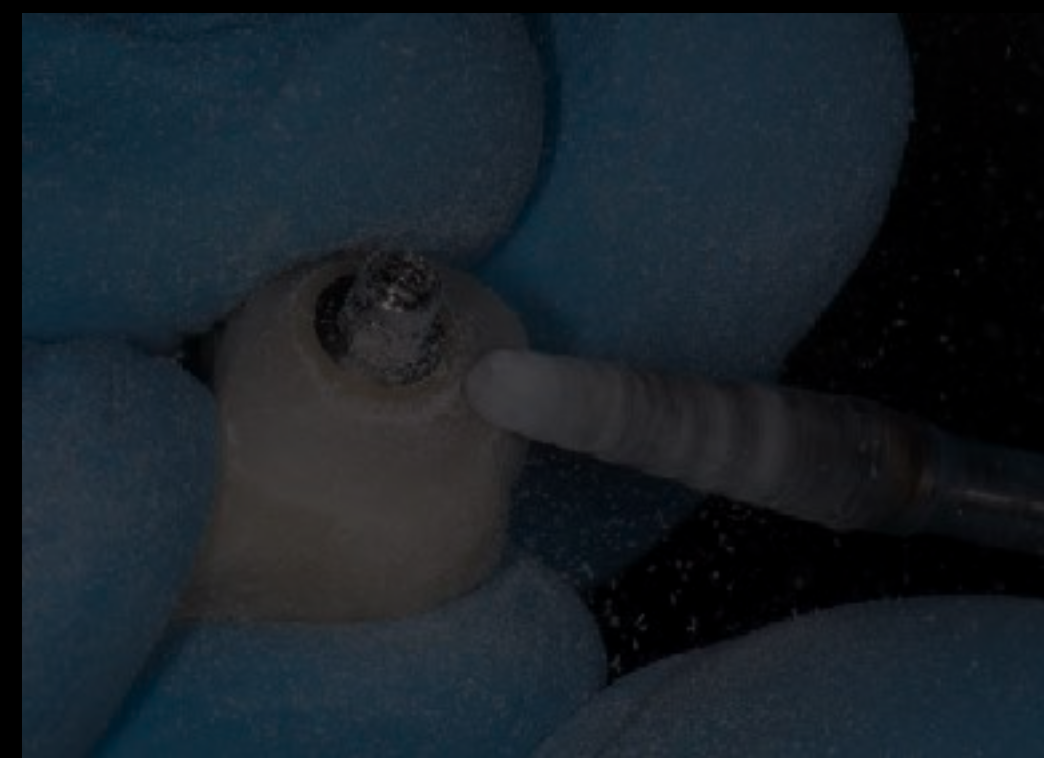
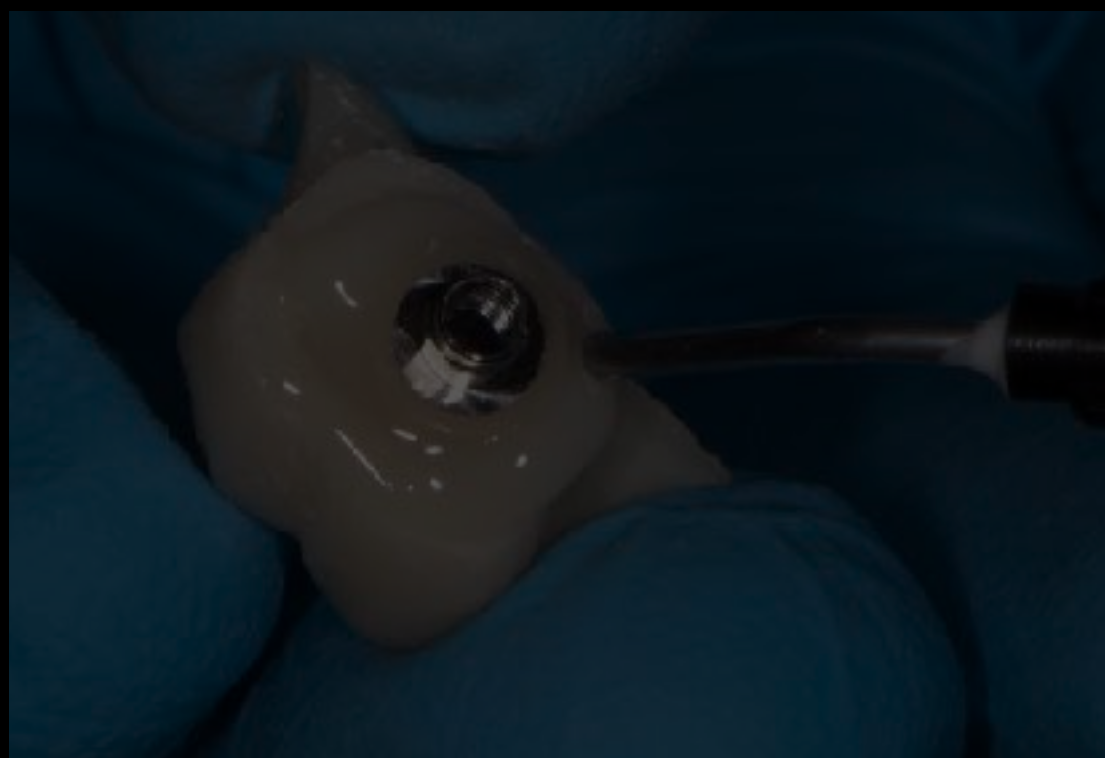




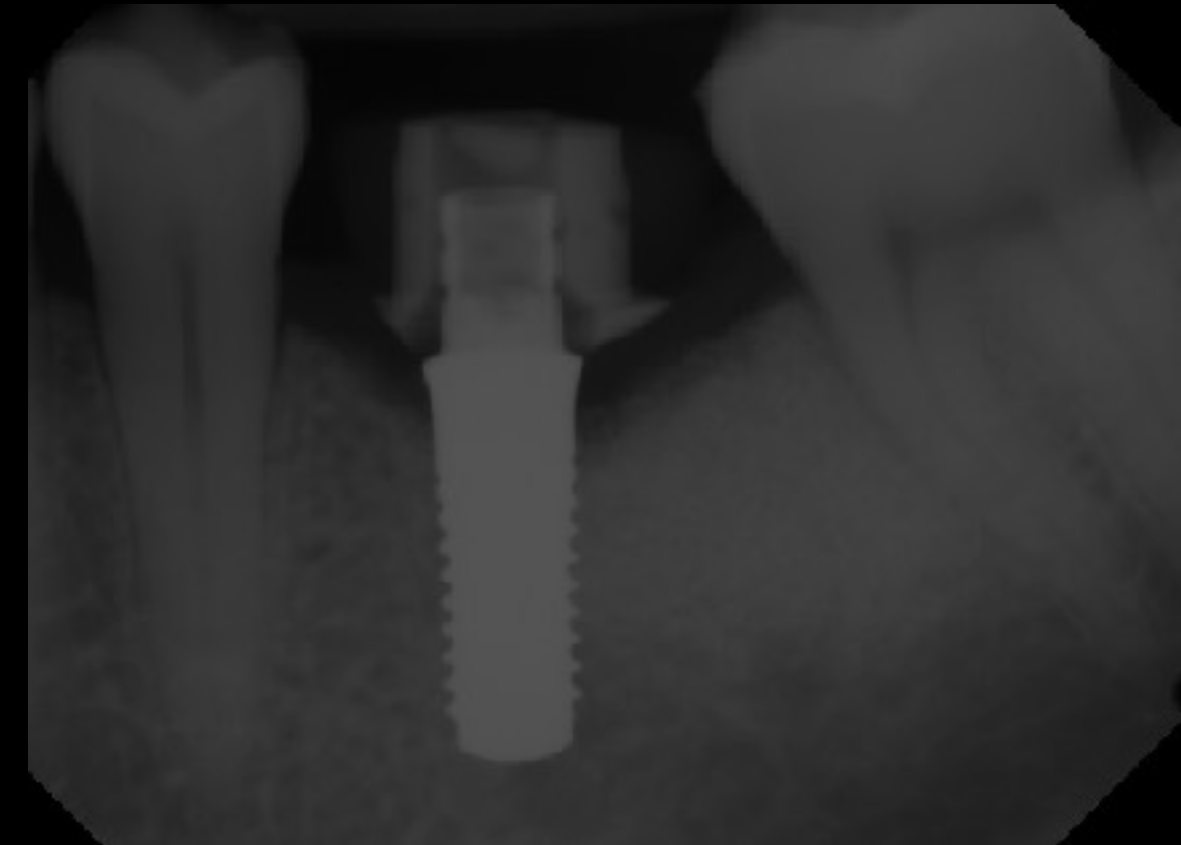


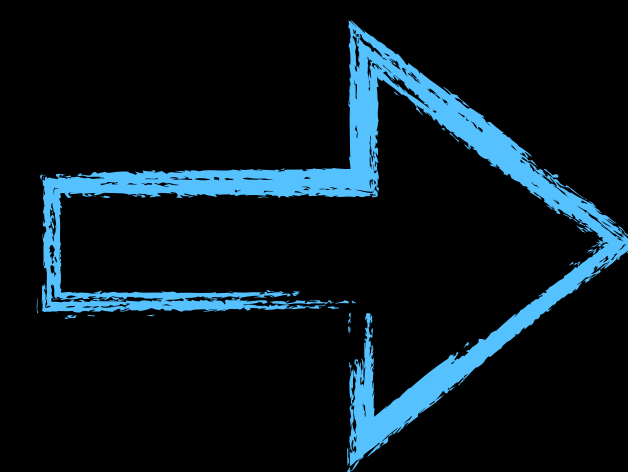
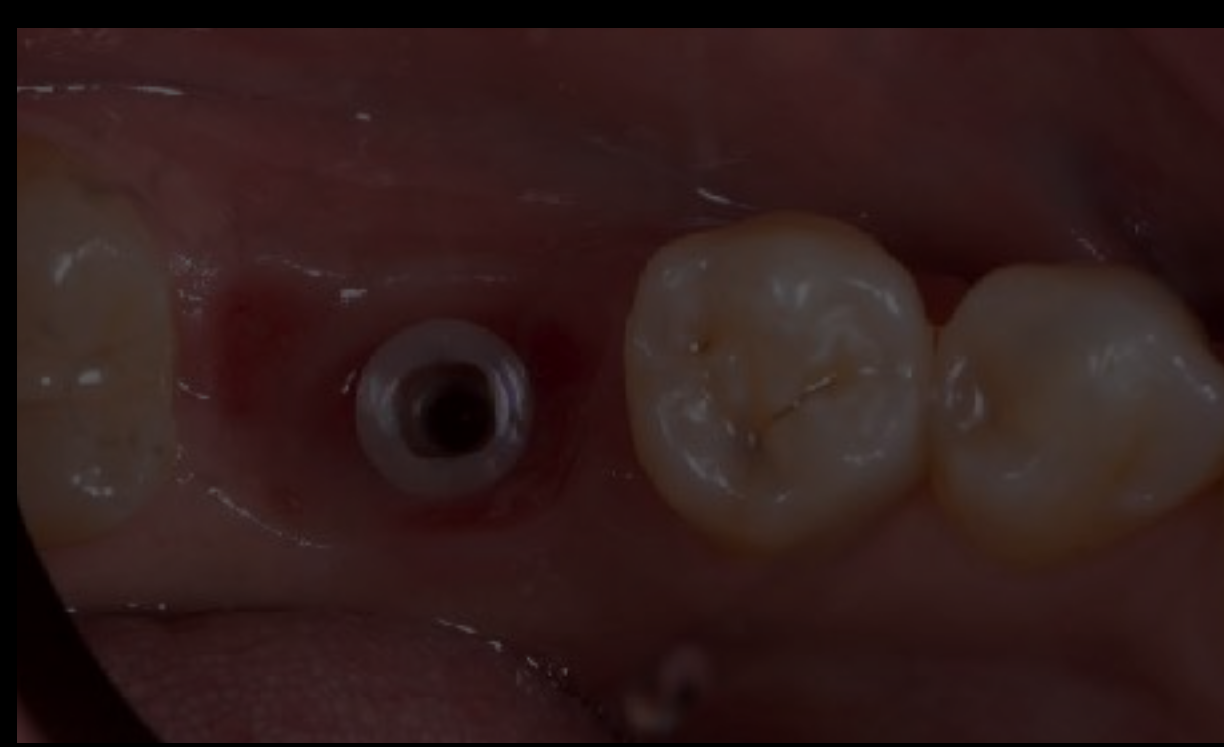




