

# *Achieving Aesthetic Laminate Veneers*

*Graziano D. Giglio, DDS, FACP*



A close-up photograph of human teeth, showing the upper and lower arches. The teeth are white and appear healthy. The background is dark and textured, possibly a close-up of a person's skin or a dark surface.

# Presentation PDF

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dental



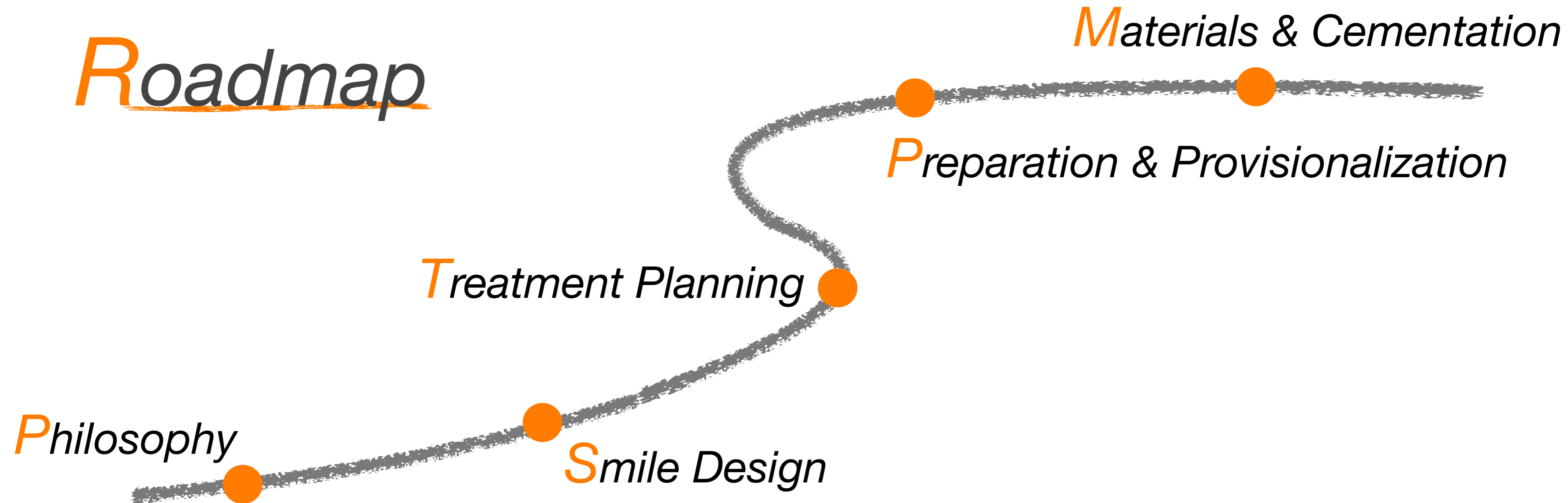


# Objectives

- ✓ Evaluate the Patient's Aesthetic Needs
- ✓ Formulate a Viable Treatment Plan
- ✓ Execute Laminate Veneer Therapy
- ✓ Predictably Achieve Optimal Aesthetics

*Natural*

# *Roadmap*



*R*oadmap

*P*hilosophy





**Calamia JR.** Etched porcelain facial veneers; a new treatment modality based on scientific and clinical evidence. NY J Dent 1983;53:255-259.



**Calamia JR, Calamia CS.** Porcelain Laminate Veneers: Reasons for 25 Years of Success. Dent Clin N Am 2007;51:399-417.



**Barrack G.** Aesthetic Partial-Coverage Dental Restoration. *Curr Opin Dent* 1992;2:39-44.



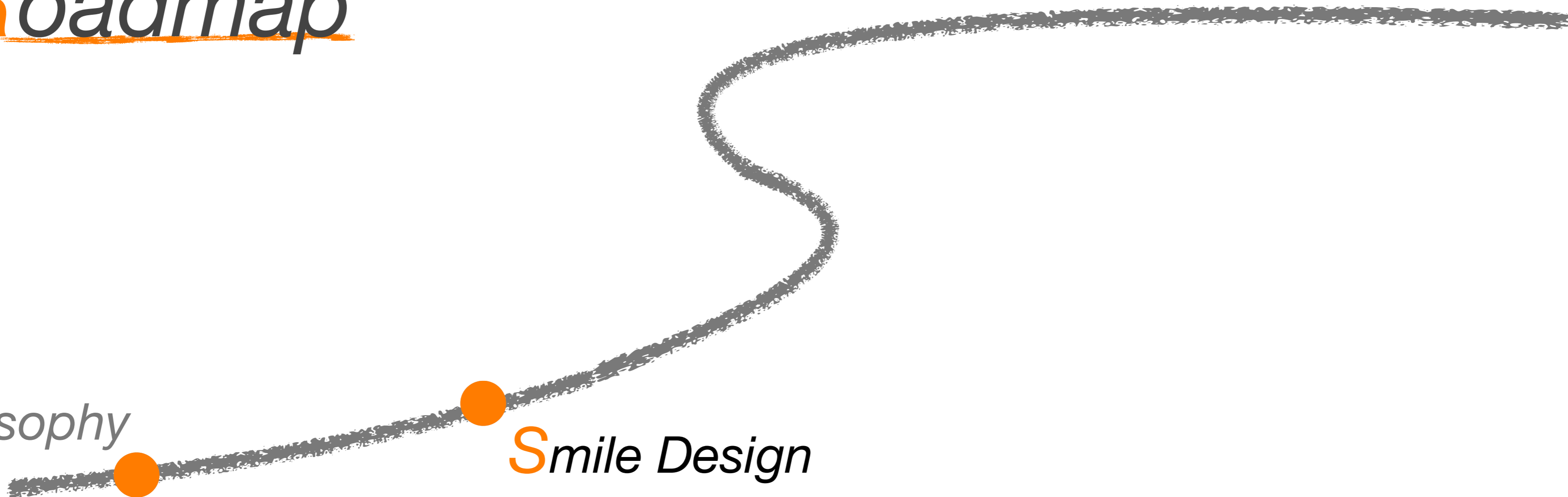




# *Roadmap*

*Philosophy*

*Smile Design*



# Smile Design

- ✓ Parameters
- ✓ Diagnostic wax-up
- ✓ Trial try-in



# *Smile Design*

- ✓ Parameters
- ✓ Diagnostic wax-up
- ✓ Trial try-in





Buccal Corridor

High Lip Line

Lip Support

Extraoral

Facial Midline

Incisal Edges

Vertical Dimension

Lower Lip Contour

Gingival Margins

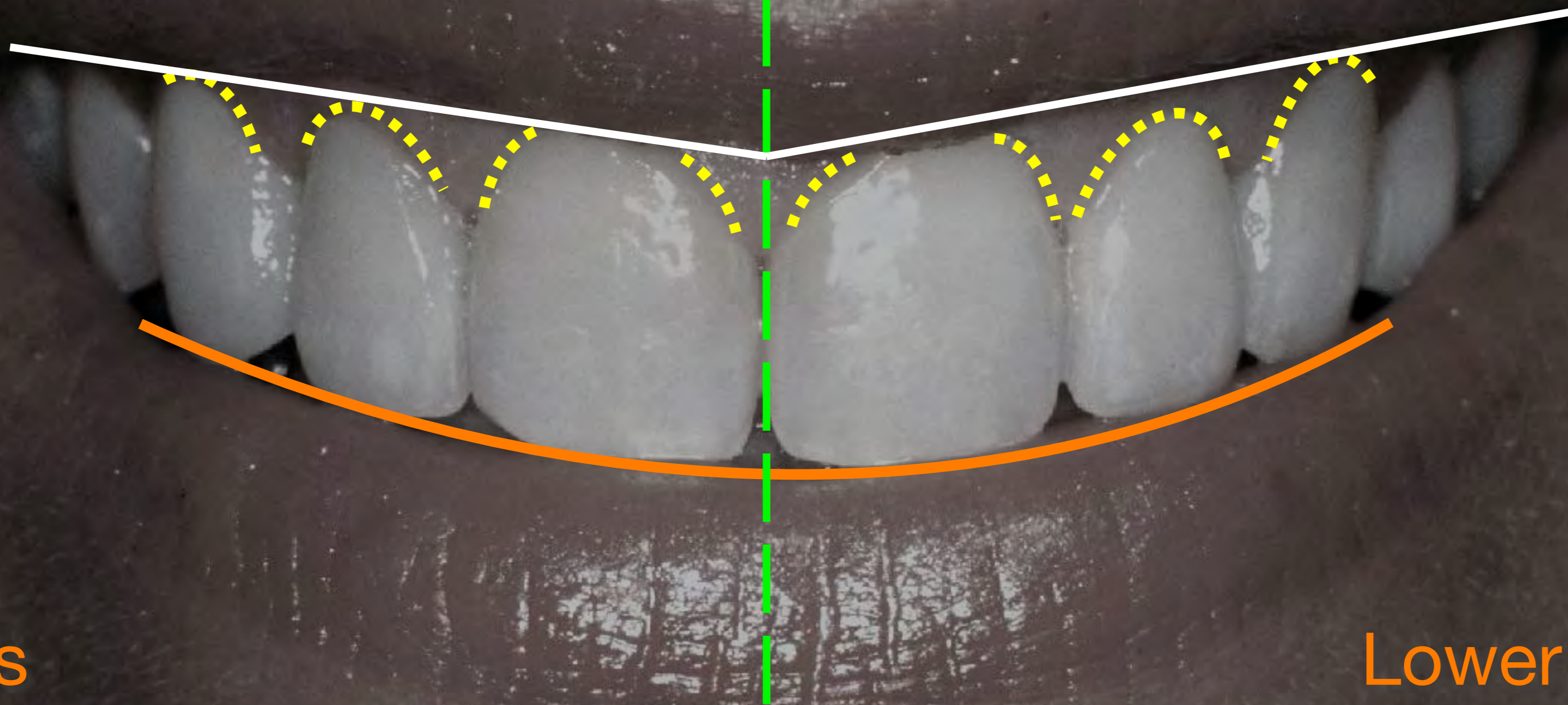
High Lip Line

Facial Midline

Gingival Margins

Incisal Edges

Lower Lip Contour





# Intraoral

Gingival Health

Negative Space

Developmental Grooves

Dental Midline

Occlusion

Shade

Translucency

Golden Rule of Proportions

Tooth Inclination

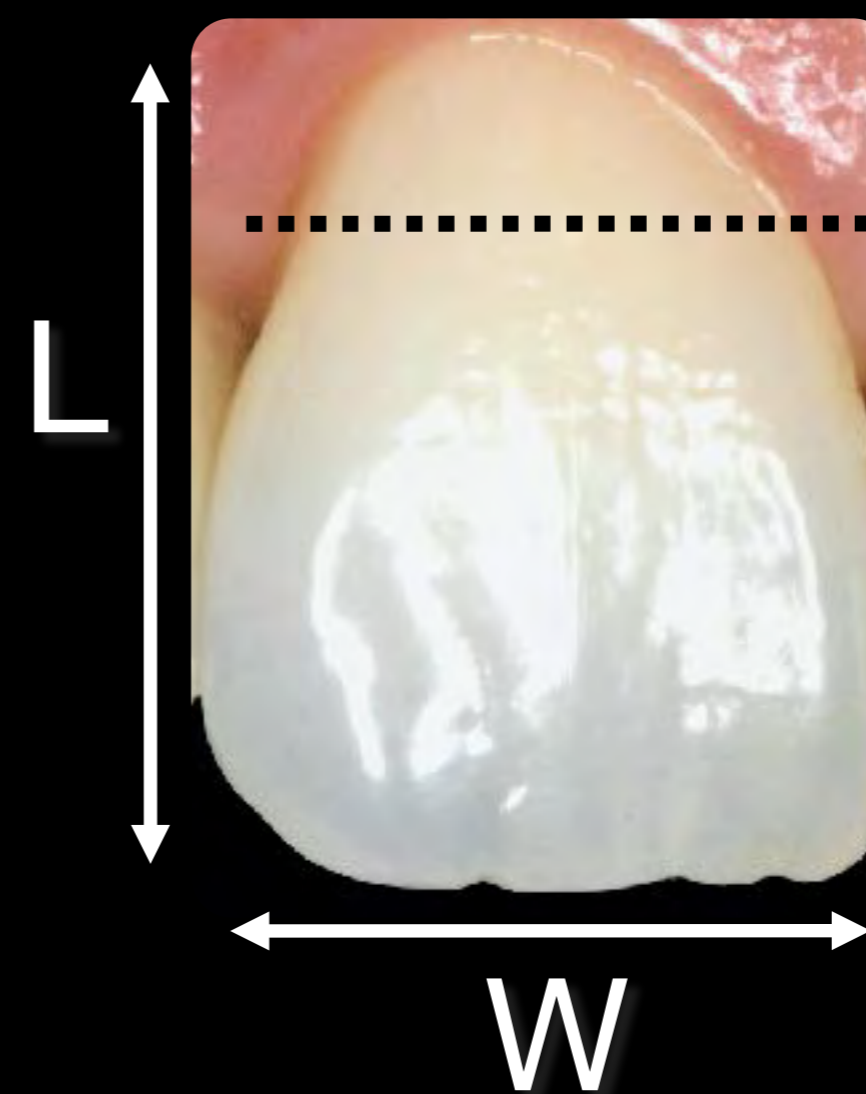
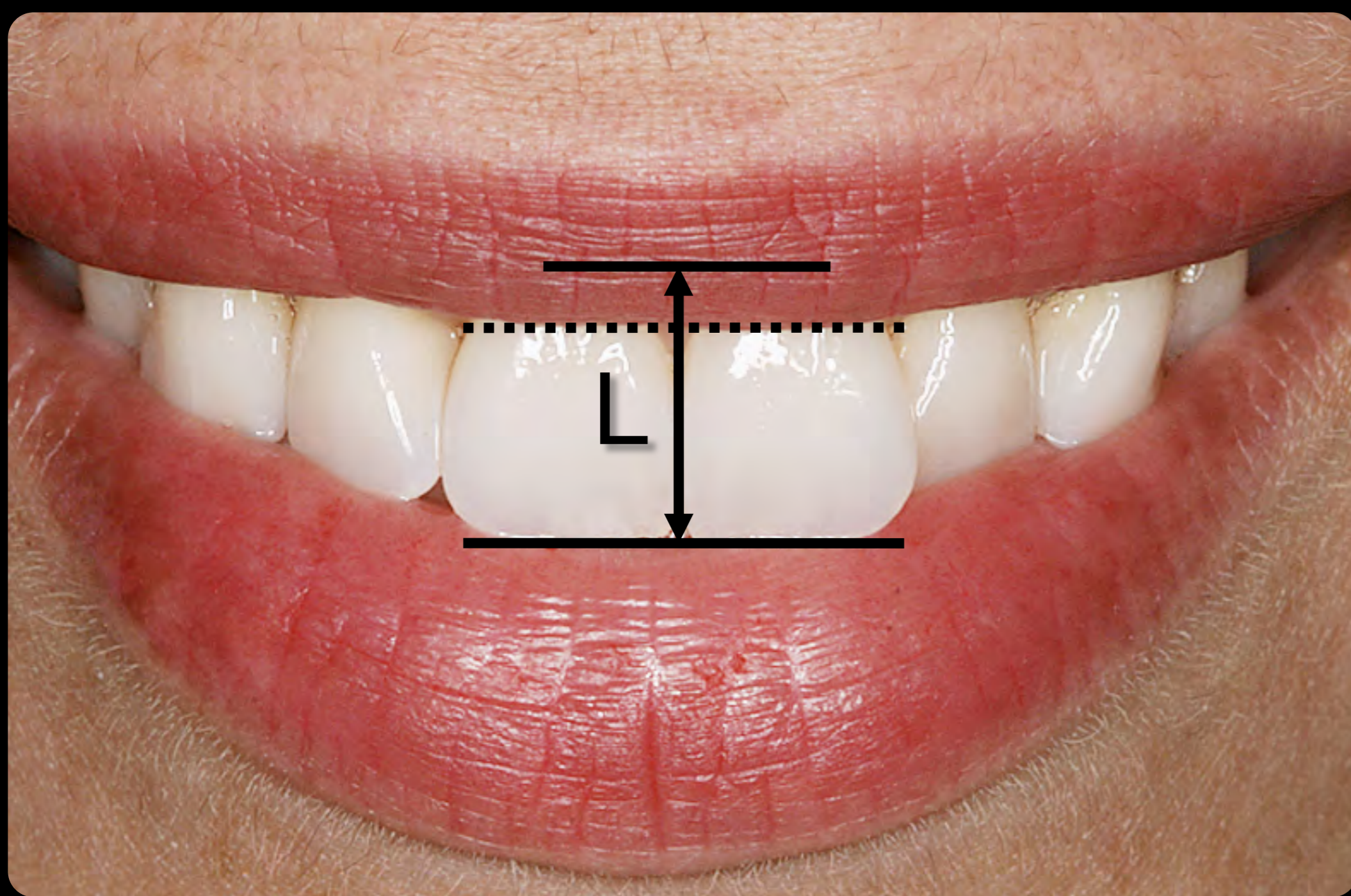
Contact Points

