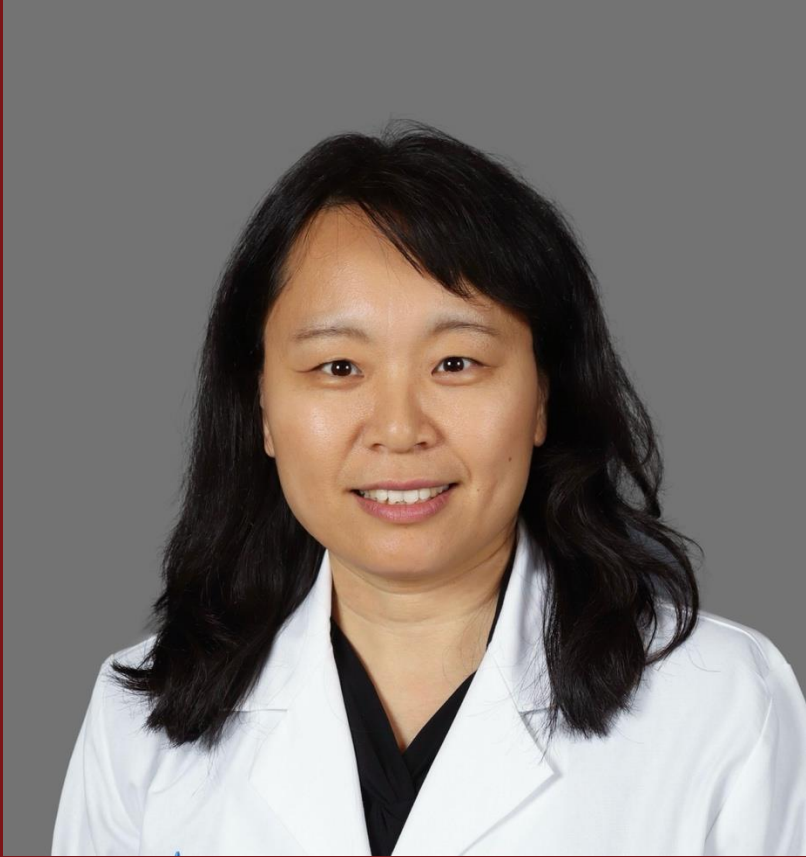




# Integrated Digital Workflow for Guided Alveoplasty and CAD-CAM Denture in an Edentulous Patient with Condylar Resorption

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### Introduction

Although complete dentures remain the conventional treatment modality for edentulous patients, their fabrication can be particularly challenging due to anatomical complexities and limited prosthetic space.

### Purpose

To present a digitally integrated, prosthetically driven workflow incorporating guided mandibular alveoplasty and CAD-CAM complete denture fabrication in the management of a fully edentulous patient with limited restorative space due to severe bilateral condylar resorption.

