Partnership in Perio

Timothy M. Bizga, DDS, FAGD

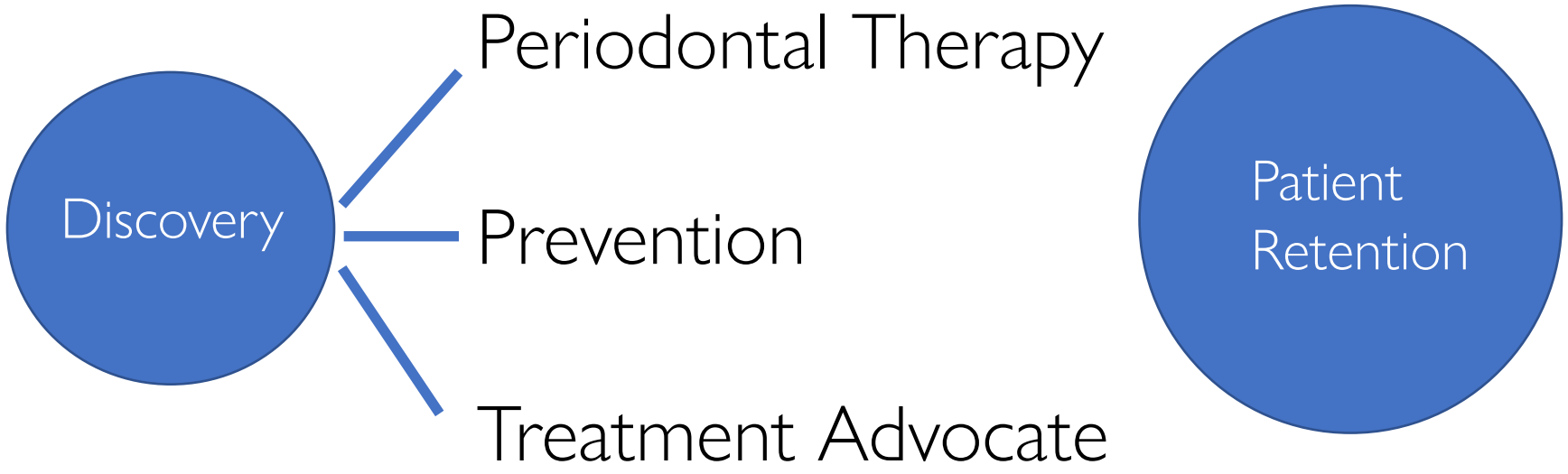
Objectives

- Share my experience and tell stories
- Be authentic
- Have fun

The most damaging phrase
in the language is:
"It's always been done that way."

Grace Hopper

Your Hygiene Team



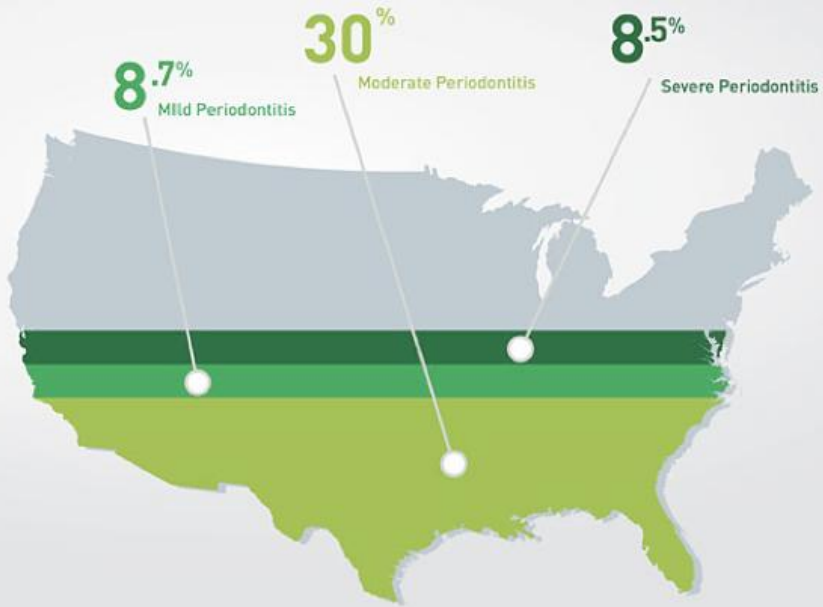
*THE AMERICAN ACADEMY OF PERIODONTOLOGY WARNS OF A SIGNIFICANT PUBLIC HEALTH PROBLEM

HALF OF AMERICAN ADULTS SUFFER FROM GUM DISEASE

47.2%
Have periodontitis

THAT'S

64.7
Million
Adults 30 years and older



*SOURCE: P.I. Eke, B.A. Dye, L. Wei, G.O. Thornton-Evans, and R.J. Genco. Prevalence of Periodontitis in Adults in the United States: 2009 and 2010. J DENT RES 0022034512457373, first published on August 30, 2012 as doi:10.1177/0022034512457373

6 Step Assessment

1 HEALTH HISTORY & RISK ASSESSMENT

- A comprehensive Medical/Dental History form must be completed and reviewed with each patient.
- Blood Pressure screening on all adult patients
- List of medications and supplements
- Pre-medication needed? Taken?
- Recent surgeries and/or visits to the physician/hospital/ urgent care.
- Use separate Risk Assessment form or use Medical/

2 PATIENT WANTS & NEEDS

- Cosmetic wants?
- Areas of sensitivity or pain?
- Other concerns: Crowding, grinding, or snoring?

3 RADIOGRAPHS & INTRA ORAL PHOTOS

- Decay?
- Bone loss or periodontal involvement?
- Abscess?
- Intra Oral Photos
- Identify areas of concern
- Condition of existing restorations
- Periodontal concerns
- Home care review
- Review of treatment previously completed

4 ORAL ASSESSMENT

- General Oral Assessment
- Calculus detection
- Decay or demineralized areas?
- Evaluation of existing restorations
- Sensitivity?
- Oral Hygiene Evaluation
- Occlusal analysis

5 ORAL CANCER SCREENING

- Head/Neck Exam
- Tongue
- Tonsils
- Cheeks
- Palate

6 COMPREHENSIVE PERIODONTAL ASSESSMENT

- Include 6 point probing, bleeding, furcations, mobility, recession, and exudate

Co-Discovery

- Inform patient:
  - What you are doing?
  - Why you are doing it?
  - How this assessment affects them?

- Use intra oral camera, radiographs, mirror to show patient what is happening in their mouth.

#1: Health History & Risk Assessment

- Comprehensive Medical/Dental History
  - When was the last time you saw your doctor?
  - When was the last time you were at urgent care?
  - ….What was that for?
- What medications are you currently taking?
- Blood Pressure & Pulse

Periodontal Risk Factors

- Diabetes
- Smoking
- Pregnancy
- Age
- Genetics
- Oral Hygiene
- History of Periodontal Disease

Periodontal Risk Factors

- Heart Disease
- Stroke
- Diabetes
- Rheumatoid Arthritis
- Cancer
- Erectile Dysfunction
- Pre-term/Low birth weight babies
- Obesity
- COPD

#2. Patient Wants & Needs – Chief Complaint/Chief Need

- Areas of discomfort?
- Sensitivity?
- Cosmetic wants?
- Whiter teeth?

#3. Radiographs & Photos

Type	Frequency
FMX 18-20 films	3 years: patients with moderate/high caries risk, and history of periodontal disease. 5 years: patients with low caries risk, and no history of periodontal disease.
Bitewings 4 films – adult 2 films - child	6 months: patients with high caries risk 12 months: patients with low-moderate caries risk **vertical bitewings for periodontal patients
Periapicals	Take as needed when patient reports pain or discomfort.
Panoramic	5 years: children, and as necessary for adults

From: American Dental Association, U.S. Food & Drug Administration. The Selection of Patients For Dental Radiograph Examinations. Available on www.ada.org

#4. Oral Assessment

- Broken, cracked or leaking fillings?
- Demineralization and/or Decay
- Plaque & Calculus detection

#5. Oral Cancer Screening

- Head/Neck Exam
- Tongue
- Palate
- Tonsils
- Cheeks

Risk Factors:

- Smoking
- Heavy alcohol use
- Excessive sun exposure
- Family History
- HPV

#6. Comprehensive Periodontal Assessment

- Pocket Depths
- Bleeding on Probing
- Recession
- Exudate
- Furcation
- Mobility

- Full Documentation a **minimum of 1x/Year**.

Co-Discovery

- Inform patient:
  - What you are doing?
  - Why you are doing it?
  - How this assessment affects them?

- "Mrs. Smith, I am going to check the health of your gum tissue….

Goals of Periodontal Therapy

- Preserve, improve and maintain

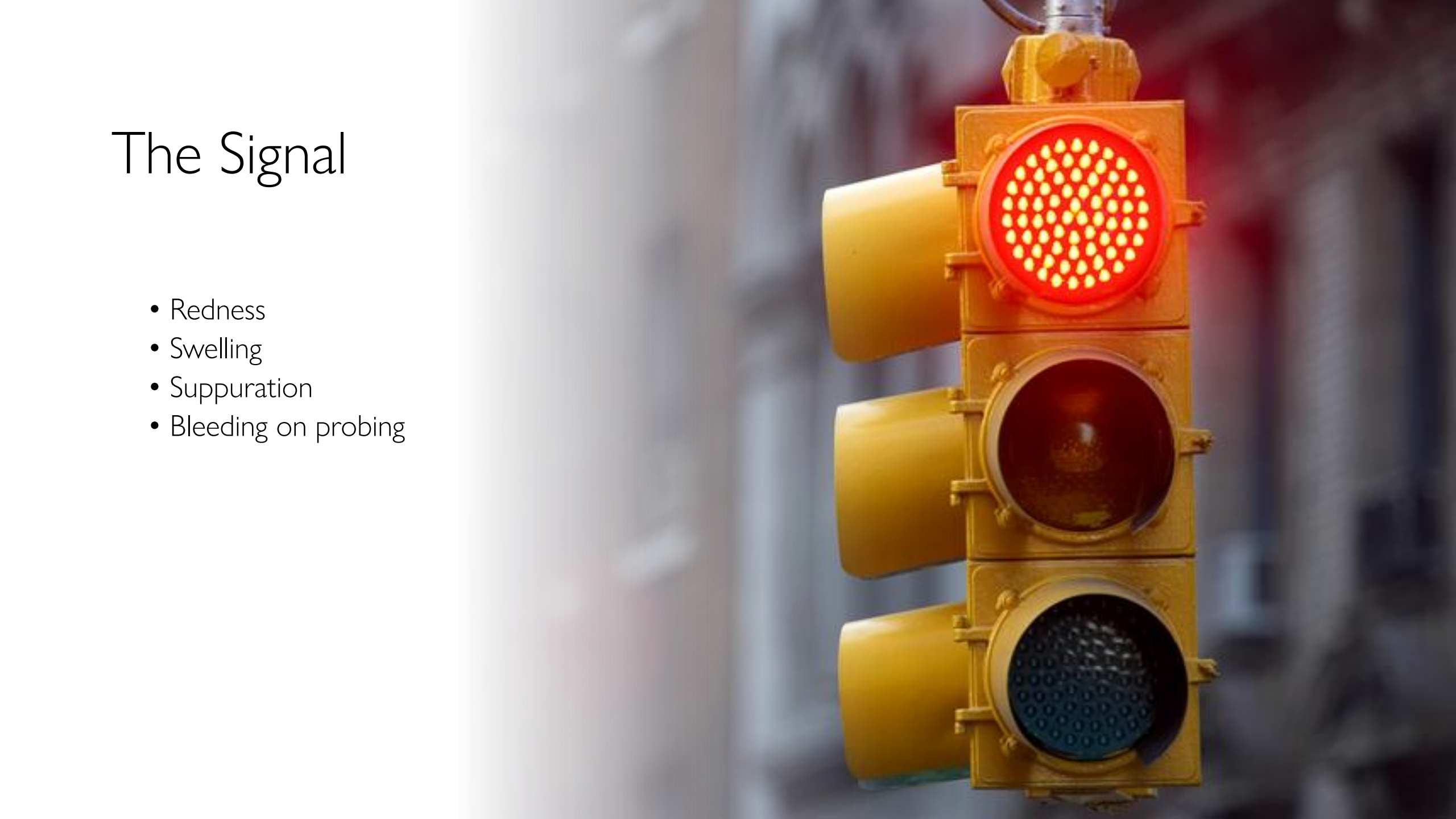
- Health is described as NO inflammation
  - Clinical Signs:
    - Redness
    - Swelling
    - Suppuration
    - Bleeding on probing

A Shift?

"Pocket depth reduction is a measurable result of periodontal therapy, but not the primary goal of treatment."

The Signal

- Redness
- Swelling
- Suppuration
- Bleeding on probing

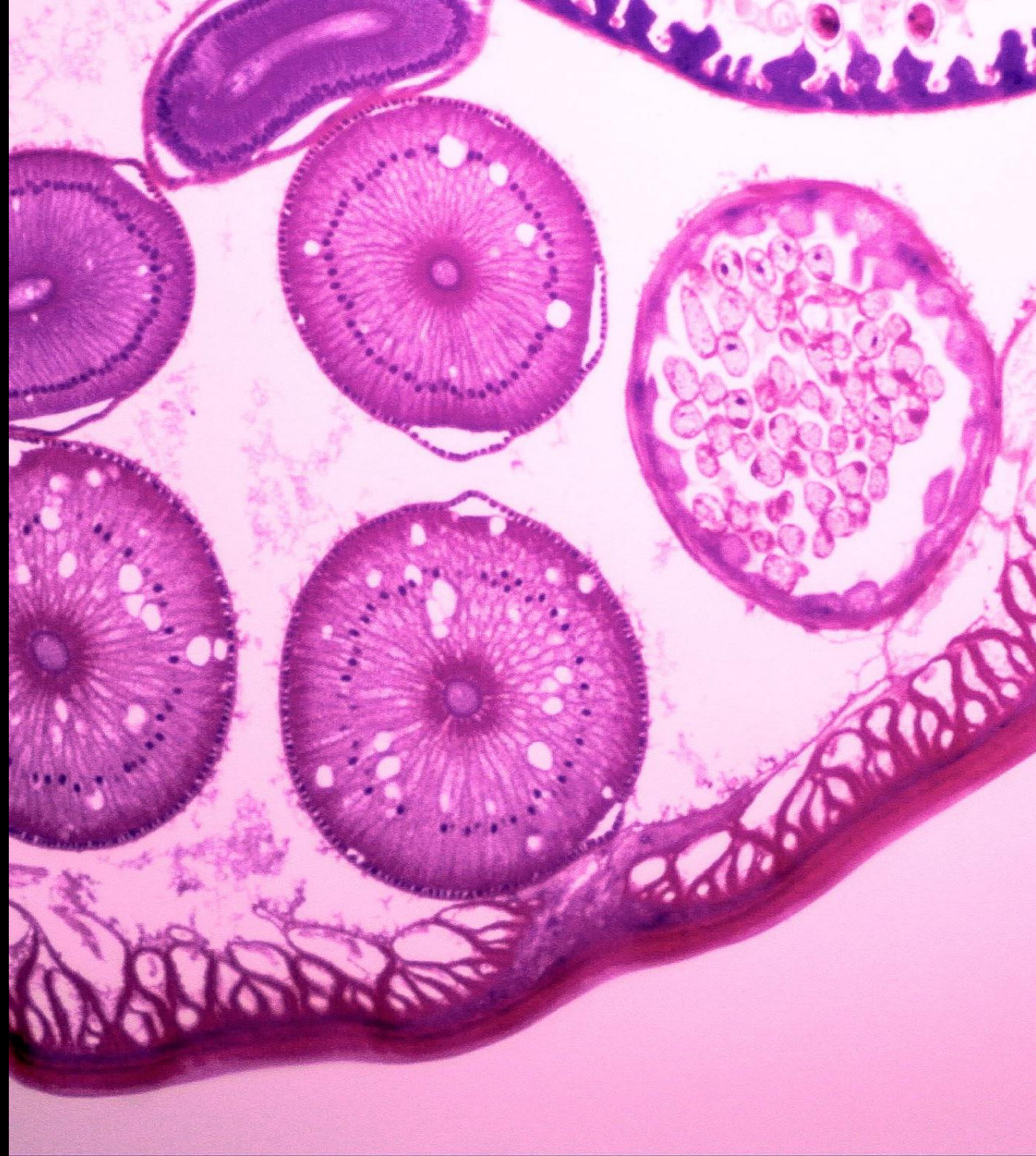


Doctor/Hygiene Collaboration

- Triad
- Share all findings from 6-Step Assessment
- Solutions discussed
- Patient responses thus far.

