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**Oregon Periodontics<sup>PC</sup>**

SPECIALISTS IN PERIODONTICS & DENTAL IMPLANTS

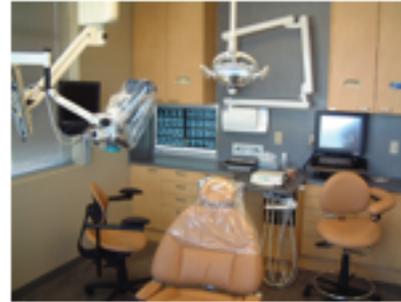
*Robert S. Henshaw DDS*

503-531-3550





## Barnes Road Professional Campus



## IDEAL GINGIVAL ARCHITECTURE

Periodontal & Implant  
Microsurgery

Gum Gardner's Study Club 2016











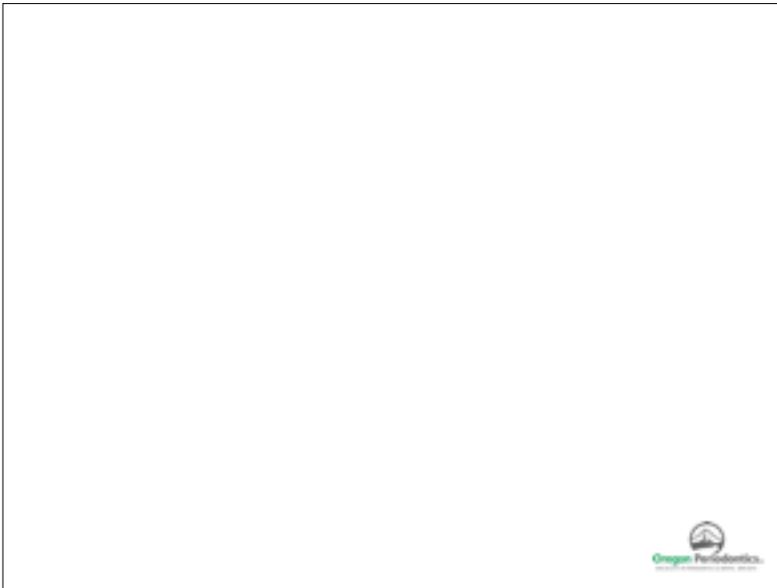












Microscopes in  
Dentistry

*... it's not high tech but rather common sense*

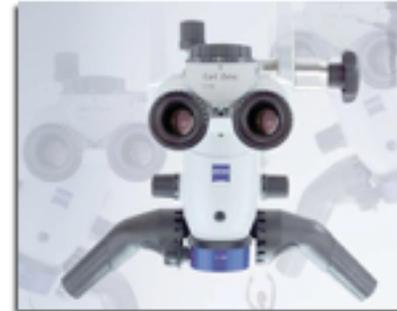


"As medicine and dentistry continue the pursuit of minimally invasive treatment, periodontal microsurgery and its principles will emerge as the methodology to meet both professional and public demand. The microscope provides a tremendous platform from which the microsurgical clinician can gather and observe detailed and precise amounts of information for the diagnosis and treatment of patients with skill and accuracy. Microsurgery leads to improved esthetics, rapid healing, reduced morbidity, and enhanced patient acceptance."  
-Carranza's Clinical Periodontology (Authors: Michael G. Newman, Henry Taki, Perry R. Klokkevoold, Fermin A. Carranza; Contributors: Shastley D., Neubus R.)





## The Operating Microscope



## Illumination



## 15 Blade vs. Ophthalmic Scalpel



FS-2 vs. TG 140-8



Minimally invasive approach to surgery



Microsurgical wound healing 1 week



Rapid Revascularization



Rapid Revascularization



Rapid Revascularization



Accelerated Healing



## Accelerated Healing



## Accelerated Healing



## Accelerated Healing



## Accelerated Healing





## Etiology of Gingival Recession

... it is essential to identify the cause of the defect so we can control or eliminate it



## Plaque/Calculus/Inflammation



## Tooth Brush Abrasion



Tooth Position



Occlusal Trauma/Abfraction



Prominent Frenum



Chewing Tobacco



# Common Sites for Recession Defects

A Reoccurring Theme in Daily Dentistry



## Lower Bicuspids



## Lower Incisors



## Cuspids prominence in the arch...



## MB roots of mandibular first molars



## MB root maxillary first molars



## To Treat or Not to Treat

- Is there BOP?
- How is home care?
- Is the recession getting worse?
- Is this a strategic tooth? (ie: bridge abut.)
- Is there tooth sensitivity to cleaning/temp?