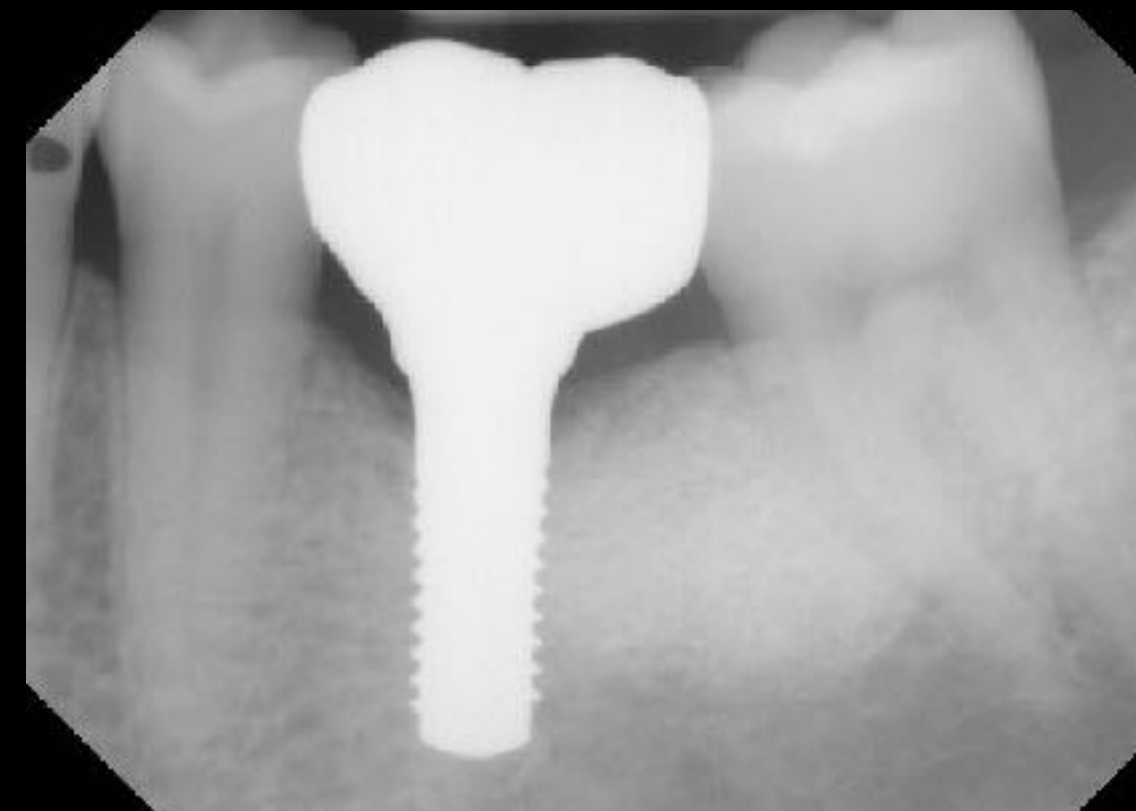




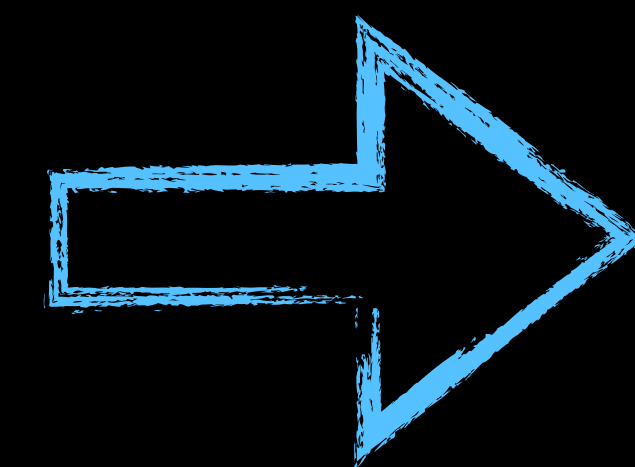




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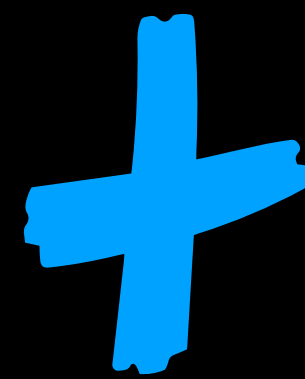


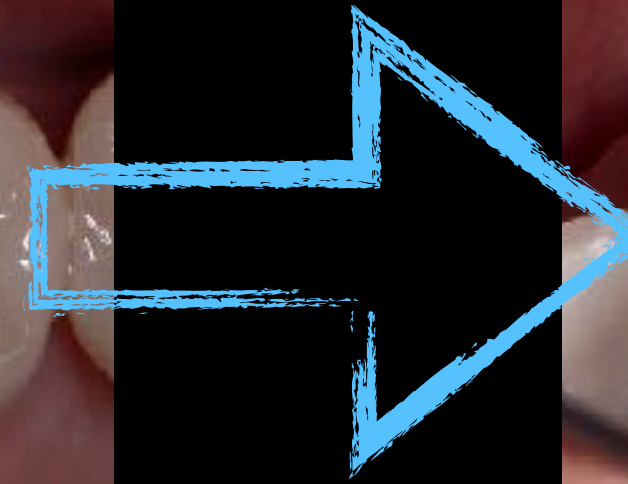
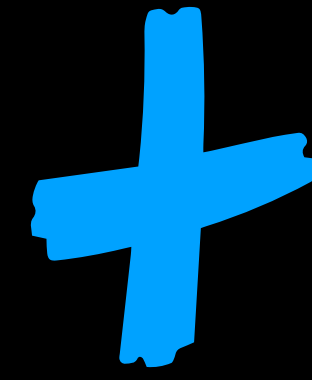
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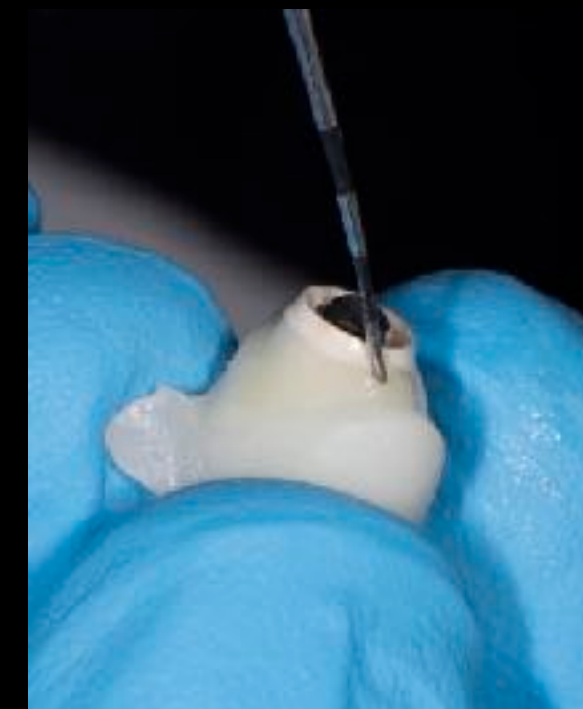
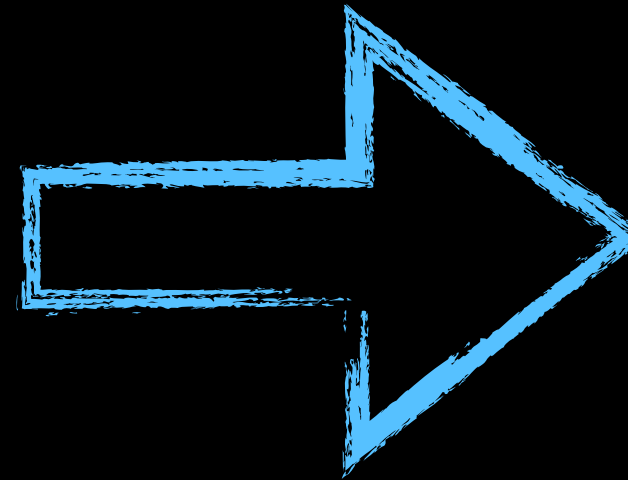
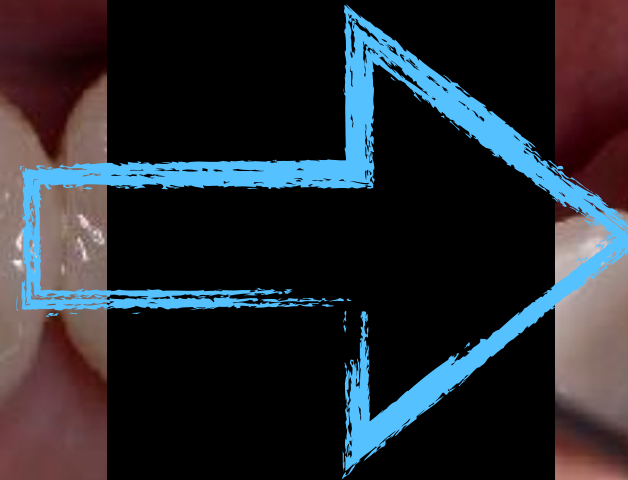


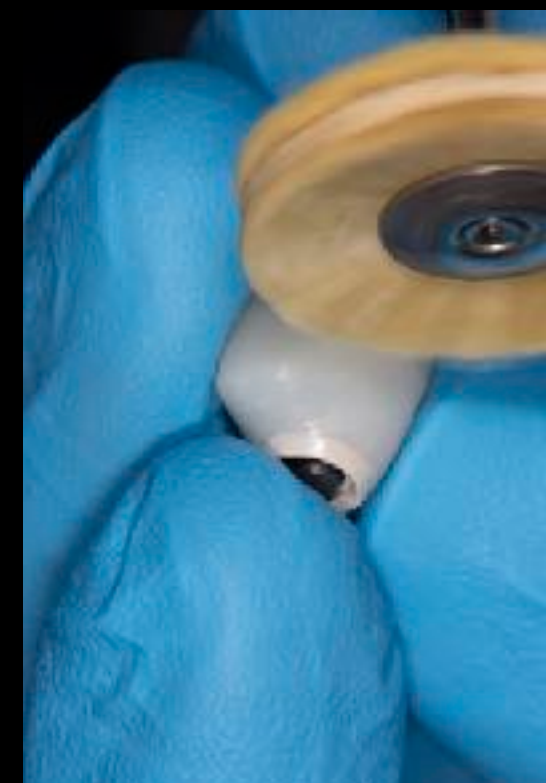
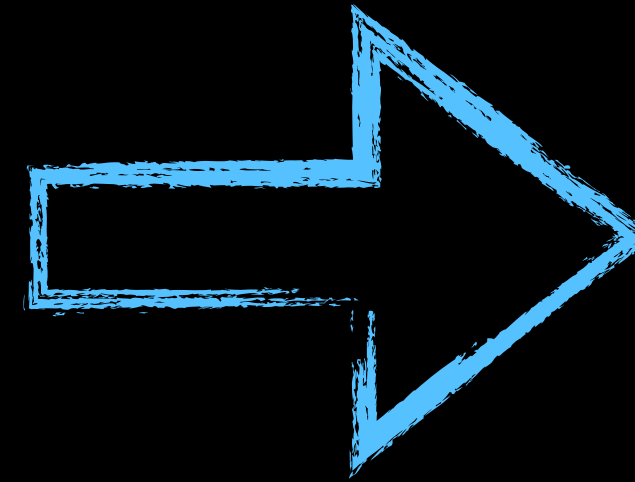
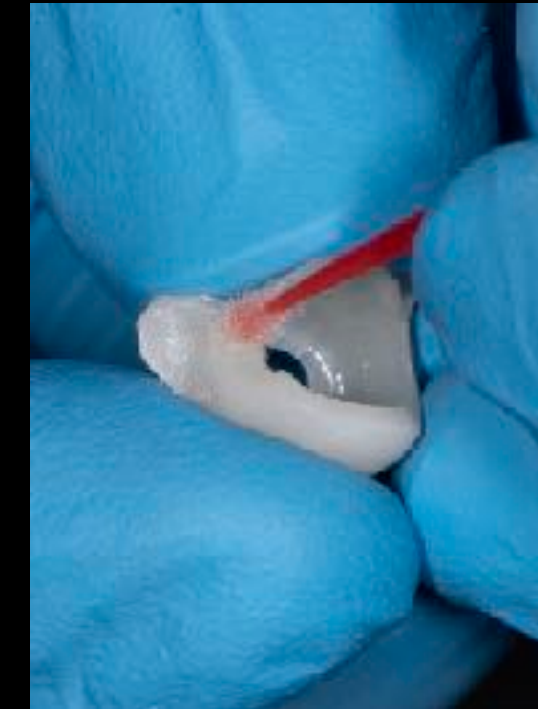
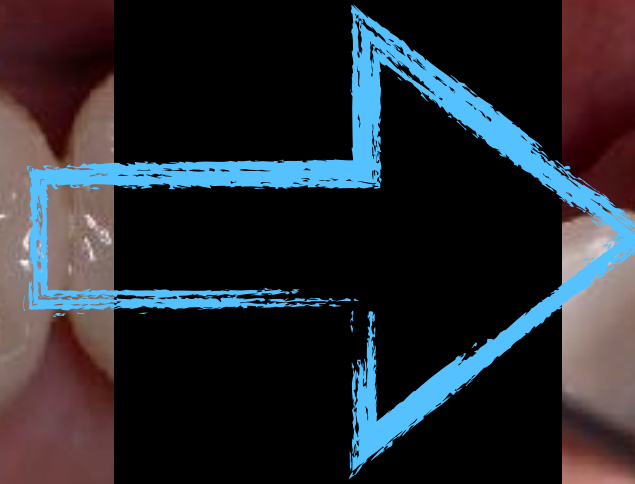
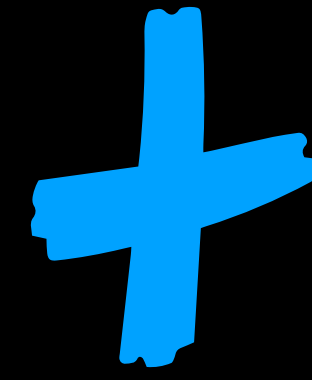


