

Clinician- and Patient-Reported Outcomes of a Multi-center Randomized Controlled Study Comparing Early Implant Placement and Delayed Implant Placement Following Alveolar Ridge Preservation;1-year Follow up.

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OBJECTIVE

Various implant placement protocols after tooth extraction are applied in daily clinical practice. However, recent systematic reviews have failed to find clinically relevant differences across the various implant protocols. Consequently, many clinicians may select their treatment protocol based on their own experience and preference. The aim of the present study was, therefore, to assess and compare early implant placement (EP) and alveolar ridge preservation with delayed implant placement (ARP/DP) in terms of clinician- (ease of treatment) and patient-reported outcomes along with aesthetic, radiographic and clinical outcomes 1-year after the crown delivery.

METHODS

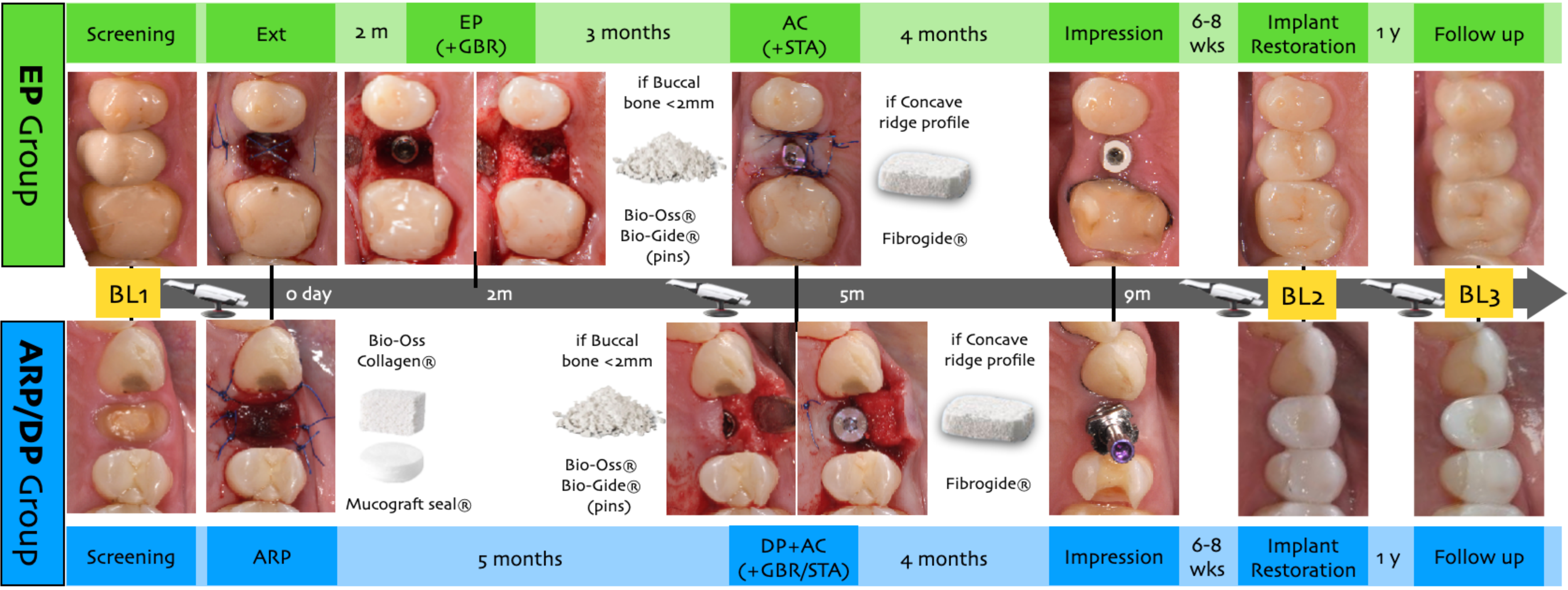
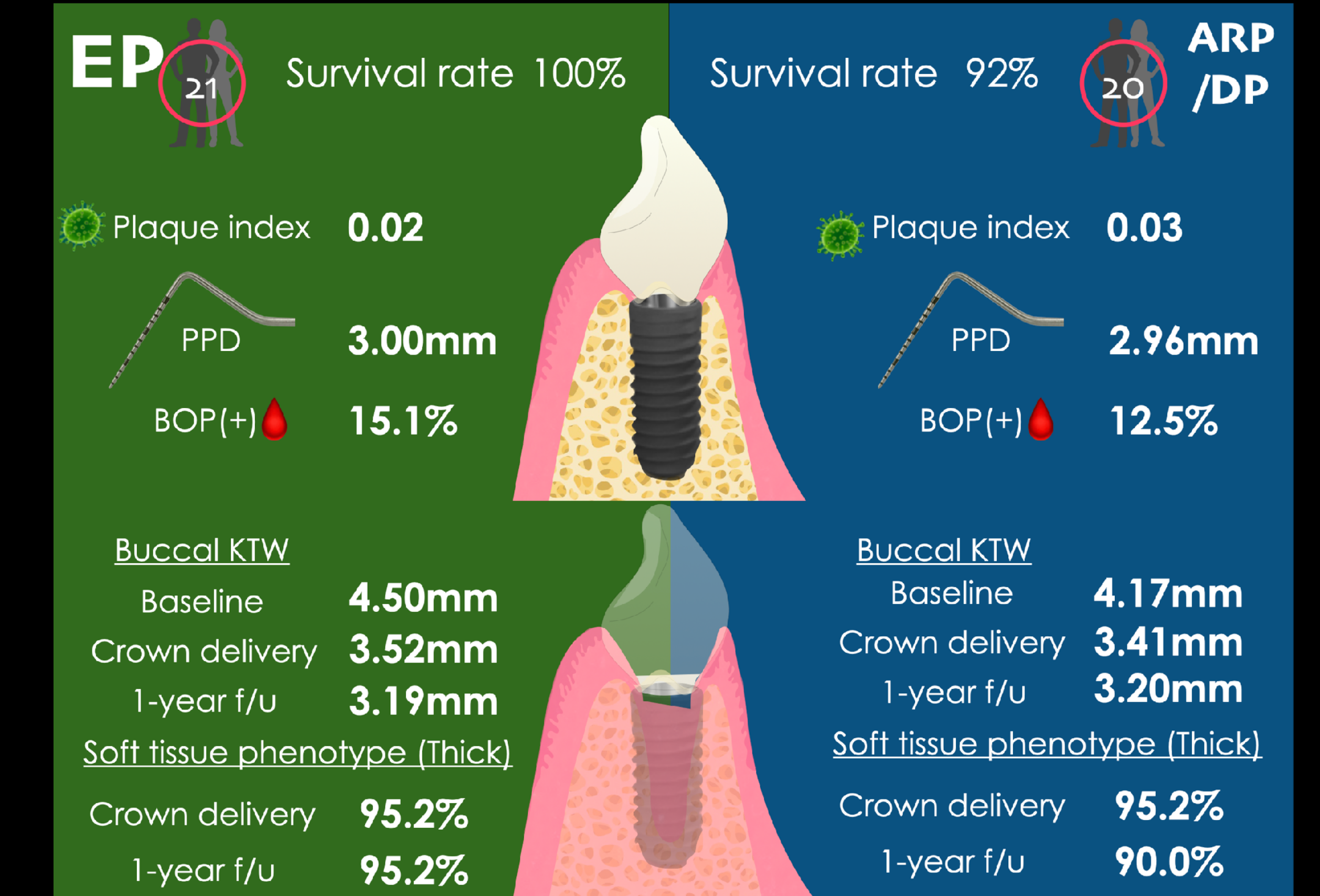
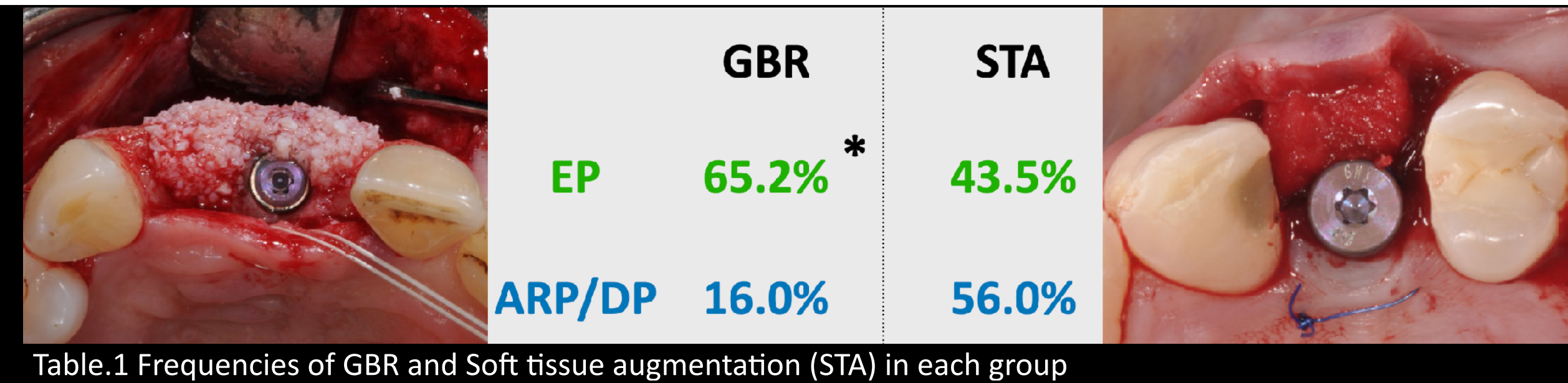
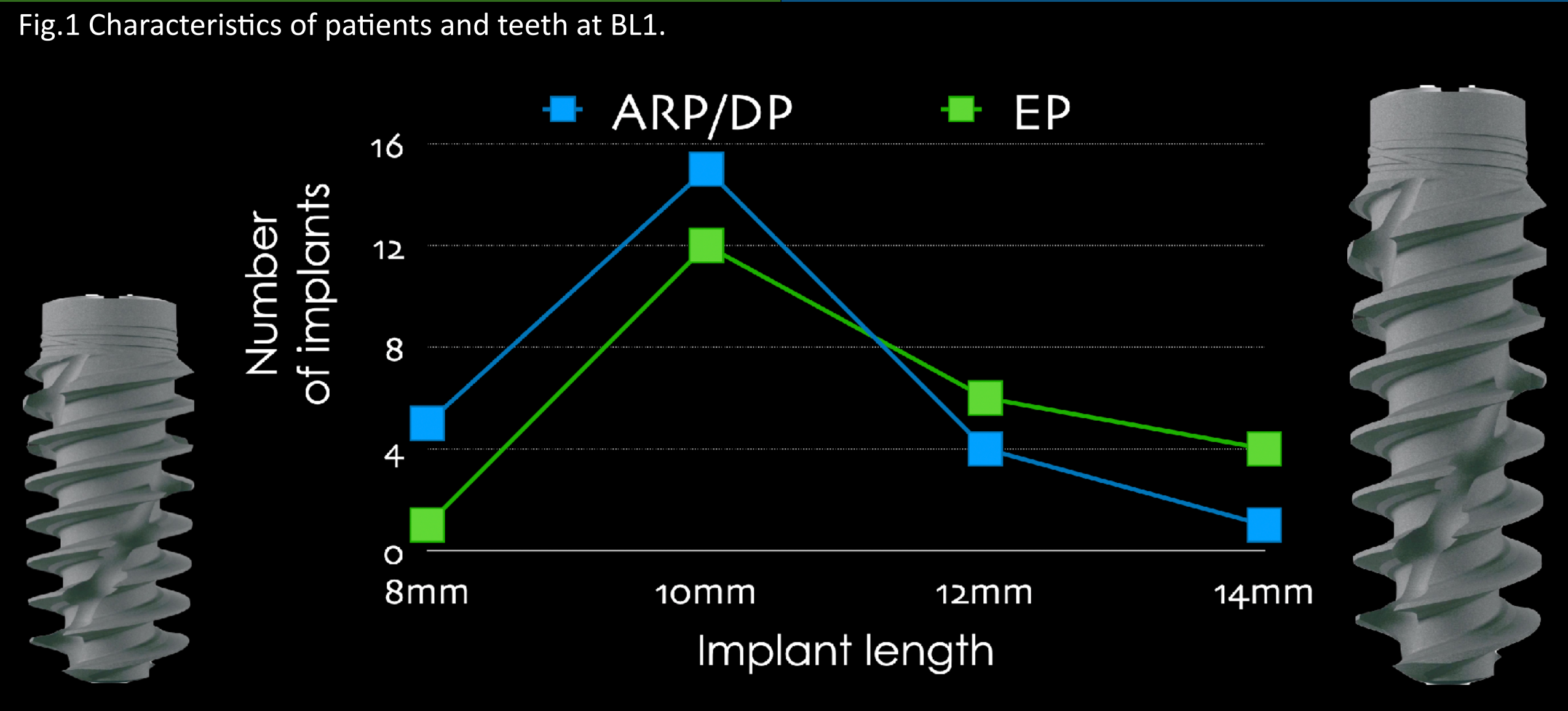
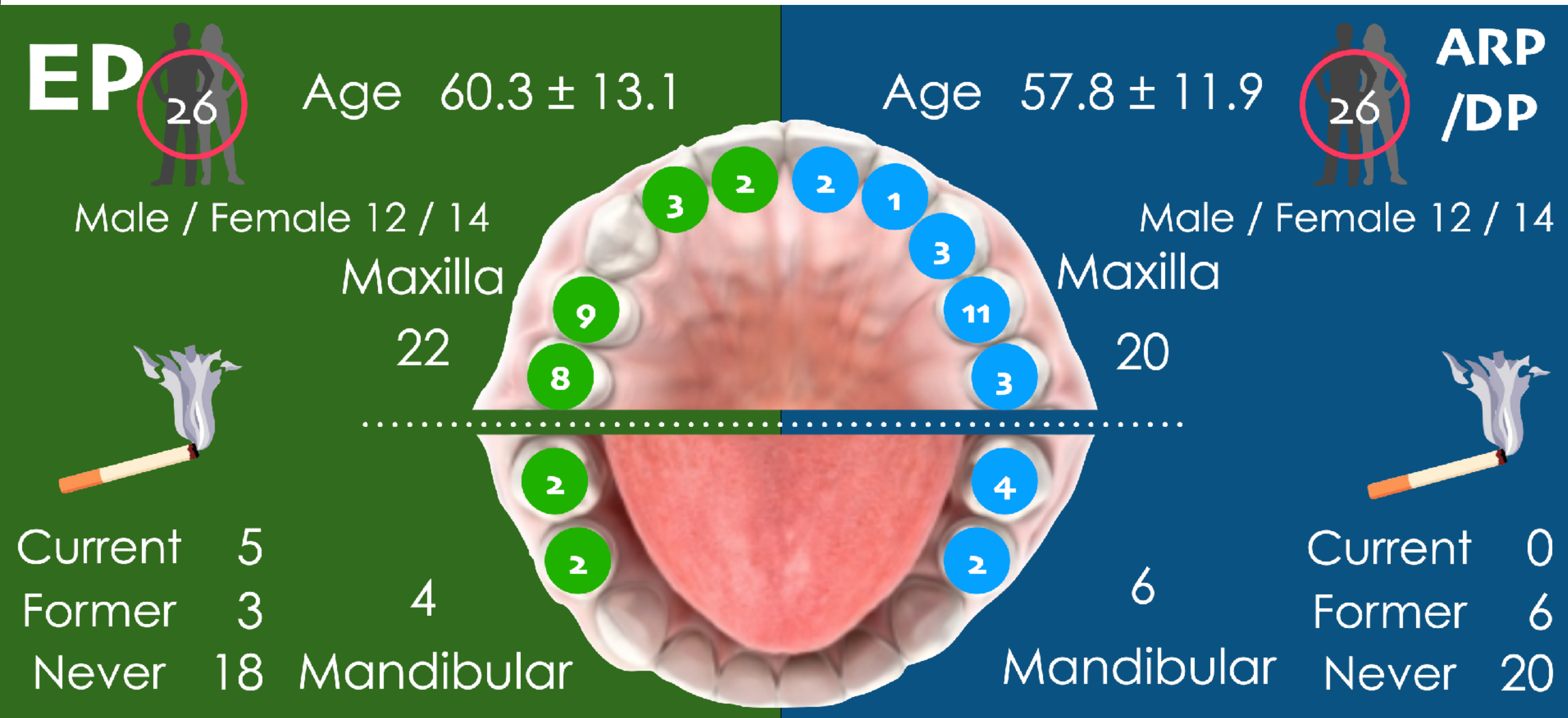


