



First semester-classification of periodontal and peri implant conditions (2017) Lec.5.part3

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Table 1

Table 1. Classification of Periodontal Diseases and 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 or Conditions Affecting the Periodontal Supporting Tissues	Periodontal Abscesses and Endodontic-Periodontal Lesions	Mucogingival Deformities and Conditions	Traumatic Occlusal Forces	Tooth and Prosthesis Related Factors
Peri-Implant Diseases and Conditions										
Peri-Implant Health		Peri-Implant Mucositis		Peri-Implantitis		Peri-Implant Soft and Hard Tissue Defencies				

Adapted from Caton et al. (2018) J Clin Periodontol. 45(Supl 20); S1-S8.

INTRODUCTION

- ❖ Periodontal disease is a chronic inflammatory disease that affects approximately 45% of the adult population. The disease is driven by development of a plaque biofilm but the majority of periodontal tissue damage is as a result of an exaggerated host inflammatory response.

A number of risk factors impact on periodontal disease resulting in initiation or exacerbation of the disease process, examples include smoking, poor plaque control and unstable diabetes.

Recently, based on pathophysiology, three clearly different forms of periodontitis have been identified according to new classification system proposed by the American Academy of Periodontology (AAP) and the European Federation of Periodontology (EFP) in 2017:

1. Periodontitis.
2. Periodontitis as a direct manifestation of systemic diseases
3. Necrotizing periodontitis.

TABLE 2. Forms of Periodontitis⁶

1. NECROTIZING PERIODONTAL DISEASES

- a. Necrotizing gingivitis
- b. Necrotizing periodontitis
- c. Necrotizing stomatitis

2. PERIODONTITIS AS A MANIFESTATION OF SYSTEMIC DISEASES

Classification of these conditions should be based on the primary systemic disease according to the International Statistical Classification of Diseases and Related Health Problems (ICD) codes

3. PERIODONTITIS

- a. **Stages:** Based on severity¹ and complexity of management²
 - Stage I:** Initial periodontitis
 - Stage II:** Moderate periodontitis
 - Stage III:** Severe periodontitis with potential for additional tooth loss
 - Stage IV:** Severe periodontitis with potential for loss of the dentition
- b. **Extent and distribution:**³ localized, generalized; molar-incisor distribution
- c. **Grades:** Evidence or risk of rapid progression,⁴ anticipated treatment response⁵
 - i. Grade A: Slow rate of progression
 - ii. Grade B: Moderate rate or progression
 - iii. Grade C: Rapid rate of progression

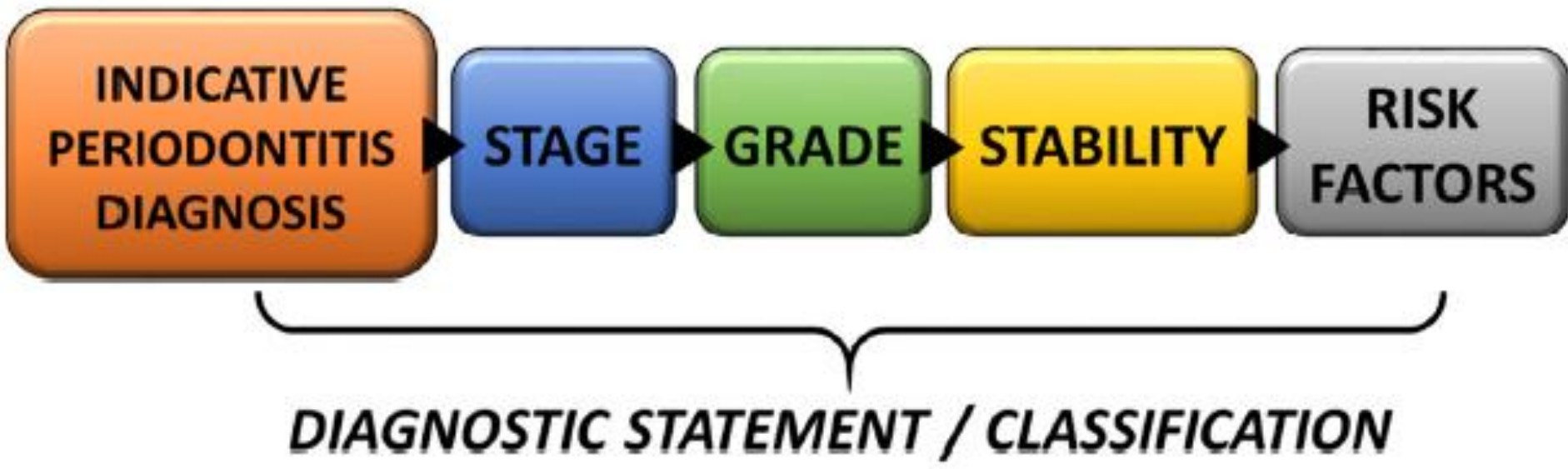
1 Severity: Interdental clinical attachment (CAL) at site with greatest loss; radiographic bone loss and tooth loss