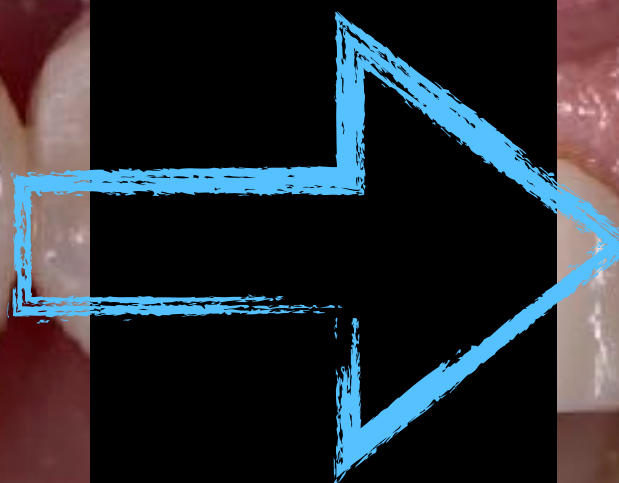


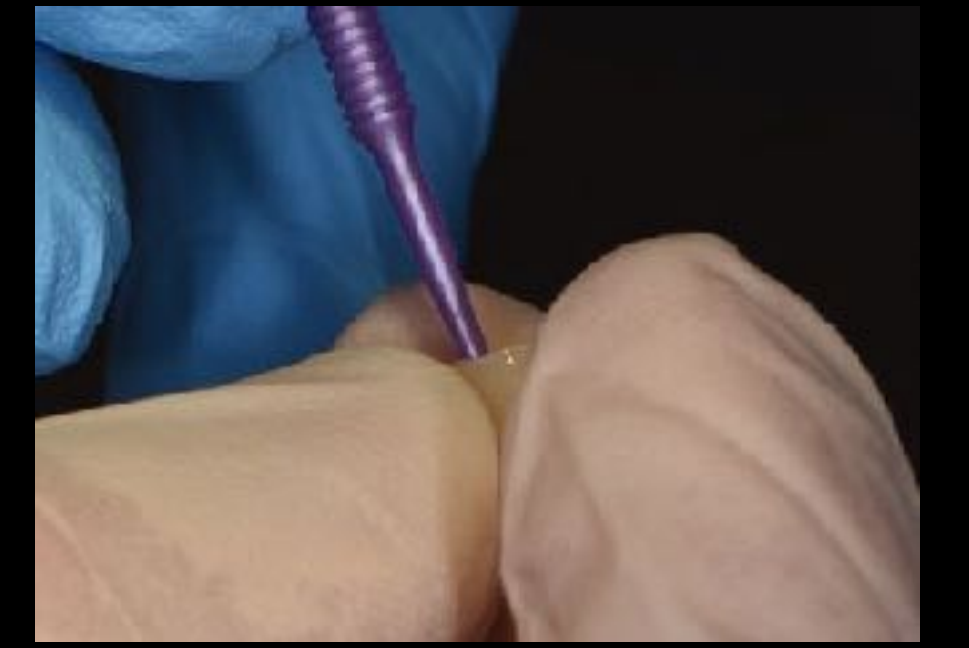
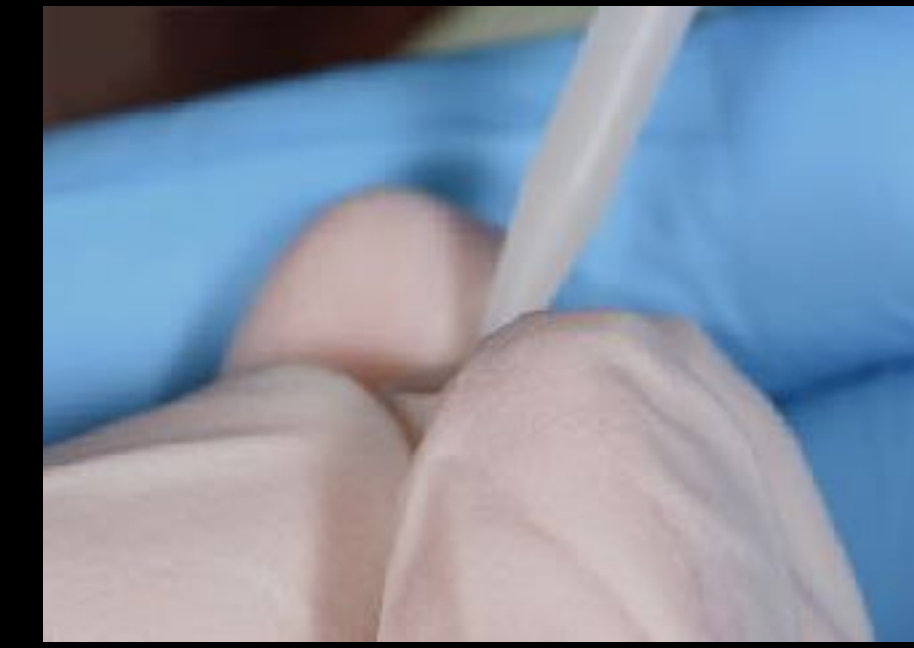
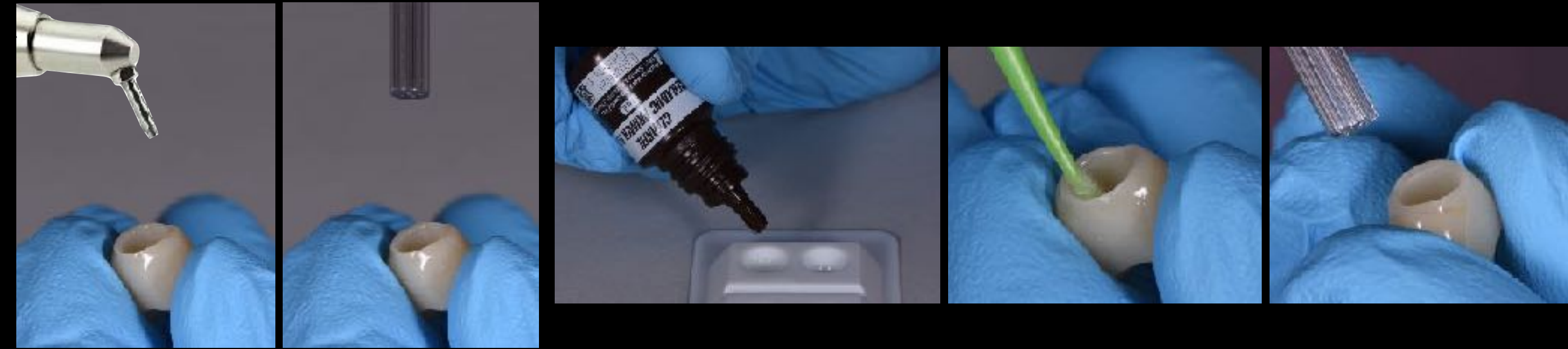
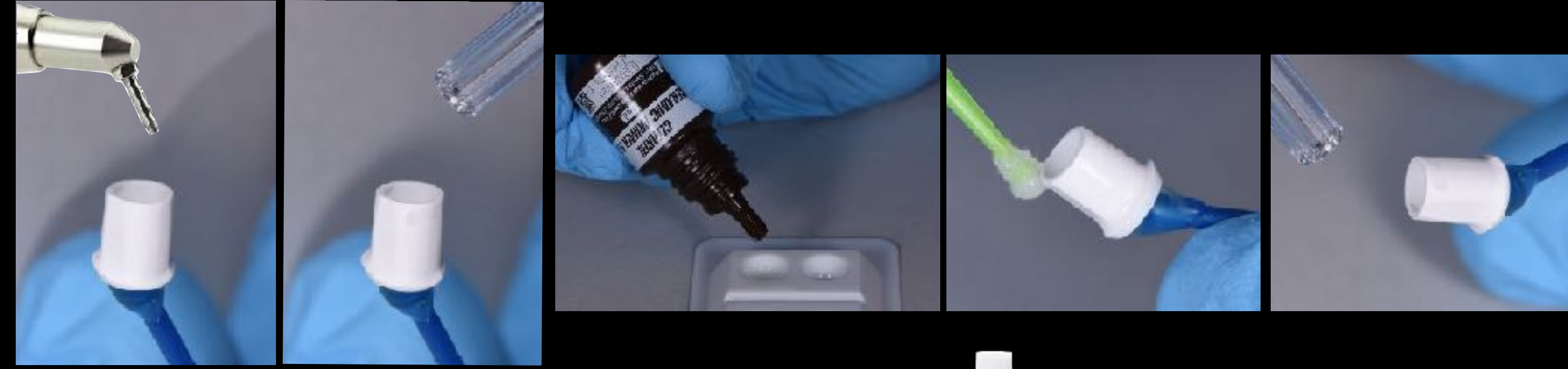
















