

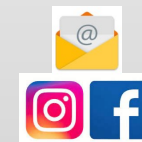
CUORE E PARODONTOPATIE

la salute orale allunga la vita

La malattia parodontale e le Linee Guida Intersocietarie



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MALATTIA PARODONTALE



gengivite



parodontite

PARODONTITE

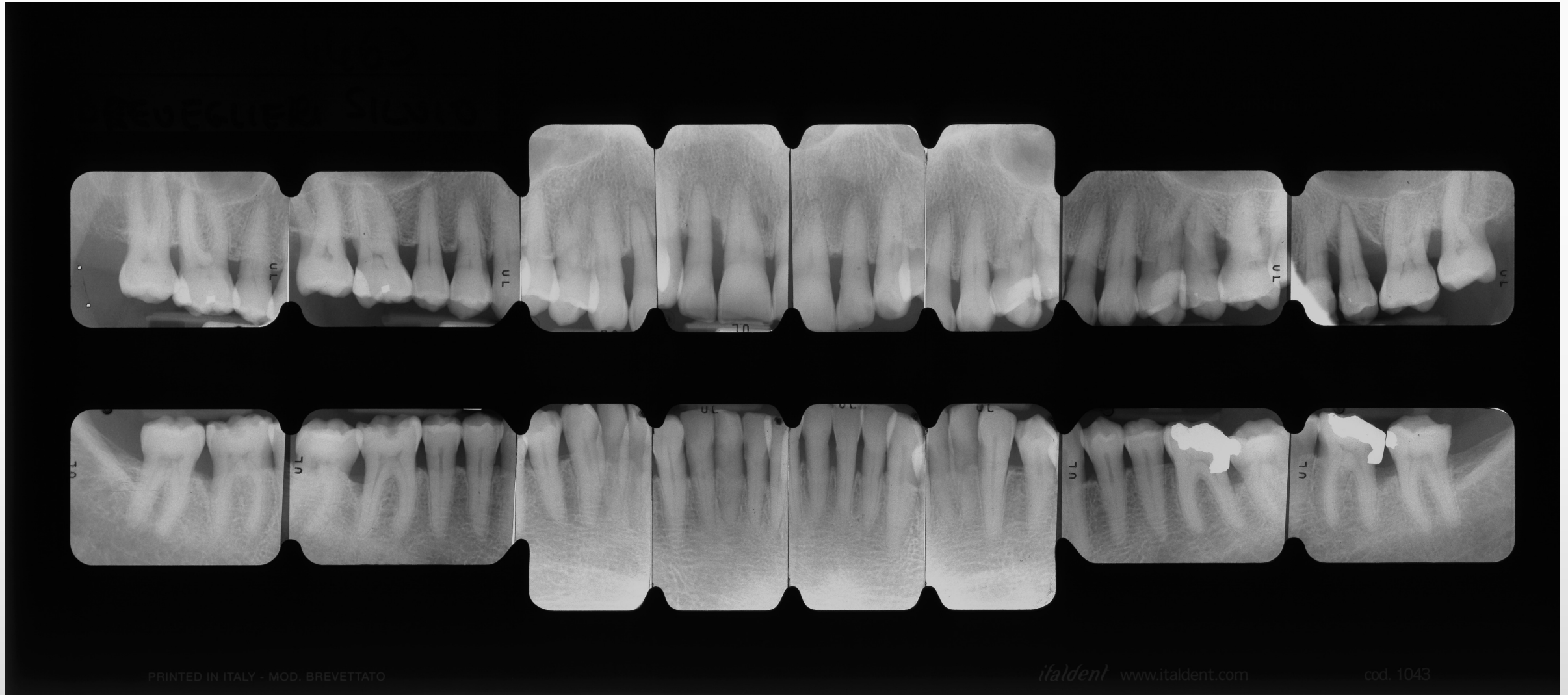
DEFINIZIONE:

Patologia infiammatoria multifattoriale ad eziologia batterica, caratterizzata da perdita di attacco parodontale e distruzione ossea.

