

# Immediate Insertion and Provisionalization of OsseoSpeed™ Profile EV Implants in the Esthetic Zone: Early Results

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Topic: Implant insertion after tooth extraction: Clinical outcomes with different approaches

## BACKGROUND AND AIM

In the anterior zone of the maxilla, the main problem to overcome is the physiological height difference between the oral, inter-proximal and facial bone and the soft tissue levels. To cover this problem a sloped implant has been developed with a height difference of the implant shoulder of approximately 1.5 mm to support the peri-implant structures circumferentially. This study evaluates the early clinical outcome (survival rates, marginal bone levels and Pink Esthetic Score (PES)) of OsseoSpeed™ EV Profile implants inserted into extraction sockets applying immediate provisionalization in the anterior maxilla.



Fig.1: OsseoSpeed Profile EV Implant with a bucco-lingual height difference of 1.3 mm to 1.7 mm.

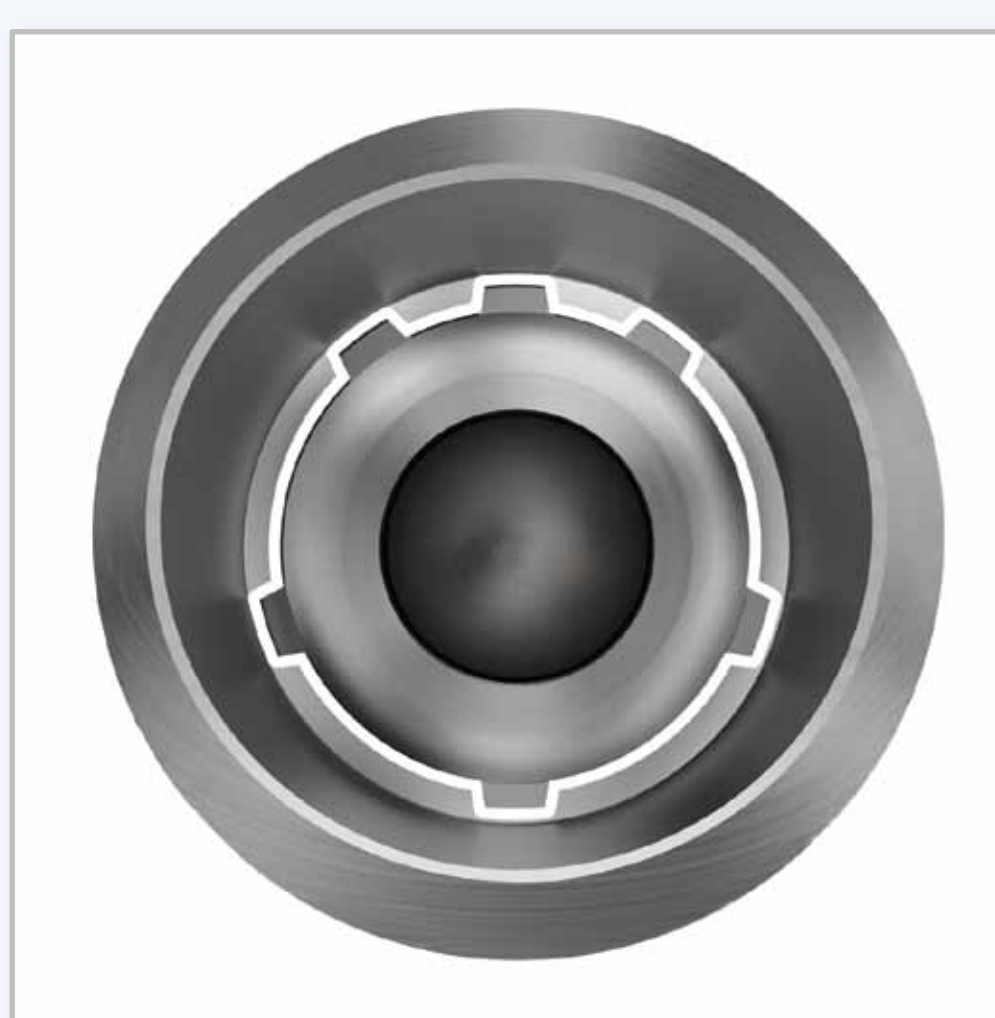


Fig.2: New internal connection with one-position only feature for the OsseoSpeed Profile EV Implant.