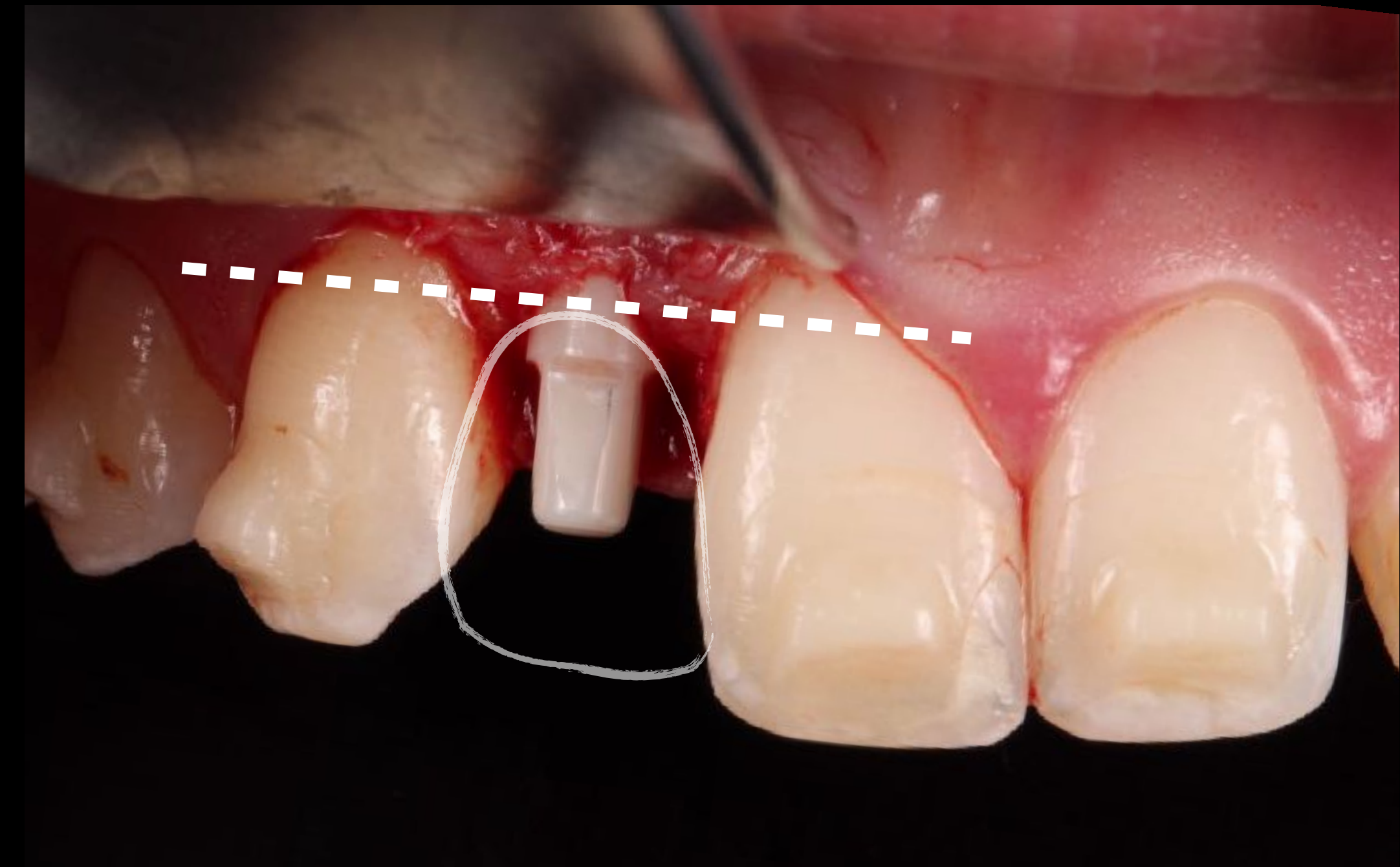






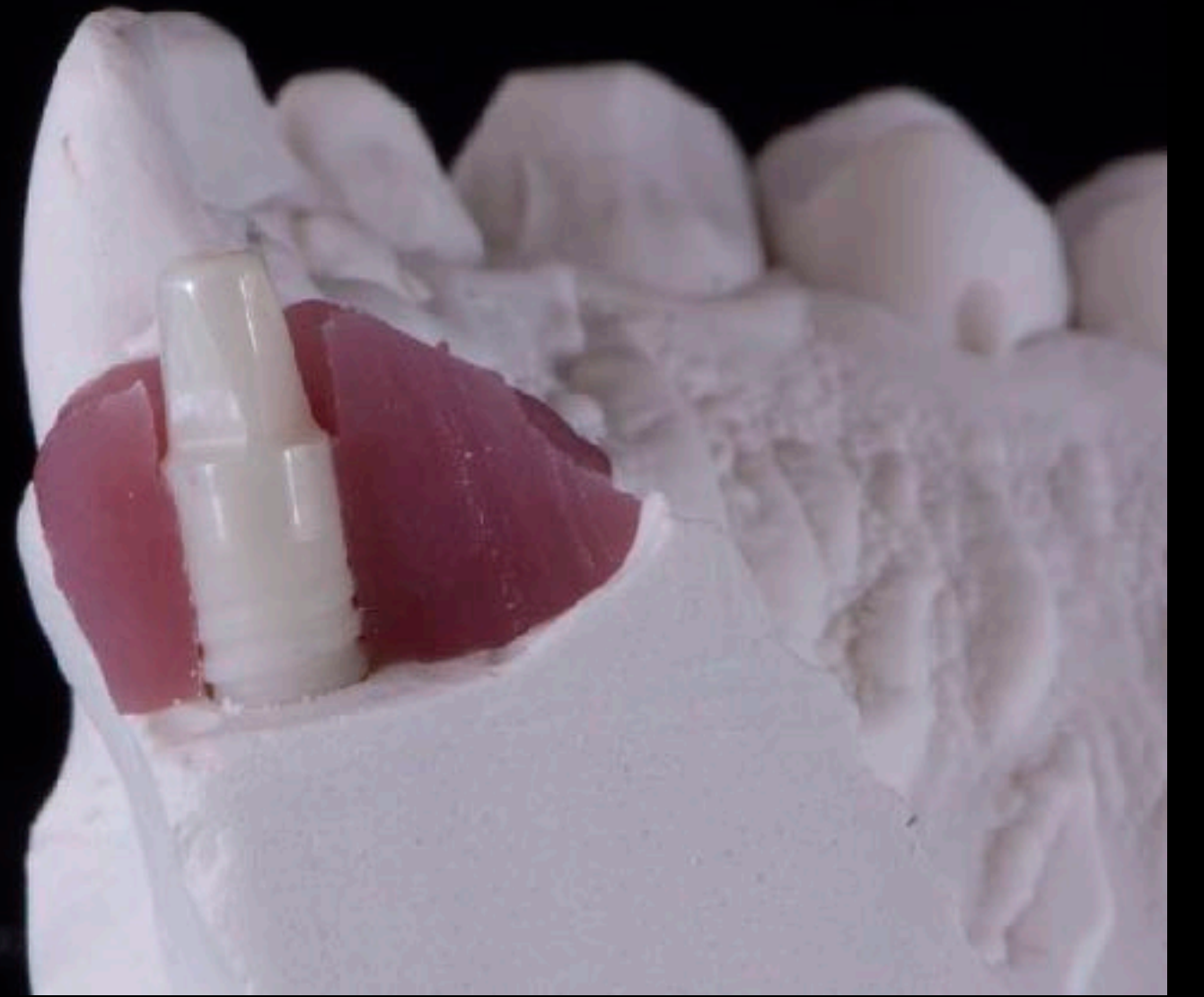
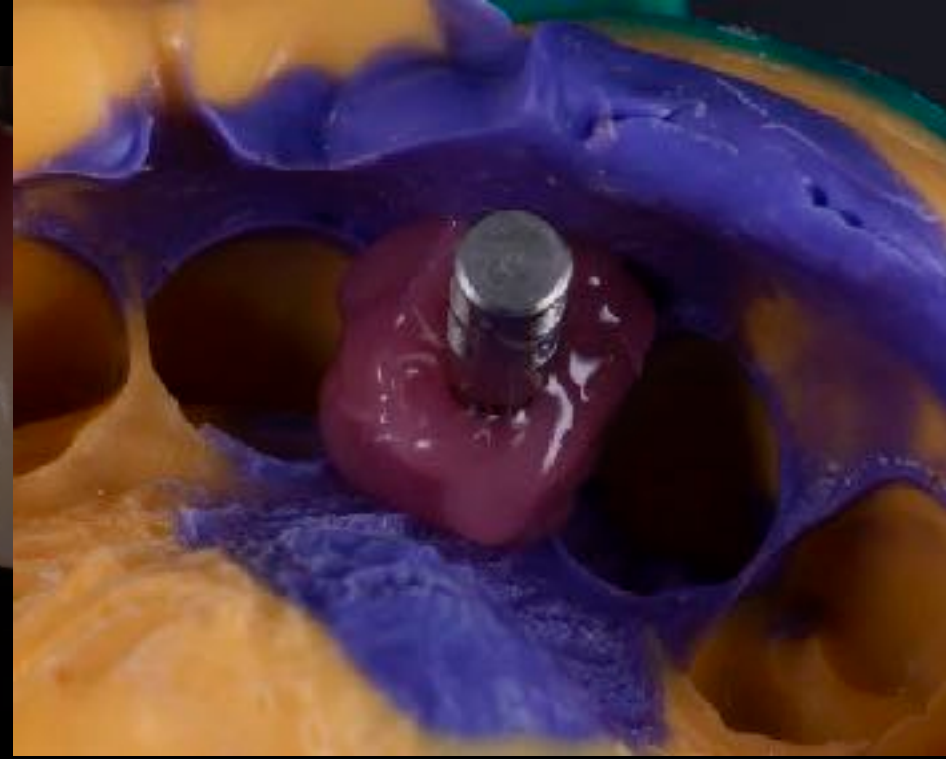


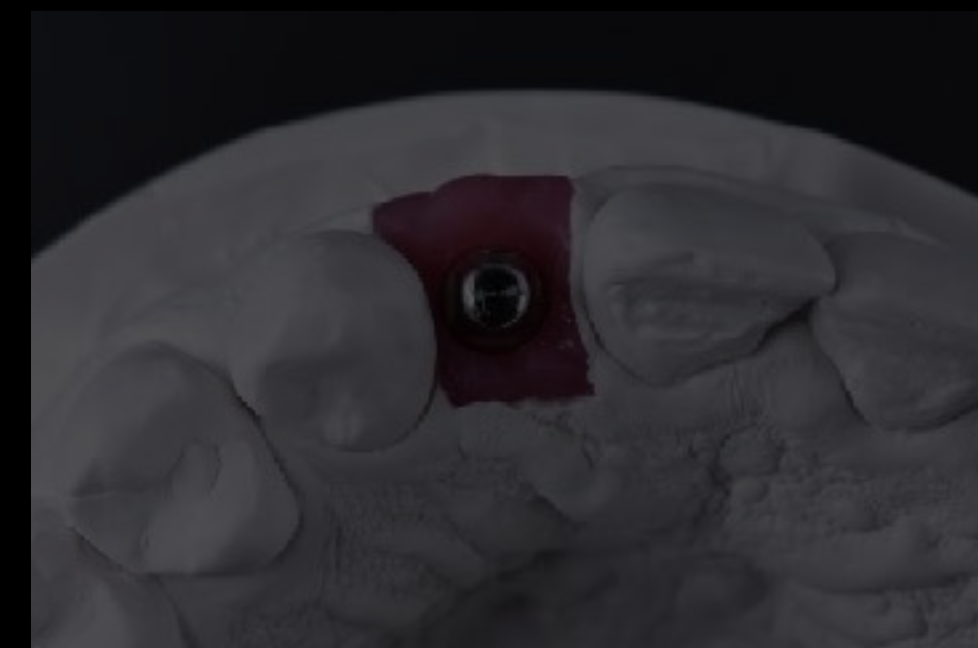
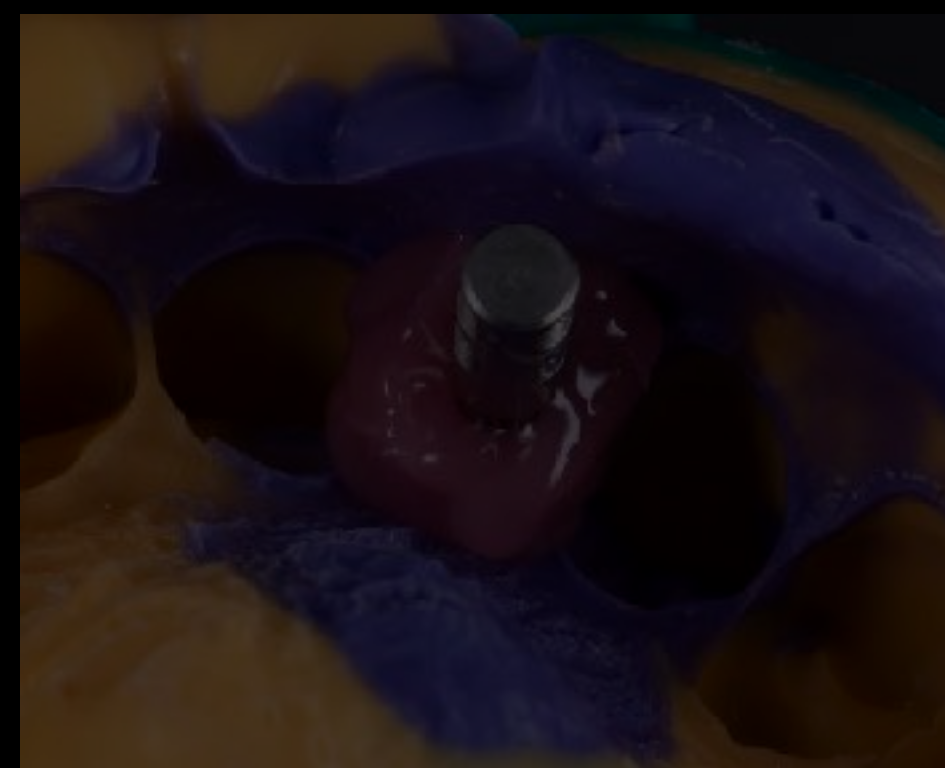