Fig.1 Treatments time courses in each group. The total treatment periods between the both groups were approximately the same.

Result



Result

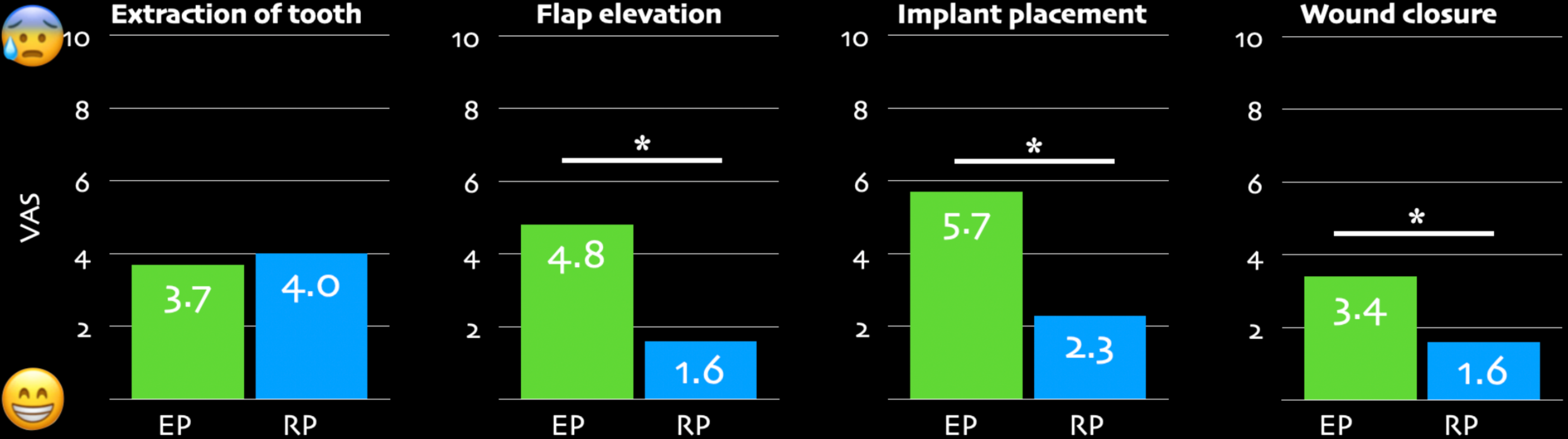
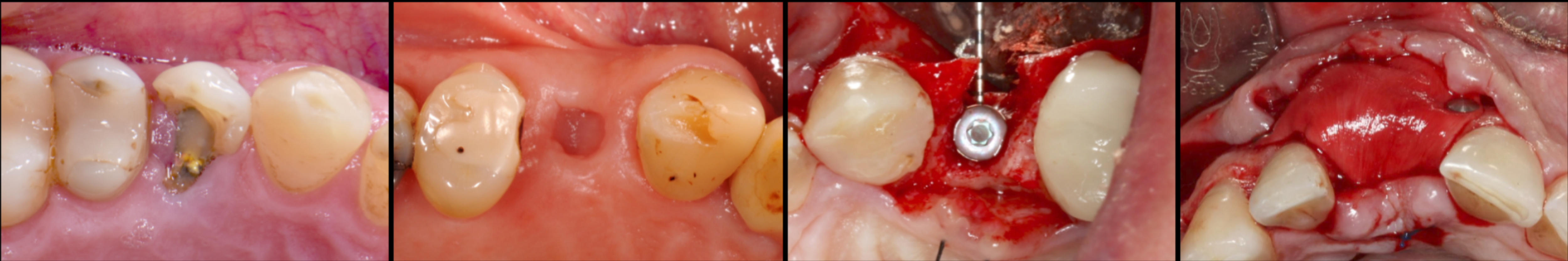


Fig.4 Ease of treatment using a numeric rating scale ranging from 0 (most easy) to 10 (most difficult) across the different procedures of the surgery.

