

Dual Arch Subperiosteal Implant Rehabilitation in a Young Adult with Post-Oncologic Jaw Atrophy: A Case Report in a Patient with History of Rhabdomyosarcoma

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Purpose/Aim

- Presenting the prosthetic and surgical management of a maxillomandibular atrophy with a prosthetically driven, digitally designed, custom subperiosteal implants.

Initial Presentation

- A 28-year-old female with a history of childhood rhabdomyosarcoma managed with radiation and chemotherapy.
- She presented with extreme ridge resorption, hypodontia, tooth mobility, and collapsed vertical dimension.

Diagnostic Tools

Initial diagnostics included:

- Comprehensive examination and medical history.
- Intra-oral scans and photographs.
- CBCT imaging.
- Treatment plan, review, consent.

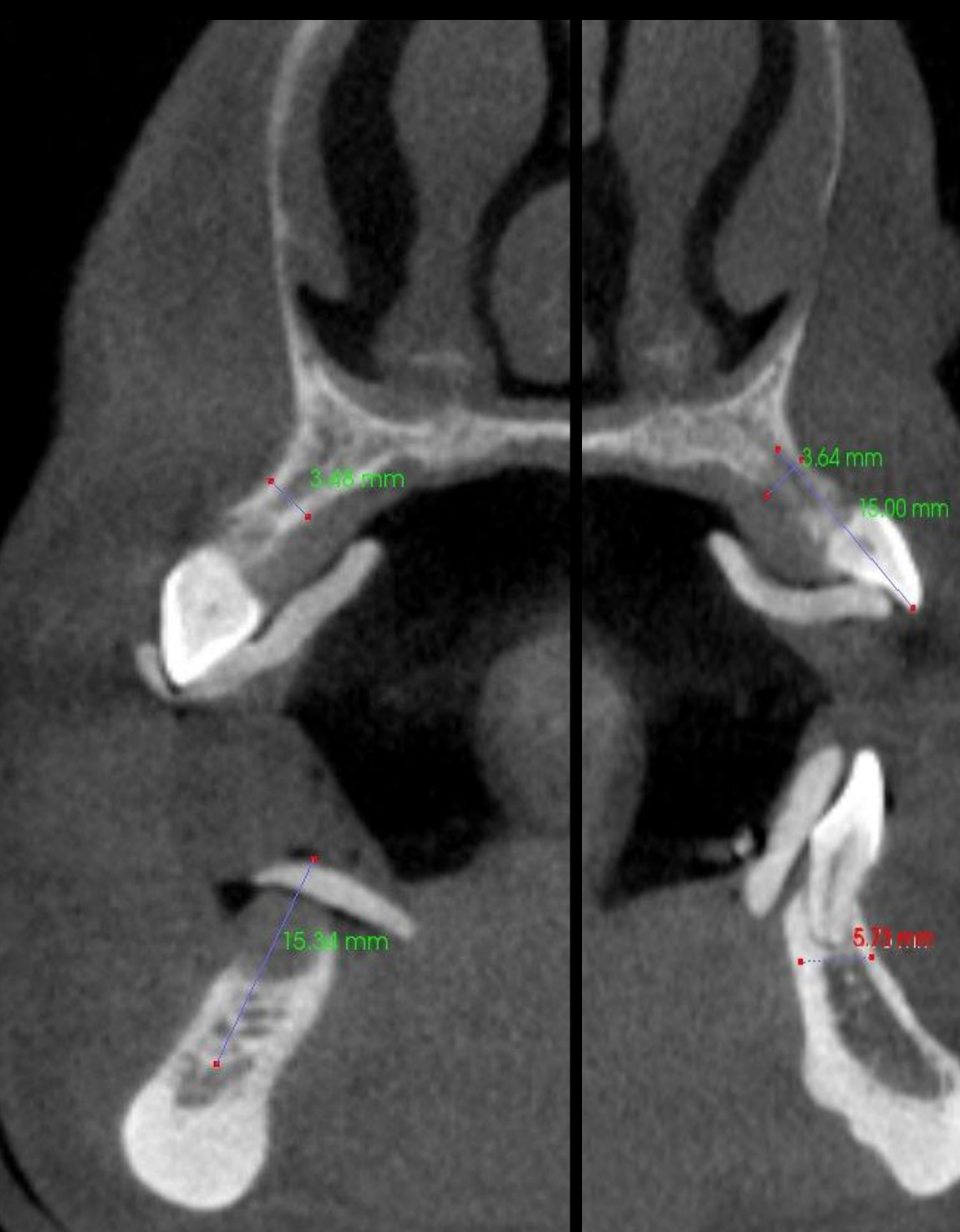
Results

- Dual-arch titanium subperiosteal implants provided fixed rehabilitation without bone grafting, using digital design for precise fit and stability.
- 12-month follow-up showed stable implants and healthy peri-implant tissues.
- Patient reported improvements in mastication, speech, comfort, and quality of life.