## METHODS AND MATERIALS

A total of 11 OsseoSpeed EV Profile implants were inserted in 7 patients. All implants were immediately placed into extraction sites with and without facial bone deficiencies (2 intact, 4 defect, 5 complete loss). A flapless procedure was utilized and the implants were provisionalized immediately. Facial gaps between the implant and facial tissues were grafted with autogenous bone chips from the mandibular ramus (n=10) or a bone grafting material (Symbios AlgOss 80/20) (n=1). During the clinical study, implant survival, the interproximal bone levels and the PES were evaluated per implant.

## CONCLUSIONS

Survival rates, marginal bone levels, and esthetic results suggest proof of principle for the preservation of marginal bone and the improvement of peri-implant soft tissue esthetics when inserted and provisionalized immediately. With the use of immediate insertion, reconstruction and provisionalization protocol, even extraction sockets with facial bone wall defects can be successfully treated with a favorable esthetic outcome.



Fig.3a: Tooth 11 was traumatized 20 years ago by a horizontal crown and root fracture.



Fig.3b: The occlusal view is showing the facial misposition outside of the alveolar bone contour.

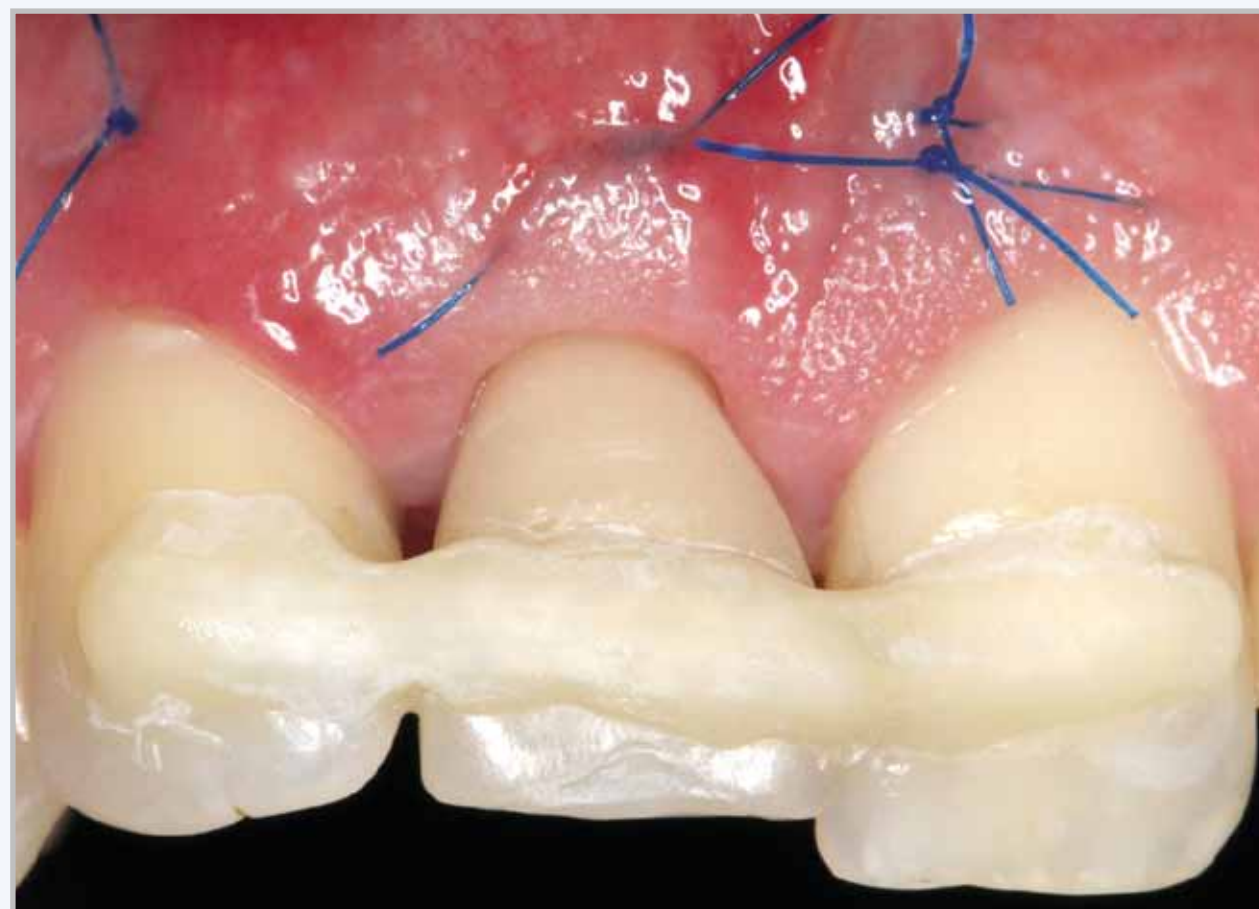


Fig.3c: Immediate insertion, hard and soft tissue reconstruction and provisionalization of an OsseoSpeed Profile EV implant.



Fig.3d: Increased peri-implant soft tissue at 3 months following immediate insertion, provisionalization and reconstruction.



Fig.3e: Horizontal root fracture in the apical part of the root of tooth 11.



Fig.3f: Immediate implant insertion and facial bone grafting.



Fig.3g: Occlusal view of OsseoSpeed Profile EV implant shoulder showing the increased facial tissue volume at 4 months.



Fig.3h: Delivery of the ATLANTIS zirconia abutment. The customized ATLANTIS abutment perfectly supports the emergence profile.



Fig.3i: Delivery of the final zirconia crown supporting the marginal contour at 4 months.



Fig.3j: Harmonious marginal gingival contour of the final zirconia crown after 9 months.



Fig.3k: Maintained interproximal marginal bone level.

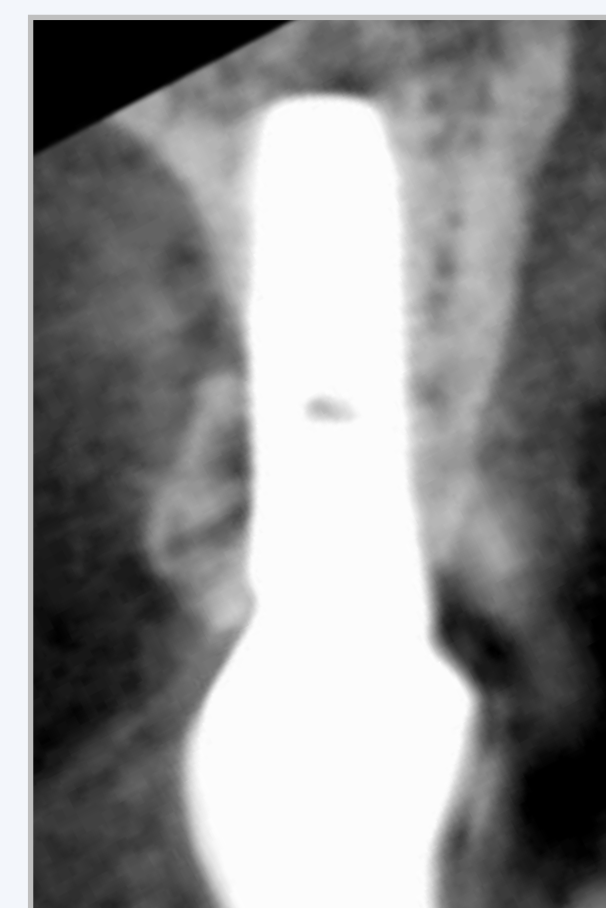


Fig.3l: Successful reconstruction of the facial bone defect.



Fig.4a: Hopeless canine with vertical and horizontal root fracture at pre-operative examination.



Fig.4b: Immediate implant placement into extraction site with total loss of facial bone wall.

