

HANDS-ON WORKSHOP

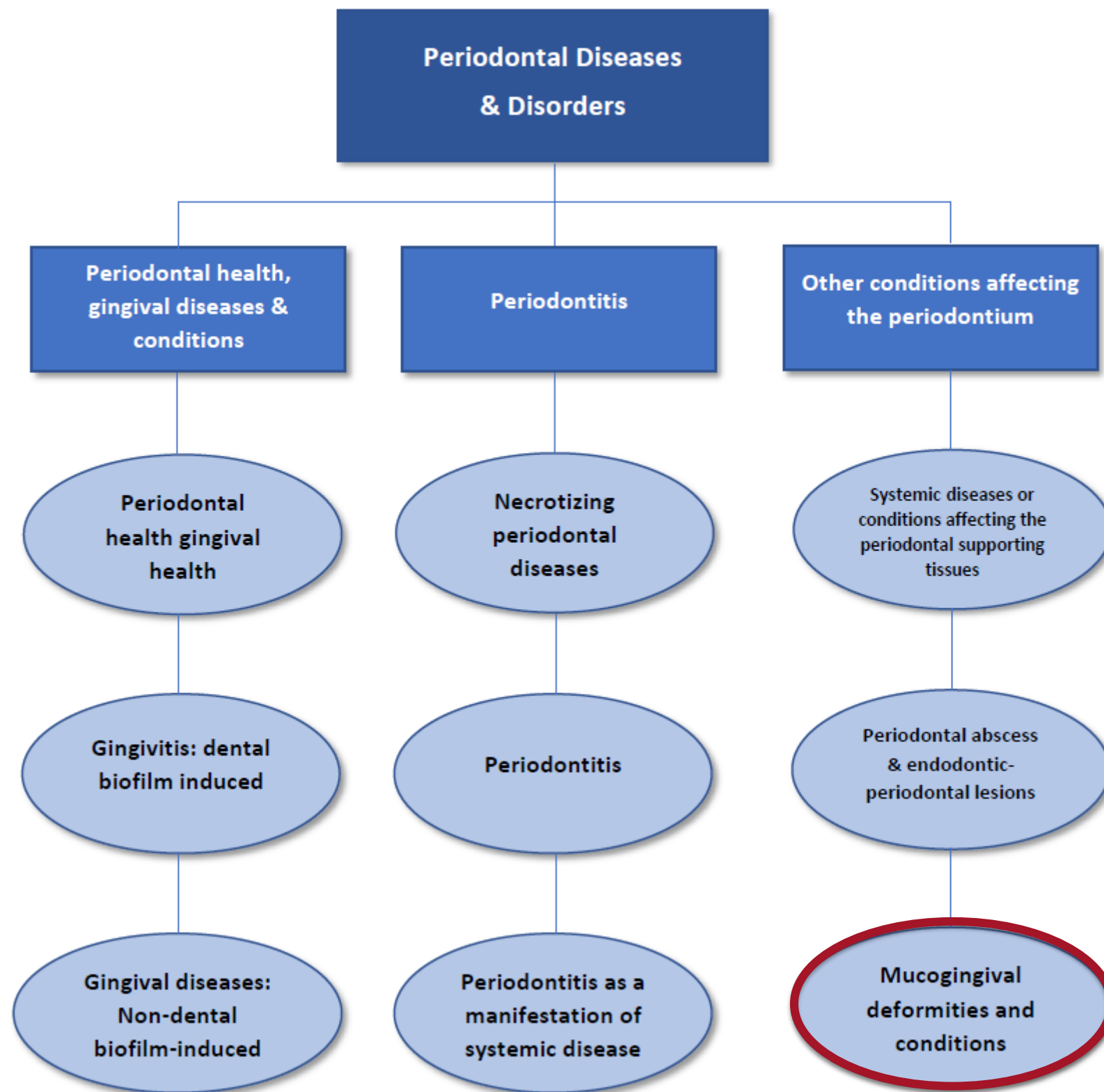
2018 CLASSIFICATION OF PERIODONTAL CONDITIONS

UDA 2025 Convention
January 24, 2025

David K. Okano, DDS, MS
Diplomate, American Board of Periodontology
Section Head of Periodontics
University of Utah School of Dentistry

MUCOGINGIVAL DEFORMITIES AND CONDITIONS

eg. Gingival Recessions



MUCOGINGIVAL DEFORMITIES AND CONDITIONS

Examination of mucogingival conditions

-Roll Technique



MUCOGINGIVAL DEFORMITIES AND CONDITIONS

Determining the amount of attached gingiva

- Measure width of keratinized gingiva
- Measure probing depth

Width of keratinized gingiva
– probing depth

Amount of attached gingiva

MUCOGINGIVAL DEFORMITIES AND CONDITIONS

Determining the amount of attached gingiva

- Measure width of keratinized gingiva 3 mm (KG)
- Measure probing depth -2 mm (pd)
1 mm (AG)



MUCOGINGIVAL DEFORMITIES AND CONDITIONS

Mucogingival diagnoses

- Conditions with no recession:
 - Adequate attached gingiva (A)
 - Inadequate attached gingiva (B)
- Conditions with recession:
 - Gingival recession with adequate attached gingiva (C)
 - Gingival recession with inadequate attached gingiva (D)



CLASSIFICATION OF GINGIVAL RECESSIONS

Key Point!!!

The amount of remaining interproximal tissue determines the potential for root coverage

- Miller Classification uses the radiographic evaluation of interproximal bone height
- Cairo Classification uses the clinical evaluation of the interproximal clinical attachment level

CLASSIFICATIONS OF GINGIVAL RECESSIONS

Cairo Recession Type 1 (RT1)

- Similar to Miller Type I and II

Cairo Recession Type 2 (RT2)

- Similar to Miller Type III

Cairo Recession Type 3 (RT3)

- Similar to Miller Type IV

- Recession Type 1 (RT1): Gingival recession with no loss of interproximal attachment. Interproximal CEJ is clinically not detectable at both mesial and distal aspects of the tooth.
- Recession Type 2 (RT2): Gingival recession associated with loss of interproximal attachment. The amount of interproximal attachment loss (measured from the interproximal CEJ to the depth of the interproximal sulcus/pocket) is less than or equal to the buccal attachment loss (measured from the buccal CEJ to the apical end of the buccal sulcus/pocket)
- Recession Type 3 (RT3): Gingival recession associated with loss of interproximal attachment. The amount of interproximal attachment loss (measured from the interproximal CEJ to the apical end of the sulcus/pocket) is greater than the buccal attachment loss (measured from the buccal CEJ to the apical end of the buccal sulcus/pocket)

CAIRO CLASSIFICATION OF RECESSION

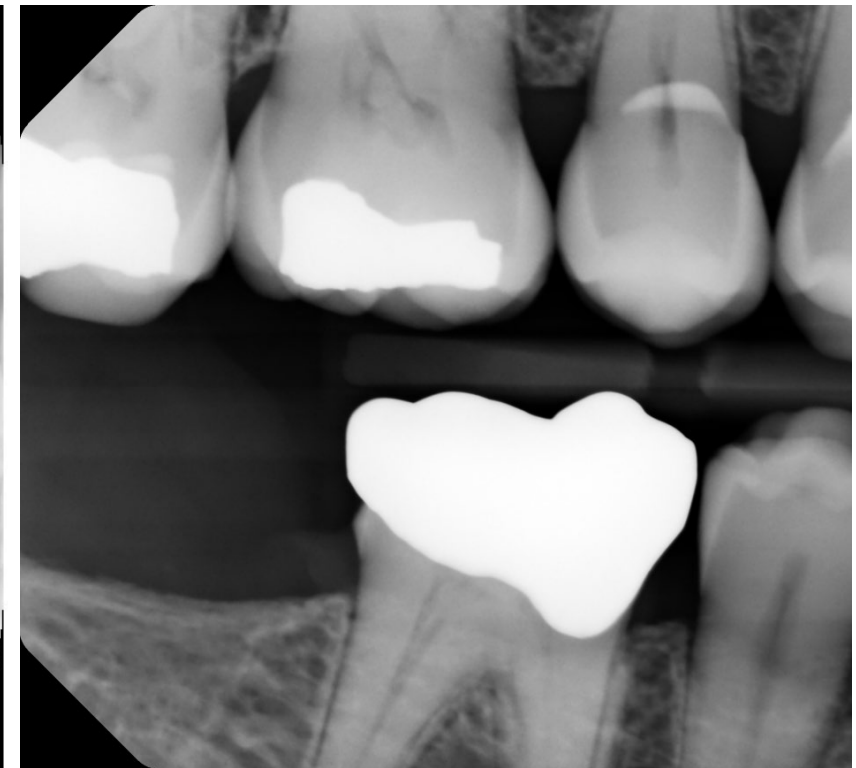
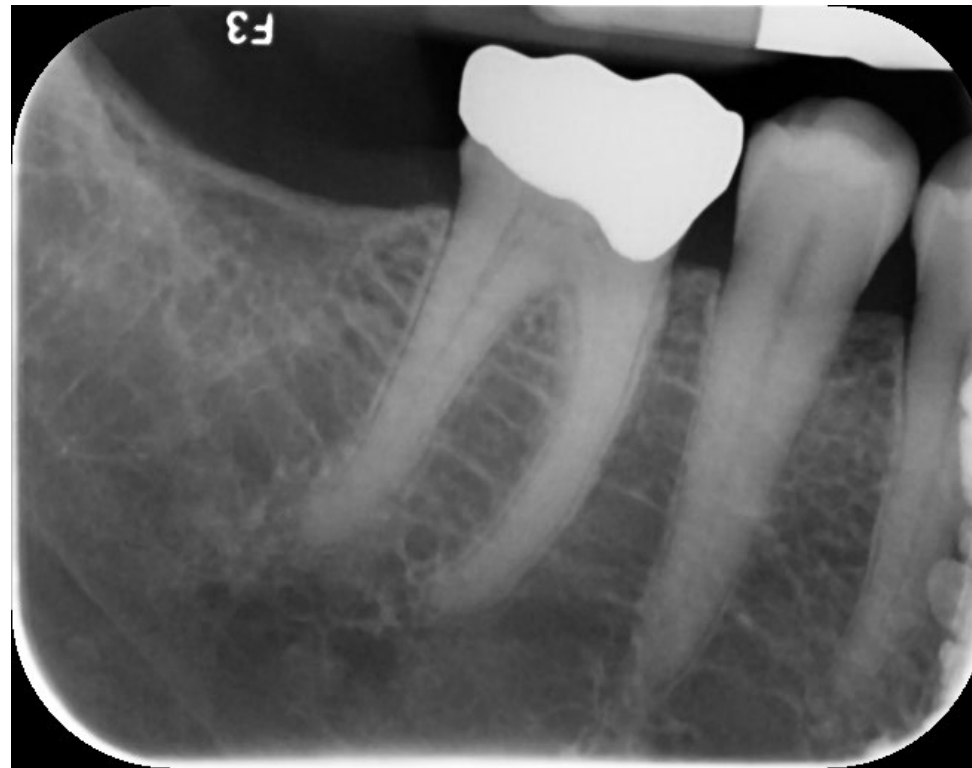
RT1 – Buccal/Lingual recession present and no interproximal attachment loss (mesial or distal).