Genco RJ et al 1998



Caso 1: uomo, 45 anni



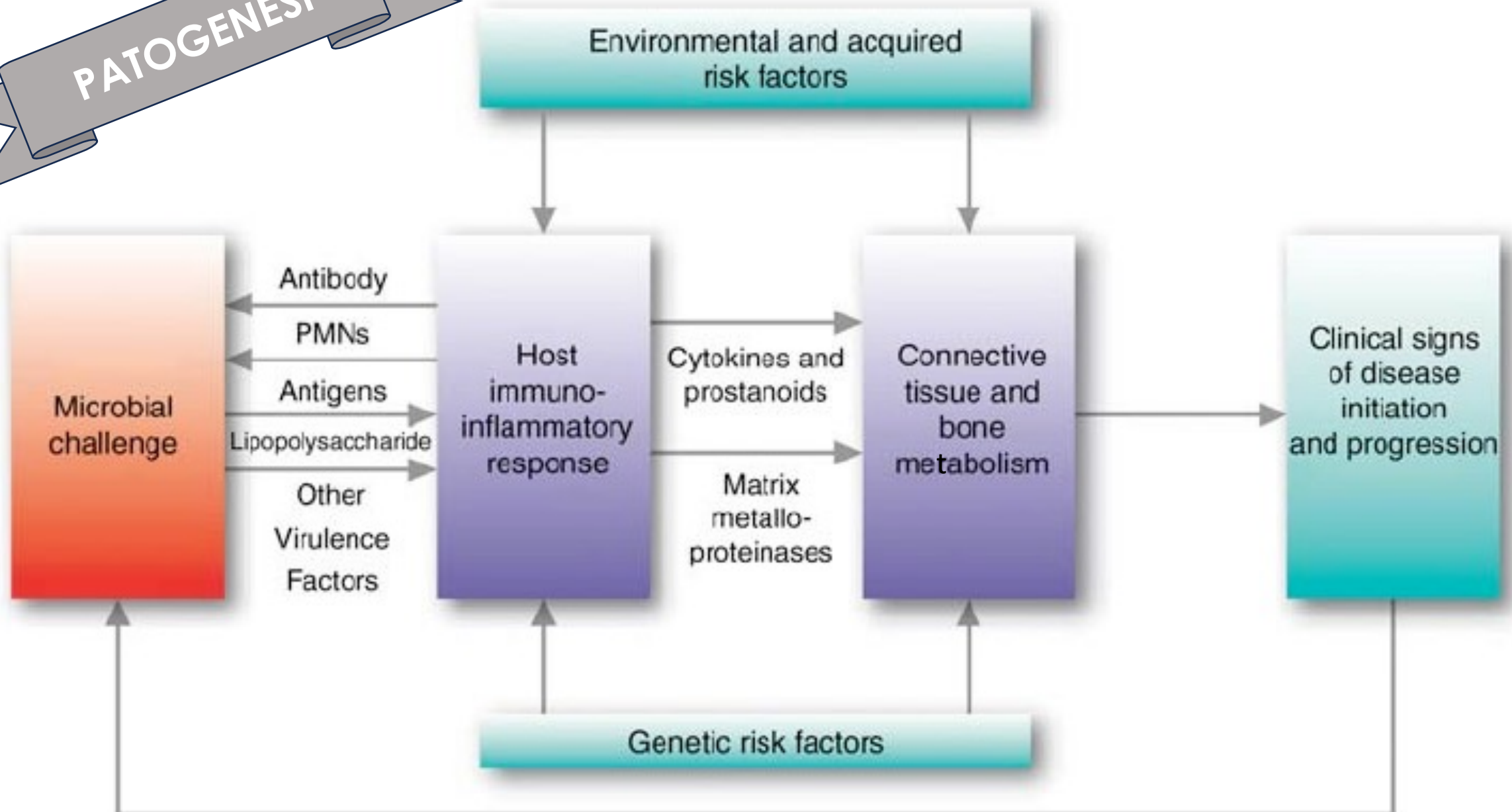
Caso 2: ragazza, 17 anni



ETEROGENEITA CLINICA



PATOGENESI



Environmental and acquired
risk factors

DIABETE



