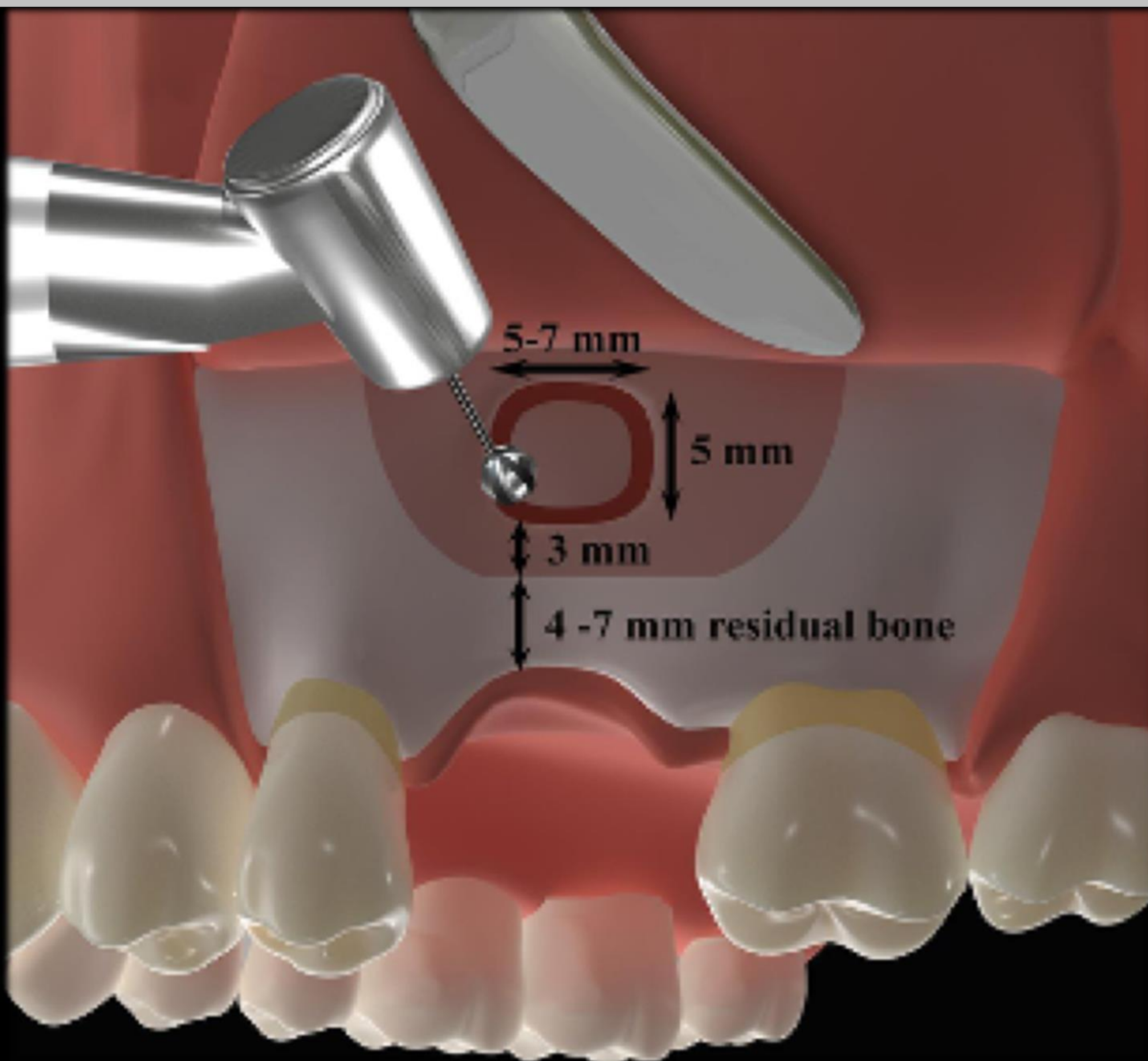


Evaluation of Implants Placed With Crestal Versus Lateral Sinus Floor Augmentation Techniques and Allogenic Bone Grafting

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Background :

Factors that complicate dental implant placement are many :

Compromised bone quality

- Limited interarch space
- Difficult visibility and accessibility
- Sinus pneumatization.

There is a scientific dilemma about which technique is best for sinus floor elevation for rehabilitation of the posterior maxillary area with dental implants especially in minimal residual bone heights (RBH).



Crestal- Closed Sinus Elevation

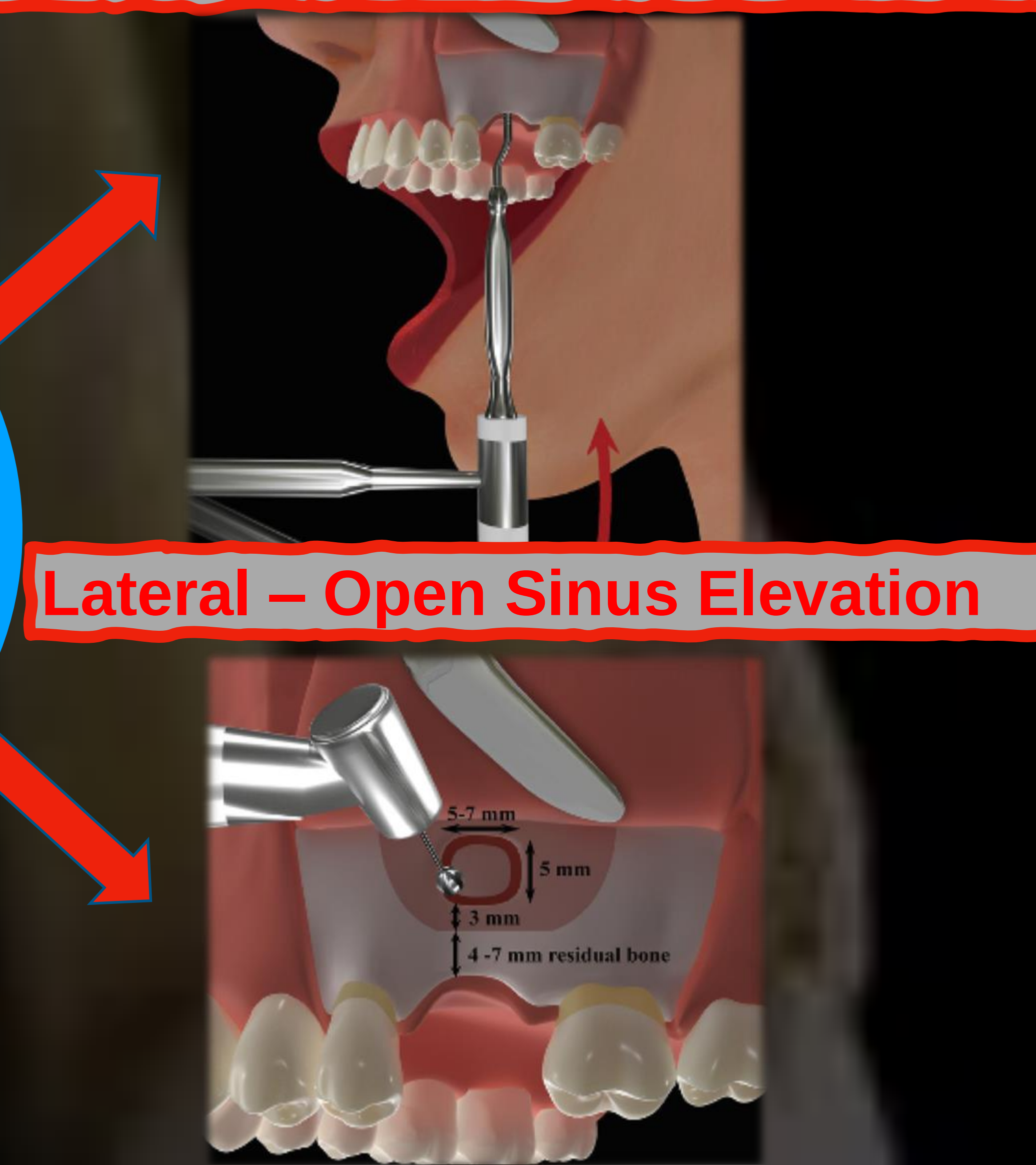
Objectives:

The purpose of this research was to assess the effectiveness of two distinct sinus floor elevation procedures for implants implanted concurrently with maxillary sinus bone augmentation and compare their outcomes in RBH **4-6mm.**

Aim :

To evaluate implants placed simultaneously with maxillary sinus bone augmentation with Allogenic bone grafting Using two different sinus floor elevation techniques:

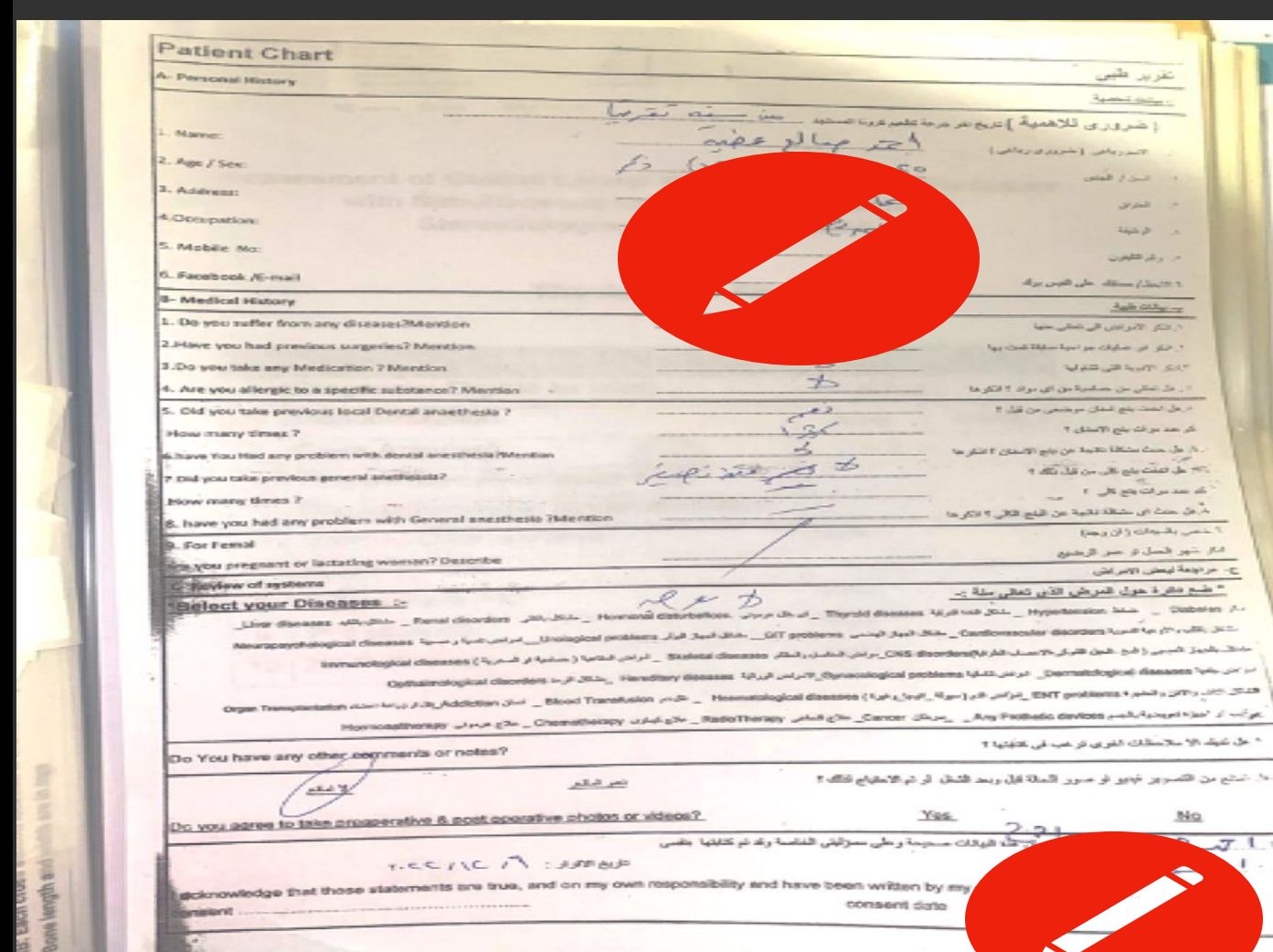
15
implants
in each
group



Lateral – Open Sinus Elevation

*Pre-operative Patient Assessment:

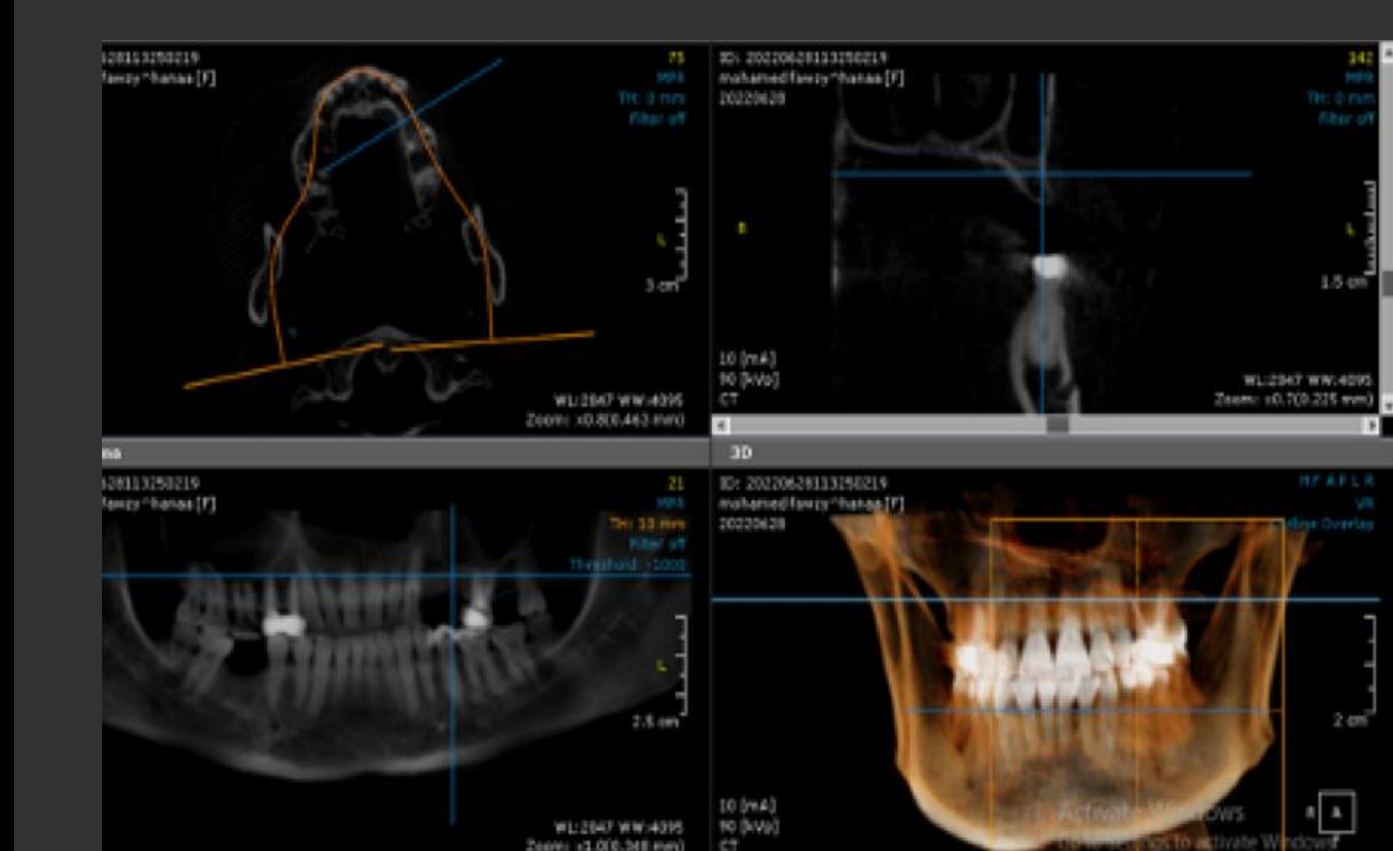
*Medical Assessment :



*Clinical assessment :



*Radiographic assessment



*Preoperative Radiographic Jig Preparation:



*Facial Measures:



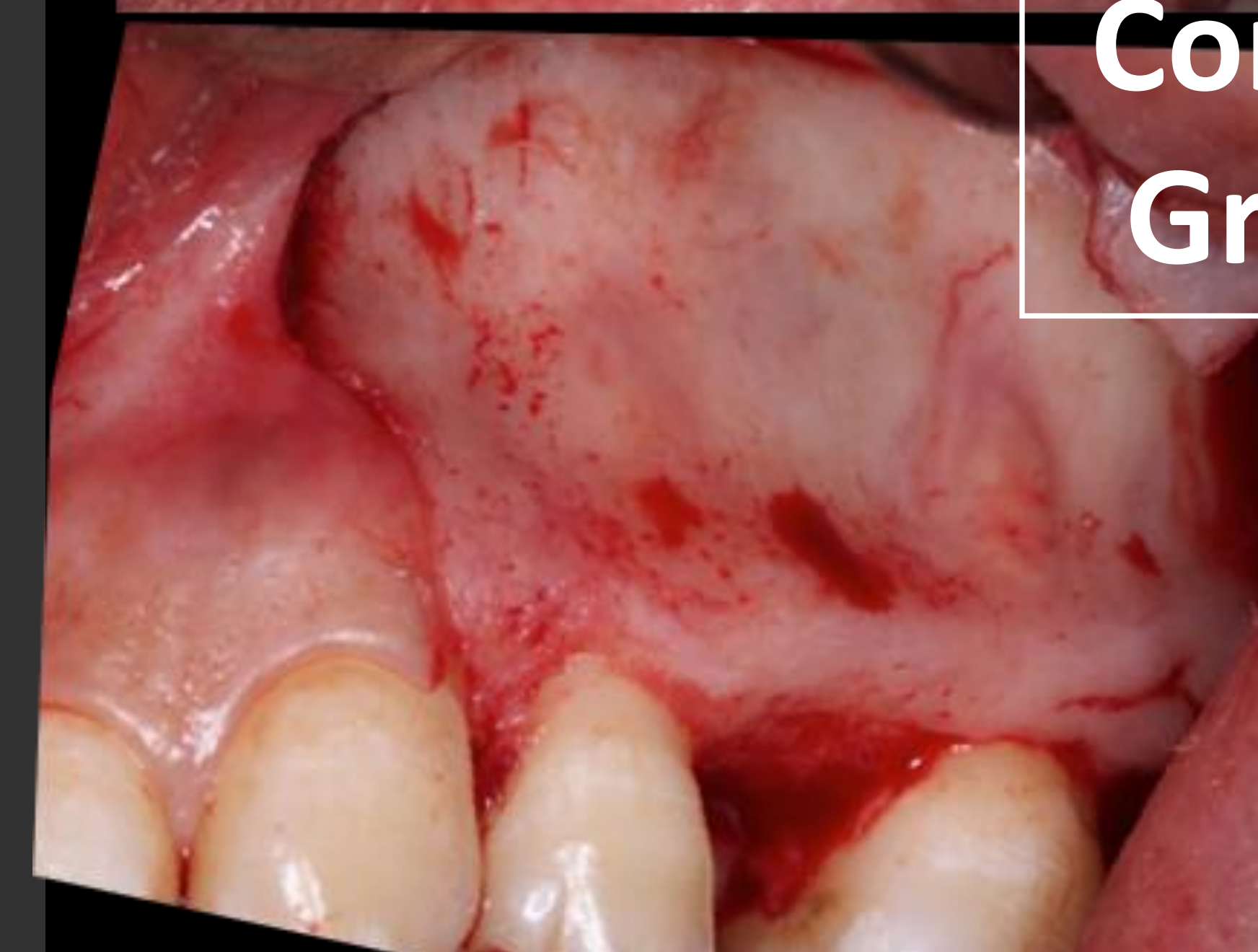
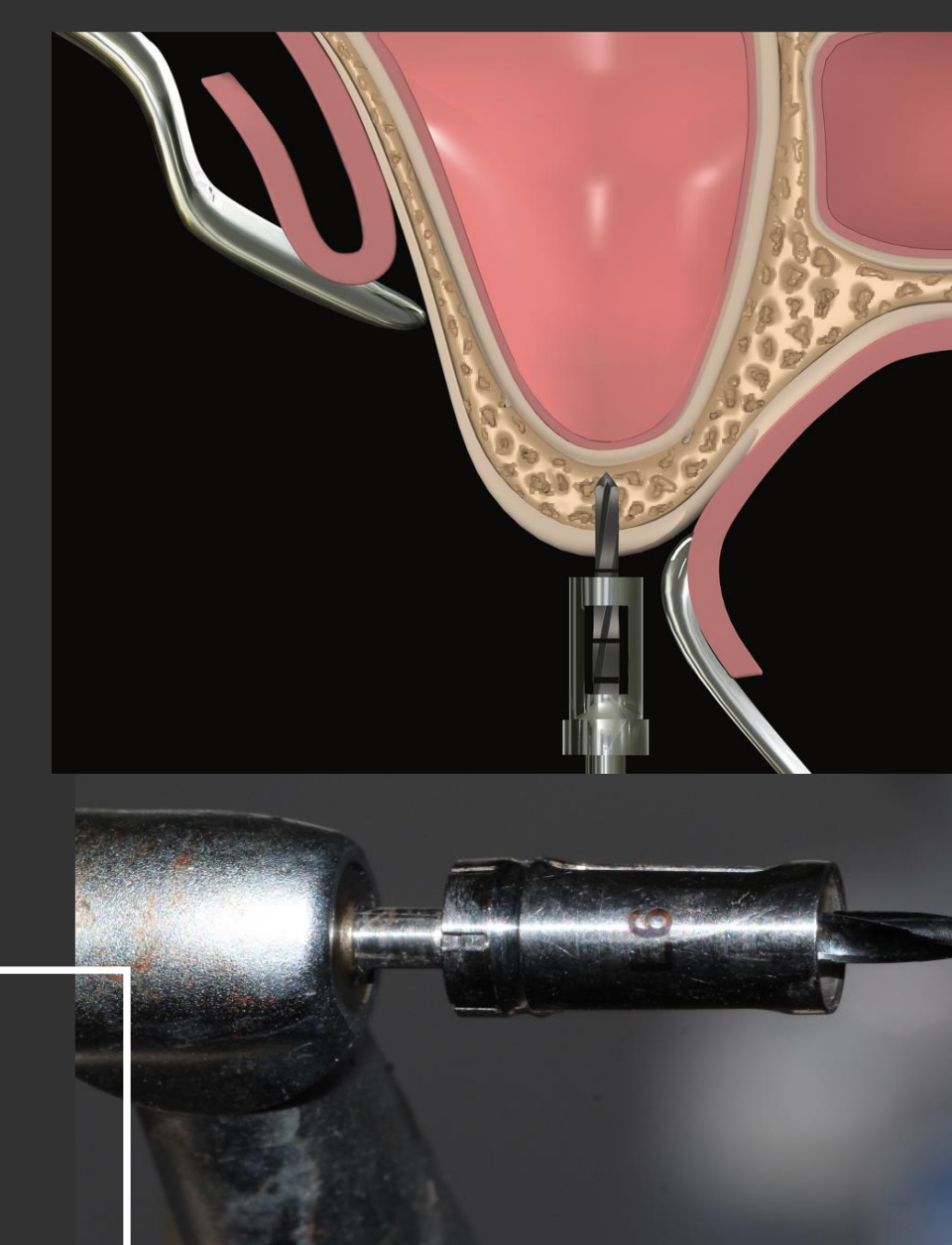
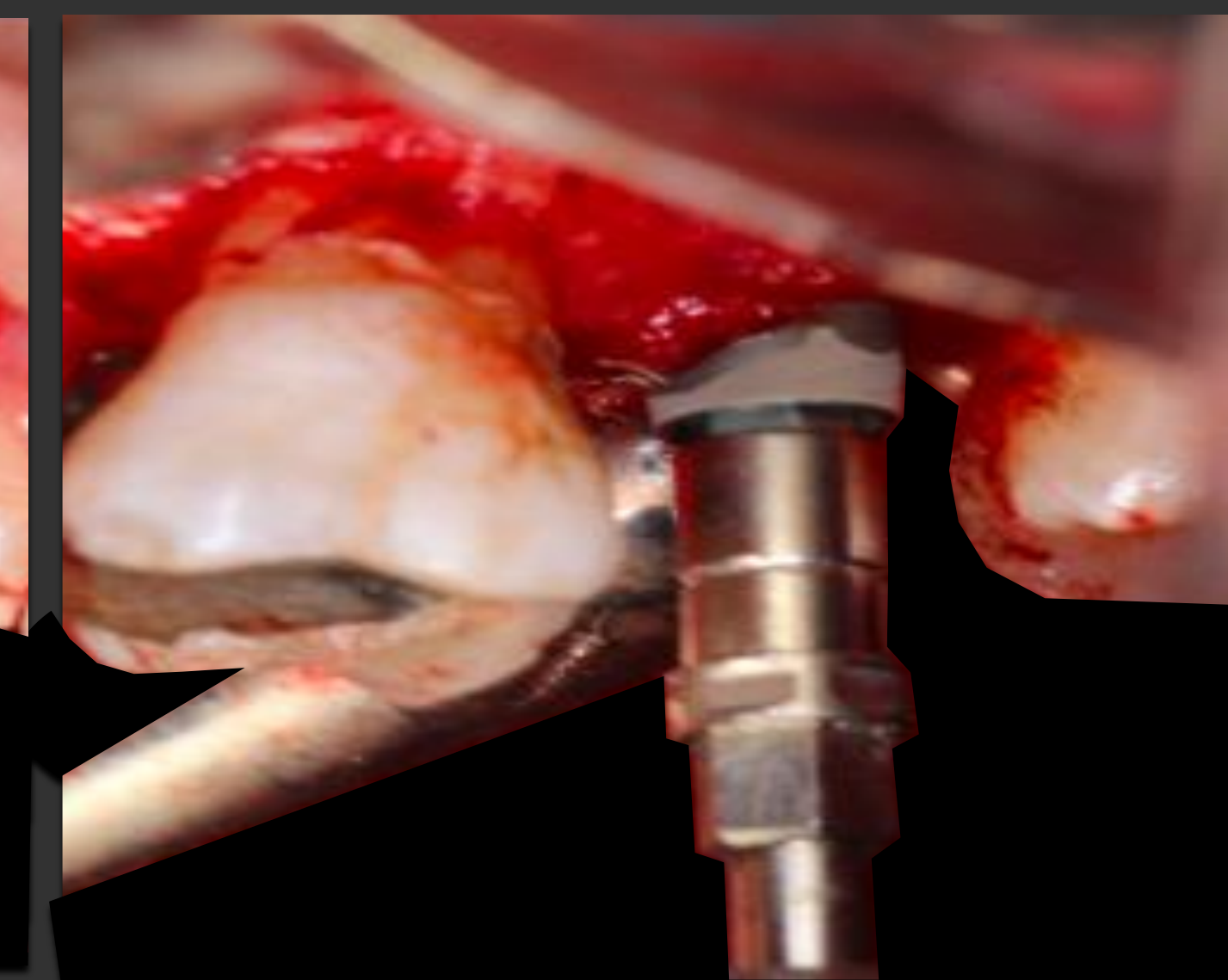
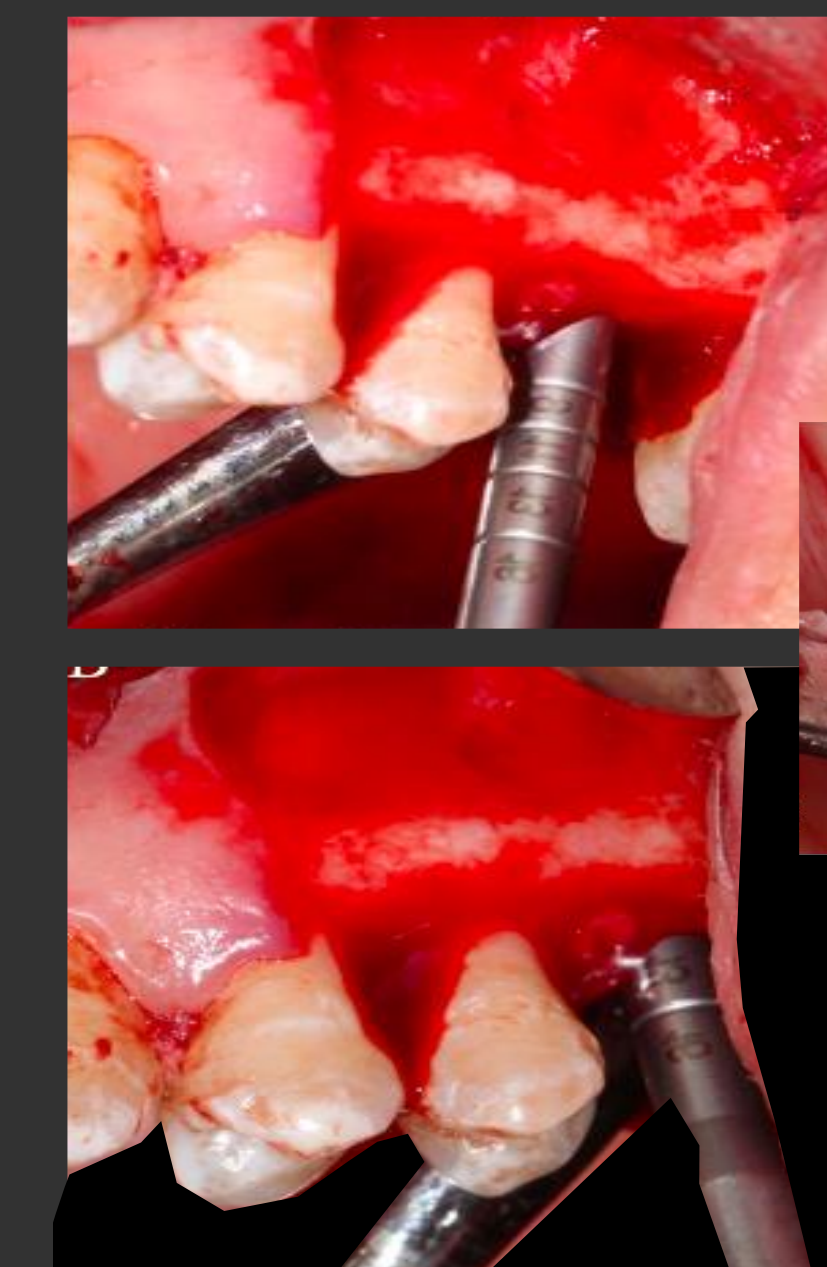
