HYBRIDGE® | DENTAL LAB

Hybridge Dental Laboratory

Newsletter

Full-Arch Restoration, Materials and Digital Workflow



Two White Papers Enclosed

Biomaterials and the Future of Full-Arch Prostheses

Materials Preference Statement

Julian Conejo, DMD • Christina Rivet, CDT

Hybridge's Digital Restorative Workflows

Combining Intraoral Scanning, Photo grammetry and Gen 5 Prostheses. A Case Report – Visual Essay for the Contemporary Clinician

Alejandro Sanchez-Lara, DDS • Michael Baleno, DDS • Christina Rivet, CDT • Julian Conejo, DMD • Frank LaMar, DDS

Letter from the Editors

INNOVATION • COLLABORATION • EXCELLENCE

Every day, we are inspired by the passion, precision, and commitment of the dental professionals we have the privilege of working alongside.

At Hybridge Lab, we believe exceptional dentistry happens when **technology, skill, and craftsmanship come together**. We embrace digital innovation while remaining deeply committed to the artistry, hand skills, and attention to detail that bring every case to its highest level.

This journal is our way of sharing ideas, celebrating achievements, and highlighting the innovation that continues to move our industry forward. Inside, you'll find clinical case studies, expert perspectives, practical insights, and a closer look at the talented people behind the work. Meet our team, our partners, and the doctors who inspire us every day.

Most importantly, we believe in the power of collaboration. The strongest outcomes come when the laboratory and the practice work together, communicate openly, and share a commitment to excellence.

Thank you for being part of the Hybridge Lab family. We look forward to continuing to learn, innovate, and create exceptional dentistry together.



Dr. Julian Conejo
Clinical Lab Director,
Hybridge Lab



Dr. Frank LaMar
Founder & CEO,
Hybridge Lab

> **The best outcomes happen when skill and technology come together with precision, craftsmanship, and a shared commitment to excellence.**

Meet Meg Hendrix

STAFF HIGHLIGHT



Director of Practice Development,

Hybridge Dental Laboratory

In Your Corner. Focused on Your Growth.

Meg helps doctors grow their full-arch programs with clarity, structure, and ongoing guidance. Her white-glove approach helps doctors and their teams feel prepared, aligned, and confident as they bring the Hybridge standard of care to more patients.

She brings more than a decade of experience helping dentists pursue continuing education, train their teams, grow their practices, and develop as leaders. At Spear Education, she supported dental practices and organizations as an education advisor and practice coach, providing guidance tailored to their clinical and business goals.

Meg approaches each partnership holistically, helping practices identify opportunities, strengthen team alignment, and build sustainable success with full-arch treatment. Most importantly, she wants every doctor to know they have someone genuinely invested in their progress and ready to support them through challenges.

Meg helps support your team's growth by coordinating training and continuing education.

Born and raised in Texas as one of 18 children, Meg developed an early appreciation for connection, collaboration, and bringing people together. She is an avid traveler, lifelong learner, and dedicated advocate for inclusion and expanded educational opportunities for women and children worldwide.

Call for Full-Arch Case Studies

We invite you to submit a documented full-arch case that presented a unique challenge or represents work you are especially proud of.

Selected cases may be featured to recognize your work and help fellow Hybridge clinicians learn from real-world experience.

Scan the QR code to submit your case for consideration.