Cairo (2011)

GINGIVAL RECESSION WITH MINIMAL ATTACHED GINGIVA

CAIRO RT 1 (MILLER I)

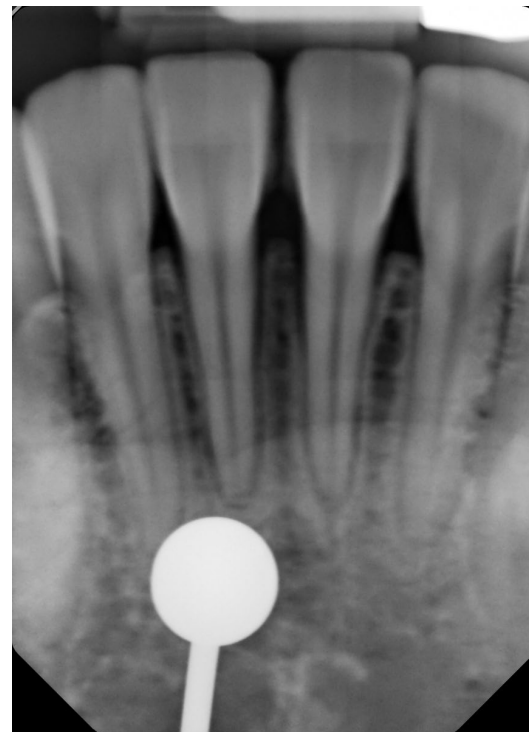
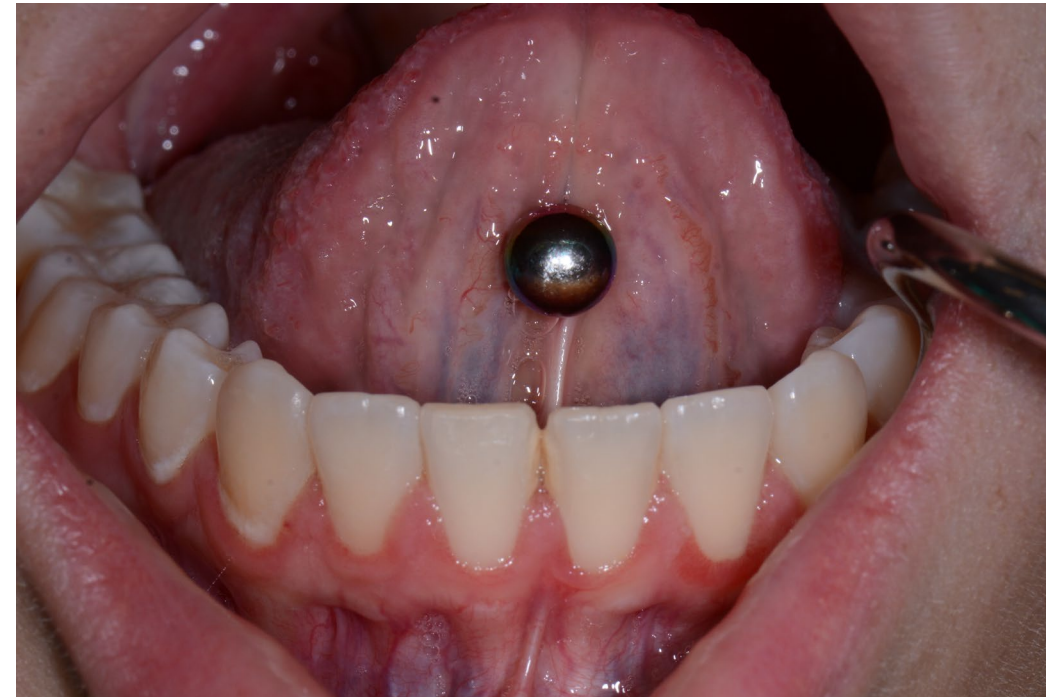


GINGIVAL RECESSION WITH ADEQUATE ATTACHED GINGIVA

CAIRO RT 1 (MILLER I)

Gingival Recession Related
to
Oral Piercing

ORAL PIERCING



CAIRO CLASSIFICATION OF RECESSION

RT 2 – Interproximal attachment loss is less than or equal to Buccal attachment loss



Cairo (2011)

CAIRO CLASSIFICATION OF RECESSION

RT3 – Interporximal attachment loss is greater than Buccal or Lingual attachment loss



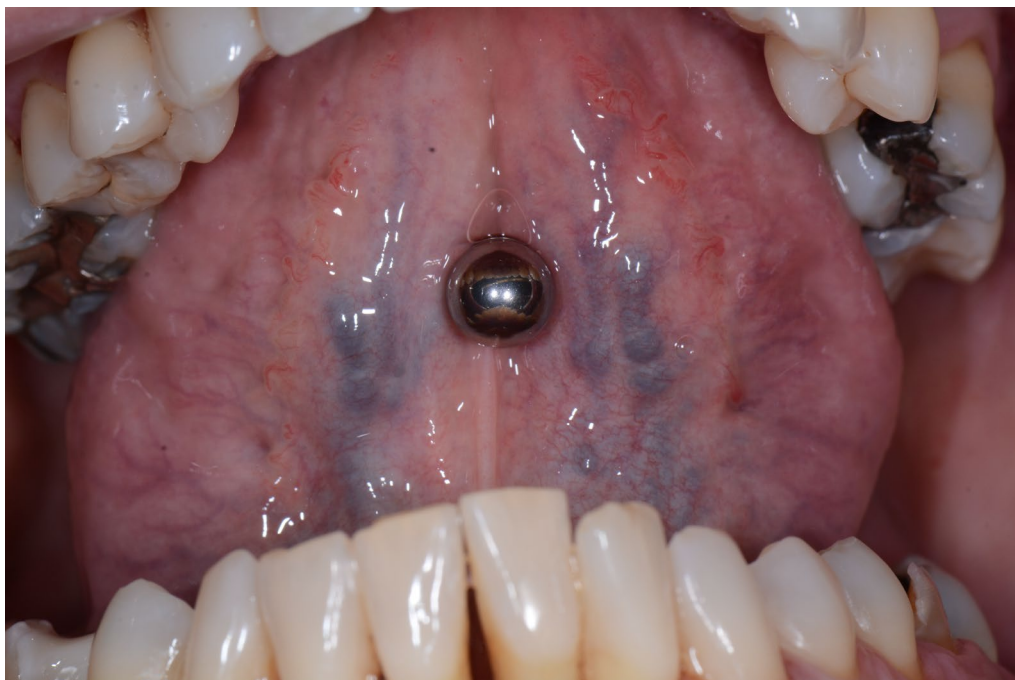
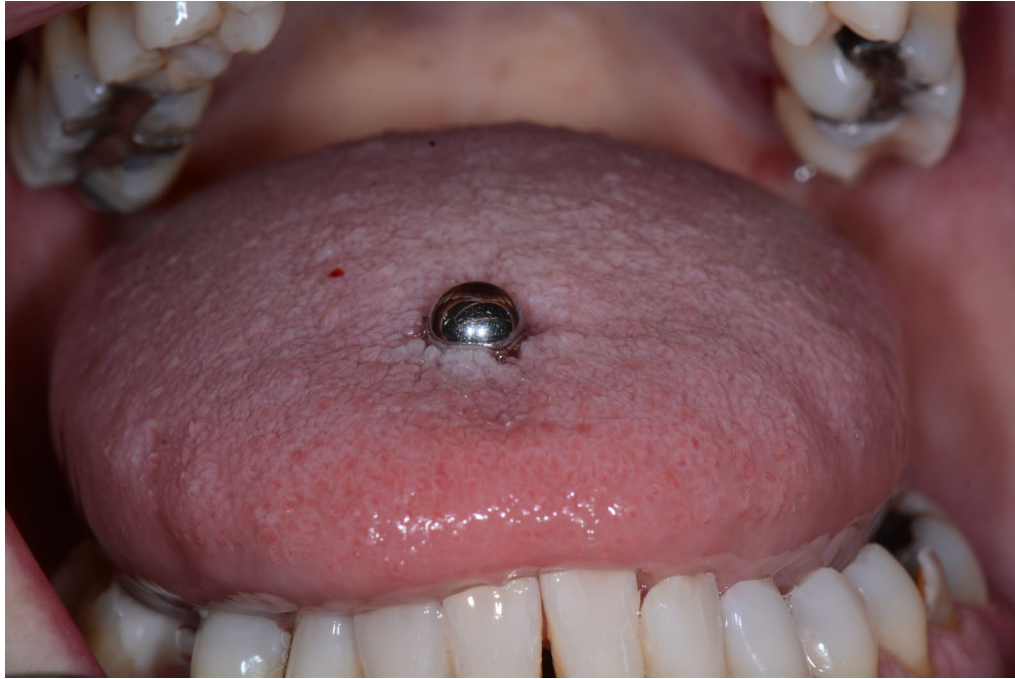
Cairo (2011)