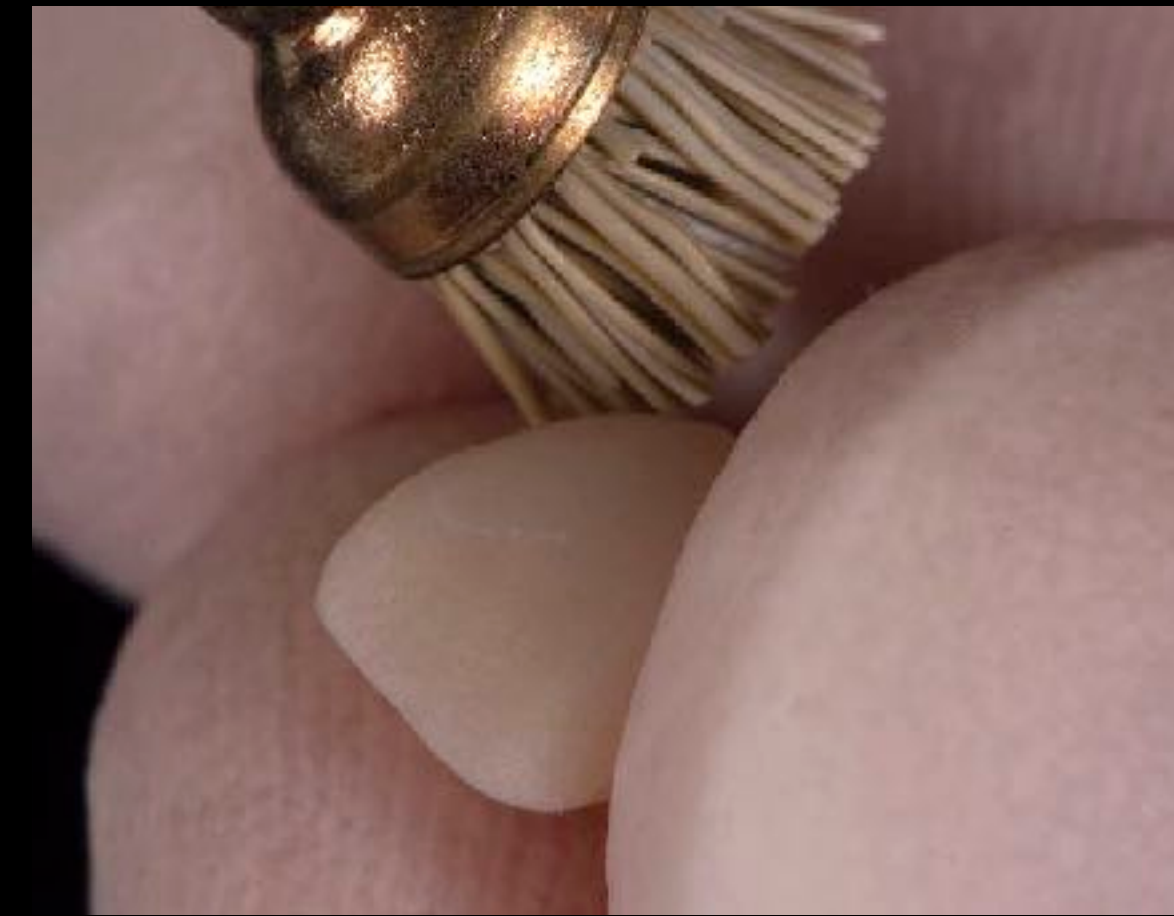










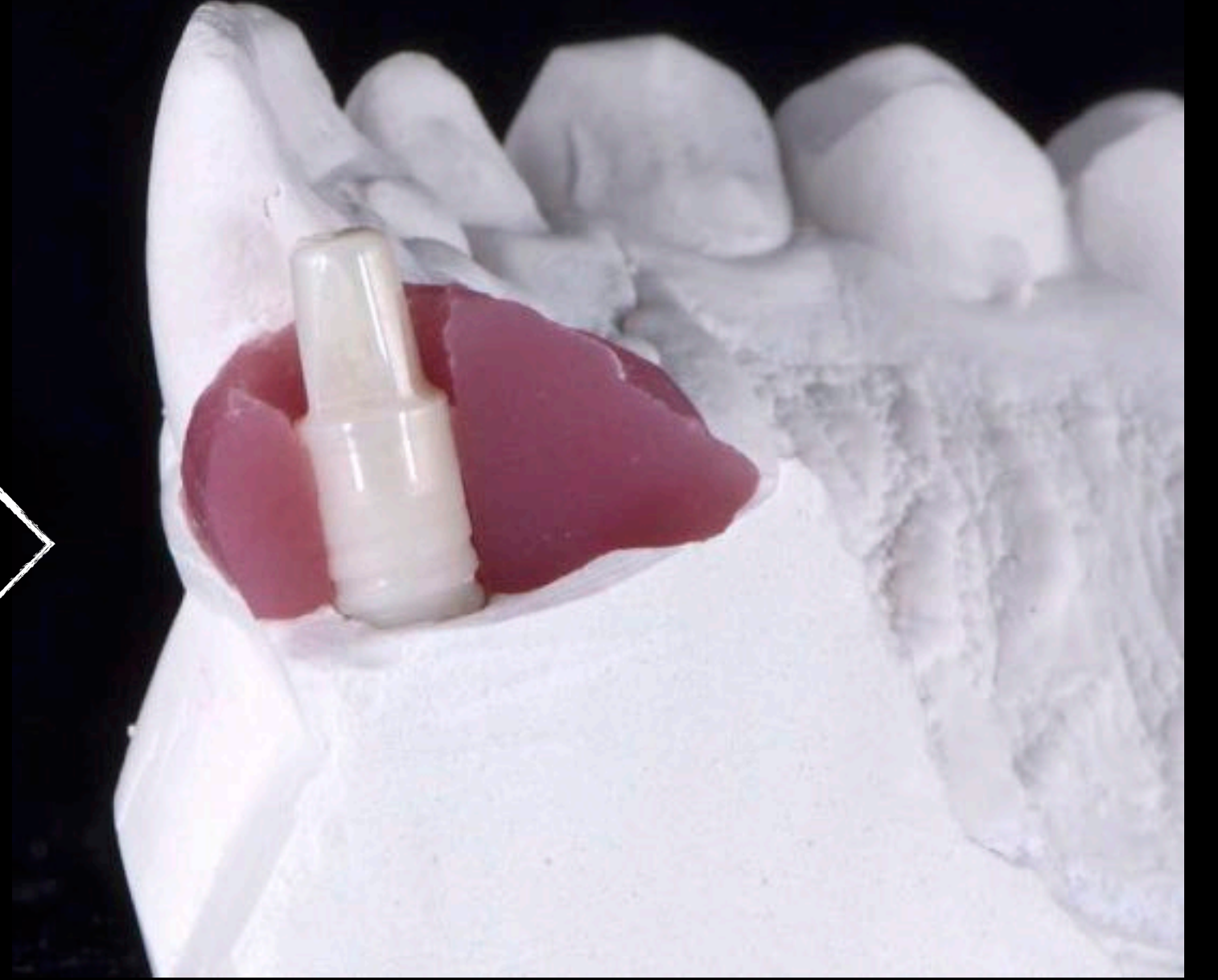
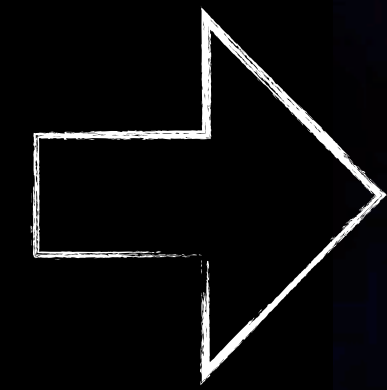
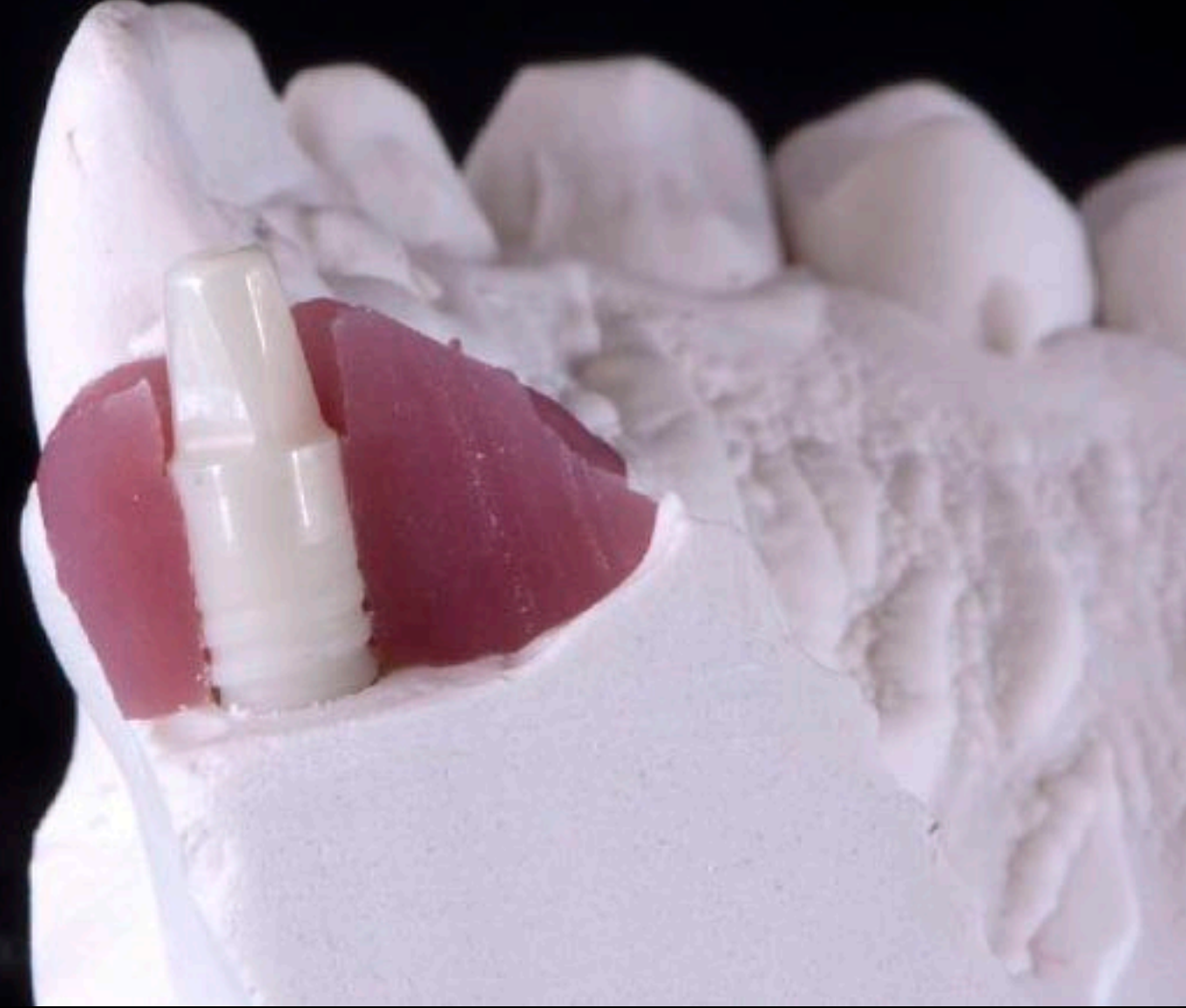
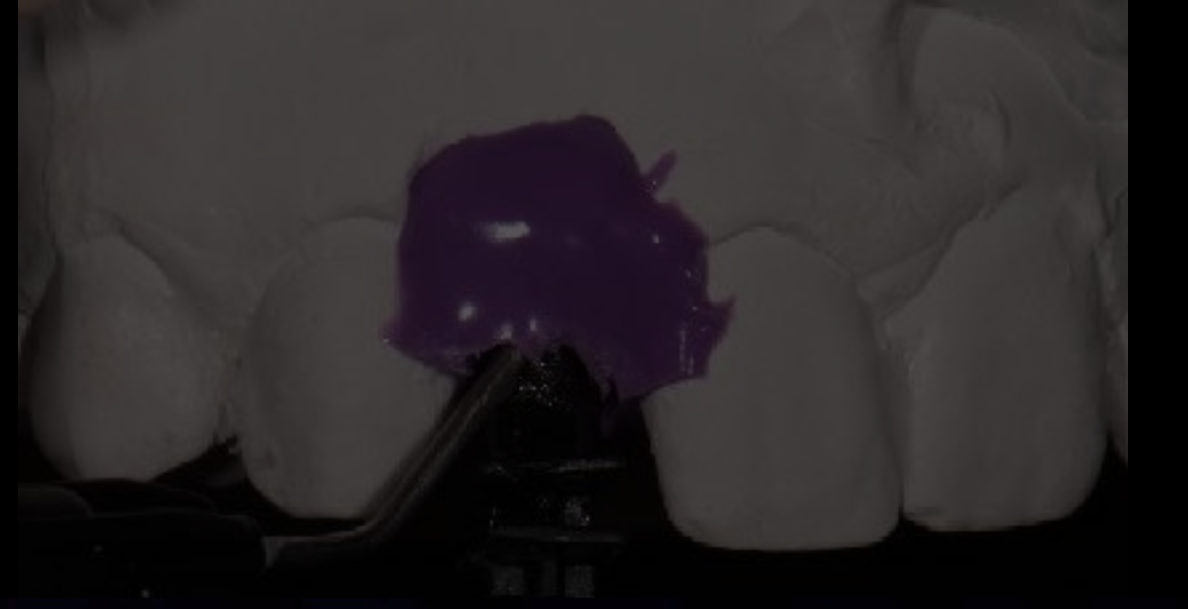




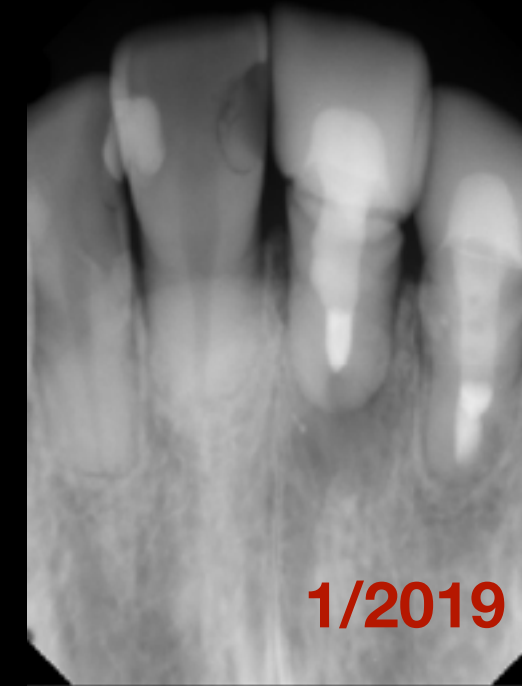
4 weeks Follow up

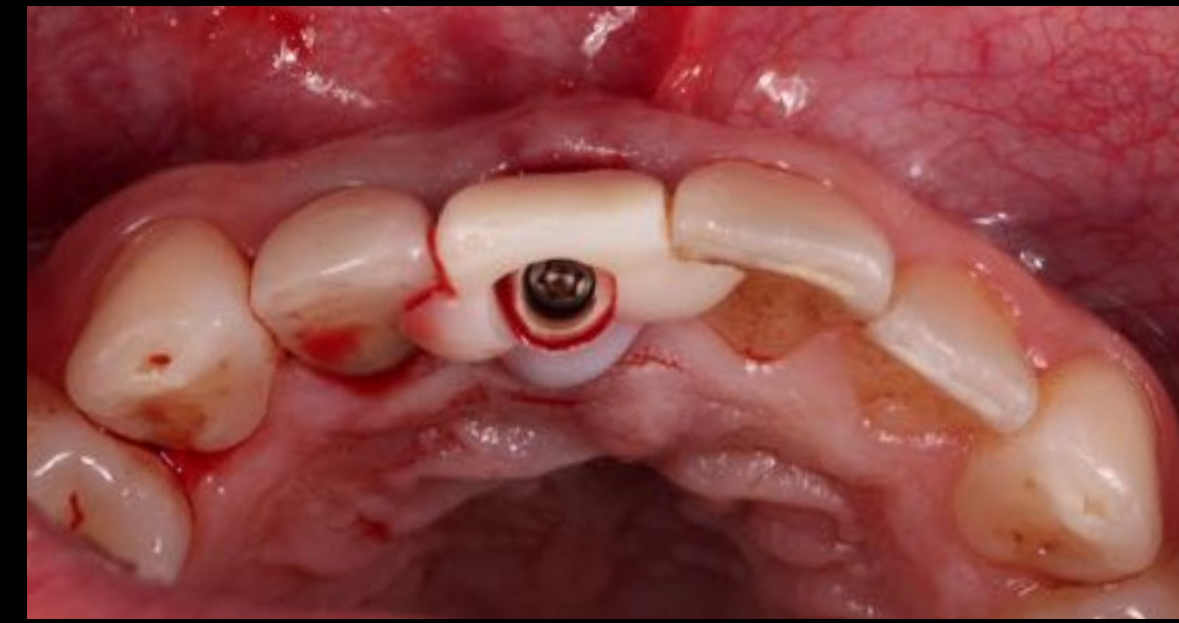
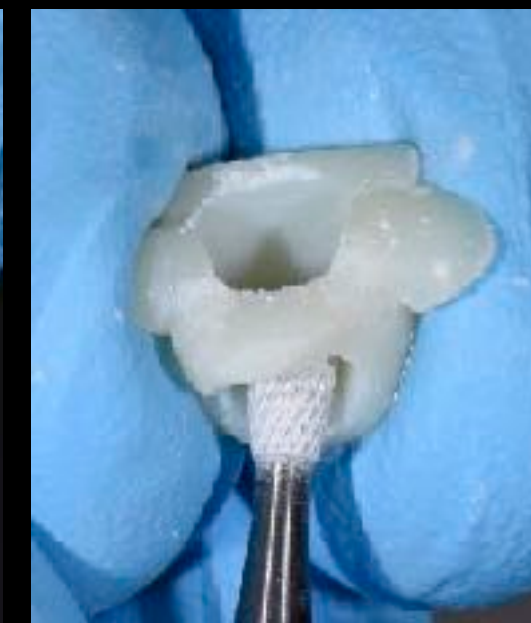
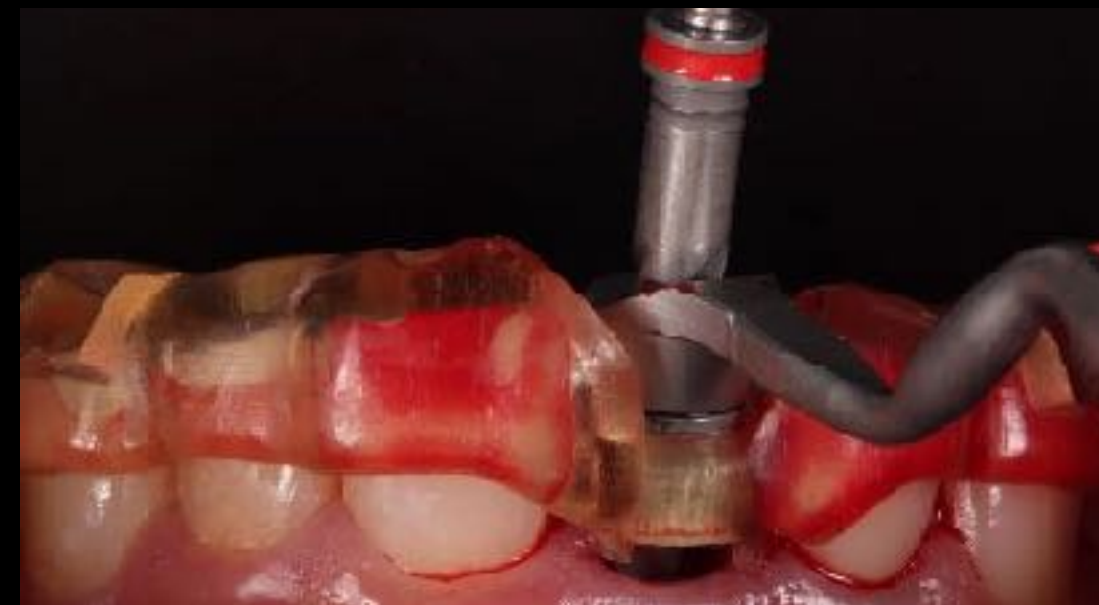
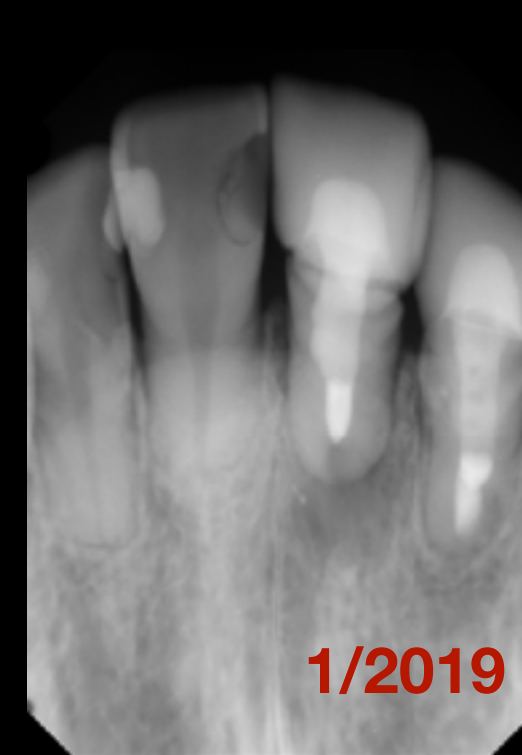