## The Miller Classification of Recession Defects



## Miller Class I



## Miller Class I



## Miller Class I



## Miller Class I



## Miller Class I



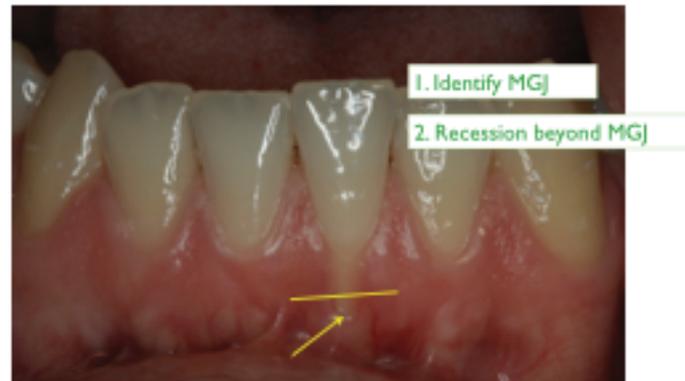
## Miller Class II



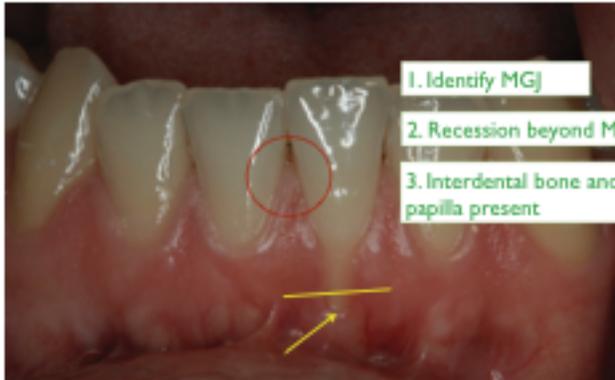
## Miller Class II



## Miller Class II



## Miller Class II



1. Identify MGJ
2. Recession beyond MGJ
3. Interdental bone and papilla present



## Miller Class II



4. 100% Root coverage is possible



## Miller Class III



## Miller Class III



1. Interdental bone and papilla compromised



## Miller Class III



1. Interdental bone and papilla compromised

2. Amount of recession relative to MGJ is irrelevant



## Miller Class III



3. 100% Root coverage NOT predictable



## Miller Class IV



## Miller Class IV



1. Interdental bone and soft tissue even with marginal tissue



## Miller Class IV



1. Interdental bone and soft tissue even with marginal tissue
2. Likely tooth extraction



## Two Treatment Options

Free Gingival Graft vs. Connective Tissue Graft



## Connective Tissue Graft

vs.

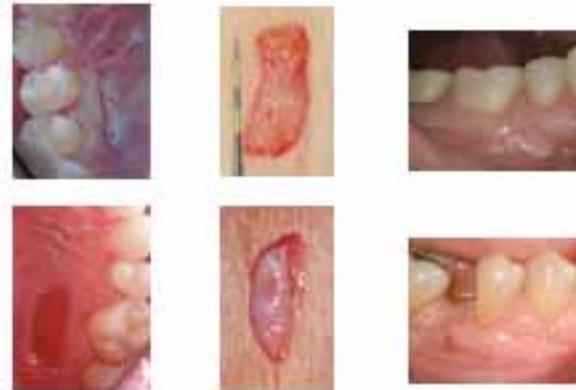
## Free Gingival Graft

### Connective Tissue Graft

- Clinical attachment to root
- Root coverage
- Aesthetic blend of tissues
- Reduced palatal p/o pain – primary closure

### Free Gingival Graft

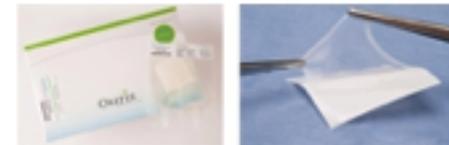
- Clinical attachment mainly to bone
- Minimal root coverage
- Poor aesthetic blend of tissues
- Increased palatal p/o pain - secondary closure



The future of oral plastic surgery.....