GINGIVAL RECESSION WITH NO ATTACHED GINGIVA

CAIRO 3 (MILLER TYPE IV)

Gingival Recession Related to Oral Piercing

ORAL PIERCING

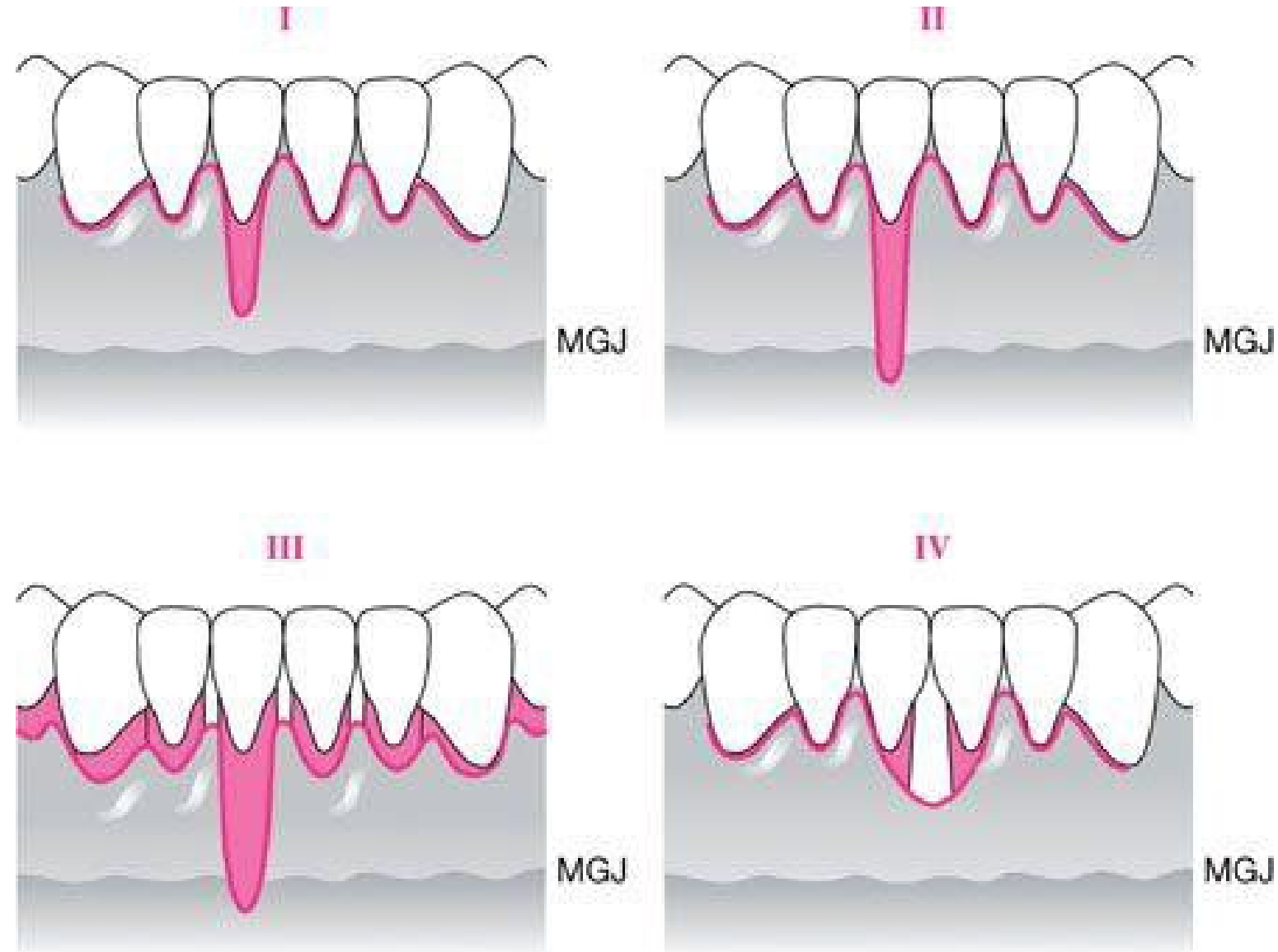


RT3





MILLER RECESSION CLASSIFICATION

- Miller Type I Recession
- Miller Type II Recession
- Miller Type III Recession
- Miller Type IV Recession

1985 MILLER CLASSIFICATION

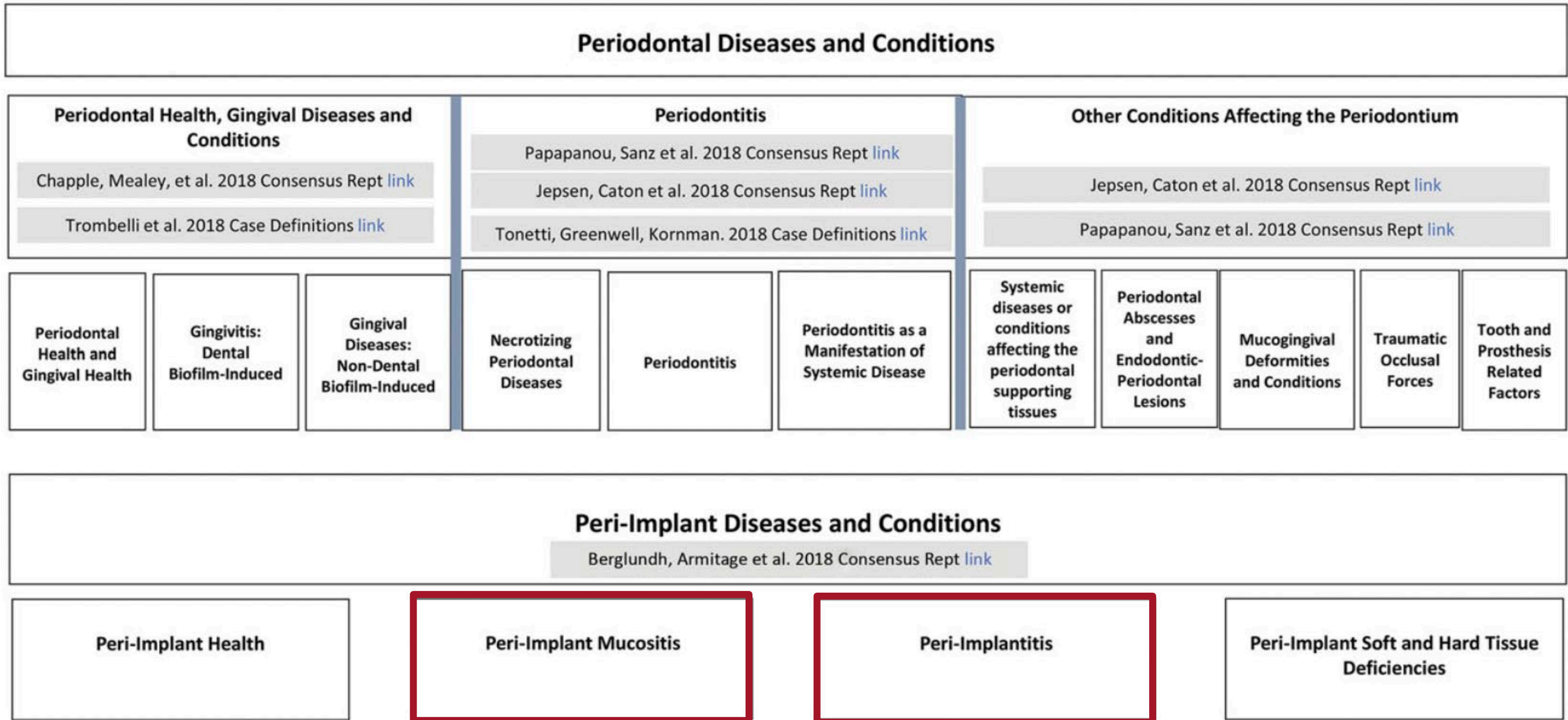


MILLER RECESSION CLASSIFICATION

Class I		The gingival recession does not extend to the mucogingival line, and there is no loss of interdental bone or soft tissue present. Complete root coverage can be achieved
Class II		The gingival recession extends to or beyond the mucogingival line, and there is no loss of interdental bone or soft tissue present. Complete root coverage can be achieved
Class III		The gingival recession extends to or beyond the mucogingival line with bone or soft tissue loss in the interdental area or malpositioning of teeth. Partial root coverage can be achieved
Class IV		The gingival recession extends to or beyond the mucogingival line with severe bone or soft tissue loss in the interdental area and/or severe tooth malpositioning. No root coverage can be expected

