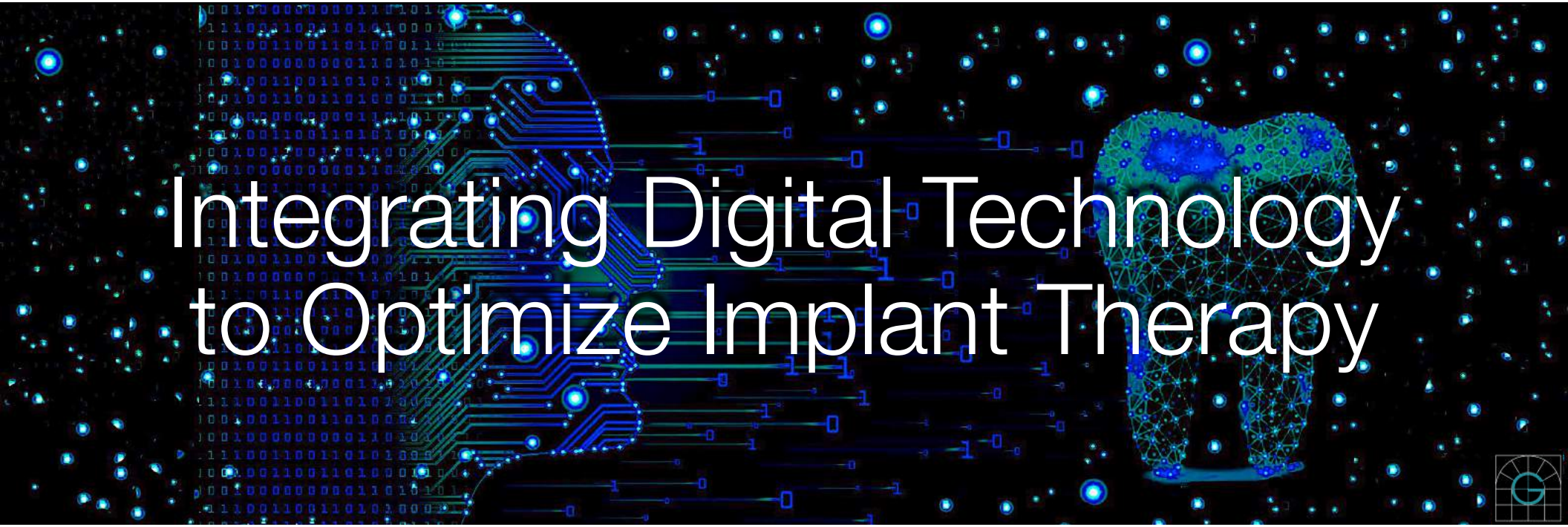
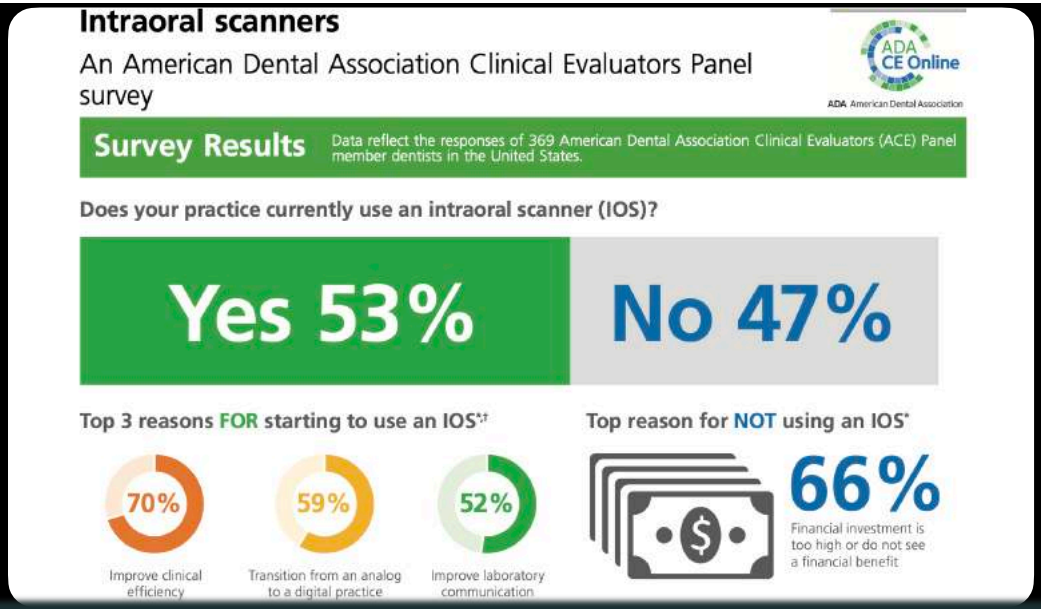

Integrating Digital Technology
to Optimize Implant Therapy



Revilla-Leon, M, et al. Intraoral scanners: An American Dental Association Clinical Evaluators Panel survey, JADA 2021;152(8):669-670.