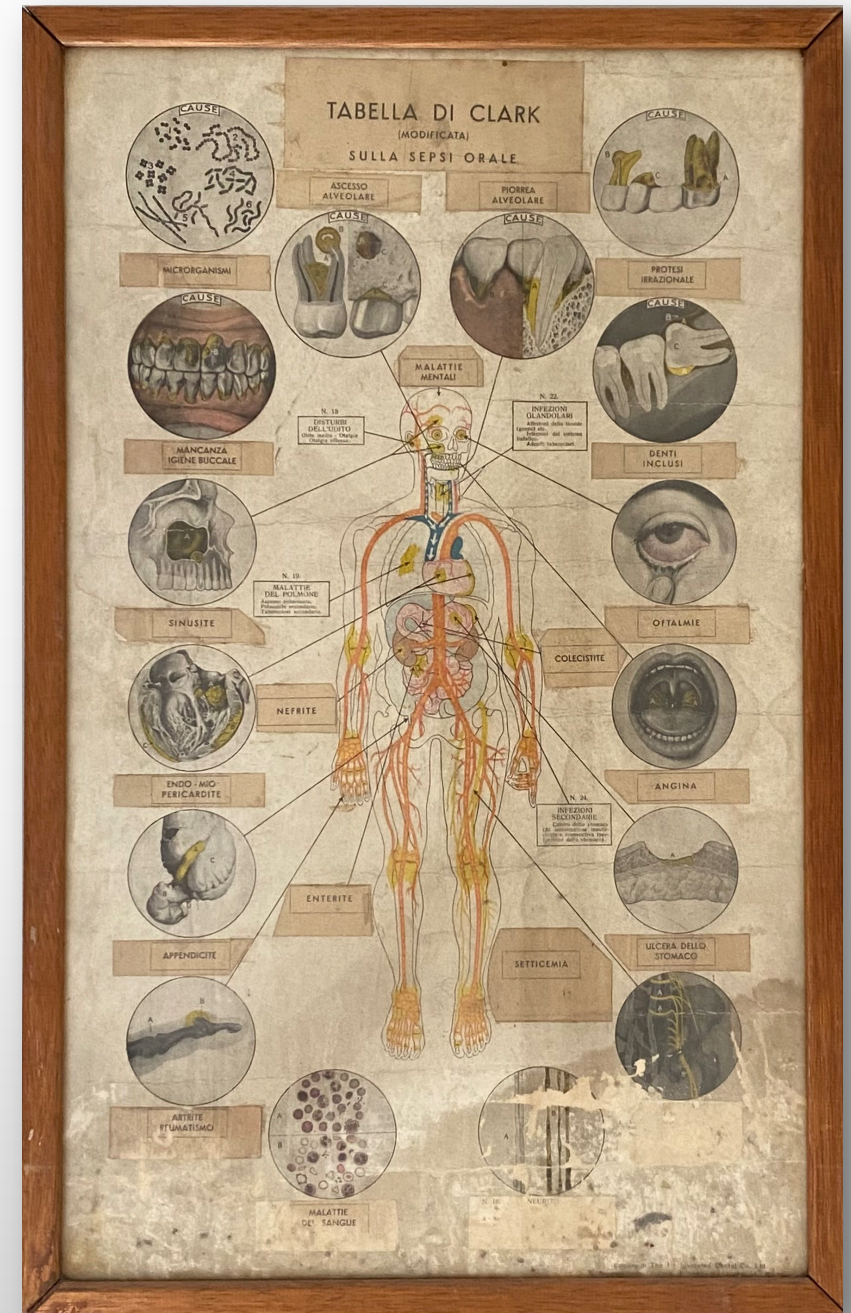
FUMO



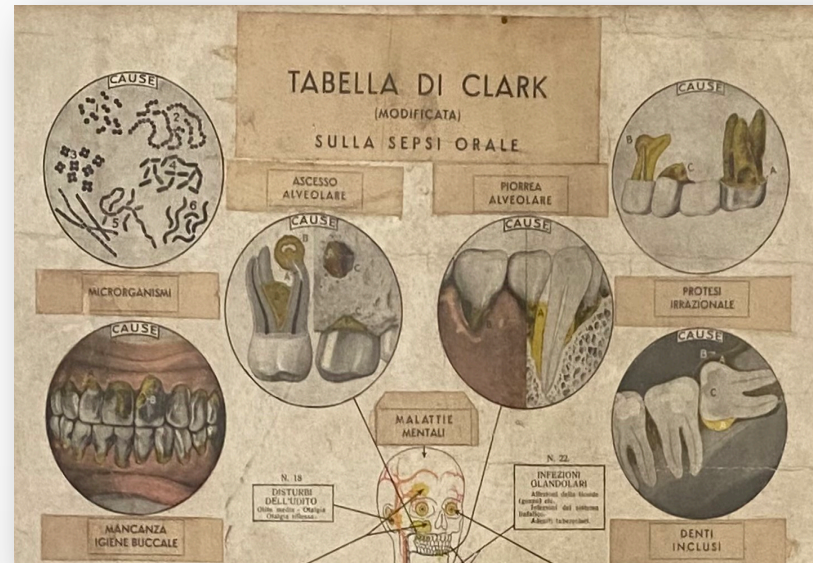
La Tabella di Clark

Malattia Focale

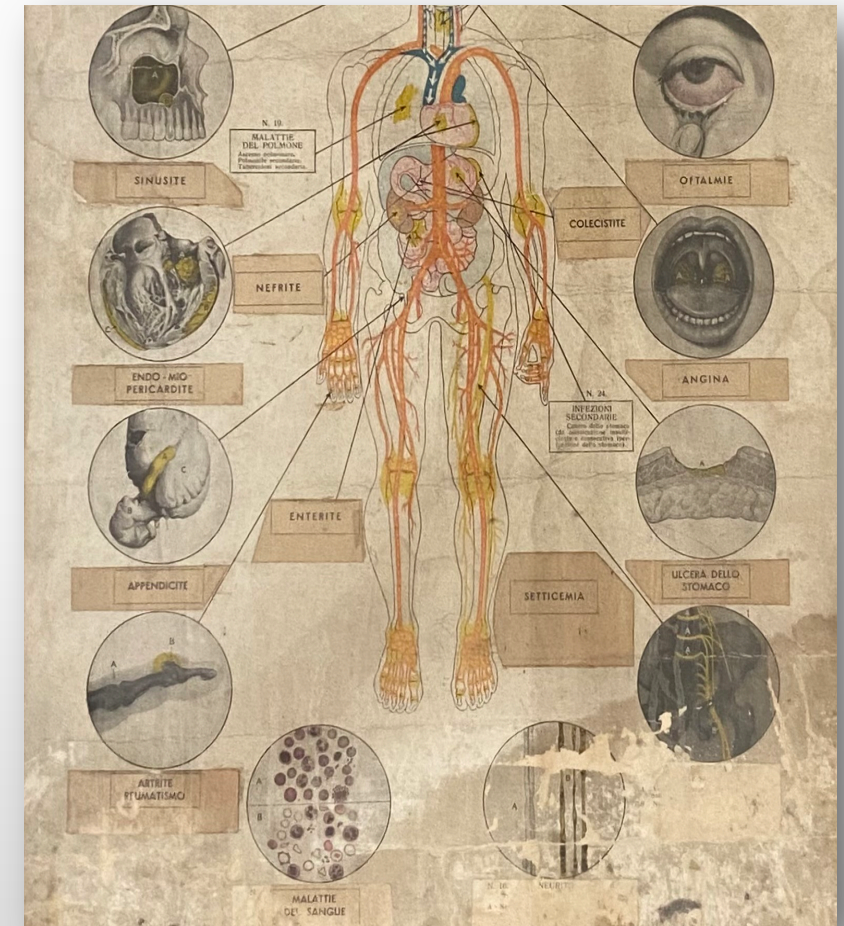
«The role of sepsis and antisepsis in medicine»
1910 - William Hunter