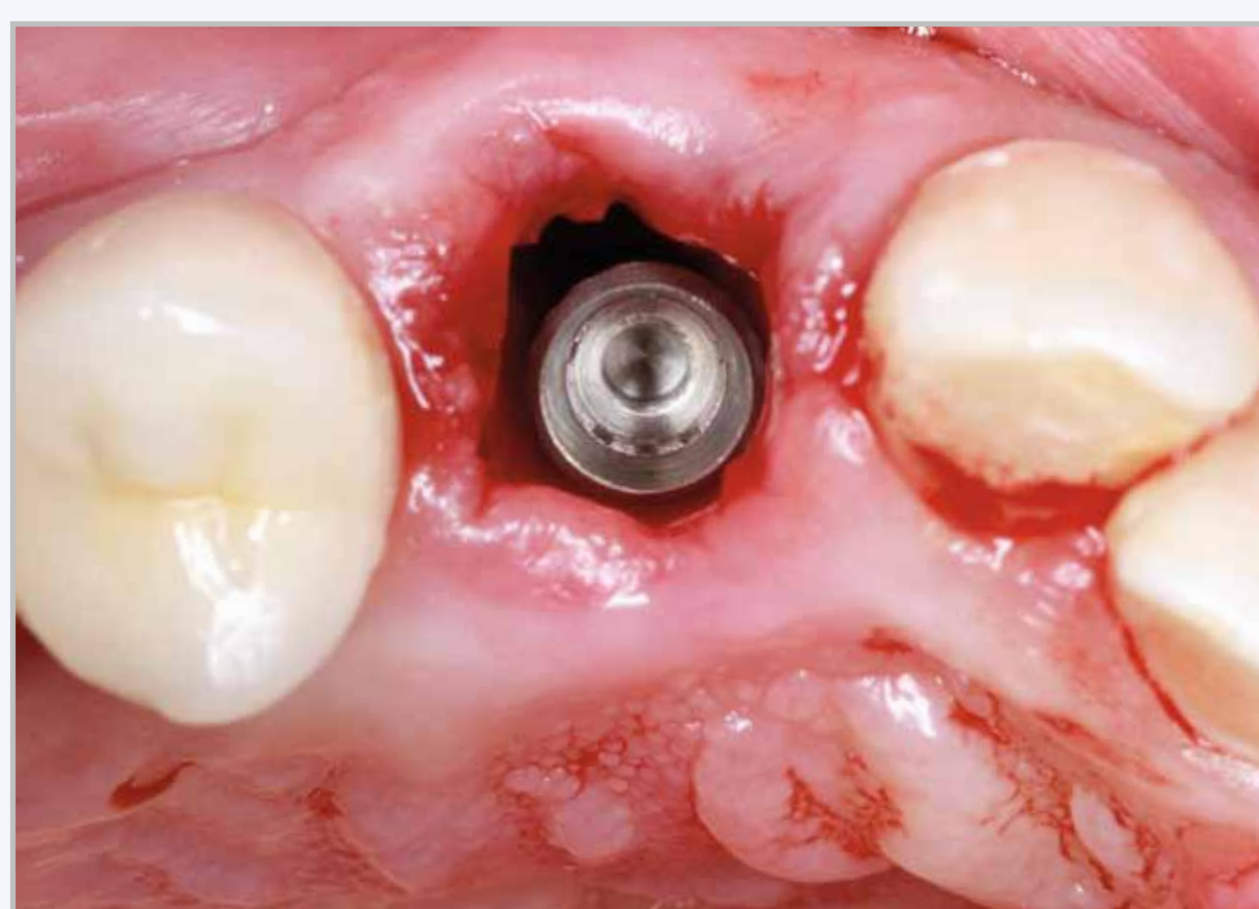


Fig.4c: Alignment of the Profile EV implant in contact to the palatal bone wall of the extraction site.



Fig.4d: Peri-implant grafting with SYMBIOS bone grafting material for reconstruction of the missing bone wall.



Fig.4e: Vertical root fracture after post restoration.



Fig.4f: Pre-op CB-CT reveals total loss of facial bone wall.