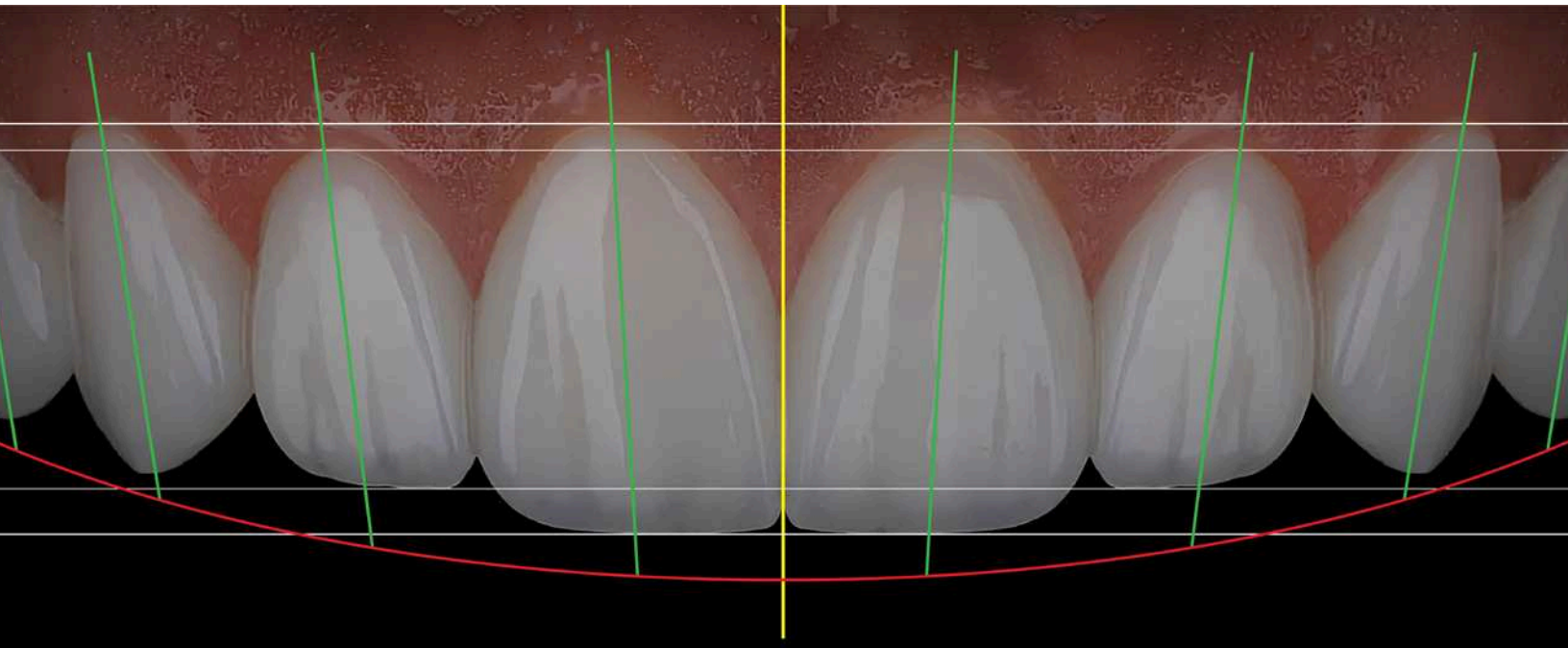
Biomaterials and the Future of Full-Arch Prostheses

Materials Preference Statement | Julian Conejo, DMD • Christina Rivet, CDT

At Hybridge Lab, our commitment is to continuously evaluate and validate emerging technologies and biomaterials that enhance the predictability, longevity, and clinical success of full-arch prostheses.

The rapid evolution of digital dentistry has introduced significant advancements in 3D printing, highly filled ceramic-resin materials, and next-generation restorative polymers. These innovations have created new opportunities for the full-arch workflow; however, responsible innovation requires more than early adoption. While new materials may receive regulatory approval and become commercially available, meaningful clinical evidence regarding long-term performance, maintenance, and patient outcomes, develops over time.

Our philosophy is to remain at the forefront of digital dentistry while maintaining a rigorous validation process. Every material and workflow we consider undergoes comprehensive laboratory evaluation, clinical collaboration, and careful assessment of both immediate performance and long-term predictability. Our objective is to provide clinicians and laboratory partners with solutions that are not only innovative, but also reliable, reproducible, and supported by sound scientific evidence.



Gen 5 Hybridge Prosthesis:

Digital Advancement and Material Evaluation

The development of our Gen 5 Hybridge Prosthesis represents another step forward in the evolution of the digital full-arch workflow. Through the integration of photogrammetry (PG), intraoral scanning (IOS), and a precision-milled interface, we have achieved marginal adaptation and passive fit comparable to our previous Gen 4 workflow, which relied on intraoral cementation of titanium bases to a Chrome-Cobalt framework to achieve passive adaptation.



The rapid evolution of digital dentistry has introduced significant advancements in 3D printing, highly filled ceramic-resin materials, and next-generation restorative polymers. These innovations have created new opportunities for the full-arch workflow.



This advancement now enables the design and manufacture of the prosthetic tooth structure through a completely digital, model-less workflow by combining the accuracy of IOS and PG data. The result is a streamlined manufacturing process that maintains the precision required for definitive full-arch restorations while reducing conventional laboratory steps.