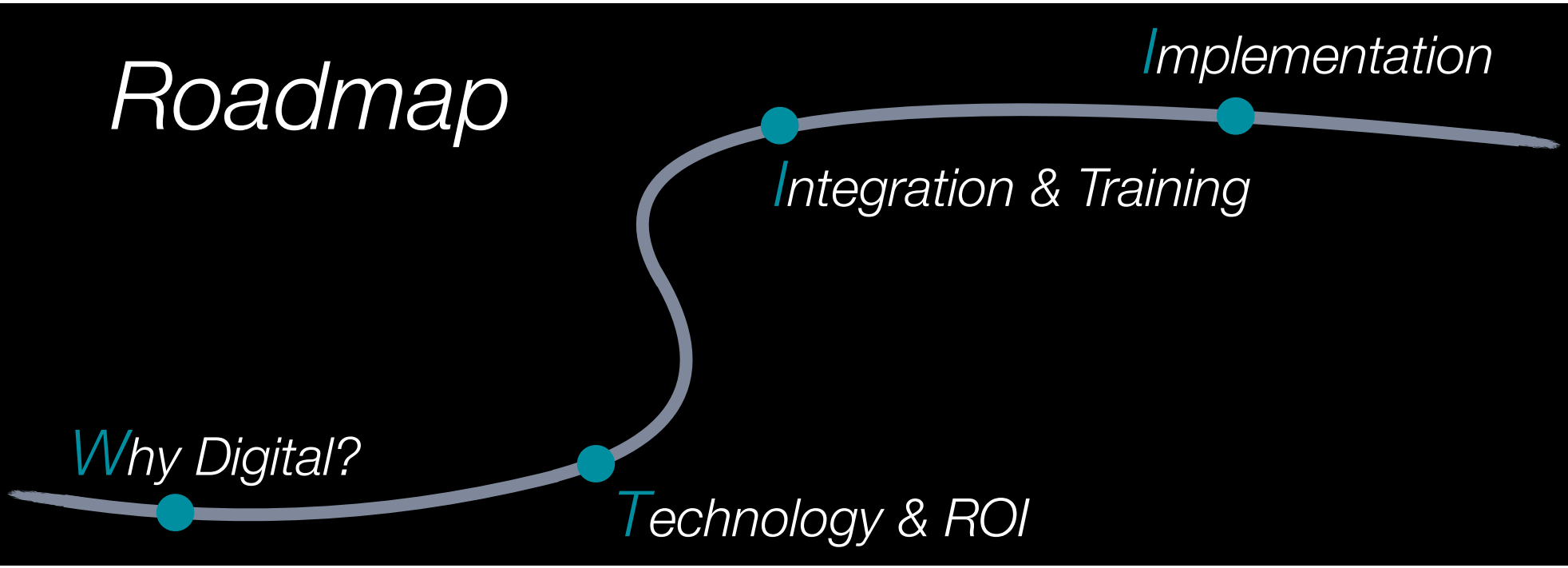
Benefits

1 Patient Comfort

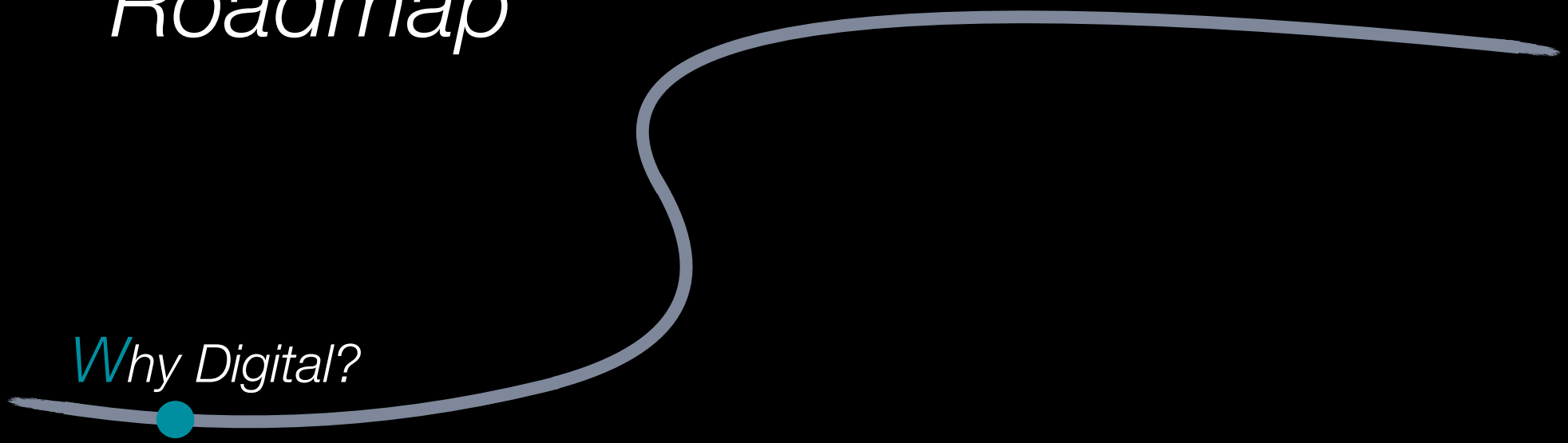
2 Accuracy & Efficiency

3 Team Delegation

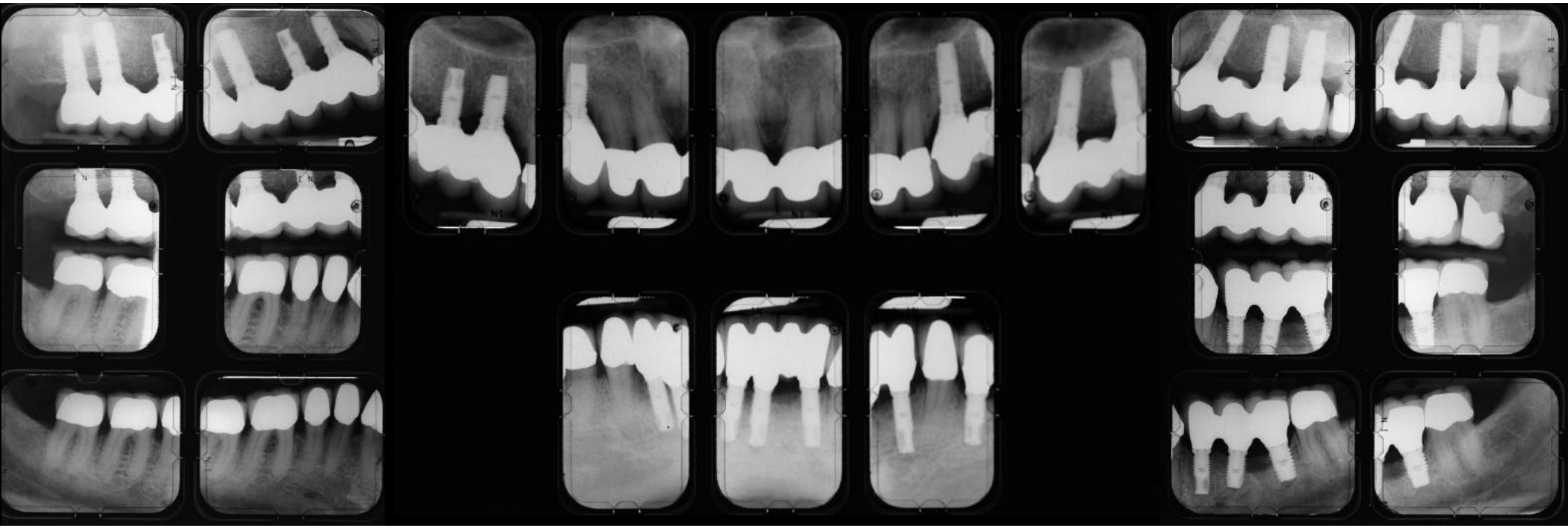
4 Digital Transformation


Roadmap
Implementation
Integration & Training
Why Digital?
Technology & ROI

Roadmap



Conventional




1 6/24/2014
3-4 6/24/2014
5 6/24/2014
6-7 6/24/2014
8-9 6/24/2014
10-11 6/24/2014
12 6/24/2014
13-14 6/24/2014
16 6/24/2014
1-30 6/24/2014
3-28 6/24/2014
12-19 6/24/2014
14-17 6/24/2014
26-28 6/24/2014
24-25 6/24/2014
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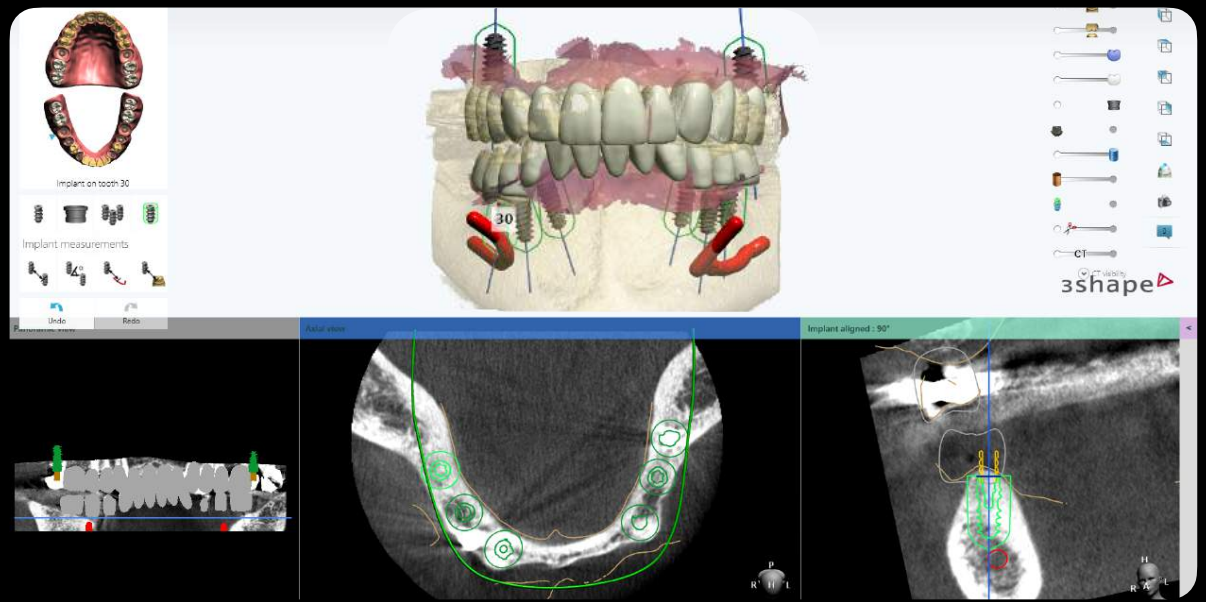
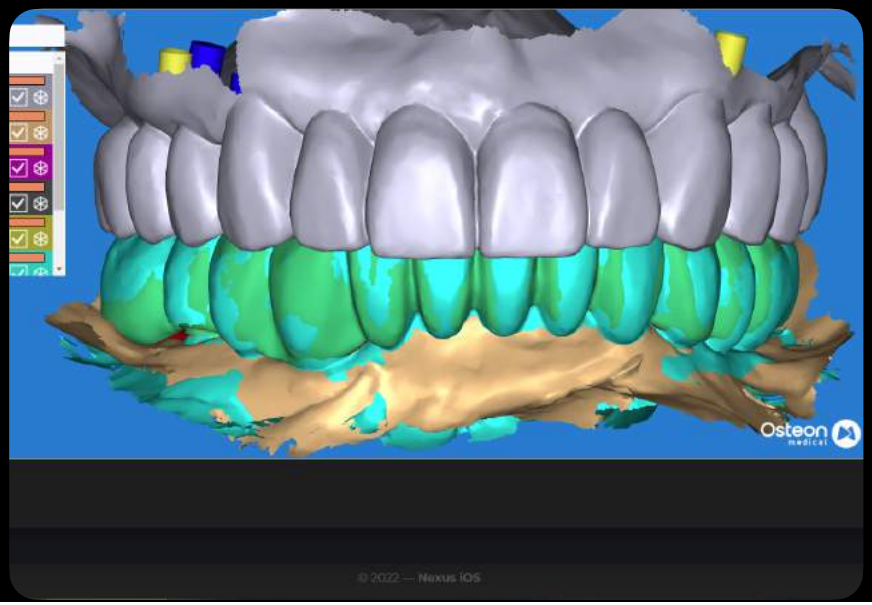
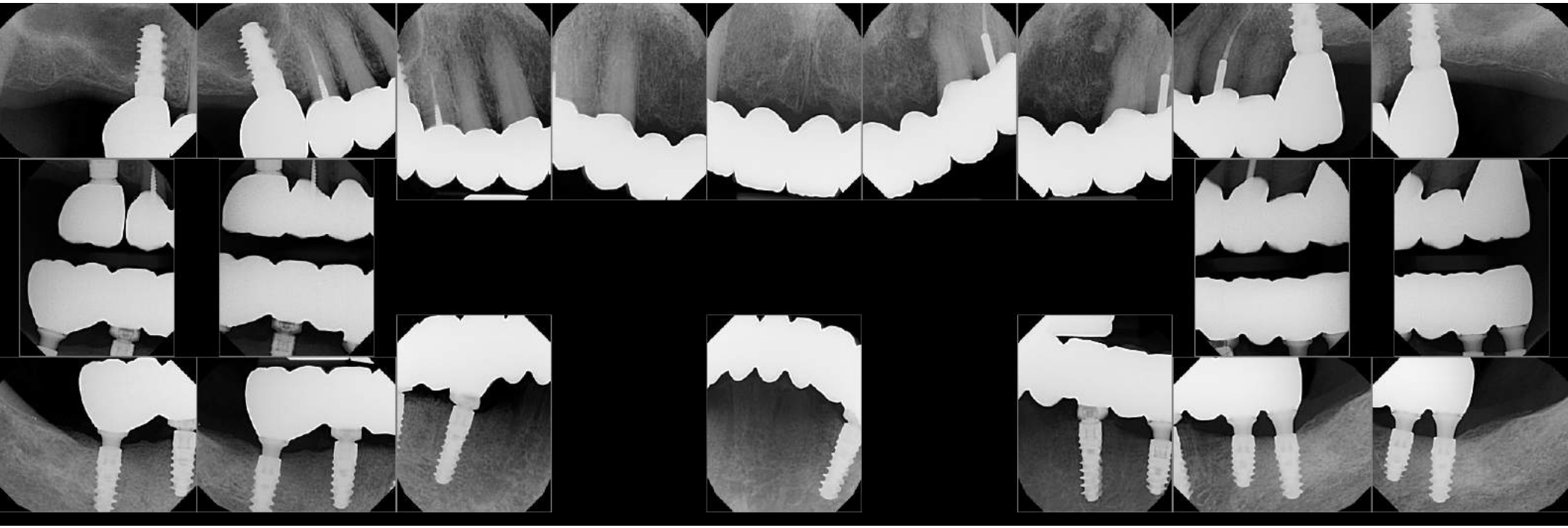
19-21 6/24/2014
17-19 6/24/2014
15Y

Digital

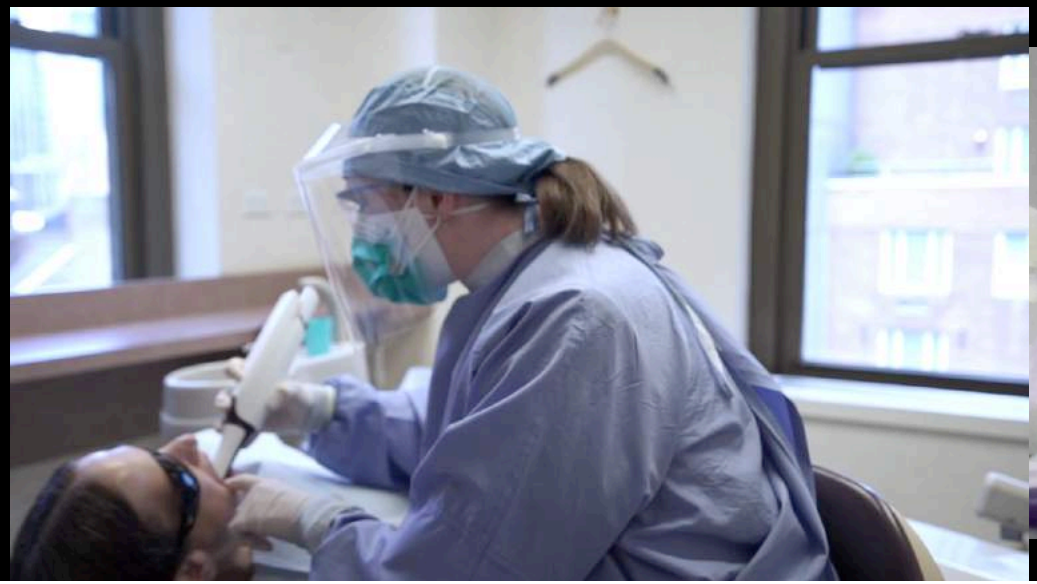

Implant on tooth 30
Implant measurements
Undo
Redo
30
3shape
Implant aligned : 50°


Osteon medical
© 2022 — Nexus IOS



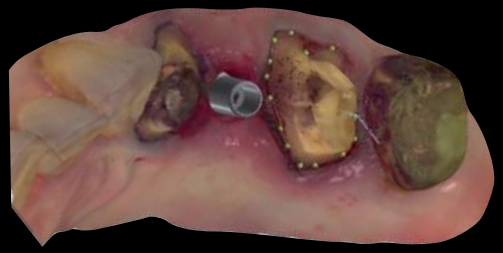
Digital Workflow

Chairside ← → Laboratory



Scan

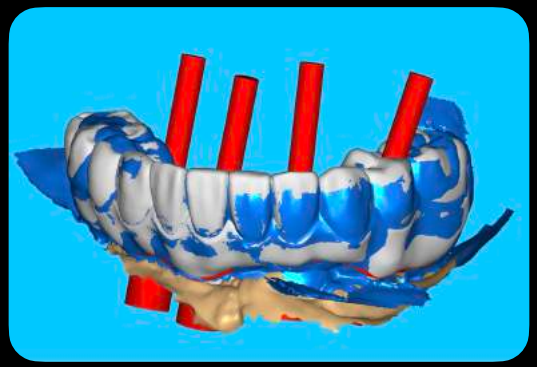
Chairside



+

CAD → CAM → Crystallize

Laboratory



Scan → CAD → CAM

El-Haddad **H, et al**. Laboratory Evaluation of Implant Metal Acrylic Prosthesis Design: Influence of Mono Acrylic Veneer—level complete arch impression. Int J Oral Maxillofac Implants 2020;35:100-106.

Advantages of Digital Technology

- Improve Patient Experience, Comfort, and Perception
- Accurate and Efficient
- No Messy Impressions and Model Work
- Better Patient, Laboratory, and Referral Communication
- Archival System
- Reduce Supply Costs

Mangano, F, et al. Intraoral scanners in dentistry: a review of current literature. BMC Oral Health, 2017;17:149.

Disadvantages of Digital Technology

- Difficulty Detecting Deep Subgingival Margins
- Inaccurate for Long Span Restorations
- Initial Investment and Software Licensing Costs
- Steep Learning Curve

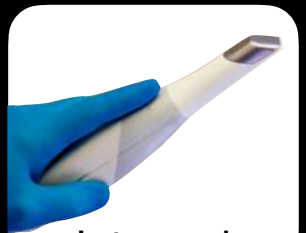
Mangano, F, et al. Intraoral scanners in dentistry: a review of current literature. BMC Oral Health, 2017;17:149.