2 Complexity of management: Probing depths, pattern of bone loss, furcation lesions, number of remaining teeth, tooth mobility, ridge defects, masticatory dysfunction

3 Add to stage as descriptor: Localized < 30% teeth, generalized ≥ 30% teeth

4 Risk of progression: Direct evidence by periapical radiographs or CAL loss, or indirect (bone loss/age ratio)

5 Anticipated treatment response: Case phenotype, smoking, hyperglycemia



1. Indicative diagnosis of periodontitis

One of the key clinical additions to the examination in the new classification is the identification of interdental attachment loss if there is evidence of interproximal attachment loss this will result in a diagnosis of 'Periodontitis.

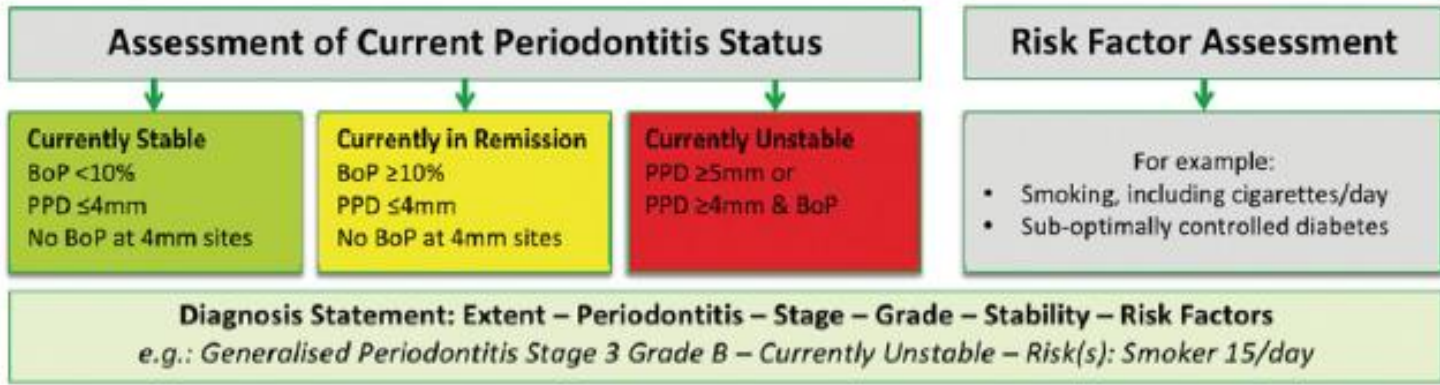
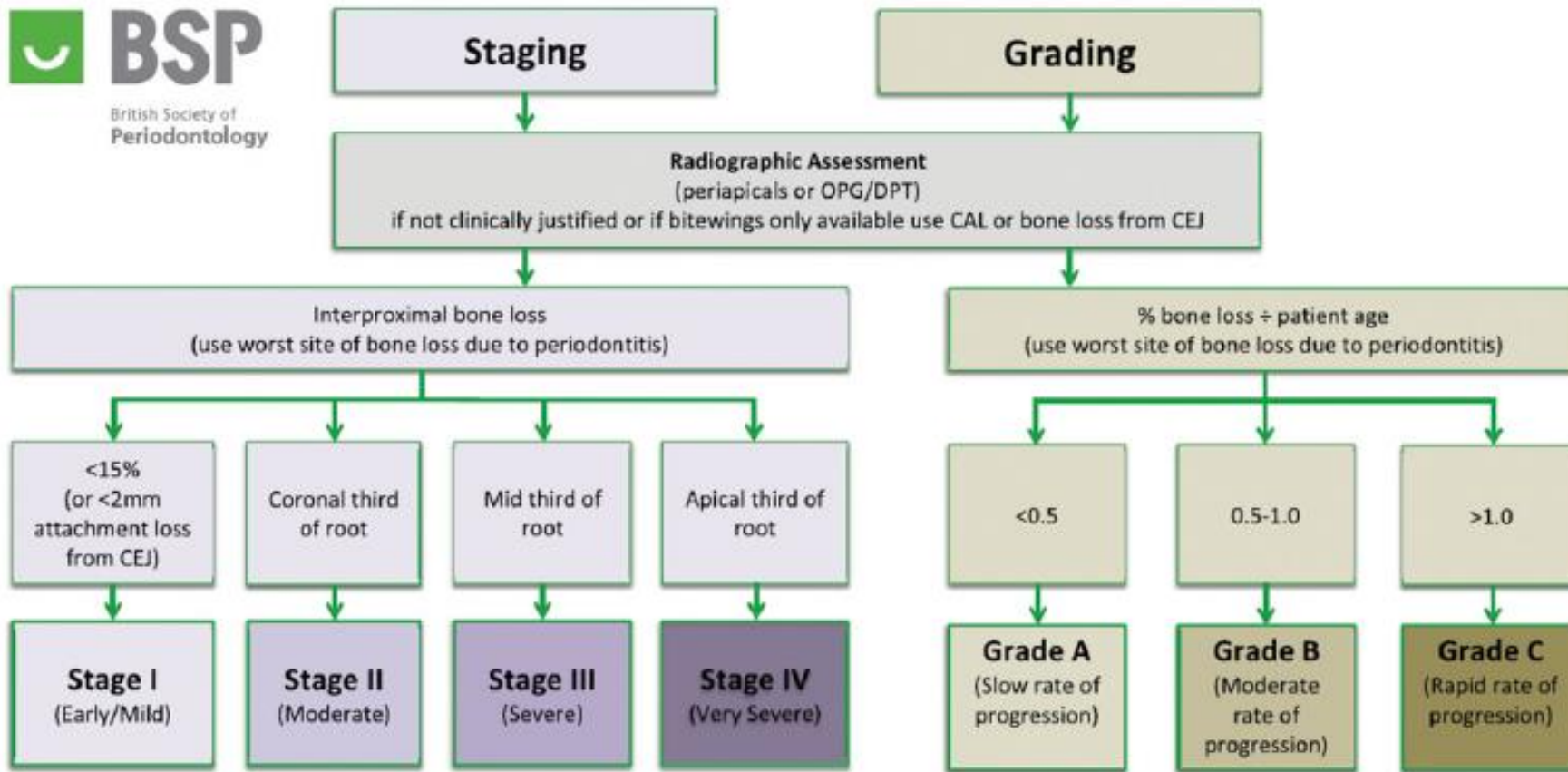
The pattern of bone loss from radiographs is determined.

- If the bone loss is isolated to molar and incisor, then the pattern is '**Periodontitis molar/ incisor pattern**'.
- If less than 30% of teeth have periodontal disease associated bone loss, the pattern is '**Localized periodontitis**'.
- If the bone loss exceeds 30% of teeth, then the pattern is '**Generalized periodontitis**'

Extent

describe as :

- localised (up to 30% of teeth),
- generalised (more than 30% of teeth)
- molar/incisor pattern