Evaluation of 3D Printed Nanoceramic Materials

As part of our ongoing research and development efforts, we have been evaluating emerging 3D printed nanoceramic materials as potential alternatives to milled PMMA for definitive full-arch prostheses.

Our laboratory testing and early clinical evaluations have demonstrated promising characteristics, particularly in wear resistance and mechanical strength. However, based on our current findings, we have not identified a 3D printed nanoceramic material that consistently surpasses our milled PMMA workflow across all clinically relevant parameters.

At present, multilayer/multichromatic milled PMMA (Ivotion Dent, Ivoclar) continues to demonstrate important advantages in esthetic characterization, stain resistance, polishability, and long-term maintenance of surface gloss. These characteristics remain critical to the long-term success and maintenance of definitive full-arch restorations.

For these reasons, milled PMMA remains our material of choice for the tooth component of the Gen 5 Hybridge Prosthesis while we continue to evaluate the next generation of printable restorative materials.

3D Printed Nanoceramic



Milled PMMA



Future Opportunities

One area where 3D printed nanoceramics have demonstrated significant potential is the fabrication of long-term provisional restorations. Their efficient digital workflow, manufacturing flexibility, and ability to produce highly customized restorations make them an attractive solution for provisional full-arch treatment.

As these materials continue to evolve, we believe they will become an increasingly valuable component of the digital full-arch restorative ecosystem. Our approach, however, remains unchanged: we adopt new technologies only after they have demonstrated meaningful clinical value, long-term reliability, and predictable outcomes.

We will continue monitoring advancements in biomaterials through ongoing laboratory research, clinical collaboration, and real-world performance evaluation, incorporating new technologies only when they demonstrate measurable benefits for clinicians and patients.

The efficient digital workflow, manufacturing flexibility, and ability to produce highly customized restorations make 3D printed nanoceramics an attractive solution for provisional full-arch treatment.

Our commitment is to combine advanced digital workflows, sound engineering principles, and scientifically validated biomaterials to deliver durable, esthetic, and predictable full-arch prosthetic solutions.

Innovation drives our research. Scientific validation guides our decisions.





Julian Conejo, DDS, MSc, Prosthodontist
Clinical Lab Director, Hybridge Lab



Christina Rivet, CDT
VP of Lab Innovation, Hybridge Lab

Hybridge's Digital Restorative Workflows

Combining Intraoral Scanning, Photogrammetry and Gen 5 Prostheses

A Case Report – Visual Essay for the Contemporary Clinician

Alejandro Sanchez-Lara, DDS
Michael Baleno, DDS
Cristina Rivet, CDT
Julian Conejo, DMD
Frank LaMar, DDS

Abstract

Full-arch implant rehabilitation has evolved from analog complexity to digital precision. This case report highlights how the integration of intraoral scanning and photogrammetry enhances accuracy, efficiency, and predictability – while ensuring a passive-fitting prosthetic framework, the cornerstone of long-term success.

Clinical Challenge

Restoring a fully edentulous arch presents inherent difficulties:

- Distortion in conventional impressions
- Time-consuming workflows
- Risk of misfit in long-span frameworks