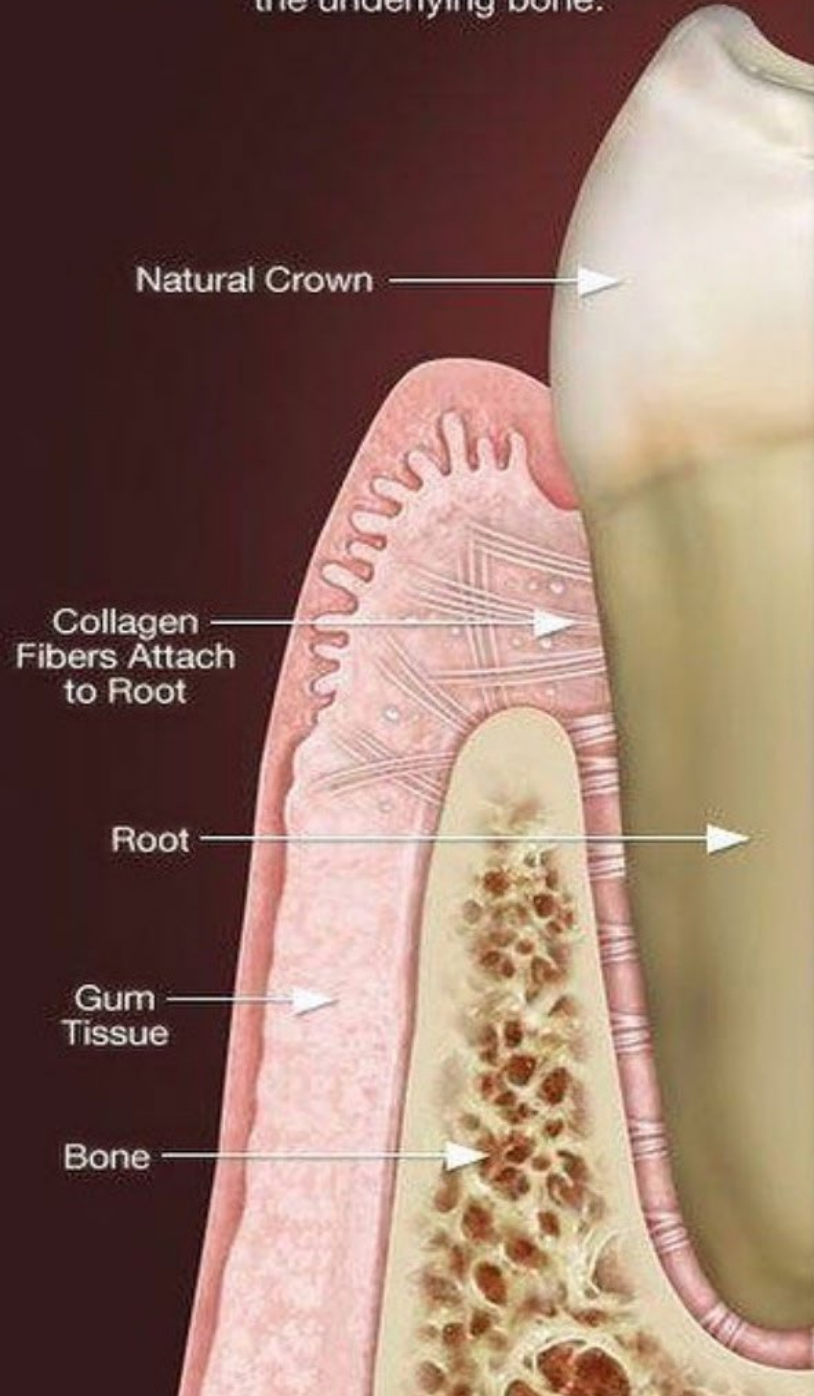
PERI-IMPLANT DISEASES

CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS 2017



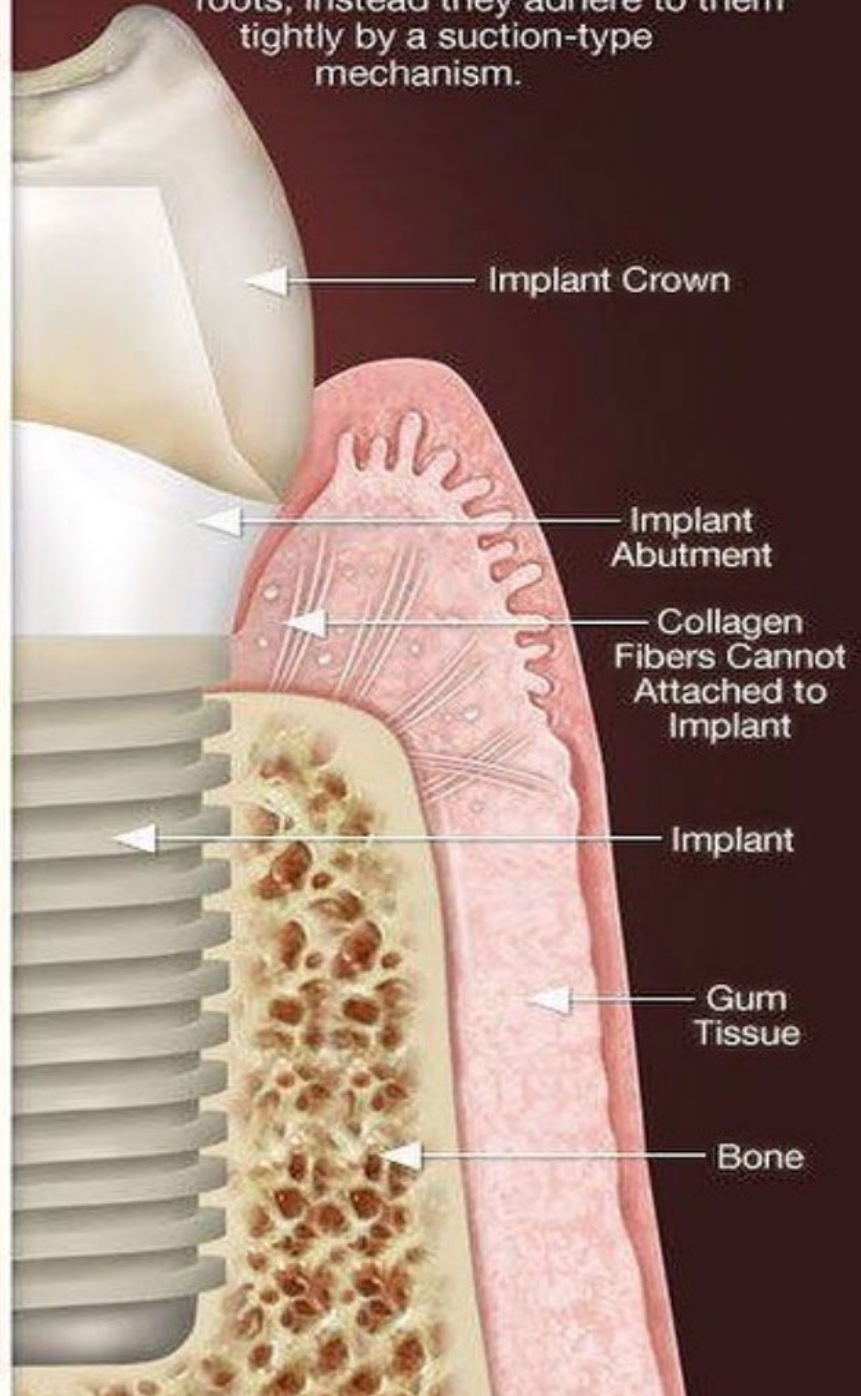
Natural Tooth

The periodontal tissues naturally attach the bone to the root surfaces of the teeth; they act as a shock absorber. The gum tissues attach into the root surfaces, helping to protect the underlying bone.