Result

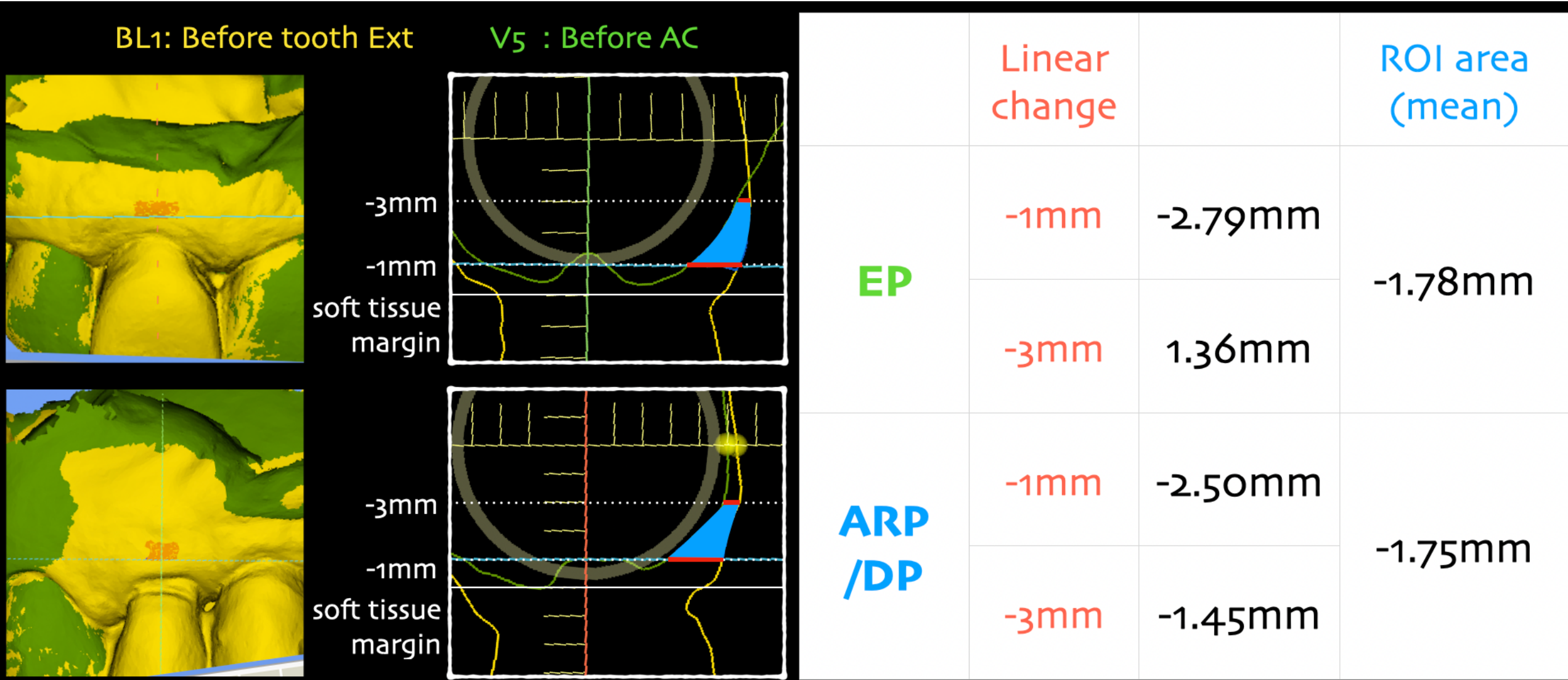


Table.2 Profilometric analysis through superimposing STL data by between Screening; Before tooth Extraction and V5; Before Abutment connection.