## Cryopreserved Placental Membranes



A layer of stem cells rich in growth factors and fibroblasts.



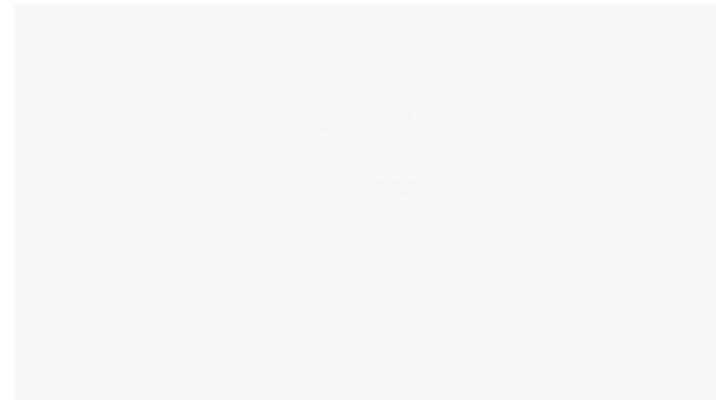
## Implant Soft Tissue Management

*A microsurgical approach*

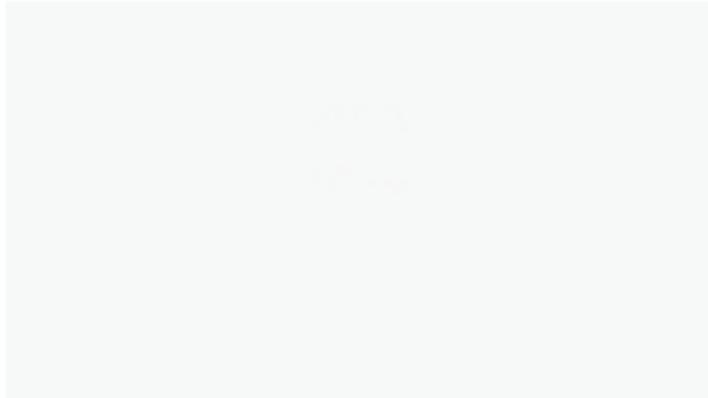
Robert S. Henshaw DDS



## High Resolution 3D Imaging



## High Resolution 3D Imaging



A systematic review of post extraction alveolar hard and soft tissue dimensional changes in humans

Tan WL, Wong TL, Wong MC, Lang NP  
Clin. Oral Implants Res. 2012 Feb;23 Suppl 5:1-21

**Objective:** To review all English literature to assess the magnitude of dimensional changes of both hard and soft tissues up to 12 months following tooth extractions in humans.

**Methods/Results:** An electronic Medline and Central search that provided 20 studies that met the inclusion criteria.



A systematic review of post extraction alveolar hard and soft tissue dimensional changes in humans

Tan WL, Wong TL, Wong MC, Lang NP  
Clin. Oral Implants Res. 2012 Feb;23 Suppl 5:1-21

**Conclusions:** Human re-entry studies showed horizontal bone loss of 29-63% and vertical bone loss of 11-22% after 6 months following tooth extraction. These studies demonstrated rapid reductions in the first 3-6 months that was followed by gradual reductions in dimensions thereafter.



## Implant Soft Tissue Management Where have we come in the last 12 years?



# Controlling Surrounding Implant Anatomy

- Tissue Preservation
- Prosthetics
- Surgical Design
- Hard Tissue and Soft Tissue Reconstruction
- Tissue Repair
- Biotype Conversion