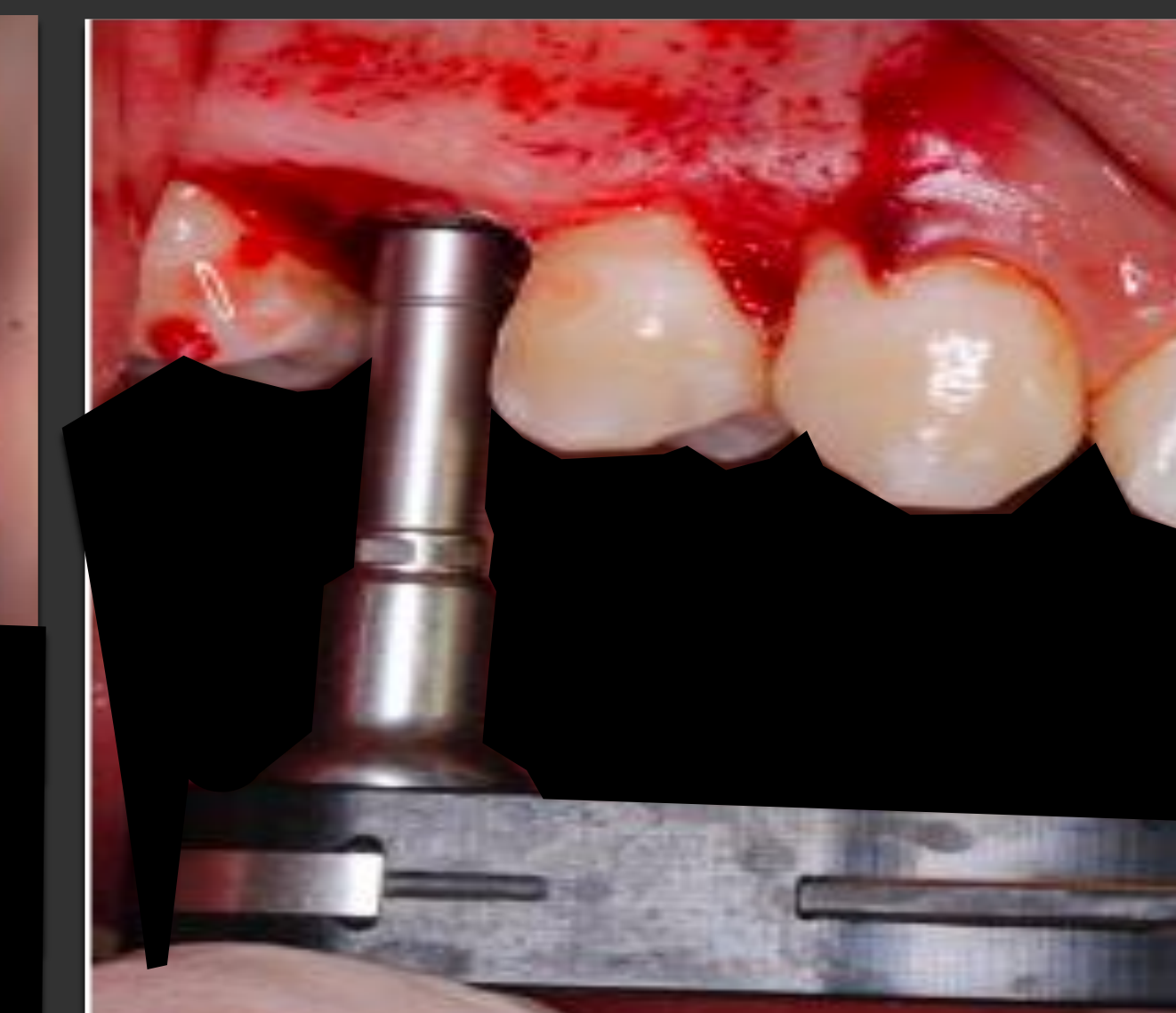
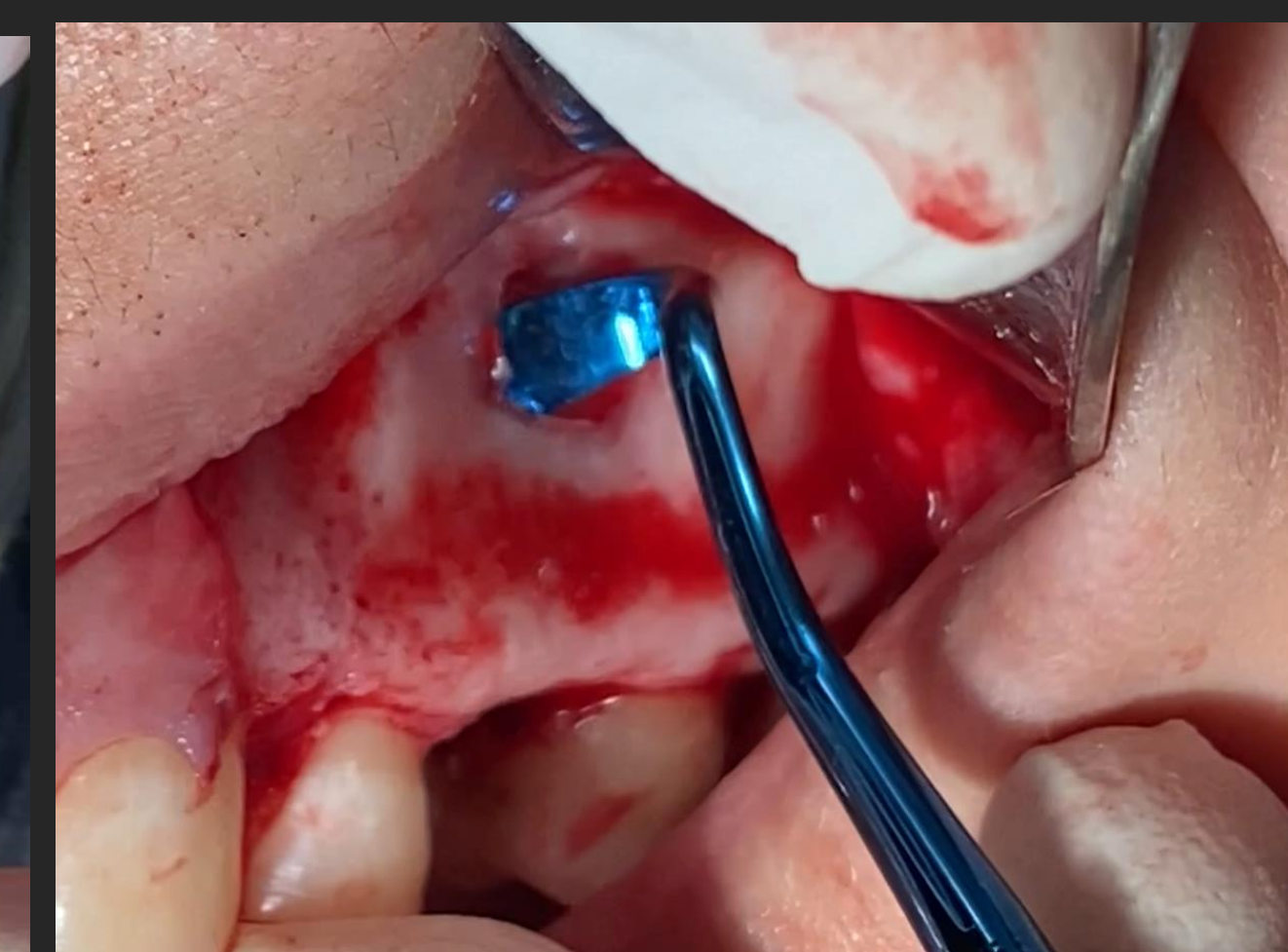
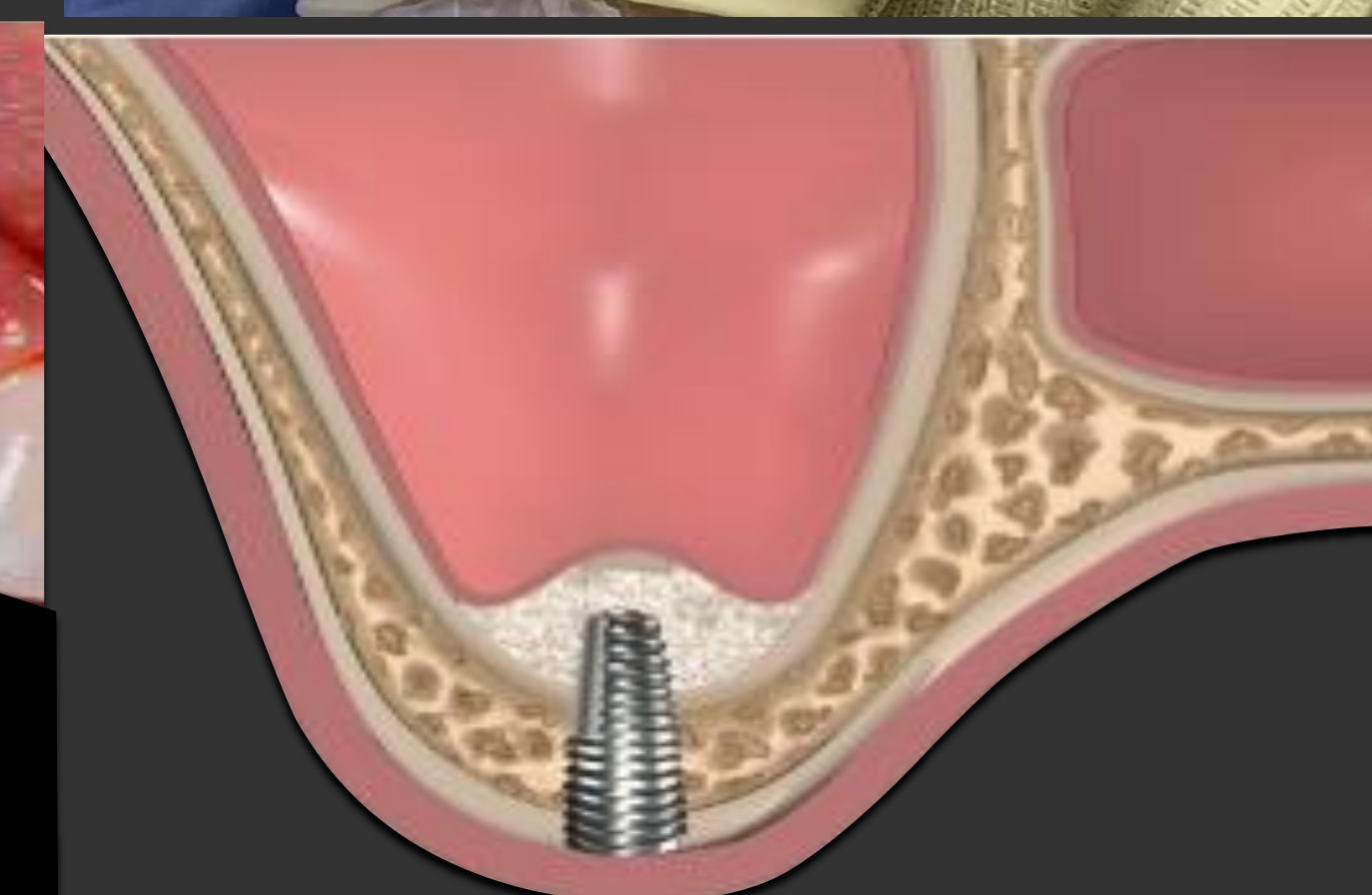
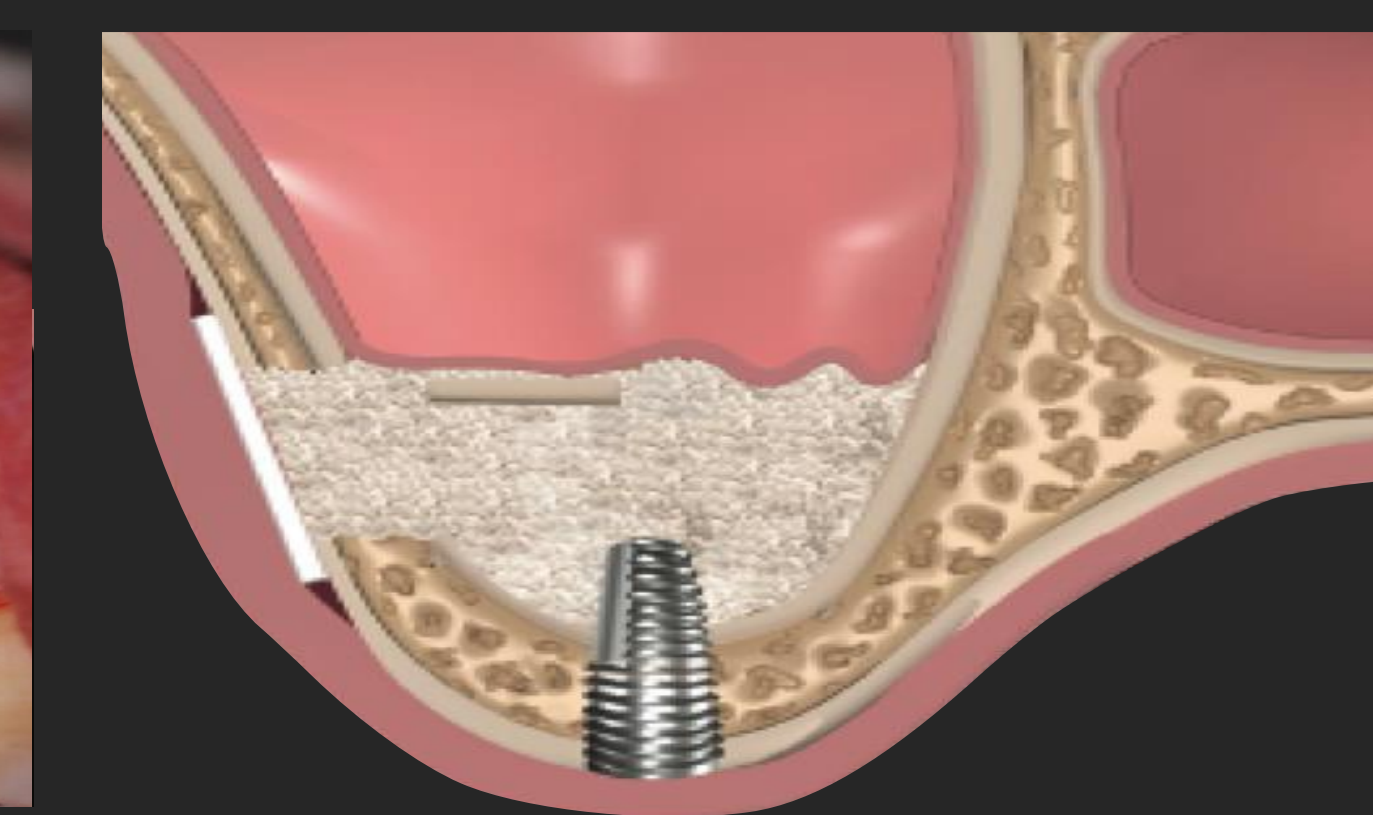
*Surgical Procedures:



Test Group



Control Group

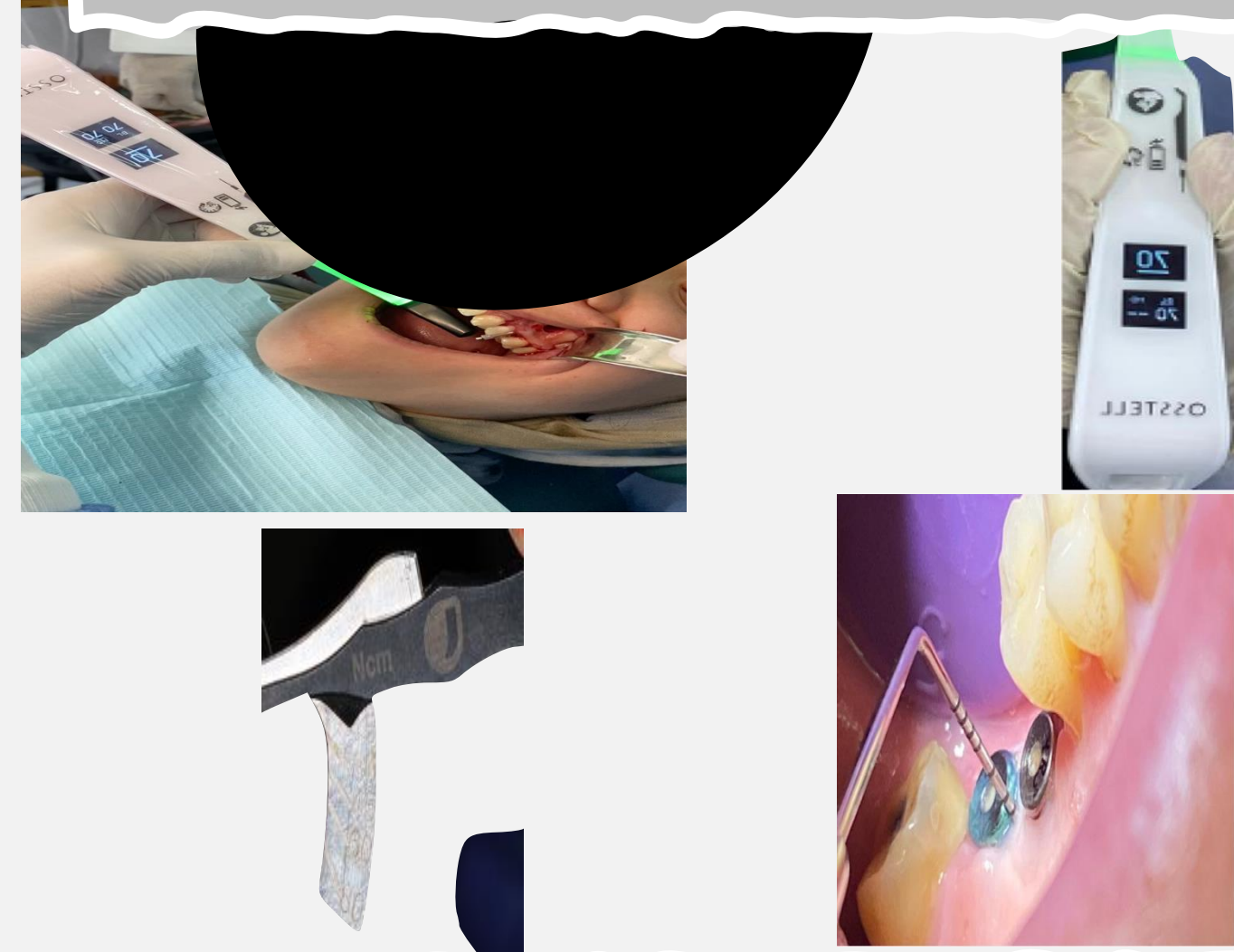


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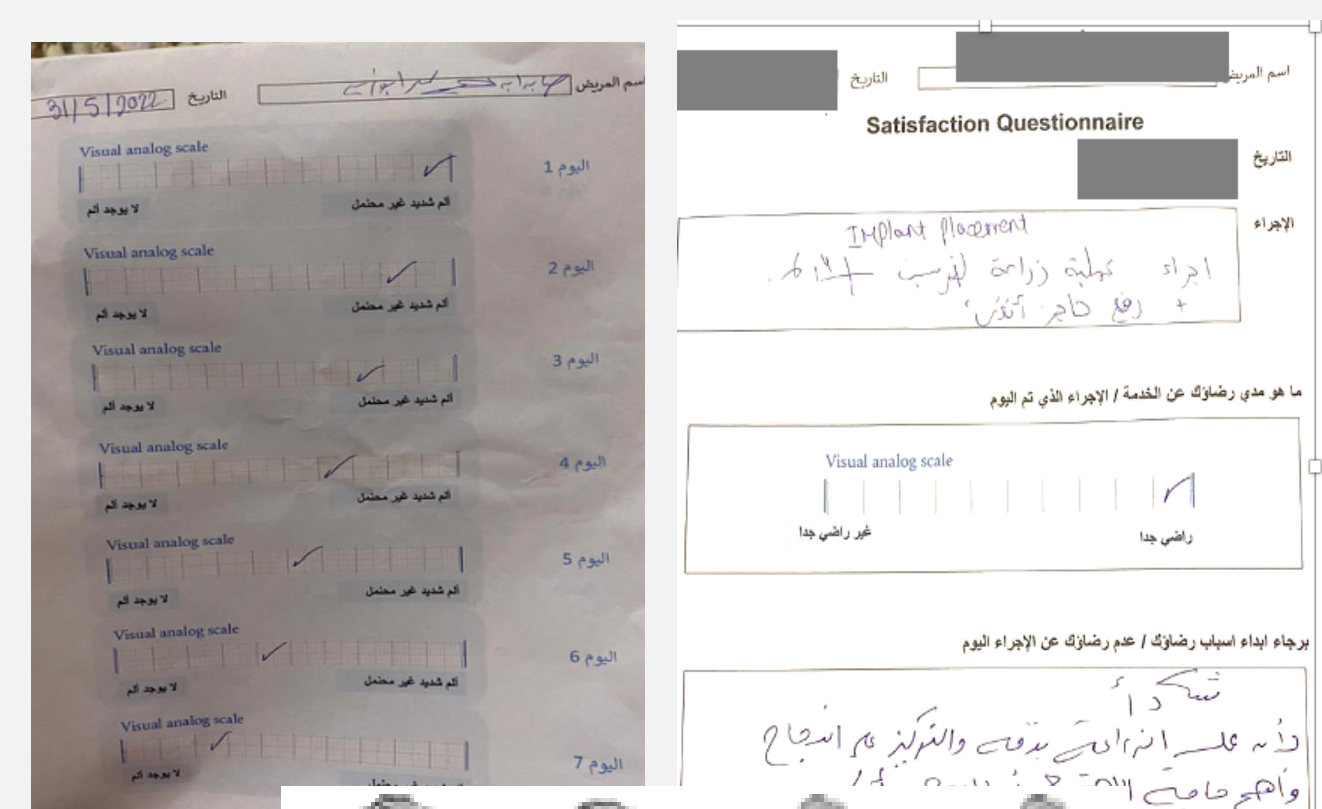
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Outcome Assessment

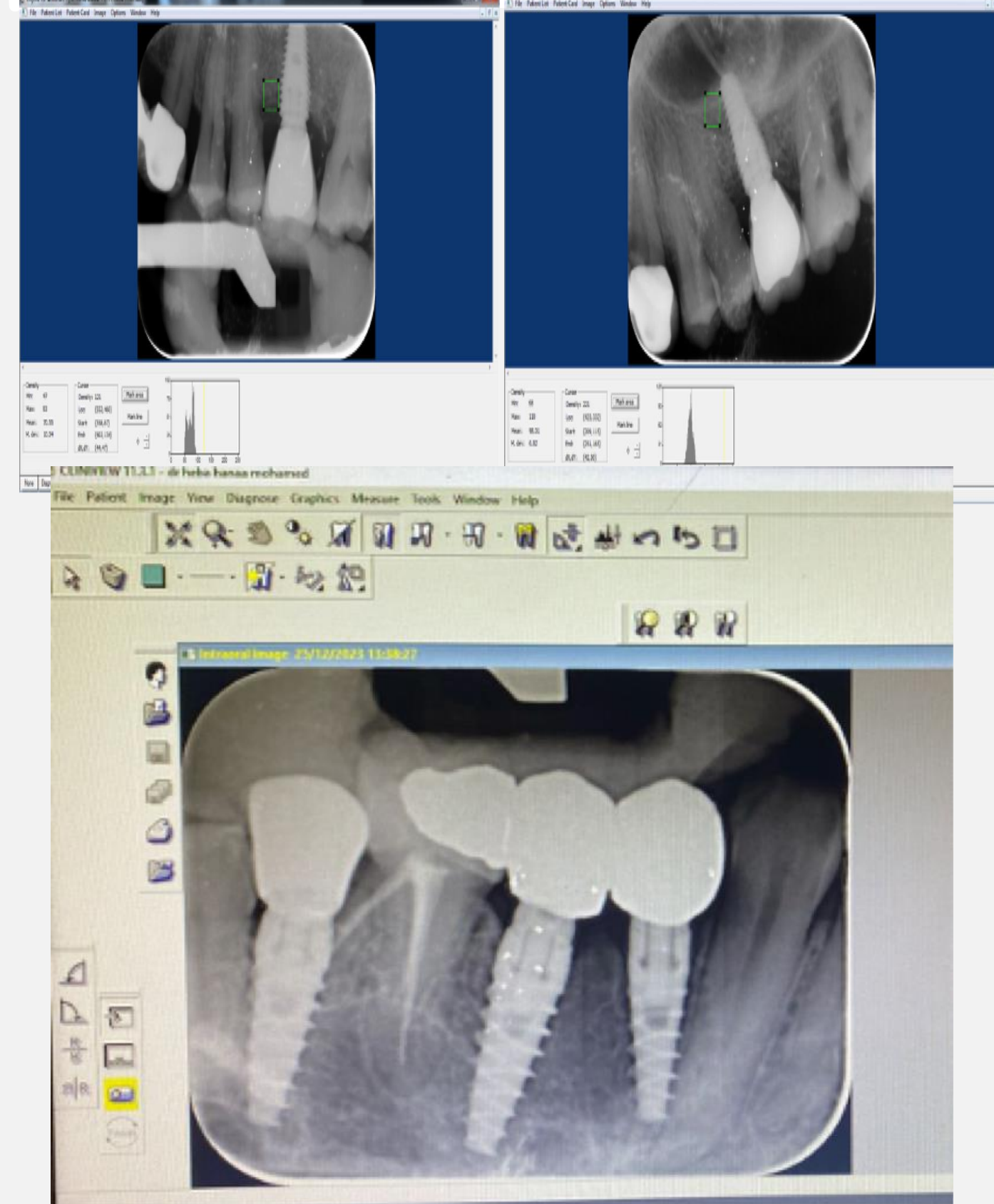
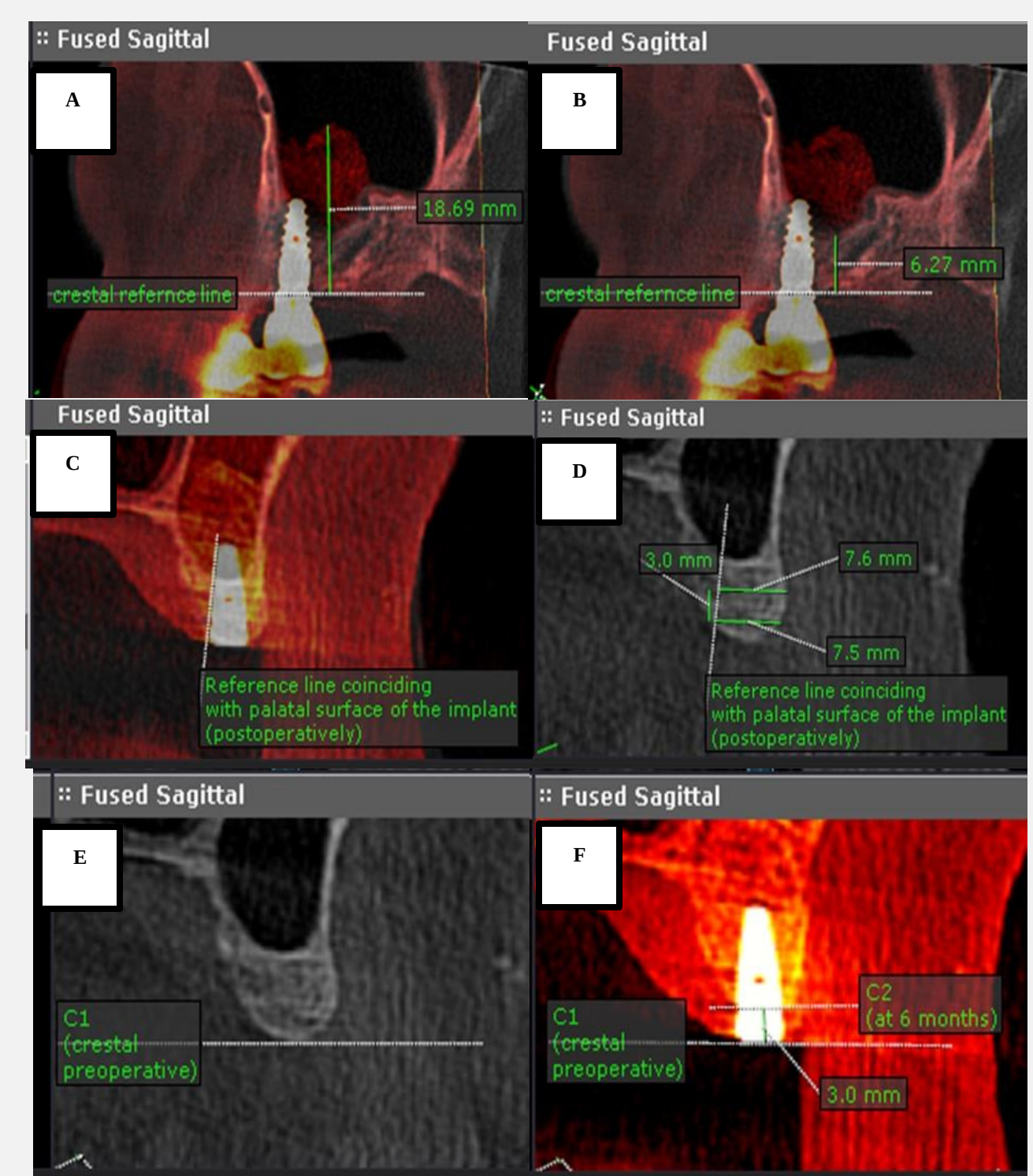
Clinical Outcomes