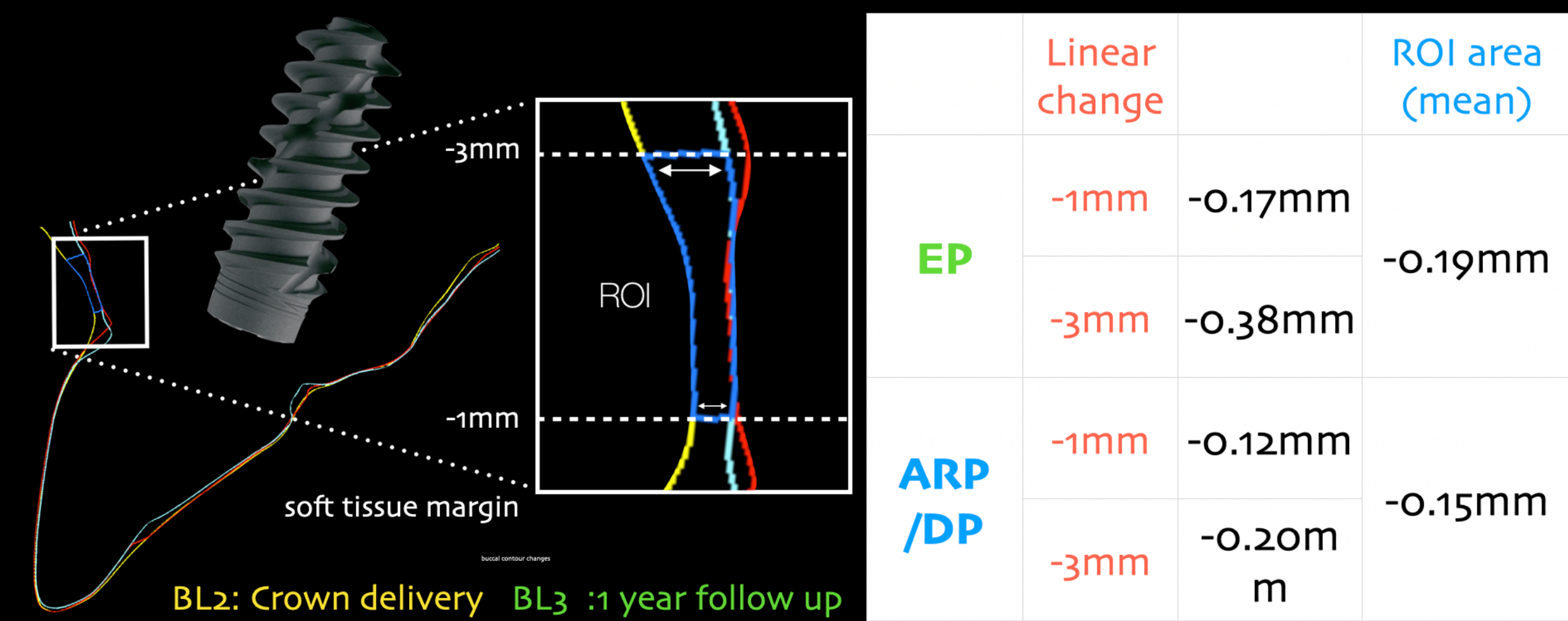


Table.3 Profilometric analysis through superimposing STL data by IOS between BL2; Crown delivery and BL3; 1 year follow up.