Arch Form

Texture

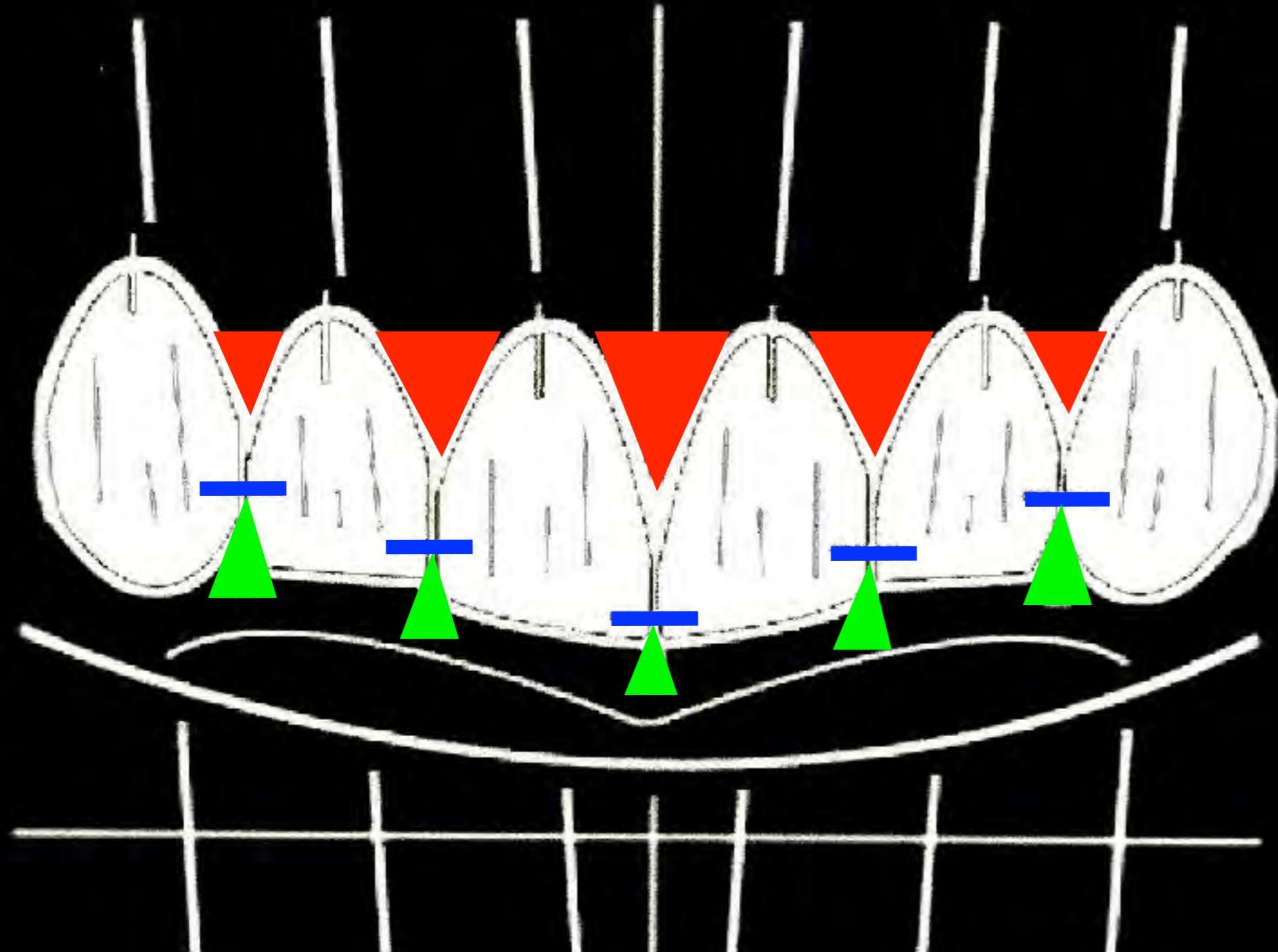
Embrasures

Width to Length Ratio

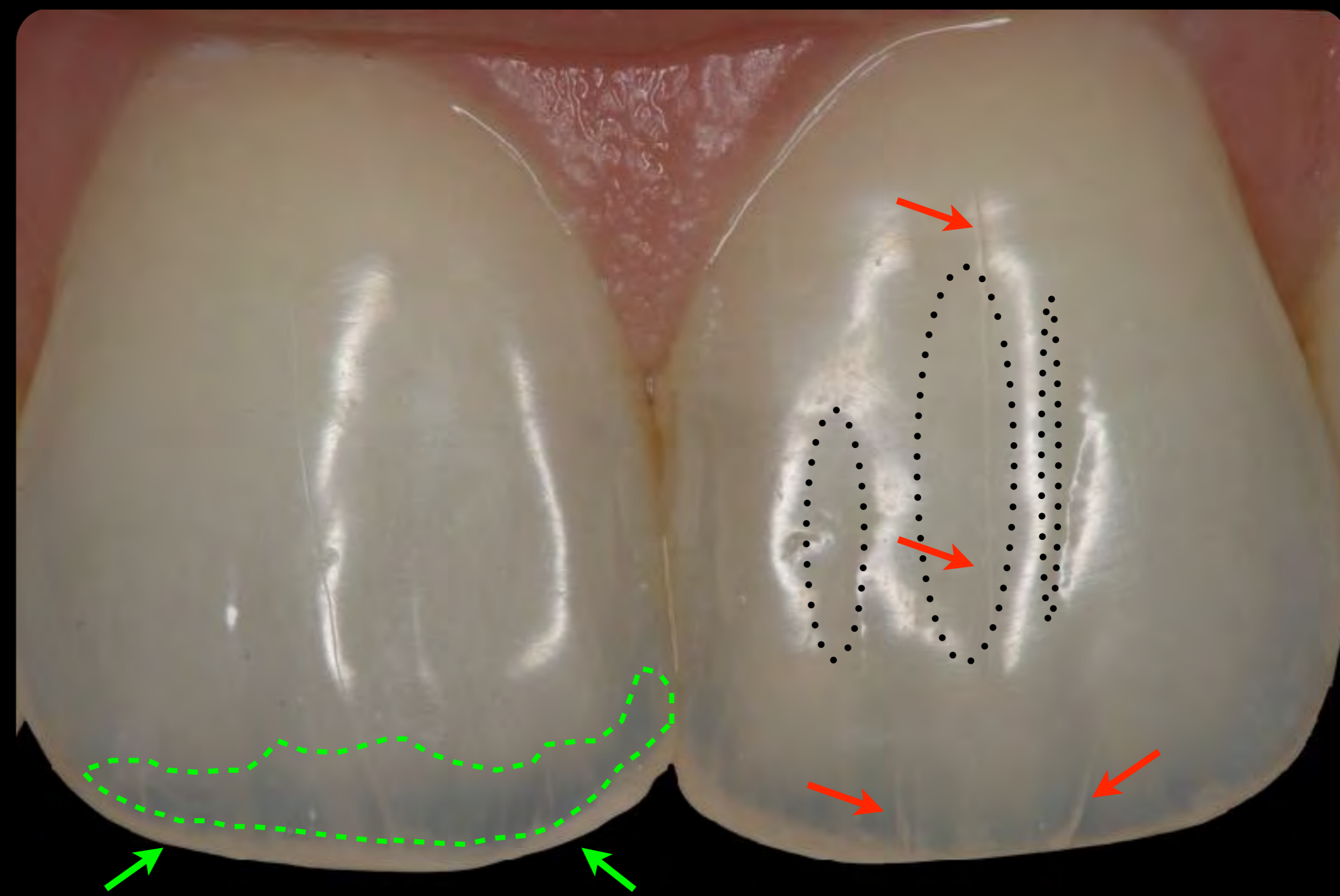
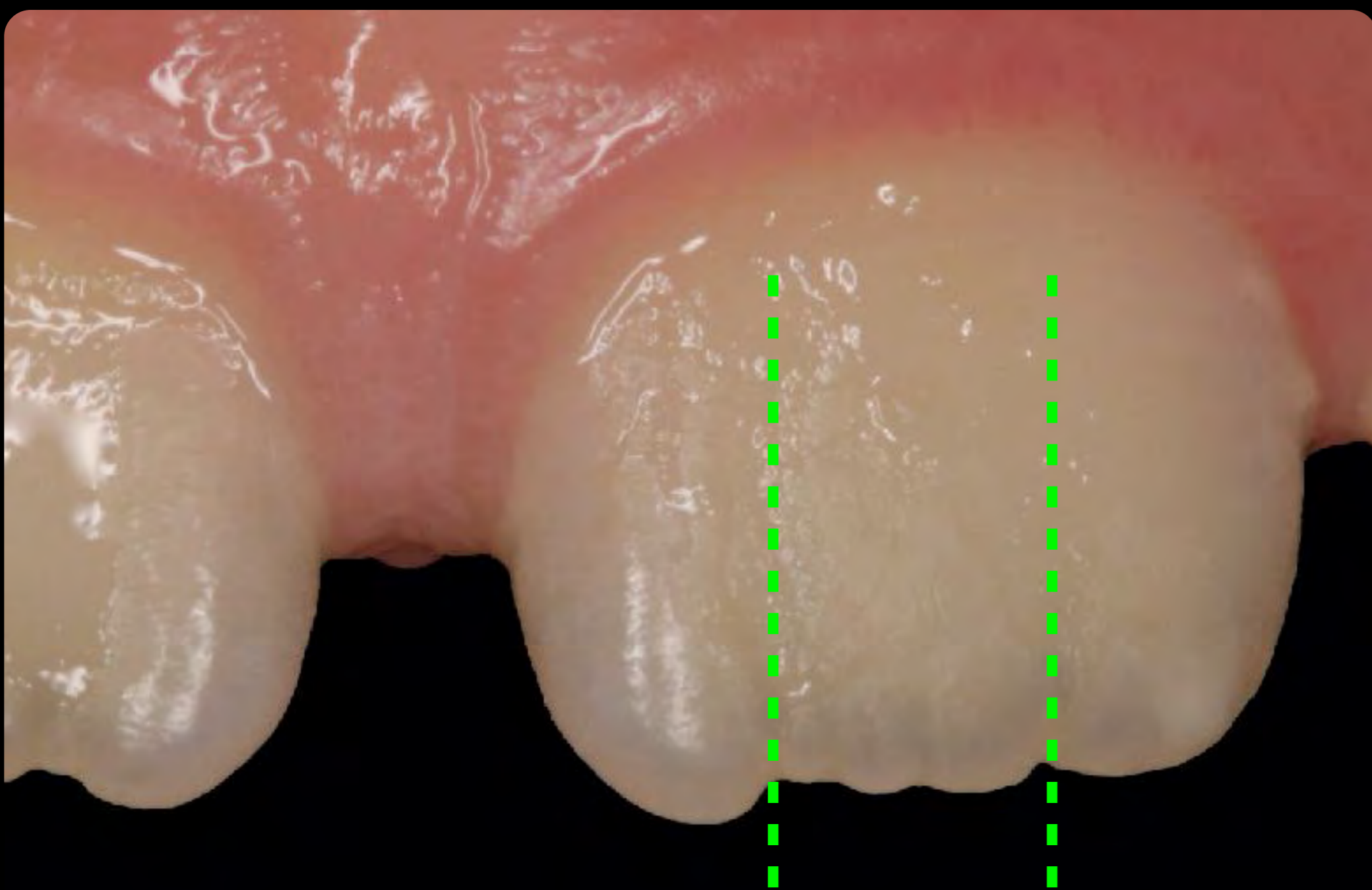


**Centrals**  
 $W = .78 \times L$

**Magne P, Gallucci G, Belser U.** Anatomic crown width/length ratios of unworn and worn maxillary teeth in white subjects. JPD 2003;89:453-61.