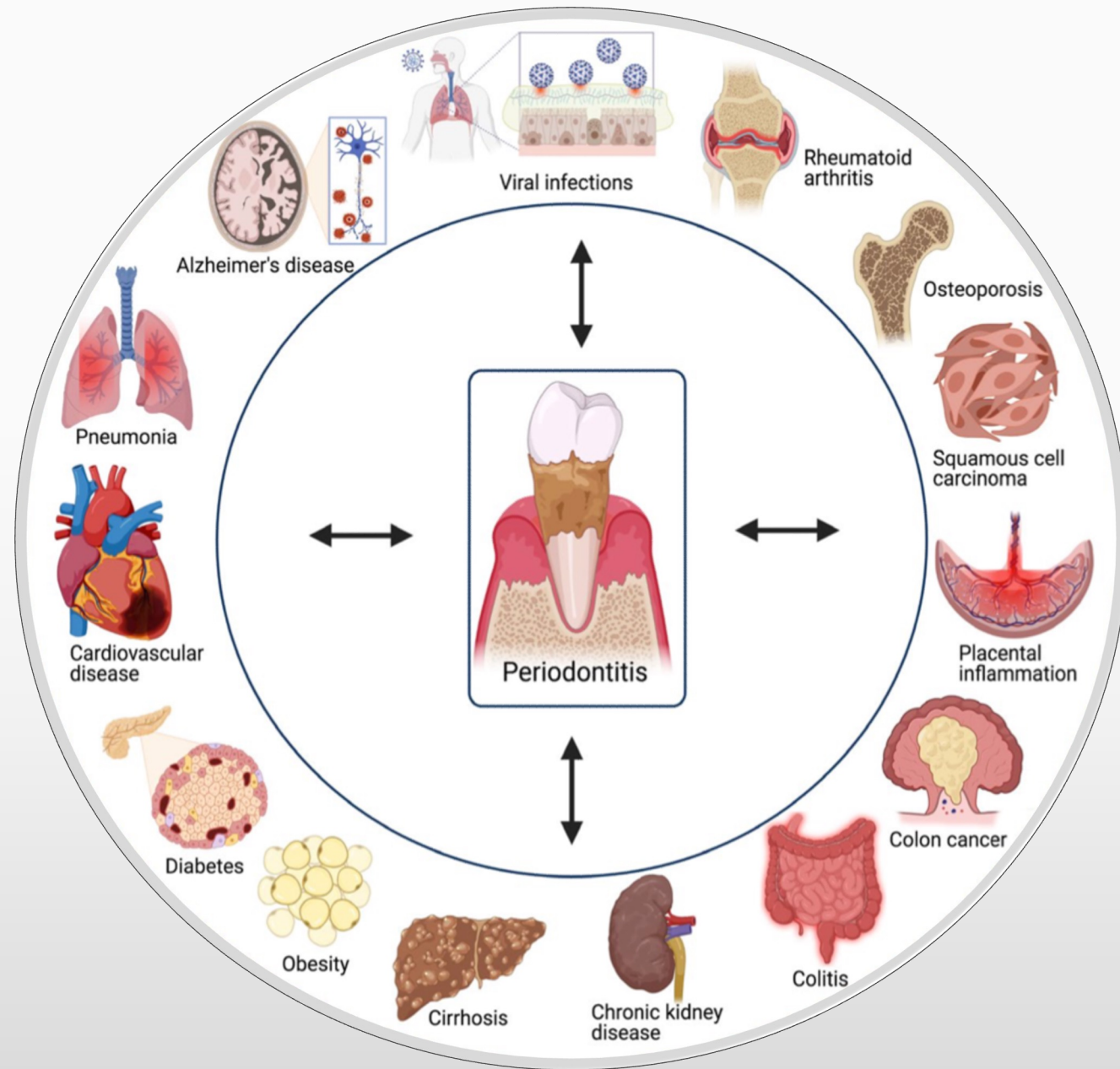


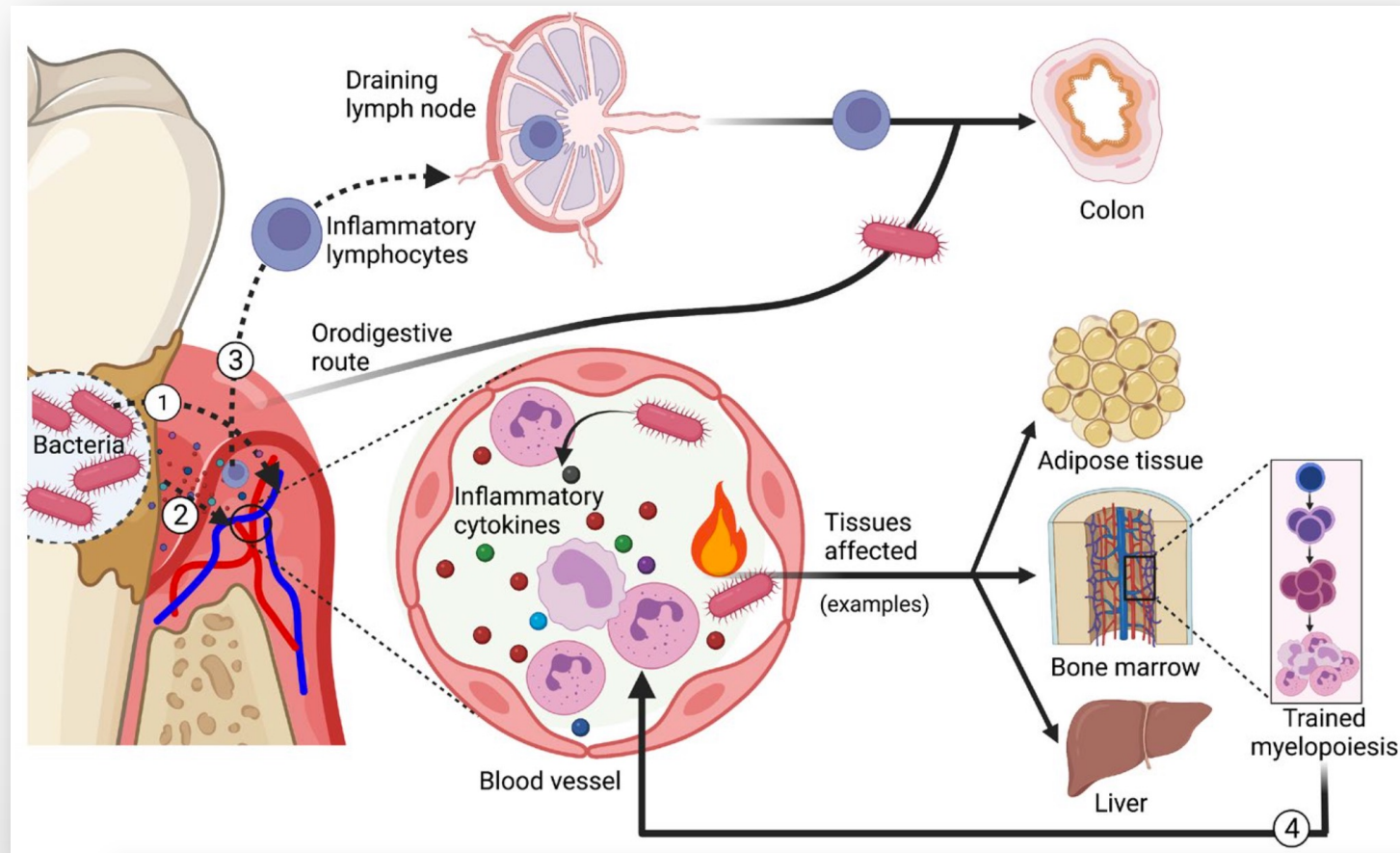
Causa



Effetto







- 1) Traslocazione batterica all'interno del circolo ematico
- 2) Rilascio di citochine infiammatorie a livello del circolo ematico
- 3) Migrazione nel circuito ematico e linfatico di linfociti attivati a livello locale
- 4) Cellule mieloidi «allenate» già presenti in circolazione, pronte per un rapido reclutamento nei siti infiammati

INFIAMMAZIONE SISTEMICA & OMEOSTASI IMMUNITARIA

Tossine microbiche

Le principali:

- Lipopolisaccaride (LPS o endotossina) della parete cellulare dei Gram-
- Superantigeni (es Proteina M o esotossina del Streptococco emolitico)