Periodontal Disease

- **What is Periodontal Disease:**
- Pathogenic infection process (foreign bodies)
- Inflammatory Response by host (systemic TNT)
- Granulation tissue (localized)
- Calcified Buildup (tooth AND bacterial colony)
- Cementum Biofilm (can you remove biofilm with piezo or scaler)
- Epithelial cells to protect the system (inside and out)
- Sharpey’s Fibers compromised (tooth mobililty)
- Etc



Periodontal Disease

What is SRP or Traditional Open Debridement:

- Does Remove foreign bodies (Calculus) but NOT pathogens
- Does NOT directly address inflammatory response by host
- Does Remove granulation tissue
- Does disrupt calcified bacterial colony (somewhat)
- Does NOT address epithelial cell lining (inside and out)
  - Leads to Long Junctional Epithelium
- Does NOT address Sharpey's Fibers
- Does NOT address biofilm
- 100+ years of history (but not 100 years of success)

Periodontal Disease

What is LAPT: Laser Assisted Periodontal Therapy:

- Does Remove foreign bodies (Calculus) including pathogens
- Does reduce inflammatory response by host
- Does Remove granulation tissue (is this allowed?)
- Does disrupt calcified bacterial colony
- Does address epithelial cell lining (inside and out)
  - Less chance of Long Junctional Epithelium
- Does stimulate Sharpey's Fibers
- Does address biofilm
- 20+ years of history (with success)

Laser Hygiene Applications

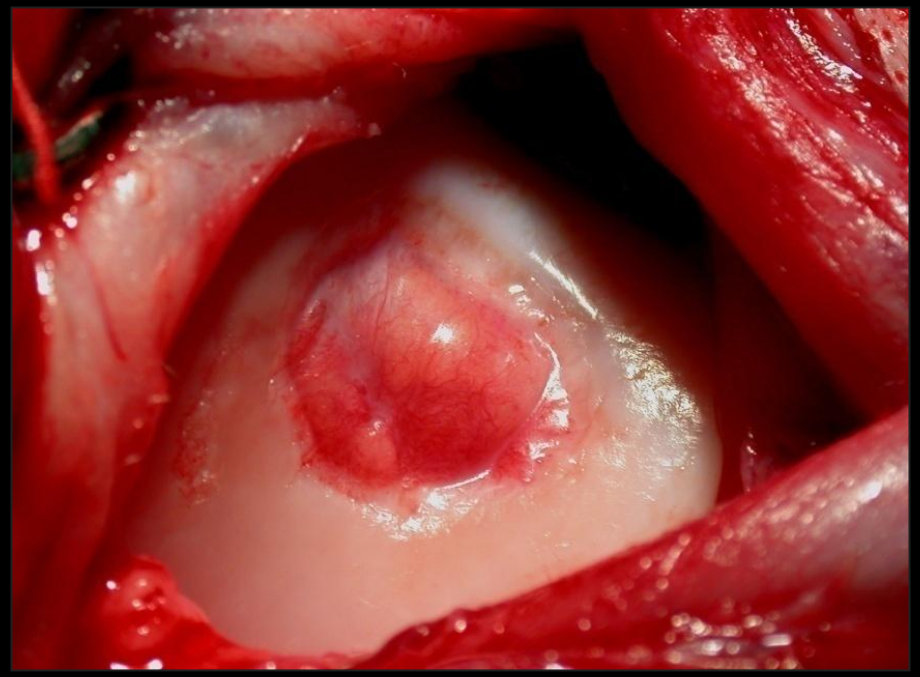
Benefits:

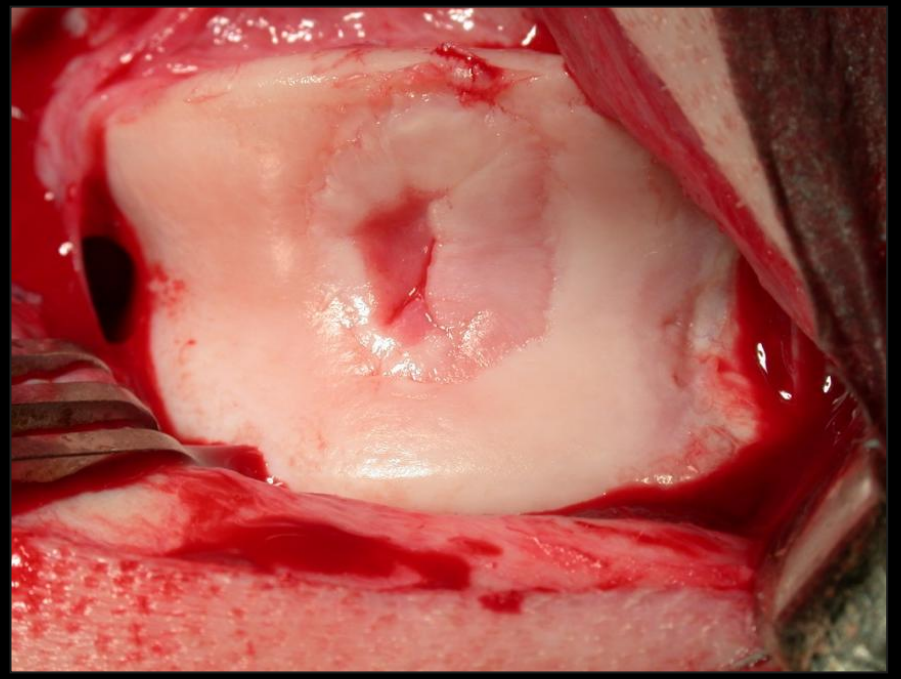
- Removes affected/infected tissue
- “Bad Bugs” - Addressing bacteria/virus/fungus “Biofilm”
- De-Epithelialization
  - Inhibits epithelial migration (wavelength specific)
- Photo Chemical Effect
  - Stimulates biologic healing and decreases inflammation
- Bone Regeneration through multiple pathways (epi + stim)
- Decreased hemorrhage
- Decrease operative AND post operative pain
- Promotes faster/better healing

Osseous Regeneration

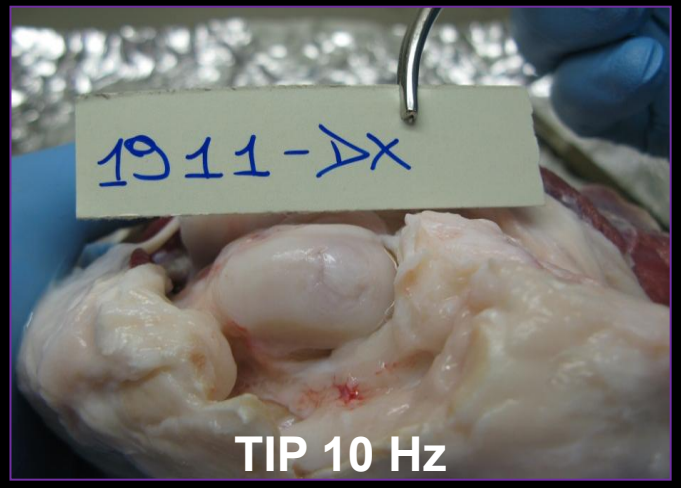
Benefits:

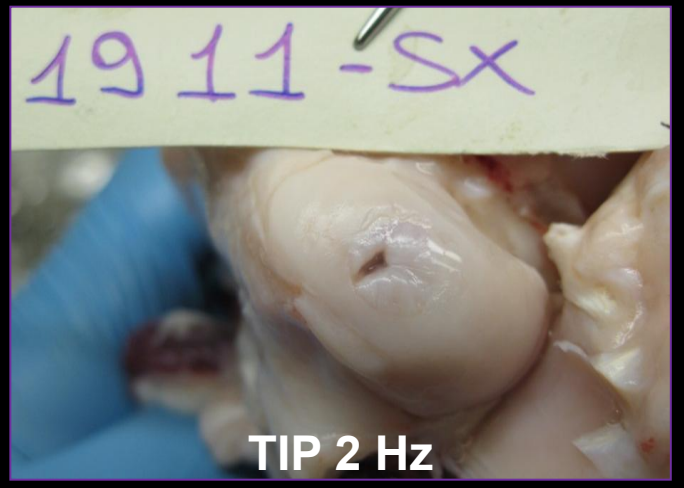
- Bone Regeneration through multiple pathways

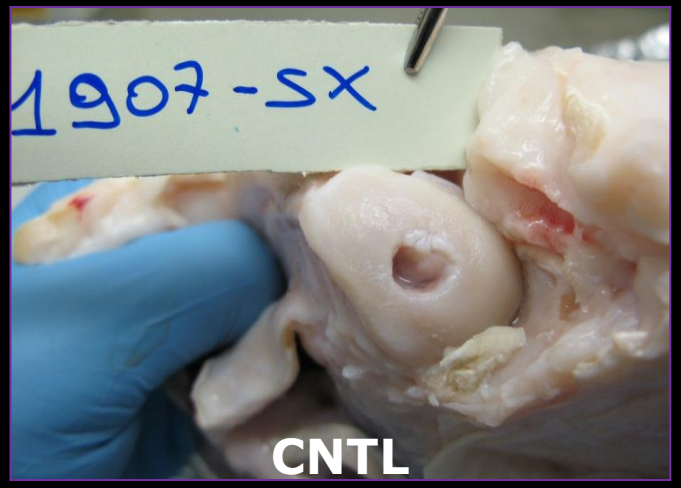


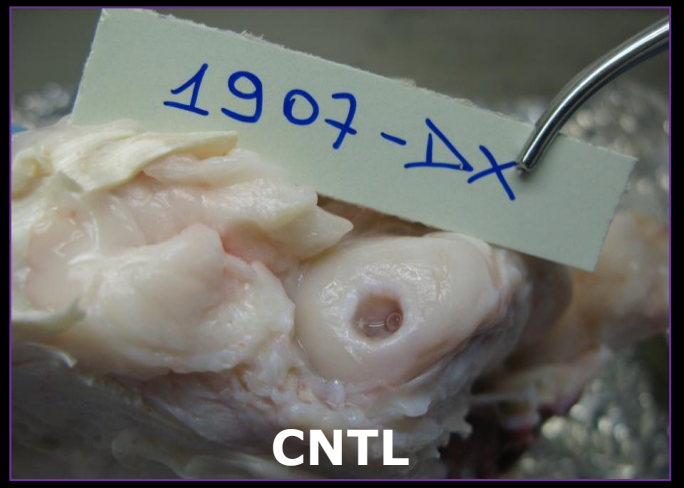


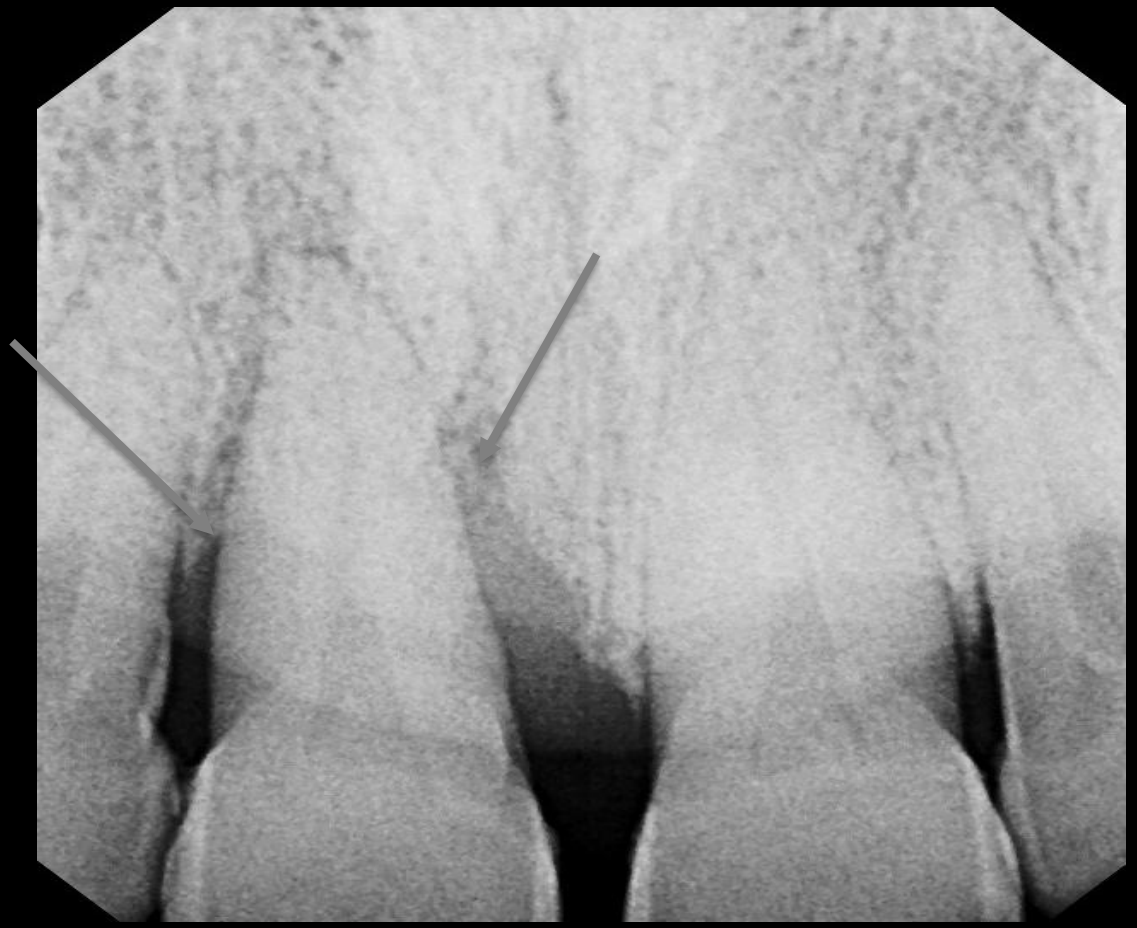
Osseous Regeneration



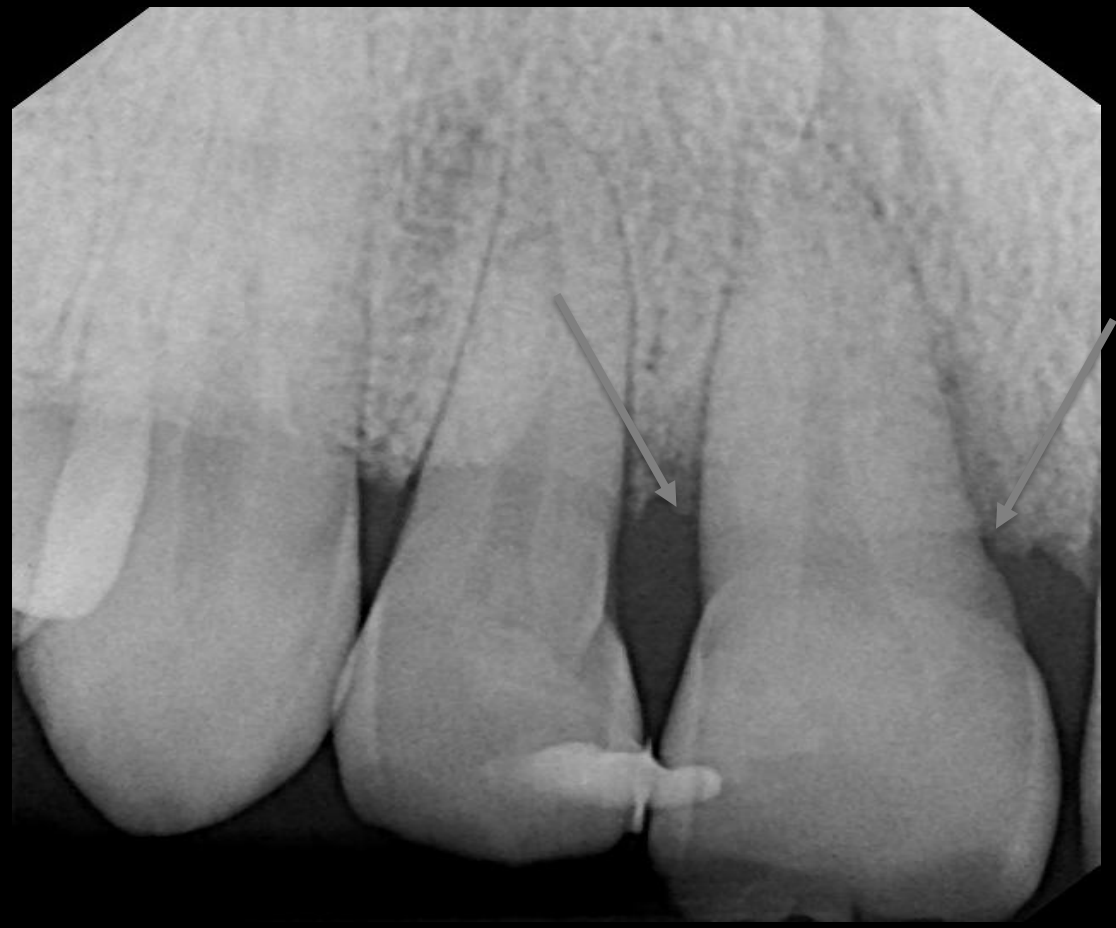






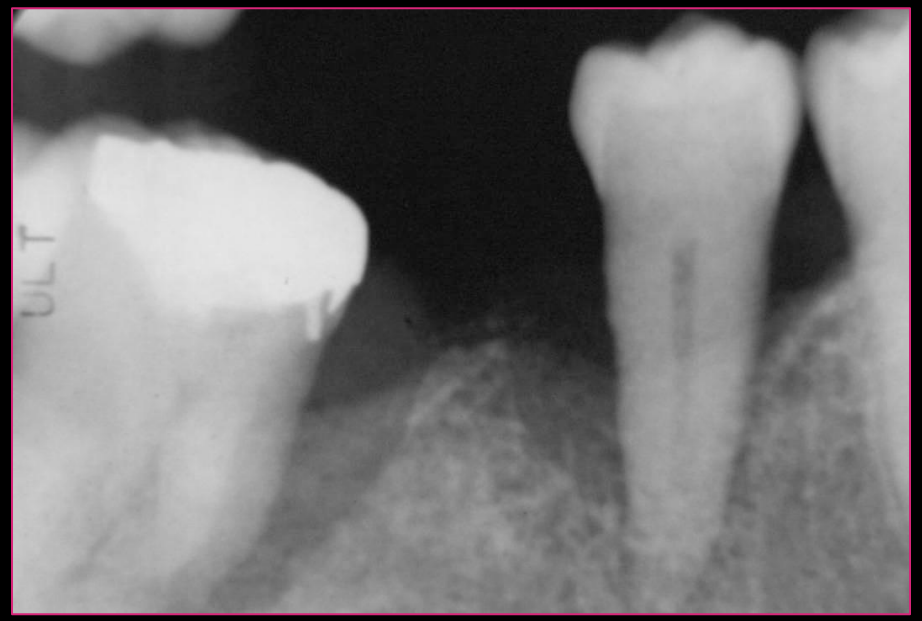


Oct 2011

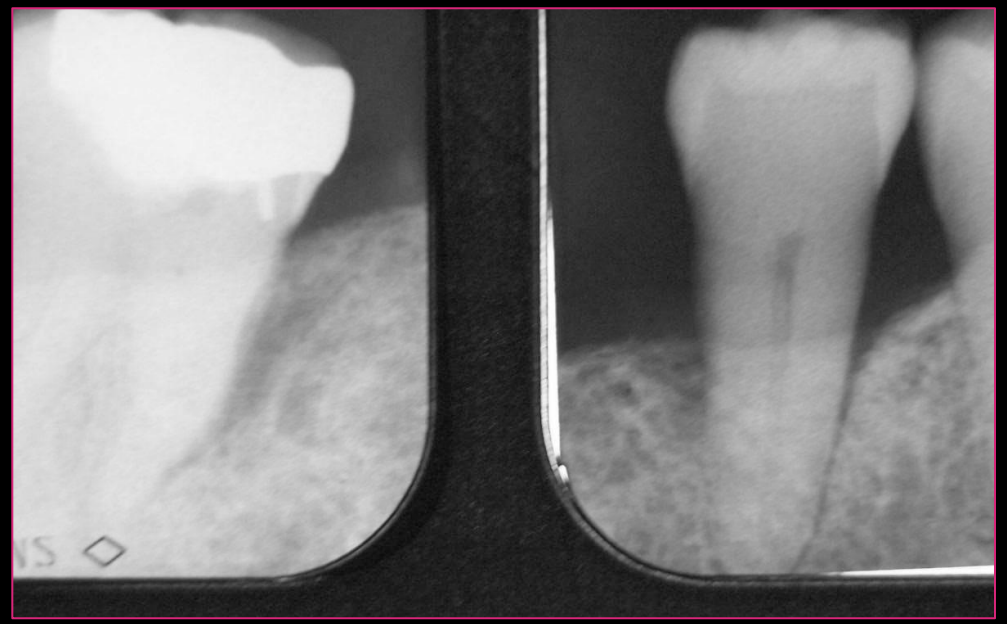


Mar 2013

Gwen Smukowski, RDH, Chicago, IL



Pre-Op



6 Month Post-Op

Gwen Smukowski, RDH, Chicago, IL

Laser Hygiene Applications

Benefits:

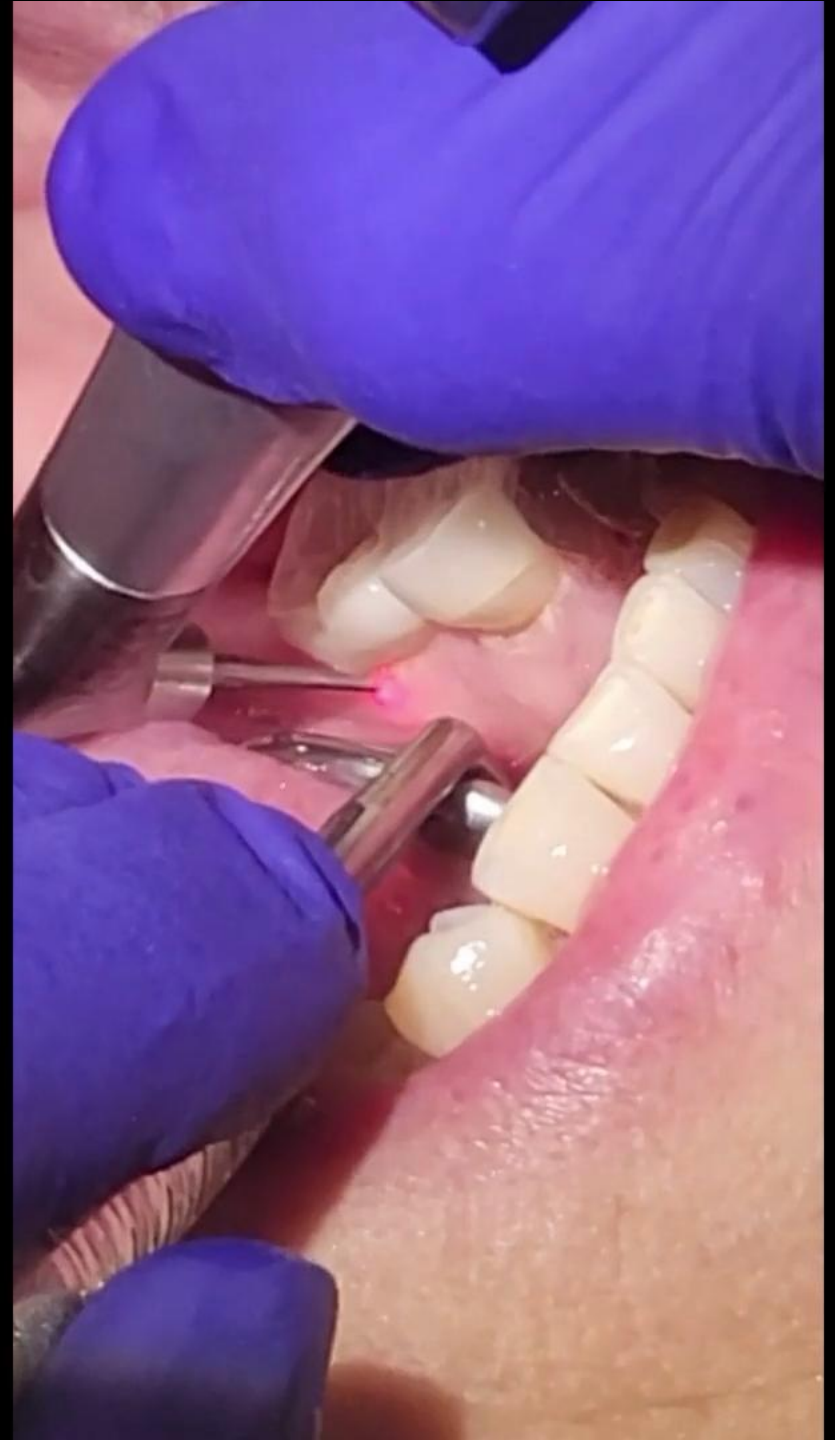
- Decreased hemorrhage
- Decrease operative pain
- Promotes faster healing
- Decreased post operative pain

Laser Hygiene Steps

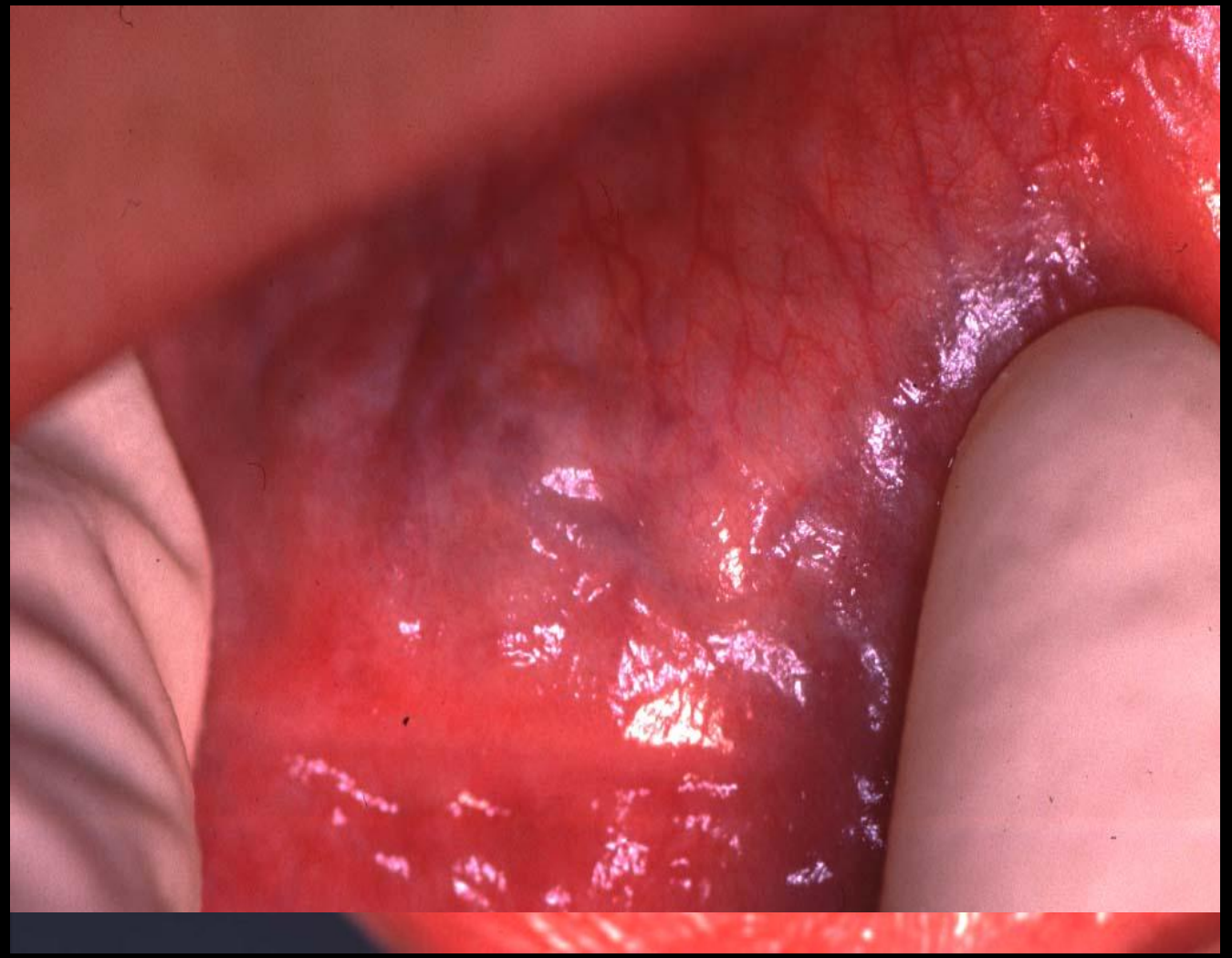
Technique:

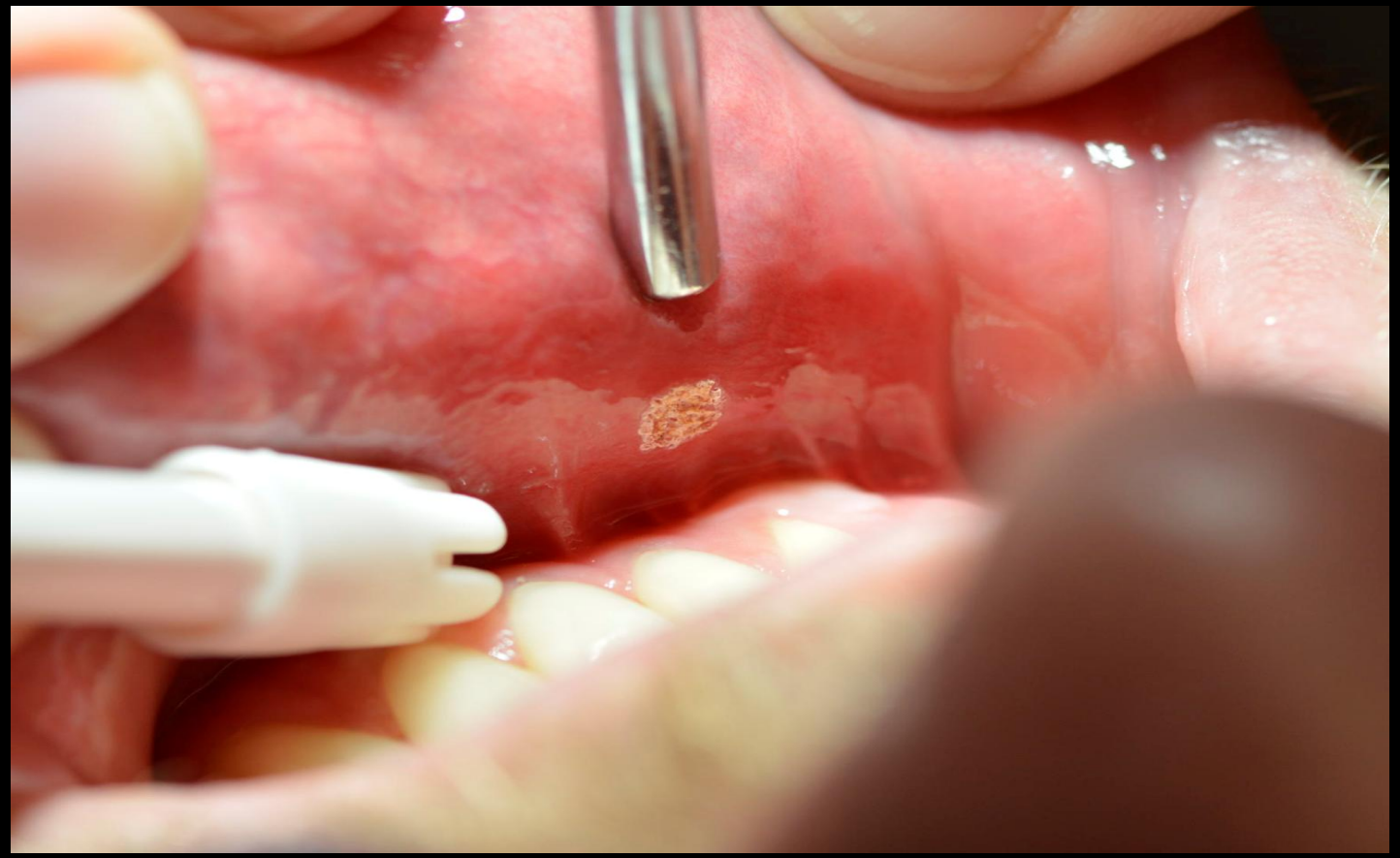
- Traditional SRP
- De-Epithelialization
- Sulcus sterilization
- Laser with Assistant
- Irrigation with PerioProtect / StellaLife / CloSYS
- Medicaments (Arestin, Perio Chip)
- Re-eval and use laser as needed at recalls

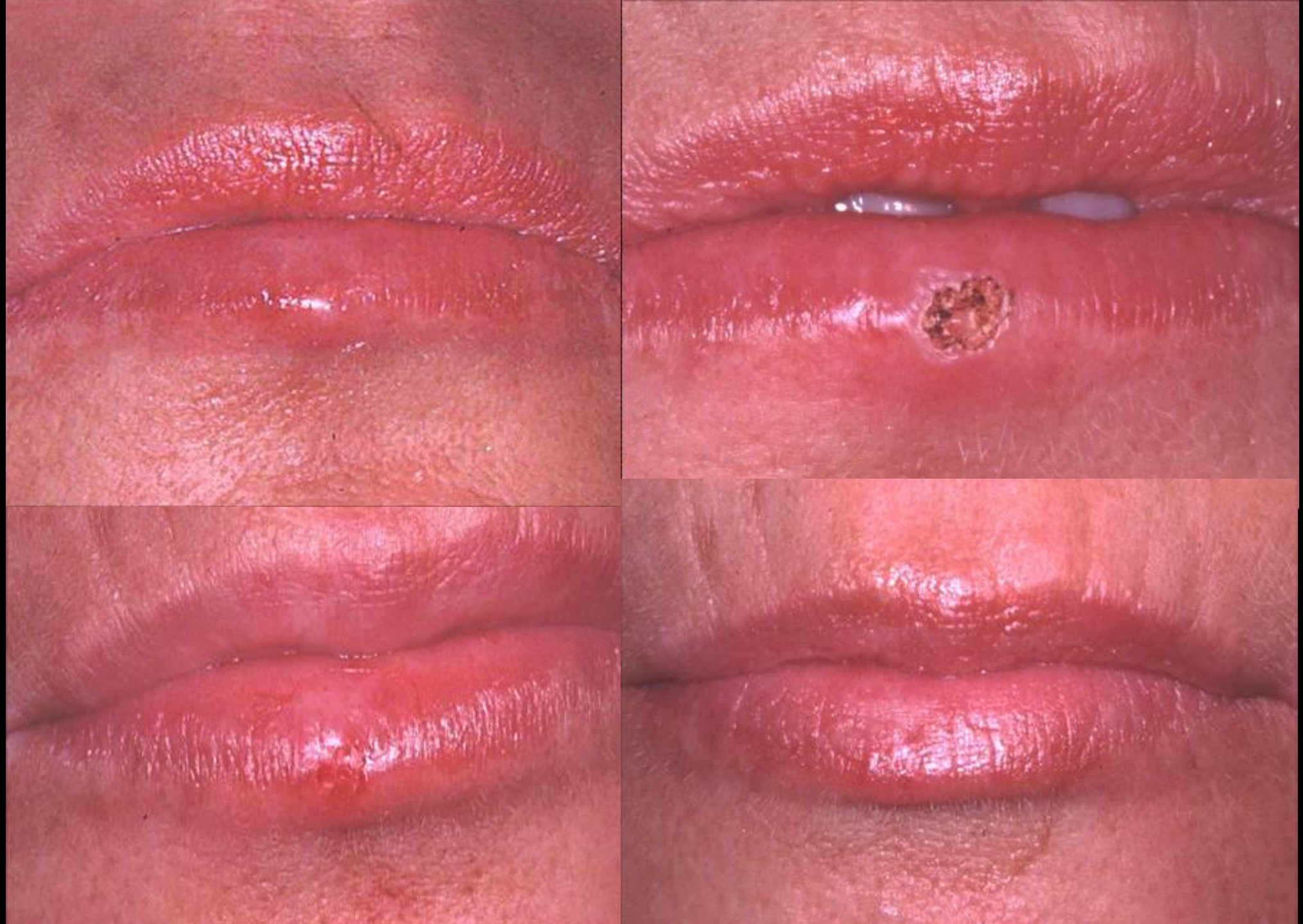
  -Periodontal disease is episodic in nature