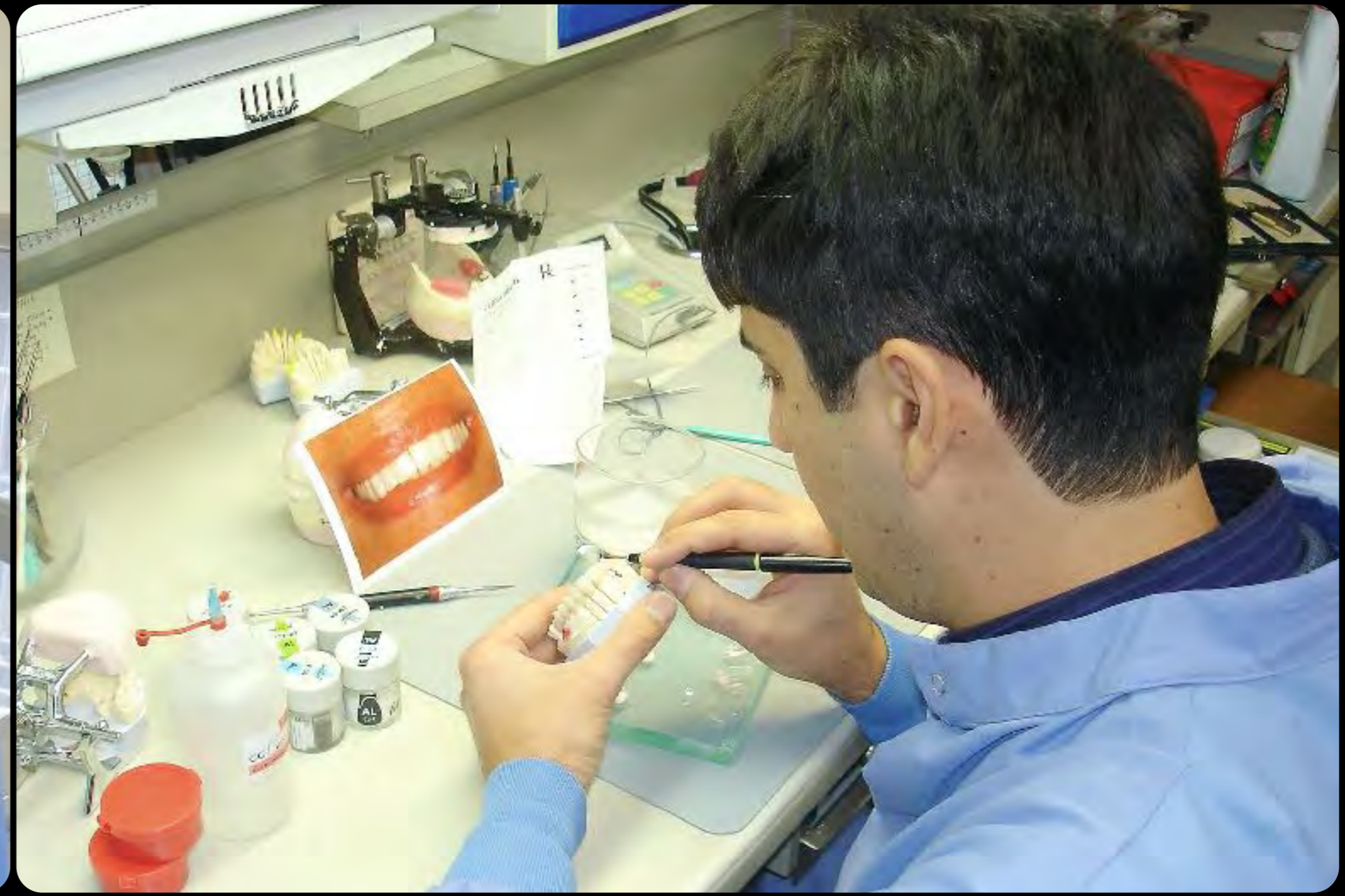
**Scharer P, Rinn L, Kopp FR:** Esthetic Guidelines for Restorative Dentistry, Chicago, 1982, Quintessence Publishing Co.



*Shade*









Vita Shades



Bleach Shades



# *Natural Smiles*



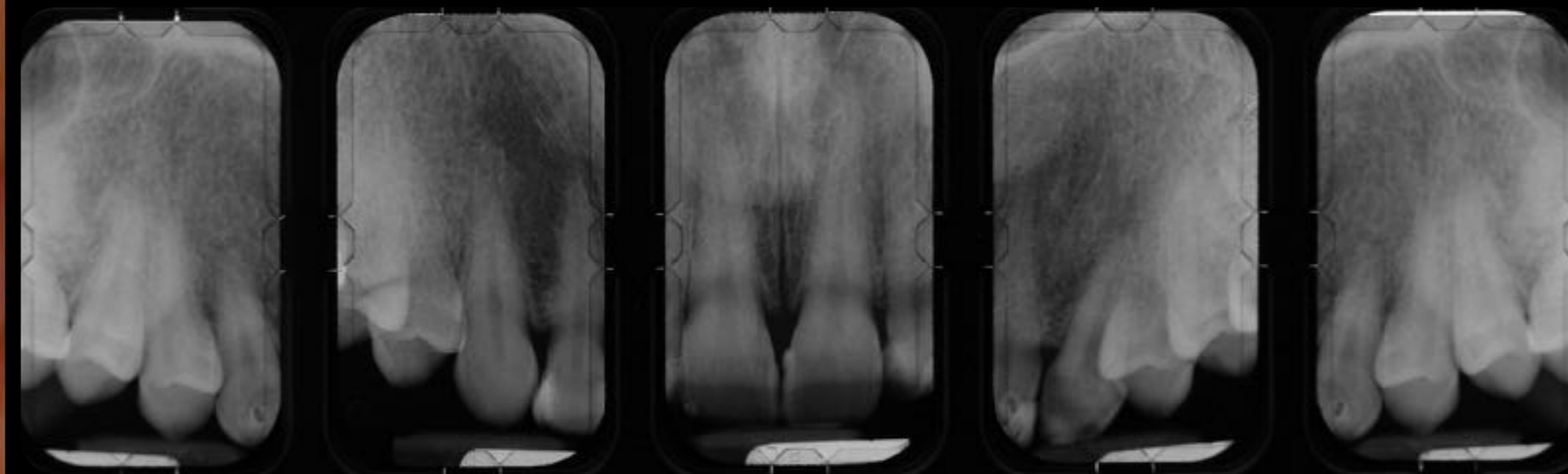


# Smile Design

- ✓ Parameters
- ✓ Diagnostic wax-up
- ✓ Trial try-in









**Magne P, Magne M.** Use of Additive Waxup and Direct Intraoral Mock-up for Enamel Preservation with Porcelain Laminate Veneers. *Eur J Esthet Dent* 2006;1:10-19.