Rilascio a livello sistemico di citochine pro-infiammatorie sia dalle cellule immunocompetenti presenti nel sito (fagociti, fibroblasti, linfociti) che circolanti (monociti)



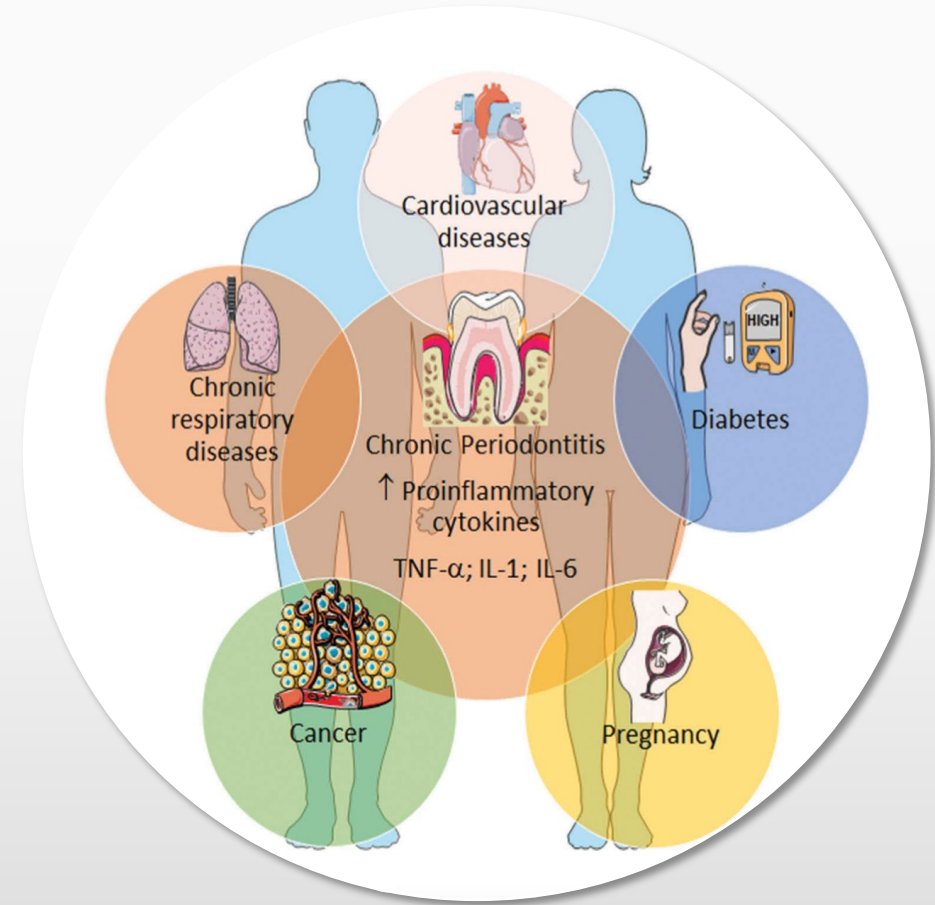
Alterazione dell'omeostasia immunitaria dell'organismo



Fattori individuali genetici e/o acquisiti



Fattori ambientali e stress psicosociale



PISA - Periodontal Inflammed Surface Area

J Clin Periodontol 2008 Nesse W et al.

$$\text{PESA} \times \text{n}^\circ \text{BOP+} : 6 = \text{PISA}$$



DIFFICOLTA' CLASSIFICATIVA

1989

World Workshop in
Clinical Periodontics

1993

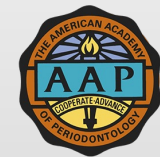
1° European Workshop in
Periodontology

1999

International Workshop for a
Classification of Periodontal
Diseases and Conditions