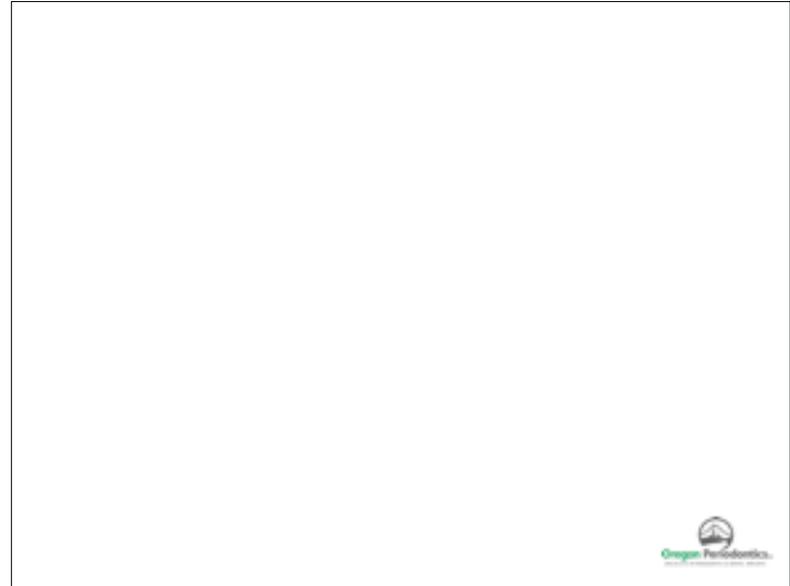
# Cheryl

Soft Tissue Management - Preservation



# Anterior Immediate Implant and Provisional









# Krista

Soft Tissue Management Through Prosthetics



# Krista

- Perio Dx: #8 Possible Biologic Width Violation/Insufficient Tooth Structure/Recurrent Decay
- Option #1: Crown Lengthening, Endo Retx, Buildup, Crown
- Option #2: Orthodontic Extrusion, Endo Retx, Buildup, Crown
- Option #3: Immediate Implant Placement with Provisional









# Patricia

Soft Tissue Management and Biotype Conversion





# Stephanie

Implant Rescue Through Soft Tissue Management







Hope







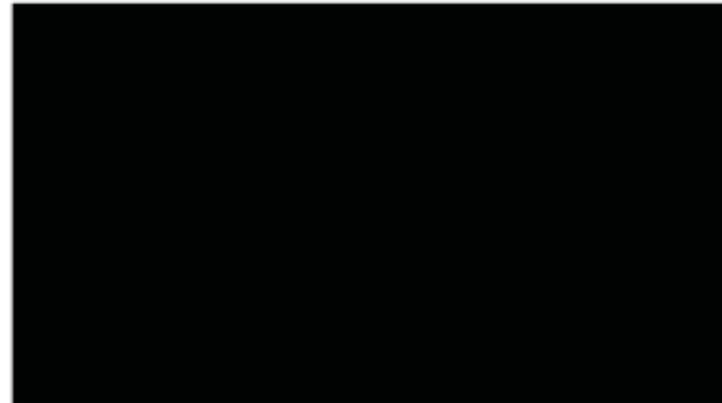
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Our future is now....Computer  
Guided Surgery

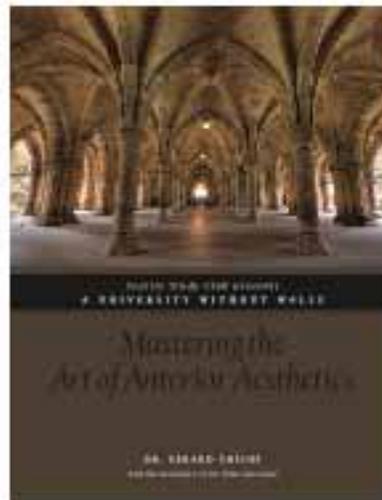


Our future is now....Computer  
Guided Surgery





**SEATTLE STUDY CLUB**  
*Cultivating Excellence in Comprehensive Dentistry*



# The PerioLase nd:YAG Laser



Laser Assisted New  
Attachment Procedure



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[www.oregonperio.com](http://www.oregonperio.com)