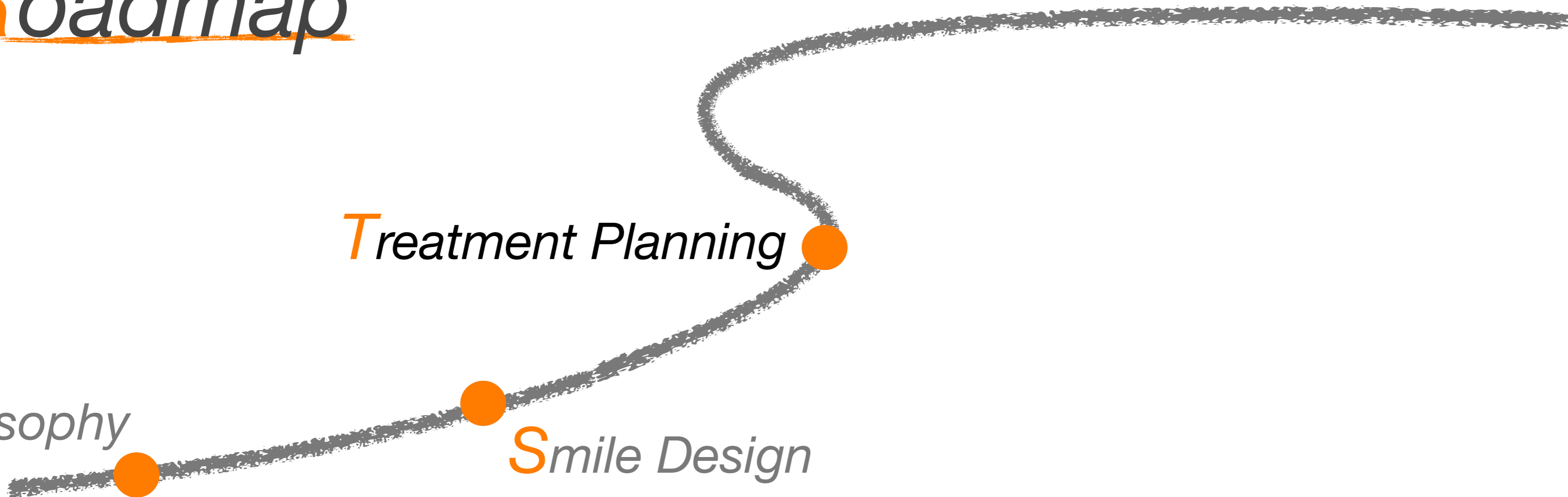


# *R*oadmap

*Philosophy*

*Treatment Planning*

*Smile Design*



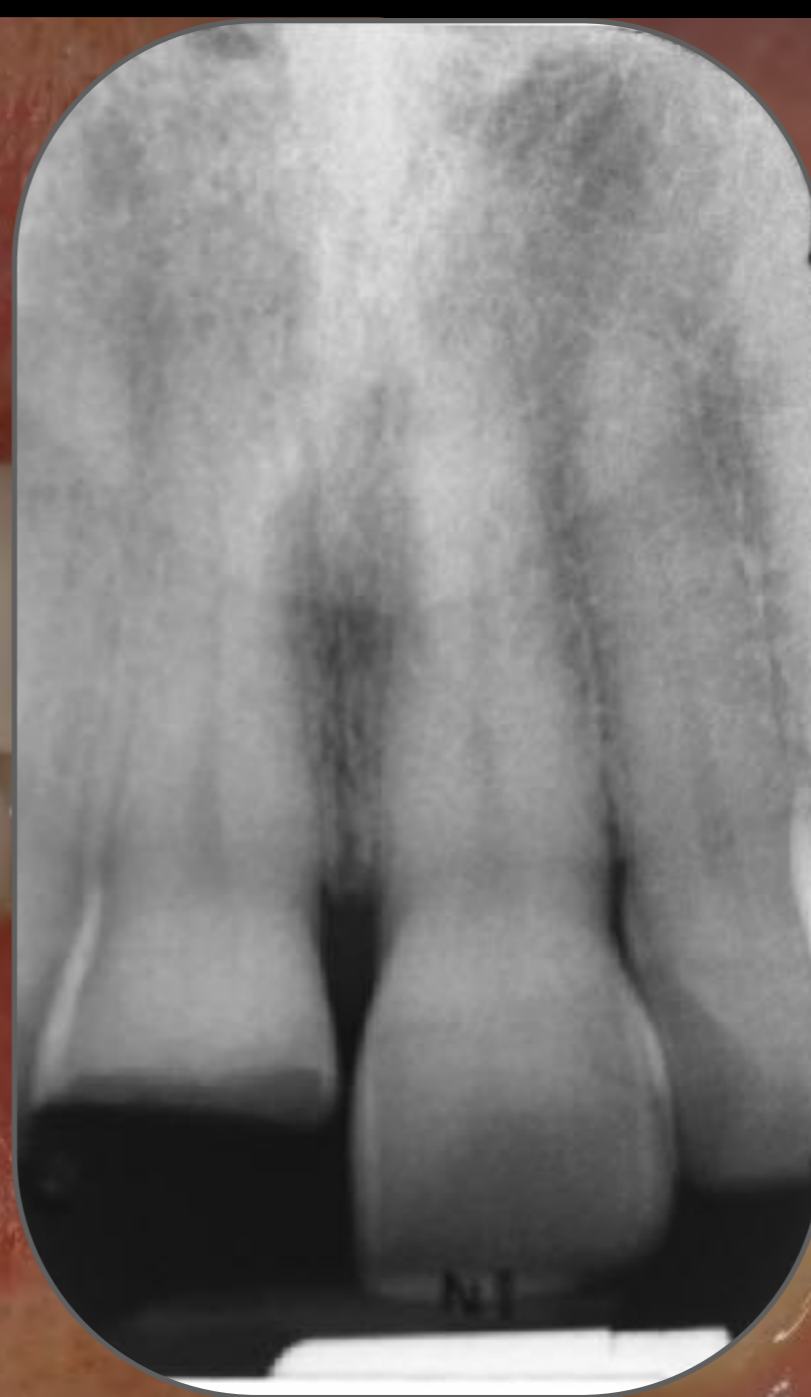


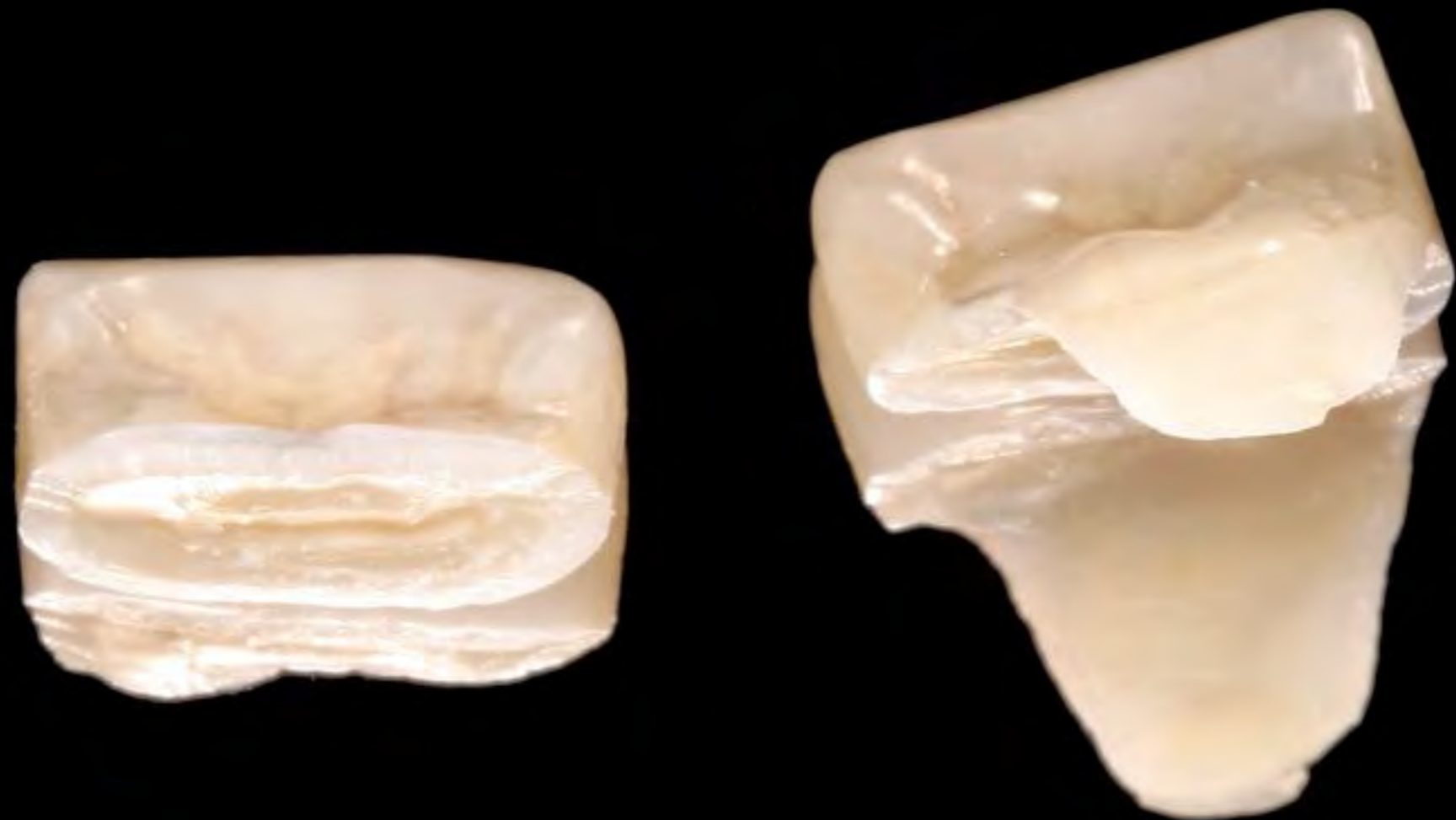


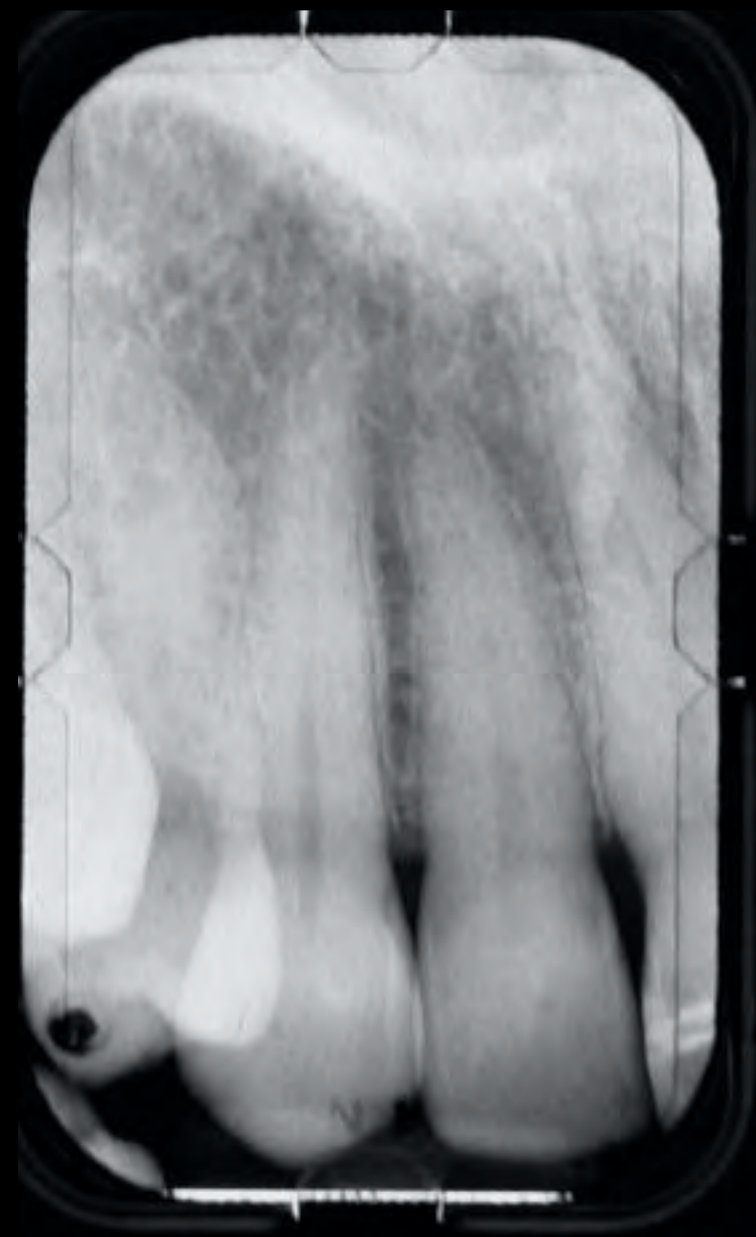


























# *Roadmap*

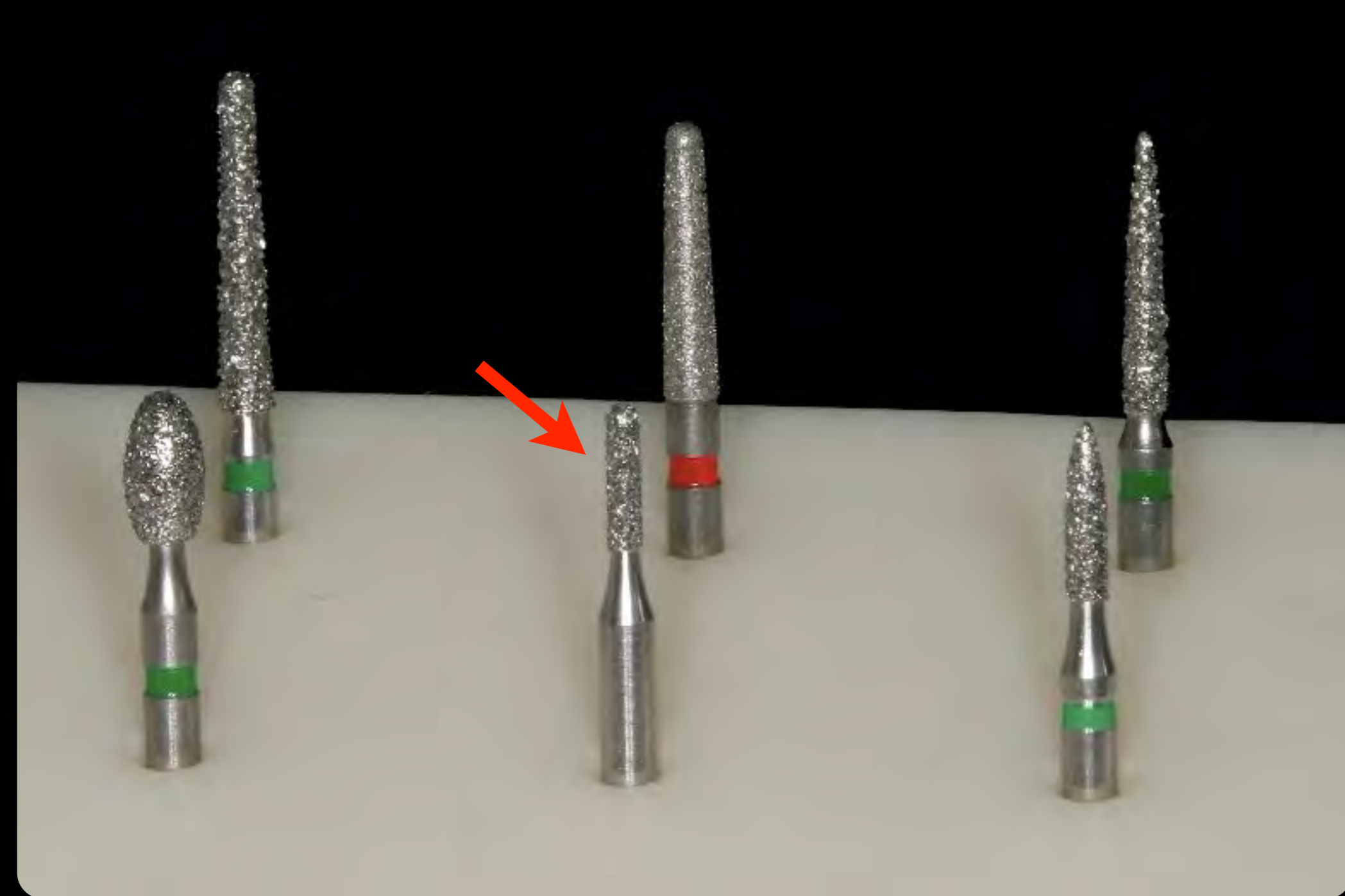


*Preparation & Provisionalization*

*Treatment Planning*

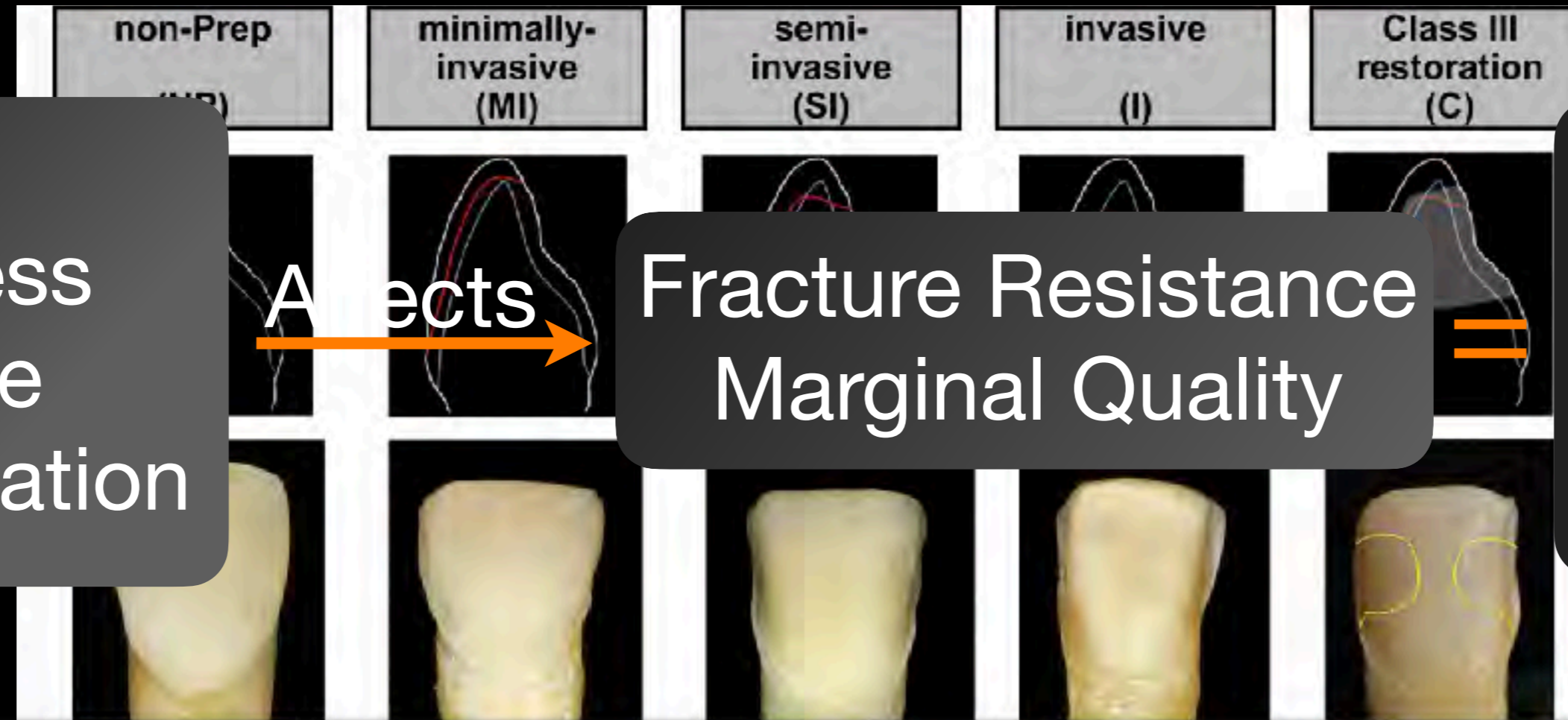
*Philosophy*

*Smile Design*





# Preparation Types



Preparation  
Ceramic Thickness  
Dentin Exposure  
Pre-existing Restoration

Affects

Fracture Resistance  
Marginal Quality

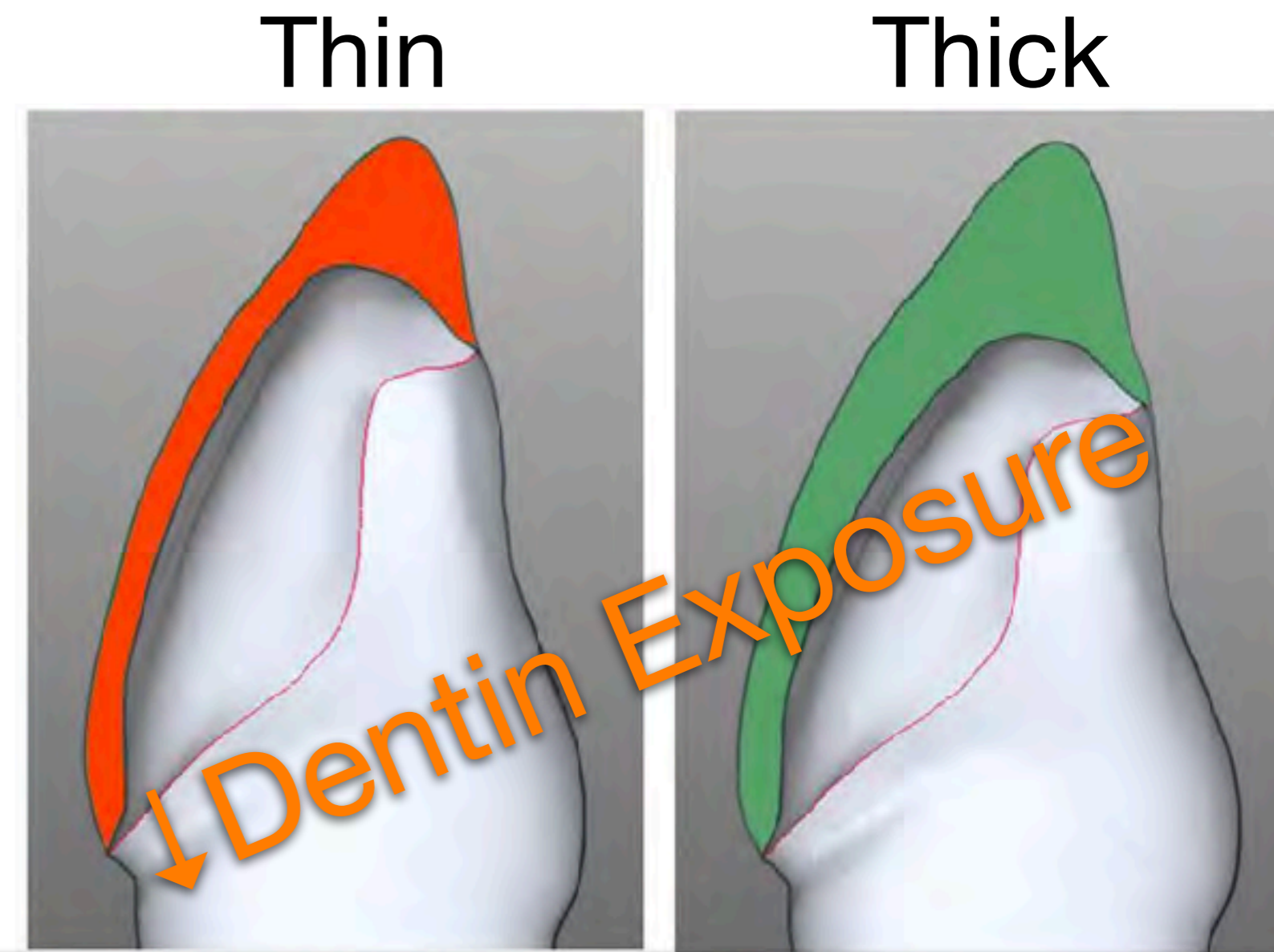
*Fracture*

Thin Ceramic  
&  
↑ Dentin Exposure

**Blunck U, et al.** Ceramic laminate veneers: effect of preparation design and ceramic thickness on resistance and marginal quality in vitro. Clin Oral Invest 2020. Jan 04.