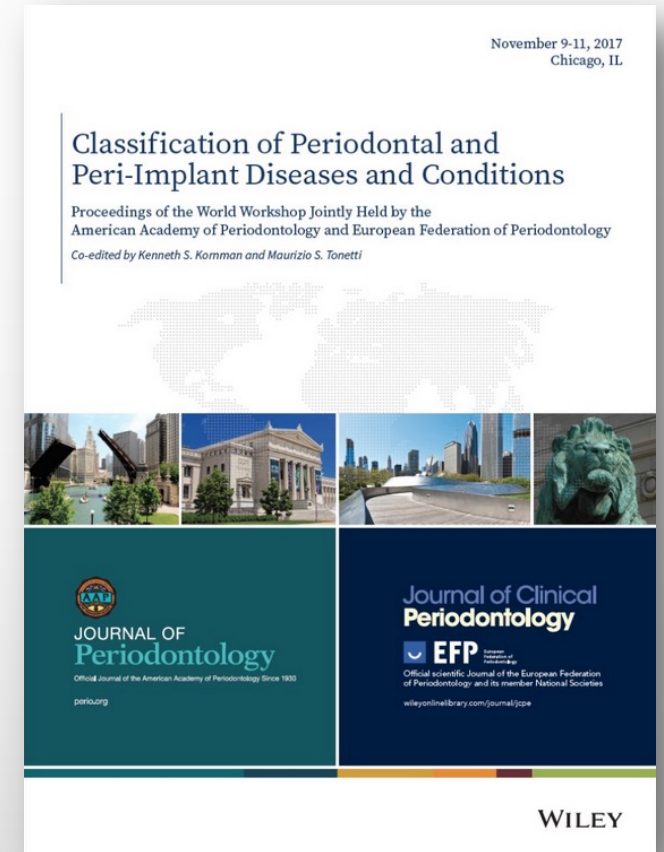
2018

World Workshop on the
Classification of Periodontal and
Peri-Implant Diseases





World Workshop on the Classification of Periodontal and Peri-Implant Diseases 9-11 Novembre 2017 Chicago, IL



ALCUNI ASPETTI CHIAVE



a) Vengono riconosciute tre forme di parodontite:

1. Parodontite
2. Parodontite Necrotizzante
3. Parodontite come manifestazione diretta di malattia sistemica

b) Viene definito un percorso clinico per una diagnosi di parodontite:

1. Identificazione di un paziente con sospetto di parodontite
2. Conferma della diagnosi di parodontite
3. **Stadiazione** del caso di parodontite
4. Accertamento del **grado** di parodontite

STADIO

gravità e complessità della parodontite

GRADO

tasso di progressione della parodontite



STADIO DI PARODONTITE		STADIO I	STADIO II	STADIO III	STADIO IV
Gravità	CAL interdentale nel sito di massima perdita di attacco	Da 1 a 2 mm	Da 3 a 4 mm	≥5 mm	≥5 mm
	Perdita ossea radiografica	Terzo coronale (<15%)	Terzo coronale (da15% a 33%)	Estesa al terzo medio o apicale della radice	Estesa al terzo medio o apicale della radice
	Perdita di denti	Nessuna perdita di denti dovuta alla parodontite		Perdita di denti dovuta alla parodontite ≤4 denti	Perdita di denti dovuta alla parodontite di ≥5 denti
Complessità	Locale			Oltre alla complessità dello Stadio II:	Oltre alla complessità dello Stadio III:
		Massima profondità di sondaggio ≤4 mm	Massima profondità di sondaggio ≤5 mm	profondità di sondaggio ≥6 mm	Necessità di riabilitazione complessa dovuta a:
		Perdita ossea prevalentemente orizzontale	Perdita ossea prevalentemente orizzontale	Perdita ossea verticale ≥3 mm	Disfunzione masticatoria Trauma occlusale secondario (mobilità dentale di grado ≥2) Gravi difetti delle selle Collasso del morso, spostamenti, sventagliamento. Meno di 20 denti rimasti (10 paia di denti contrapposti)
				Interessamento delle forcazioni di Classe II o III	
				Moderati difetti delle selle	
Estensione e distribuzione	Aggiungere allo stadio come descrizione	Per ogni fase, descrivere l'estensione come localizzata (<30% dei denti coinvolti) generalizzata o rapporto incisivo/molare			



GRADO DI PARODONTITE			GRADO A: BASSO TASSO DI PROGRESSIONE	GRADO B: MODERATO TASSO DI PROGRESSIONE	GRADO C: RAPIDO TASSO DI PROGRESSIONE
Criteri Primari	Diretta evidenza di progressione	Dati longitudinali (perdita radiografica di CAL)	Evidenza di nessuna perdita in 5 anni	<2 mm in 5 anni	≥2 mm in 5 anni
	Indiretta evidenza di progressione	% perdita ossea/età	<0.25	0.25 to 1.0	>1.0
		Fenotipo del caso	Grandi depositi di biofilm accompagnati da bassi livelli di distruzione ossea	Distruzione ossea commisurata ai depositi di biofilm	La distruzione supera le attese formulate in base ai depositi di biofilm; specifici schemi clinici indicativi di periodi di rapida progressione e/o malattia a esordio precoce (per es. rapporto incisivo/molare; mancanza di risposta attesa alle terapie standard di controllo batterico)
Fattori di modificazione del Grado	Fattori di rischio	Fumatore	Non – fumatore	Fumatore <10 sigarette/giorno	Fumatore ≥10 sigarette/giorno
		Diabete	Normoglicemia/no diagnosi di diabete	HbA1c <7.0% in pazienti diabetici	HbA1c ≥7.0% in pazienti diabetici
Rischio di impatto sistemico della parodontite*	Carico infiammatorio	Alta sensibilità CRP (hsCRP)	<1 mg/L	Da 1 a 3 mg/L	>3 mg/L
Biomarkers	Indicatori di CAL/perdita ossea	Saliva, fluido crevicolare gengivale, siero	?	?	?

A 3D illustration of a maze with a light gray border and a blue path. The path starts at a blue arrow pointing left at the bottom left, winds through the maze, and ends at a blue arrow pointing up and right at the top right. The text "LE LINEE GUIDA" is centered over the maze.