Roadmap

Digital Sequence

Acquisition

CBCT

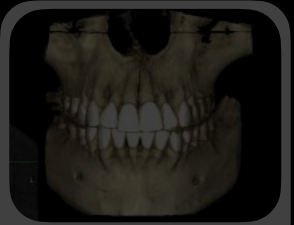


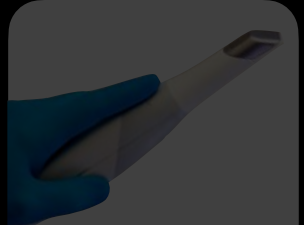
Intraoral

Face

Model

Acquisition


CBCT


Intraoral

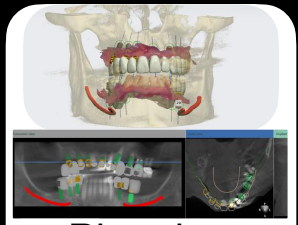

Face


Model

CAD


Smile


Prosthetic

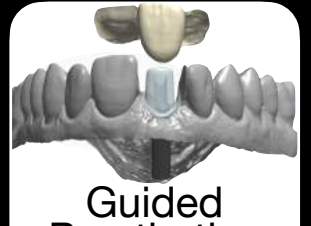

Planning

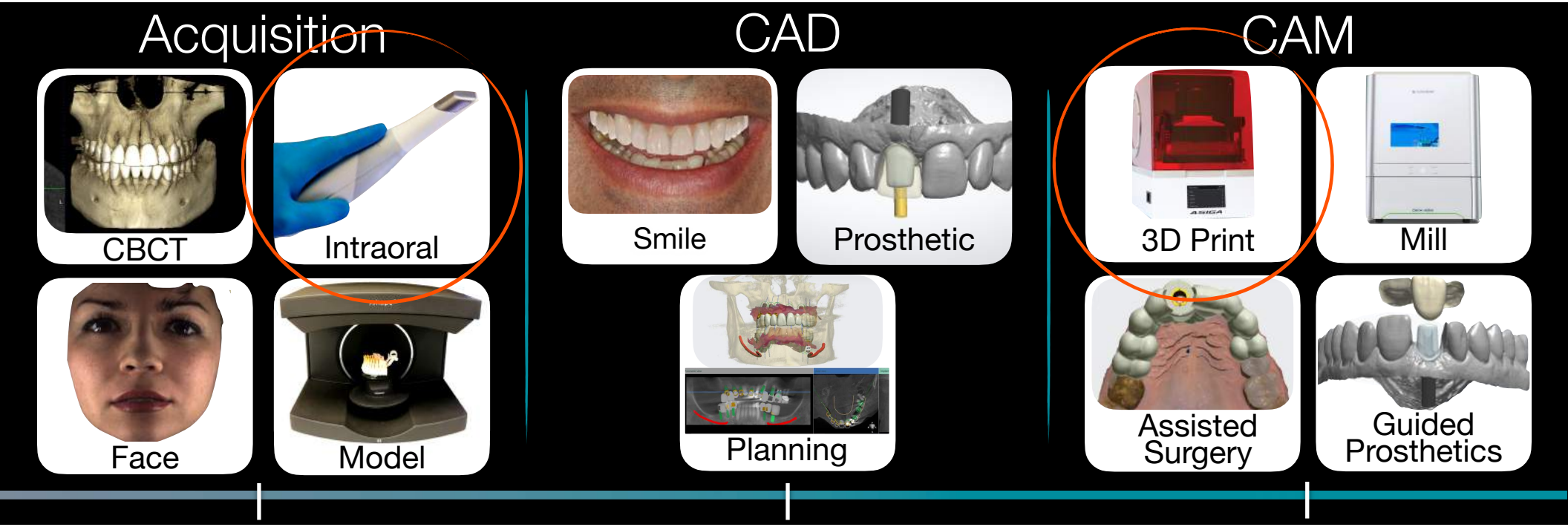
CAM

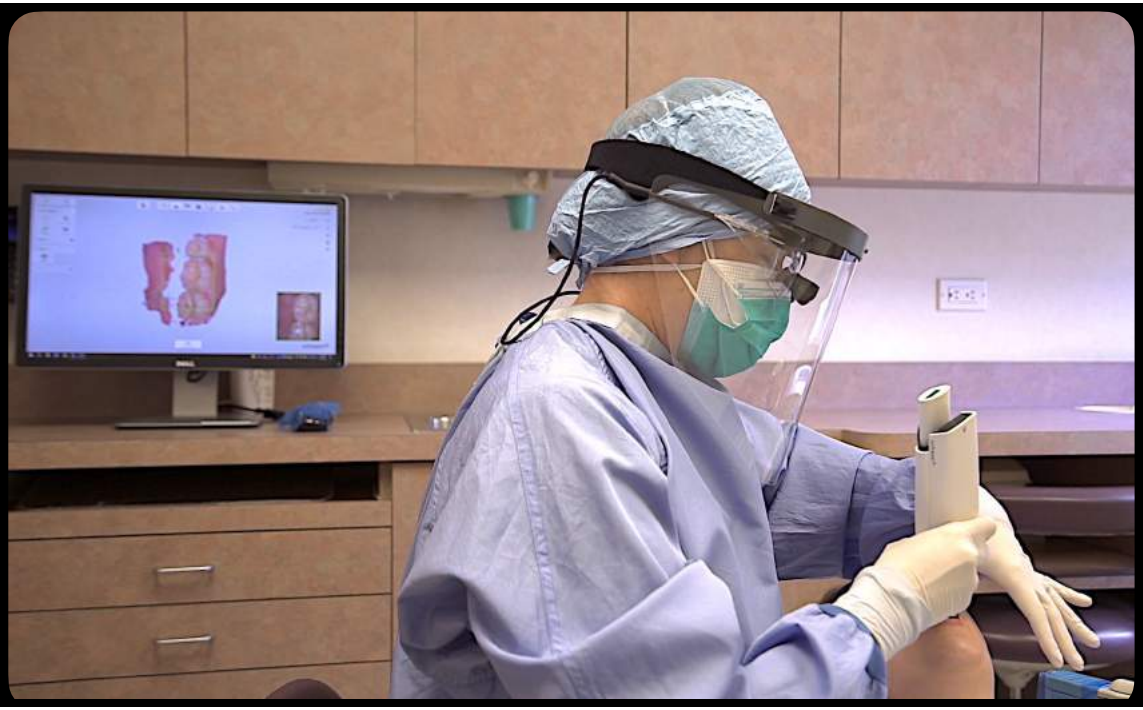

3D Print


Mill


Assisted Surgery


Guided Prosthetics


Acquisition
CAD
CAM
CBCT
Intraoral
Smile
Prosthetic
3D Print
Mill
Face
Model
Planning
Assisted Surgery
Guided Prosthetics



Clinical

- Patient Comfort
- User Friendly
- Open Systems
- Easily Accessible


Sapna
Scan from anywhere
on the network
Lindsay
Chrissy
Dr. A

Financial

- 3-5 Year Cycle & Payoff
- Recurring Licensing Cost
- Hardware Requirements
- Maintenance
- Repair Policy

Investment

Intraoral Scanner = $35,000

3D Printer = $10,000

Milling Machine = $35,000

Ceramic Furnace = $10,000

Technology = $90,000

36 Month Lease at 3.5% Annual Interest

Monthly Payment = $2,637

Technology w/ Interest = $94,939

Investment

Technology w/ Interest = $94,939

Licensing Fees ($2300/yr x 3 yrs) = $ 6,900

Additional IT Cost ($300/mo x 36 mos) = $10,800

Hidden Expenses ($500/mo x 36 mos) = $18,000

Total Investment = $130,639

Income & Savings

Two Crowns/Month (2 @ $2000 x 36 mos)	= $144,000
Supply Costs Savings ($500/month x 36 mos)	= $ 18,000
Total Income & Savings	= $162,000
Total Investment	=-$130,639

Net Profit = $ 31,361

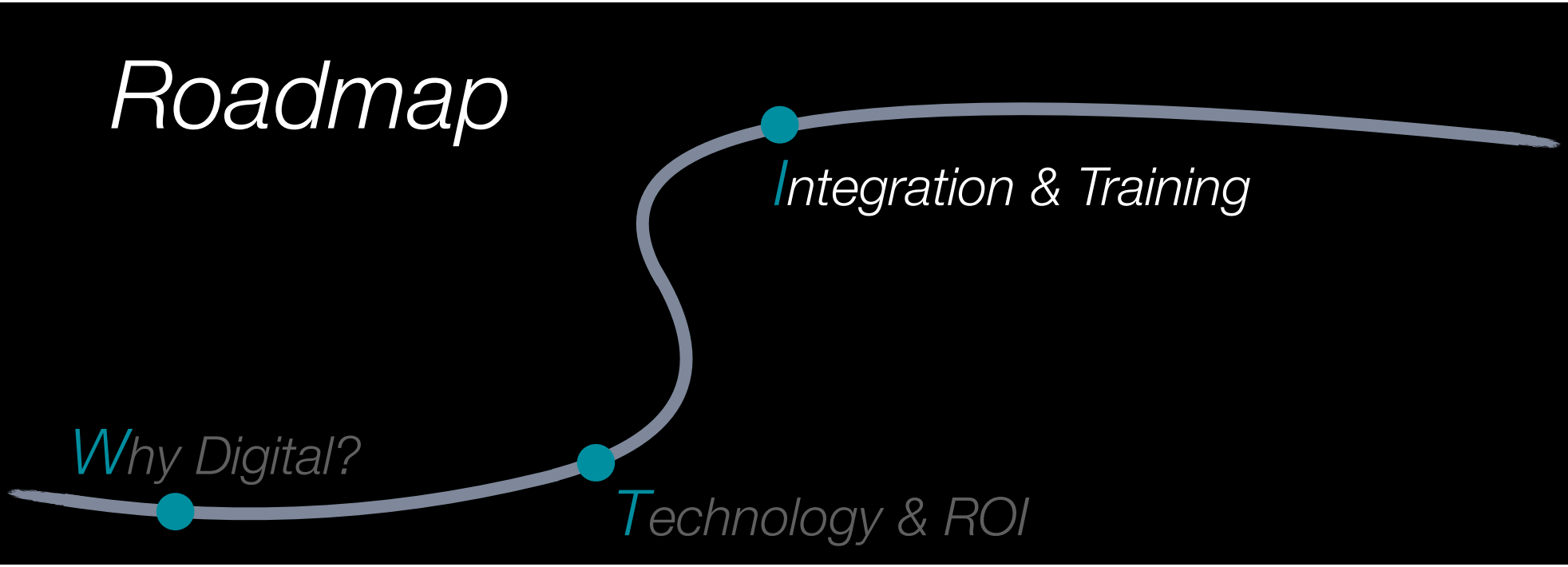
Return on Investment

$$\frac{\text{Net Profit}}{\text{Total Investment}} \times 100\%$$

$$\frac{\$\ 31{,}361}{\$130{,}639} \times 100\%$$

ROI = 24%

Roadmap



IT Company

Network
Technology Consultant
Cyber Security
Back Up
Maintenance
HIPAA Compliance