# Recommendations

- Perfect Margin Quality in all Groups
- Thin Veneer & ↑Dentin Exposure = **Fracture**
- Thin or Thick Veneer & ↓Dentin Exposure
- Preexisting Restorations—No Adverse Effects



**Blunck U, et al.** Ceramic laminate veneers: effect of preparation design and ceramic thickness on resistance and marginal quality in vitro. Clin Oral Invest 2020. Jan 04.

# Preparation Types



No Prep



Simple



Wrap-around



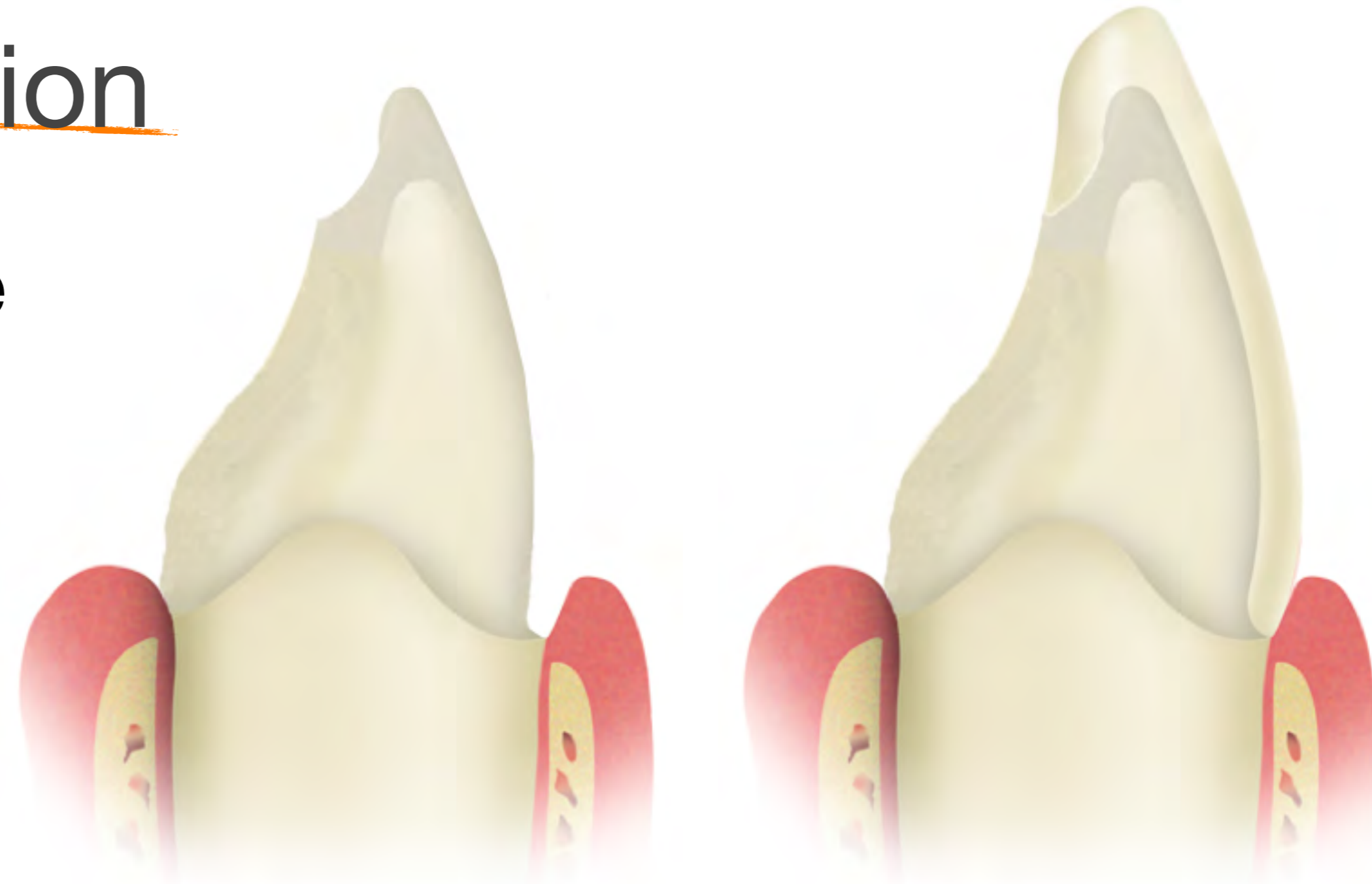




**Albanesi RB, et al.** Incisal coverage or not in ceramic laminate veneers: A systematic review and meta-analysis. J Dent 2016;52:1-7.

# Simple Veneer Preparation

- ✓ Small Chamfer or Feather Edge
- ✓ Labial & Lingual = 0.6 mm
- ✓ Smooth Transitions
- ✓ Incisal = 1.5 mm

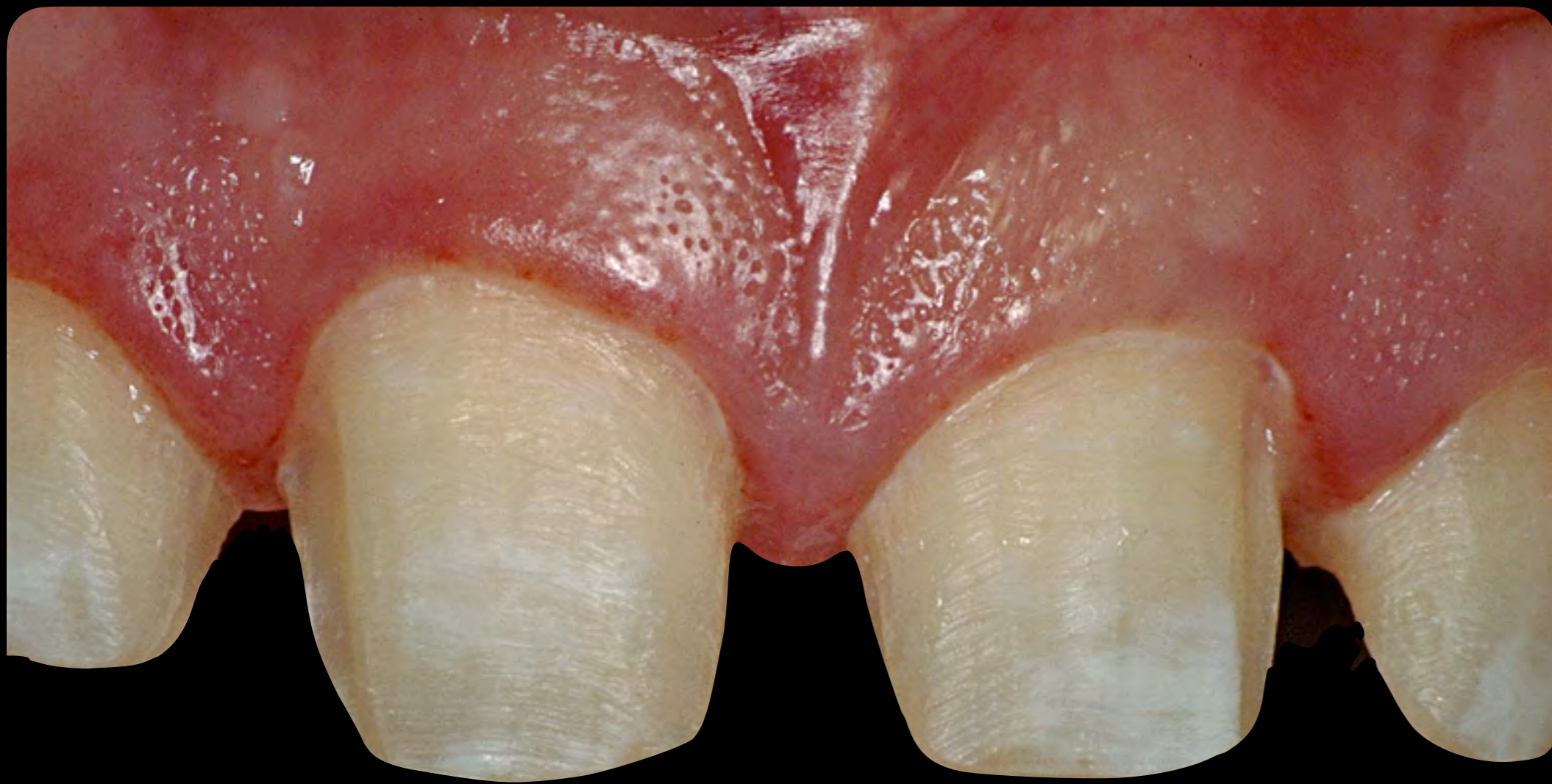




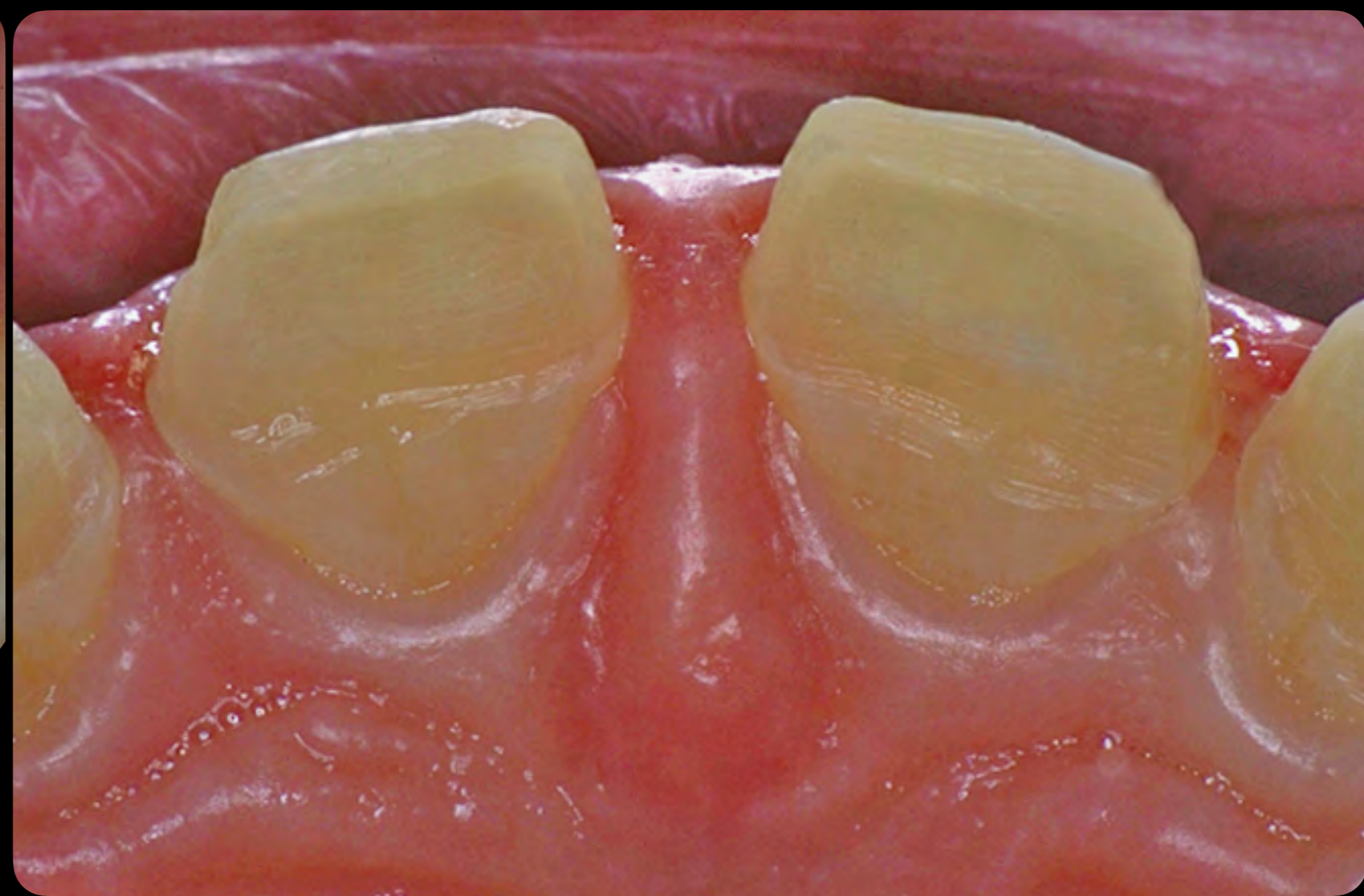


**Edelhoff D, Sorenson, J.** Tooth structure removal associated with various preparation designs for anterior teeth. J Prosthet Dent 2002;87:503-509.