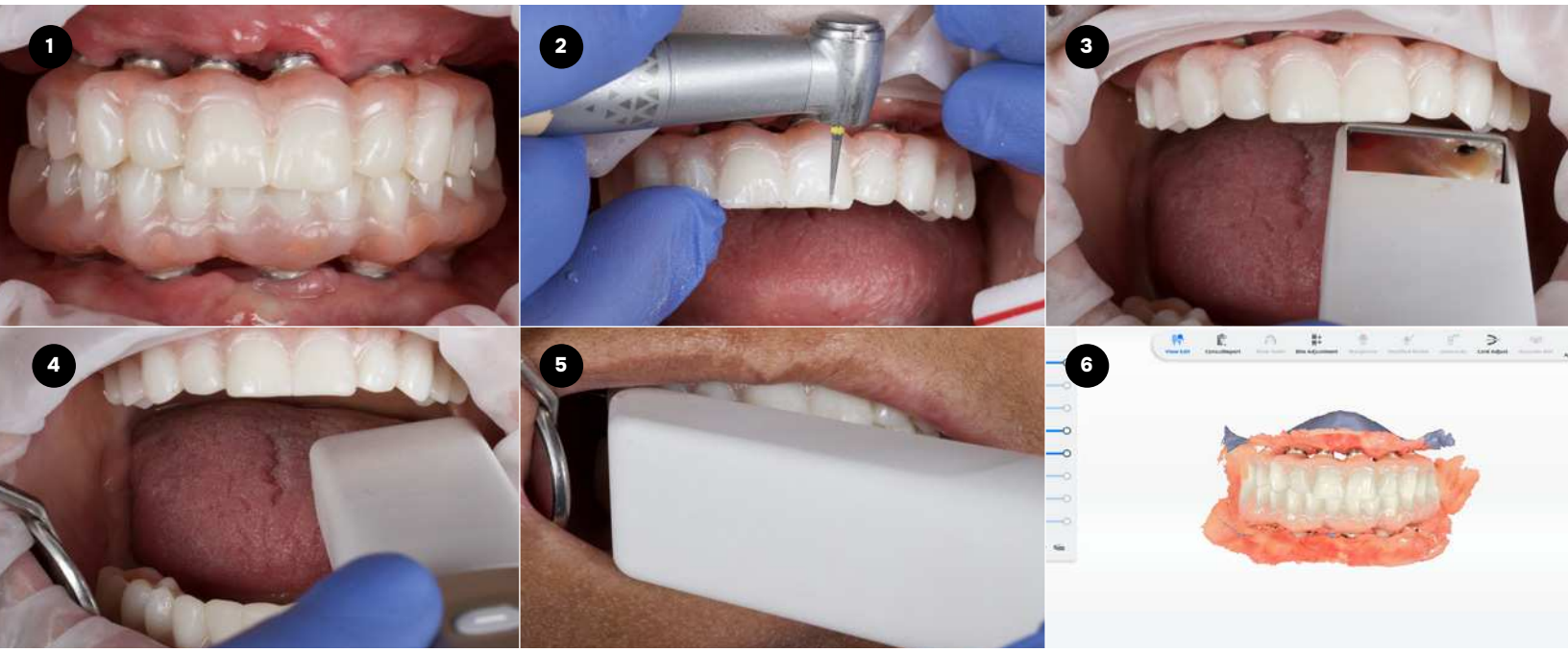
Achieving a "passive fit" remains critical to avoid biologic and mechanical complications.

Digital Workflow Overview

Intraoral Scanning

- Captures soft tissue anatomy, provisional prostheses, and occlusion
- Improves patient comfort and reduces chair time

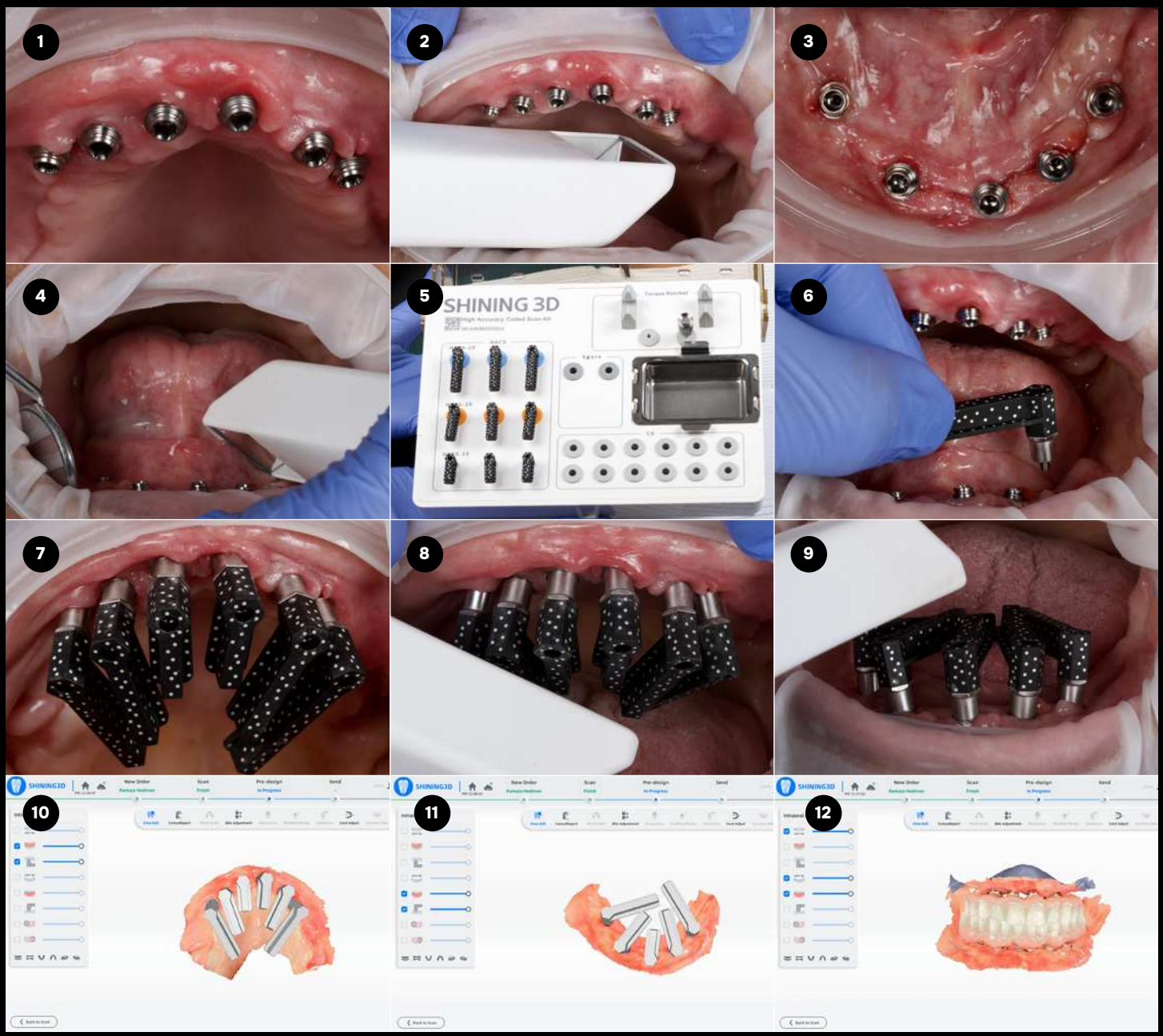
Clinical Step 1: Evaluate and modify the immediately loaded provisionals for optimized esthetics. Scan upper, lower and bite after modifications to share with laboratory.



