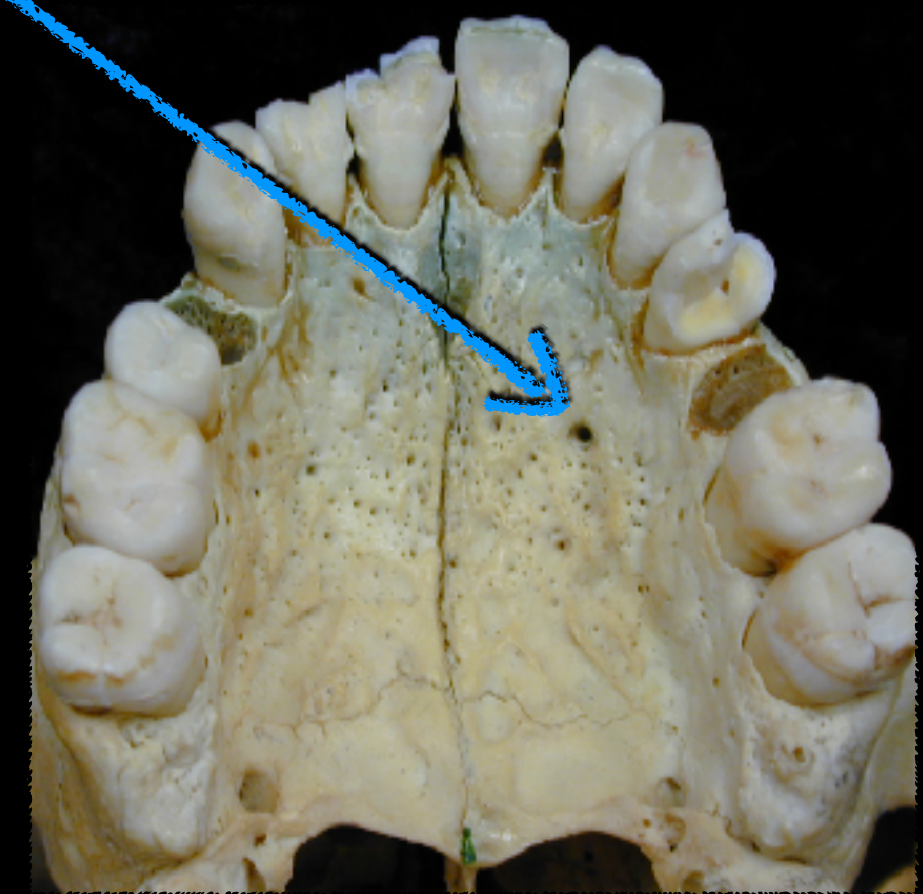
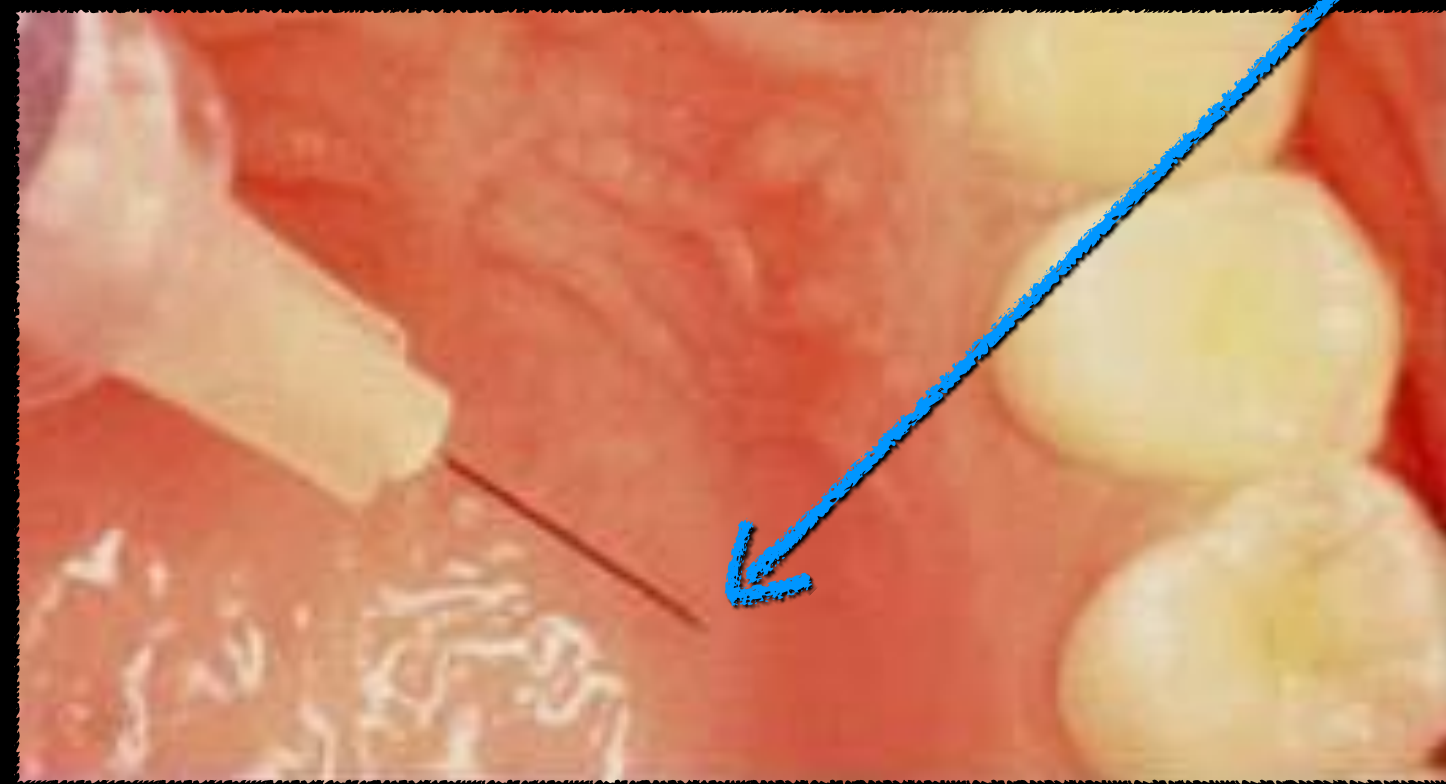