Wrap-around

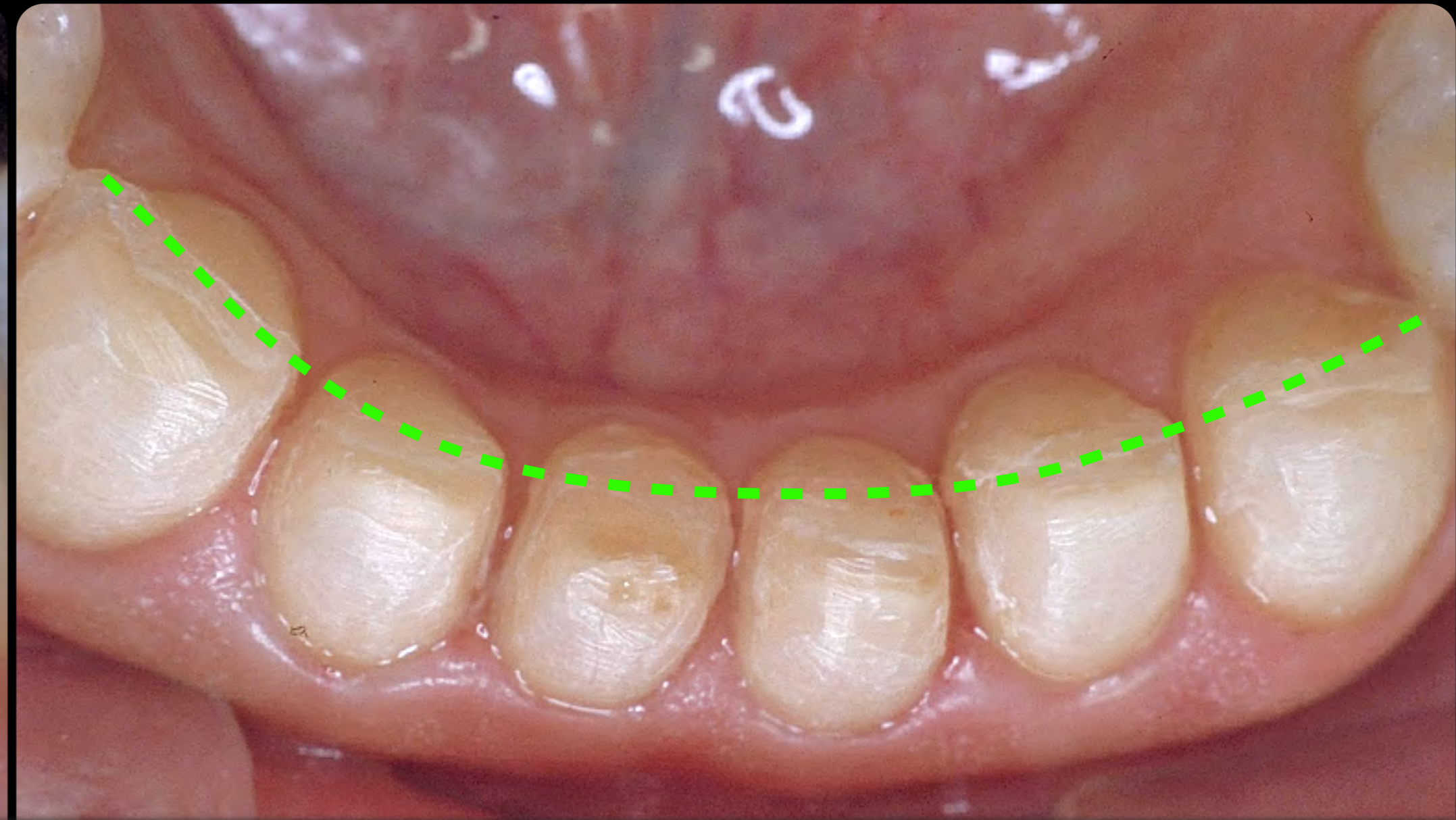


# Wrap-around Preparation

- ✓ Extensive Interproximal Caries
- ✓ Large Interproximal Restorations
- ✓ Decrease Interproximal Staining
- ✓ Planned Movement of Interproximal Surface



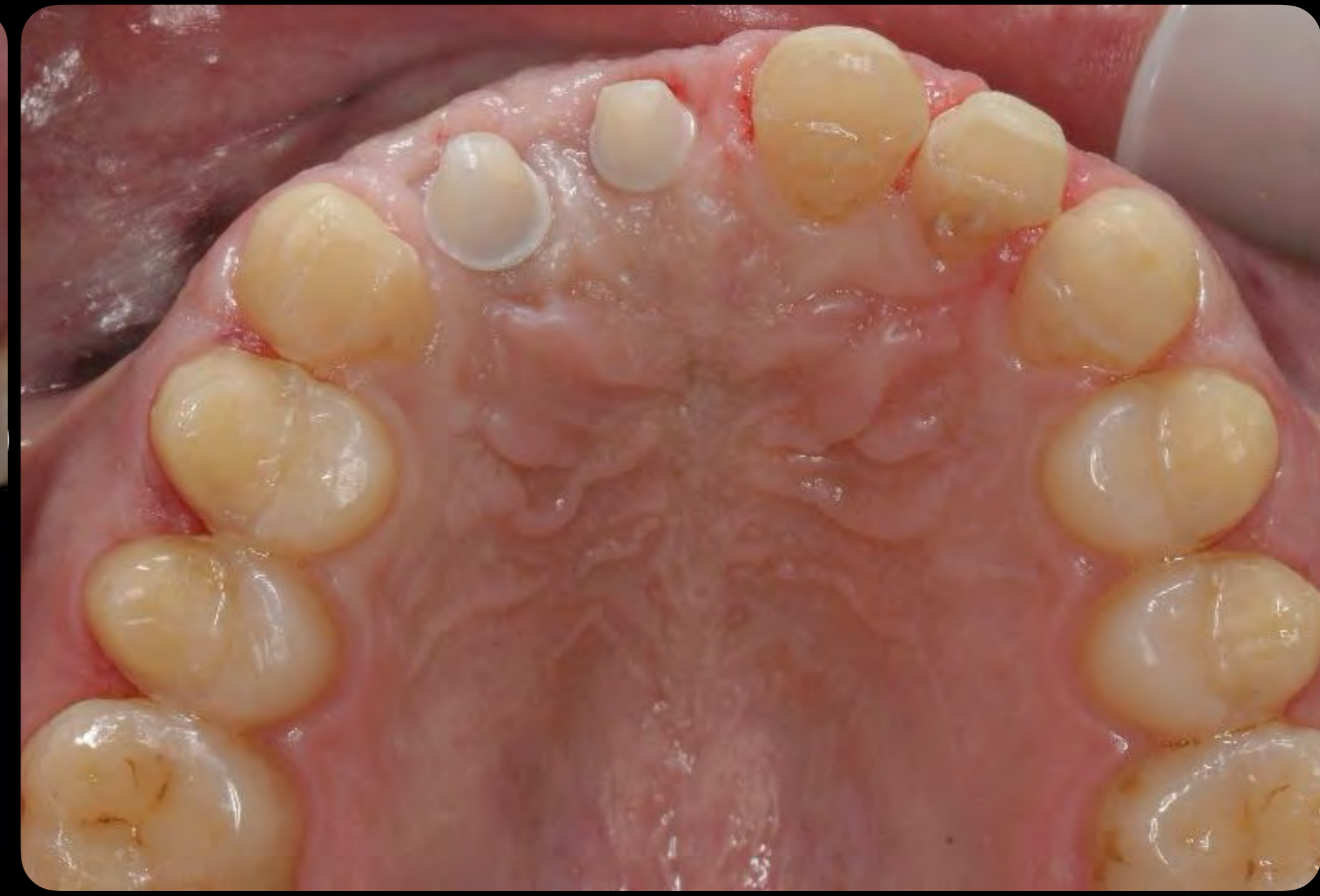




**Guess P, et al.** Prospective Clinical Study of Press-Ceramic Overlap and Full Veneer Restorations: 7-Year Results. *Int J Prosthodont* 2014;27:355-358.