Aphthous Ulcers
Herpetic Lesions
Dentin Desensitization





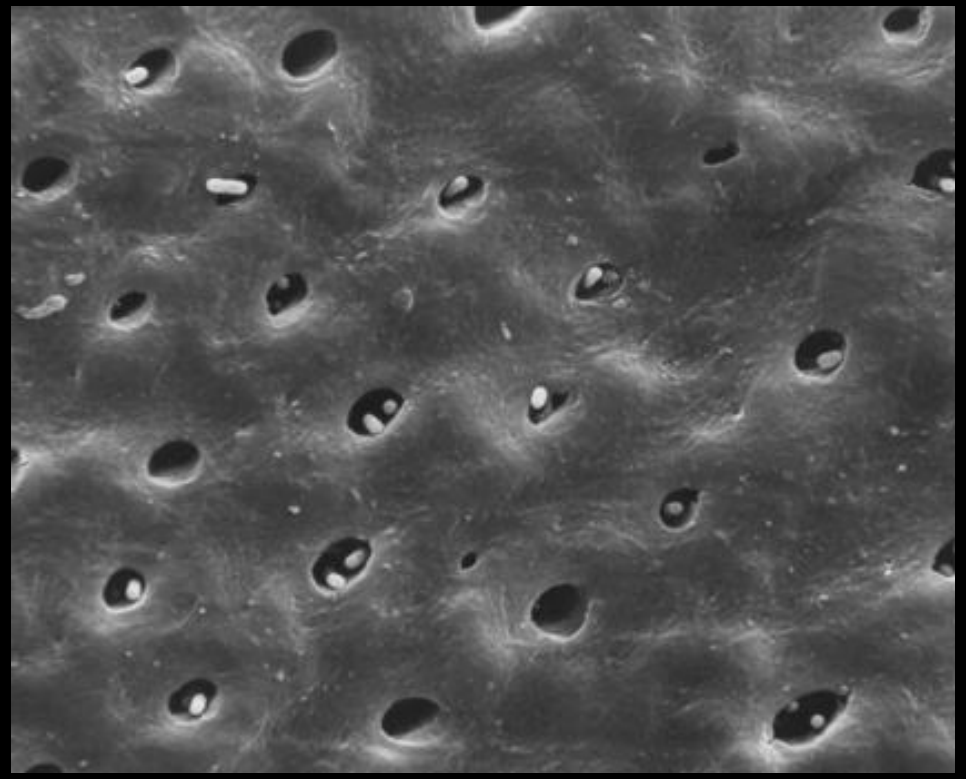


Hard Tissue Applications

-Sealing of dentinal tubules
-Desensitization
-Disinfection

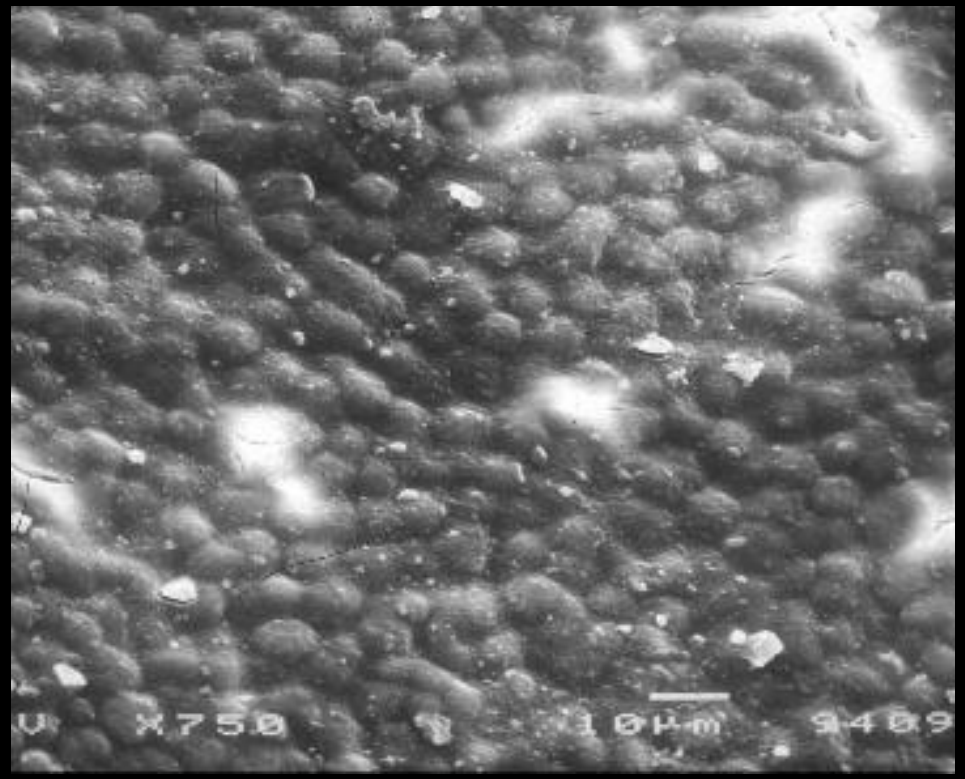
SEM: Dentin After CO_2 Conditioning

After Conventional Preparation



Note cocci in tubuli.

Decontamination - Tubuli Sealed

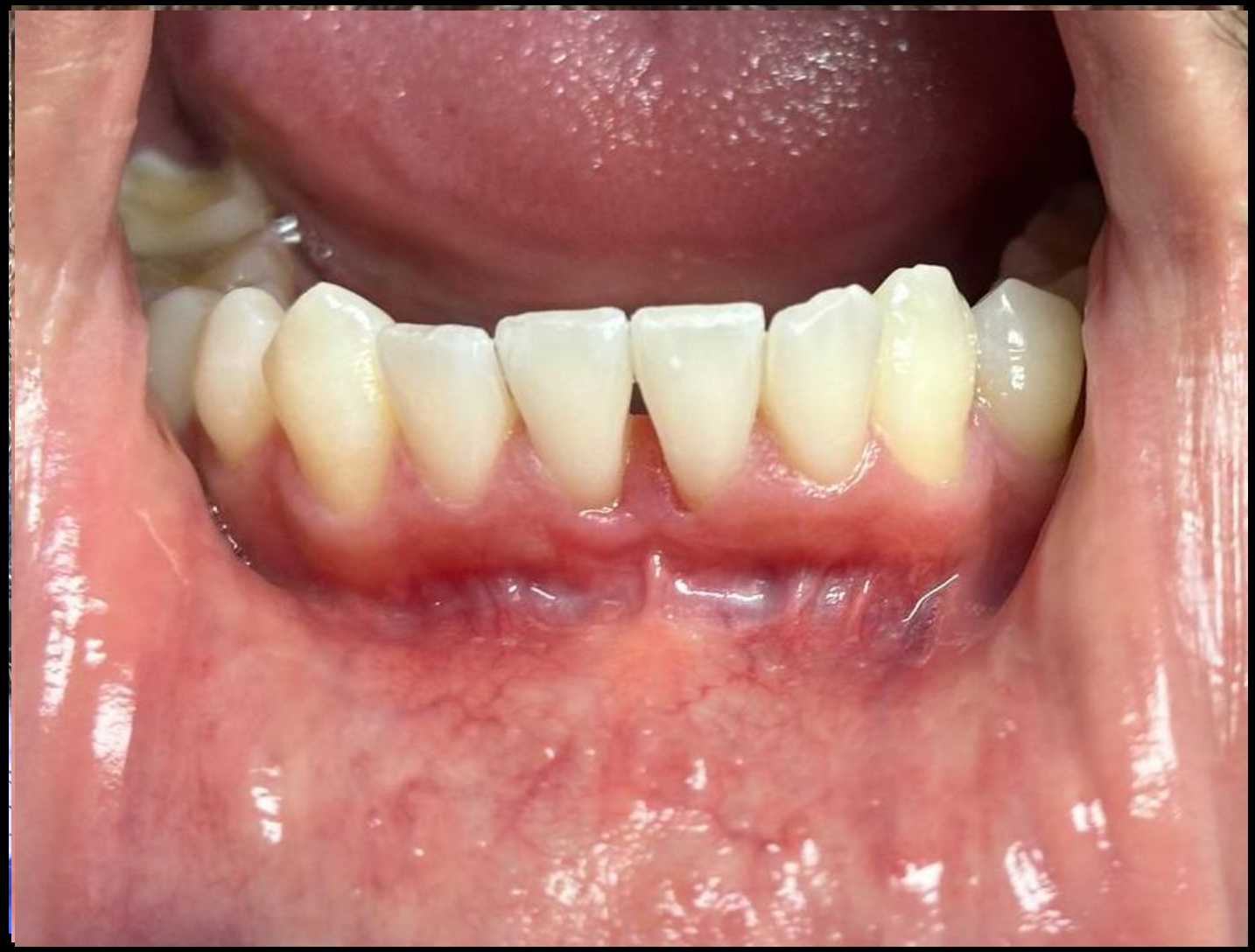


Laser-conditioned dentin.

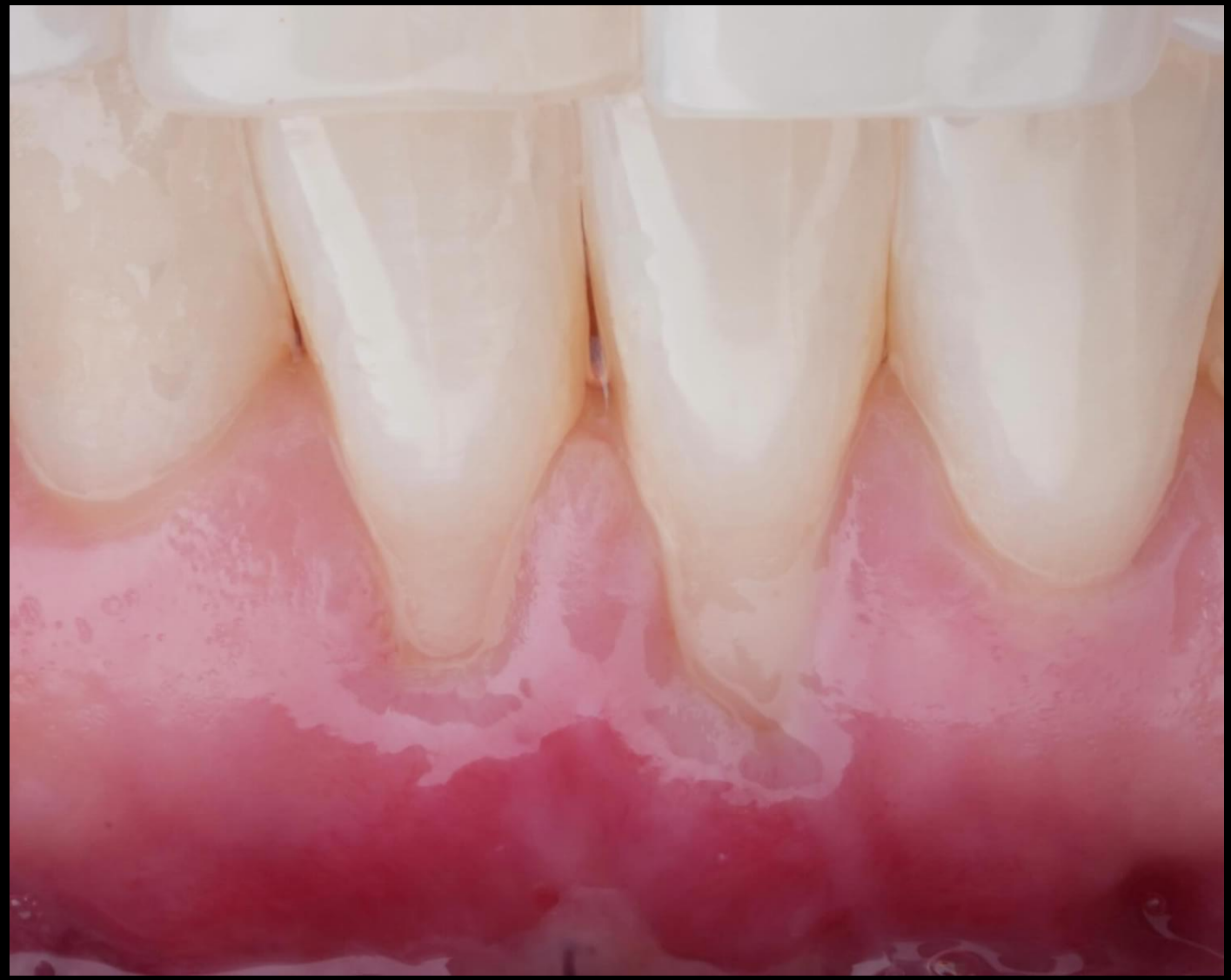
But Wait… There's More
Much More…

Partnership in diagnosis:

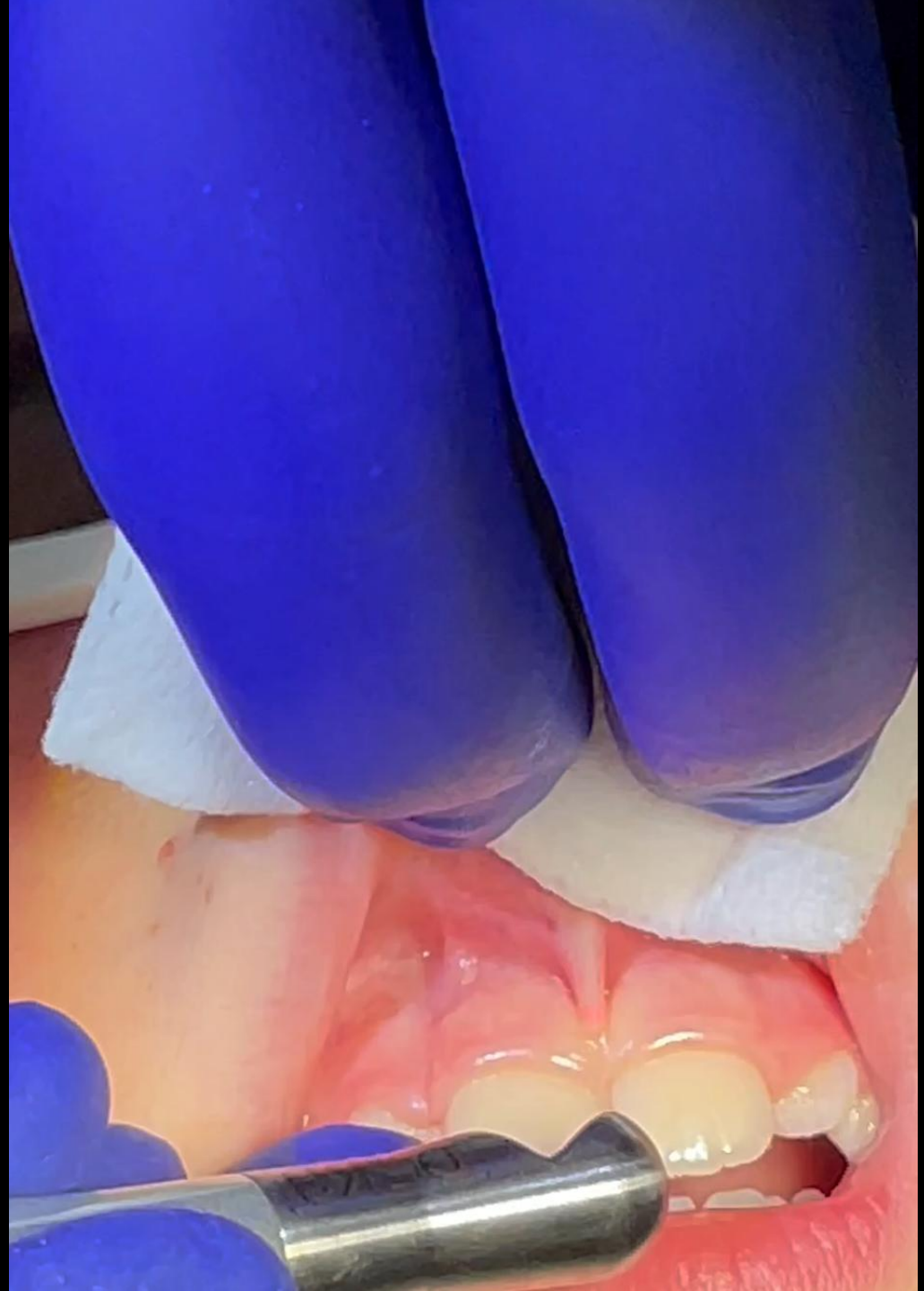
- Soft Tissue Disorders (frenum associated)
- Hard Tissue Disorders (TMD TMJ)
- Sleep Disorders (snoring and OSA)
- Systemic Issues