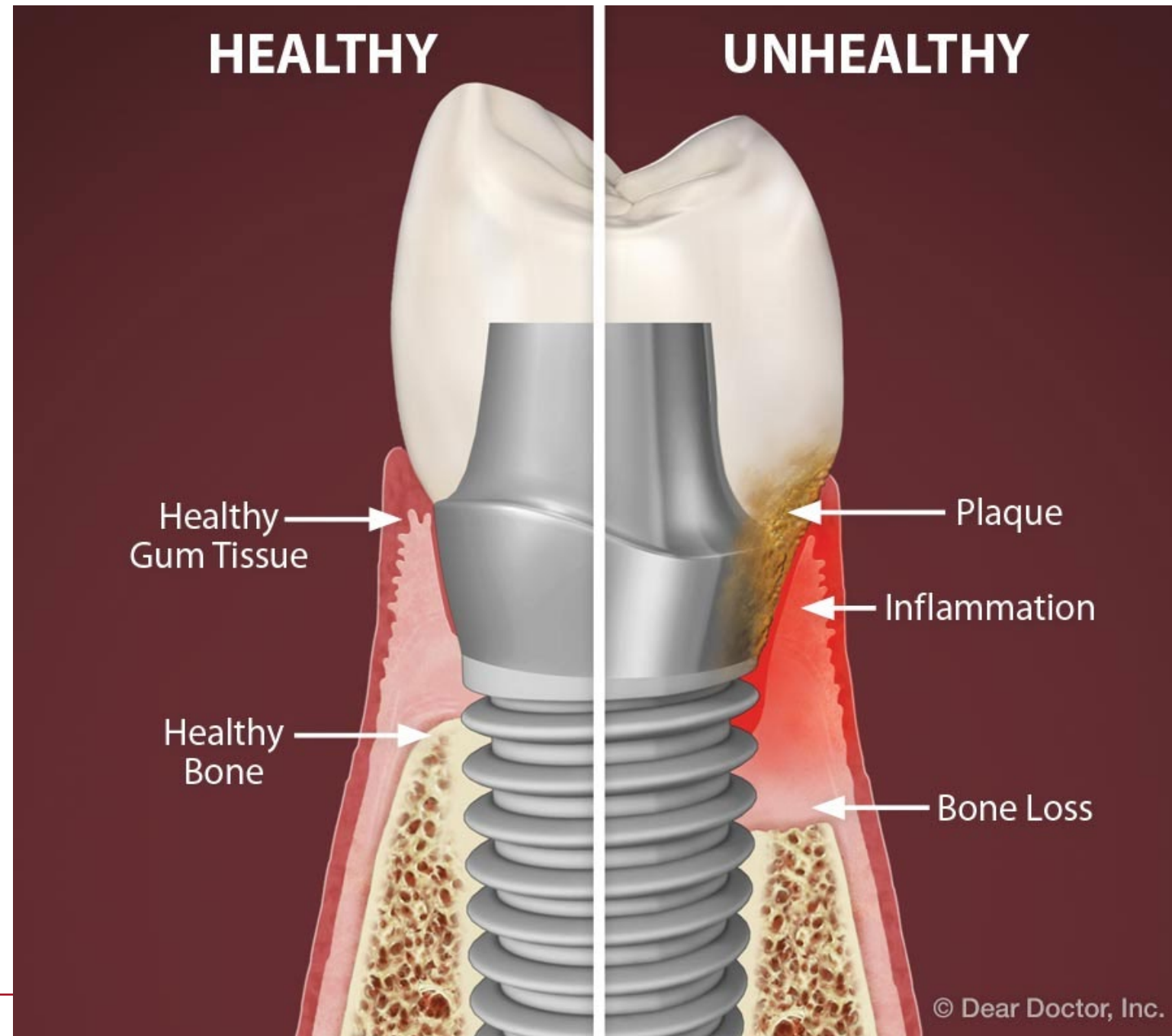


Dental Implant

Titanium, of which most dental implants are made, fuses to the jawbone giving implants great strength and stability. However, the gum tissues cannot attach to the implants in the same way as they do to tooth roots; instead they adhere to them tightly by a suction-type mechanism.



DENTAL IMPLANT HEALTH VS PERI-IMPLANTITIS



PERI-IMPLANT DISEASES

Peri-mucositis
(akin to gingivitis)



Peri-Implant Diseases

Peri-Mucositis



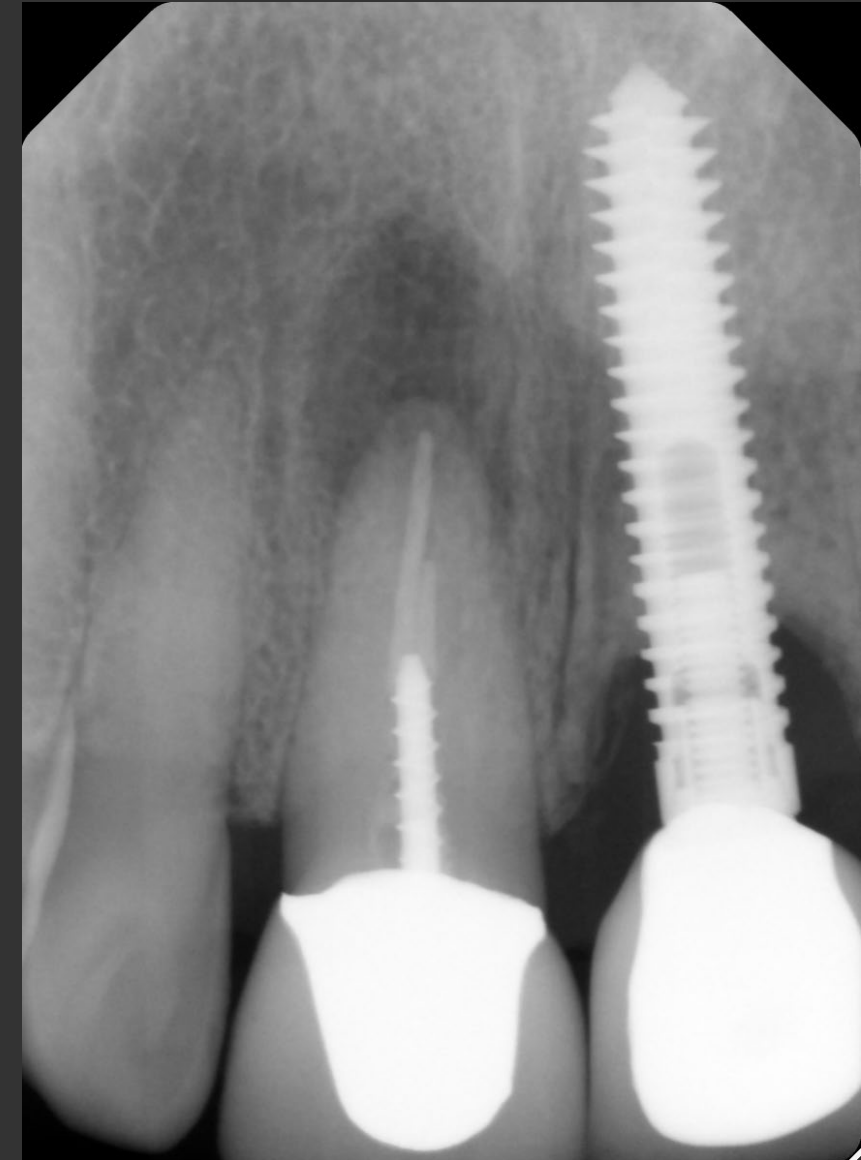
PERI-IMPLANT DISEASES AND CONDITIONS

Peri-Implantitis (akin to periodontitis)



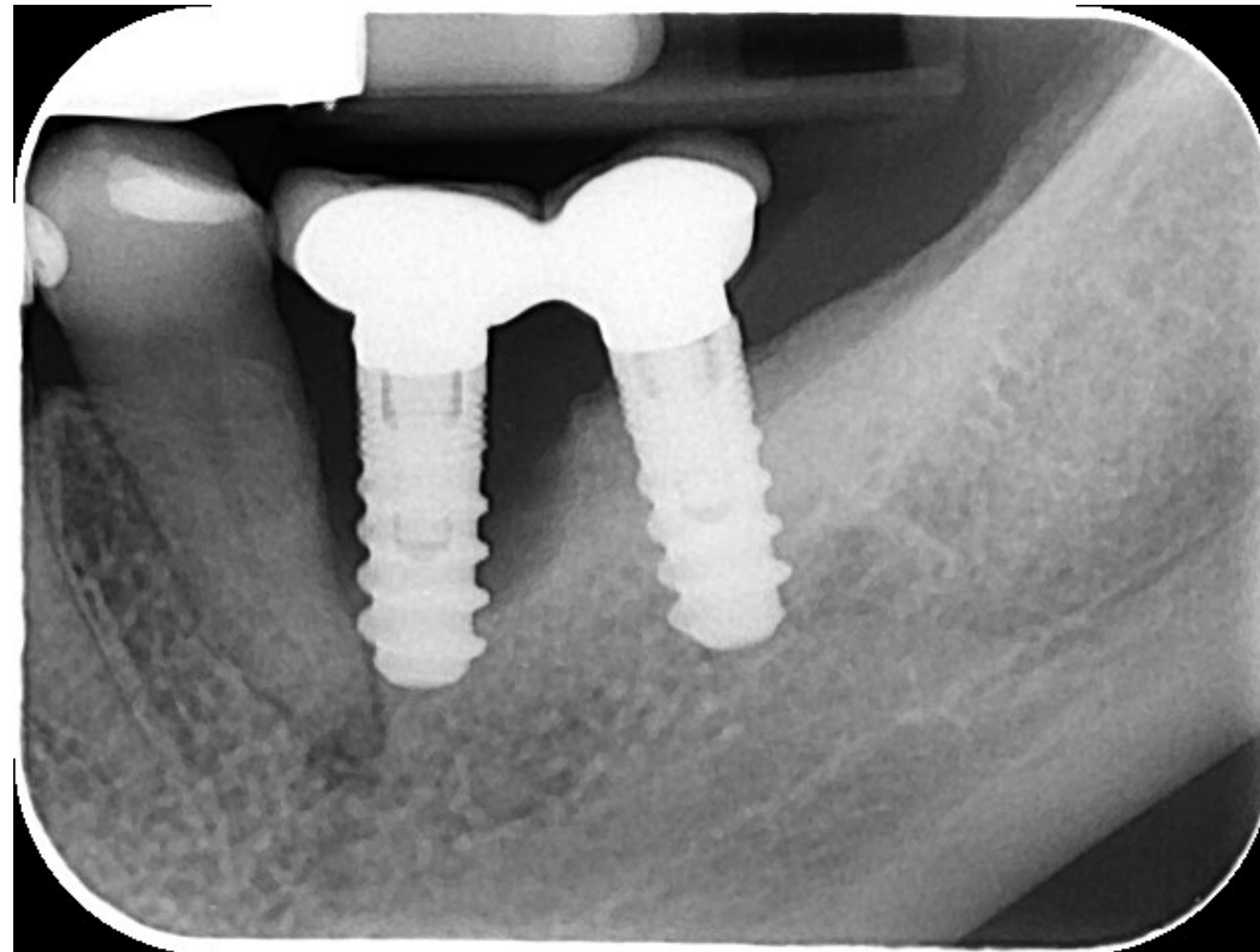
Peri-Implant Diseases

Peri-Implantitis



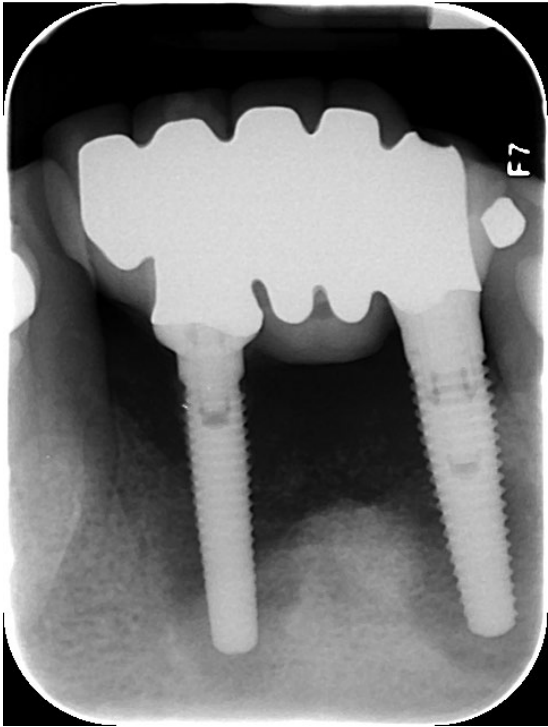
PERI-IMPLANT DISEASES AND CONDITIONS

Peri-Implantitis (akin to periodontitis)