# Injection techniques

AMSA - Anterior Middle Superior Alveolar Injection\*

Midway between free gingival margins and the mid palatine suture

Bisects premolars or deciduous molars



# Injection techniques

## STA - Intraligamentary\* (PDL) Injection

Uses DPS - Dynamic Pressure Sensing technology

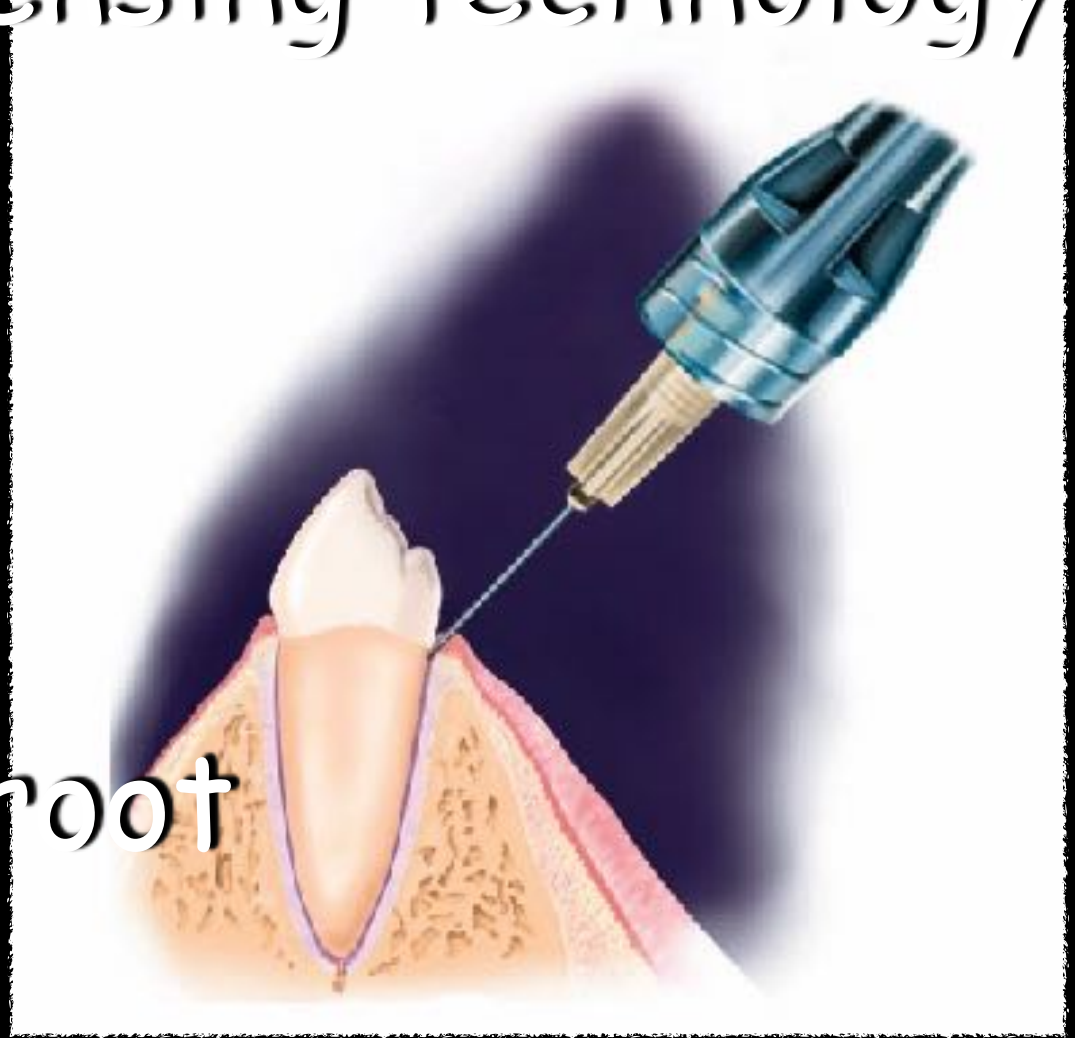
Site specific injection

Used as primary anesthesia

Dosage\*\* of 1/4 cartridge per root

Delivery time 1 or 2 minutes\*\*

Duration approx. 40-60 minutes of profound anesthesia



\*\*Using 4% Articaine Hydrochloride 1:200,000 local anesthetic solution.