Photogrammetry Acquisition

- Records precise 3D implant positions using scan flags.
- Eliminates stitching errors common in full-arch scans.

Clinical Step 2: Remove the provisionals and scan the fully healed soft tissue. Place the scan flags and capture implant positions using the photogrammetry feature. Do the same for the lower arch.



Key Insight:

- Intraoral scanners alone may accumulate errors over long spans.
- Photogrammetry compensates by delivering **true implant spatial relationships**, ensuring restorative accuracy.

Full-arch implant rehabilitation has evolved from analog complexity to digital precision.

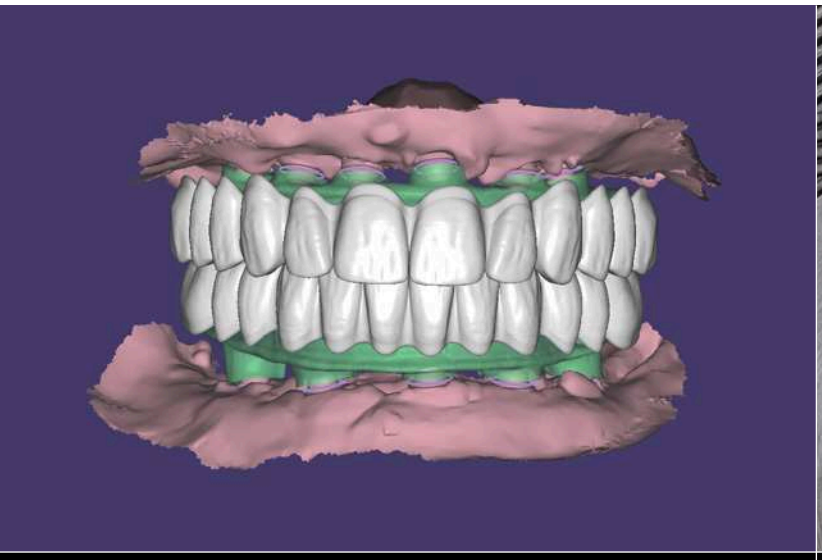
Data Integration

Merging intraoral scans (soft tissue and provisionals) with photogrammetry (implant positions) produces a highly accurate digital master model.

