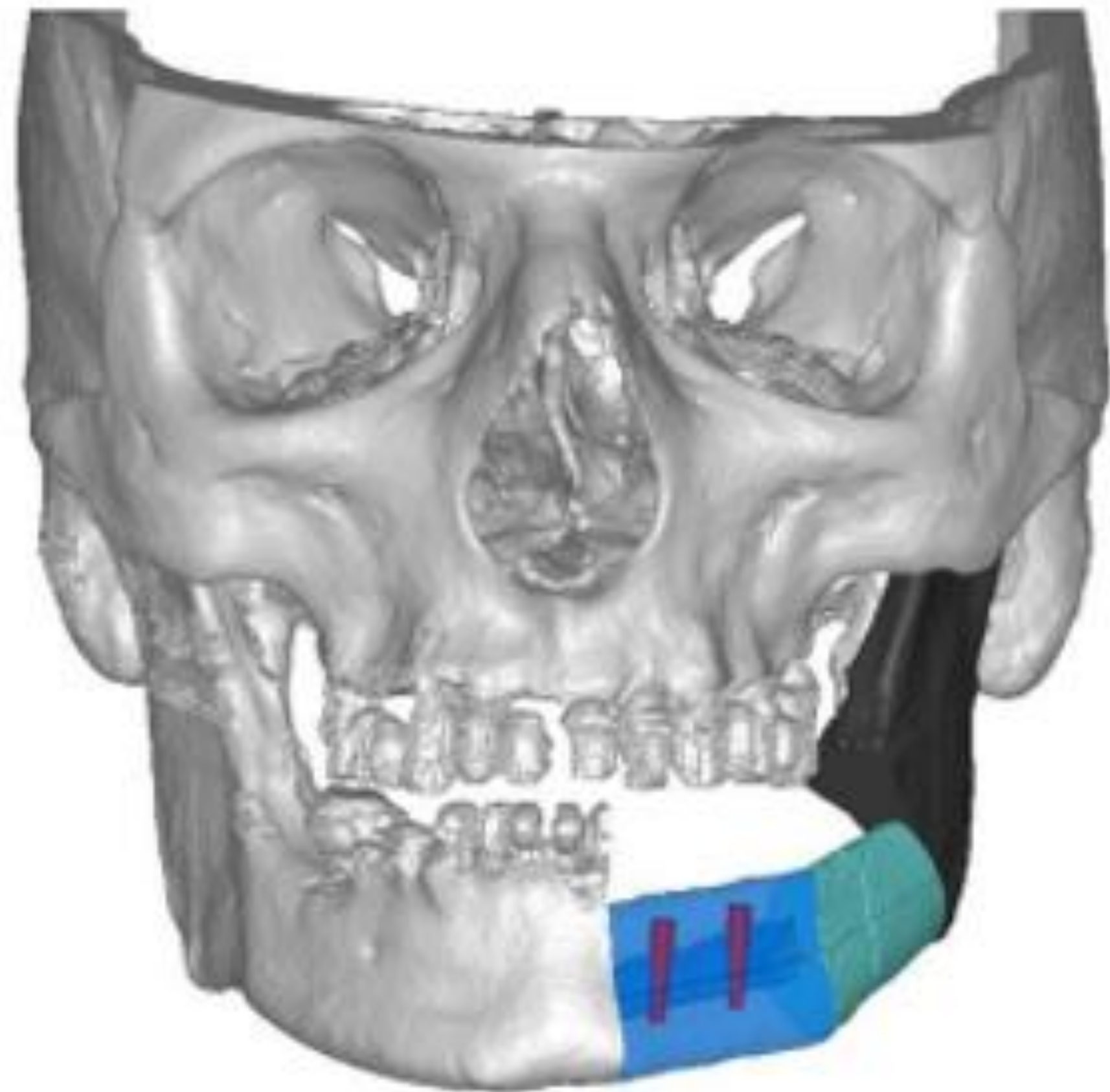


A Long-term Evaluation of Immediate Dental Implant Placement in Free Fibula Flaps for Mandibular Reconstruction

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Background

- Dental restoration is an important part of rehabilitation after mandibular reconstruction.
- Dental prosthetics supported by implants are superior to traditional prostheses with respect to quality-of-life outcomes.
- Immediate dental implant placement (IDIP) is a relatively new technique in the oncologic setting.
- Long-term outcomes for IDIP have yet to be evaluated with respect to a control group.



Objective

- Evaluate long-term clinical and dental outcomes for IDIP group vs. non-IDIP control group.