Patient Centered/ Reported outcomes

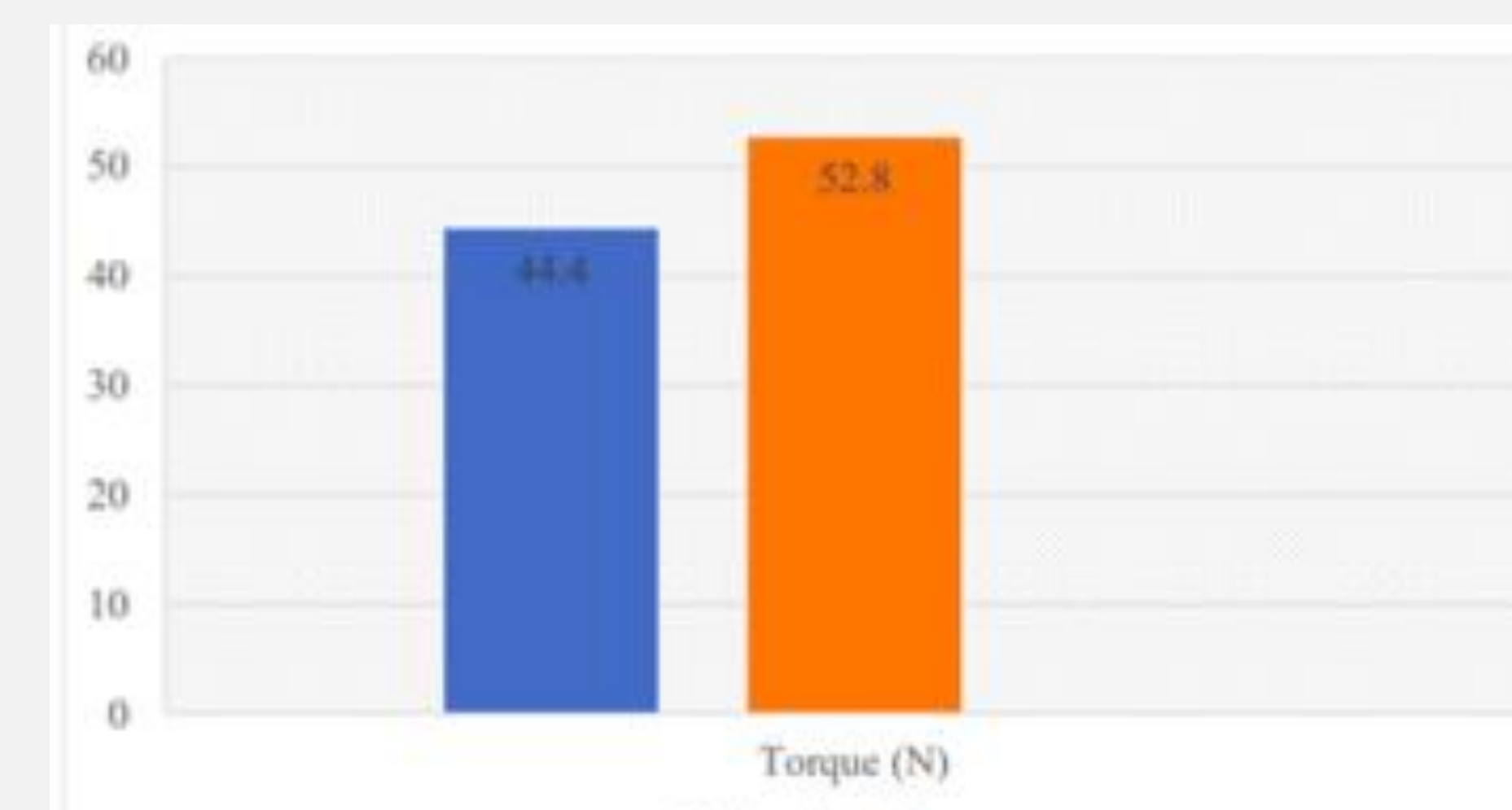


Radiographic outcomes

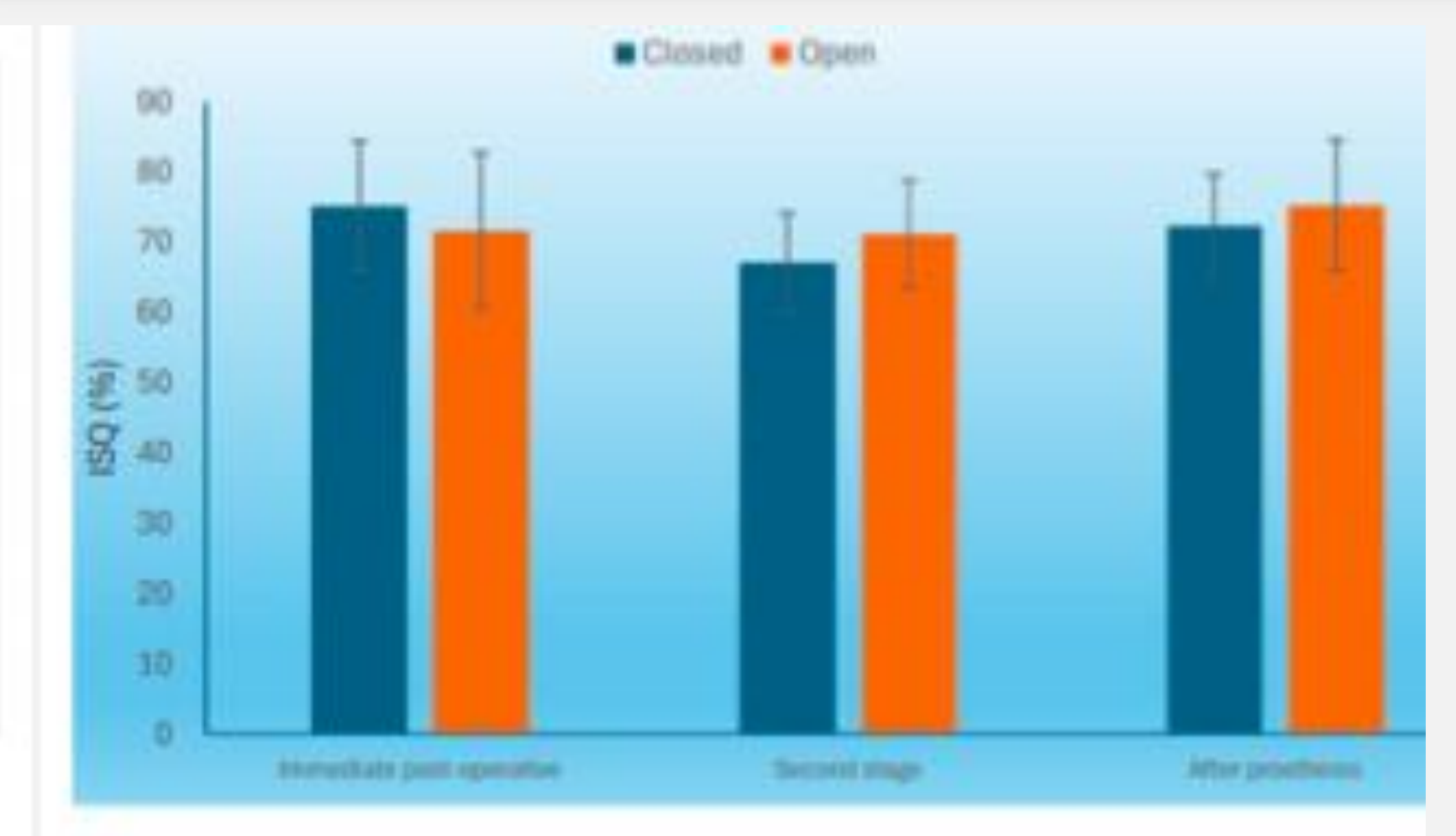


Results :

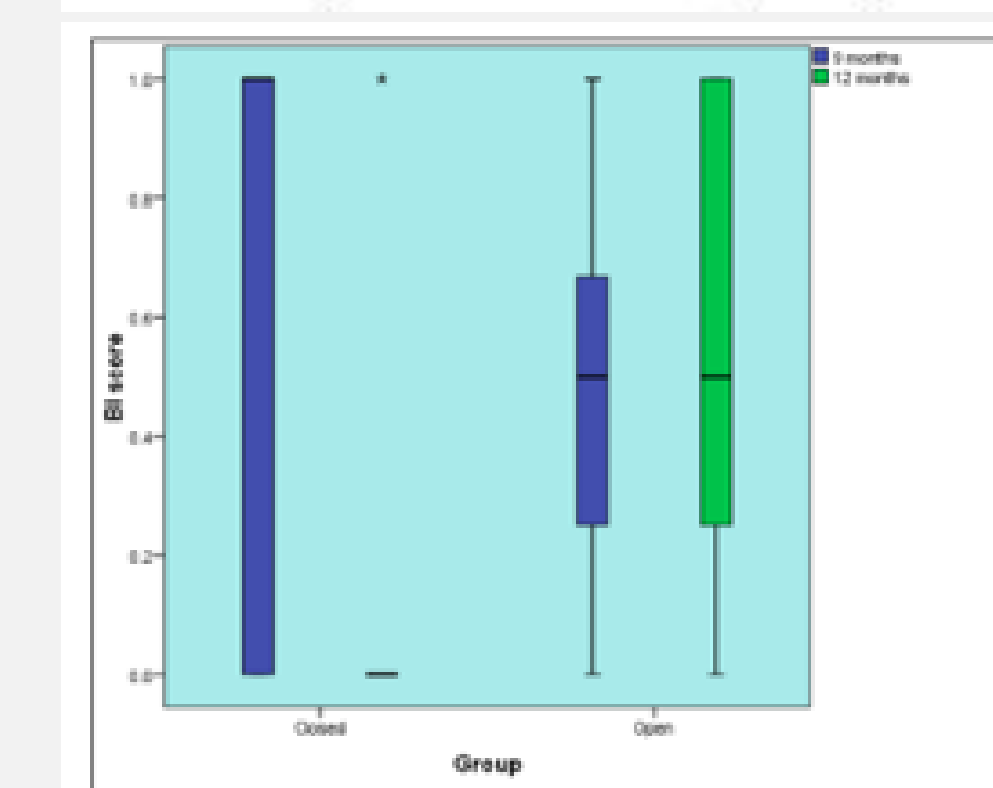
After one year, no significant differences were observed between the groups regarding implant distribution, average age, or radiographic parameters. The crestal group had a higher prevalence of females ($p=0.035$). There were no statistically significant differences in ISQ scores or implant success/failure rates ($p>0.05$). Clinically, the crestal group exhibited lower bleeding index (BI) scores compared to the lateral window group ($p=0.027$).