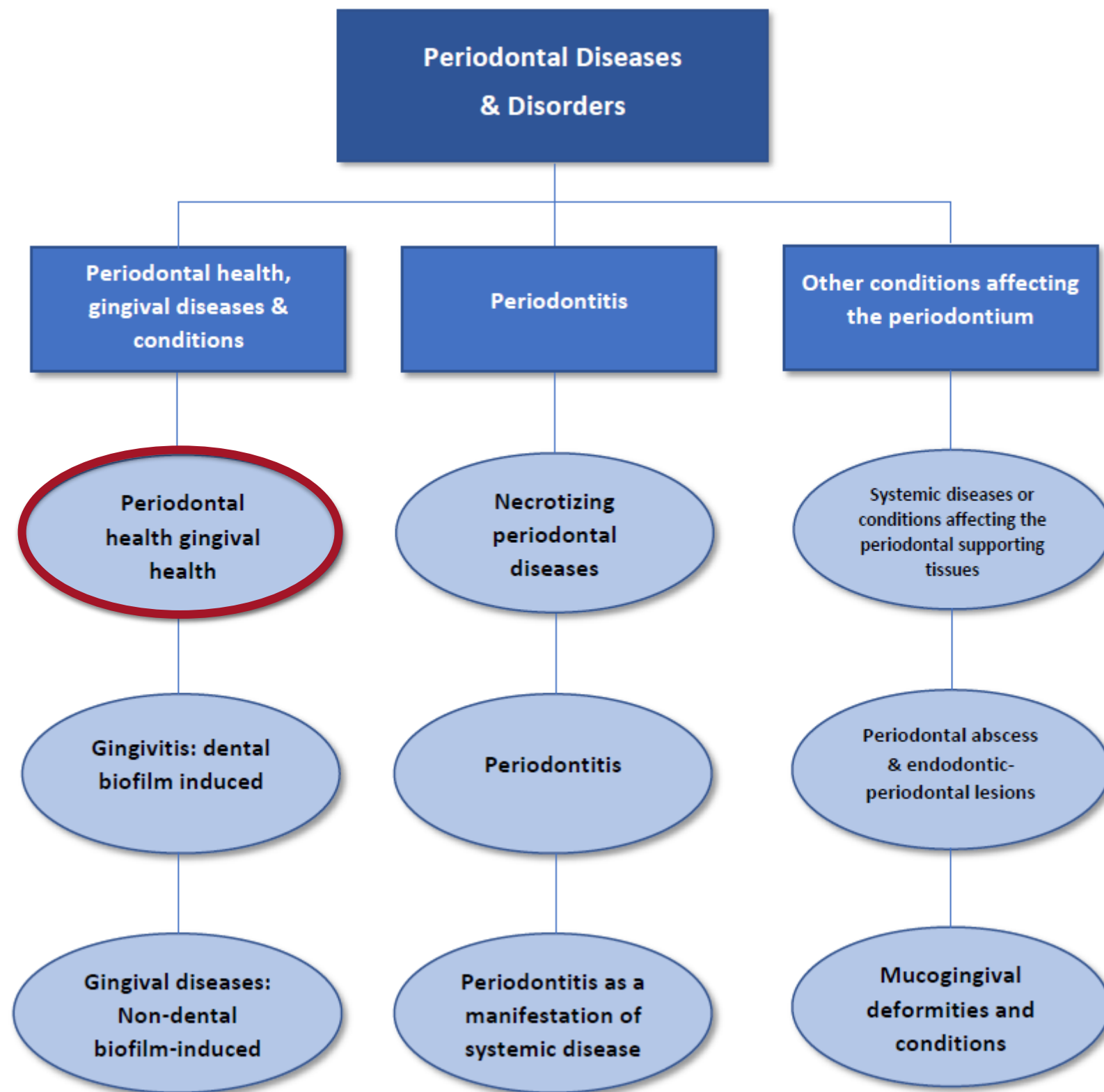


PERI-IMPLANT DISEASES AND CONDITIONS

Peri-Implantitis



PERIODONTAL HEALTH



2018 CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS

GINGIVAL HEALTH

Less than 10% bleeding sites with probing depths \leq 3mm

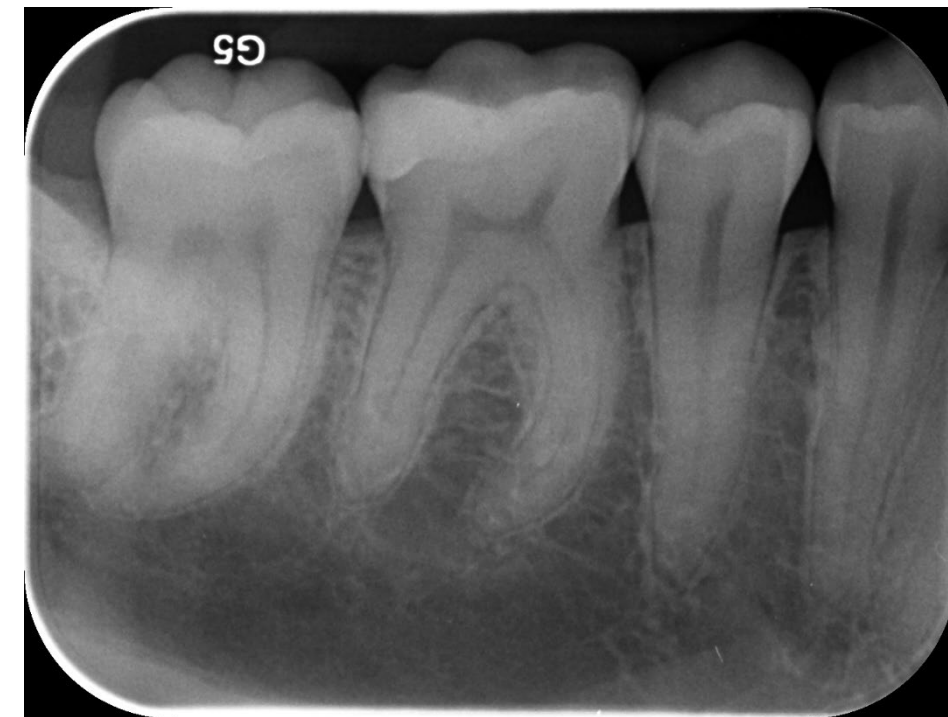
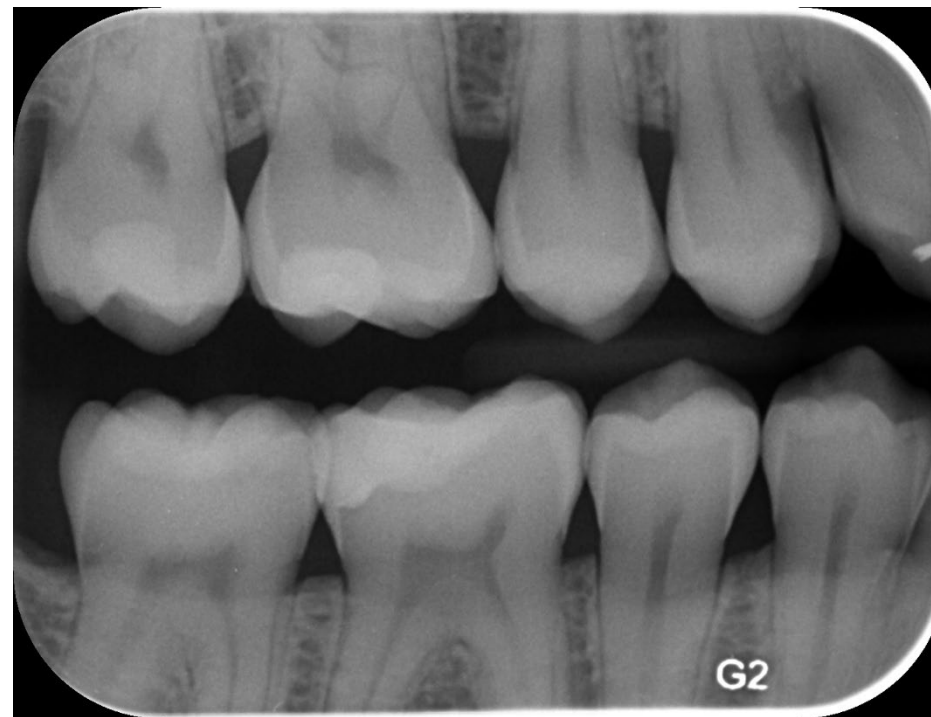
- Epidemiological definition

Characterized by successful treatment through control of local and systemic risk factors, resulting in minimal (< 10% of sites) BOP, no probing depths of 4mm or greater that bleed on probing, optimal improvement in other clinical parameters and lack of progressive periodontal destruction

- Clinical practice definition (DO: may not be histologic definition)