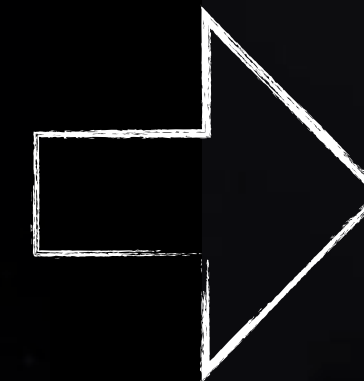


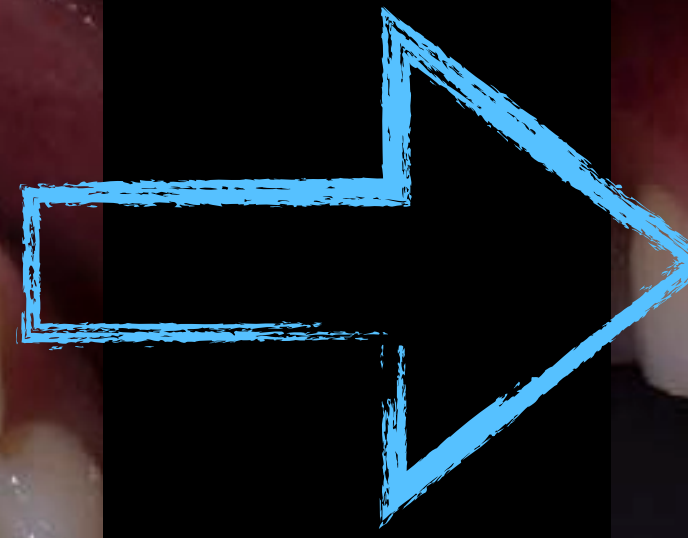


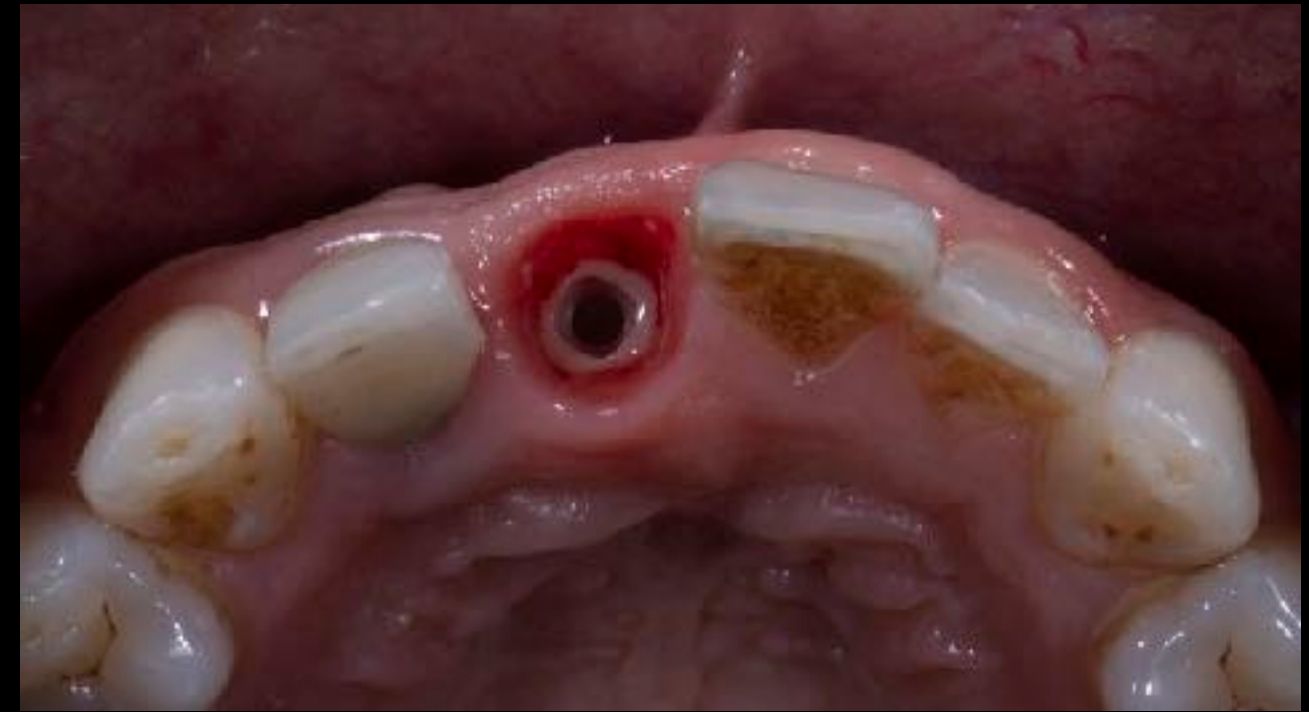
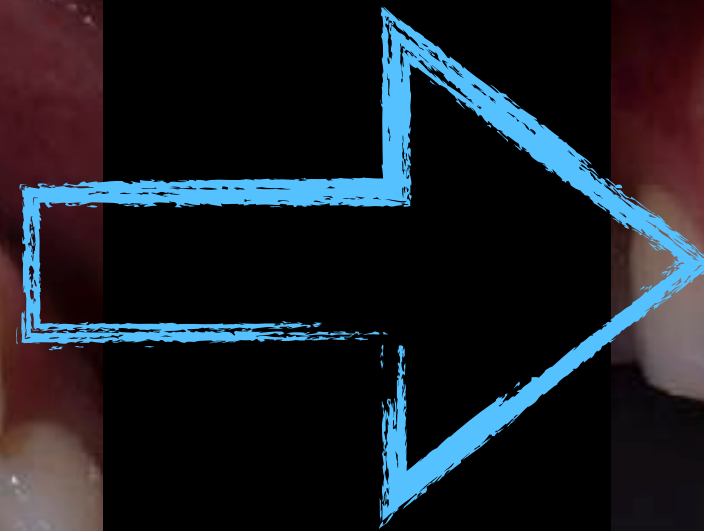