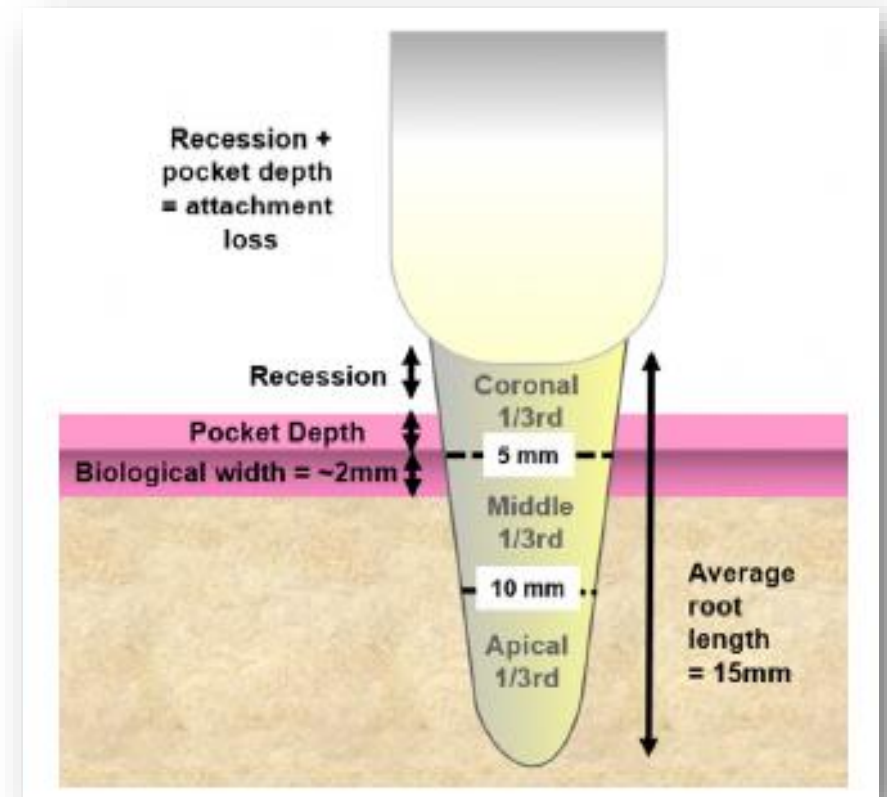
Disease Staging

- ❖ Staging aims to indicate the severity of disease, which will reflect the complexity of patient management. Staging utilizes the percentage bone loss at the worst site due to periodontal disease.
- The ability to stage and grade a patient requires access to radiographs.
- ❖ If radiographs are taken for other reasons, or recent radiographs are available, these can be used for staging or grading. However, if this is not the case, then Stage 1 (mild disease) can be determined if there is <2 mm attachment loss from the cemento-enamel junction (CEJ).

- Stage 2-4, however, become problematic. One solution is to estimate the bone level clinically. The authors propose that this can be achieved by measuring recession and pocket depth using the worse tooth with interproximal recession, adding the biological width (~2 mm) to give an estimate of the distance that the bone crest is from the CEJ.

How to calculate bone loss?

$$\text{Bone loss} = \frac{\text{CAL} + 2}{15} * 100$$



STAGING

1-2mm mild	Stage I	<15%
3-4mm moderate	Stage II	<1/3
>5mm severe	Stage III	mid 1/3
>5mm very severe	Stage IV	apical 1/3 (additional complexity)