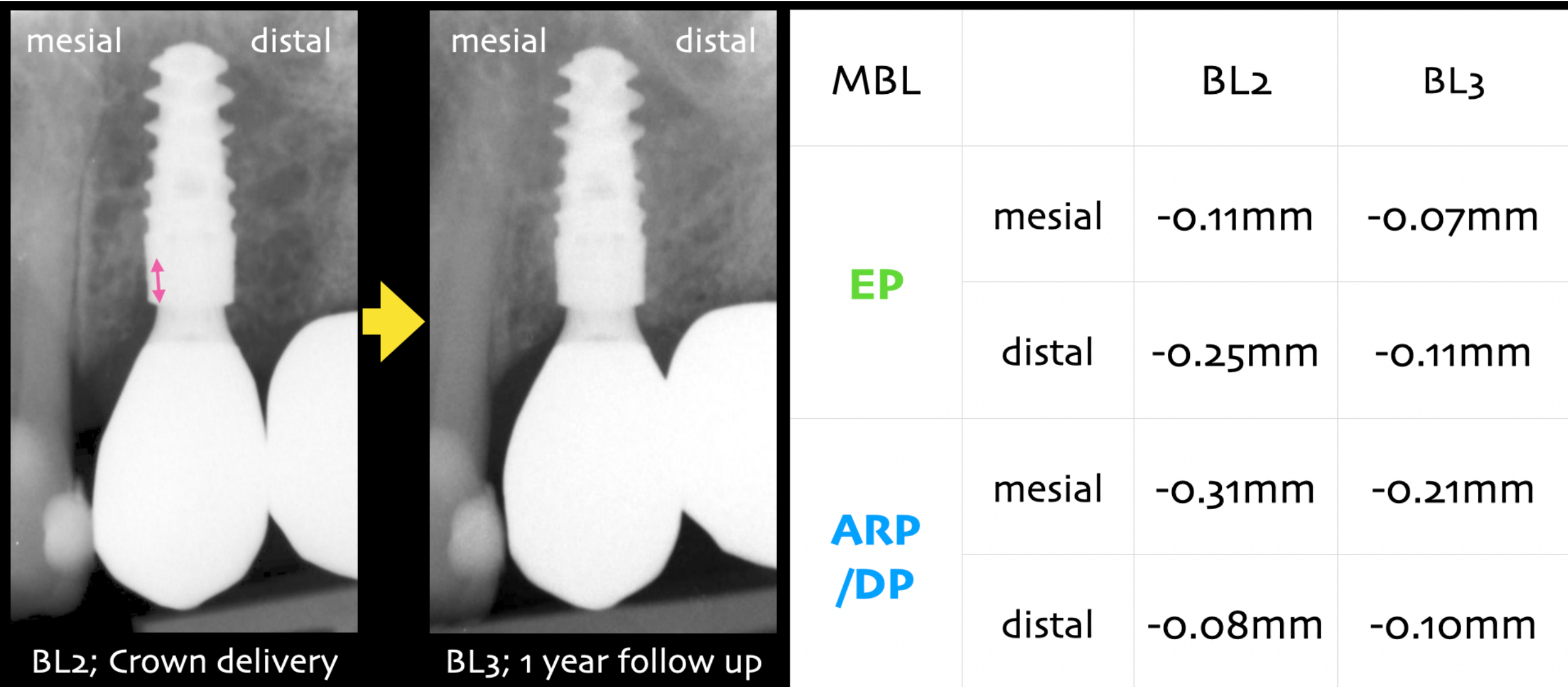


Table.4 MBL measurements on X-ray images at BL2; Crown delivery and BL3; 1 year follow up.

Main findings

- Implant survival and peri-implant tissue health were similar between groups.
- Longer implants were needed in EP group.
- Necessity of additional GBR was significantly higher at EP group.
- Most procedures at implant placement was significantly more difficult in EP group.
- Contour changes on the buccal side of the extraction site from pre-tooth extraction were radiographically and profilometrically similar in both groups.
- MBL on peri-apical X-ray images were clinically stable in both groups.
- Aesthetic outcomes were similar in both groups.
- Overall satisfaction of patients was quite high in both groups.
- Overall satisfaction of dentists were slightly higher in ARP/DP group.

Result & Conclusion

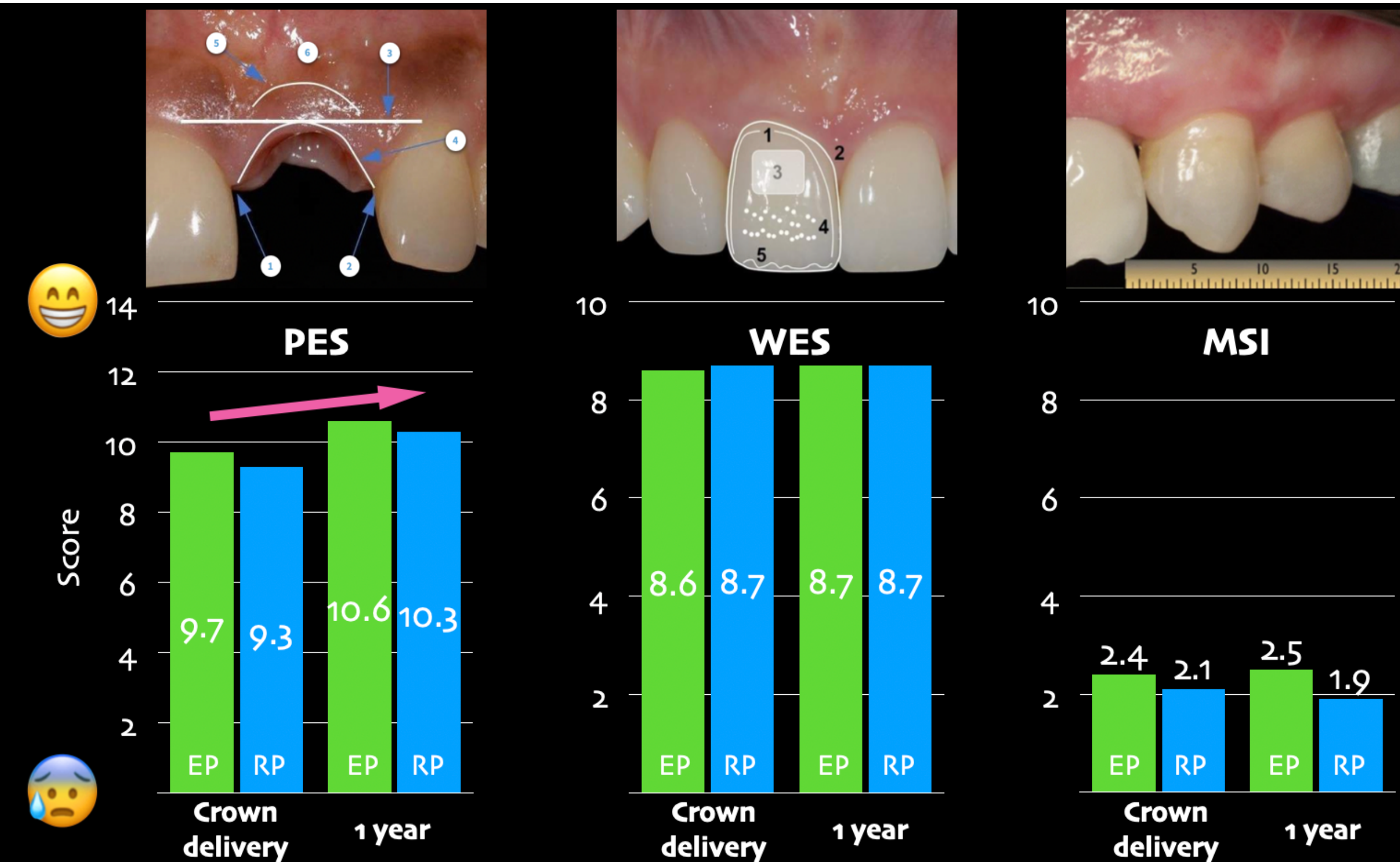


Fig.5 Aesthetic evaluations (PES, WES, and Mucosal scarring index; MSI) of implant sites at crown delivery and 1 year follow up.