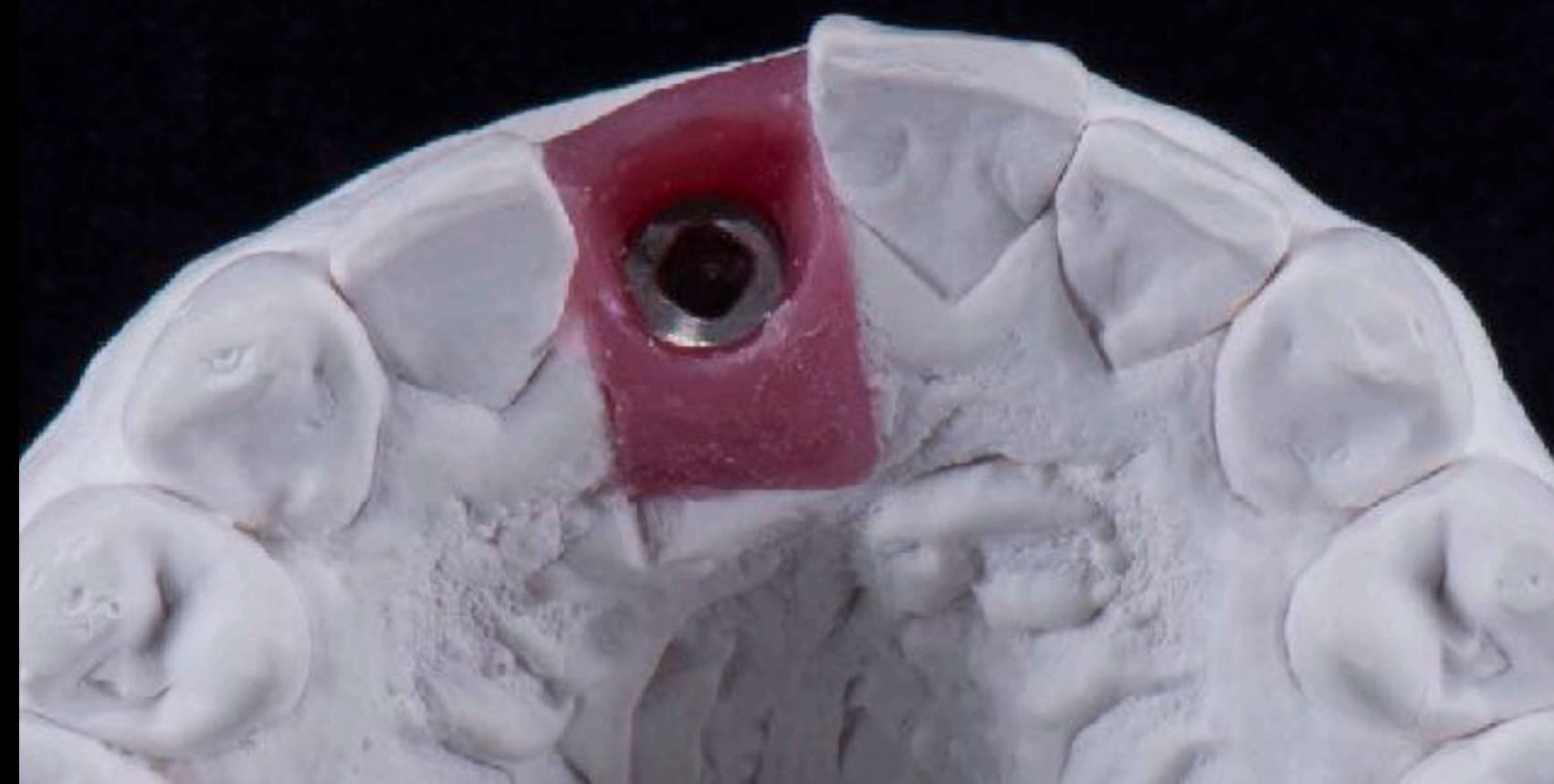


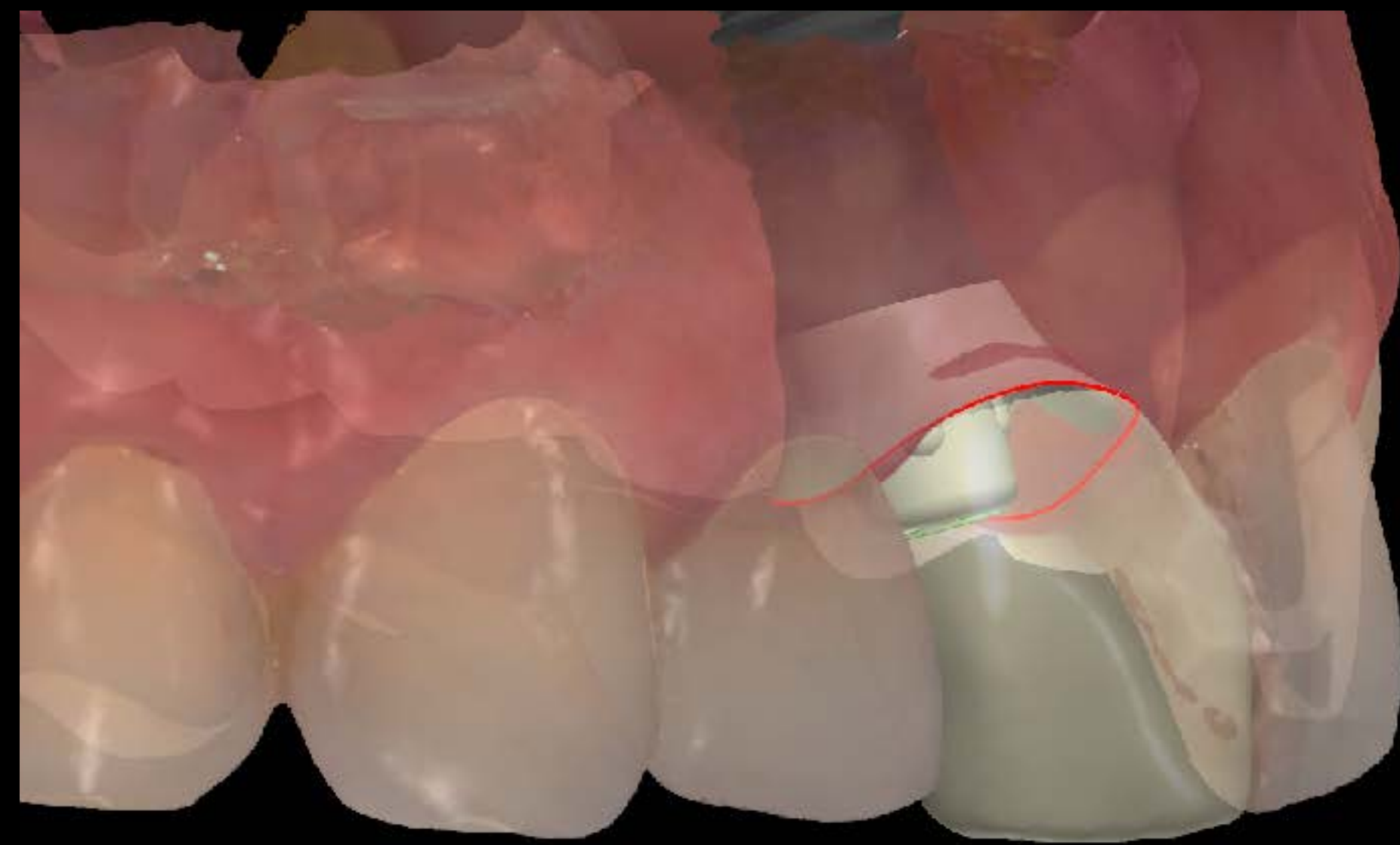
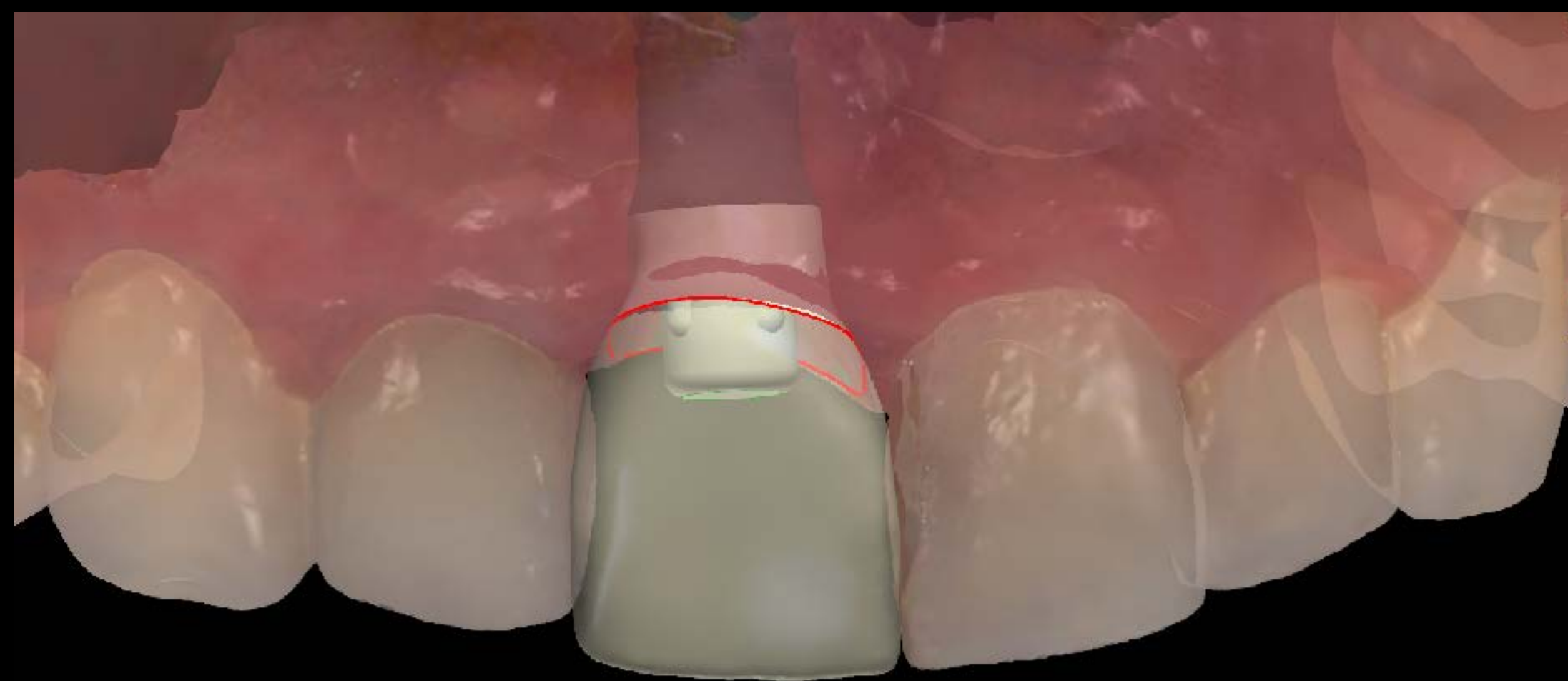
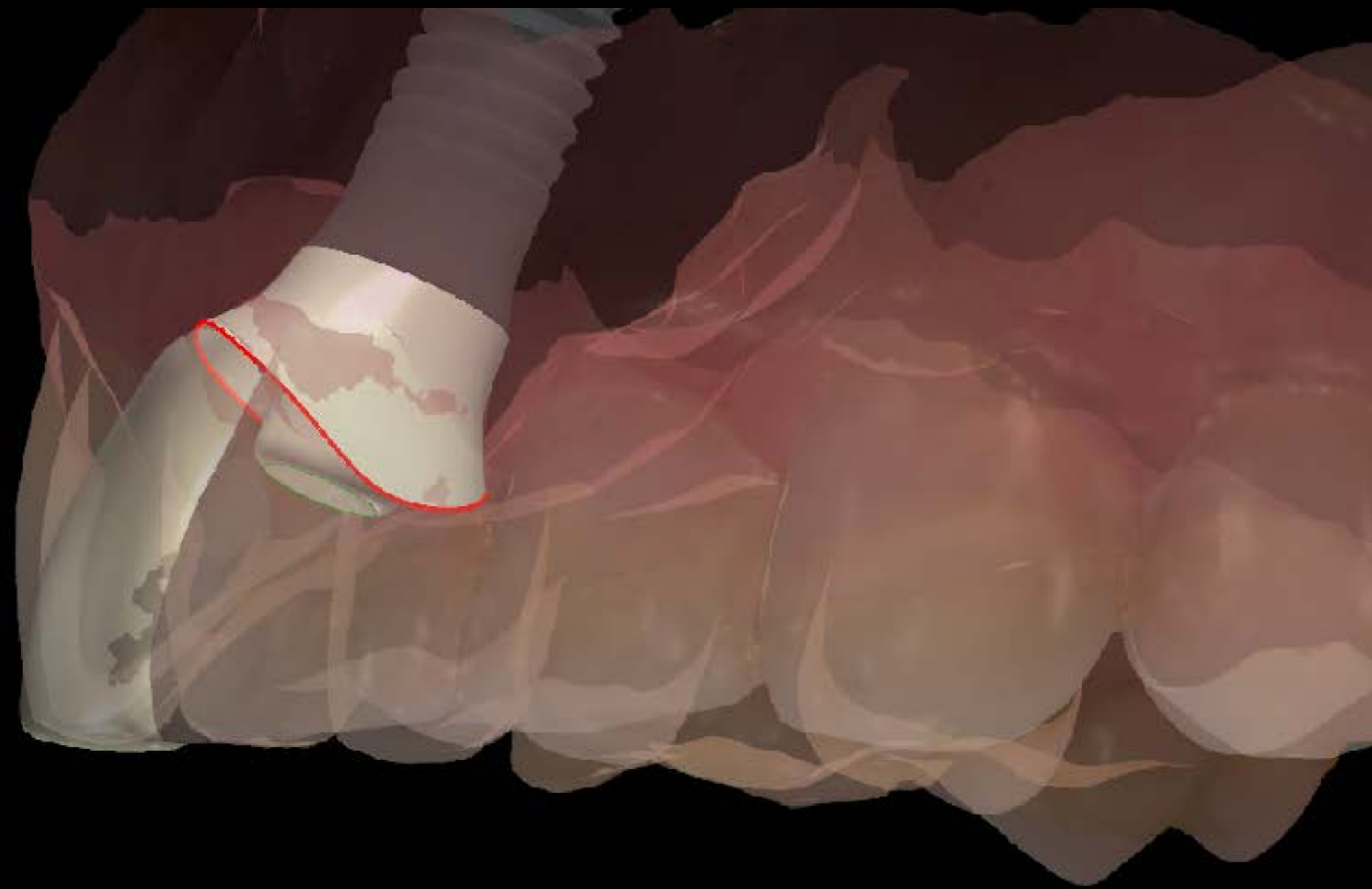


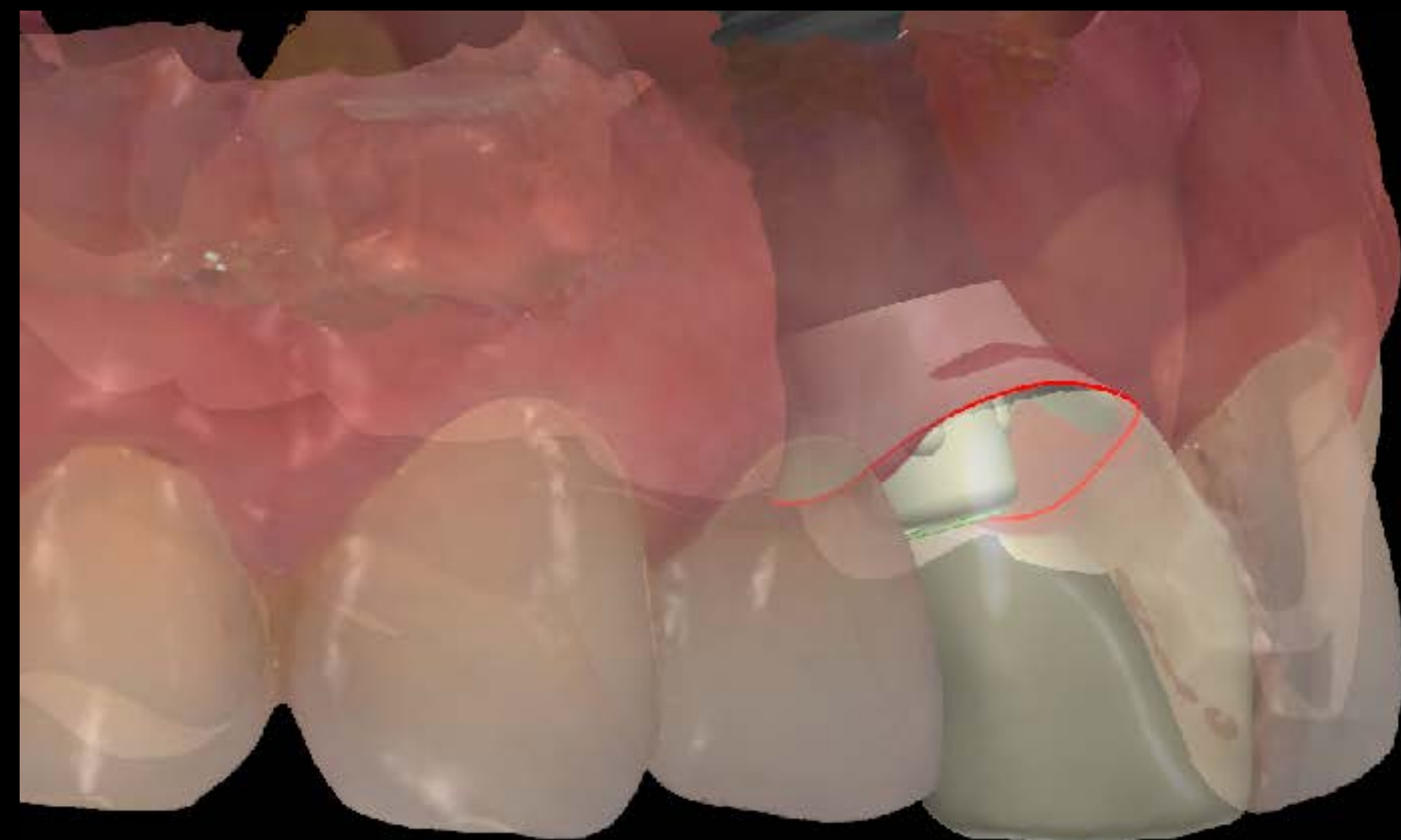
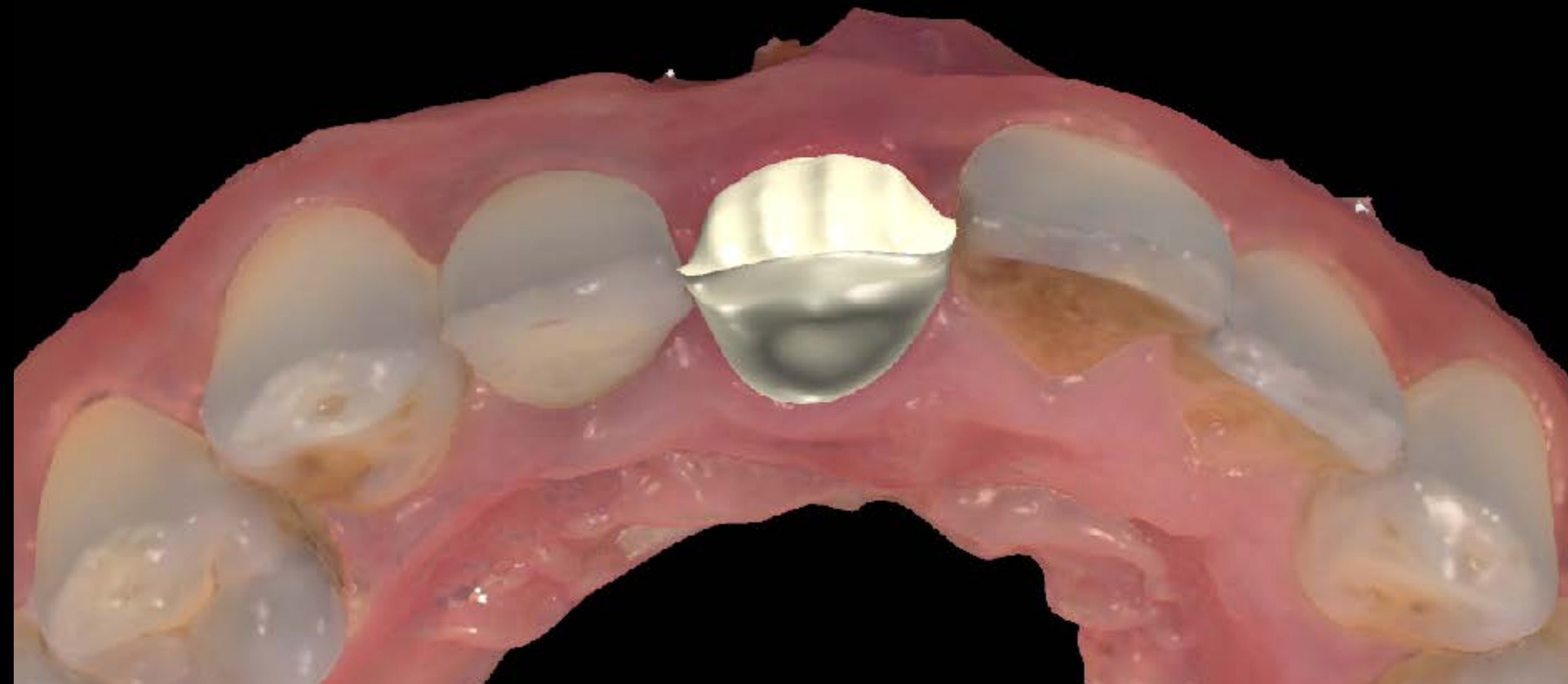