Vendor

Install, Training, & Support

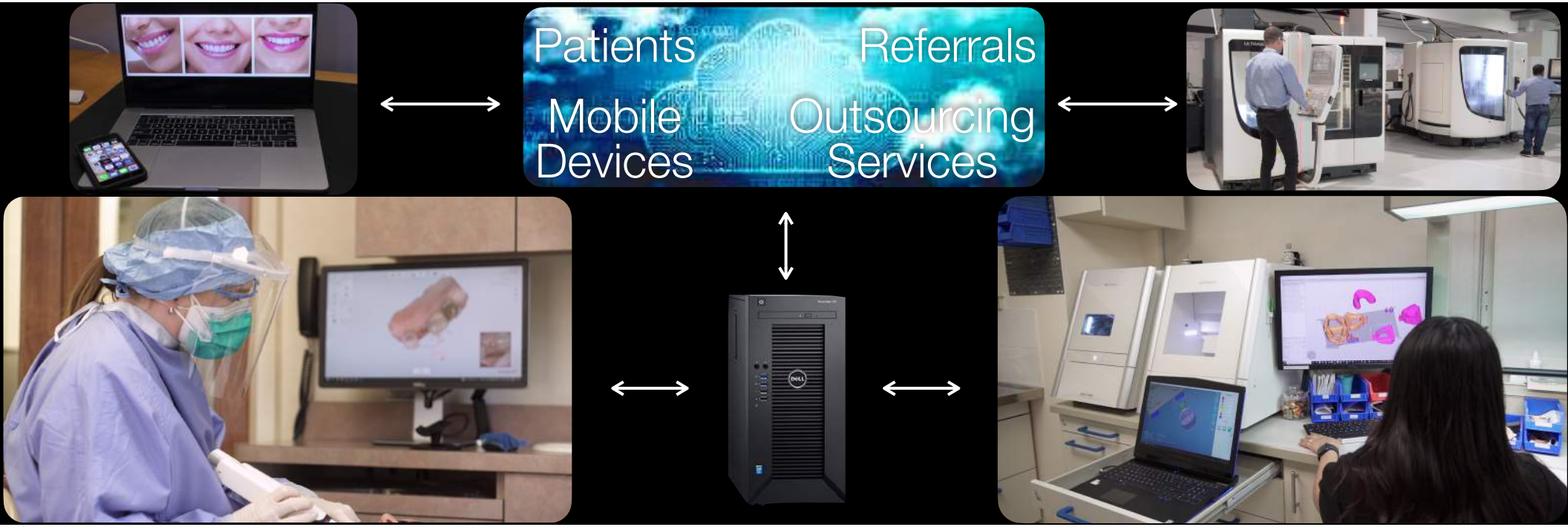
Integration & Training

Lab/Outsourcing Services

Design, Planning, & Fabrication

Internal IT

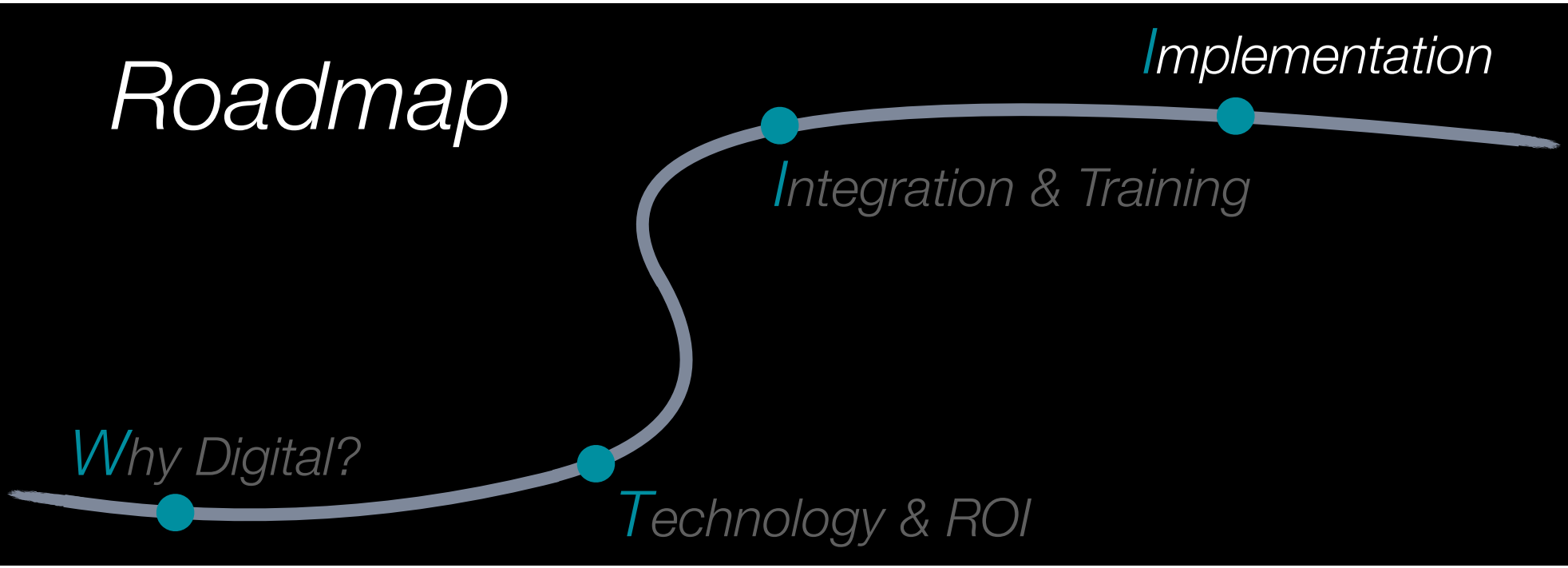
Technology Manager
Troubleshooting
Staff Training


Patients
Referrals
Mobile Devices
Outsourcing Services

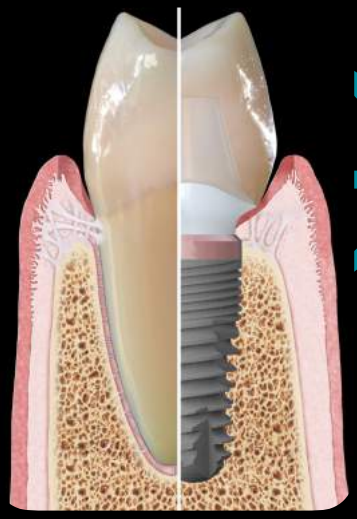
Digital Transformation

Advantages

- More Efficient Workflow
- Staff Delegation
- Expedited Lab Transfer
- Expanded Outsourcing

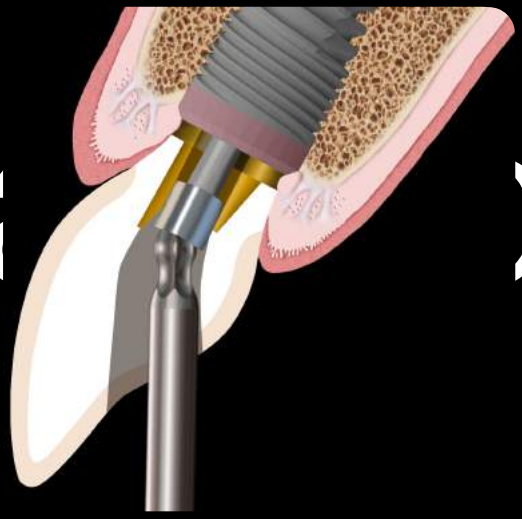

Roadmap
Implementation
Integration & Training
Why Digital?
Technology & ROI

Peri-implant Complex



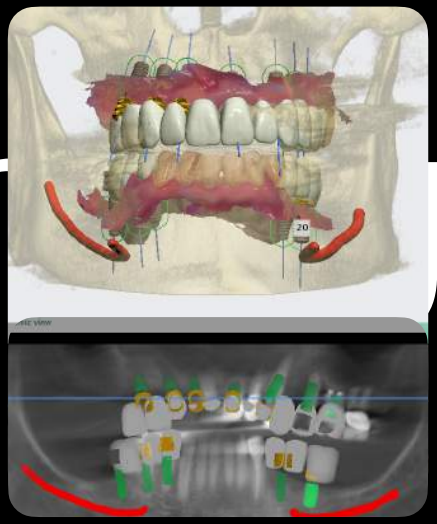
2004

Angulated Screw



2014

Digital Planning

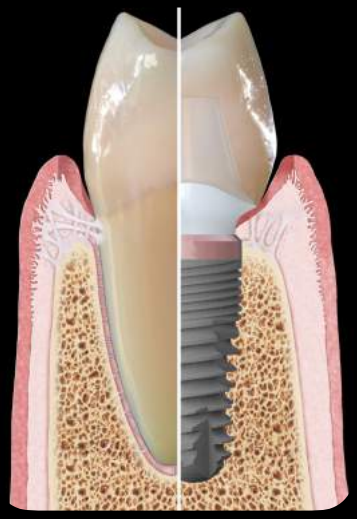


2017

Full Arch Scanning

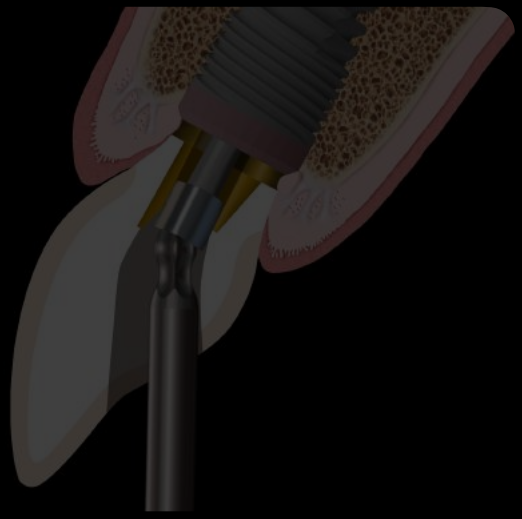
2022

Peri-implant Complex



2004

Angulated Screw

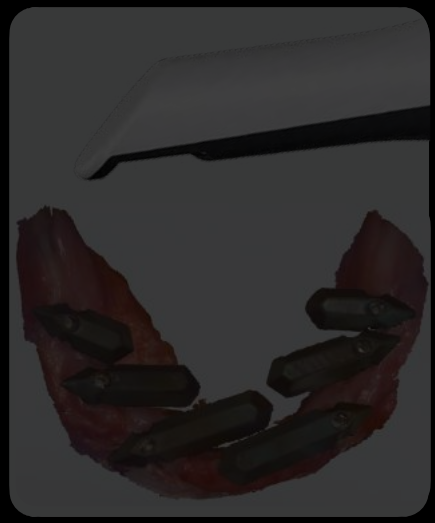


2014

Digital Planning

2017

Full Arch Scanning



2022

Consensus 2017

Abutment Dis/Reconnection

Canullo

Reduce
Dis/Reconnection

Platform
Switching

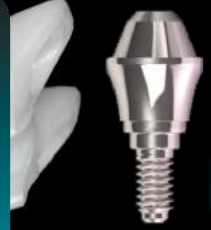
Implant Neck

Gracis

Chu

Concave Sub-gingival
Contour

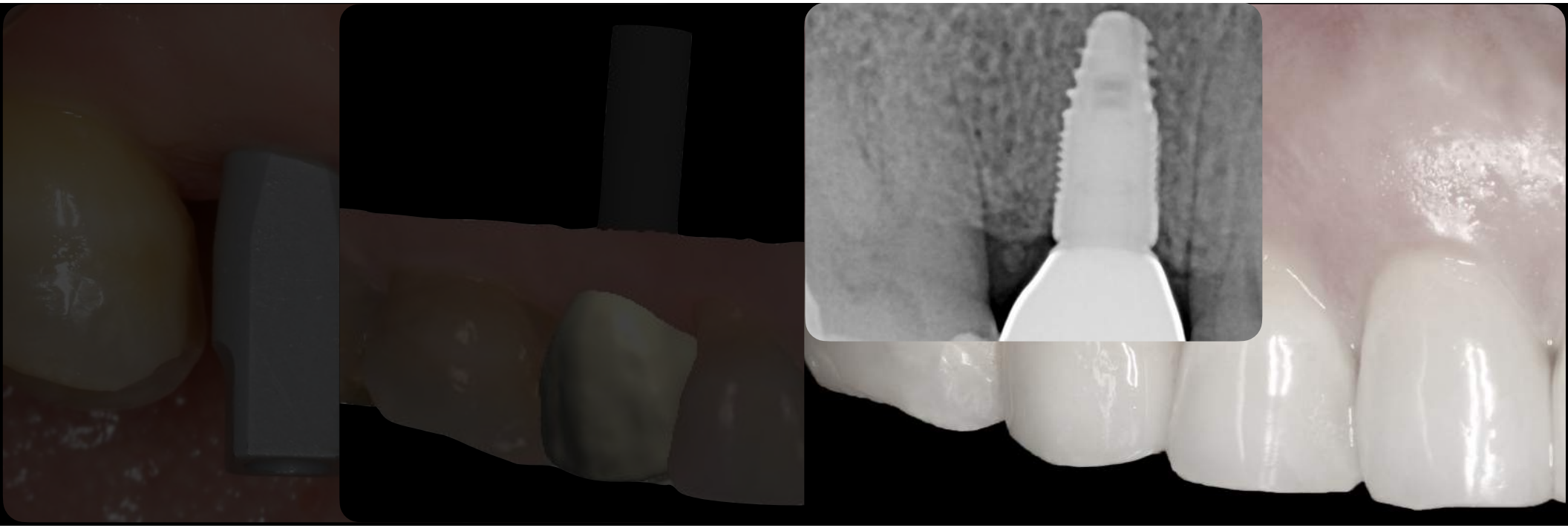
High Esthetics: Ceramic
Low Esthetics: Metallic
Soft Tissue Grafting
Ti-Base Hybrid