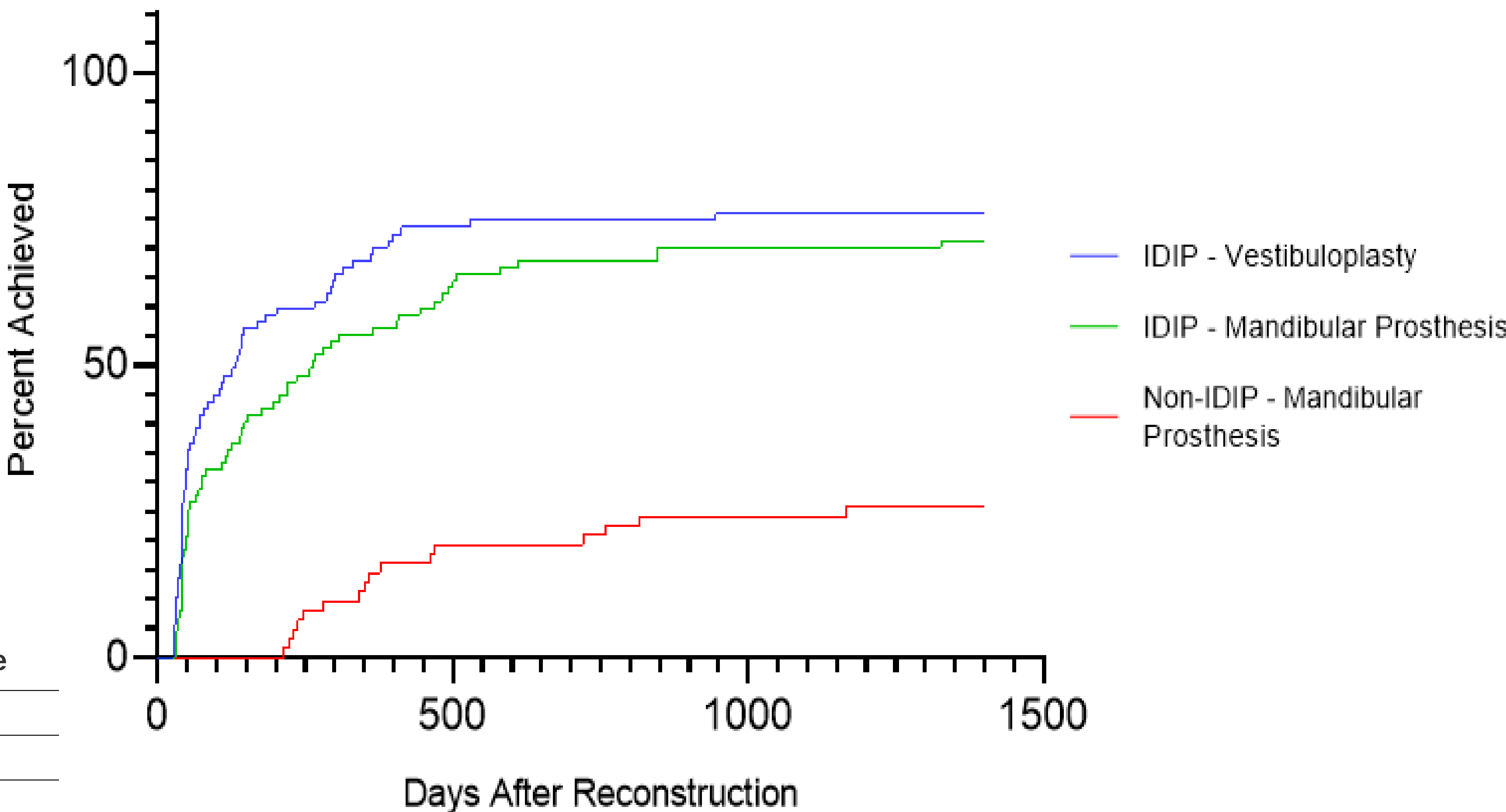
Methodology

- Retrospective review from 2010-2022 of adult patients who underwent free fibula flap mandible reconstruction with virtual surgical planning.
- Evaluation of long-term recipient site complication profile and dental outcomes.
- Major complication: Requiring return to OR
- Long-term criterion:
 - 6 months following adjuvant RT
 - OR
 - 1 year following reconstruction without adjuvant RT.

Results

Complications, n (%)	IDIP (n=87)	Non-IDIP (n=62)	p-value
Overall	24 (27.6%)	22 (35.5%)	0.369
Major	14 (16.1%)	14 (22.6%)	0.396
Minor	10 (11.5%)	8 (12.9%)	0.804
Complications Overall, n (%)			
Total Flap Loss	0 (0%)	0 (0%)	N/A
Partial Flap Loss	0 (0%)	0 (0%)	N/A
Flap Compromise	0 (0%)	0 (0%)	N/A
Osteoradionecrosis	8 (9.2%)	10 (16.13%)	0.214
Wound Dehiscence	2 (2.3%)	0% (0)	0.511
Wound Infection/Cellulitis	9 (10.34%)	3 (4.84%)	0.360
Malunion/Nonunion	1 (1.15%)	1 (1.61%)	1.000
Fistula	4 (4.6%)	2 (3.23%)	1.000
Contour Irregularities	2 (2.3%)	4 (6.45%)	0.234
Exposed Hardware	11 (12.64%)	5 (8.06%)	0.432

Rate of Dental Rehabilitation



Conclusions

- IDIP in the oncologic setting demonstrates a non-inferior long-term safety profile.
- IDIP patients achieve dental rehabilitation at a significantly higher rate.
- IDIP patients achieve dental rehabilitation at a significantly earlier time.

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