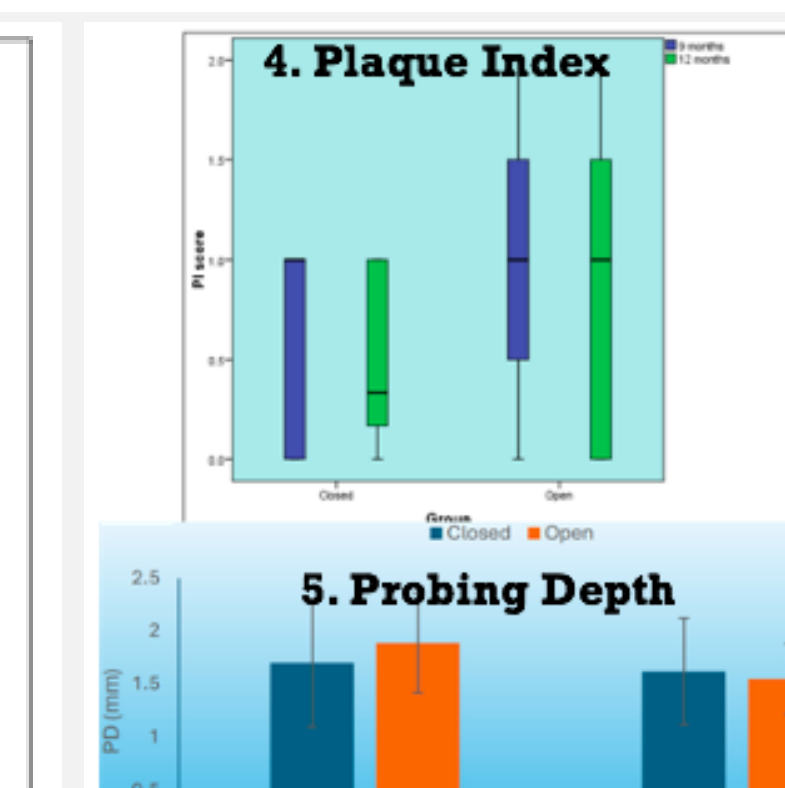
1. 1ry Stability by Peak Insertion Torque