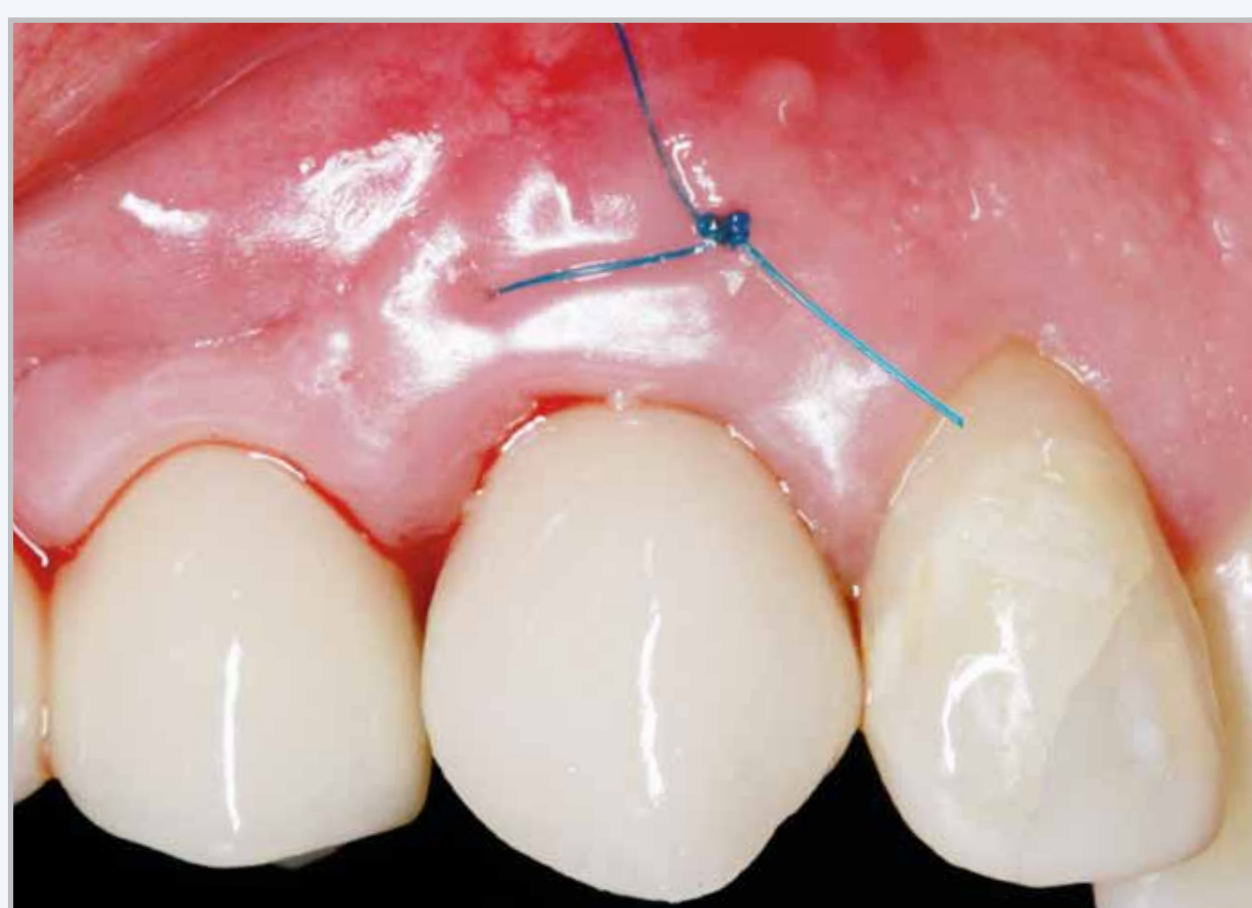


Fig.4g: Immediate provisionalization with an undercontoured temporary crown.



Fig.4h: Delivery of an ATLANTIS zirconia abutment at 3 months.



Fig.4i: Maintained facial soft tissue volume following reconstruction of the facial bone wall at 6 months.



Fig.4j: Improved peri-implant soft tissue level and contour at 6 months.