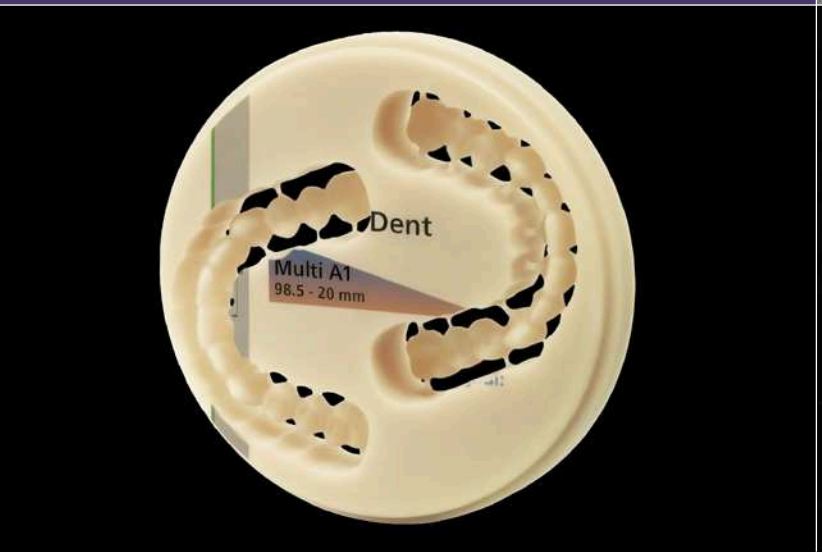
CAD/CAM Framework Design

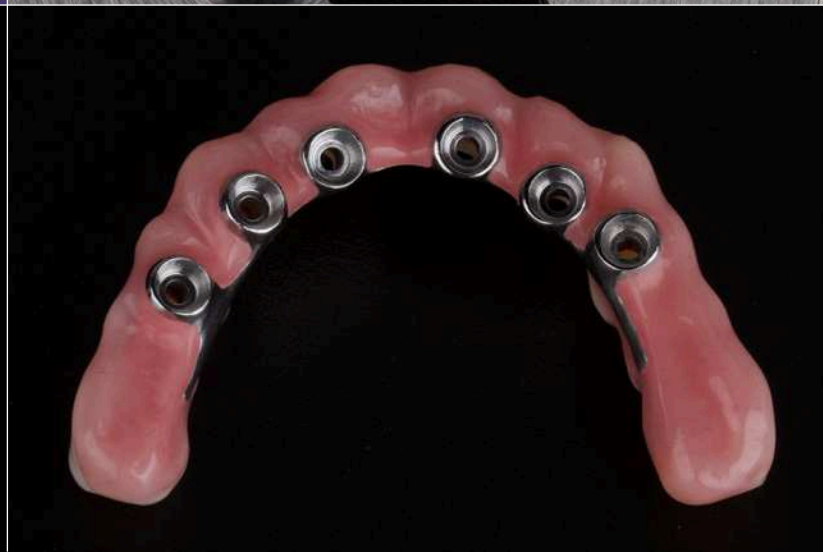
Digitally designed framework based on verified implant coordinates Fabricated with high precision milling or additive manufacturing

Clinical Step 3: After uploading all files to the Hybridge Lab portal, review the final prostheses design and approve. After this, the team will manufacture the Hybridge Gen 5 Hybridge prostheses with a CoCr framework, which is 3D laser printed followed by detailed milling of the interfaces. The teeth are milled from a tooth-colored, multi-translucent PMMA disc, followed by a pink PMMA injection process.









Key Takeaways

The Passive Fit Imperative

- A passive-fitting framework is not optional – it is essential.

Mechanical Benefits

- Prevents screw loosening and fractures
- Enhances prosthesis longevity

Biologic Benefits

- Reduces peri-implant bone stress
- Minimizes inflammation and bone loss

Digital Advantage

- Verification of fit can be done virtually before fabrication
- Reduced need for intraoral adjustments

Clinical Outcome

- Accurate prosthetic seating without strain
- Minimal chair-side adjustment
- Improved patient comfort and confidence
- Streamlined communication between clinic and laboratory

Laboratory Perspective

The digital workflow transforms the laboratory process:

- Eliminates physical casts prone to distortion
- Enables repeatable, scalable production
- Facilitates collaborative planning with clinicians
- Supports archival of digital cases for future reference



Clinical Step 4: Try-in and delivery of upper and lower Gen 5 Hybridge prosthesis with a passive fitting framework and esthetically designed, functional teeth providing efficient mastication and phonetics, giving back a confident smile to the patient.