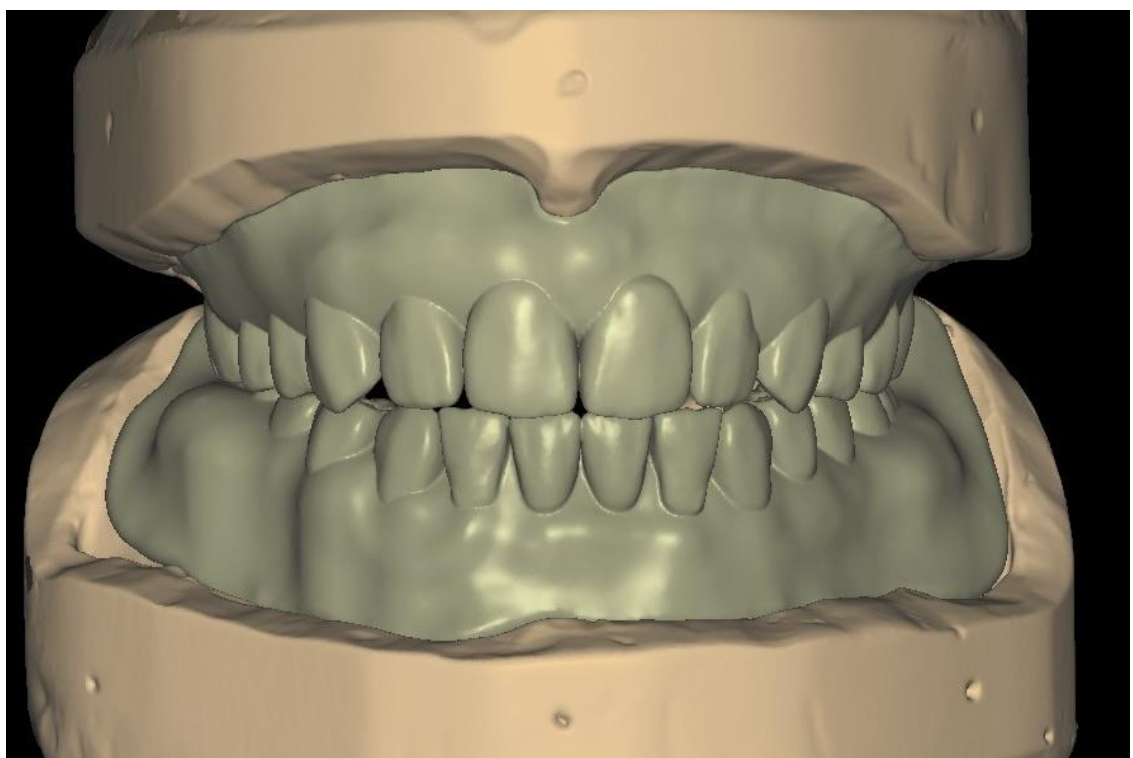
### Clinical Procedures

- 1) A fully edentulous patient presented with Class II malocclusion, and limited restorative space.
- 2) Digital denture design and Dual scan.
- 3) Guided mandibular alveoplasty, and one-month post-surgery follow-up.
- 4) A try-in denture was designed, 3D-printed and used to evaluate occlusion, esthetics, and phonetics.
- 5) Definitive 3D-printed denture was designed, manufactured, and delivered.

