Classification System for Complete Edentulism (continue)

Integration of Diagnostic Findings

The previous four sub classifications are important determinants in the overall diagnostic classification of complete edentulism. In addition, variables that can be expected to contribute to increased treatment difficulty are distributed across all classifications according to their significance.

Diagnostic Classification of Complete Edentulism

Class I

This classification level characterizes the stage of edentulism that is most appear to be successfully treated with complete dentures using conventional prosthodontics techniques. All four of the diagnostic criteria are favorable.

- Residual bone height of 21 mm or greater measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge morphology resists horizontal and vertical movement of the denture base; Type A maxilla.
- Location of muscle attachments that are conducive to denture base stability and retention; Type A or B mandible.
- Class I maxillomandibular relationship

Class II (Fig 15 A-H)

This classification level distinguishes itself by the continued physical degradation of the denture supporting anatomy, and, in addition, is characterized by the early onset of systemic disease interactions,

patient management, and/or lifestyle considerations.

- Residual bone height of 16 to 20 mm measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge morphology that resists horizontal and vertical movement of the denture base; Type A or B maxilla.
- Location of muscle attachments with limited influence on denture base stability and retention; Type A or B mandible.

- Class I maxillomandibular relationship.
- Minor modifiers, psychosocial considerations, mild systemic disease with oral manifestation.