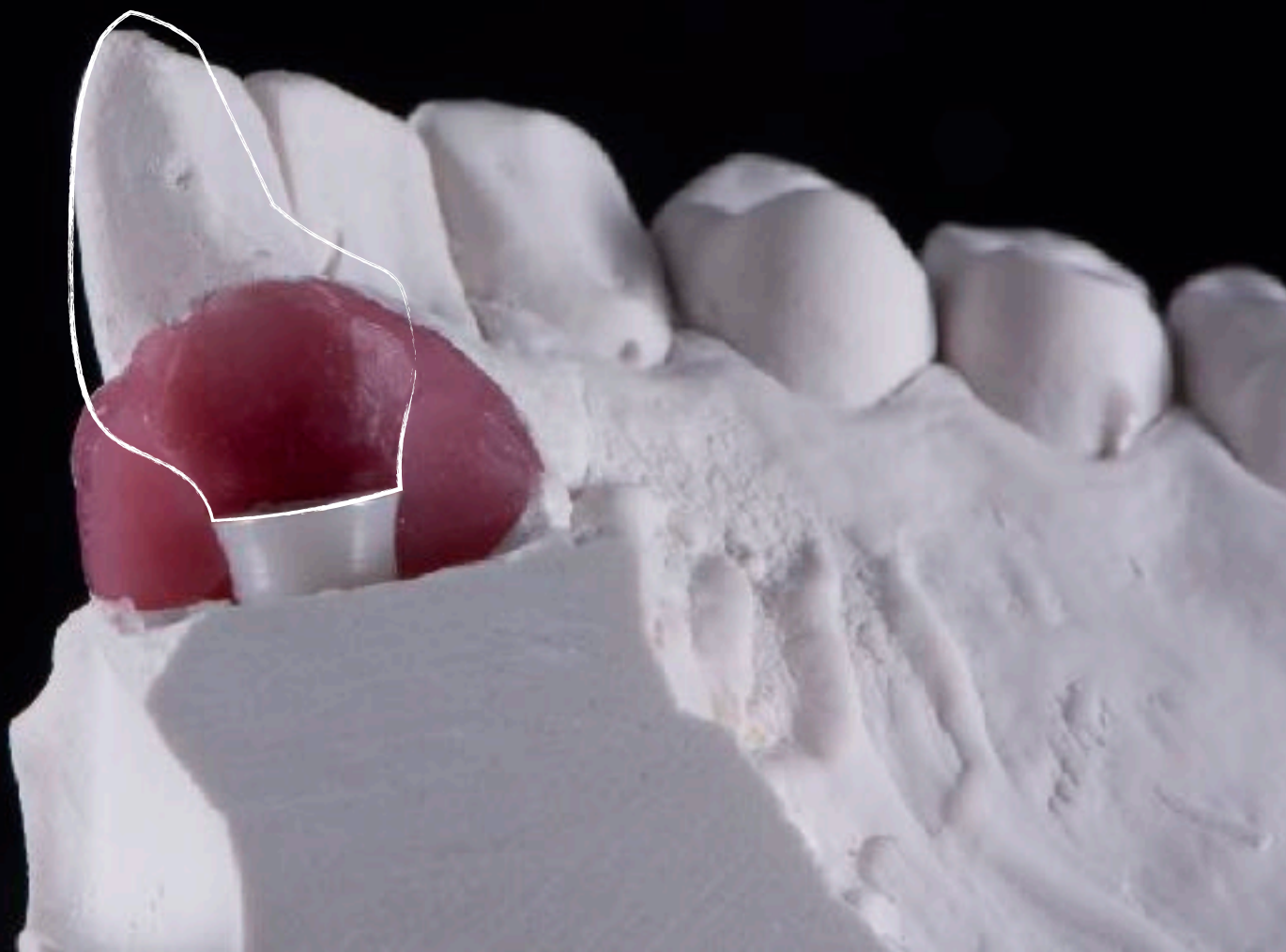
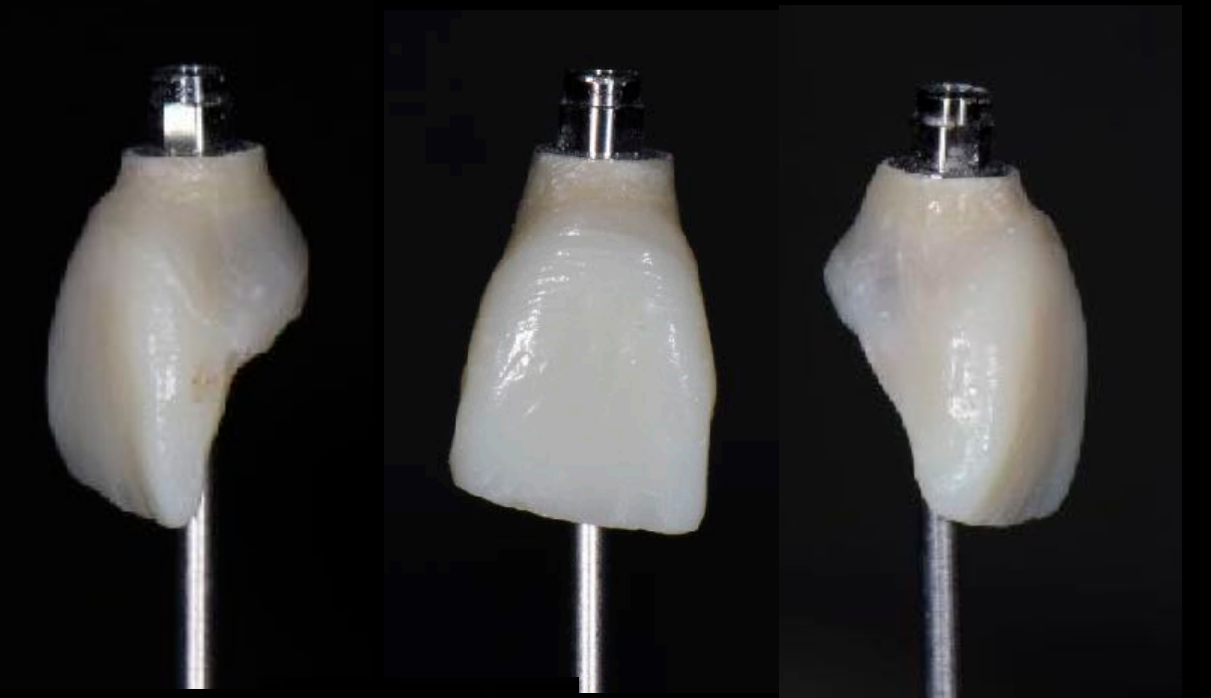
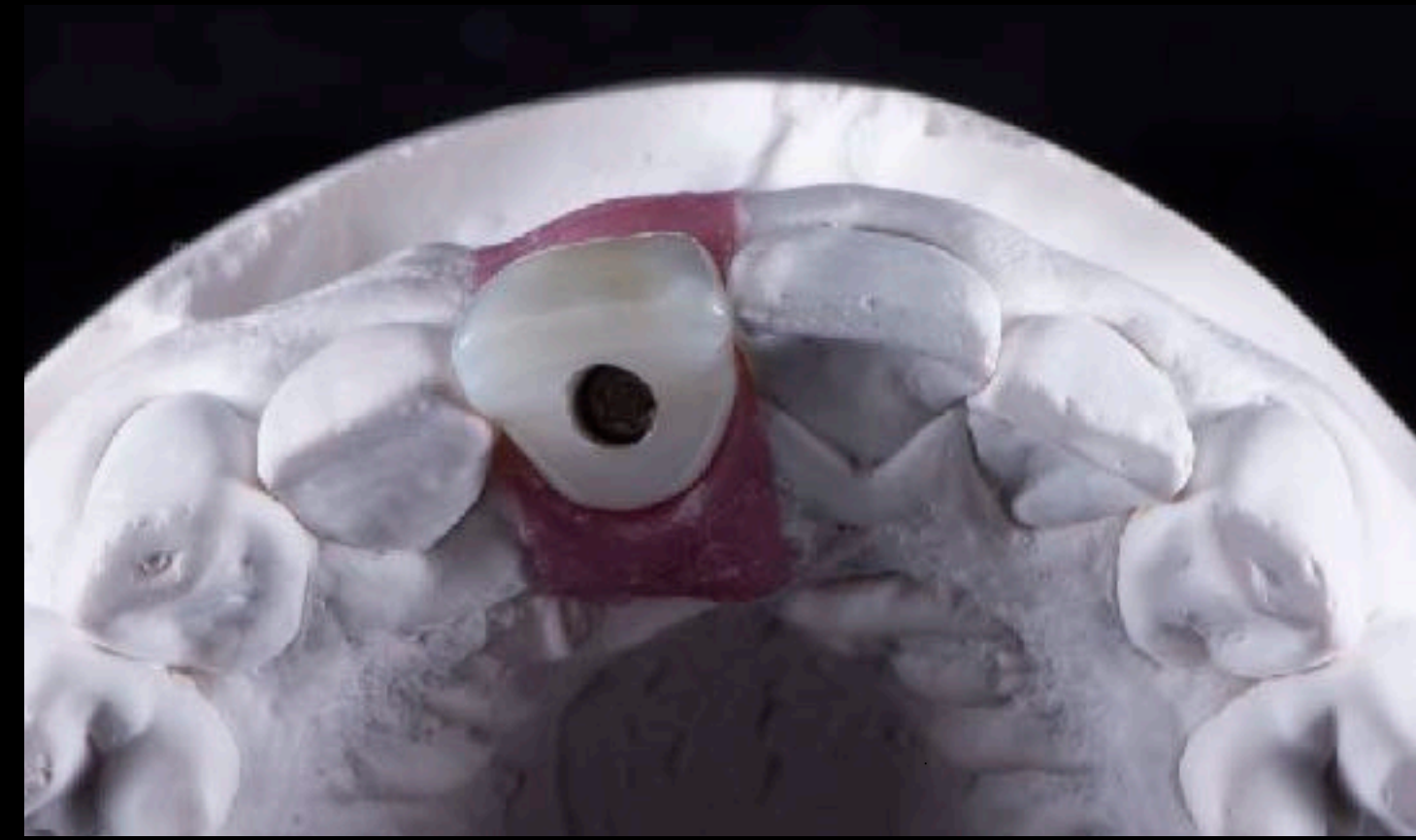


















Thank you