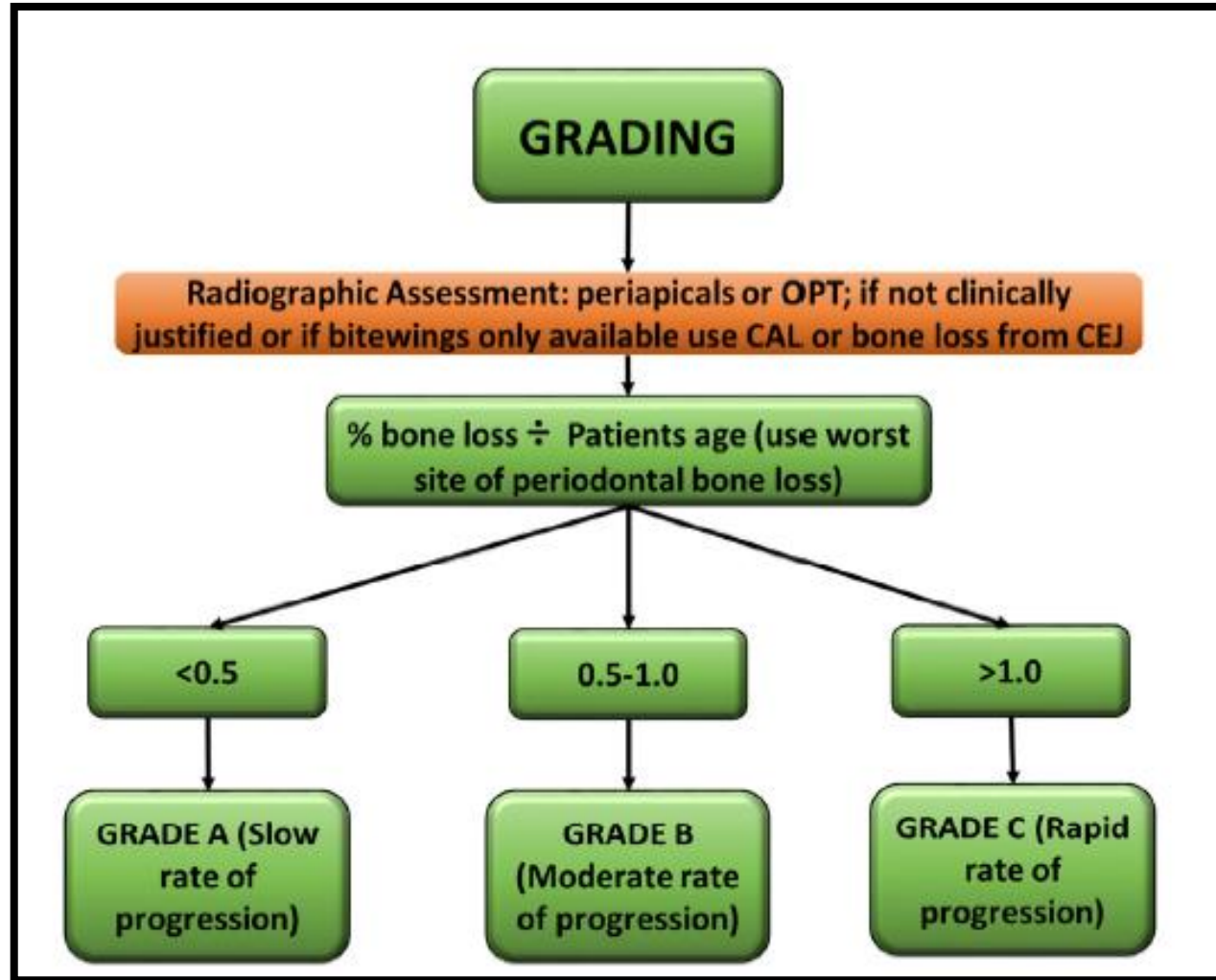
Disease 'grading'

- ❖ Grading' aims to help identify how susceptible a patient is to periodontal disease by using the worst site of bone loss due to periodontal disease along with the patient's age.

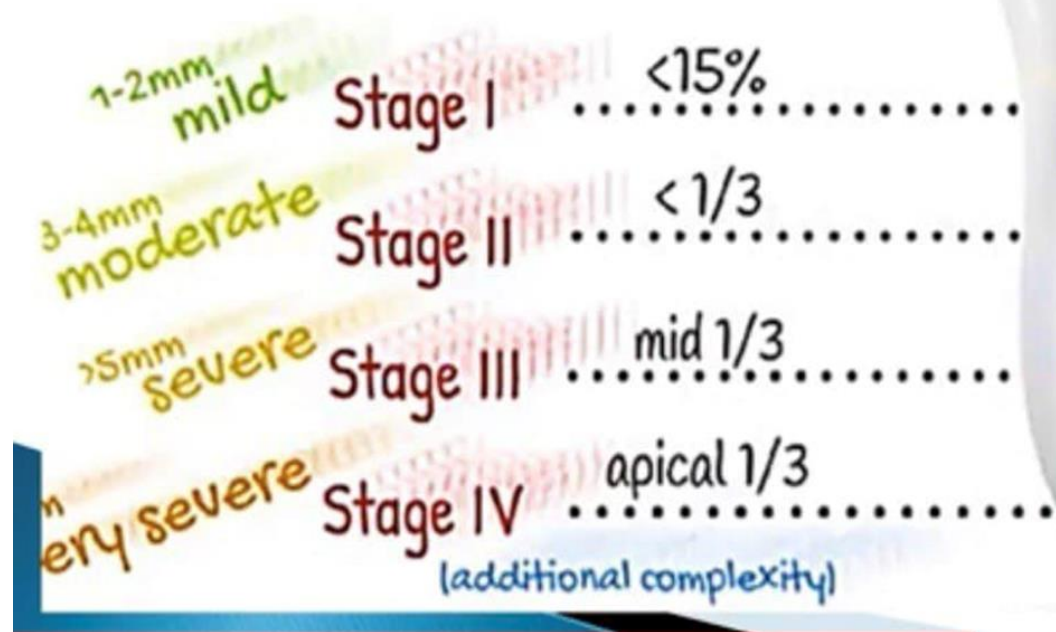
Estimate bone loss, as described in the previous staging section, then divide this by the patient's age. This gives a ratio,