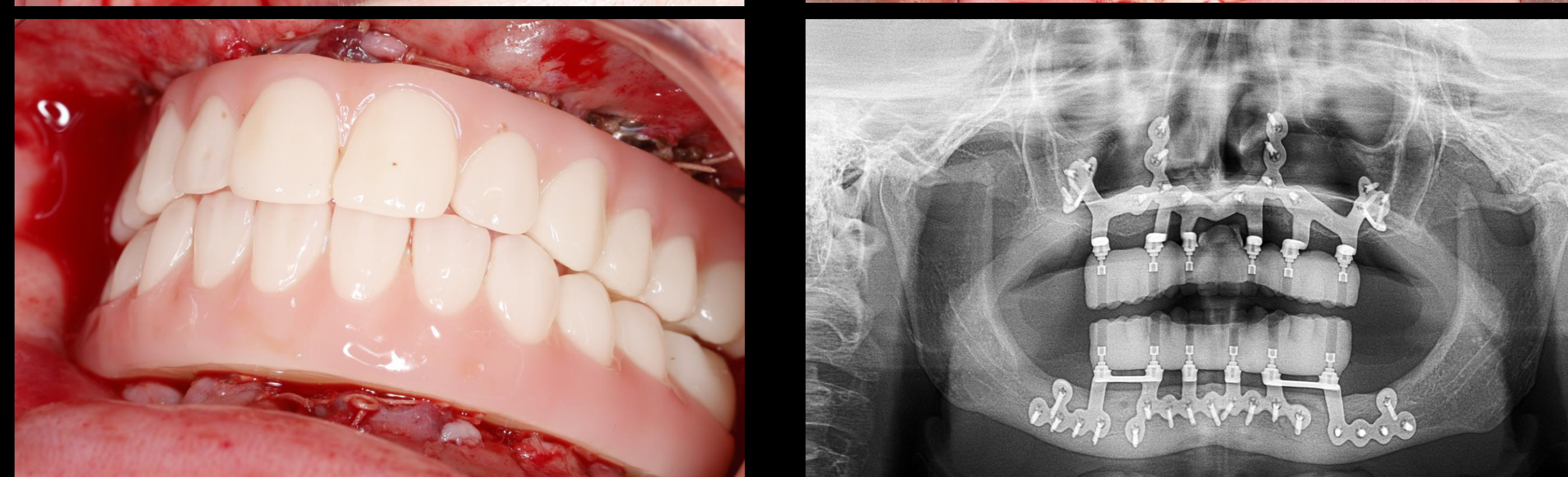
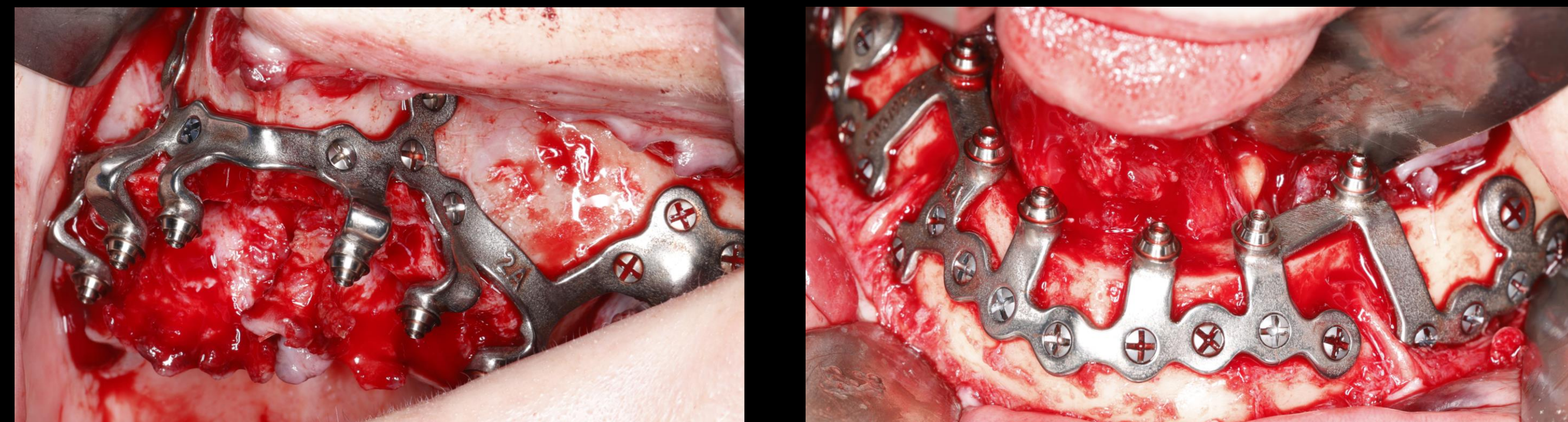
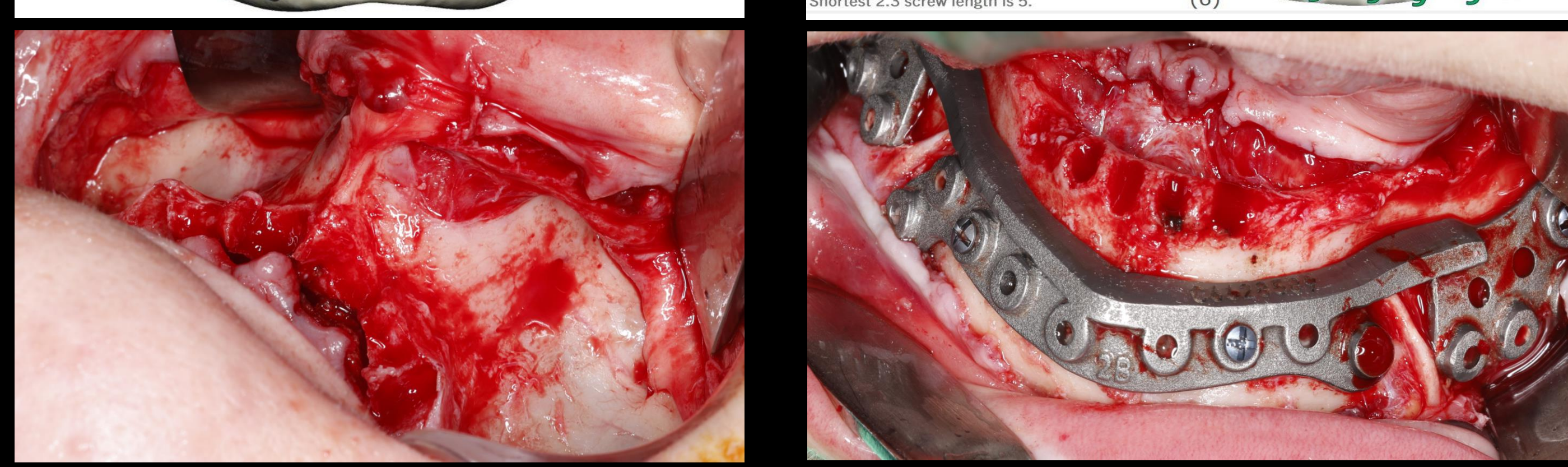
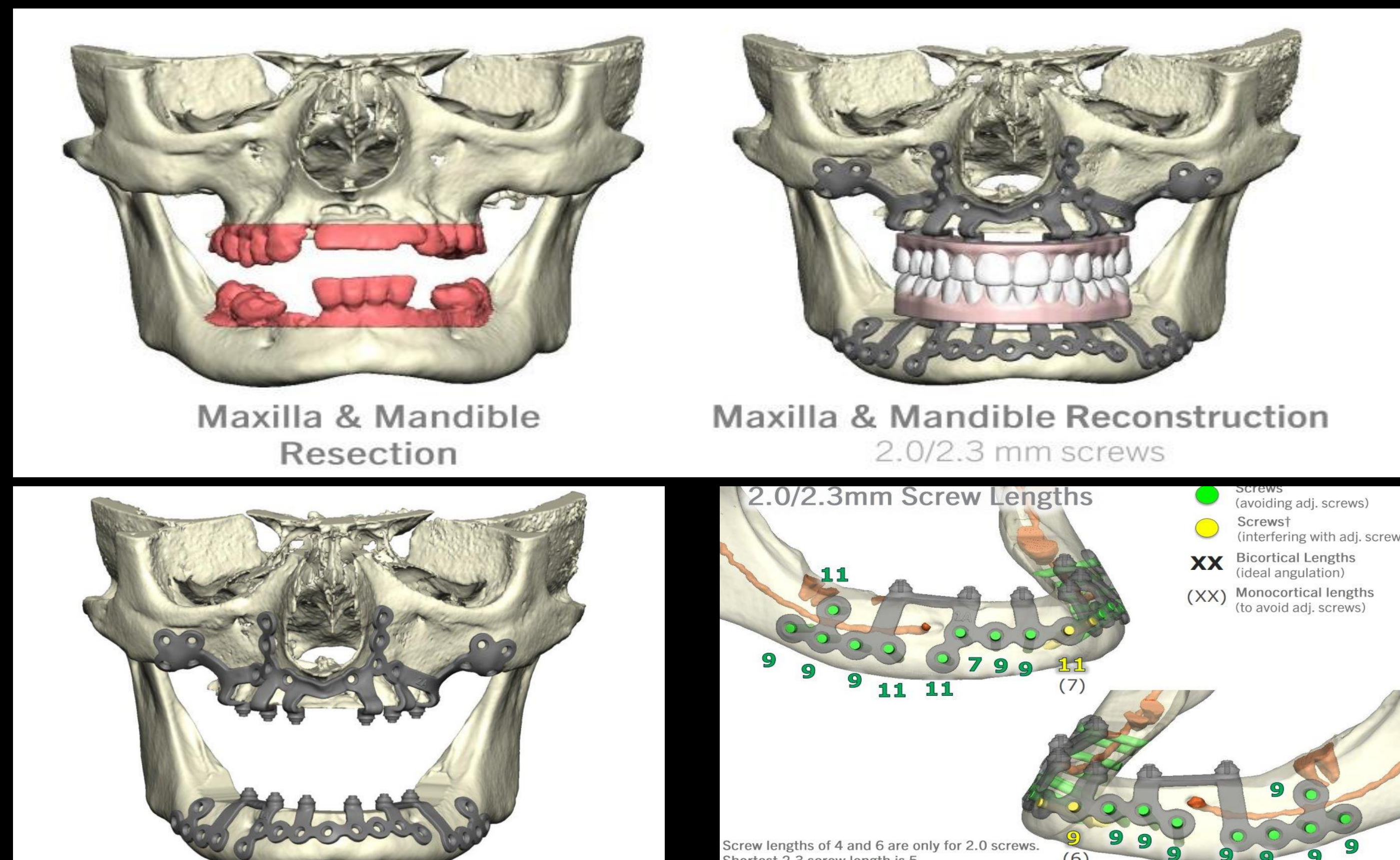
Conclusion

- In cases of severe post-oncologic jaw atrophy where bone grafting or endosseous implants are not possible, digitally designed custom subperiosteal implants enable patient-specific, prosthetically driven rehabilitation with predictable functional and esthetic outcomes.

Diagnosis and Treatment Planning



Surgical Design



Digital Designs and Prototypes