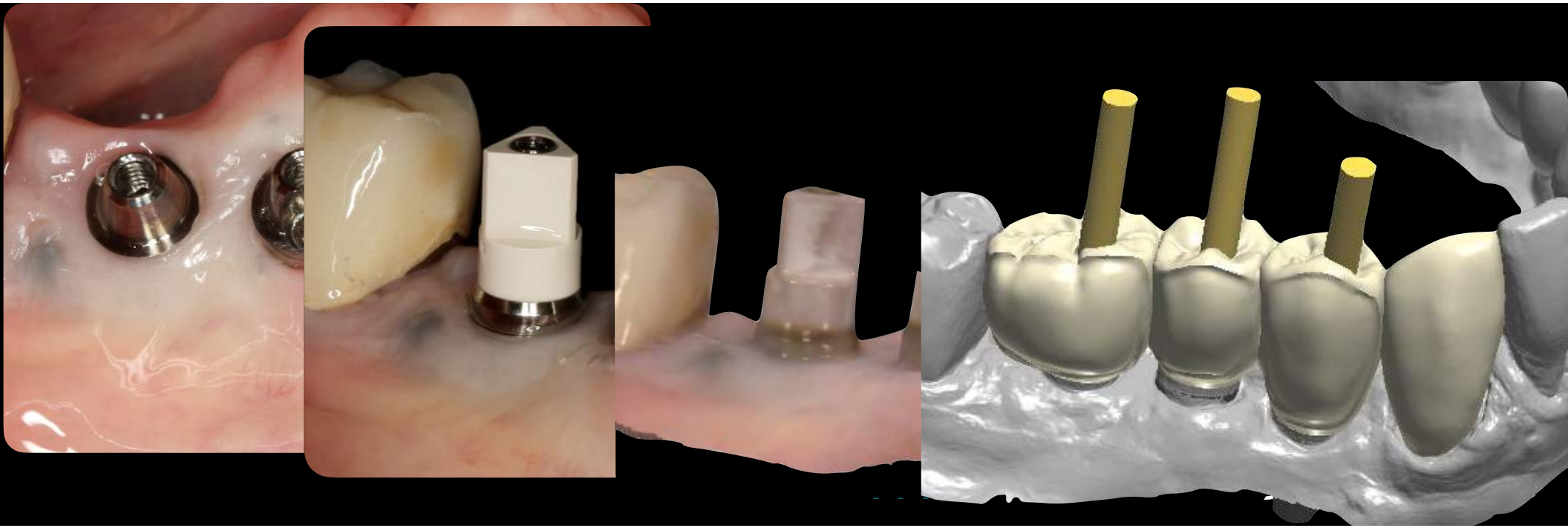


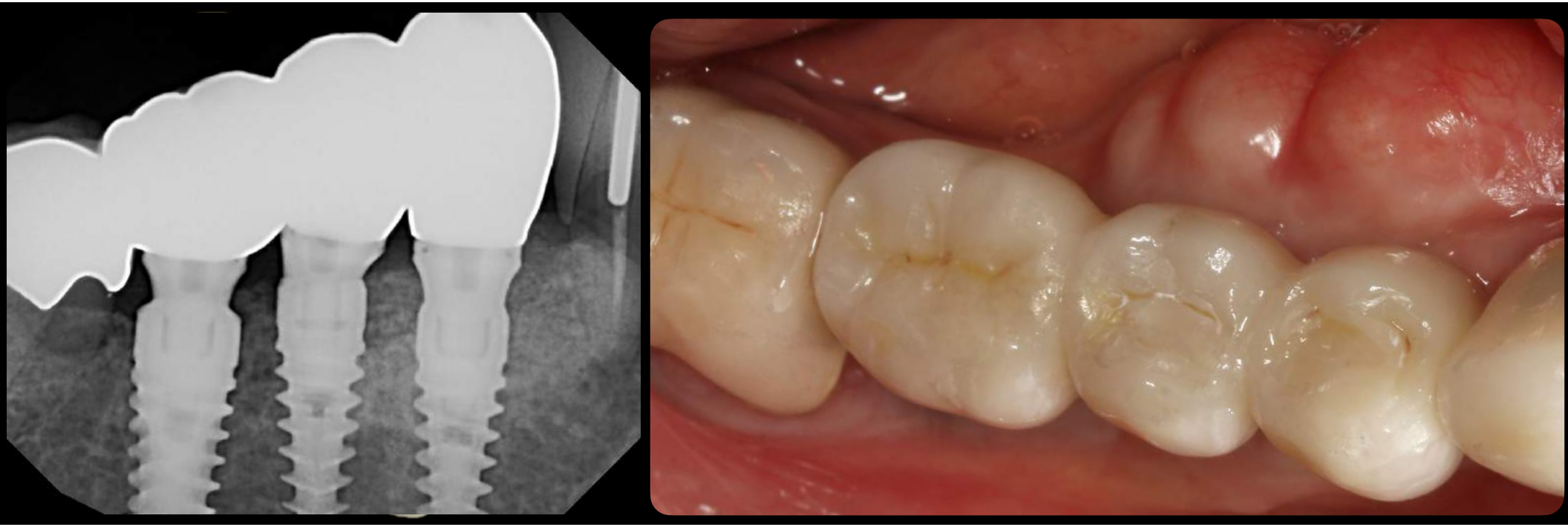
Zarauz

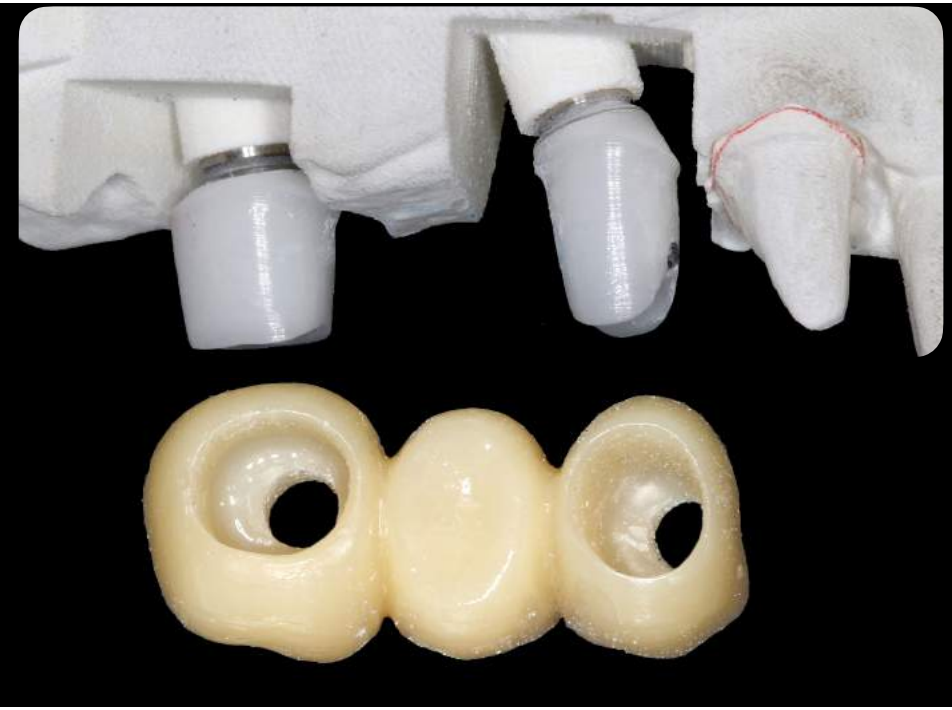
Restorative Eme

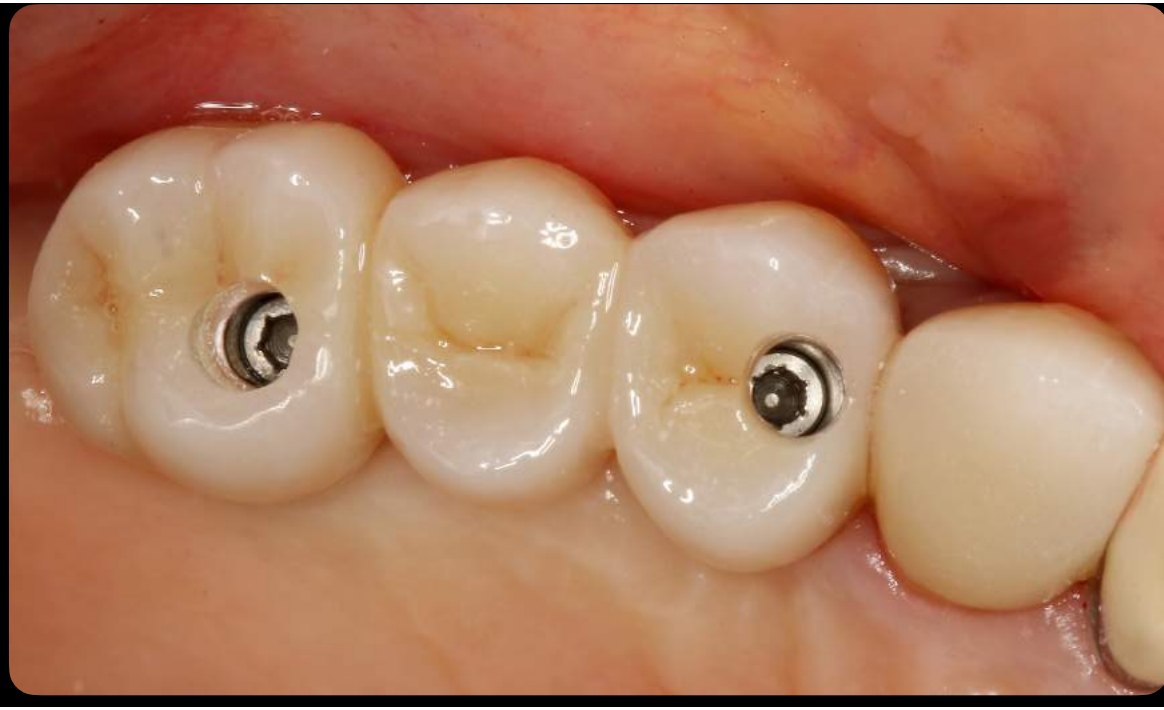
vs Standardized

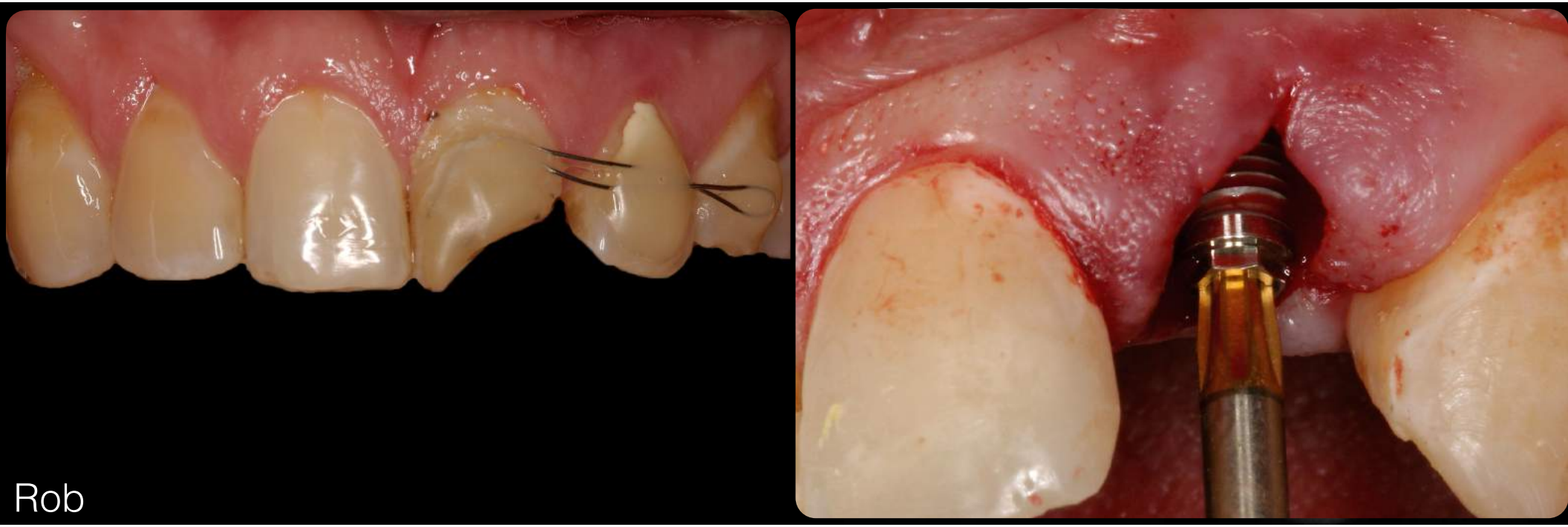






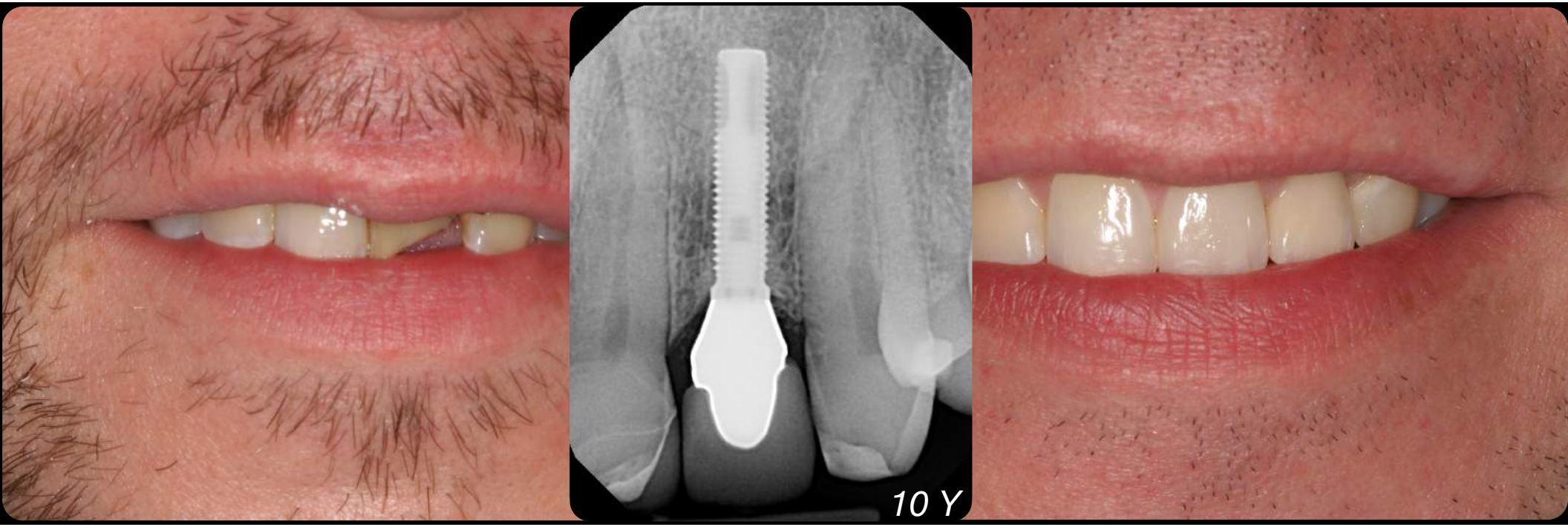





Rob

One Abutment One Time

Tallarico, M, et al. Definitive abutments placed at implant insertion and never removed: Is it an effective approach? A systematic review and meta-analysis of randomized controlled trials. J Oral Maxillofac Surg 2018;76:316-324.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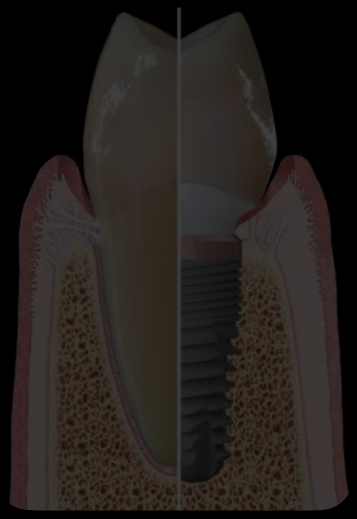