2018 CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS

PERIODONTAL HEALTH AND GINGIVAL HEALTH

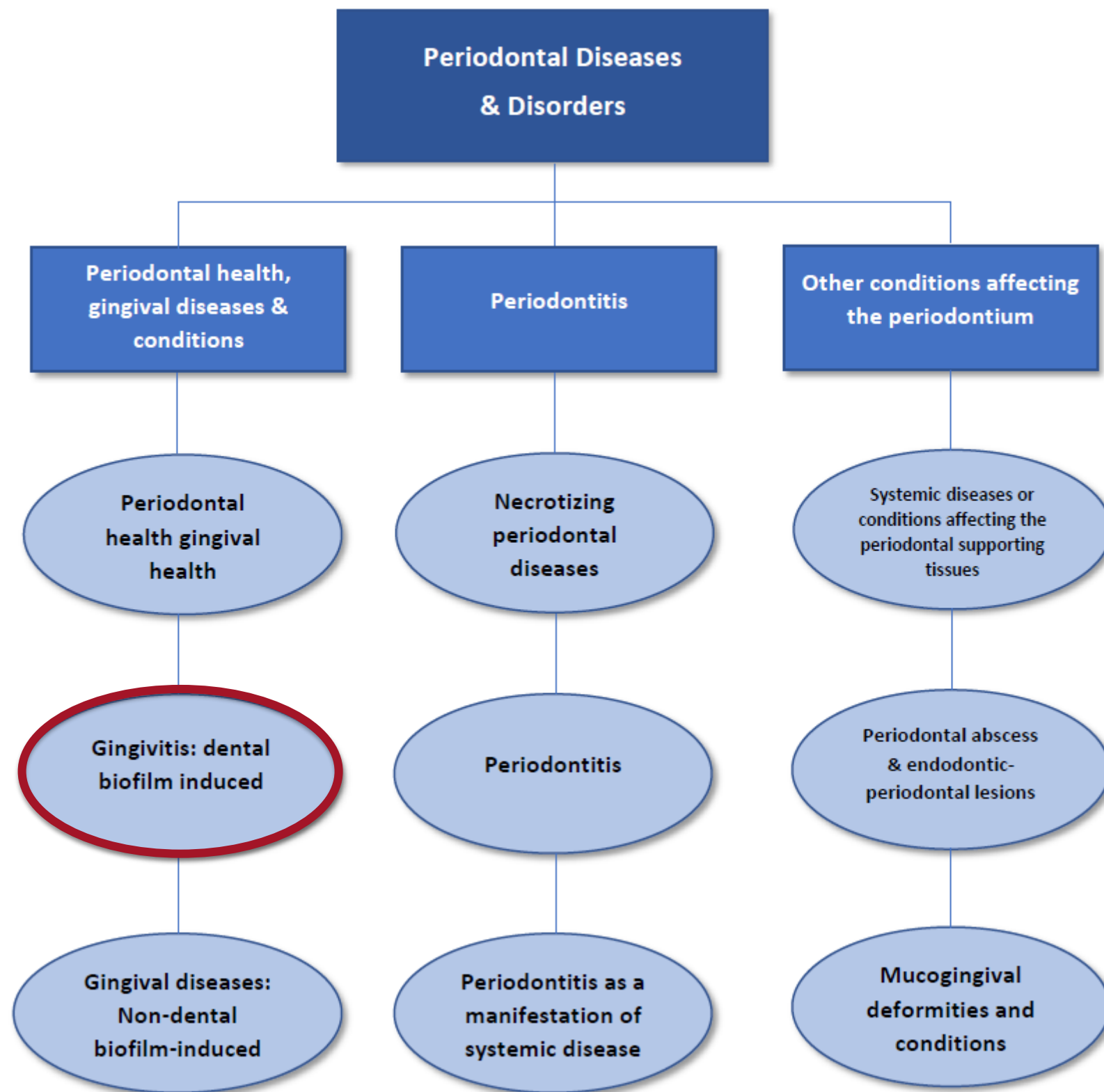


2018 CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS

PERIODONTAL HEALTH AND GINGIVAL HEALTH



GINGIVITIS



2018 CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS

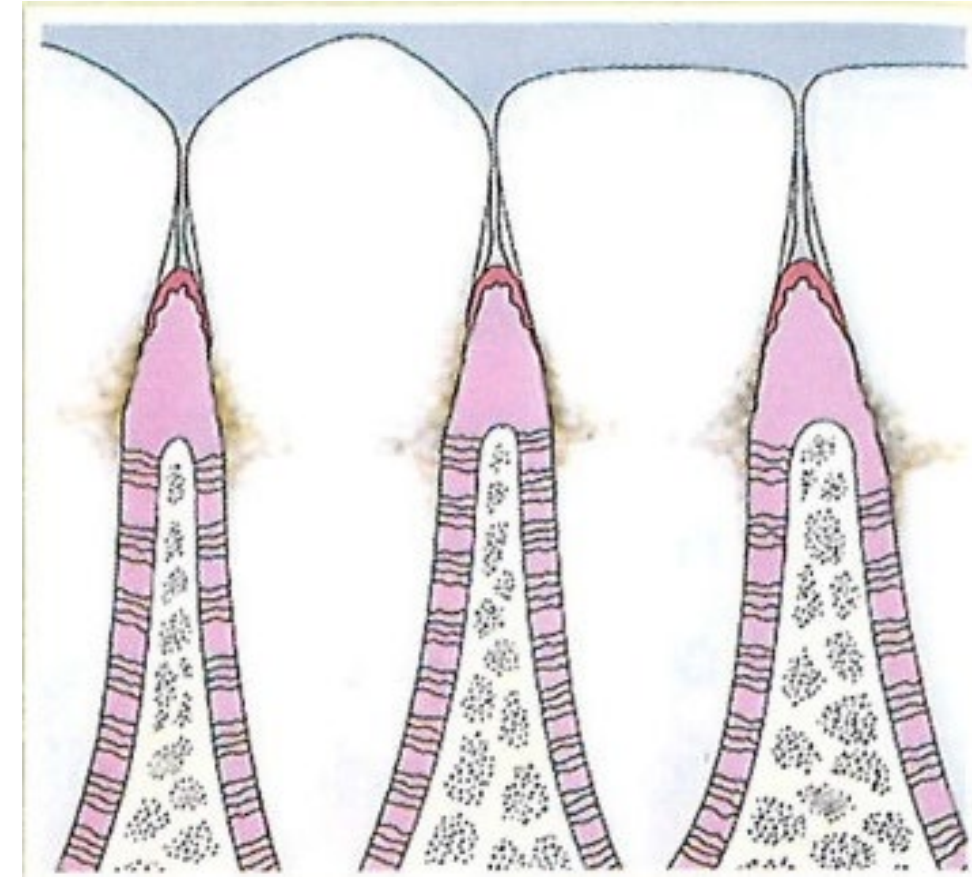
GINGIVITIS

≥ 10% bleeding sites with probing depths ≤ 3mm

- Epidemiological definition
- Localized is defined as 10% - 30% bleeding sites
- Generalized is defined as > 30% bleeding sites
- In clinical practice we should refer to the gingivitis look-up table to determine if we have a gingivitis case.

GINGIVITIS

No Attachment Loss
(No Bone Loss)



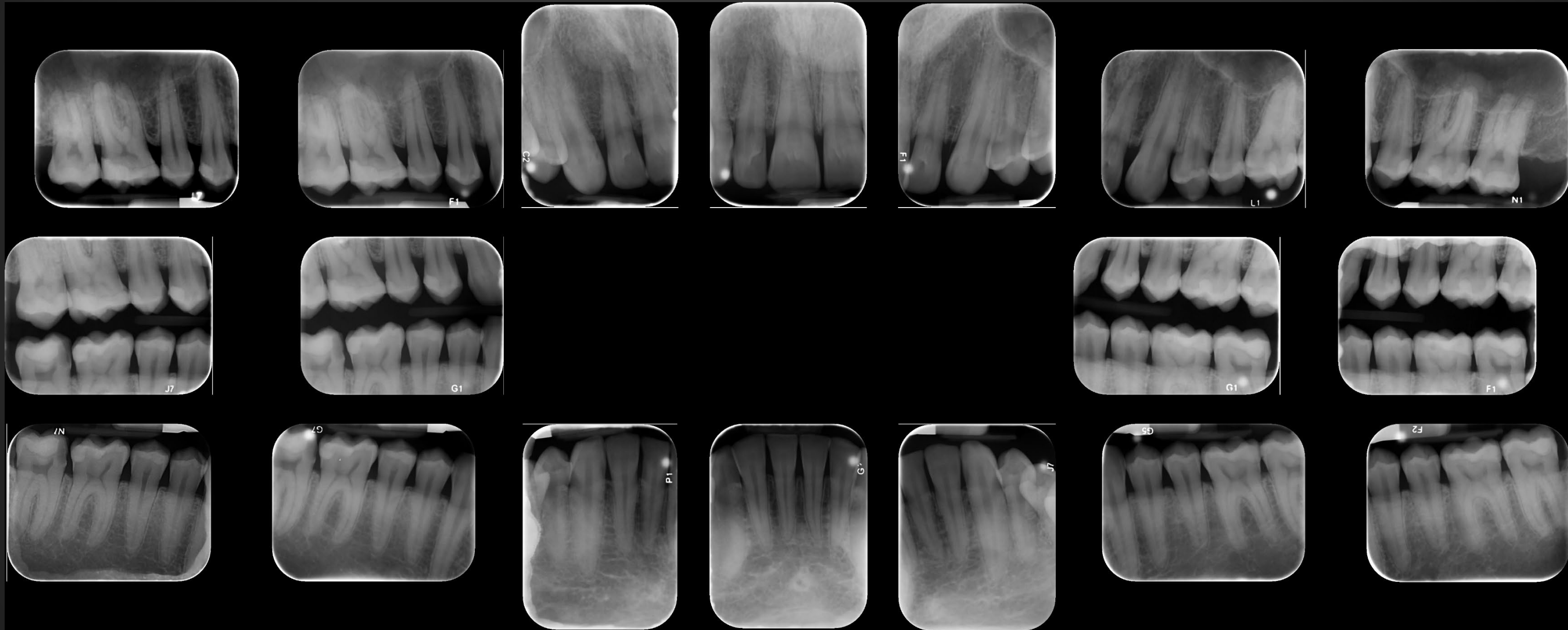
The bacteria in plaque irritate the gums, making them red, tender, swollen and likely to bleed. If plaque is not removed, it can harden into tartar.

2018 CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS

GINGIVITIS

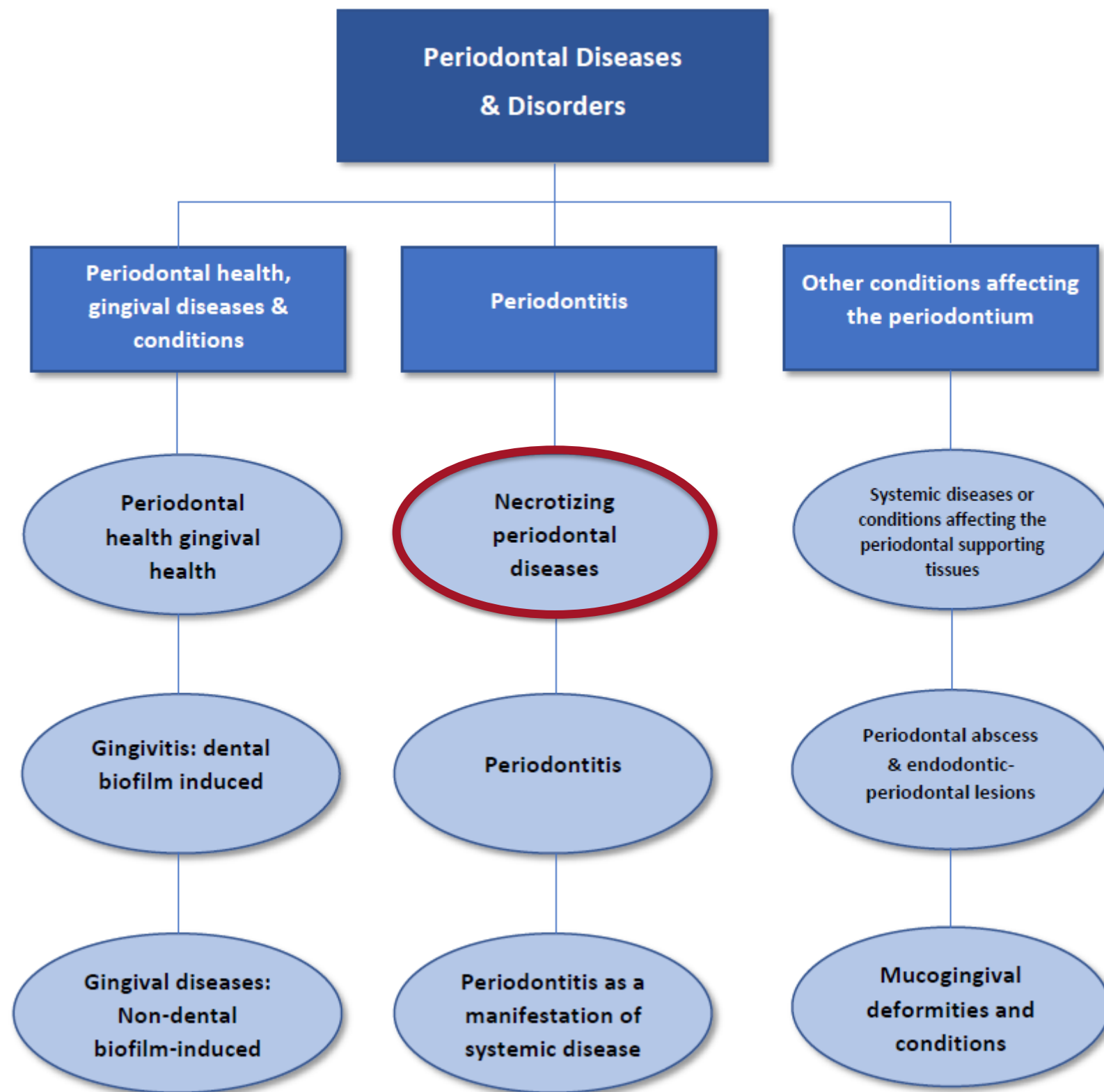


Gingivitis



NECROTIZING PERIODONTAL DISEASES

Note: no longer includes Acute or Ulcerative



NECROTIZING PERIODONTITIS/STOMATITIS

PRE-TREATMENT



ONE WEEK, POST DEBRIDEMENT
WITH ANTIBIOTICS



PERIODONTITIS

Note: no longer called Chronic Periodontitis

2018 CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT CONDITIONS

CLASSIFICATION OF PERIODONTAL AND PERI-IMPLANT DISEASES AND CONDITIONS 2017

Periodontal Diseases and Conditions										
Periodontal Health, Gingival Diseases and Conditions			Periodontitis			Other Conditions Affecting the Periodontium				
Periodontal Health and Gingival Health	Gingivitis: Dental Biofilm-Induced	Gingival Diseases: Non-Dental Biofilm-Induced	Necrotizing Periodontal Diseases	Periodontitis	Periodontitis as a Manifestation of Systemic Diseases	Systemic diseases affecting the periodontium	Periodontal Abscess and Endodontic-Periodontal Lesions	Mucogingival Deformities and Conditions	Traumatic Occlusal Forces	Tooth and Prosthesis Related Factors
Peri-Implant Disease										
Peri-Implant Health		Peri-Implant Mucositis		Peri-Implantitis			Peri-Implant Soft and Hard Tissue Deficiencies			

Periodontitis

Staging and Grading Periodontitis



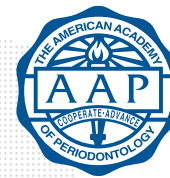
The 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions resulted in a new classification of periodontitis characterized by a multidimensional staging and grading system. The charts below provide an overview. Please visit perio.org/2017wwdc for the complete suite of reviews, case definition papers, and consensus reports.

PERIODONTITIS: STAGING

Staging intends to classify the severity and extent of a patient's disease based on the measurable amount of destroyed and/or damaged tissue as a result of periodontitis and to assess the specific factors that may attribute to the complexity of long-term case management.

Initial stage should be determined using clinical attachment loss (CAL). If CAL is not available, radiographic bone loss (RBL) should be used. Tooth loss due to periodontitis may modify stage definition. One or more complexity factors may shift the stage to a higher level. See perio.org/2017wwdc for additional information.

	Periodontitis	Stage I	Stage II	Stage III	Stage IV
Severity	Interdental CAL <i>(at site of greatest loss)</i>	1 – 2 mm	3 – 4 mm	≥5 mm	≥5 mm
	RBL	Coronal third (<15%)	Coronal third (15% - 33%)	Extending to middle third of root and beyond	Extending to middle third of root and beyond
	Tooth loss <i>(due to periodontitis)</i>	No tooth loss		≤4 teeth	≥5 teeth
Complexity	Local	<ul style="list-style-type: none"> • Max. probing depth ≤4 mm • Mostly horizontal bone loss 	<ul style="list-style-type: none"> • Max. probing depth ≤5 mm • Mostly horizontal bone loss 	In addition to Stage II complexity: <ul style="list-style-type: none"> • Probing depths ≥6 mm • Vertical bone loss ≥3 mm • Furcation involvement Class II or III • Moderate ridge defects 	In addition to Stage III complexity: <ul style="list-style-type: none"> • Need for complex rehabilitation due to: <ul style="list-style-type: none"> – Masticatory dysfunction – Secondary occlusal trauma (tooth mobility degree ≥2) – Severe ridge defects – Bite collapse, drifting, flaring – < 20 remaining teeth (10 opposing pairs)
Extent and distribution	Add to stage as descriptor	For each stage, describe extent as: <ul style="list-style-type: none"> • Localized (<30% of teeth involved); • Generalized; or • Molar/incisor pattern 			



PERIODONTITIS: GRADING

Grading aims to indicate the rate of periodontitis progression, responsiveness to standard therapy, and potential impact on systemic health.

Clinicians should initially assume grade B disease and seek specific evidence to shift to grade A or C.

See perio.org/2017wwdc for additional information.

	Progression		Grade A: Slow rate	Grade B: Moderate rate	Grade C: Rapid rate
Primary criteria <i>Whenever available, direct evidence should be used.</i>	Direct evidence of progression	Radiographic bone loss or CAL	No loss over 5 years	<2 mm over 5 years	≥2 mm over 5 years
	Indirect evidence of progression	% bone loss / age	<0.25	0.25 to 1.0	>1.0
Case phenotype		Heavy biofilm deposits with low levels of destruction	Destruction commensurate with biofilm deposits	Destruction exceeds expectations given biofilm deposits; specific clinical patterns suggestive of periods of rapid progression and/or early onset disease	
Grade modifiers	Risk factors	Smoking	Non-smoker	<10 cigarettes/day	≥10 cigarettes/day
		Diabetes	Normoglycemic/no diagnosis of diabetes	HbA1c <7.0% in patients with diabetes	HbA1c ≥7.0% in patients with diabetes

The 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions was co-presented by the American Academy of Periodontology (AAP) and the European Federation of Periodontology (EFP).