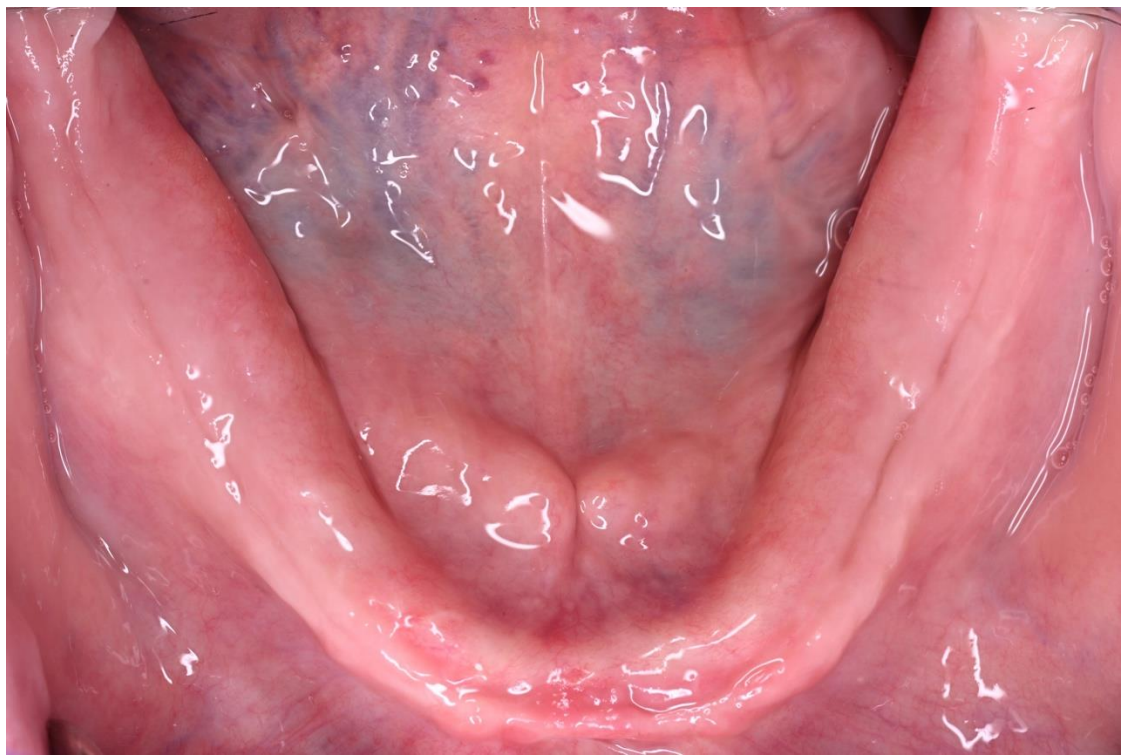
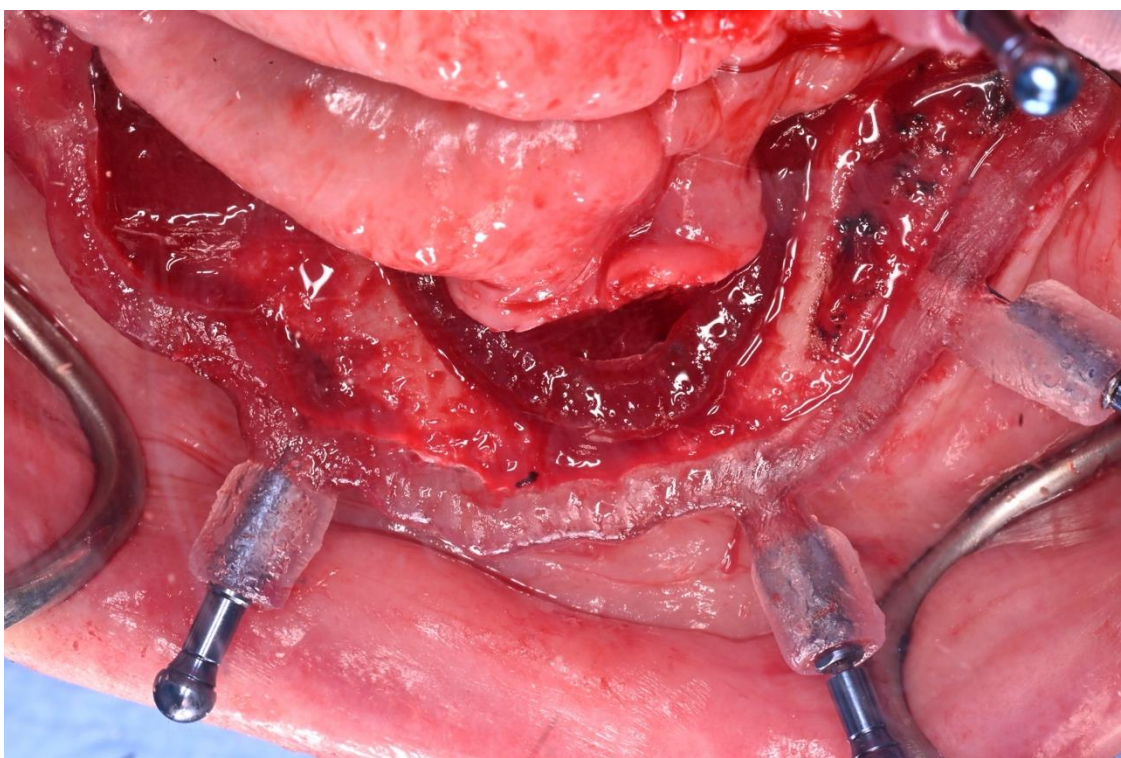
### Pre-operative