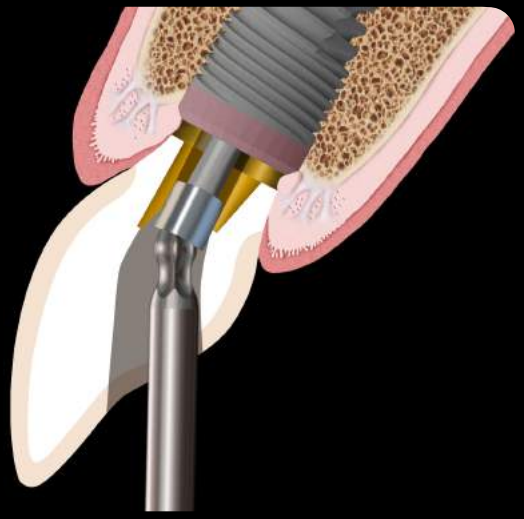
Peri-implant Complex



2004

Angulated Screw

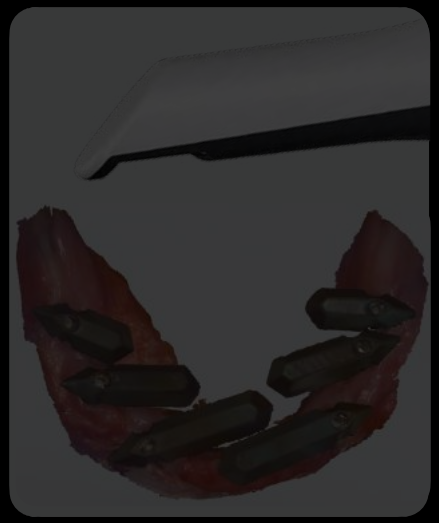


2014

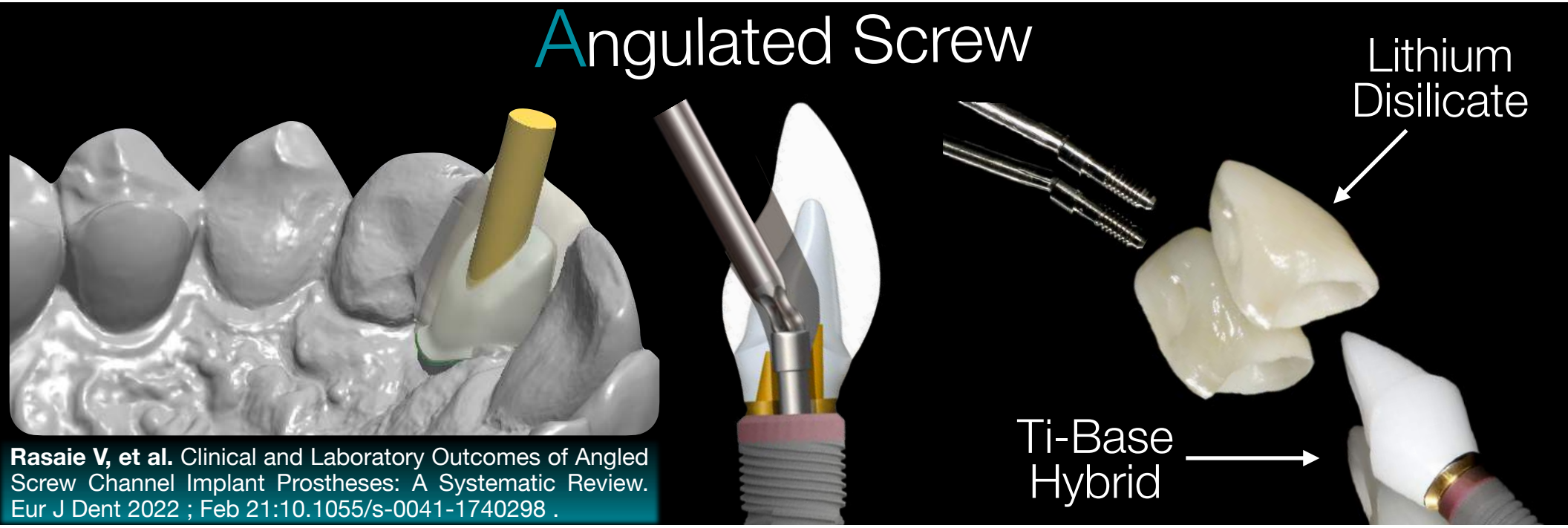
Digital Planning

2017

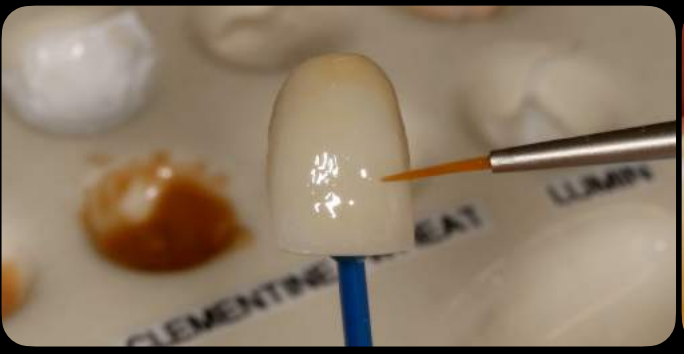
Full Arch Scanning

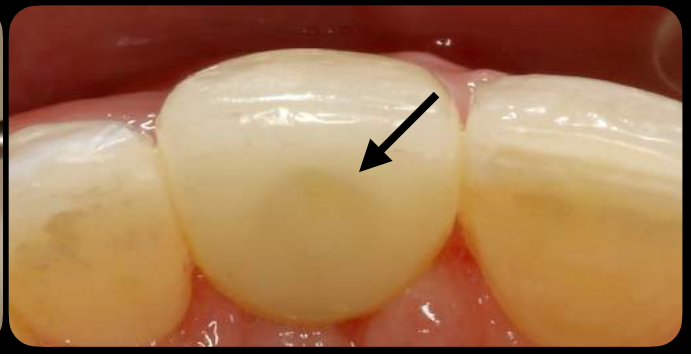


2022



Rasaie V, et al. Clinical and Laboratory Outcomes of Angled Screw Channel Implant Prostheses: A Systematic Review. Eur J Dent 2022 ; Feb 21:10.1055/s-0041-1740298 .