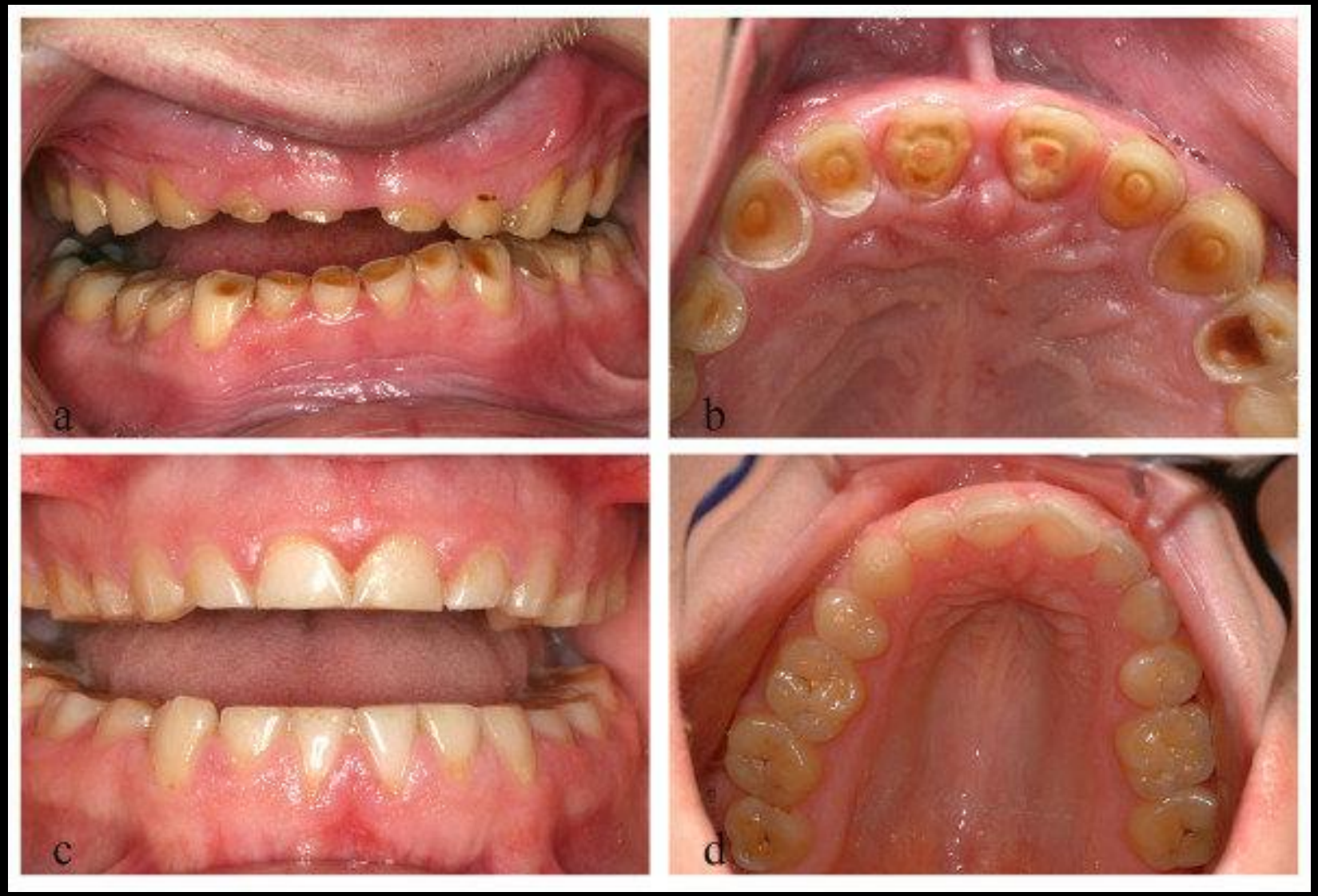
Dariush Radman DDS

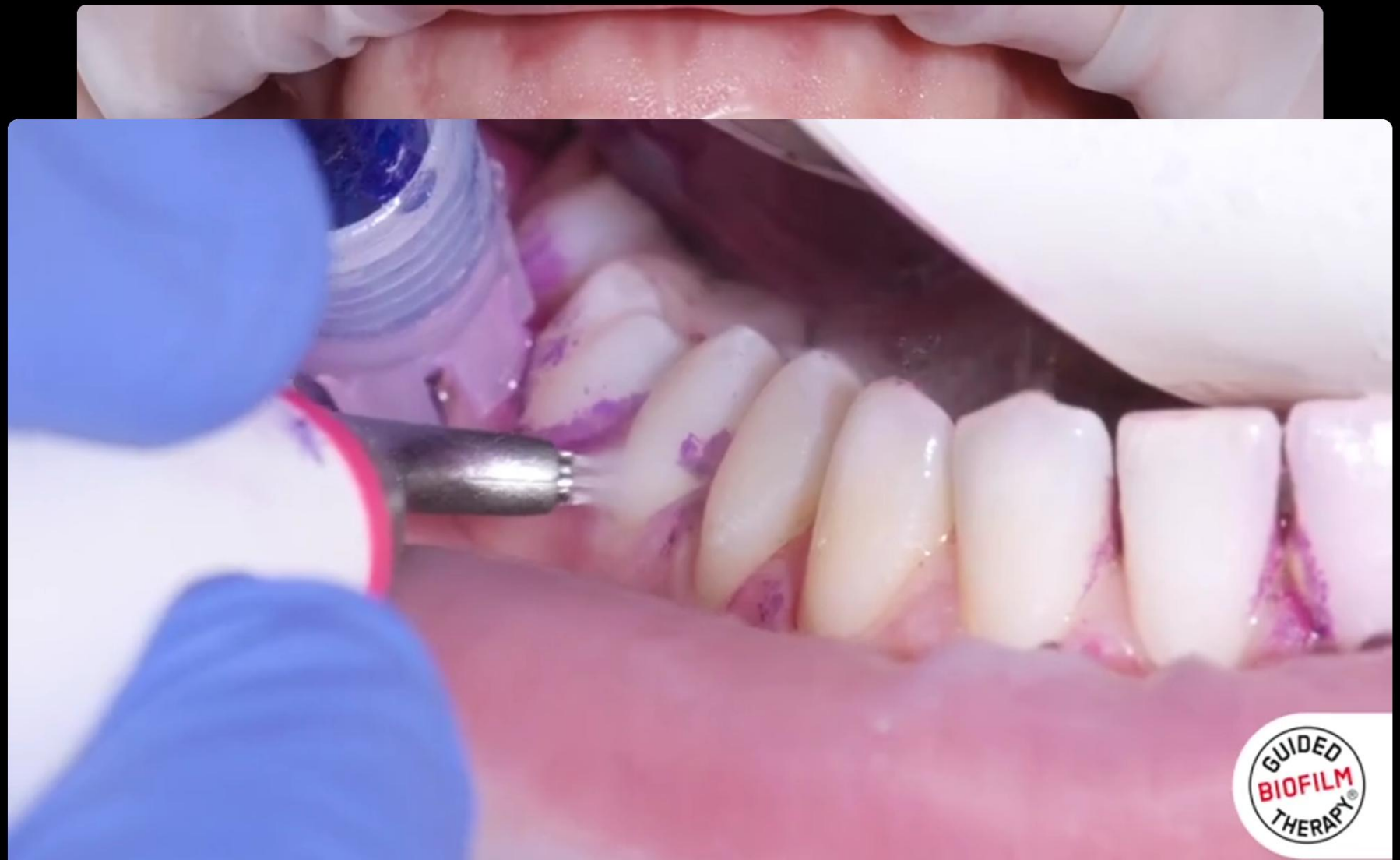


Esteban Garza DDS



Tim Morschauser DDS


a
b
c
d



"This is one of those once-in-a-lifetime products," shares Forward Science CEO Robert Whitman. "Our team has worked tirelessly to develop this innovative product over the past decade, and we are excited to provide clinicians with a cost-effective solution that meets the highest standards of quality."

PerioStōm is formulated with chitosan microspheres, a biocompatible polymer known for its antimicrobial, anti-inflammatory, and anti-biofilm properties. Chitosan's proven ability to inhibit biofilm formation and combat periodontal pathogens such as *P. gingivalis* makes it an ideal agent for post-SRP care. The formulation is further enhanced by an advanced delivery system featuring a curved stainless-steel tip with the same diameter as a curette, allowing for precise application at the base of the periodontal pocket.

"PerioStōm will be a game changer in the dental industry. I think you hear it too often about new products, but this time it's true," shares Forward Science Chief Scientific Officer Dr. Brian Pikkula. "After our longest R&D timeline from concept to launch, the exceptional clinical results speak for themselves. Our team is excited to get PerioStōm to the market."

PerioStōm® delivers a sustained release of chitosan's therapeutic effects, providing lasting protection to the oral mucosa. This innovative system ensures a smoother recovery with reduced discomfort and improved outcomes for patients undergoing periodontal procedures.

How Important is Saliva to Overall Oral Health?

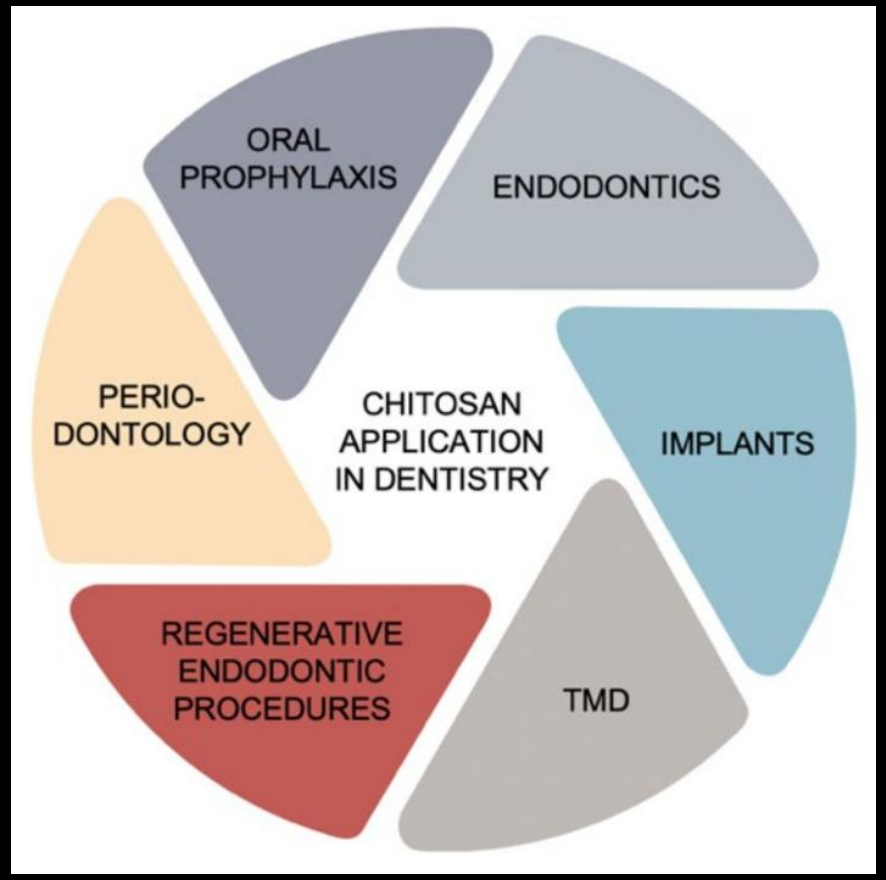
Aspen Dental Opens New Selma Practice

Planet DDS Expands AI-Powered Dental Software

TUSK Explores Future of Dental Practice Transitions

Straine Acquires Bird Dental Studio in Idaho

Chitosan in Dentistry



- What it is: a biopolymer from chitin — positively charged, biocompatible
- Antimicrobial: disrupts bacterial membranes, limits S. mutans biofilm
- Mucoadhesive: binds enamel, dentin, and mucosa for longer contact
- Remineralization: aids calcium/phosphate delivery; occludes tubules
- Uses: pastes, rinses, varnishes, bonding aids, perio gels, scaffolds
- Watch-outs: shellfish labeling, batch variability, low pH solubility

Treatment Protocol

PerioProtect

Periodontal and Peri-Implant Diseases

Condition	Initial Use	Daily Maintenance
Gingivitis	**PerioTrays** with **PerioGel** 2x per day for 10-15 minutes with first tube of **PerioGel**.	**PerioTrays** with **PerioGel** 1x per day for 10-15 minutes. **AO ProToothpaste** & **AO ProRinse** 2x per day.
Periodontitis		
Peri-Implant Mucositis		
Peri-Implantitis		
Inflammation around Crowns		

PerioSciences

Surgery

Procedure	Initial Use	Daily Maintenance
Periodontal Laser Surgery	Week 1 & 2 patient applies **AO ProVantage Gel** 3-5x per day. Tip: While patient is in the chair post-procedure, open **AO ProVantage Gel** 30ml container and apply gel to treated area. Send patient home with remaining bottle of **AO ProVantage Gel**.	Use **AO ProVantage Gel** 2x per day. Optimal usage is morning, after daily hygiene regimen and just before bed until bottle is finished. **AO ProToothpaste** & **AO ProRinse** 2x per day. Once the bottle of **AO ProVantage Gel** has been finished, add **PerioTrays** with **PerioGel** 1x per day for 10-15 minutes.
Laser Gingivectomy		
Flap Surgery		
Soft Tissue Grafting		
Implant Placement		
Extractions		
Endodontic Treatment		

Intra Oral Conditions

Condition	Initial Use	Daily Maintenance
Denture Stomatitis	Week 1 patient applies **AO ProVantage Gel** 3-5x per day.	
Ulcers – Canker Sore, Oral Lichen Planus, Acute Necrotizing Ulcerative Gingivitis (ANUG), Other		

Product Features and Applications

PerioProtect Products:

PerioTray®: Custom tray with peripheral seal for deep medication delivery

PerioGel®: 1.7% hydrogen peroxide oral debriding agent and wound cleanser

- **PerioGel:** Mint
- **PerioGel® X:** Sweet mint with xylitol
- **PerioGel® X Neutral:** Unflavored

ReminGel™: Mint flavored remineralizing/desensitizing dental gel

PerioSciences Products:

Moisyn™: Dry mouth oral rinse and mist
10 OZ BOTTLE | 2 OZ MIST (2 PACK)

AO ProVantage Gel®: Antioxidant-infused dental gel
30 ML (STANDARD) | 15 ML (ON-THE-GO)

AO ProRinse®: Antioxidant-infused mouthwash
HYDRATING | SENSITIVE | NATURAL | WHITE CARE

AO ProToothpaste®: Antioxidant-infused toothpaste
HYDRATING | SENSITIVE | NATURAL | WHITE CARE

Bibliography and Articles

Scan the QR code to view bibliography and links to published articles, or visit **perioprotect.com/solutions**

PerioSciences

Dry Mouth

Cause	Initial Use	Daily Maintenance
Generalized Medication-Induced Sjogrens	**Morning and Evening:** **Moisyn Oral Rinse** Use 5-6ml per rinse. Fill up to 1/2 capful. **Daytime**: **Moisyn Oral Mist** as needed. 3-6x per day depending on severity of dry mouth.	During morning and evening, use **Moisyn Oral Rinse**. Throughout the day, use **Moisyn Oral Mist.** **Hydrating AO ProToothpaste** is an optimal addition. Consider adding **ReminGel** in **PerioTrays** for patients with high caries risk.
Radiation / Chemo / Extreme Sensitivity[1]	*For severe dry mouth cases, reference Advanced Dry Mouth Protocol on right.*	

PerioProtect + PerioSciences

Remineralization and Sensitivity

Condition	Initial Use	Daily Maintenance
High Caries Risk Demineralization White Spot Lesions	**PerioTrays** with **ReminGel** 1x per day for 15 minutes with the first tube of gel.	**PerioTrays** with **ReminGel** for 15 minutes 1x per day - 1x per week as directed by clinician.
Tooth Sensitivity	**PerioTrays** with **ReminGel** 1x per day for 15 minutes for 7-21 days.	Use **ReminGel** in **PerioTrays** as needed. **Sensitive AO ProToothpaste** & **Sensitive AO ProRinse** 2x per day.

PerioSciences

Cosmetic Procedures

Procedure	Initial Use	Daily Maintenance
Cosmetic Tooth Whitening	**PerioTrays** with **PerioGel** 2x per day for 10-15 minutes with first tube of gel	**PerioTrays** with **PerioGel** 1x per day for 10-15 minutes with **White Care AO ProToothpaste** and

Advanced Dry Mouth Protocol

MORNING
(Reset + Condition)
- Use **Moisyn™ Oral Rinse**
- For advanced cases wait 5 minutes, then apply **AO ProVantage Gel®**

DAYTIME
(Maintenance)
- Use **Moisyn™ Oral Mist** as needed, typically 3-6x per day

EVENING/NIGHT
(Repair + Sustain)
- Apply **ReminGel™** with **PerioTray®** for 15 minutes
- Use **Moisyn Oral Rinse**
  - Wait 5 minutes
- Apply **AO ProVantage Gel**

Notes

PerioProtect: With **PerioTray** delivery of **PerioGel**, apply a thin line or ribbon of gel on the occlusal surface of the tray.

For best results, brush teeth after **PerioTray** usage. There are no eating or drinking restrictions with **PerioGel**.

For all other gels, do not eat or drink for 30 minutes after gel application.

PerioSciences: The most effective method of applying **AO ProVantage Gel** without a tray is to use the tongue to distribute the gel throughout the mouth, making sure to spread the gel on the upper and lower gums.