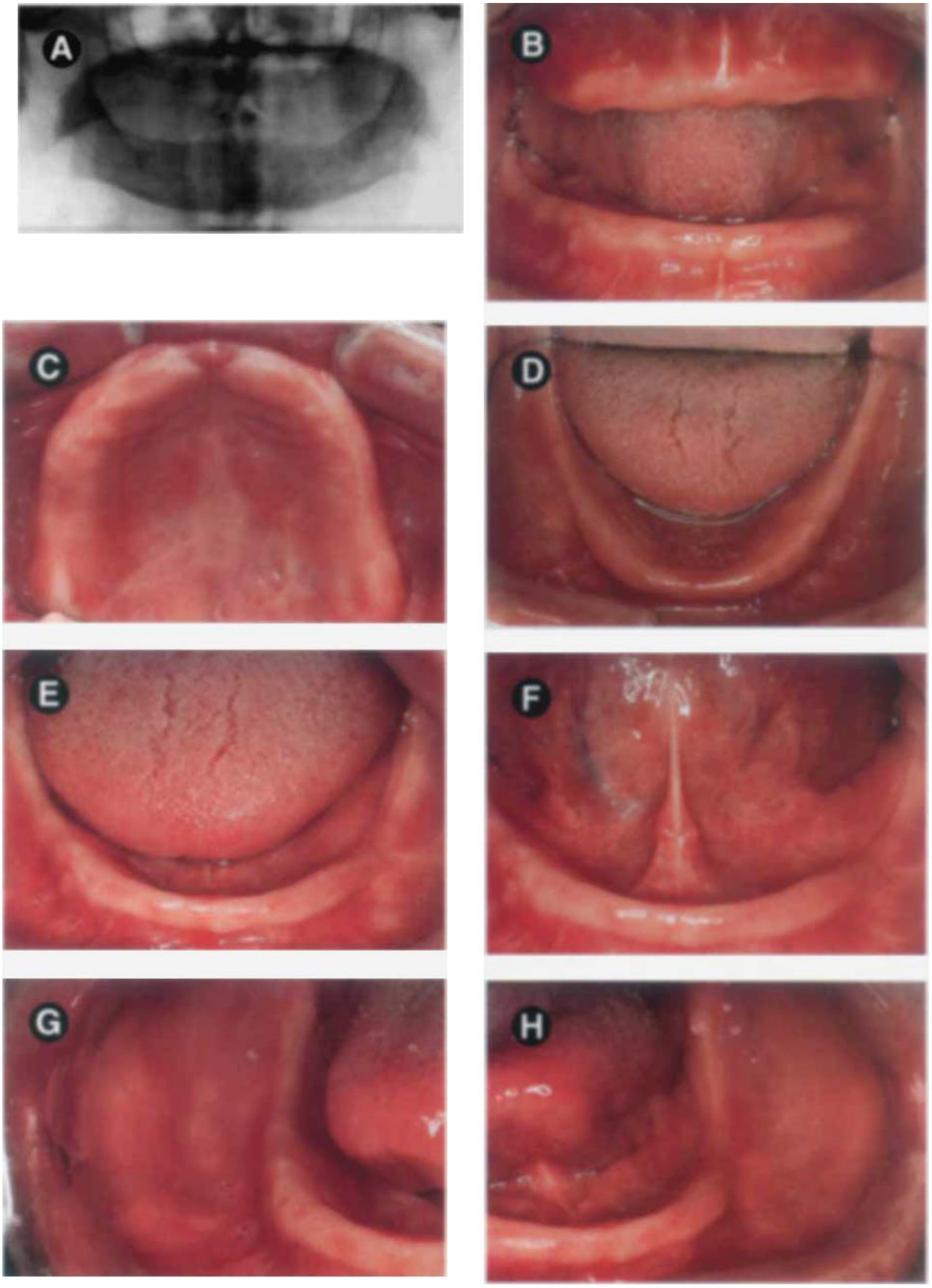

Figure 14. Class I patient. (*A*) Panoramic radiograph. (*B*) Facial view at the approximate occlusal vertical dimension. (*C*) Occlusal view: maxillary arch. (*D*) Occlusal view: mandibular arch. (*E*) Facial view: tongue in resting position. (*F*) Facial view: tongue elevated. (*G*) Lateral view of mandible: patient right. (*H*) Lateral view of mandible: patient left.