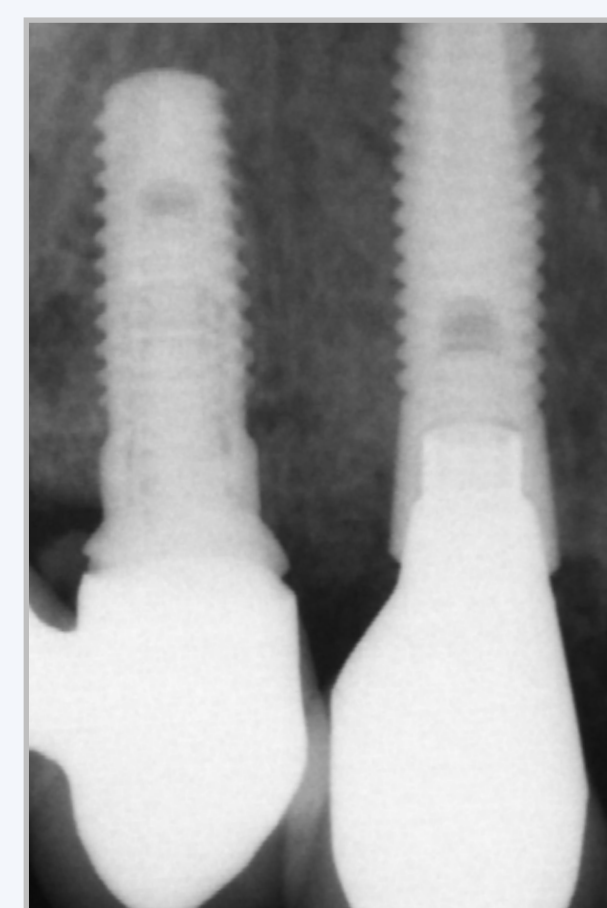


Fig.4k: Maintained marginal bone at the level of the implant shoulder.

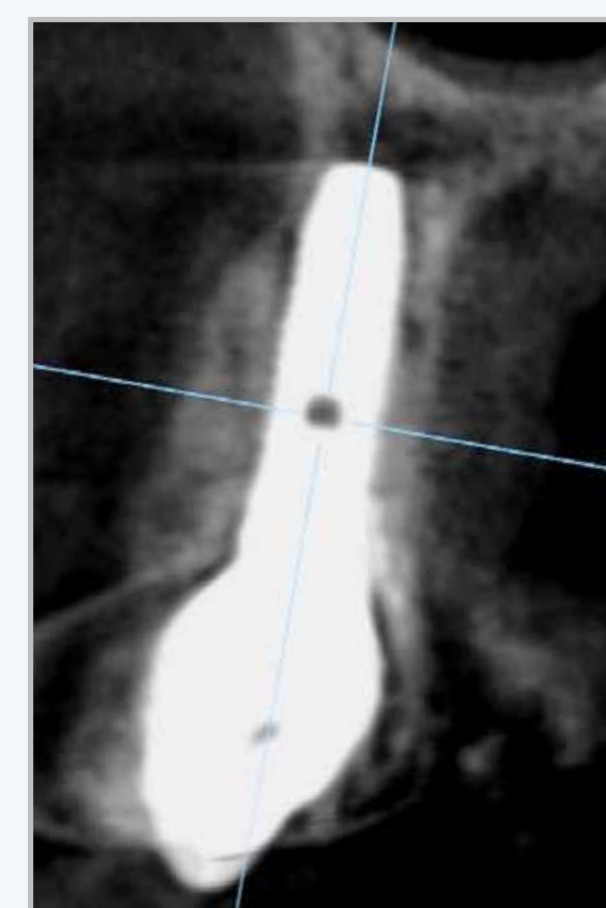


Fig.4l: Reconstruction of the facial bone defect with BGM at 6 months.

## REFERENCES

Noelken R, Oberhansl F, Kunkel M, Wagner W. Immediately provisionalized OsseoSpeed Profile implants inserted into extraction sockets: 3-year results. Clin. Oral Impl. Res. 00, 2015, 1–6.

Cooper LF et al. (2014). Immediate provisionalization of dental implants placed in healed alveolar ridges and extraction sockets: a 5-year prospective evaluation. JOMI 29: 709-717.

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