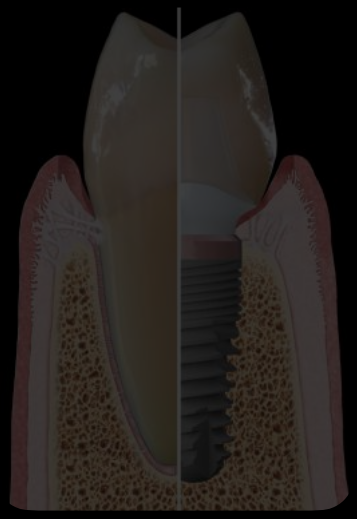


Advantages

- ↓Dis/Reconnection
- Custom Shading
- Retrievability

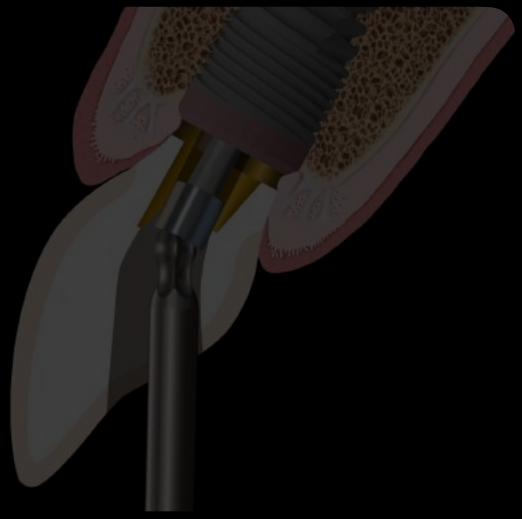

Angulated
Prosthetic Screw

Peri-implant Complex



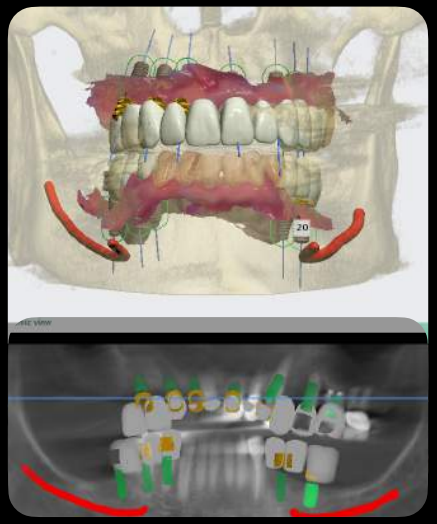
2004

Angulated Screw



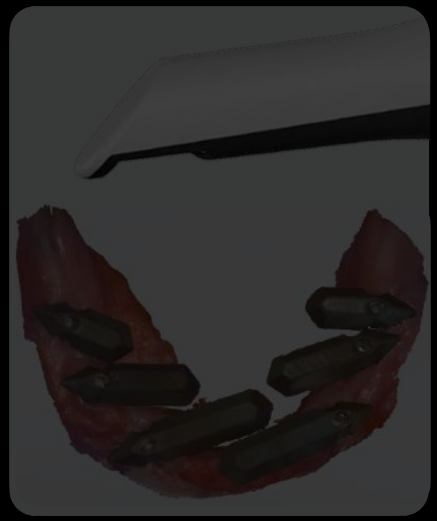
2014

Digital Planning

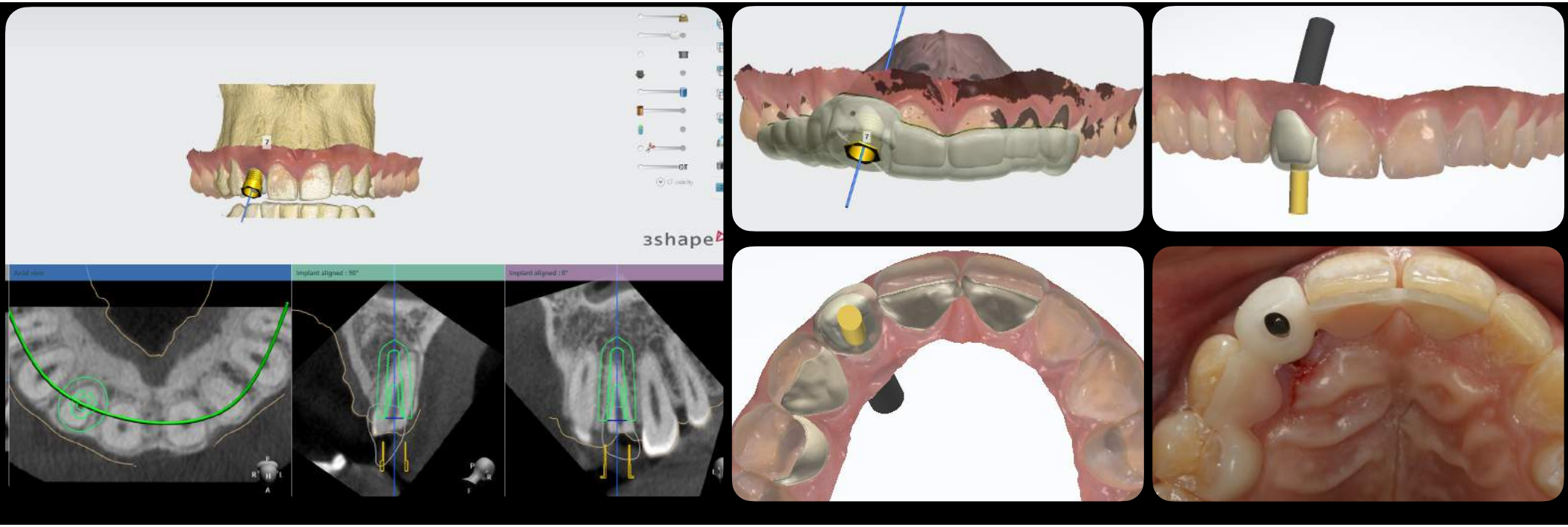


2017

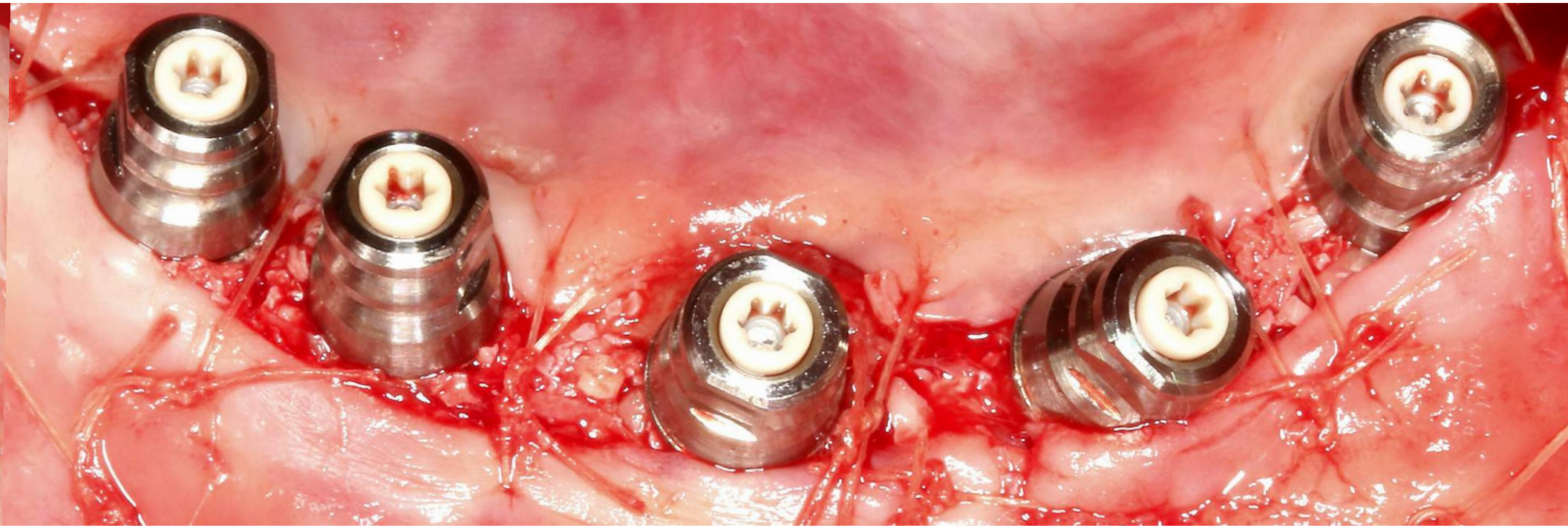
Full Arch Scanning



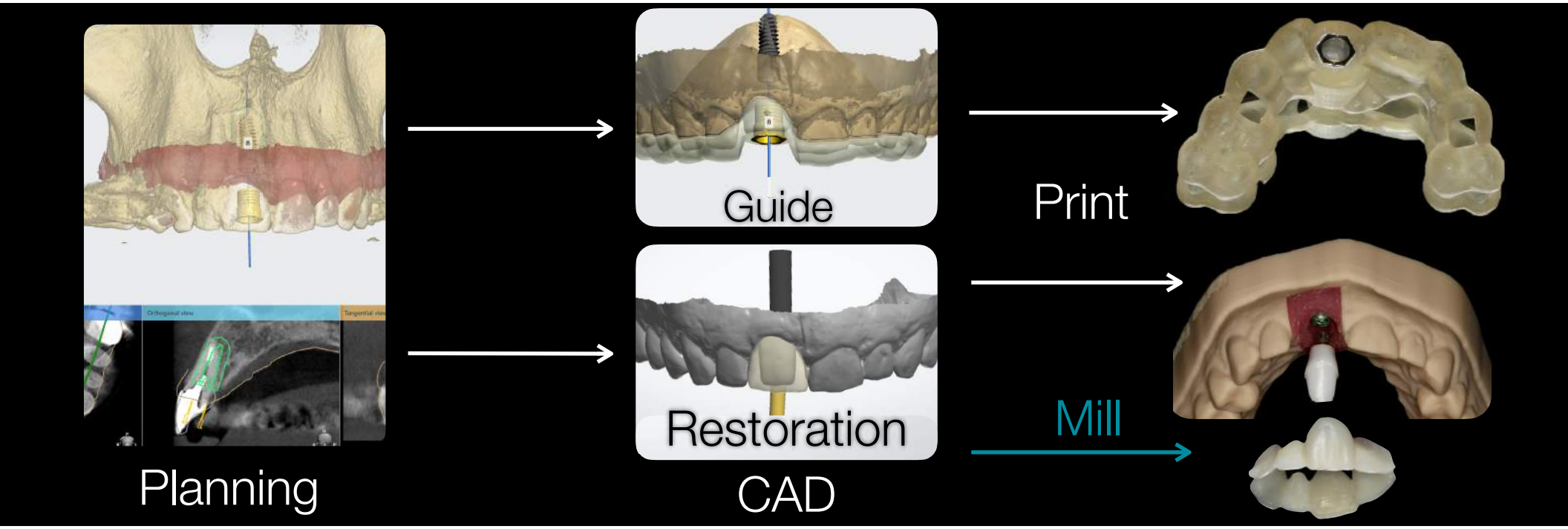
2022


3shape

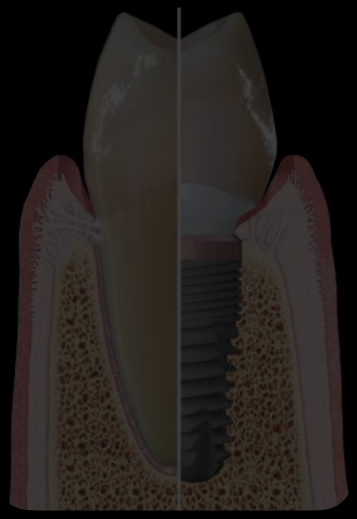

One Surgery / One Abutment / One Time




Delayed Placement
& Immediate Load

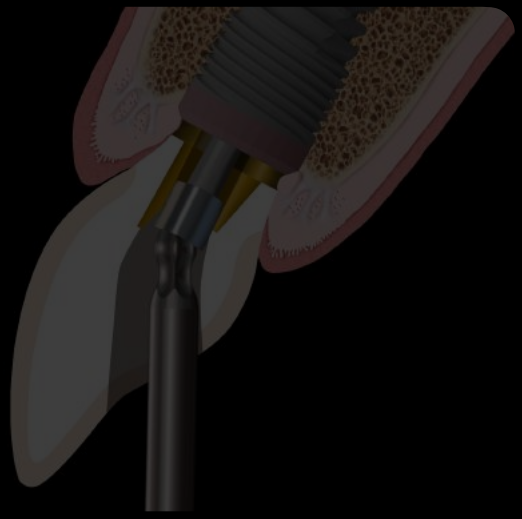

Guide
Restoration
Print
Mill
Planning
CAD

Peri-implant Complex



2004

Angulated Screw

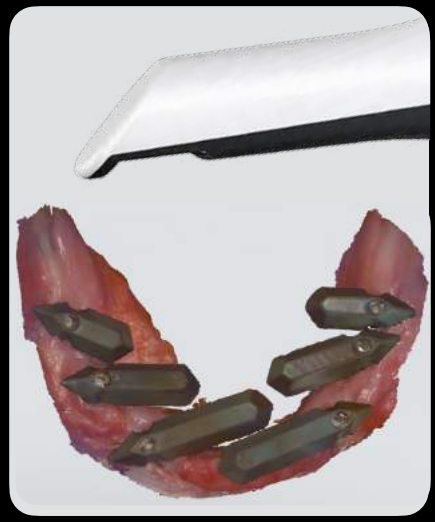


2014

Digital Planning

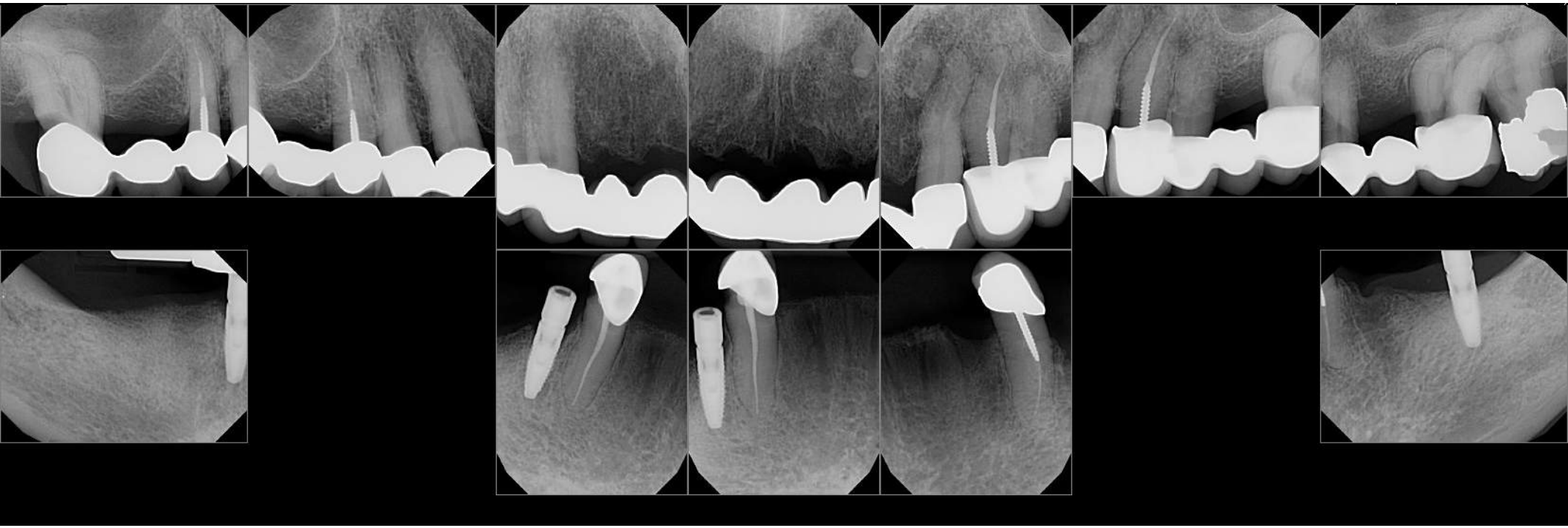