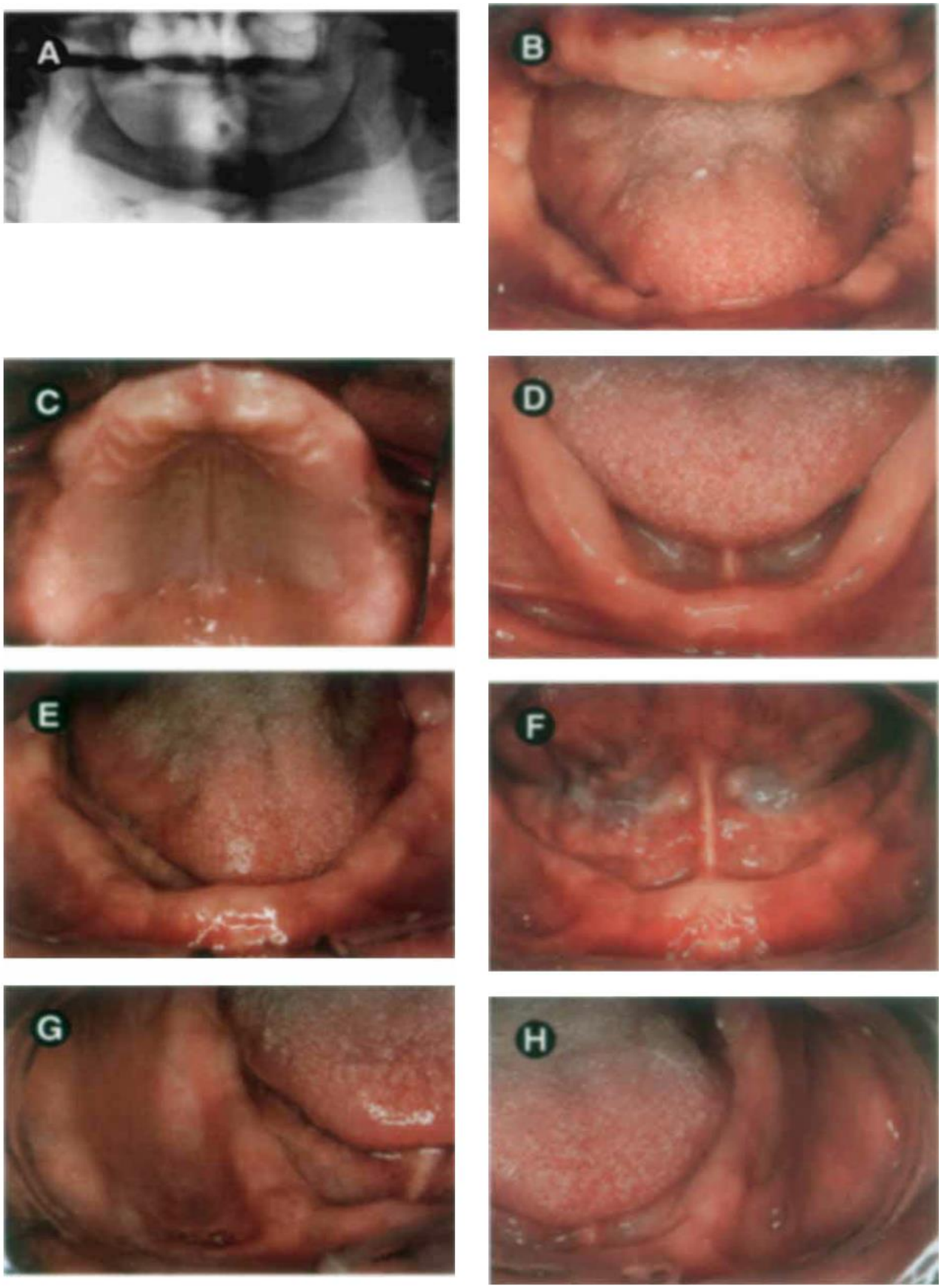

Figure 15. Class II patient. (*A*) Panoramic radiograph. (*B*) Facial view at the approximate occlusal vertical dimension. (*C*) Occlusal view: maxillary arch. (*D*) Occlusal view: mandibular arch. (*E*) Facial view: tongue in resting position. (*F*) Facial view: tongue elevated. (*G*) Lateral view of mandible: patient right. (*H*) Lateral view of mandible: patient left.

Class III

This classification level is characterized by the need for surgical revision of supporting structures to allow for adequate prosthodontic function. Additional factors now play a significant role in treatment outcomes.

- Residual alveolar bone height of 11 to 15 mm measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge morphology has minimum influence to resist horizontal or vertical movement of the denture base;

Type C maxilla.

- Location of muscle attachments with moderate influence on denture base stability and retention;Type C mandible.
- Class I, II, or III maxillomandibular relationship.
- Conditions requiring preprosthetic surgery:

1) minor soft tissue procedures;

2) minor hard tissue procedures including alveolotomy.

3) simple implant placement, no augmentation

4) multiple extractions leading to complete edentulism for immediate denture placement.

- Limited interarch space (18-20 mm).
- Moderate psychosocial consideration and or moderate oral manifestations of systemic diseases or conditions such as xerostomia
- TMD symptoms present.
- Large tongue (occludes interdental space) with or without hyperactivity.
- Hyperactive gag reflex.

Class IV

This classification level depicts the most debilitated edentulous condition. Surgical reconstruction is almost always indicated but cannot always be accomplished because of the patient's health, preferences,

dental history, and financial considerations. When surgical revision is not an option, prosthodontics techniques of a specialized nature must be used to achieve an adequate treatment outcome.

- Residual vertical bone height of 10 mm or less measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge offers no resistance to horizontal or vertical movement; Type D maxilla.
- Muscle attachment location that can be expected to have significant influence on denture base stability and retention; Type D or E mandible.
- Class I, II, or III maxillomandibular relationships.
- Major conditions requiring preprosthetic surgery:

I) complex implant placement, augmentation

2) surgical correction of dentofacial deformities;

3) hard tissue augmentation required;

4) major soft tissue revision required, ie, vestibular extensions with or without soft tissue grafting.