1 minute injection for single rooted tooth, 2 minute injection for multi-rooted tooth.

\* Hochman M. Compendium, April 2007

# Injection techniques

## STA - Intraligamentary\* (PDL) Injection

Increased predictability with DPS technology

Simple to administer

Immediate onset

No collateral anesthesia of the cheek, lip or tongue

No risk of intravascular injection or trimus

No risk of tachycardia

Increased productivity and efficiency



# Magnification and illumination!



Use high magnification, e.g. 4x - 5x  
Headlight means no operator light!  
Consider ergonomics, i.e. cable or not



3X



4X



5X

# Preventing restoration failures!

Tooth position determines occlusion

Parafunction, e.g. grinding, bruxing

Identify wear - pathway, end to end, crossover (rx appliance), OAD?

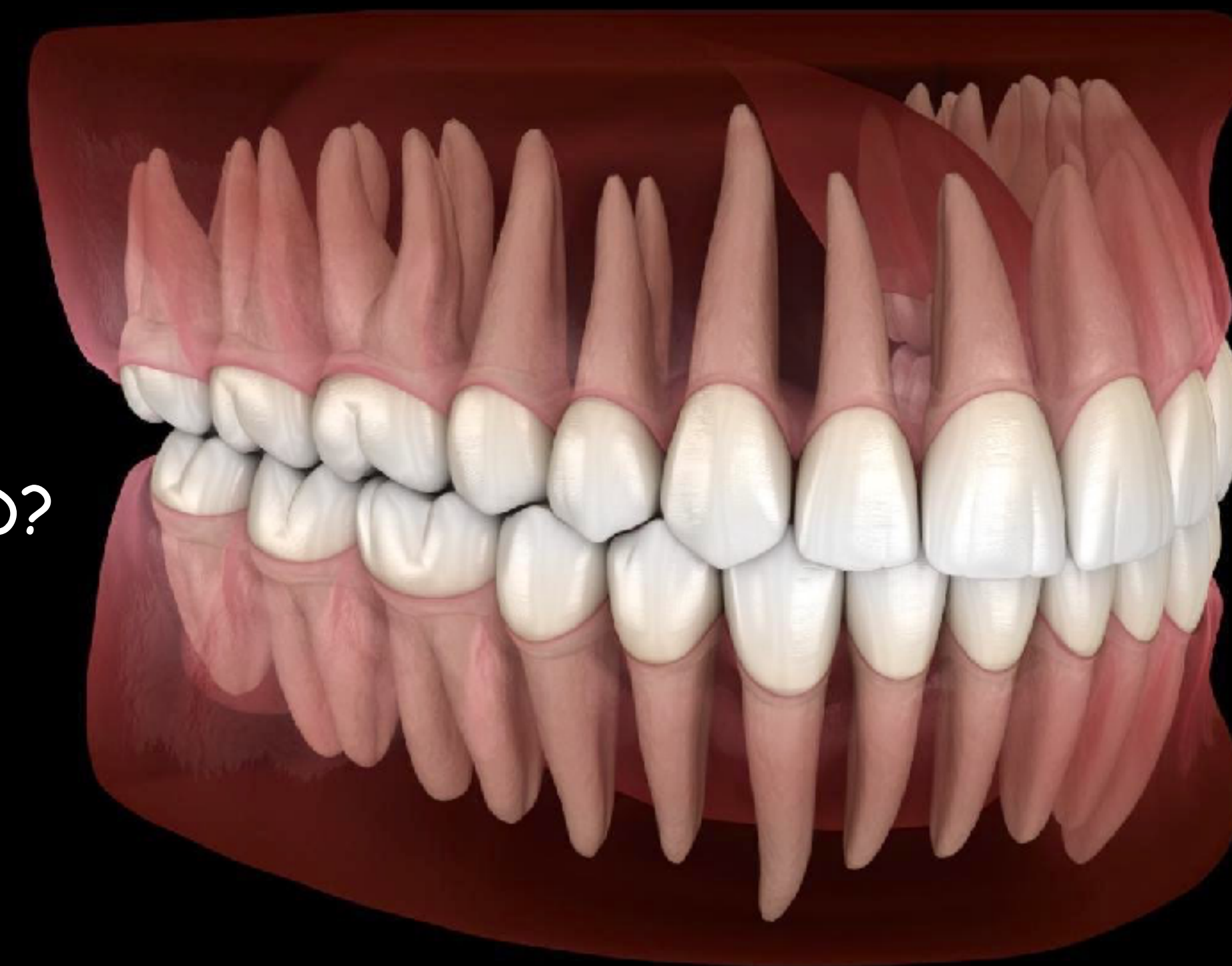
Identify - Attrition, abrasion, erosion (perimolysis)