# *Roadmap*

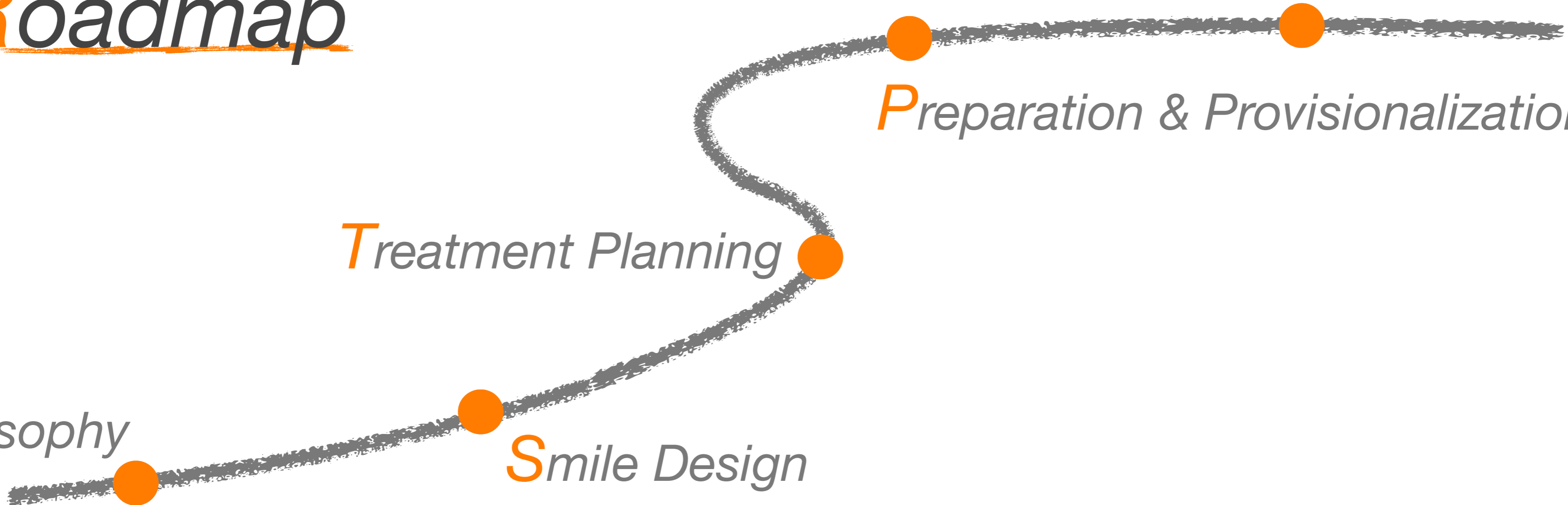
*Philosophy*

*Smile Design*

*Treatment Planning*

*Preparation & Provisionalization*

*Materials & Cementation*

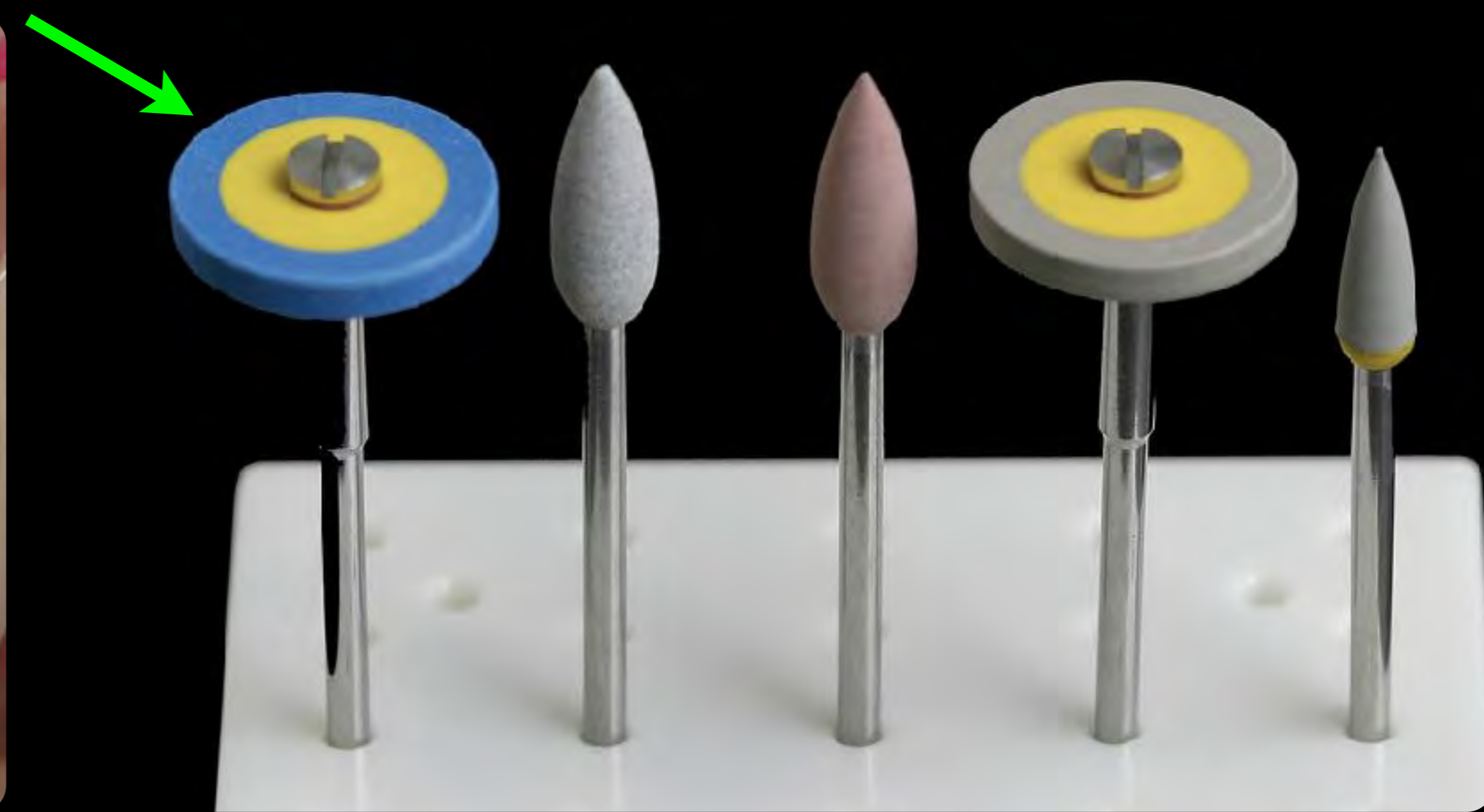


# Provisional Removal





Try-in



Adjust

# Ceramic Preparation

1. Etch With Hydrofluoric Acid
2. Steam Clean
3. Apply Silane Coupling Agent



HF Acid



Silane



Combo

# Zirconia Preparation

1. Apply Cleaning Paste
2. Rinse with H<sub>2</sub>O
3. Apply Silane Coupling Agent



Cleaning  
Paste



Silane

# Cements

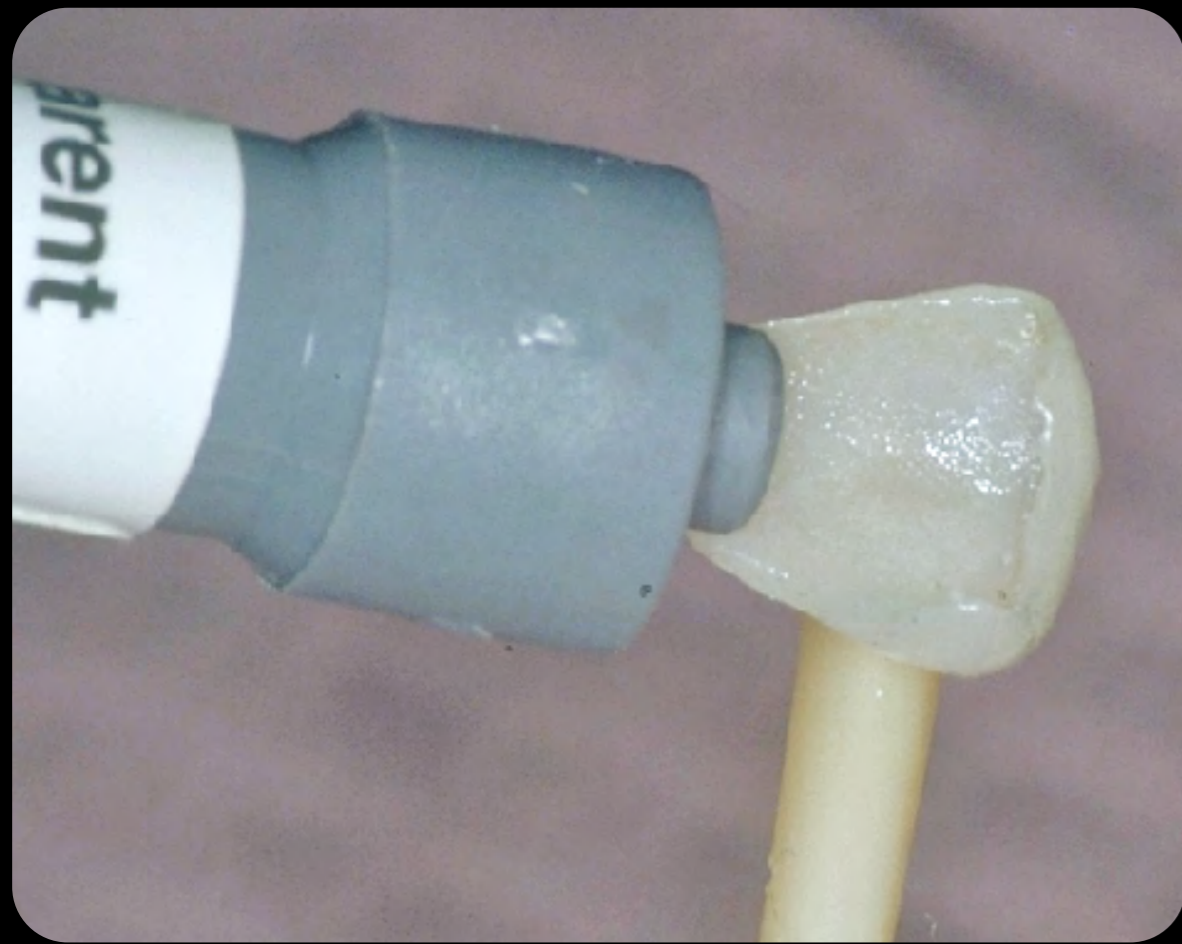


Composite Resin



Resin-Modified Glass Ionomer

Filled



Light Cure



Dual Cure

Unfilled

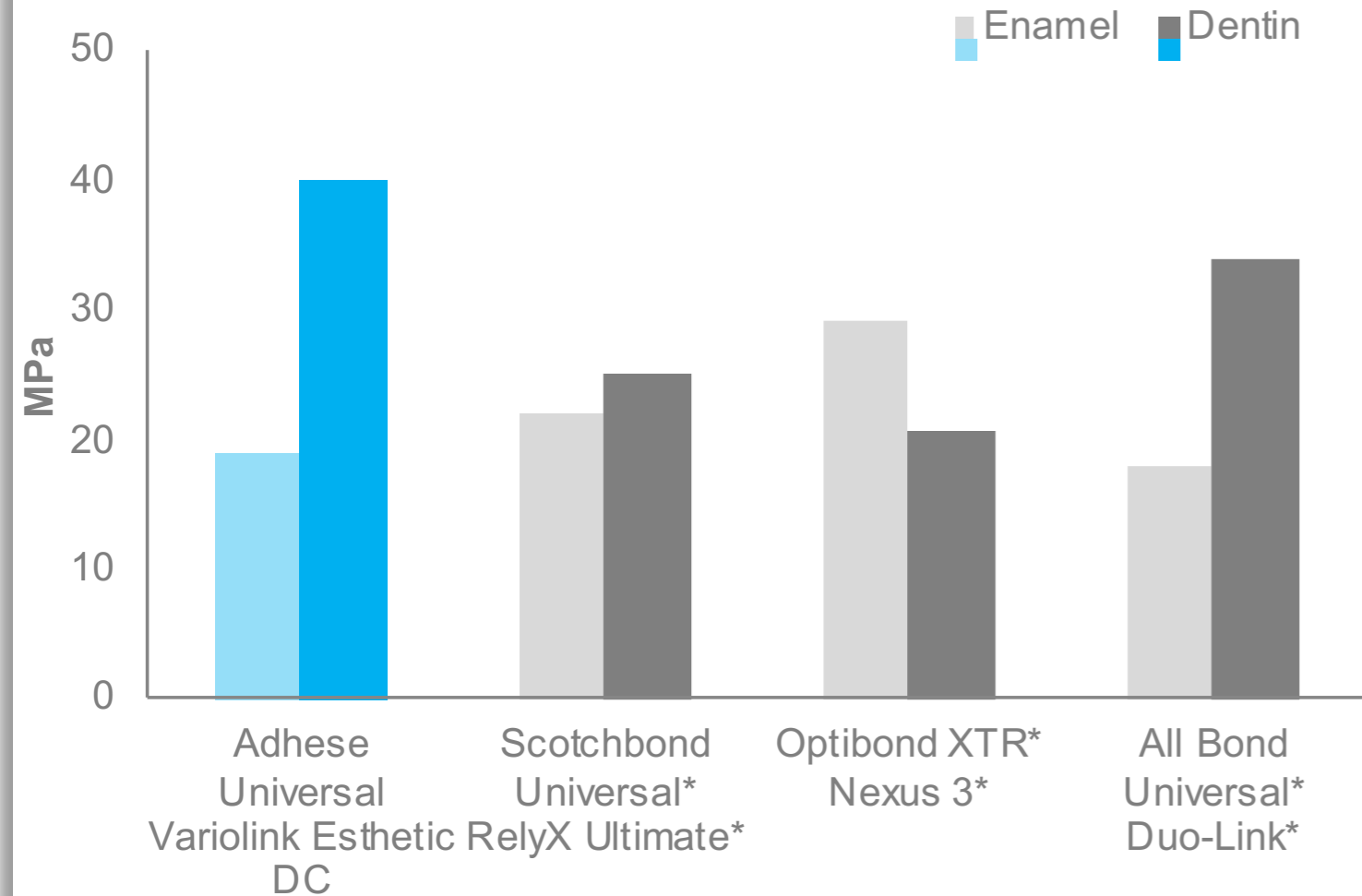


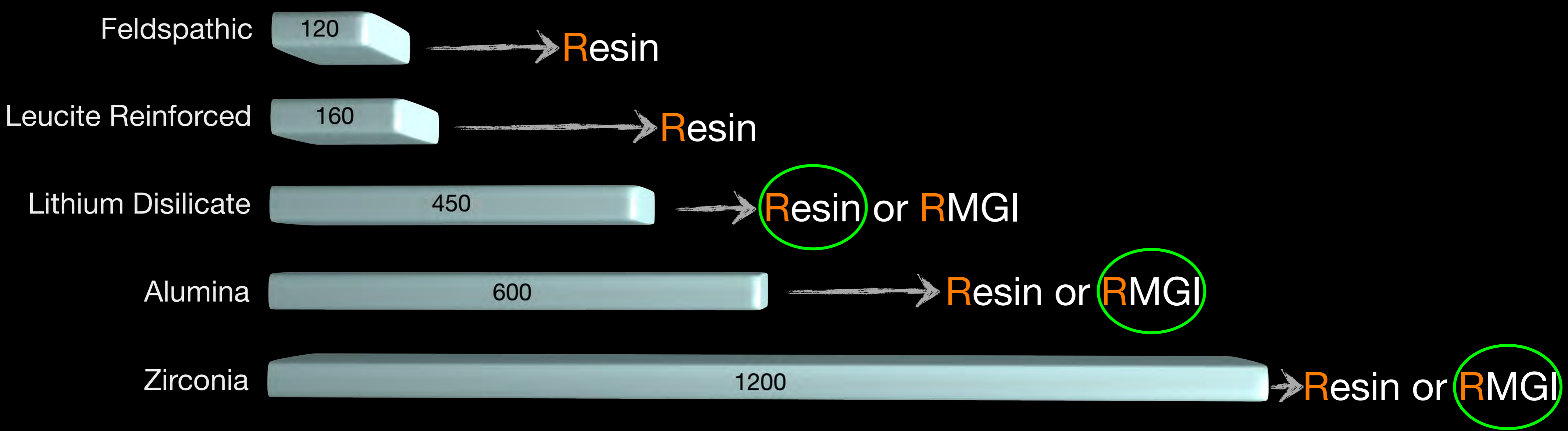
Flowable

# Resin Adhesive

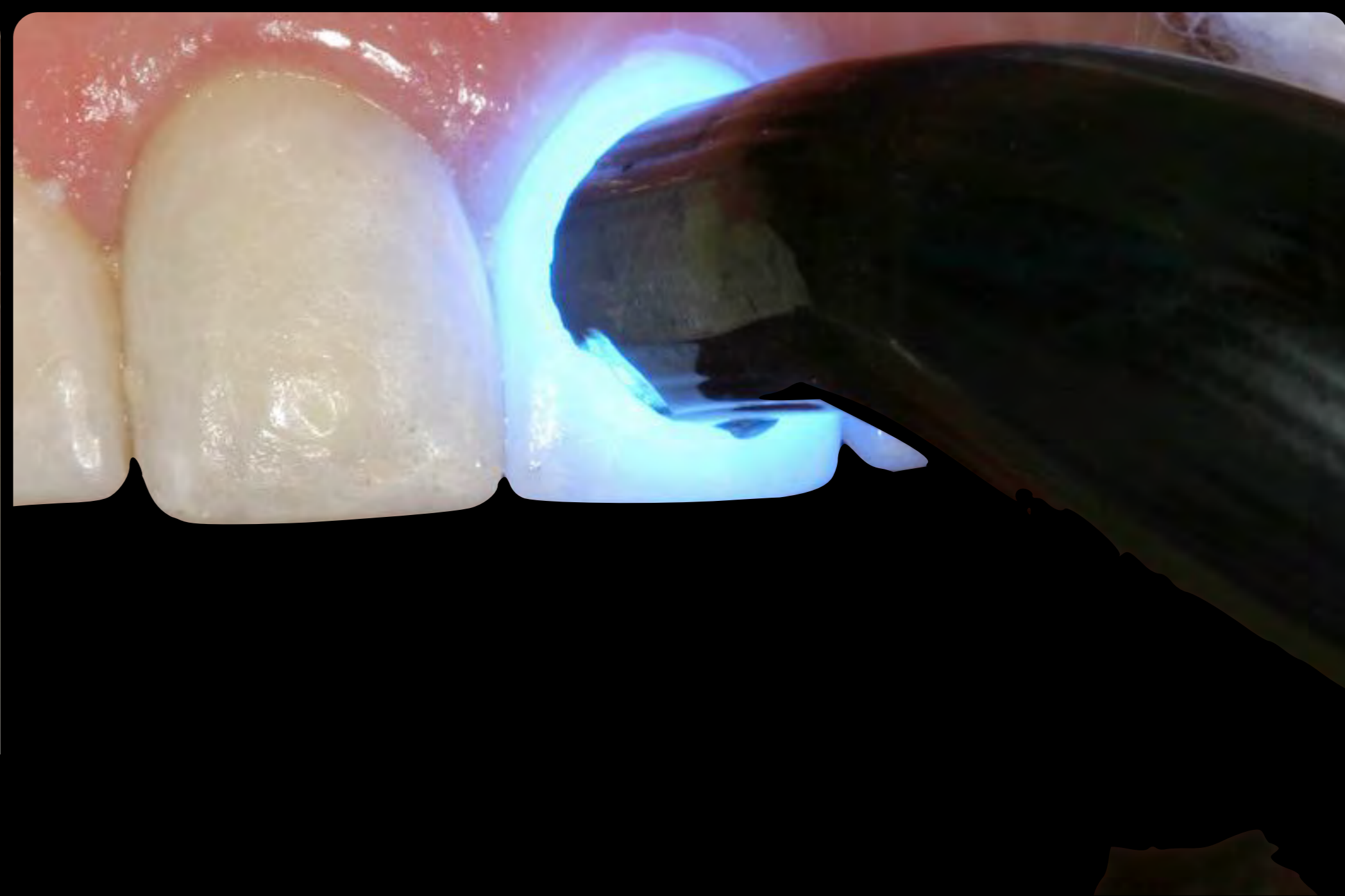
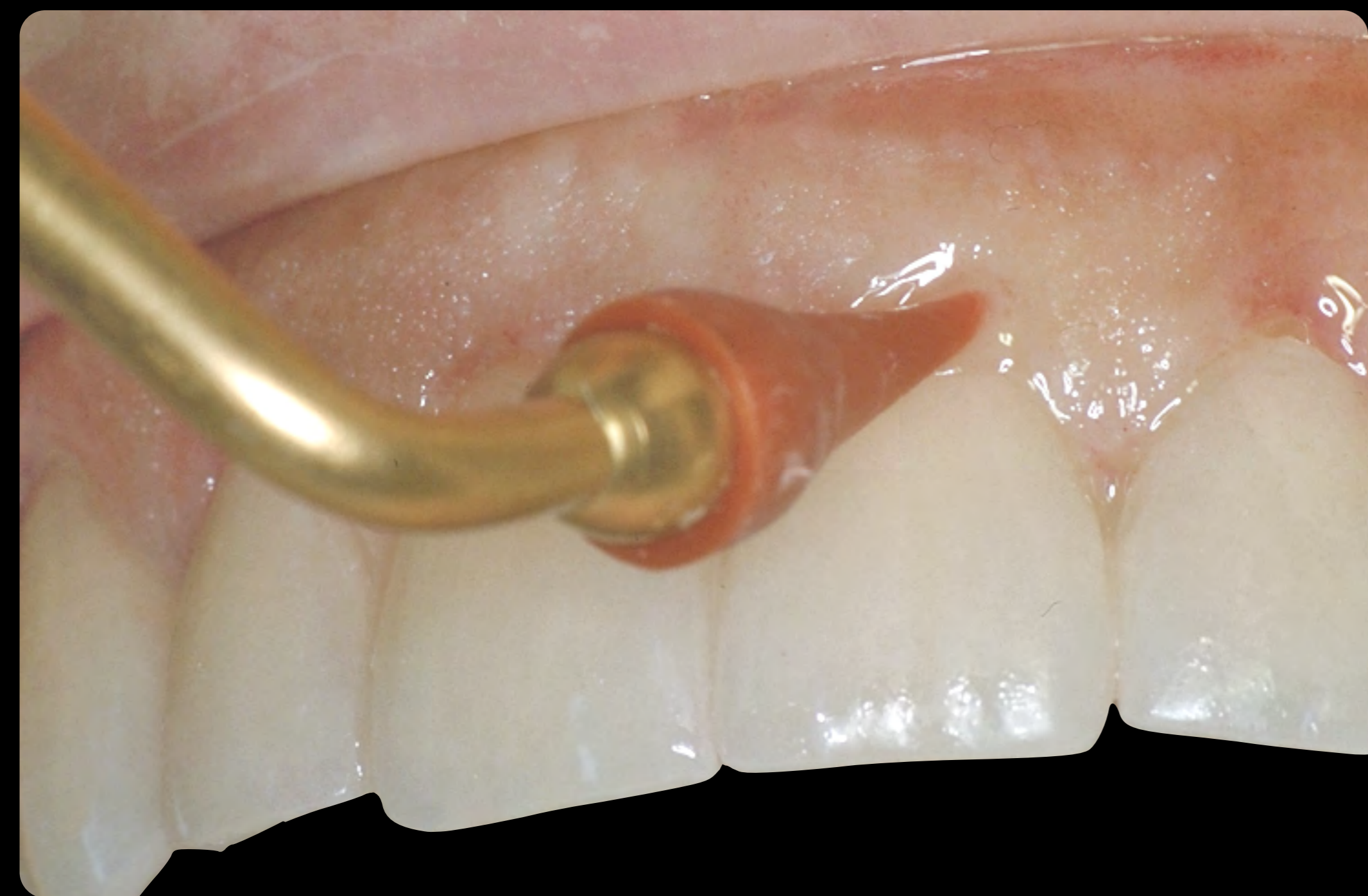
## Shear bond strength after dual-curing

