

# Clinical outcome of 33 immediately loaded NobelZygoma 45° (new design)

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Topic: Implant therapy outcomes, surgical aspects

## Background and Aim

Zygomatic implants have been validated as a satisfactory method for the rehabilitation of atrophic maxilla using a conventional two-stage approach and immediate function protocols.<sup>1-5</sup> Furthermore, these implants can be successfully placed at both intra-sinus and extra-sinus positions. However, most previously published studies were performed using the Brånemark System implants. The objective of this study was to retrospectively assess the clinical outcome of newly designed zygomatic implants with a tapered tip – for ease of use at insertion – and a partially unthreaded body that interfaces with the soft tissue and is not necessarily engaged in bone (Figure 1).

Figure 1:  
Study implant NobelZygoma 45°



## Material and Methods

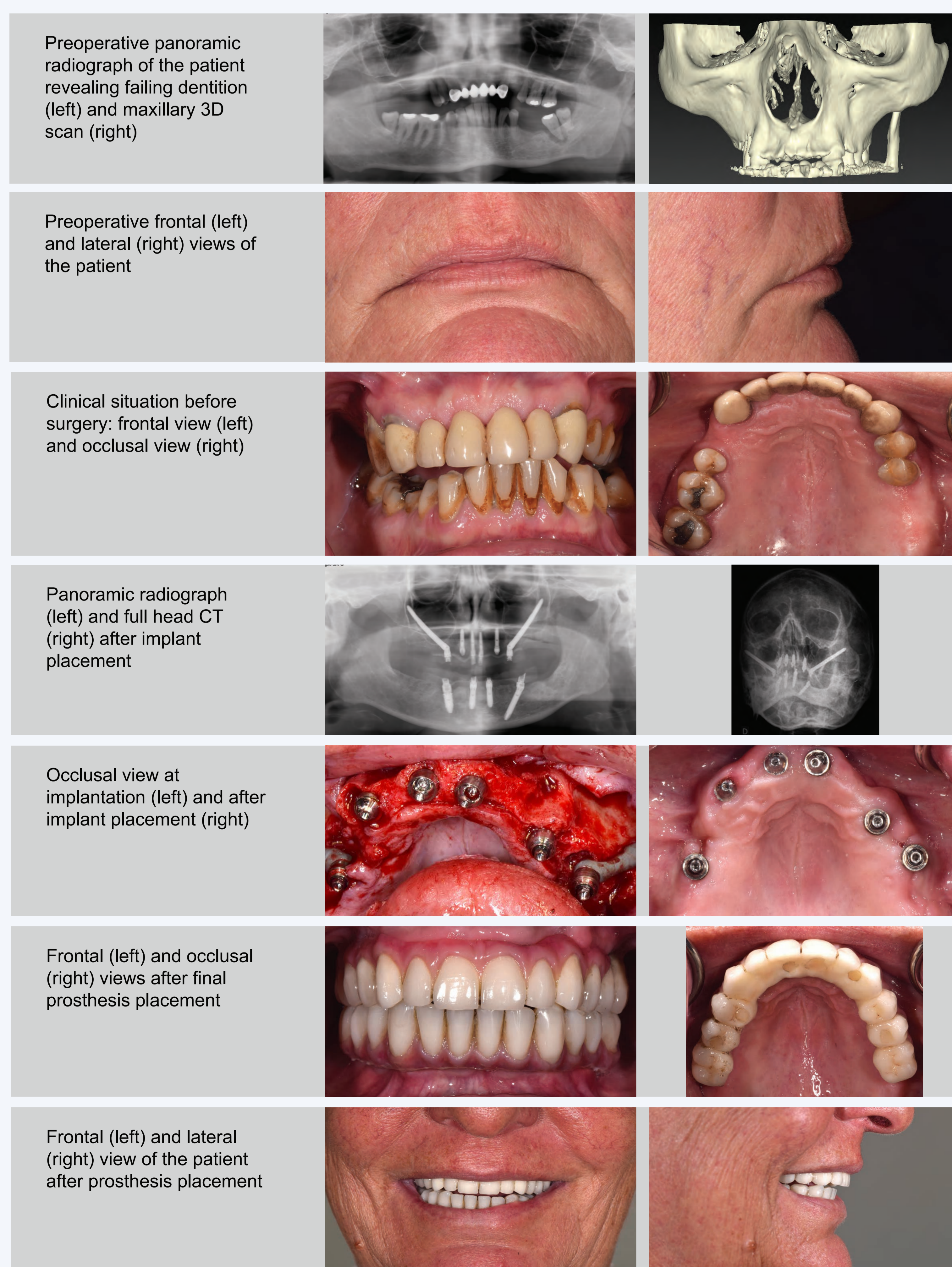
- This retrospective study included patients who received at least one zygomatic implant NobelZygoma 45° (Nobel Biocare AB, Göteborg, Sweden) to rehabilitate severely resorbed edentulous maxillae.
- In addition to the position of each zygomatic implant, the insertion torque and implant stability were also recorded.
- All patients received a fixed screw-retained prosthesis within 48 hours of implant placement.
- Criteria for implant success were: a) the implant acting as an anchor for the functional prostheses, b) no suppuration, pain, or ongoing pathological process at maxillary and zygomatic level, and c) confirmed implant stability.
- Implant survival and prosthetic stability were also recorded.