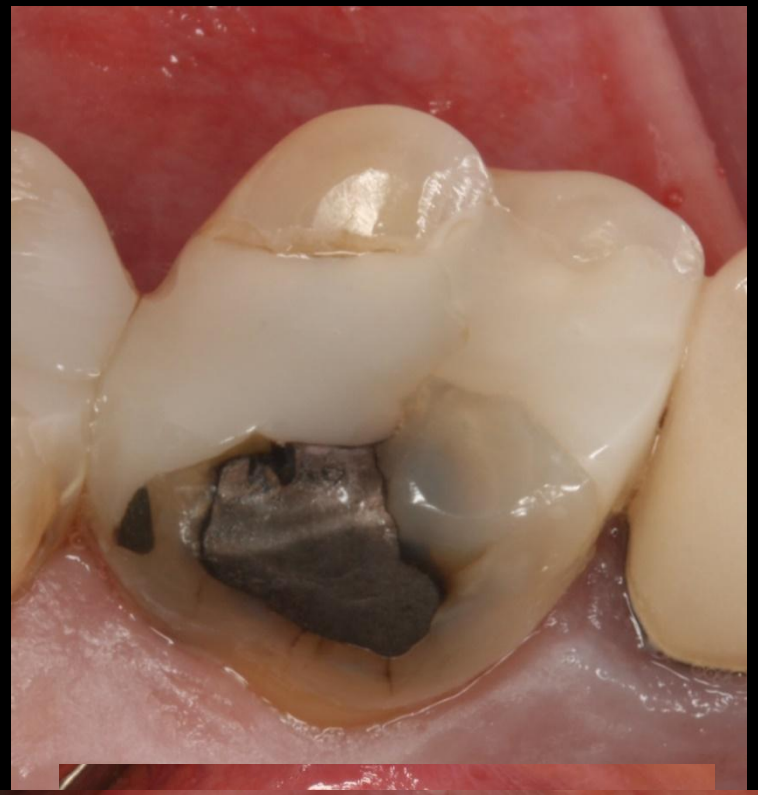
Research and Considerations

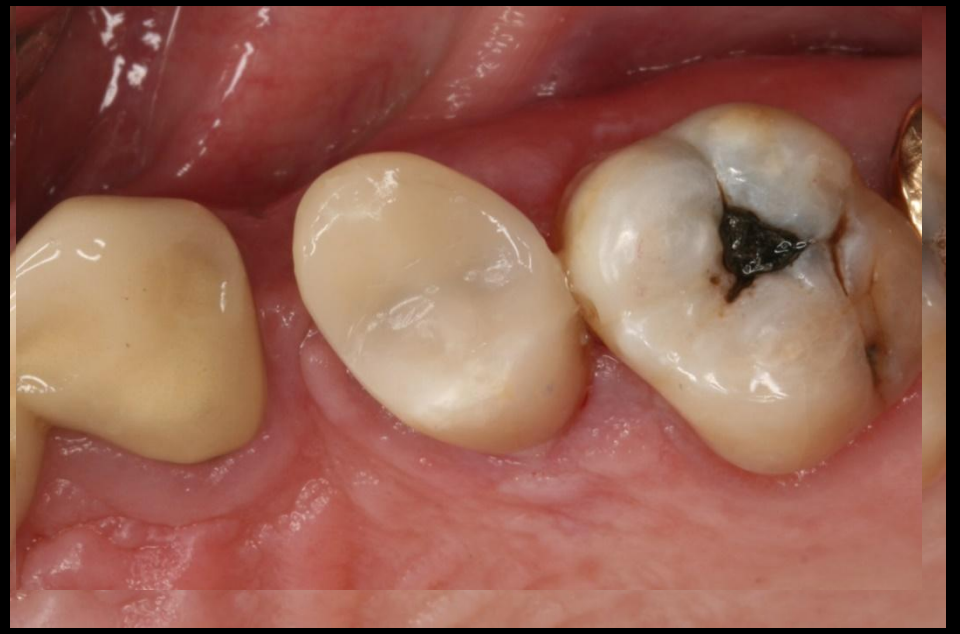
Visit **perioprotect.com/solutions** to explore supporting literature.

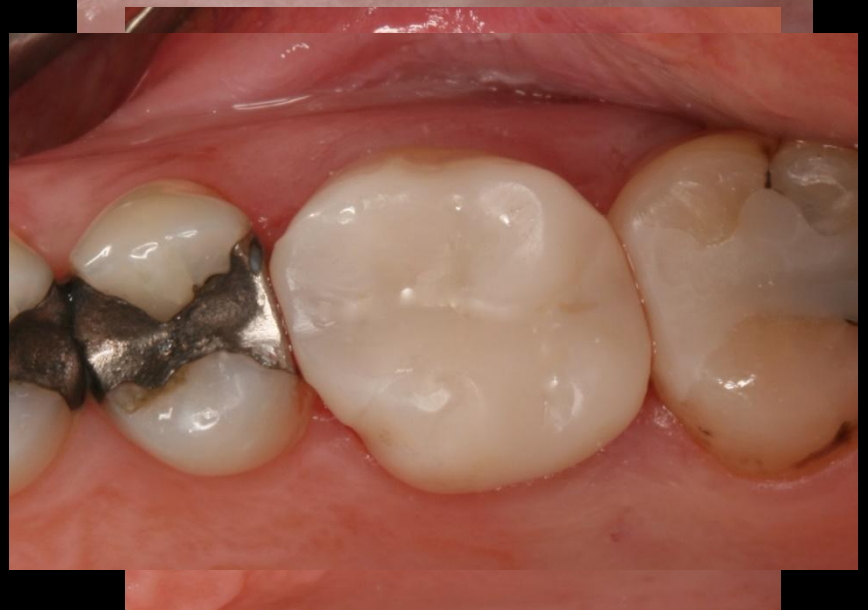
These guidelines are designed to complement your clinical

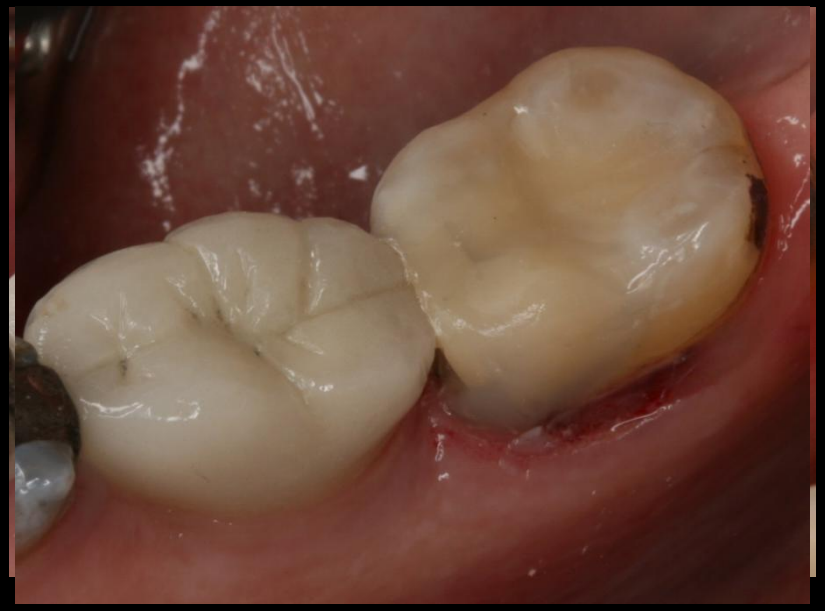
Descriptive **Not Prescriptive** Ways to Sort Whether to Crown OR Big Fill

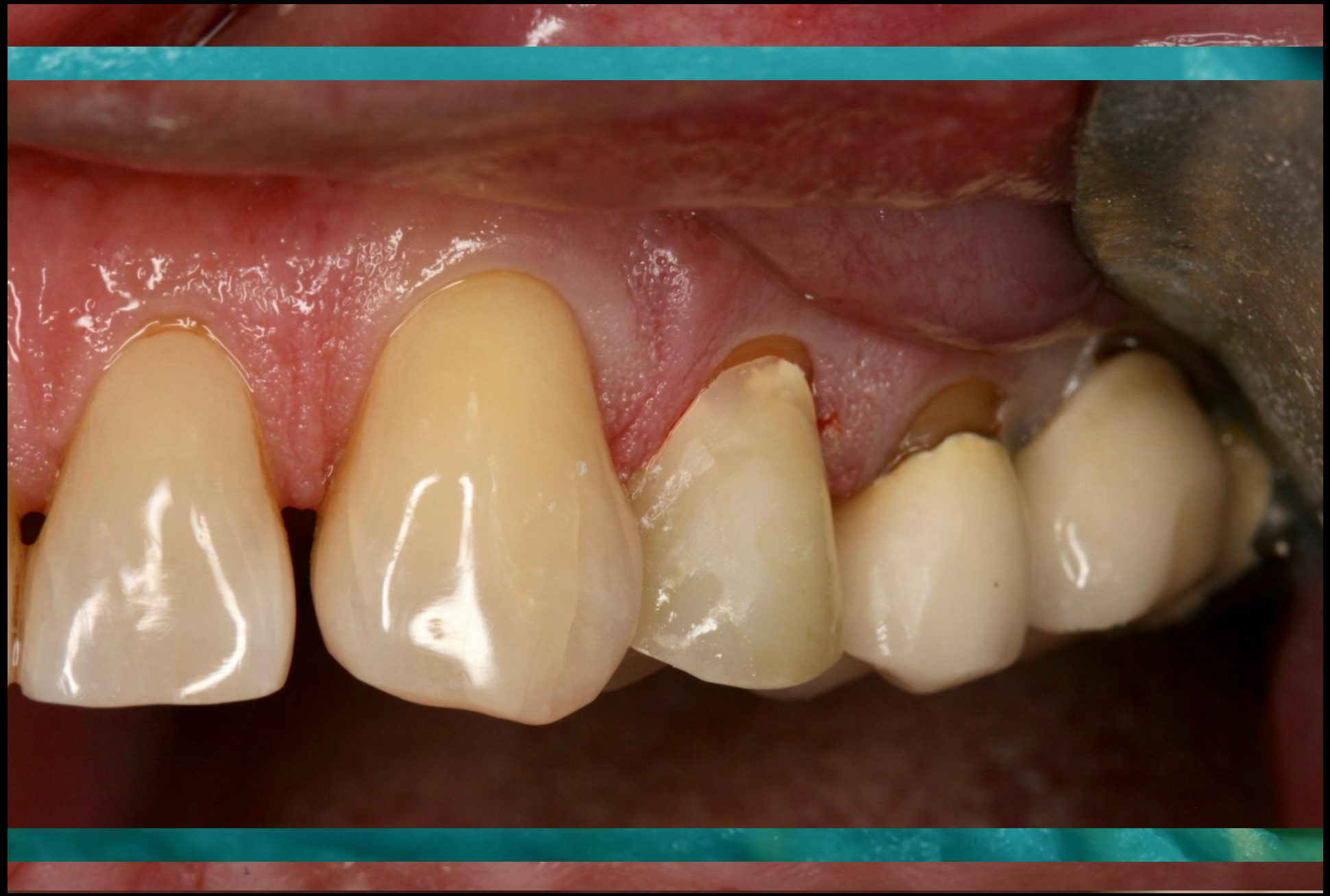
1. Missing both marginal ridges & fill is TWO THIRDS of occlusal table…CROWN
2. Decay extends grossly SUB-G and wraps around line angles **AND isolation is an issue**…CROWN
3. Pain on release YET VITAL…CROWN
4. Unsure of pulpal health…FILL
5. Emergency tx, patient traveling out of town, request a quick fix…FILL









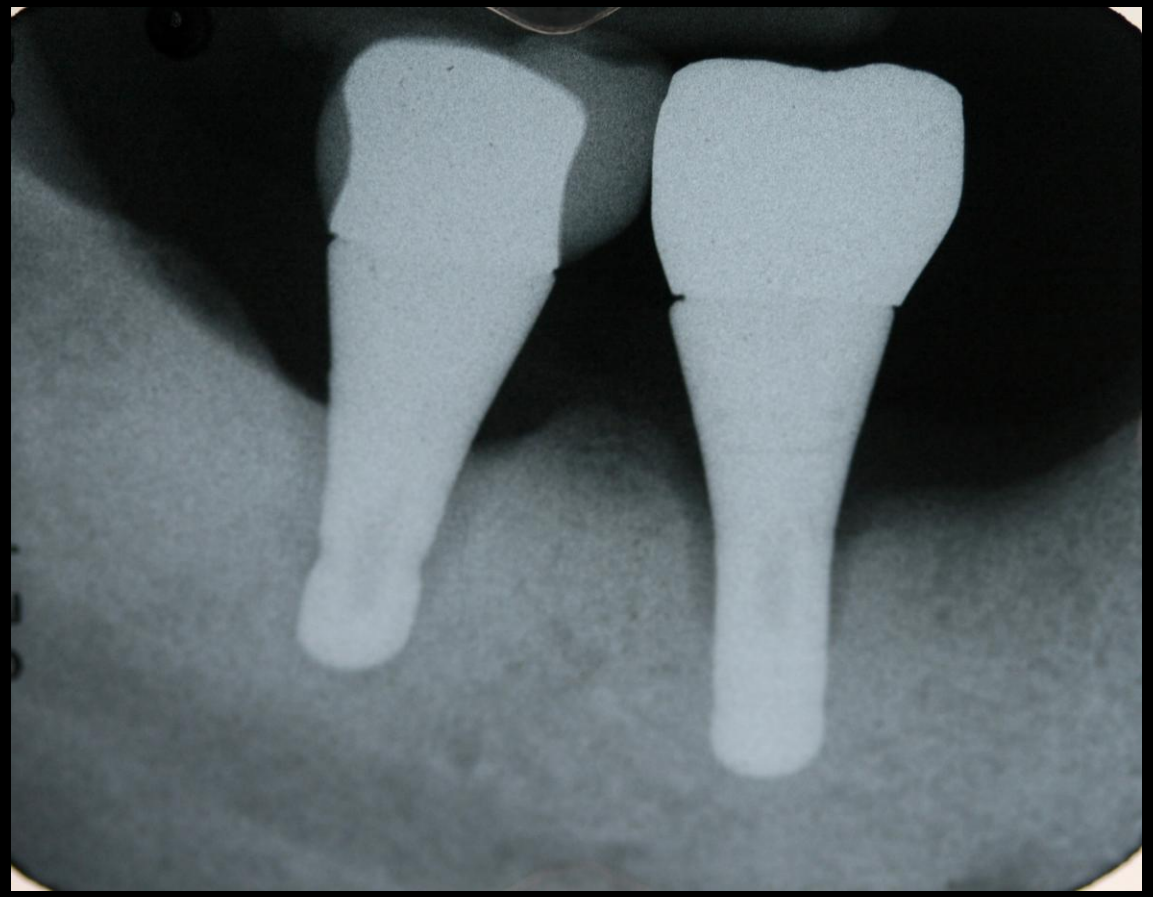


A Word on Occlusion

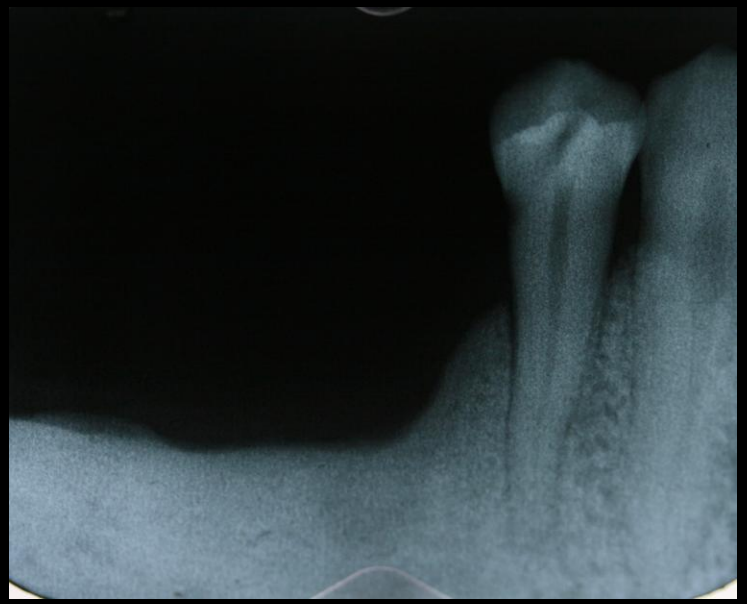
- Everything works and everything doesn't…Learn to Identify when it DOESN'T
- Occlusion is SIMPLE
  - When the jaw is closed all teeth touch at the same time
  - When power is applied neither teeth nor jaw deflect
  - In movements away from fully contacted position no back tooth hits before, harder, or after front teeth

Patient Assessment

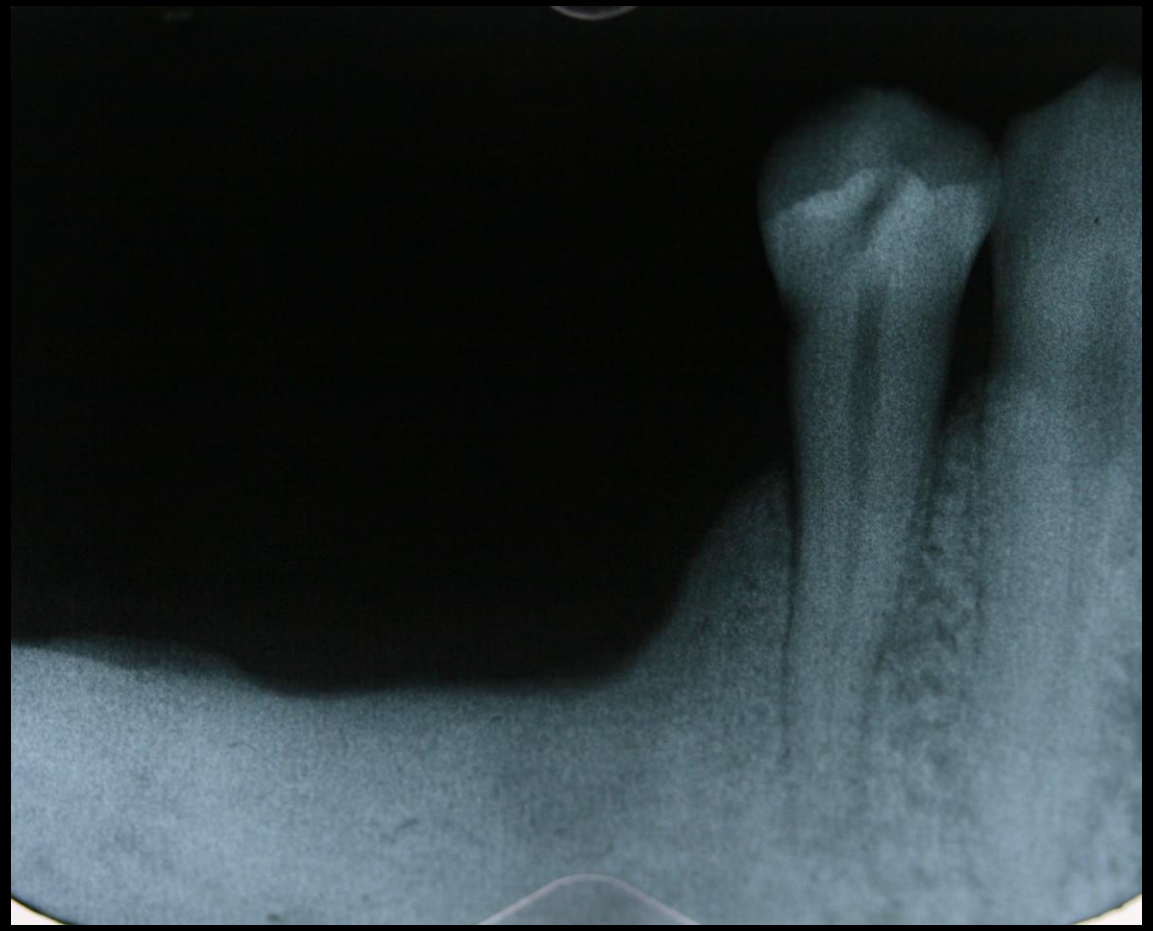
- He is a 71 y.o. male
- He has been a friend of my fathers for years and he recently called to say his implant crown was loose. He used to be talkative and light-hearted. After by-pass surgery his personality is more blunt, direct, and confrontational.
- Think: What is going on here? How might you go about presenting treatment to this patient? What alternatives can you consider?