*Thank you!*



# Michael

Soft Tissue Management Through Design



## Misch/Albrektson's Ridge Classifications

Division A: Abundant

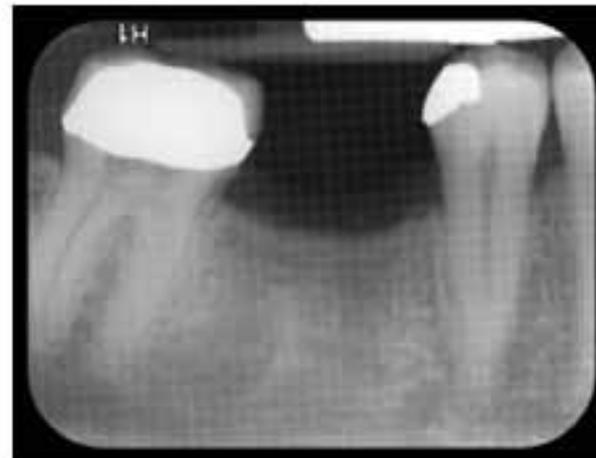
Division B: Barely Sufficient / less than 3 mm loss / Particulate

Division C-w/C-h: Compromised / greater than 3 mm loss / Block

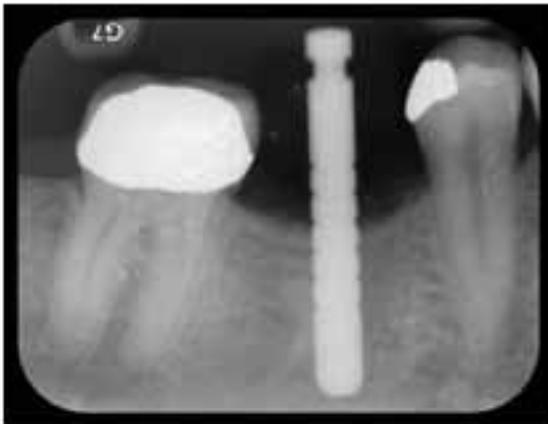
Division D: Deficient / Alveolar process absent / basal bone / Iliac Crest



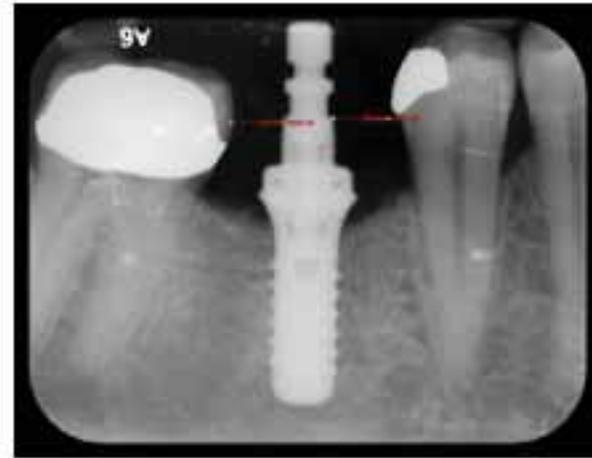
## Division B-w











Anne

Soft Tissue Management Through  
Reconstruction



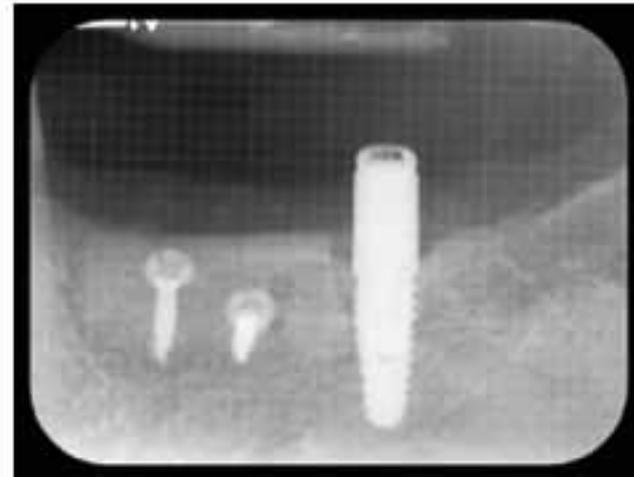
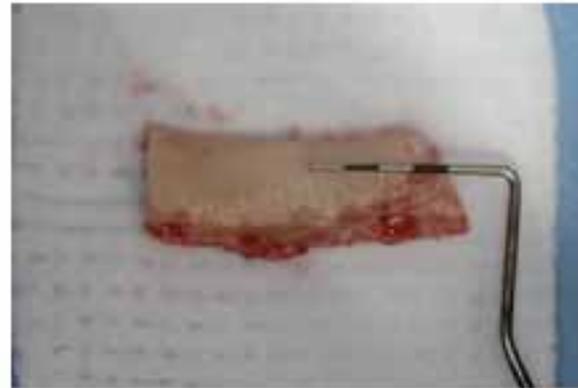
Division C-w