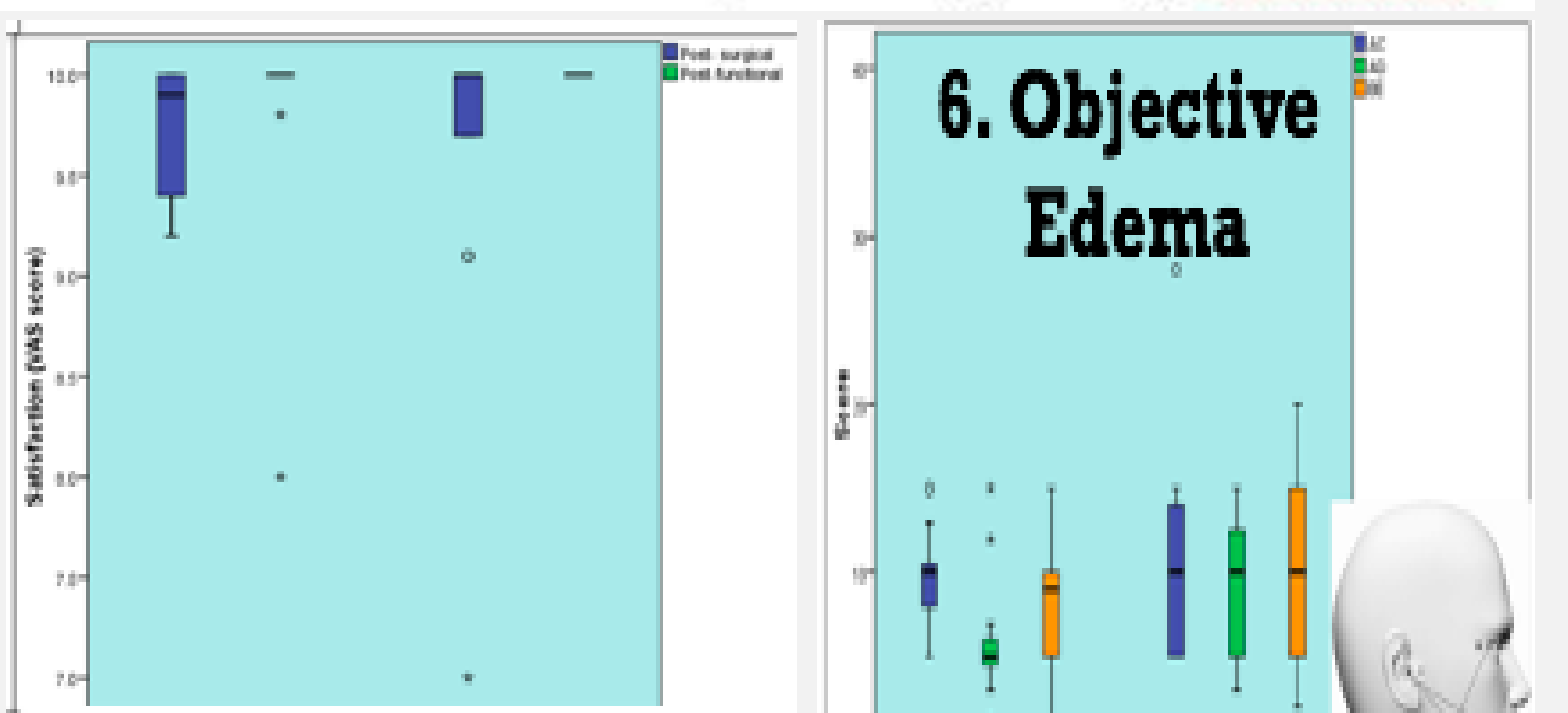
2. Stability using ISQ Ostell



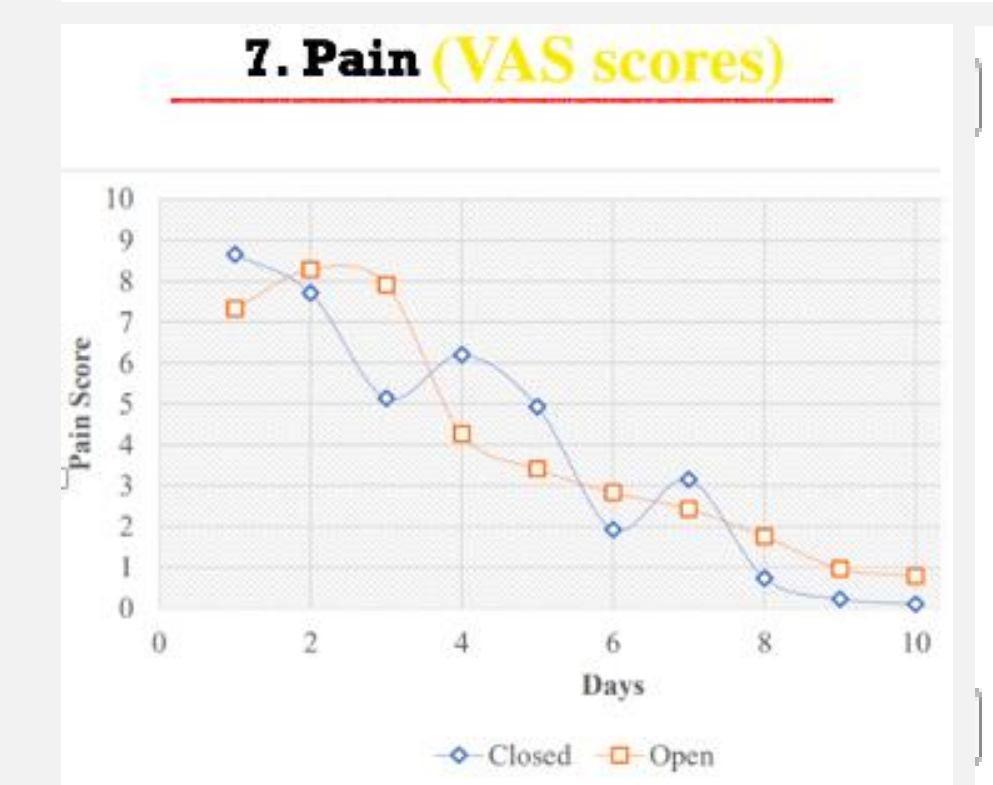
3. Bleeding index



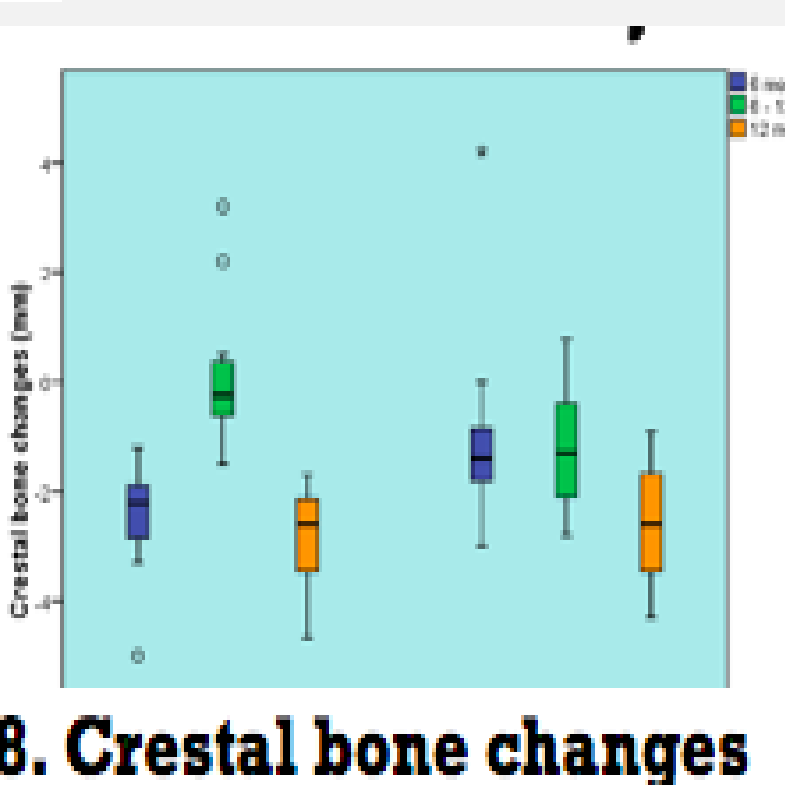
4. Plaque Index



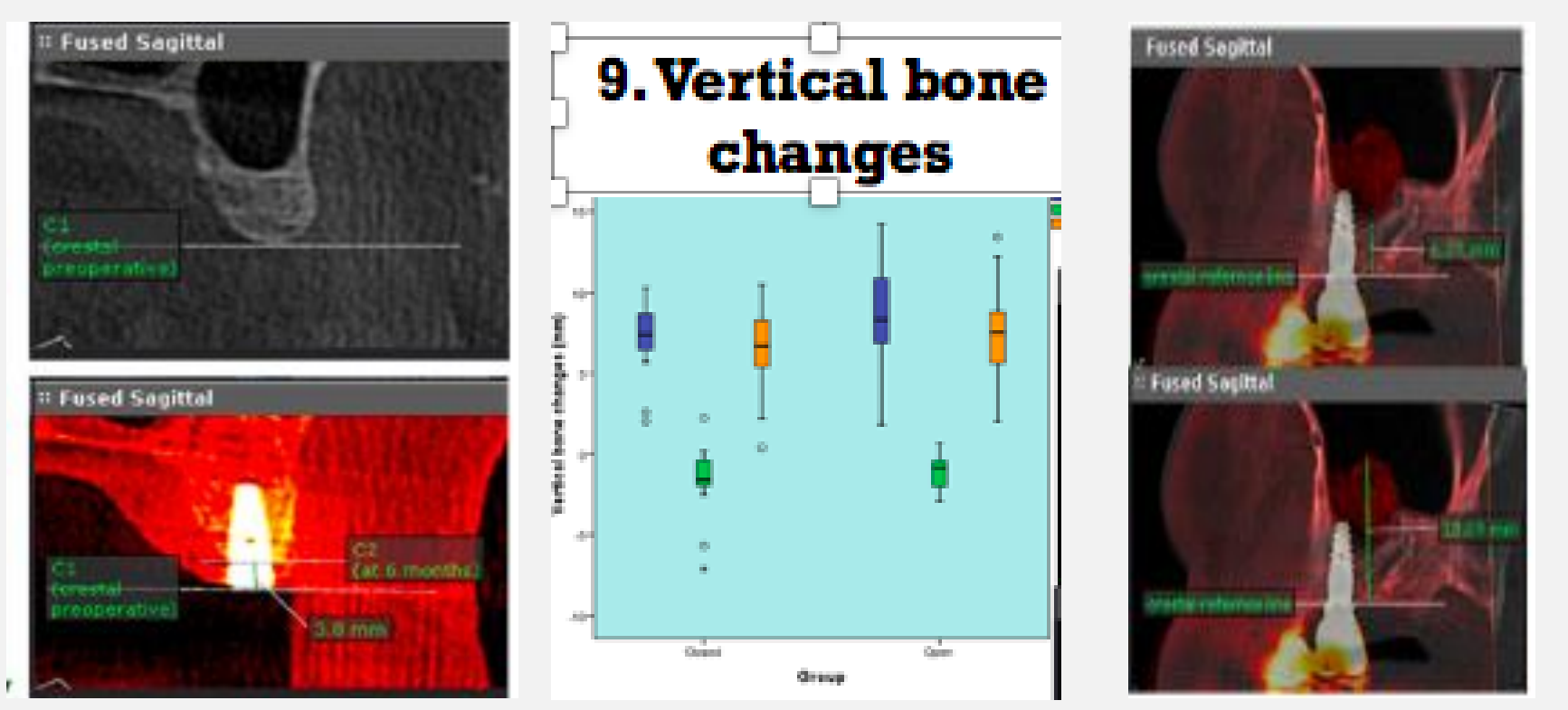
5. Patient Satisfaction



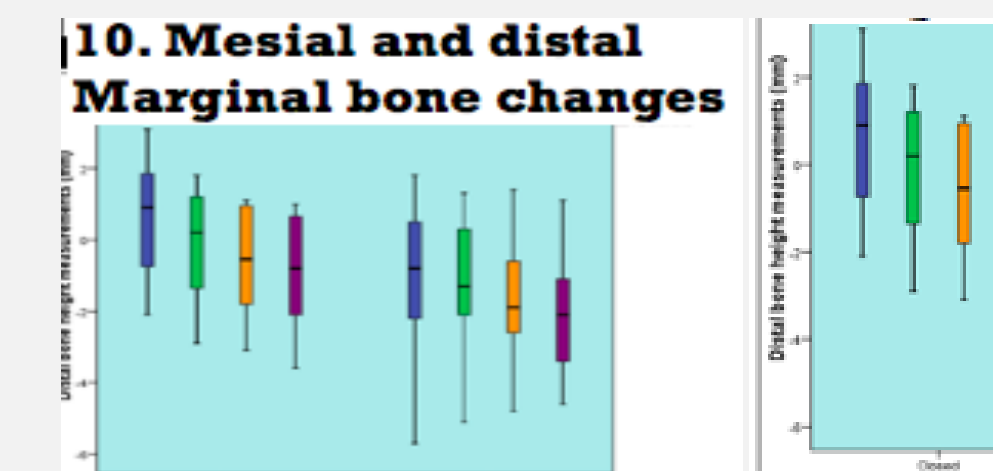
7. Pain (VAS scores)



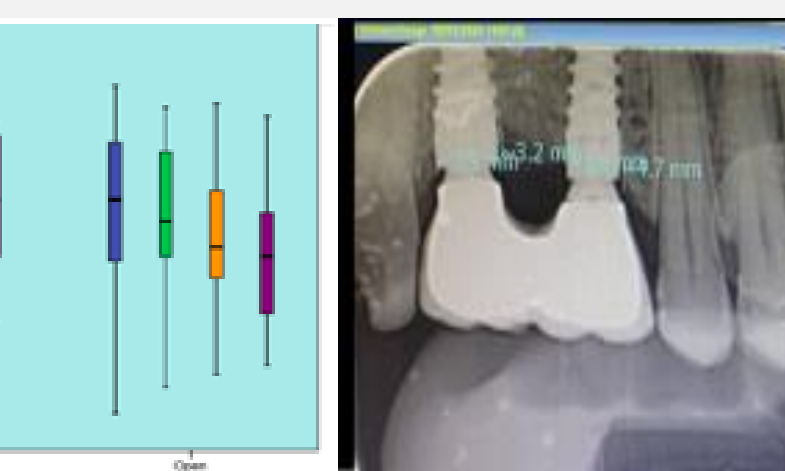
8. Crestal bone changes



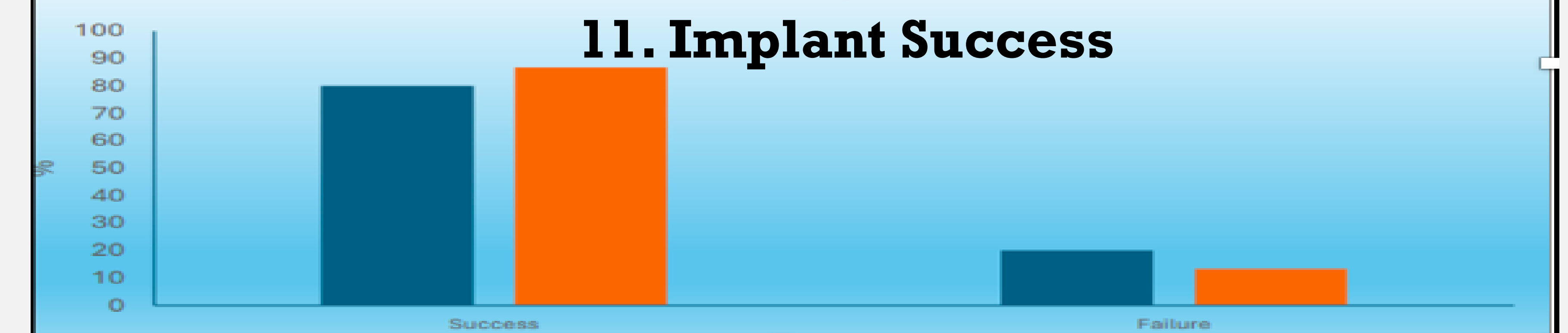
9. Vertical bone changes



10. Mesial and distal Marginal bone changes



11. Bone Density Measurements on the DIGORA Software



11. Implant Success

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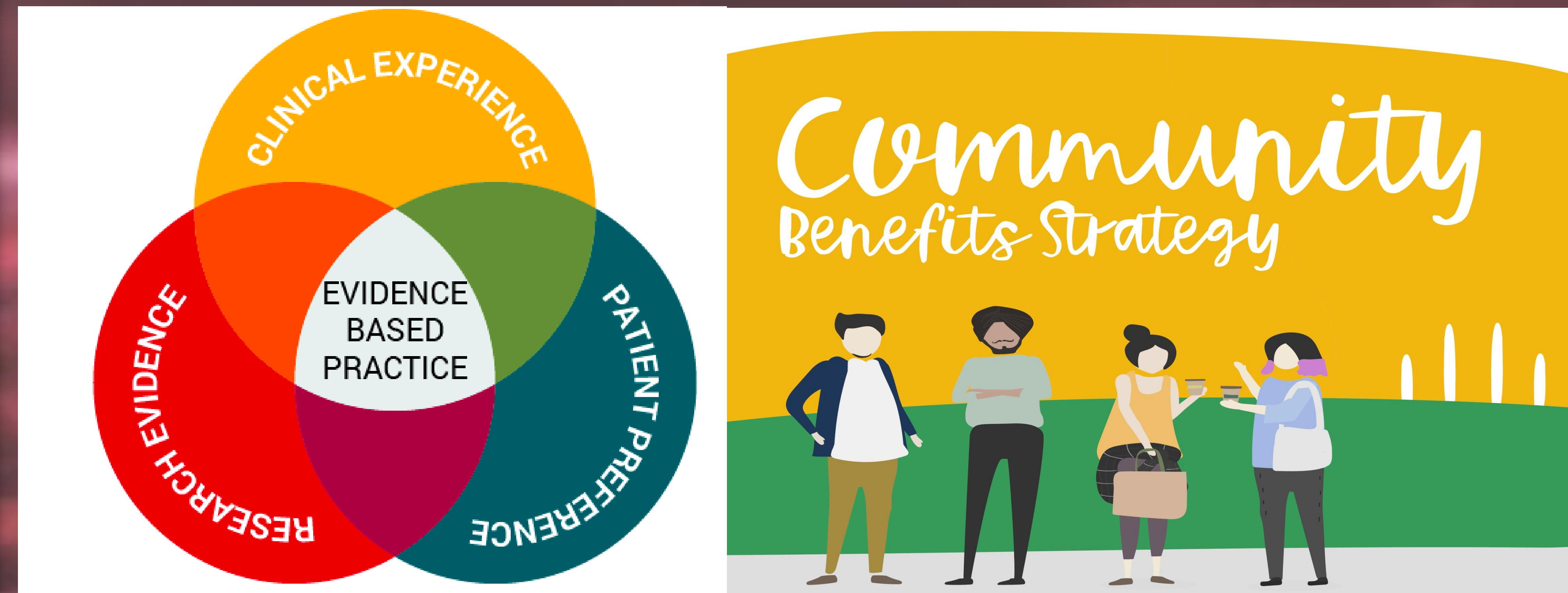
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Conclusion:

Closed sinus elevation has proven to be a successful technique in residual bone height 4-7mm.

which provides more favorable Clinical, Radiographic and patient centered outcomes as compared to open sinus elevation



Clinical Relevance and Recommendations:

It is recommended to use closed sinus elevation in cases of residual bone heights of 4 mm to 7mm

References:



Contact the Author:

