

Risk factors driving zygomatic implant outcomes: 3.5-year evidence from consecutive cases

Clinical relevance

High survival rate

98.2% implant survival shows zygomatic implants are a reliable treatment for severe maxillary atrophy.

Low complication rate

76% of implants were complication-free. All complications resolved without acute symptoms.

Enhanced patient quality of life

All patients received immediately loaded temporary prostheses, allowing rapid improvement in quality of life and esthetic restoration.

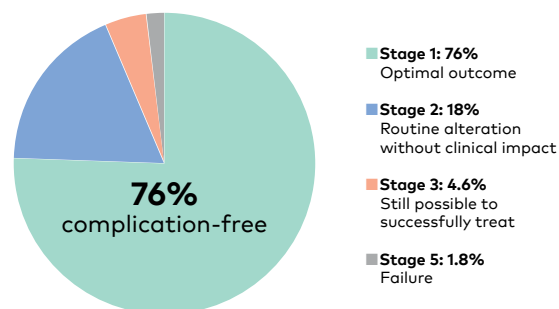


Leroy C, Longis J, Bertin H, Mader M, **Bonnet R**. Complications and risk factors associated with zygomatic implants: retrospective analysis with 73 consecutive patients followed for 3.5 years. Quintessence Int. 2025 30;56(1):46-59.

The results

- 98.2% cumulative survival rate over a mean follow-up of 3.5 years (range 1.0 to 9.8 years).
- Immediate implant loading restored function and esthetics without the healing delays seen with other approaches.
- 76% of zygomatic implants were complication-free. Sinusitis (n=21) and peri-implant inflammatory reactions (n=28), all resolved with no acute symptomology. No osseointegration failure observed after 1-year.
- NobelZygoma™ 45° implants showed a significantly lower risk of rhinosinus complications compared to predecessor, Brånemark System Zygoma TiUnite RP.
- The Chow technique using the Bichat fat pad improved the outcomes, whereas smoking, fresh socket placement, and limited surgical experience had negative effects.

Complications according to ORIS criteria*



* A standardized set of four criteria to evaluate the success of zygomatic rehabilitation: offset measurement (O), rhino-sinus status (R), implant stability (I), and soft tissue health (S).

Study design

Retrospective single-center single cohort clinical study



73 patients



Quad zygoma or hybrid protocols



217 Zygomatic Implants (56% NobelZygoma™ 45°)



NobelZygoma Multi-Unit Abutments (MUAs)



Mean 3.5 years follow-up

Sample clinical case from the study

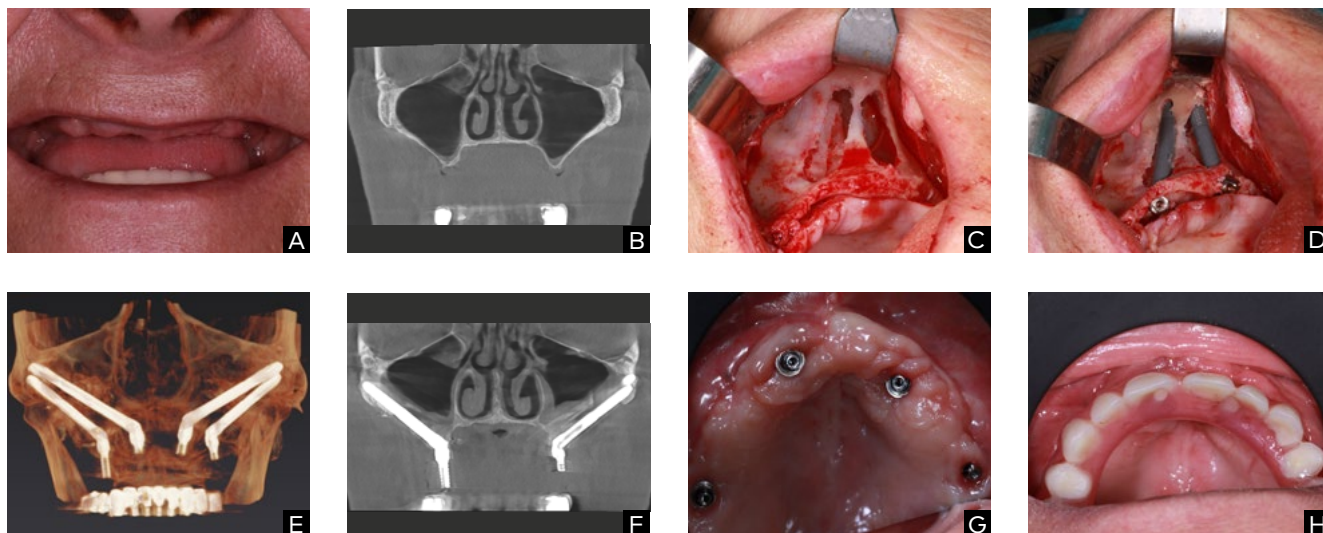


Image courtesy of Drs. Raphael Bonnet and Camille Leroy, France

A healthy 65-year-old female patient with an edentulous maxilla underwent a quad zygoma protocol.

A Initial patient smile. **B** Pre-op CBCT. **C** Pre-op at surgery. **D** After placement of NobelZygoma 45° implants.

E CBCT immediately after surgery. **F** CBCT 6 months post surgery. **G** Soft tissue health 6 months post surgery.

H Definitive prosthesis delivered 6 months after implant insertion

Authors' conclusion

"[Nobel Biocare zygomatic implants] offered a predictable treatment option for extreme upper jawbone atrophy with a relatively low complication rate and no severe injuries. The Chow technique with the Bichat fat pad positively impacted implant success and survival."

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