2017

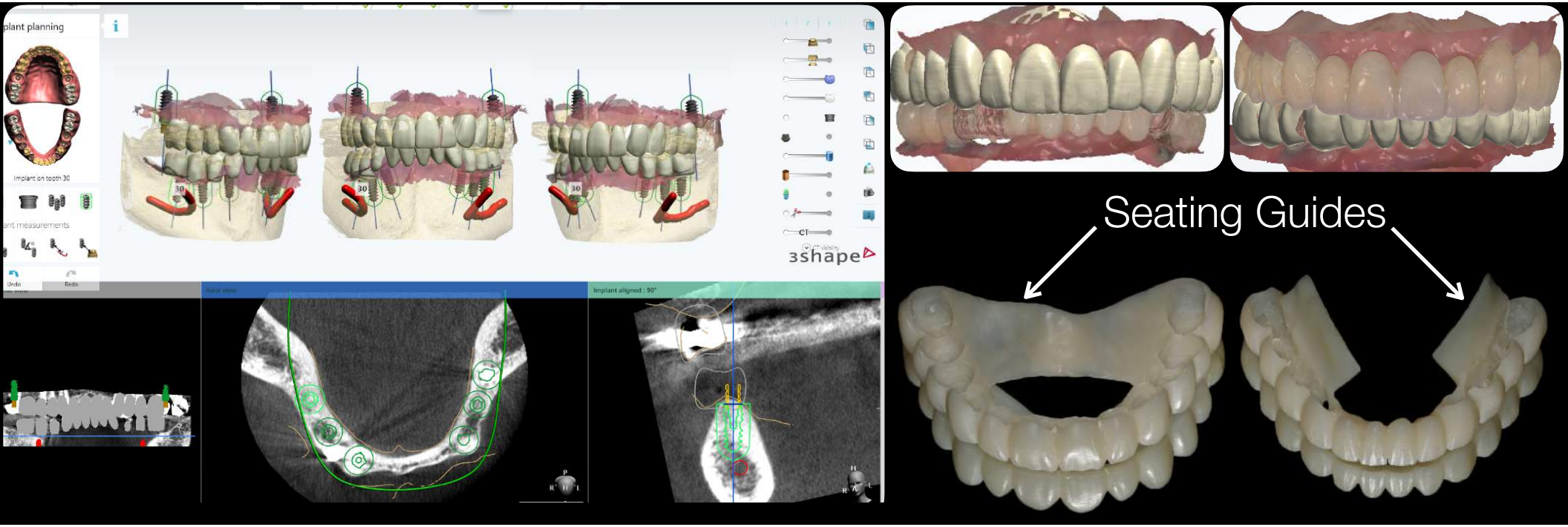
Full Arch Scanning

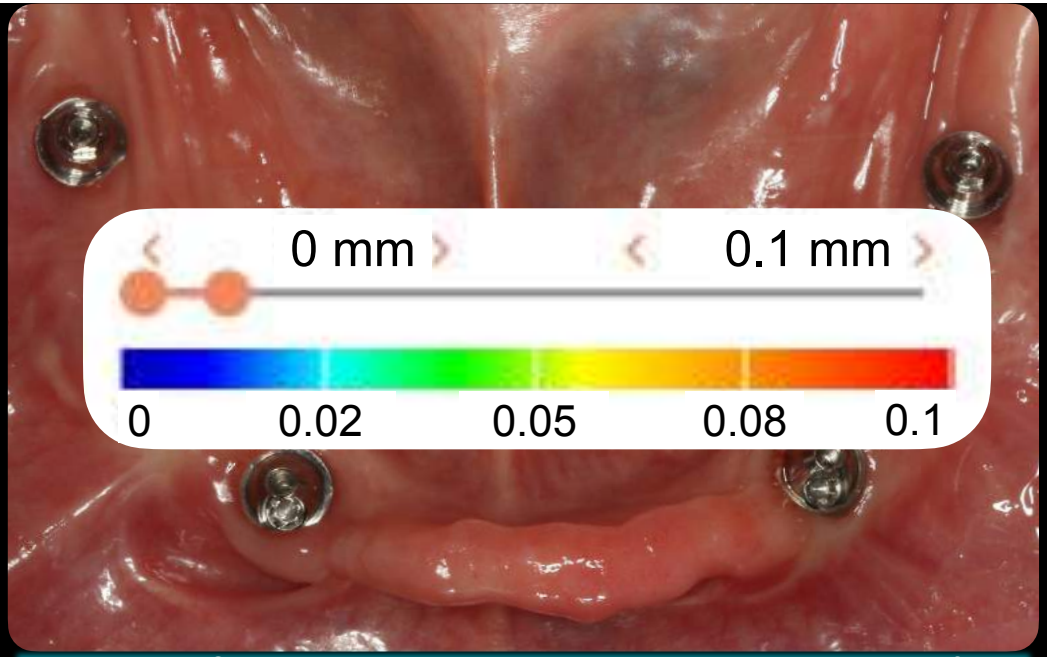


2022


Jian




plant planning
Implant on tooth 30
Undo
Redo
30
30
30
3shape
Seating Guides



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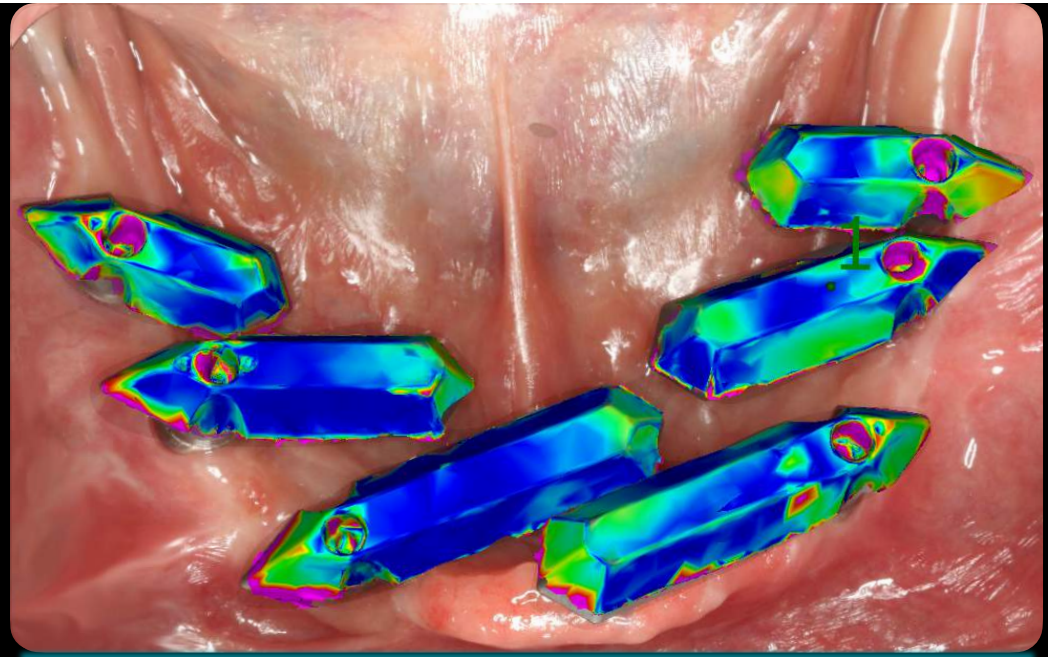

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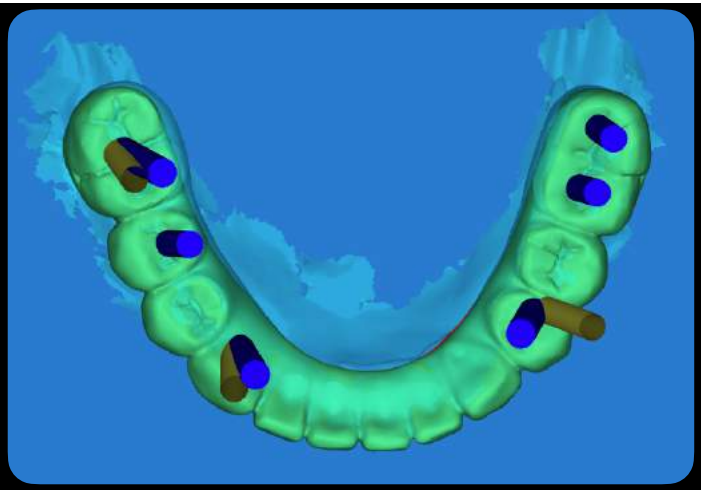
3 mm Cuff Height
Universal Driver
5 mm Cuff Height
Short
Medium
Long
4.8 mm Scan Analog
4.8 mm Narrow Scan Body
IOS_9208
NEXUS iOS
INNOVATIVE IOS TECHNOLOGIES
Powered By
Osteon

NEXUS iOS

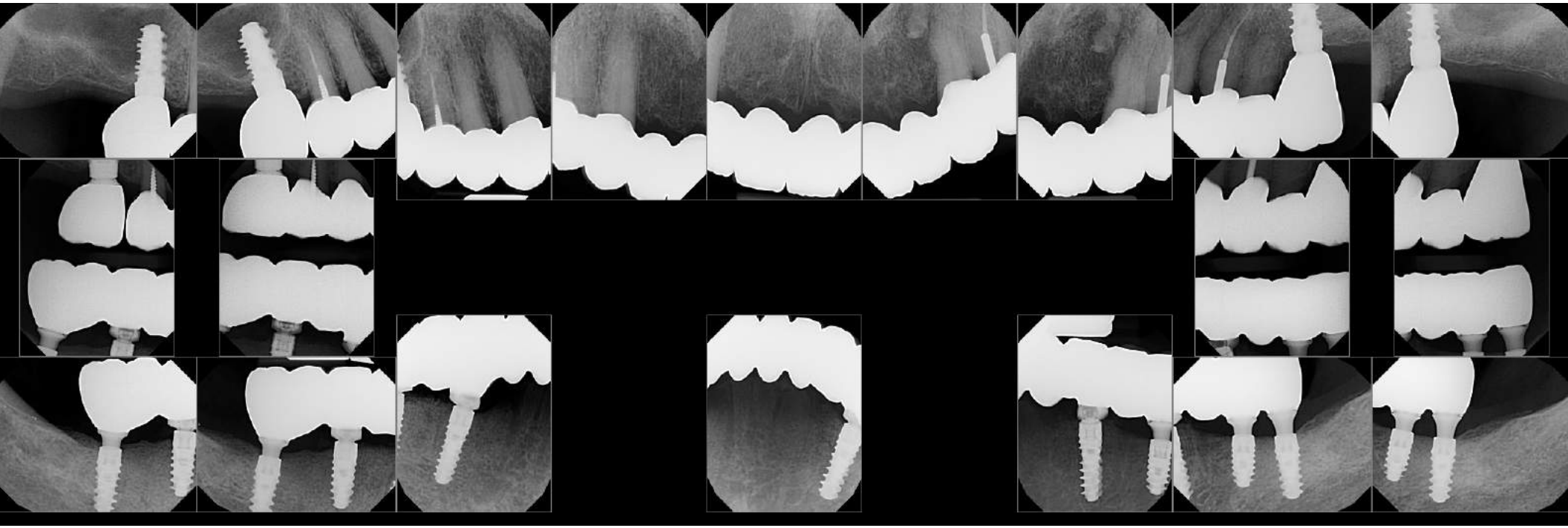


Prosthetic STL Design

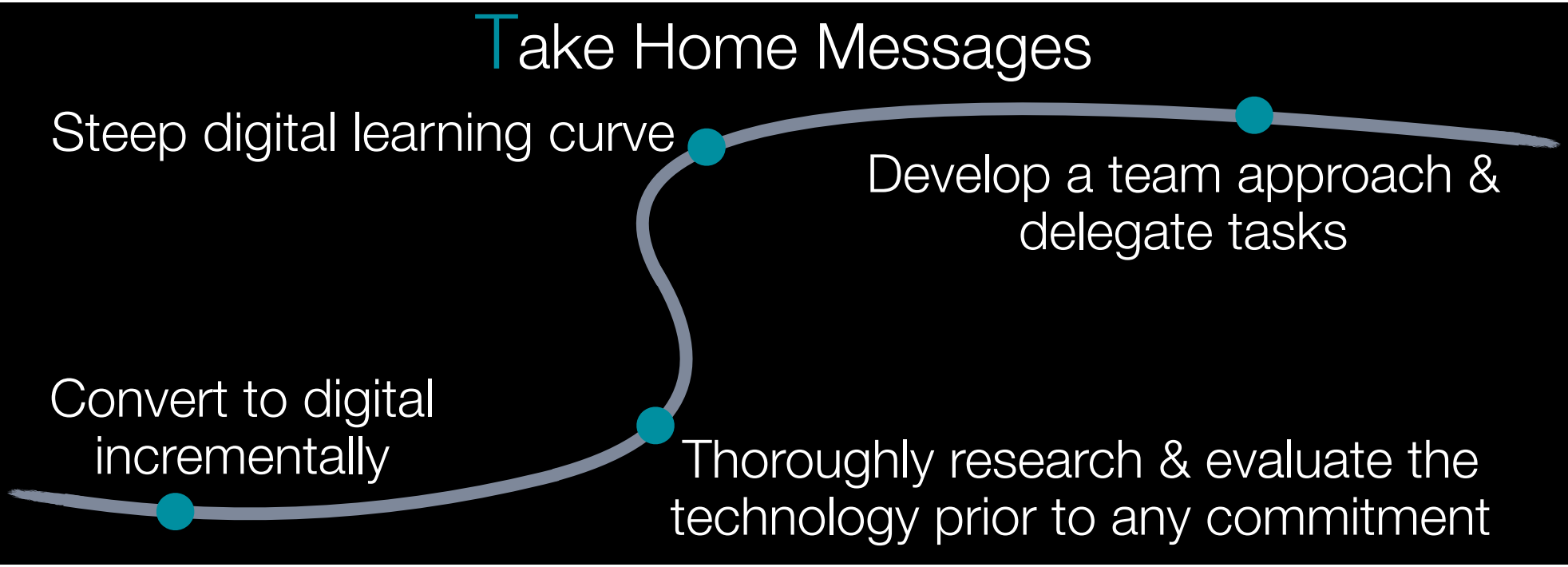
3D Printed

Try-in Prototype

Nexus IOS, Osteon Medical, Patent Pending



Take Home Messages



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dr@gdental.com