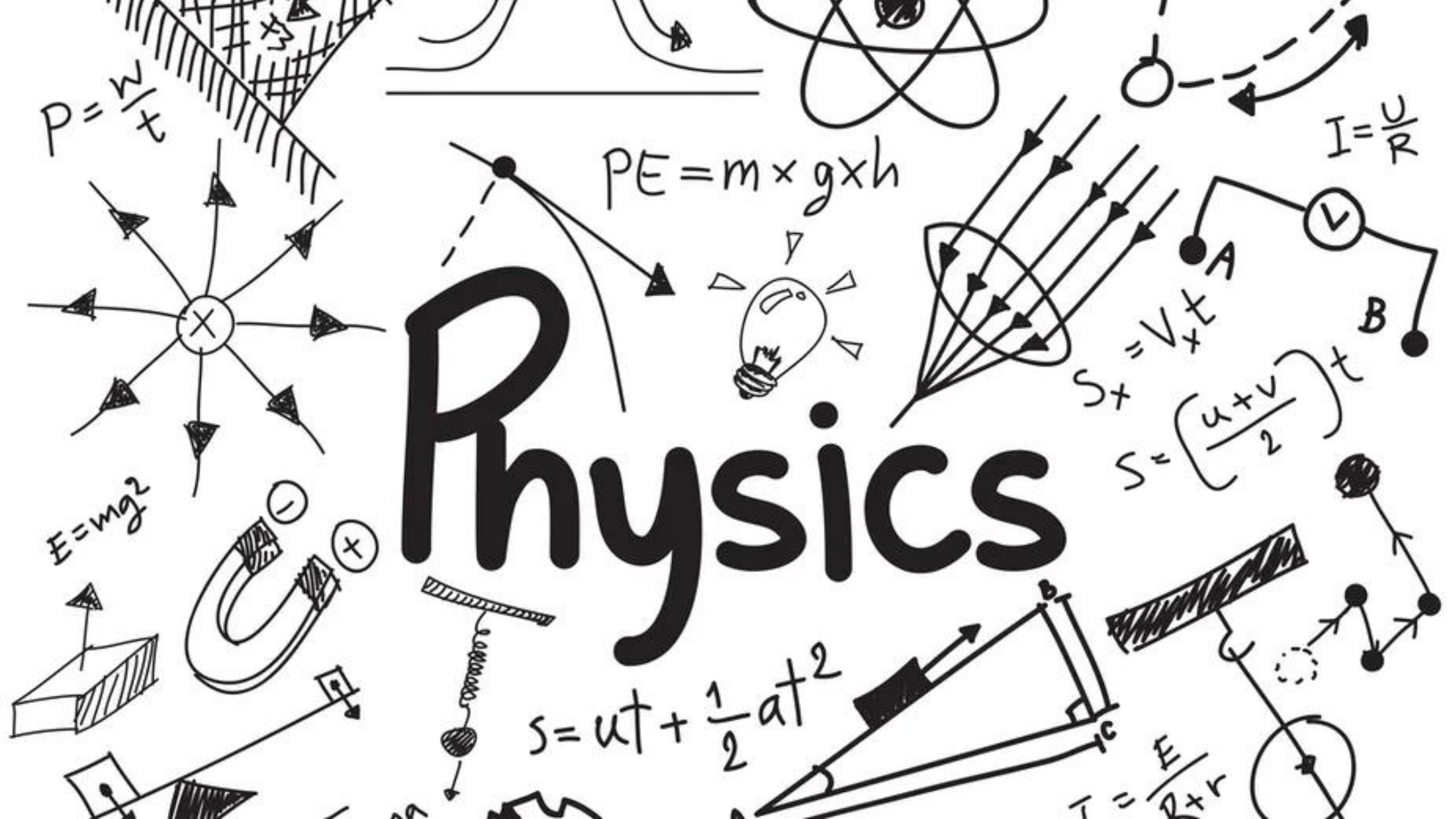
- These implants were placed in the 1980s



Lessons Learned



1. Implant platform width is as important and length
2. Do not underestimate force loads patients can place on these restorations (Brachyfacial)
3. History may be the best predictor of future events
4. Personality can change after major life events

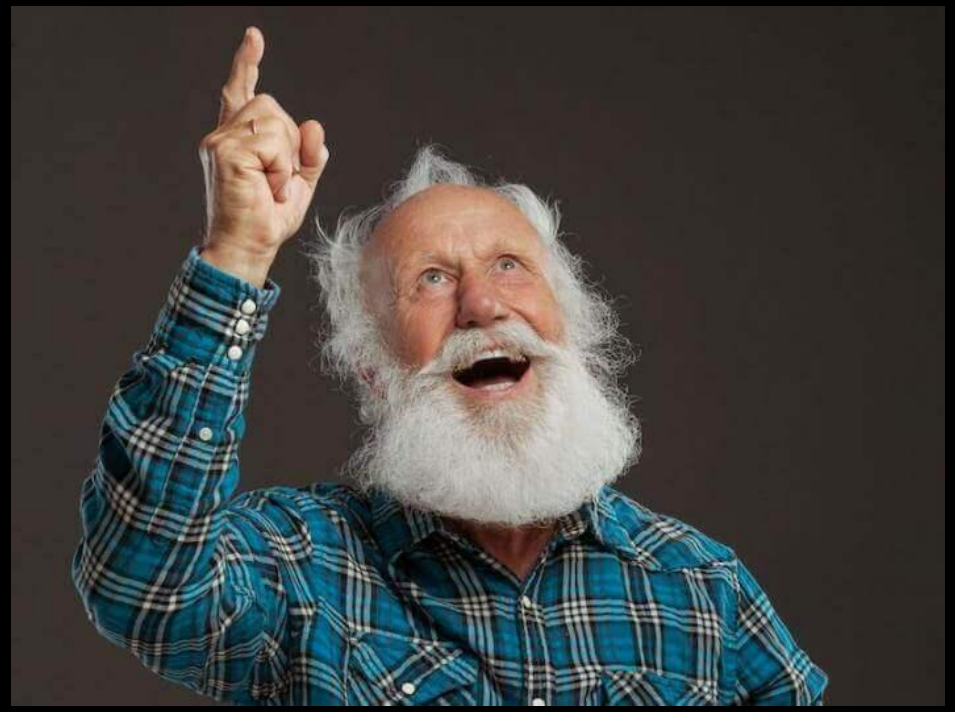

Physics
PE = m × g × h
P = W/t
E = mg²
s = ut + ½at²
I = U/R
S = V t
S = ((u+v)/2) t
A
B
C
D


TOP SECRET
Your Mission
Should You Choose to Accept . . .

What is so difficult about occlusion?

- The challenge is it is UNPREDICTABLE, and VARIES patient to patient

As a Result



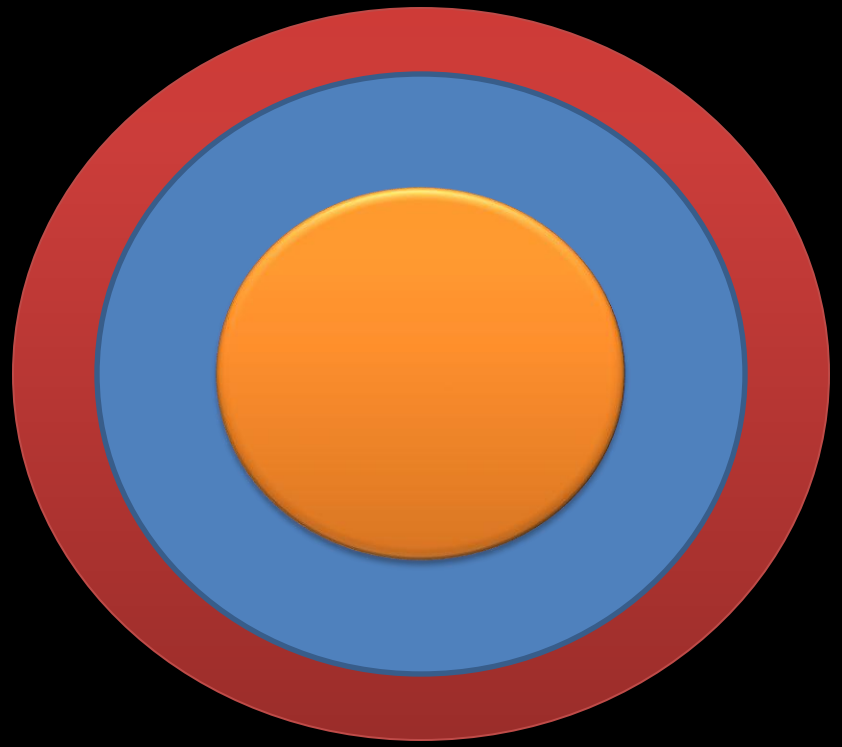
- Poorly Taught
- Poorly Understood
- Appears Difficult
- Makes Dentist Apprehensive to Treat

Common questions about occlusion

1. If I use the patient's current occlusion, will I be OK?
2. If I REMOVE existing occlusion, how do I recreate it?
3. If patient has severe tooth wear, how can I predict successful treatment
4. How do I know what kind of appliance to make?
5. What do I do if that patient is skeletal Class II or Class III
6. What do I do if my patient has pain?
7. Why, how, and when should I equilibrate?
8. How do I sequence complex occlusal treatment and bite records?

Threshold of Adaptability

- BLUE is the RANGE that patient remains asymptomatic within
- ORANGE is normal function
- RED is the area OUTSIDE the patients RANGE, and is where the patient will be symptomatic



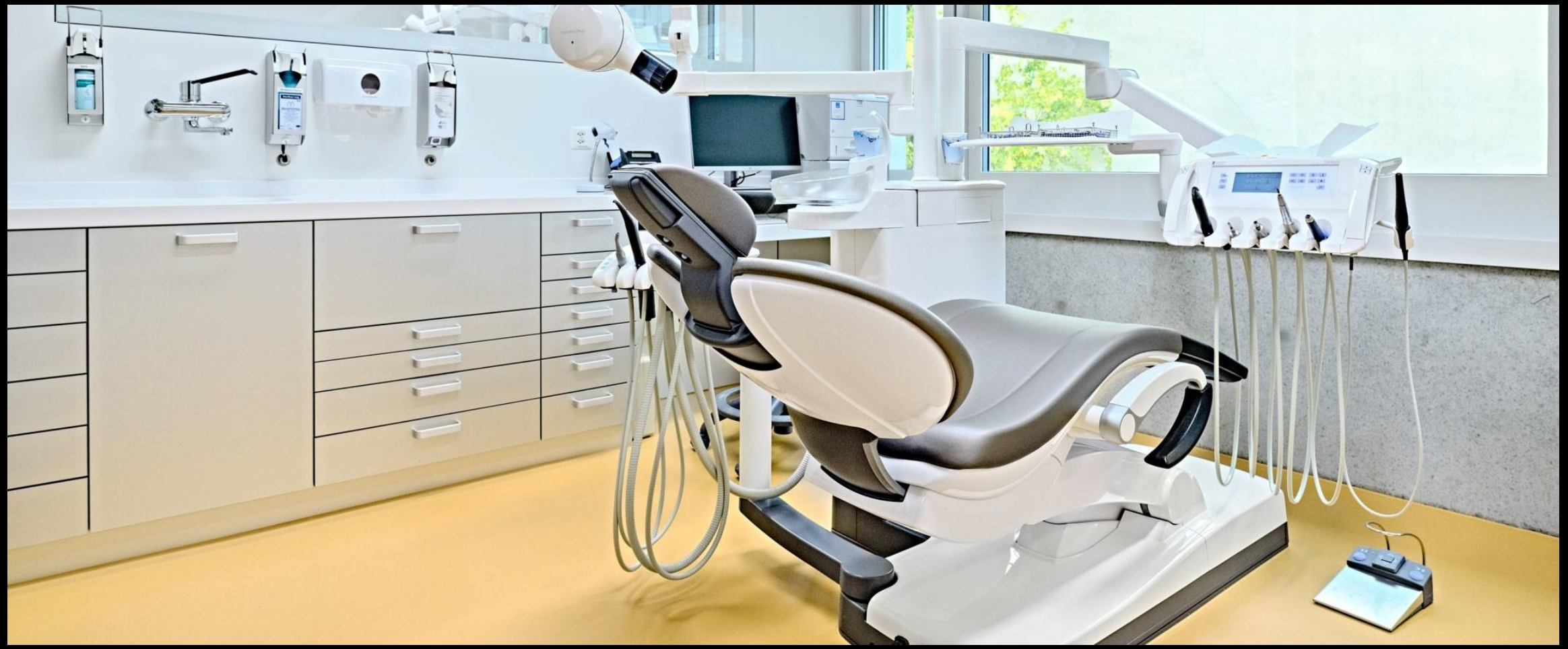
Pro Tip: the threshold varies between patients AND varies on the same patient over time

Takeway

Identify when a patient IS NOT within their adaptive threshold

Learn how to alter it

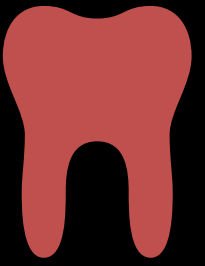
What does this look like in practice?