Evaluate type and position of facets

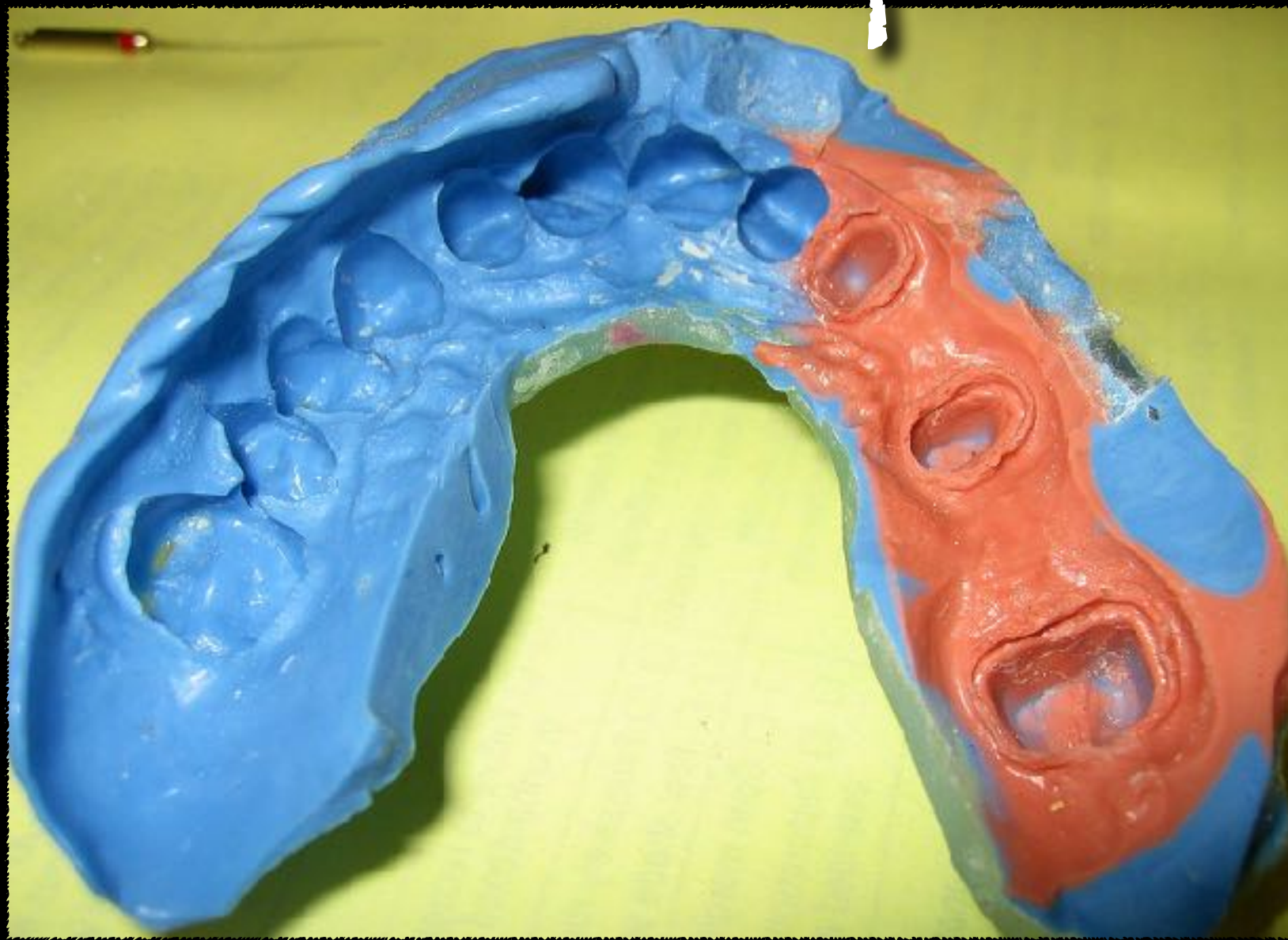
Create envelope of function to allow freedom in guidance

Wear due to neuromuscular activity (bruxing) vs occlusal interferences (parafunction)

Establish occlusion in mock-ups or prototypes before manufacturing final restorations



# Impression techniques



*Digital impressions*

e.g. Medit

iTero

*easy to evaluate accuracy*

*Analog impressions*

e.g. Impregum (polyether)

Imprint (polyvinyl)