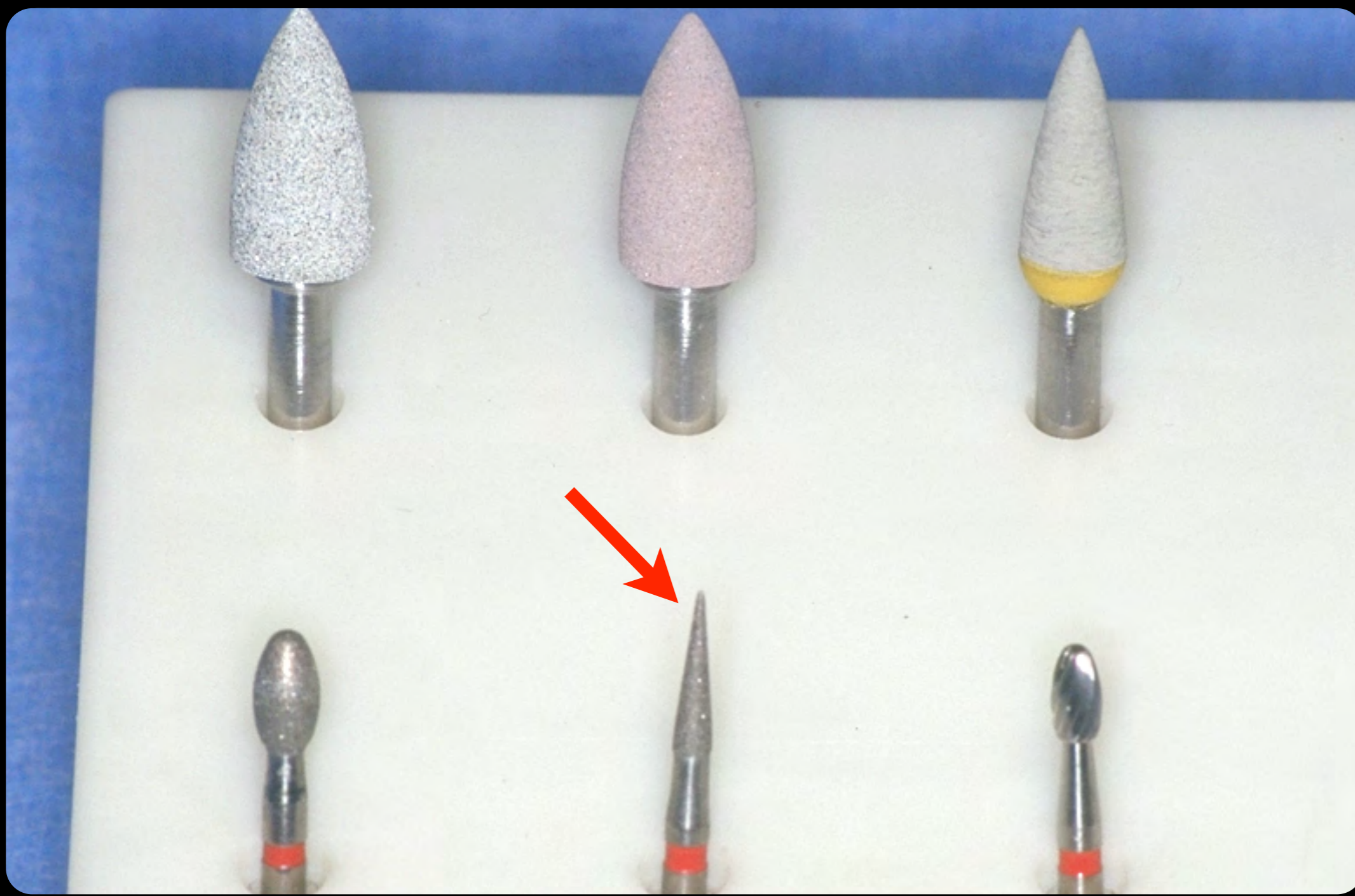
Self-etch technique on enamel and dentin  
after 10,000 thermocycles

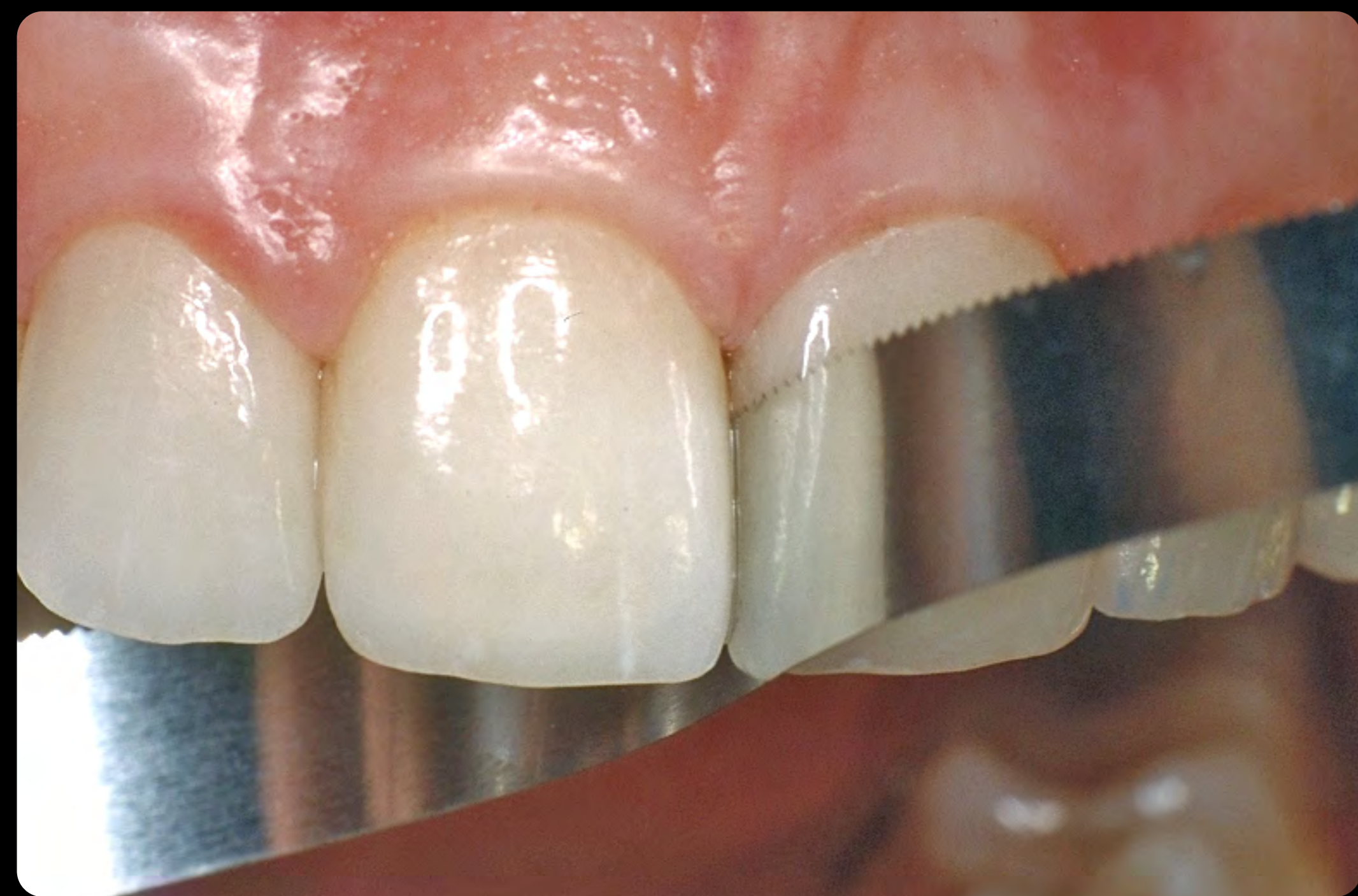




Cementation Options







Width

**6 mm**

Thickness

**0.05 mm**



Width 2.5 mm

☐ **DS 25 C**

☐ **DS 25**

☐ **DS 25 F**

☒ **DS 25 EF**

3.75 mm

☐ **DS 37**

☐ **DS 37**

☐ **DS 37**

☐ **DS 37**









**Fradeani M, et al.** Esthetic Rehabilitation of worn dentition with a minimally invasive prosthetic procedure (MIPP). *Int J Esthet Dent* 2016;11:16-35.





Virtual Wax-up

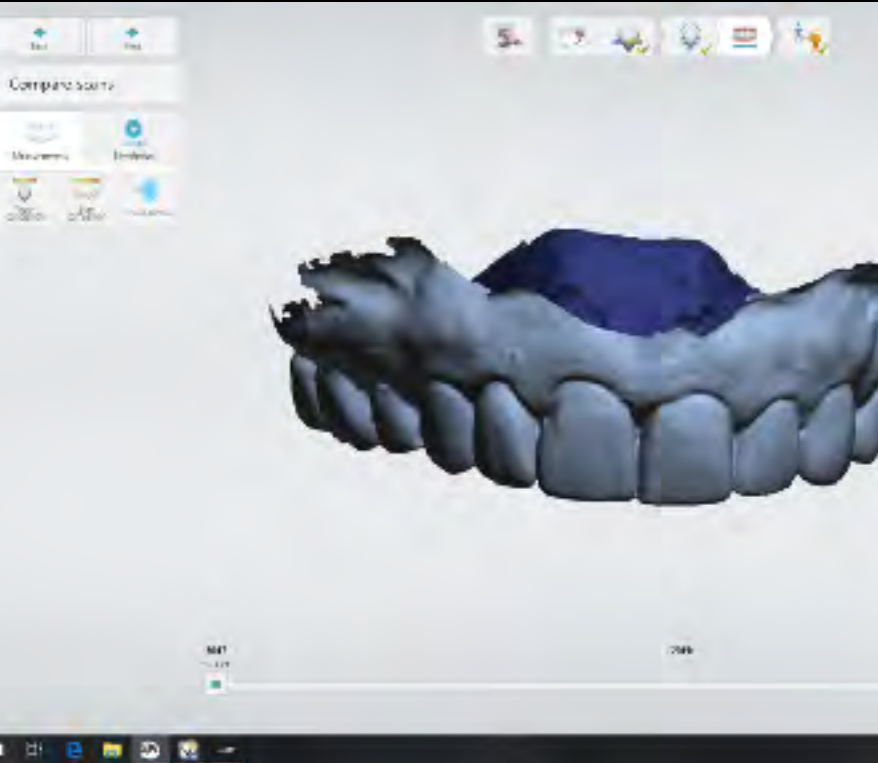


Milled Provisional



Virtual Design





Pre-op



Post-op



Pre-op

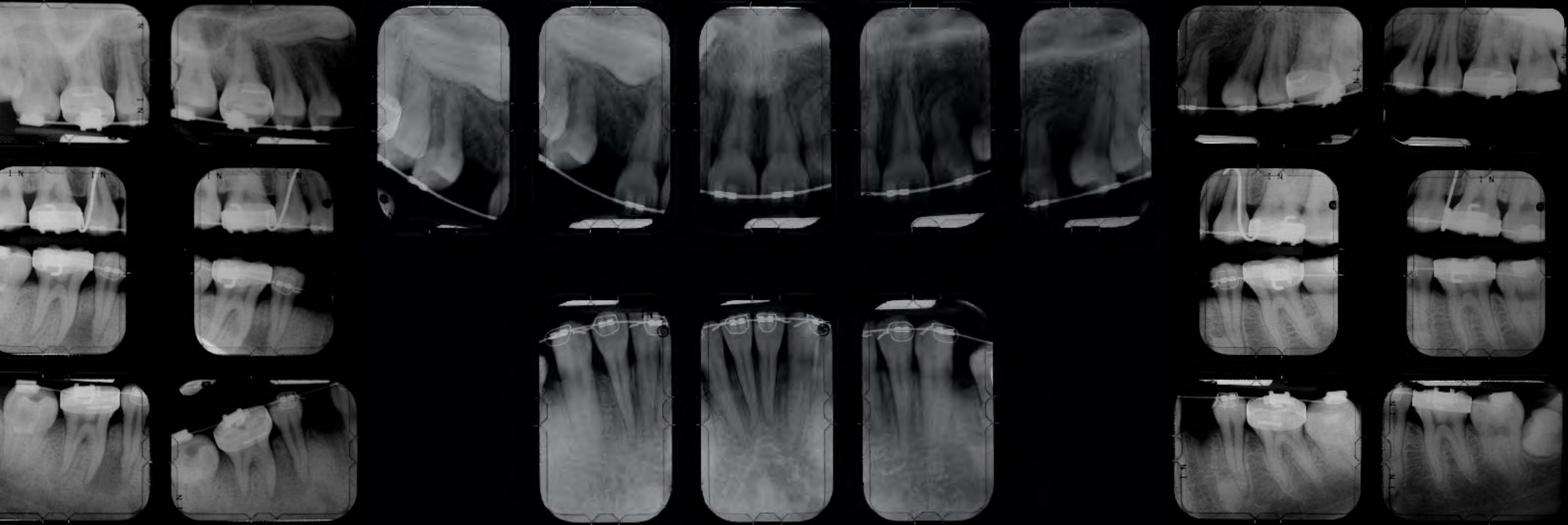


Provisional



Post-op



















# Take Home Messages

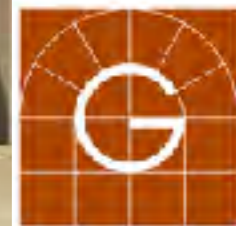
- ✓ Objectively Evaluate the Patient's Aesthetic Needs
- ✓ Formulate a Treatment Plan Using Smile Design Parameters
- ✓ Evidence Based Laminate Veneer Therapy
- ✓ Predictably Achieve Optimal Aesthetics
- ✓ Implement a Team Approach



A close-up photograph of a person's upper teeth, showing the enamel and gum line. The teeth are slightly out of focus, and the background is a dark, textured surface, possibly a wall or a piece of fabric. The overall tone is dark and moody.

# Presentation PDF

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**giglio**  
AESTHETICS