- 1) <0.5 indicating a slow rate of progression. **(grade A)**
- 2) $0.5-1.0$ a moderate rate of progression. **(grade B)**
- 3) >1.0 a rapid rate of progression. **(grade C)**

In addition, this can be used to estimate percentage bone loss for grading. A summary of how this is calculated can be seen in figure below:



STAGING



4. Assessment of disease 'status'

▪ Stable periodontitis patient

The clinical gingival health in stable periodontitis patients is characterized by:

- ✓ An absence (or minimum) bleeding on probing (less than 10%), in the presence of interproximal clinical attachment loss.
- ✓ Probing pocket depth ≤ 4 provided that there is no pseudo pockets and no bleeding on probing at site with 4mm pocket depth.
- ✓ It should be recognized that successfully treated and stable periodontitis patients remain at increased risk of recurrent progression of periodontitis.



- **Remission periodontitis (Gingival inflammation on in a successfully treated periodontitis patient).**

- ✓ Gingival inflammation associated with BOP score $\geq 10\%$.
- ✓ Probing pocket depth $\leq 4\text{mm}$ assuming no pseudo pocket, no BOP at 4mm pocket , with presence of attachment loss and radiographic bone loss.
- ✓ The patient will be diagnosed as remission periodontitis (Note that recurrent periodontitis cannot be ruled out in this case).

- **unstable periodontitis**

- ✓ Probing pocket depth more than 5 mm or BOP at 4mm pocket.

5. Identification of 'risk factors'

- ✓ Poorly controlled type 2 diabetes,
- ✓ Family history of periodontal disease
- ✓ Smoking

Periodontitis as a manifestation of systemic disease

- ❑ Classification of systemic diseases and conditions that affect the periodontal supporting tissues (adapted from Albandar et al.1)

1. Systemic disorders that have a major impact on the loss of periodontal tissues by influencing periodontal inflammation.

1.1 Genetic disorders

1.2 Acquired immunodeficiency diseases

1.3 Inflammatory diseases

1.1.1. Diseases associated with immunologic disorders

1.1.2. Diseases affecting the oral mucosa and gingival tissue

1.1.3. Diseases affecting the connective tissues

1.1.4. Metabolic and endocrine disorders

2. Other systemic disorders that influence the pathogenesis of periodontal diseases

3. Systemic disorders that can result in loss of periodontal tissues independent of periodontitis.

3.1 Neoplasms

3.2 Other disorders that may affect the periodontal tissues

Necrotizing periodontal diseases

Necrotizing periodontal diseases are characterized by three typical clinical features (papilla necrosis, bleeding, and pain) and are associated with host immune response impairments.

- Necrotizing gingivitis.
- Necrotizing periodontitis.
- Necrotizing stomatitis



Figure 1: (a) Severe necrotizing stomatitis of the left buccal mucosa, and (b) mandibular and maxillary necrotizing gingivitis, with early necrotizing stomatitis of the

Other condition affecting the periodontium

■ Periodontal abscess

- periodontal abscess is a localized purulent infection of periodontal tissues, and it is classified by its tissue of origin as gingival, periodontal, or pericoronal abscesses.



■ Endodontics lesion



*Thank you for
your attention*