*technique sensitive*

# Impression techniques

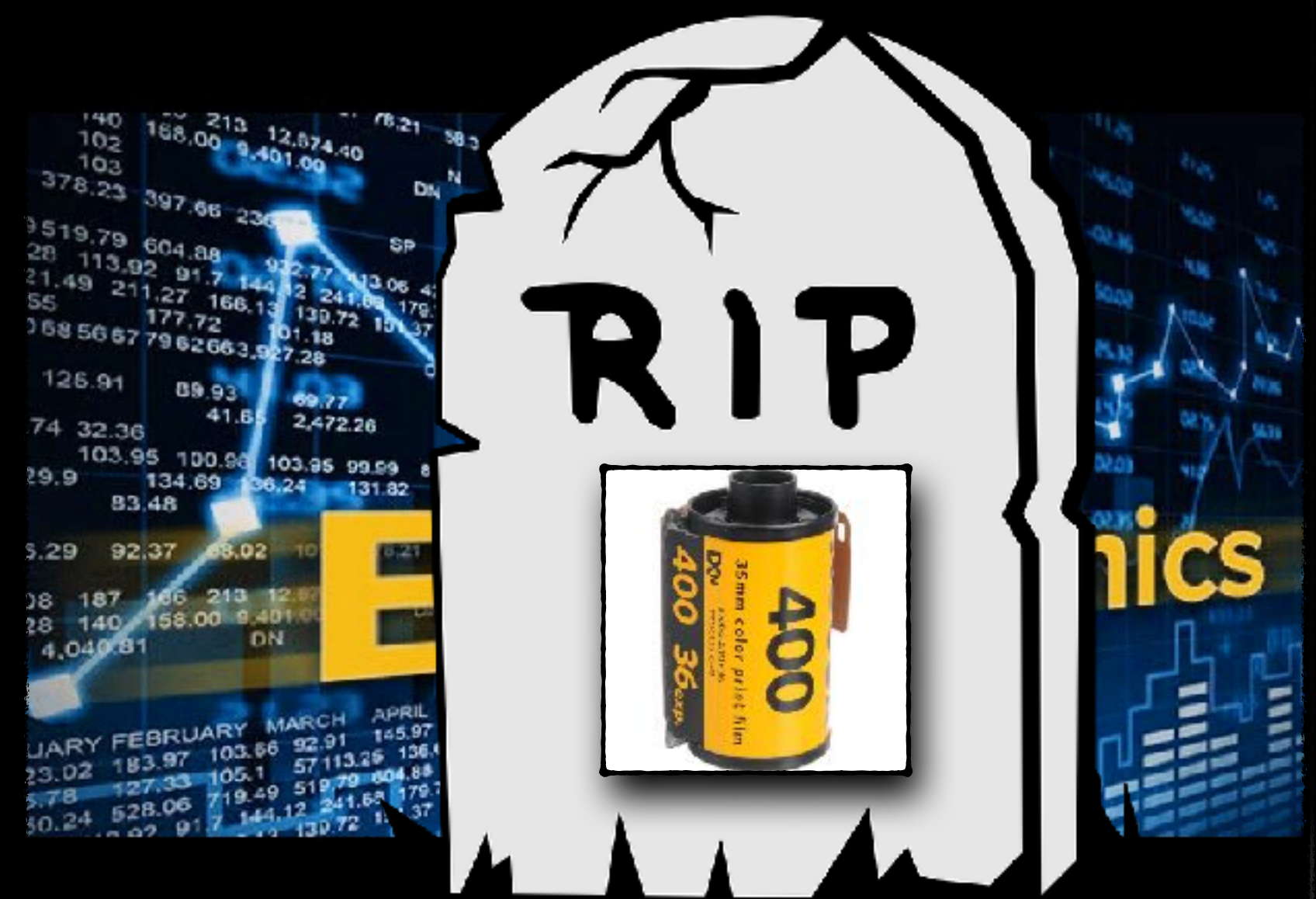
## Why embrace digital impressions?

*Efficiency - quick and the staff can do them*

*Accuracy - no human emotions and errors*

*Marketing - the "wow" factor*

*Economics - less expensive than analog*



**Remember what happened to film!**



# Impression techniques

All now have open architecture...  
but which to get?



- ergonomics/features/quality
- cost!!
- reputation/marketing
- support

*Plethora of digital scanners!*

# Impression techniques



Shade of preparation(s) is **ESSENTIAL** for proper porcelain selection



Stump Shade Guides are best for dentin shades

*Shade selection*

# Prototype restorations



Why use the term  
“prototype” versus  
“temporary” or  
“provisional”?

# Prototype restorations

## Definitions

### *Temporary*

adjective : lasting for a temporary period of time, not permanent

"A temporary job"

### *Provisional*

adjective : arranged or existing for the present, possibly to be changed later

"A provisional construction permit"

# Prototype restorations

## Definitions

### *Prototype*

noun : a first, typical or preliminary model of something, especially a device, from which other forms are developed or copied

"The firm is testing a prototype of a weapon"

# Prototype restorations

## Reasons and options

Accurate design representation

Easily modified

Direct, direct/indirect, indirect

Various material choices

Lute or not lute?

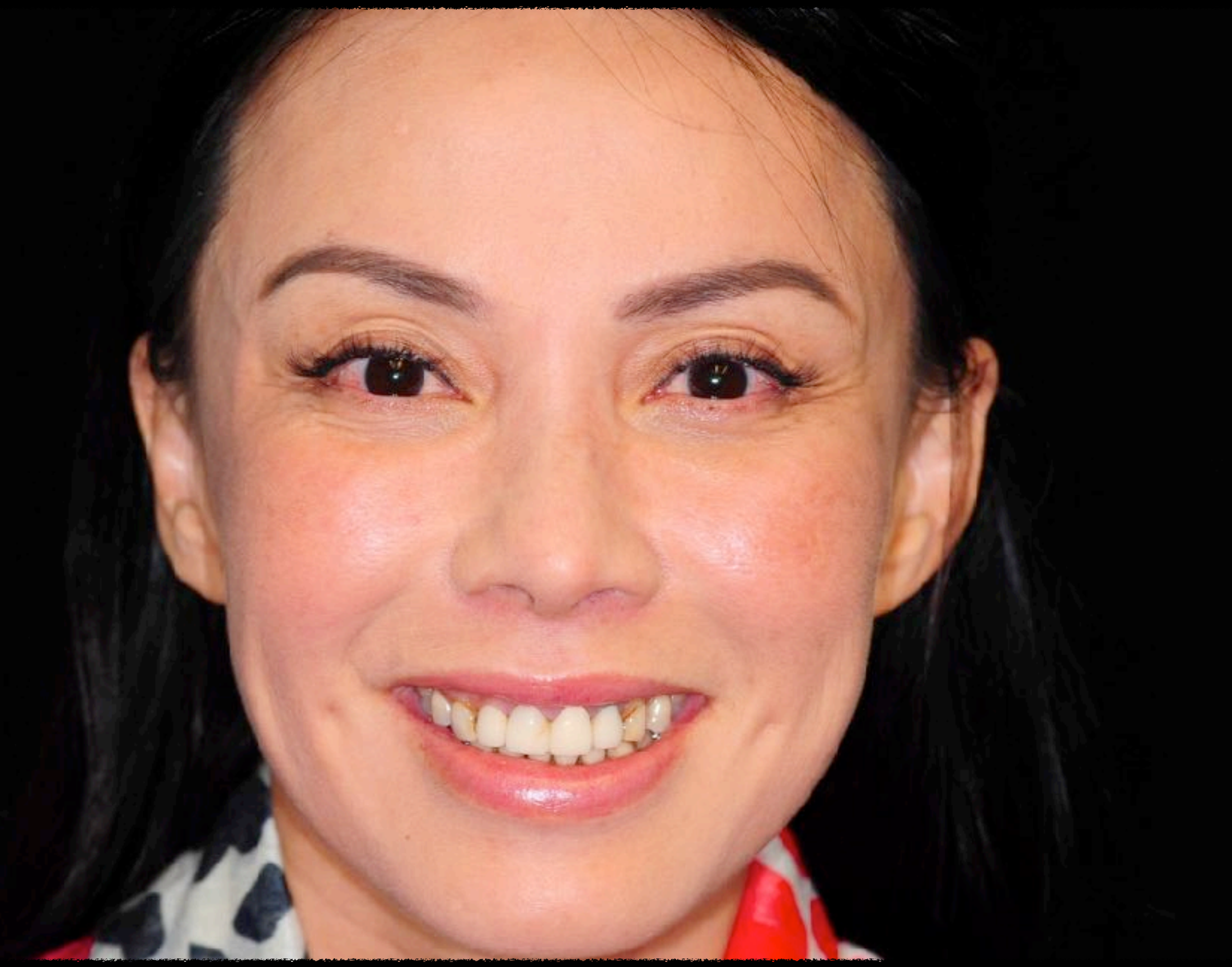
Keeps you out of trouble!!



# *Pearl #5 to remember!*

Always create custom prototypes for all esthetic cases that preview the patient's desired outcome!

# Prototype restorations

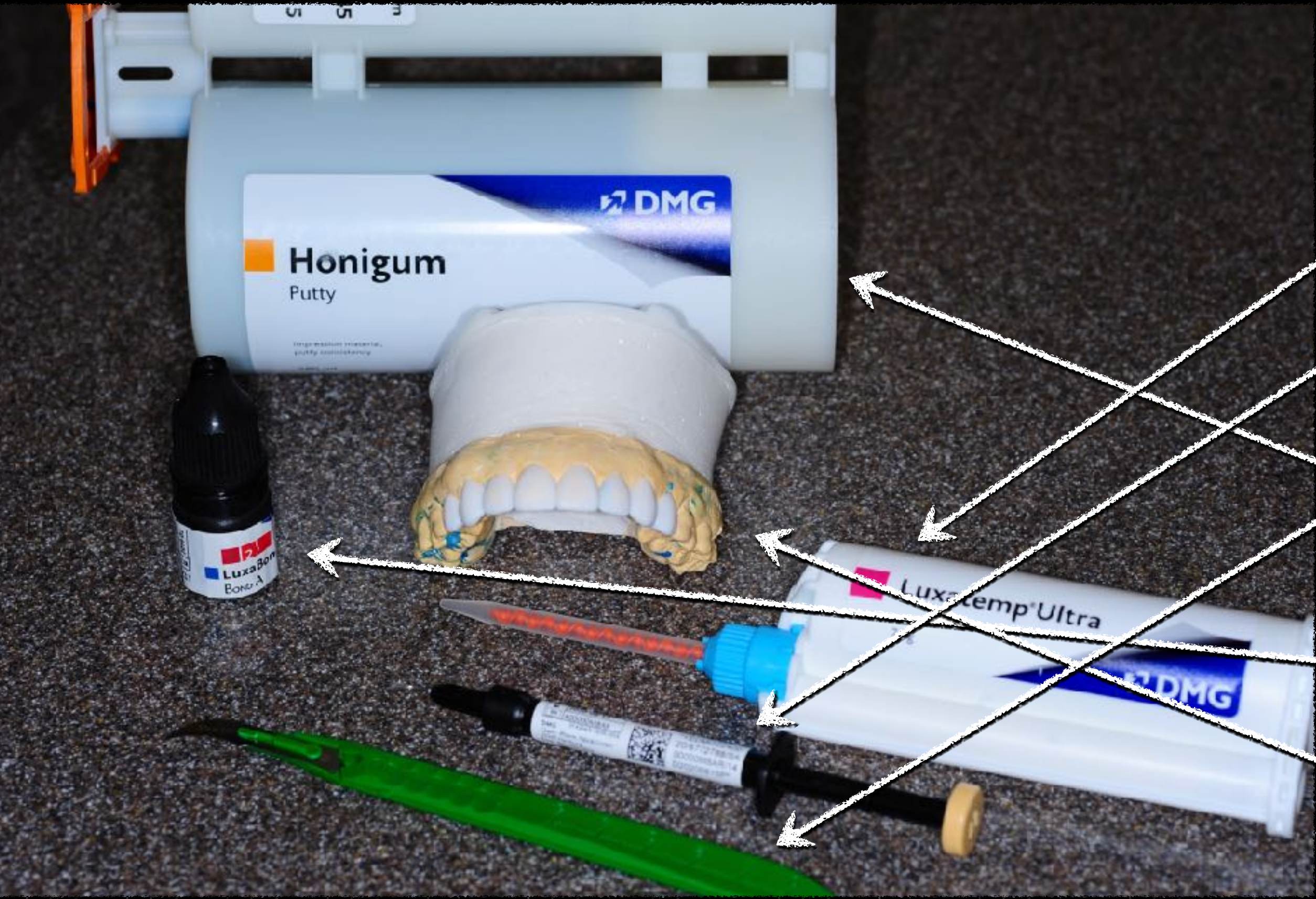


Pre-op

## Technique for anteriors



# Prototype restorations



- Bis-acrylic prototype material
  - Flowable composite
  - #12 Scalpel blade
  - Putty or silicone
  - Bonding agent
  - Wax-up of proposed smile
- Materials**

# Prototype restorations



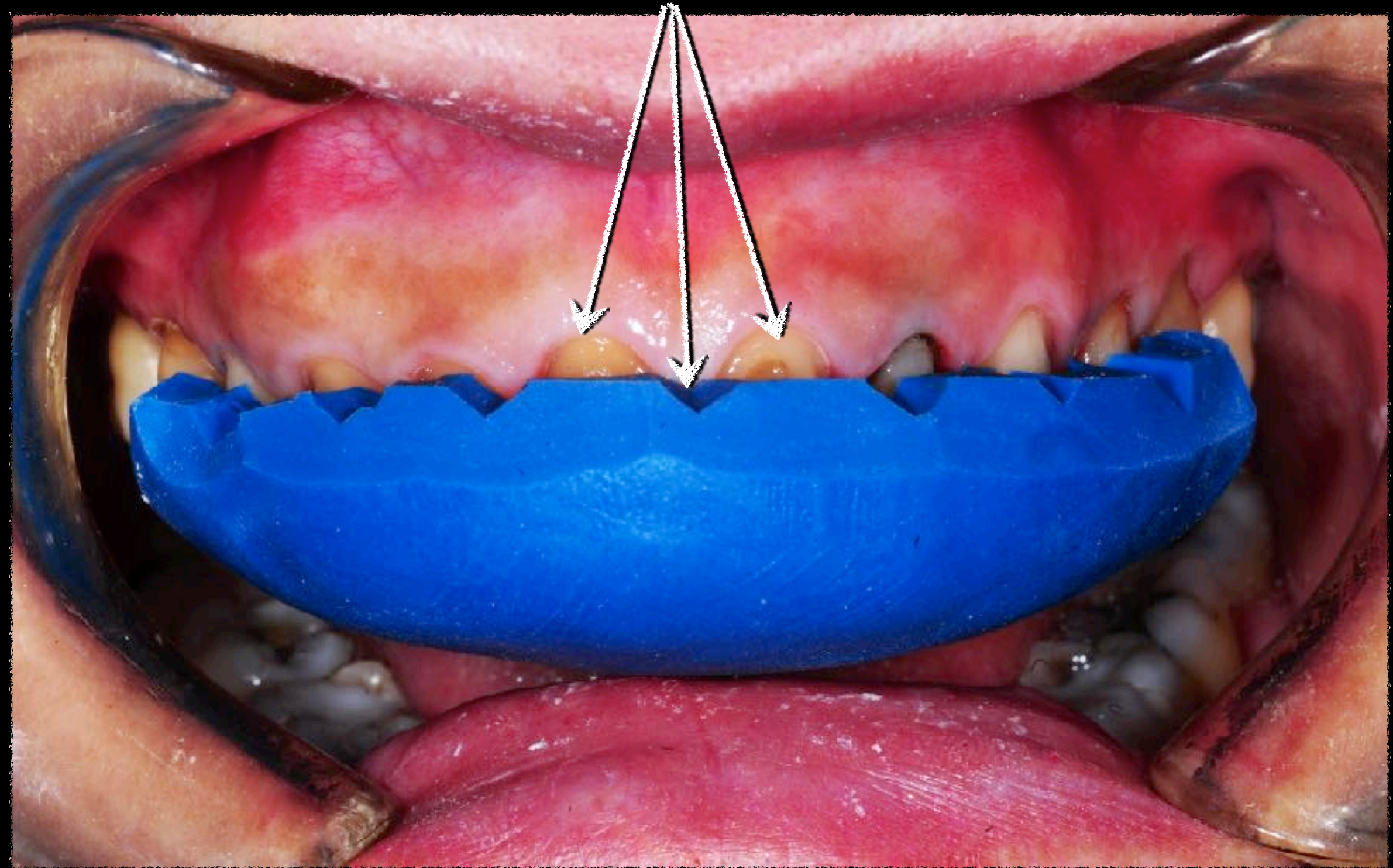
Diagnostic wax-up and scalloped putty stint, e.g . Honigum

# Prototype restorations

Prepared teeth



Trying in stint



Coronal to the papillae and gingival margin

# Prototype restorations

Curing unfilled resin



Placing adhesive

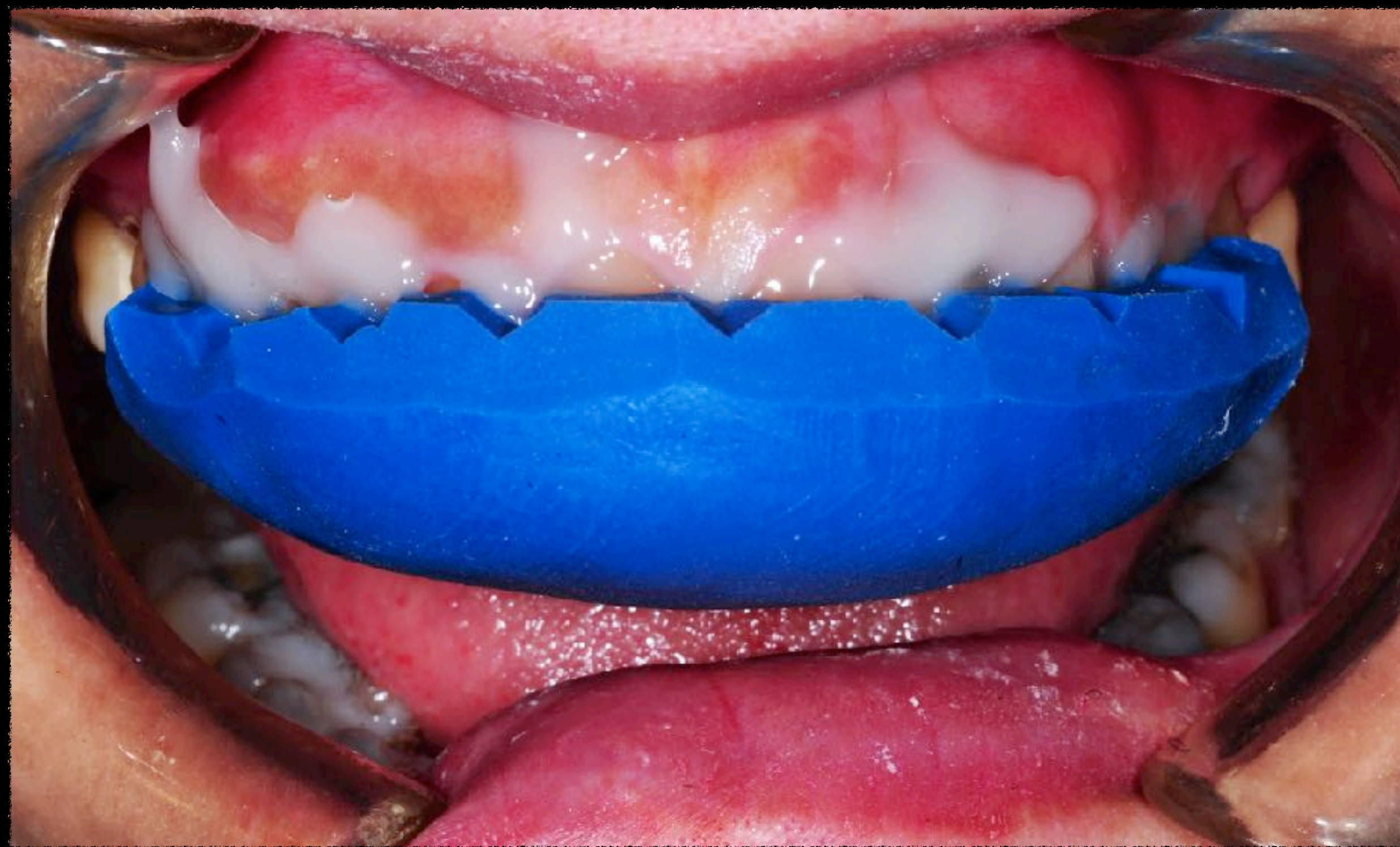


*No acid etching!*

# Prototype restorations

Resin in the stint, eg LuxaTemp Ultra

Stint with resin placed over teeth



# Prototype restorations

Wipe away excess before it sets  
Stint removed