LE LINEE GUIDA

LINEE GUIDA



REGOLE o NORME

Linee Guida in ambito medico:

- **Orientare le decisioni cliniche** sulla base delle migliori evidenze scientifiche disponibili.
- **Uniformare i comportamenti professionali**, riducendo variabilità ingiustificata nelle cure.
- **Migliorare la qualità e la sicurezza delle cure** per i pazienti.
- **Fornire un riferimento medico-legale**, utile in caso di contenzioso.
- **Integrare evidenza scientifica ed esperienza clinica**, supportando (ma non sostituendo) il giudizio del professionista.

“Treatment of Stage I-III Periodontitis – The EFP S3-level Clinical Practice Guideline”

Perio-Workshop del 2019
La Granja-Spagna

Livello S3

Linee Guida ottenute con revisione sistematica della letteratura, valutazione della qualità delle evidenze e consenso formale tra esperti.

GERMAN ASSOCIATION OF THE SCIENTIFIC MEDICAL SOCIETIES

Received: 29 March 2020 | Accepted: 3 April 2020
DOI: 10.1111/jcpe.13290

CLINICAL PRACTICE GUIDELINE

Journal of Clinical
Periodontology WILEY

Treatment of stage I-III periodontitis—The EFP S3 level clinical practice guideline

Mariano Sanz¹ | David Herrera¹ | Moritz Kebschull^{2,3,4} | Iain Chapple^{2,3} | Søren Jepsen⁵ | Tord Beglundh⁶ | Anton Sculean⁷ | Maurizio S. Tonetti^{8,9} |
On behalf of the EFP Workshop Participants and Methodological Consultants

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⁸Division of Periodontology and Implant Dentistry, Faculty of Dentistry, The University of Hong Kong, Hong Kong, Hong Kong

⁹Department of Oral and Maxillo-facial Implantology, Shanghai Key Laboratory of Stomatology, National Clinical Research Centre for Stomatology, Shanghai Ninth People's Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China

Correspondence
Mariano Sanz, ETEP (Etiology and Therapy of Periodontal and Peri-implant Diseases) Research Group Faculty of Odontology, University Complutense of Madrid, Plaza

Abstract

Background: The recently introduced 2017 World Workshop on the classification of periodontitis, incorporating stages and grades of disease, aims to link disease classification with approaches to prevention and treatment, as it describes not only disease severity and extent but also the degree of complexity and an individual's risk. There is, therefore, a need for evidence-based clinical guidelines providing recommendations to treat periodontitis.

Aim: The objective of the current project was to develop a S3 Level Clinical Practice Guideline (CPG) for the treatment of Stage I-III periodontitis.

Material and Methods: This S3 CPG was developed under the auspices of the European Federation of Periodontology (EFP), following the methodological guidance of the Association of Scientific Medical Societies in Germany and the Grading of Recommendations Assessment, Development and Evaluation (GRADE). The rigorous and transparent process included synthesis of relevant research in 15 specifically commissioned systematic reviews, evaluation of the quality and strength of evidence, the formulation of specific recommendations and consensus, on those recommendations, by leading experts and a broad base of stakeholders.

Results: The S3 CPG approaches the treatment of periodontitis (stages I, II and III) using a pre-established stepwise approach to therapy that, depending on the disease stage, should be incremental, each including different interventions. Consensus was achieved on recommendations covering different interventions, aimed at (a) behavioural changes, supragingival biofilm, gingival inflammation and risk factor control; (b) supra- and sub-gingival instrumentation, with and without adjunctive therapies; (c) different types of periodontal surgical interventions; and (d) the necessary supportive periodontal care to extend benefits over time.

Conclusion: This S3 guideline informs clinical practice, health systems, policymakers and, indirectly, the public on the available and most effective modalities to treat periodontitis and to maintain a healthy dentition for a lifetime, according to the available evidence at the time of publication.

EFP Workshop Participants and Methodological Consultants are presented in Appendix 1.