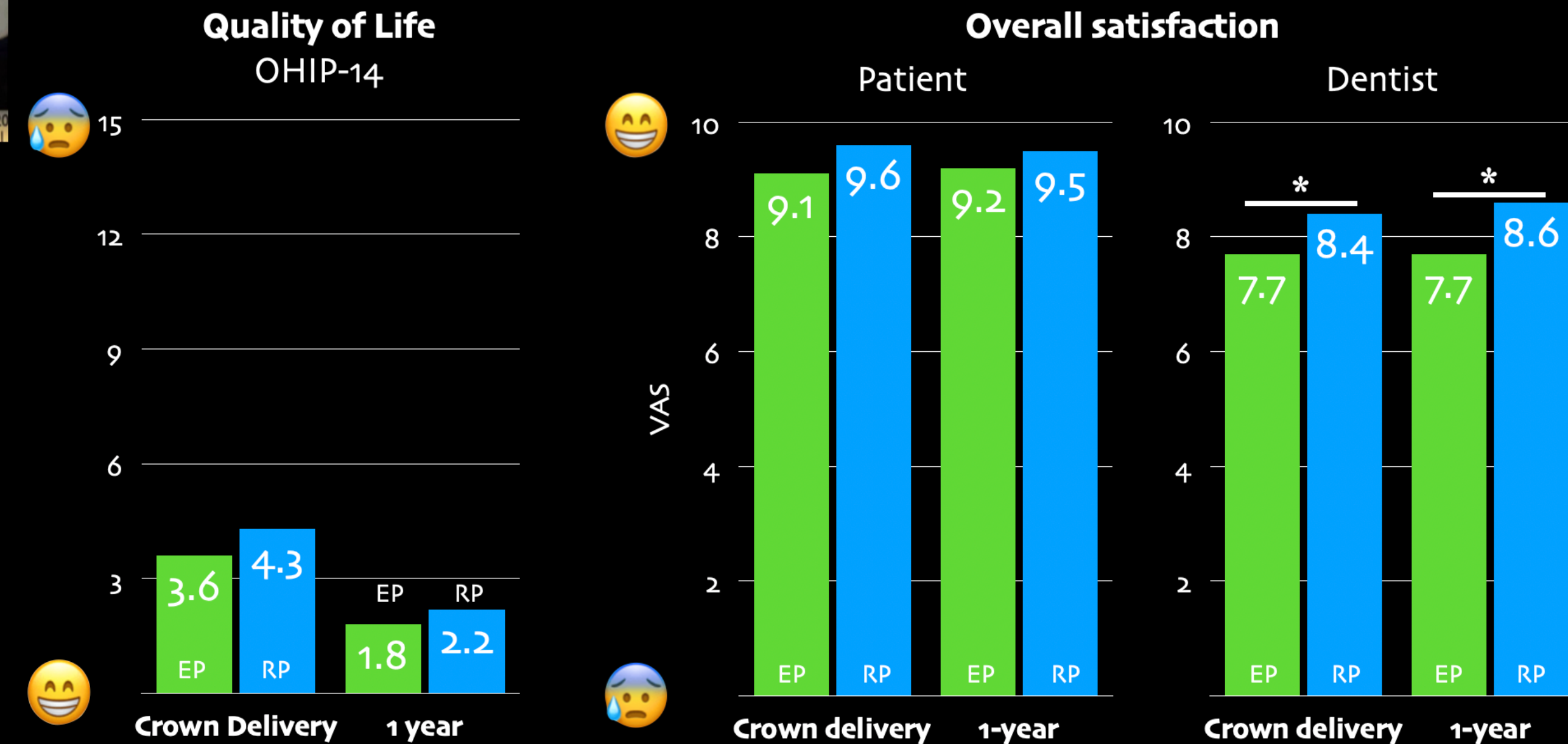


Fig.6 The evaluations of Patient- and Clinician-reported outcomes; OHIP-14 for dental QOL, Overall satisfaction of Patient and Dentist.

CONCLUSION

- **Early placement (EP)** and **ARP with delayed placement (ARP/DP)** yielded comparable outcomes for peri-implant tissue health, buccal contour change, marginal bone loss (MBL), esthetics, and patient-reported measures.
- However, **EP** more often required longer implant lengths and simultaneous GBR at the time of implant placement.
- By contrast, **ARP/DP** was technically simpler for surgeons across all surgical stages.
- Clinicians reported slightly higher overall satisfaction with the treatment than did patients.



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