- History of paresthesia or dysesthesia.
- Insufficient interarch space with surgical correction required.
- Acquired or congenital maxillofacial defects.
- Severe oral manifestation of systemic disease or conditions such as sequelae from oncological treatment.
- Maxillo-mandibular ataxia (incoordination).
- Hyperactivity of tongue that can be associated with a retracted tongue position and/or its associated morphology.
- Hyperactive gag reflex managed with medication.
- Refractory patient (a patient who presents with chronic complaints following appropriate therapy).

These patients may continue to have difficult achieving their treatment expectations despite the thoroughness or frequency of the treatments provided.

- Psychosocial conditions warranting professional intervention

Reasons for a Classification System

Classifying edentulous patients according to present criteria can be an aid in numerous aspects of treatment:

• establishing a basis for diagnostic and treatment procedures

• justifying treatment procedures and fees to patients

• screening patients treated in dental faculties for assignment to undergraduate or graduate students

• providing data for review of treatment outcome

• simplifying communication in discussions of treatment with patients and colleagues.

The classes are differentiated from each other according to the following features:

• The skill level required to treat that class of patient: Does

the patient require novice or expert treatment?

• The necessity for modification of basic clinical or laboratory procedures: Will more complicated procedures or more time be required for treatment?

• Overall management and complexity of treatment: Will

expert intervention and referral be required?

Guidelines for Use of the Complete Edentulism Classification System

In those instances when a patient's diagnostic crileria are mixed between two or more classes, any single criterion of a more complex class places the patient into the more complex class. The analysis of diagnostic factors is facilitated with the use of a worksheet.

Use of this system is indicated for pre-treatment evaluation and classification of patients. Re-evaluation of classification status should be considered following preprosthetic surgery. Retrospective analysis

on a post treatment basis may alter a patient's classification.

The classification system for complete edentulism is based on the most objective criteria available to facilitate uniform utilization of the system. With such standardization, communication will be improved among dental professionals.

This classification system will help to identify those patients most likely to require treatment by a specialist or by a practitioner with additional training and experience in advanced techniques.

This system should also be valuable to research protocols a different treatment procedures are evaluated.

Table 1. Checklist for Classification of Complete Edentulism

					Class I	Class II	Class III	Class IV
Bone Height-Mandibular								
	21 mm or greater							
	16-20 mm							
	11-15 mm							
	10 mm or less							
Residual Ridge Morphology-Maxilla								
	Type A -	resists vertical & horizonal, hamular notch, no tori						
	Type B -	no buccal vest., poor hamular notch, no tori						
	Type C -	no ant vest, min support, mobile ant. ridge						
	Type D -	no ant/post vest, tori, redundant tissue						
Muscle Attachments-Mandibular								
	Type A -	adequate attached mucosa						
	Type B -	no b attach mucosa (22-27), +mentalis m						
	Type C -	no ant b&l vest (22-27), +genio & mentalis m						
	Type D -	att mucosa only in post						
	Type E -	no att mucosa,cheek/lip moves tongue						
Maxillomandibular Relationships								
	Class I							
	Class II							
	Class III							
Conditions requiring Preprosthetic Surgery								
	Minor soft tissue procedures							
	Minor hard tissue procedures							
	Implants - simple							
	Implants with bone graft - complex							
	Correction of dentofacial deformities							
	Hard tissue augmentation							
	Major soft tissue revisions							
Limited Interarch Space								
	18-20 mm							
	Surgical correction needed							
Tongue Anatomy								
	Large (occludes interdental space)							
	Hyperactive - with retracted position							
Modifiers								
	Oral manifestations of systemic disease							
		mild						
		moderate						
		severe						
	Psychosocial							
		moderate						
		major						
	TMD symptoms							
	Hx of paresthesia or dysesthesia							
	Maxillofacial defects							
	Ataxia							
	Refractory Patient							