Conclusion

Modern full-arch rehabilitation demands precision. By leveraging digital technologies – particularly the combination of intraoral scanning and photogrammetry – clinicians can deliver restorations that are not only efficient and aesthetic, but biologically and mechanically sound. Digital accuracy is not just innovation, it is responsibility.



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Clinical Surgical Director
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VP of Lab Innovation
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Clinical Lab Director, Prosthodontist
Hybridge Lab



Frank LaMar, DDS
Prosthodontist
Founder & CEO,
Hybridge Lab

HYBRIDGE® | DENTAL LAB

Build a Stronger Full-Arch Practice

1

CLARITY

Understand the workflow.

2

ALIGNMENT

Train your team.

3

EFFICIENCY

Reduce friction.

4

PREDICTABILITY

Build repeatable systems.

Better Workflows Start With Better Education

When you and your team understand how planning, surgery, prosthetics, and patient care work together, full-arch treatment becomes easier to streamline. Hybridge provides the education and long-term support to confidently expand complex full-arch treatment.



✱ Online Course ✱

$1,750 USD*
Redeemable on a Hybridge Full-Arch case

Full-Arch Foundations

Instructors:
Dr. Frank LaMar and Dr. Julian Conejo

This expert-led course helps intermediate full-arch providers strengthen their skills with evidence-based surgical workflows for predictably treating complex and edentulous patients.

COURSE STRUCTURE
- **4 Online Interactive Sessions**
- **2 hours per session** (total of 8 CE credits)
- **2027 Courses:** Coming Soon
- **Flexible Access:** Participants can watch recorded sessions during the week if unable to attend live

COURSE HIGHLIGHTS
- **Session 1:** Introduction to Edentulism and Full-arch Implant Therapy
- **Session 2:** Surgical Workflows
- **Session 3:** Prosthetic Workflows
- **Session 4:** Case Acceptance and Prognosis-based Treatment Planning

✱ In-Person Training ✱

$8,650 USD*
Redeemable on a Hybridge Full-Arch case
Cost includes: Meals and local transportation in Rochester, NY

Advanced Full-Arch Therapy

Instructors:
Dr. Frank LaMar, Dr. Julian Conejo,
Dr. Michael Baleno, Dr. Alex Sanchez-Lara

An intensive, hands-on program designed to deepen intermediate and advanced full-arch providers' proficiency in full-arch implant therapy through advanced training, digital workflows, direct faculty interaction, and access to the laboratory team.

COURSE STRUCTURE
- 1.5 Days of Intensive Training at Hybridge Laboratory, Rochester, NY
- Full-day on Friday + Half-day on Saturday (total of 12 CE Credits)
- **Fall Course:** December 4-5, 2026
- **Limited Availability:** 15 participants

COURSE HIGHLIGHTS
- Advanced Surgical and Prosthetic Hands-on Training
- Creating the Digital Clones of Your Patients for Ideal Clinical Outcomes
- Interactive Roundtable Discussion With Hybridge's Flagship Clinical Directors
- Exclusive Lab Tour & Direct Interaction with Department Directors

LEARN MORE & REGISTER TODAY!

HybridgeLab.com • 585-998-4041

Full-Arch Workflows in Action

Hybridge Clinical Applications

An immersive, over-the-shoulder experience alongside the Hybridge founders, designed to show how the complete digital full-arch workflow comes together in a live clinical setting.

INSTRUCTORS



Frank R. LaMar, DDS
Founder, Prosthodontist

Alex Sanchez-Lara, DDS
Prosthodontist & Clinical Restorative Director

Michael Baleno, DMD
Clinical Surgical Director

COURSE STRUCTURE

- Hybridge Dental Implants, Rochester, NY
- Two-day immersive experience (total of 16 CE Credits)
- **Fall Course:** November 5-6, 2026
- **Limited Availability:** 8-10 participants
- **Prerequisite:** Hybridge Full-Arch Foundations

COURSE HIGHLIGHTS

- Observe full-arch treatment in a live clinical setting.
- Follow Hybridge's digital workflow from planning through treatment.
- See how guided surgery improves full-arch procedures.
- Learn how experienced clinicians identify and manage challenges as they arise.

HYBRIDGE® DENTAL LAB

Contact Jenna Bellucci to Learn More
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Email: jbellucci@hybridgeimplants.com

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