## Results

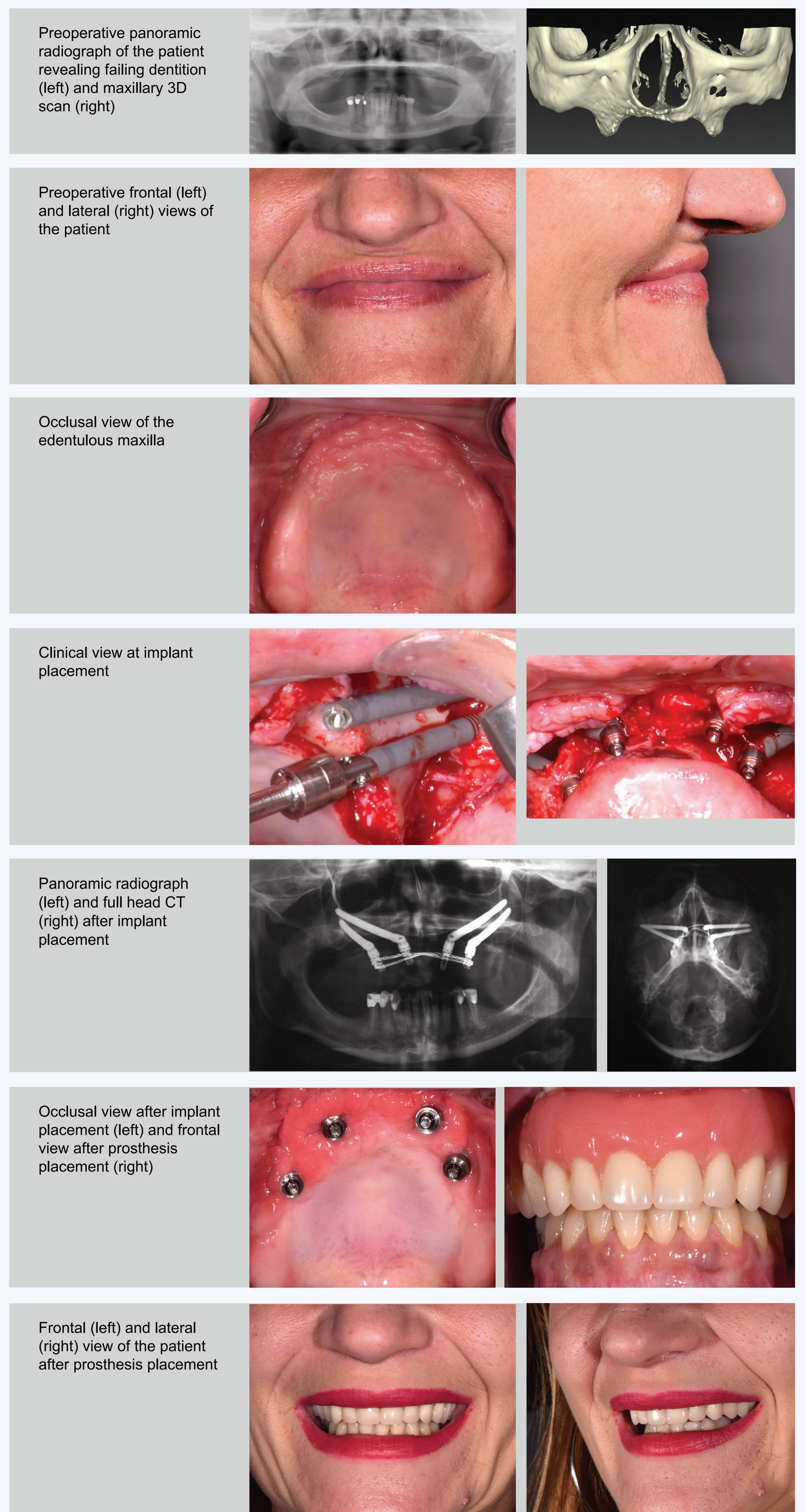
- 13 consecutive patients (5 men, 8 women) with a mean age of 57 years (range 34-79 years) were included in the study. All patients, 12 completely edentulous and 1 partially edentulous, received zygomatic implants in order to enable immediate function and to avoid sinus graft.
- The baseline implant characteristics are shown in Table 1.
- All zygomatic implants achieved primary stability sufficient for immediate loading. The last drill used was 3.5 mm for all zygomatic implants. The insertion torque was 40-45 Ncm (n=29), 30-35 Ncm (n=3), and more than 50 Ncm (n=1).
- Patients were followed for at least 6 months (mean 7.8 months, range 6-13 months). None of the patients dropped out.
- None of the implants (zygomatic or conventional) were lost over the observation period, and the success rate was 100%. All provisional prostheses were stable.

Baseline Implant characteristics	Number
Implant number	
NobelZygoma 45°	33
Conventional implants	26
Number of zygomatic implants per patient	
1	1
2	12
3	12
4	8
Position of zygomatic implants	
Extra-sinus	21
Intra-sinus	2
Maxillary wall	8
Intra- and extra-sinus	2

## Clinical Case 1



## Clinical Case 2



## Conclusions

- The new NobelZygoma implants provide high primary stability necessary for immediate function, can successfully support a fixed provisional prosthesis within 48 hours after the surgery, and thus offer an important option for treatment of a severely resorbed edentulous maxilla.
- The modification of the apex of the implant seems to help to achieve a high primary stability and the modification of the body of the implant (elimination of threads) could improve the relationship of the soft tissues with the implant.

## References

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