Evaluate on each patient

Joints

Muscles



TEETH

Diagnosis

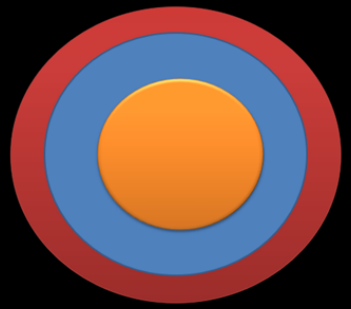
1. Physiologic
    - AM I going to alter it?
    - WHERE am I going to alter it?
    - Anterior Teeth are SAFER to alter

2. Pathologic
    - HOW am I going to alter it?

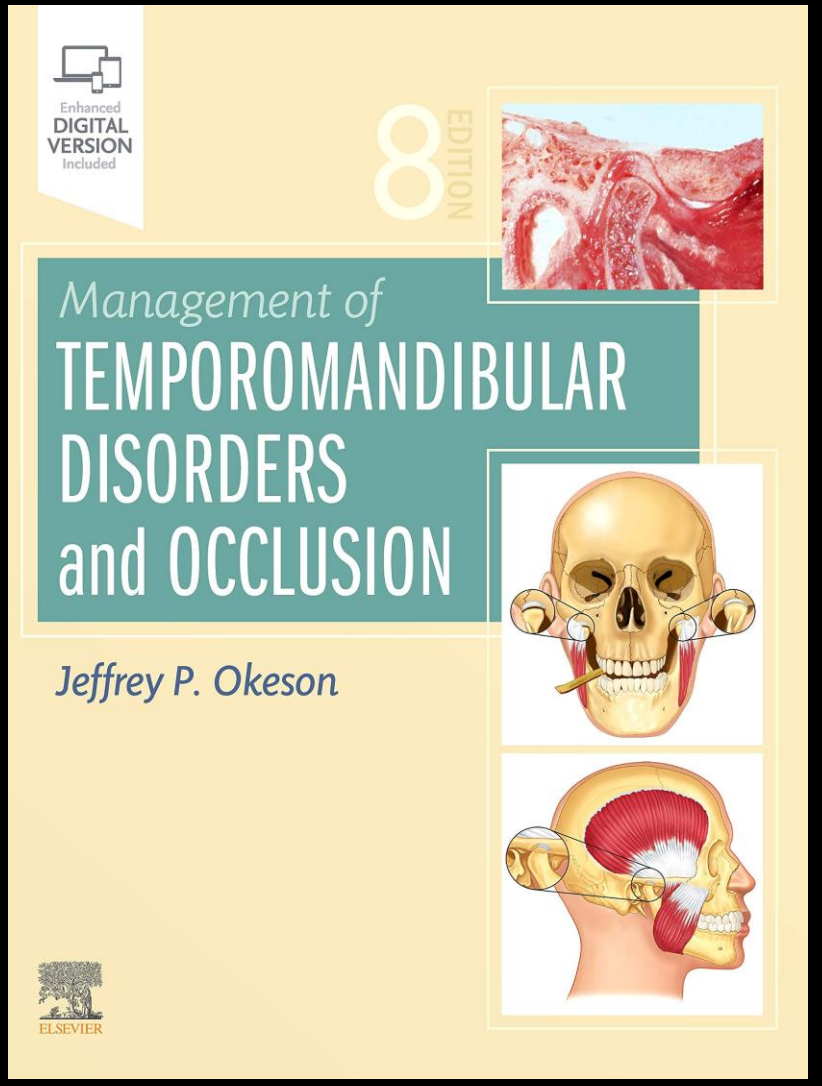
- Much of what we do with appliance therapy, is to allow the patient to find or return to adaptive normal

Threshold of Adaptability

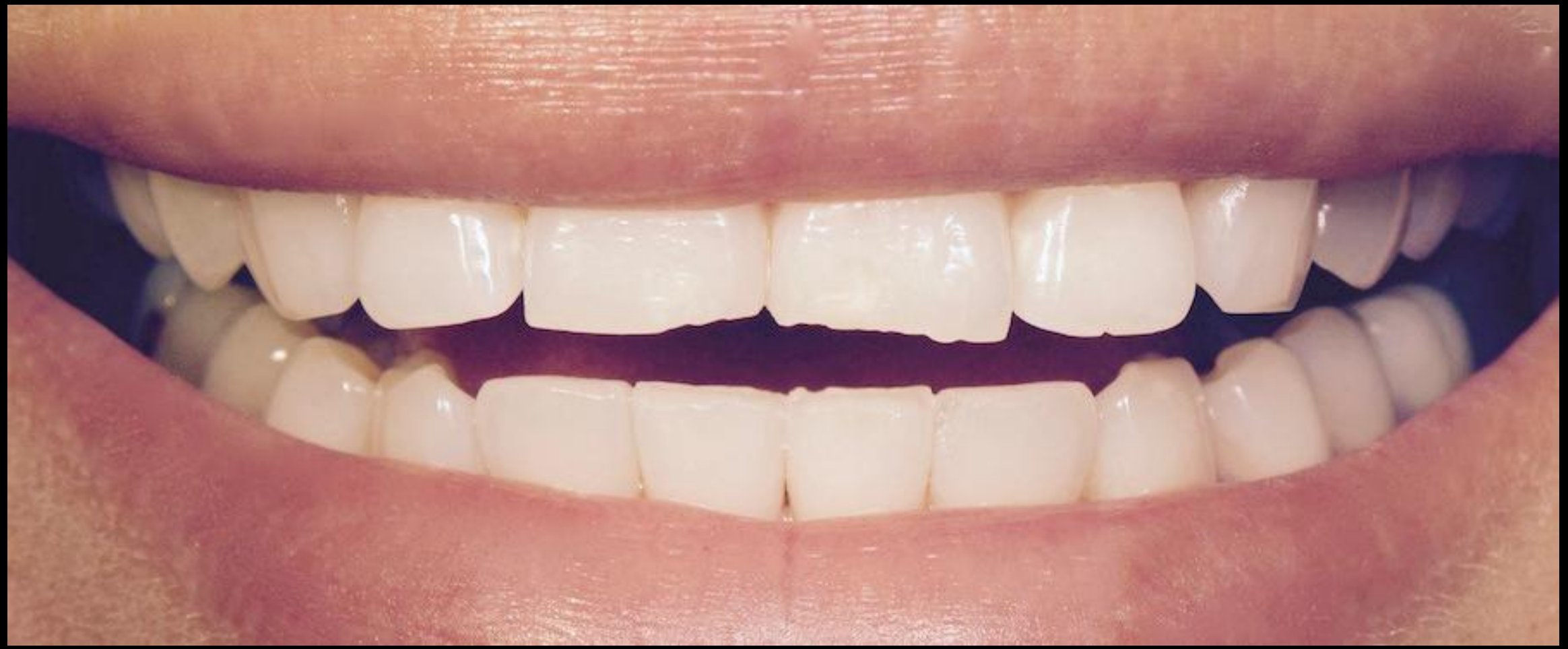
- BLUE is the RANGE that patient remains asymptomatic within
- ORANGE is normal function
- RED is the area OUTSIDE the patients RANGE, and is where the patient will be symptomatic



Pro Tip: the threshold varies between patients AND varies on the same patient over time

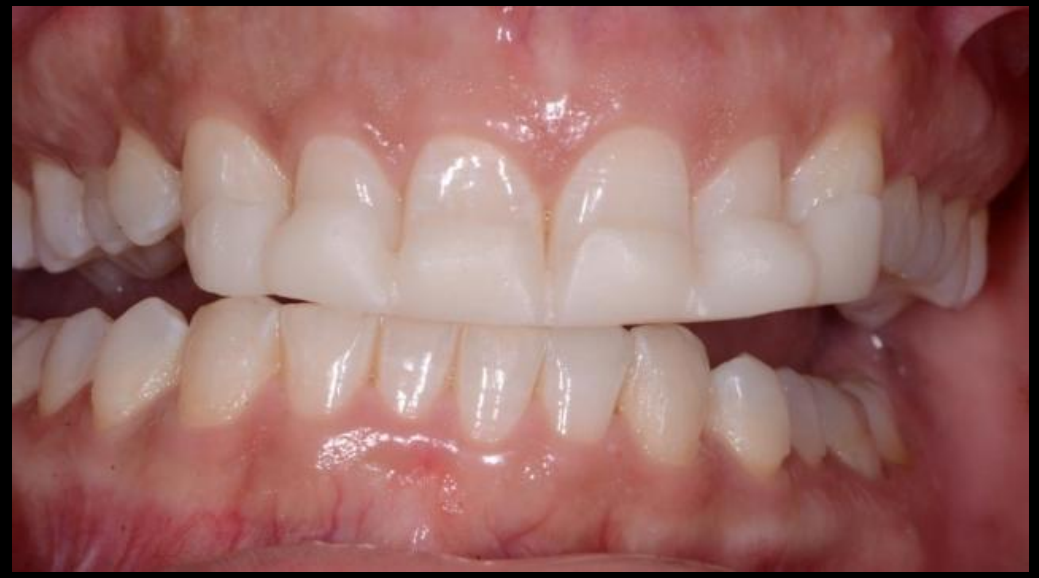


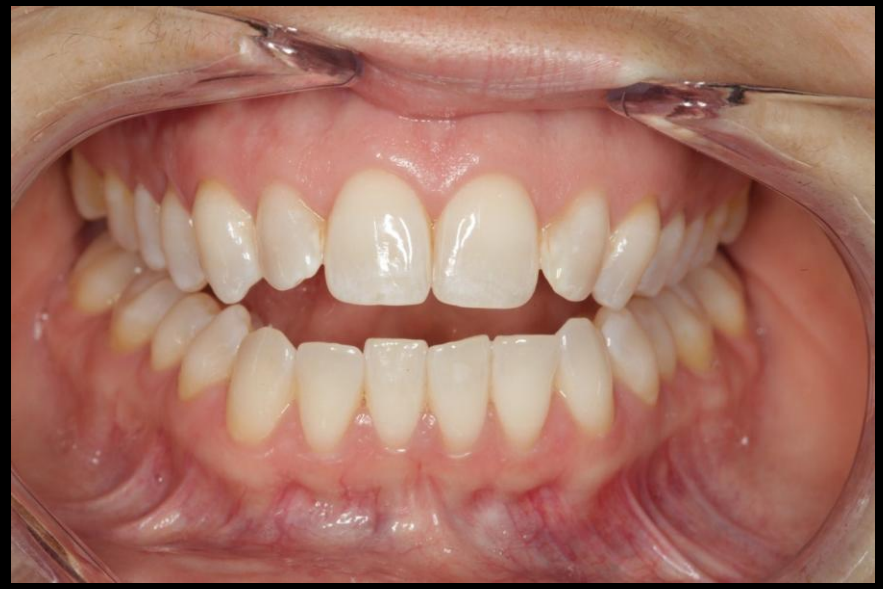
All appliances protect teeth from wear and fracture



Options

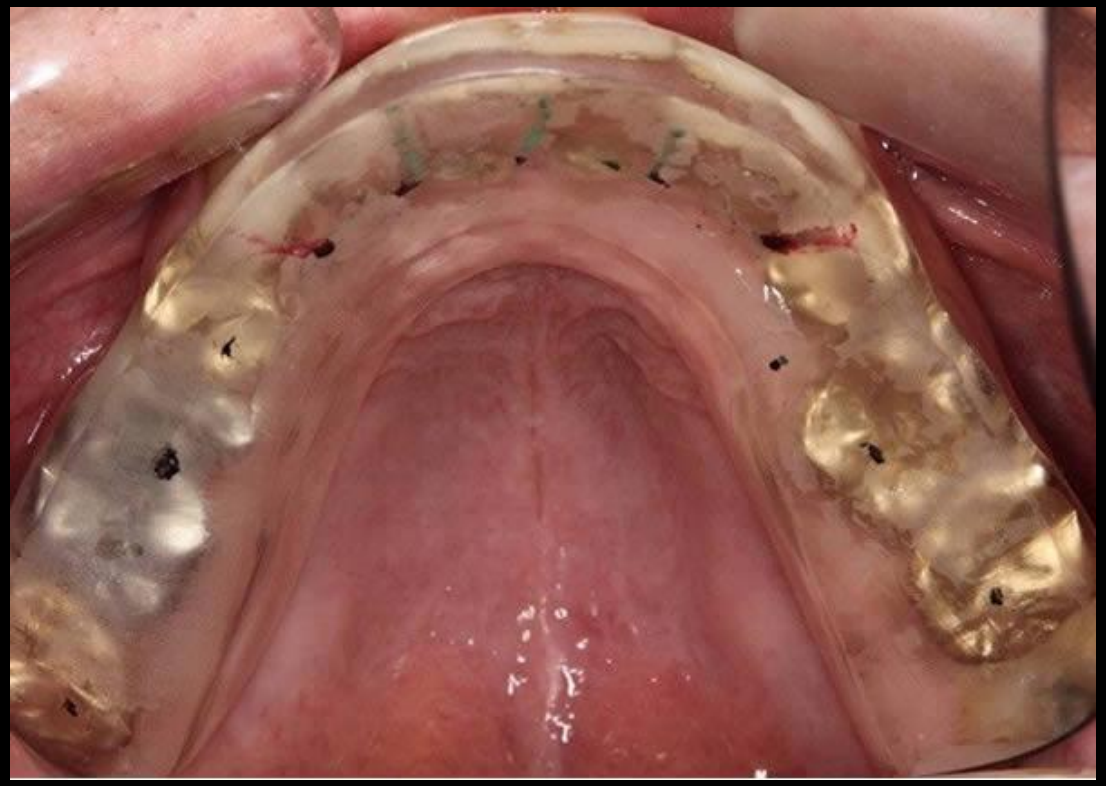
- Anterior bite plane
  - Best for decreasing muscles activity
  - Offers little joint support if muscle activity does not decrease





Options

- Full coverage with Anterior Guidance
  - Reduces joint loading during clenching
  - Reduces muscle activity during excursions
  - Aka “The Michigan Splint”



Options

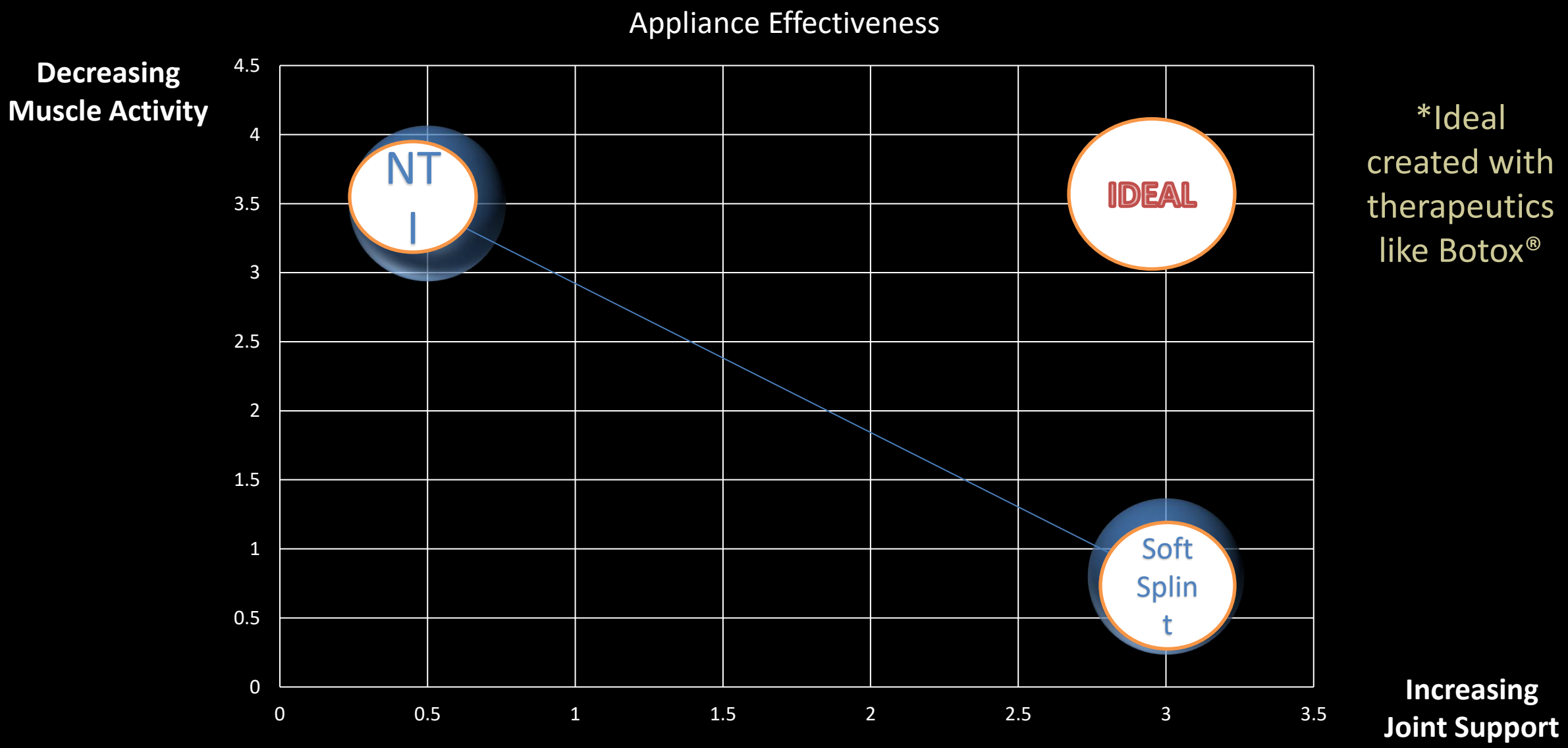
- Full Coverage Flat Plane
  - Supports joints in clenching and excursions
  - DOES NOT REDUCE MUSCLE ACTIVITY

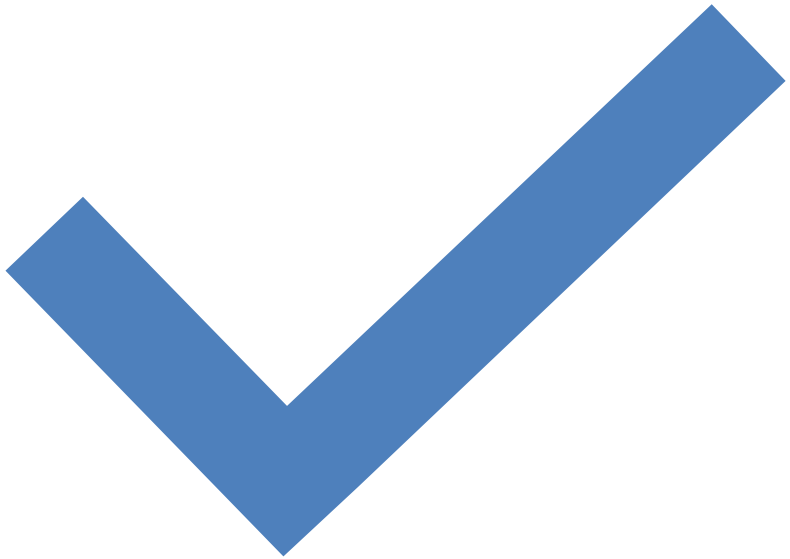
Options

- Posterior Coverage ONLY
  - Full support of the joints with no intention to decrease muscle activity
  - Often used when pain is associated with joint movements during translation
  - Known as the “Gelb appliance”

Options

- Full Soft Splint
  - MAX Joint protection
  - No decrease in muscle activity


Appliance Effectiveness
Decreasing Muscle Activity
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
0.5
1
1.5
2
2.5
3
3.5
NTI
IDEAL
Soft Splint
*Ideal created with therapeutics like Botox®
Increasing Joint Support



Review of Today

- Understand the market we exist in today
- Use the tools to get the job done faster and better
- Create an overwhelming positive experience in your business
- Empower your team
- Keep People FIRST

“There is no difference between the feeling of helping a patient or standing to the applause of a Broadway audience—it is all about JOY, and that feeling is the [exact] same in both venues. People only think that there is a difference, but they are wrong. Choose to be happy with what you find yourself doing at the present moment. Find your joy.” ~Rory O’Malley

Dr. Tim Bizga

***Like* Dr. Tim Bizga on Facebook**

2thLectures.com

Email: **2thLectures@gmail.com**