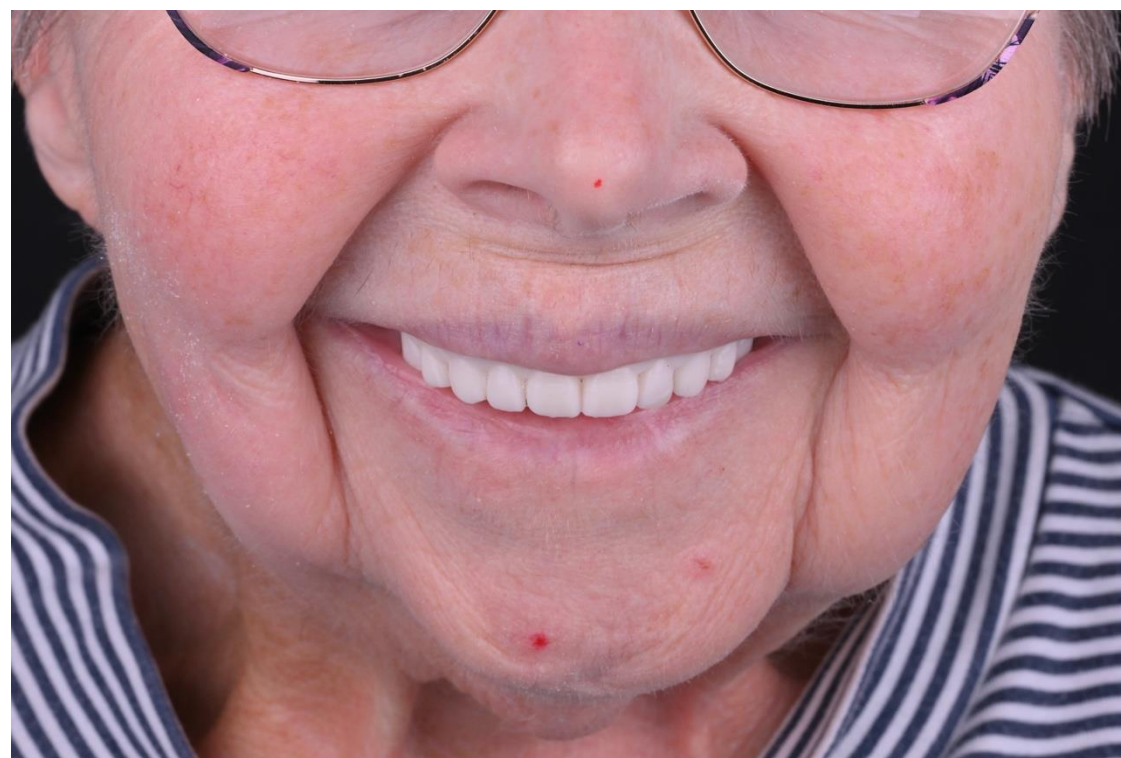
### Dual Scan



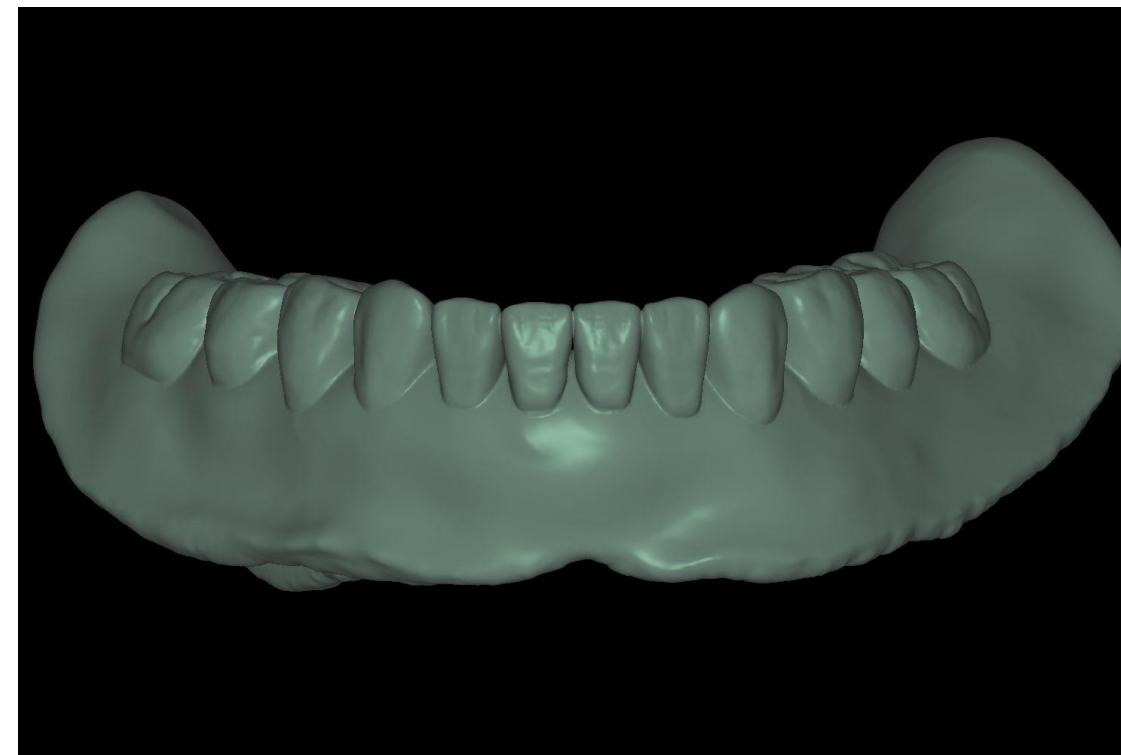
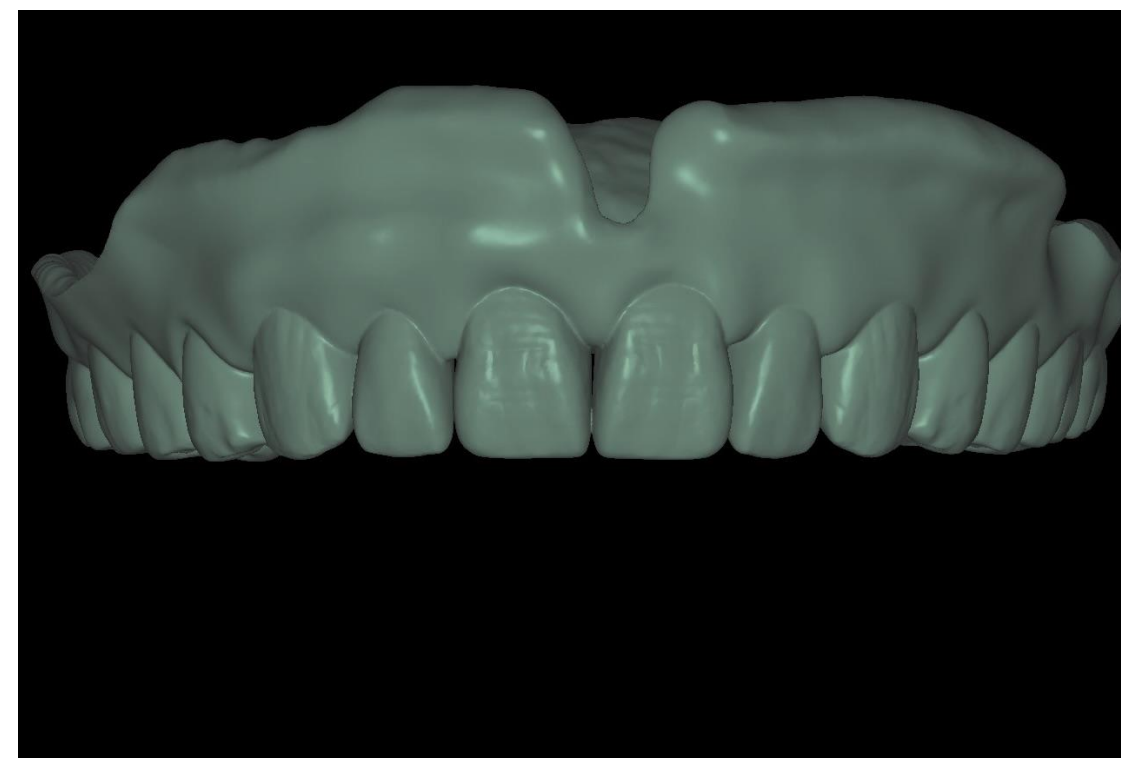
### Guided Surgery



### Try-in Denture



### Definitive Denture



### Conclusion

A guided pre-prosthetic surgery and CAD-CAM denture workflow can offer an effective, predictable solution for edentulous patients with complex anatomical challenges. The integration of virtual planning, guided surgery, and CAD-CAM prosthesis fabrication enhances clinical precision and treatment outcomes.

### Reference