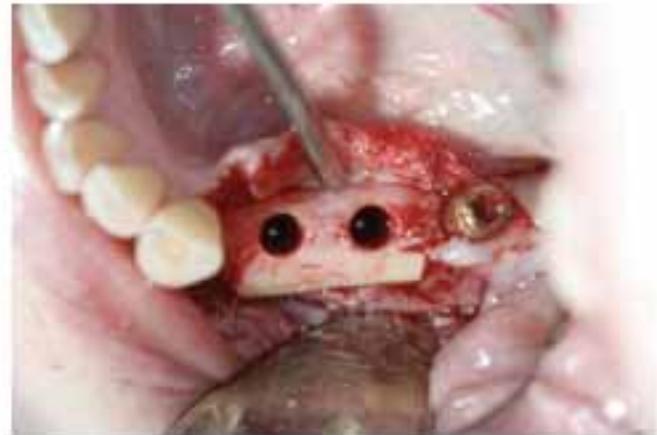


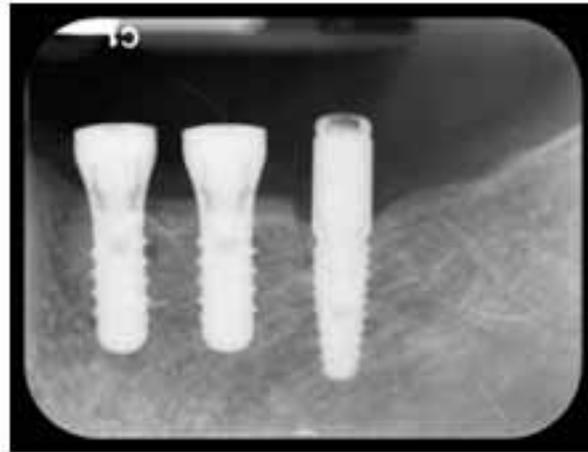
## Development of Soft Tissue



## Hard tissue reconstruction









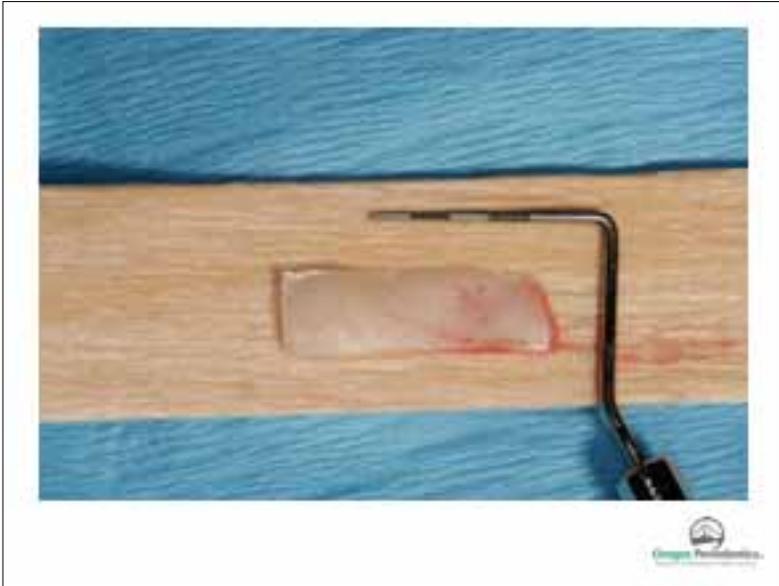
# Beatrice

Managing Soft Tissue Around "Surgical Necessities"



## Class III Furcation Involvement







Oregon Periodontics PC

Patient Care    Education    Research



## Rationale

In many surgical specialties, such as neurosurgery, urology, plastic and eye surgery treatment outcomes were significantly improved by applying minimally invasive techniques.

Komatsu S.: 1968 Plastic Reconstructive Surgery



## RESOLUTION



Morita Unit



Competitive Unit