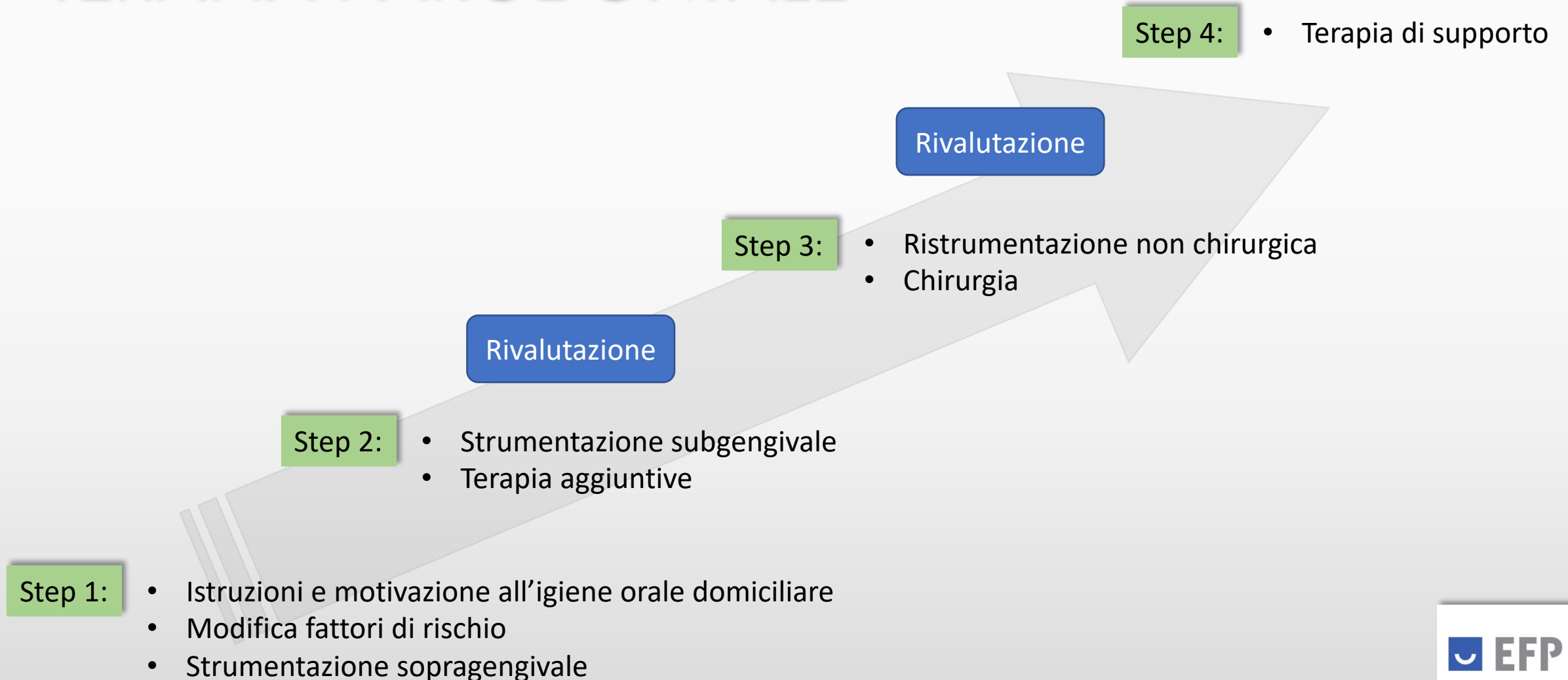
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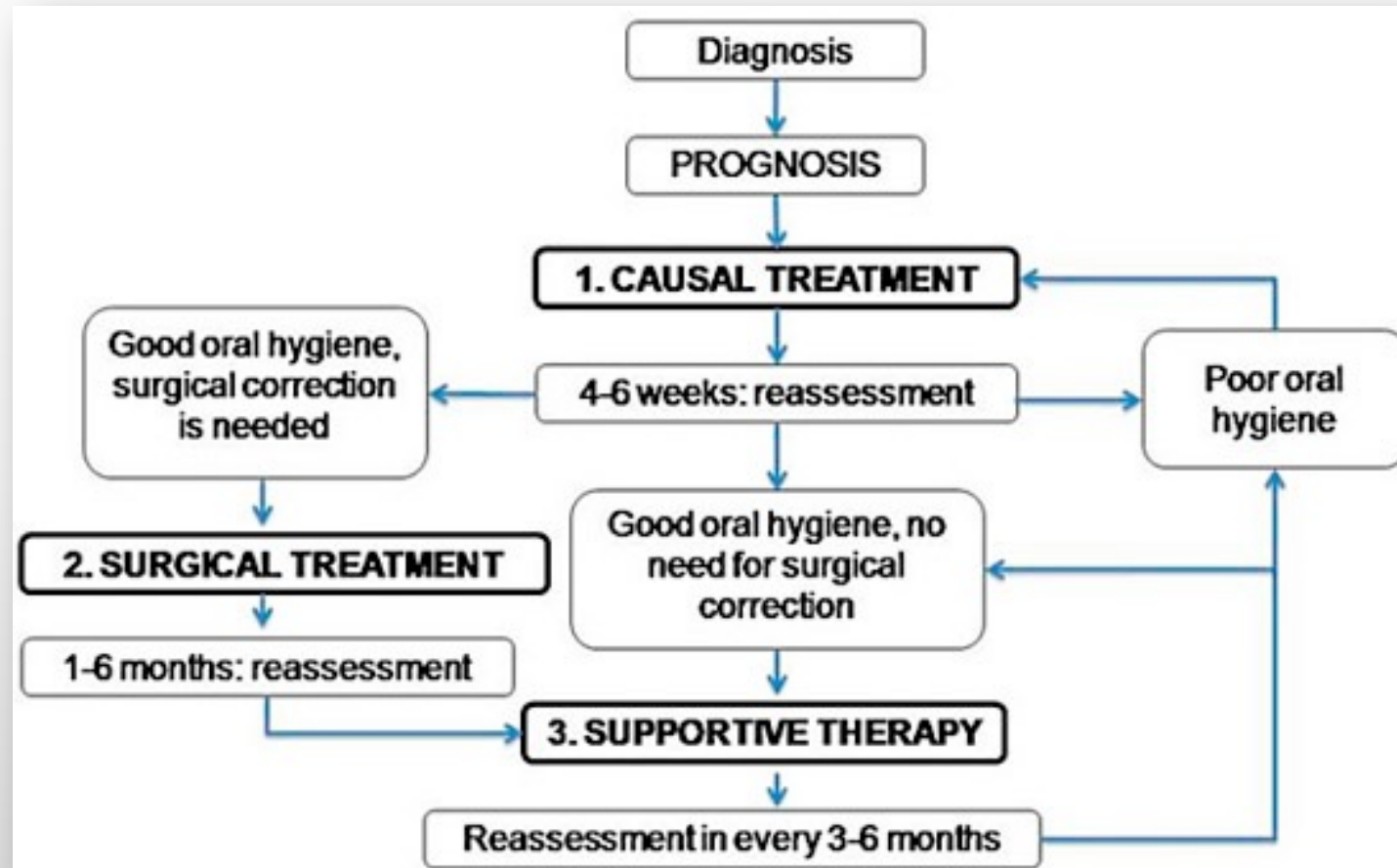
4 | wileyonlinelibrary.com/journal/jcpe

J Clin Periodontol. 2020;47:4–60.

TERAPIA PARODONTALE



TERAPIA PARODONTALE



Retrospective study of tooth loss in 92 treated periodontal patients

Checchi L, Montevercchi M, Gatto MRA, Trombelli L: Retrospective study of tooth loss in 92 treated periodontal patients. J Clin Periodontol 2002; 29: 651–656.
© Blackwell Munksgaard, 2002

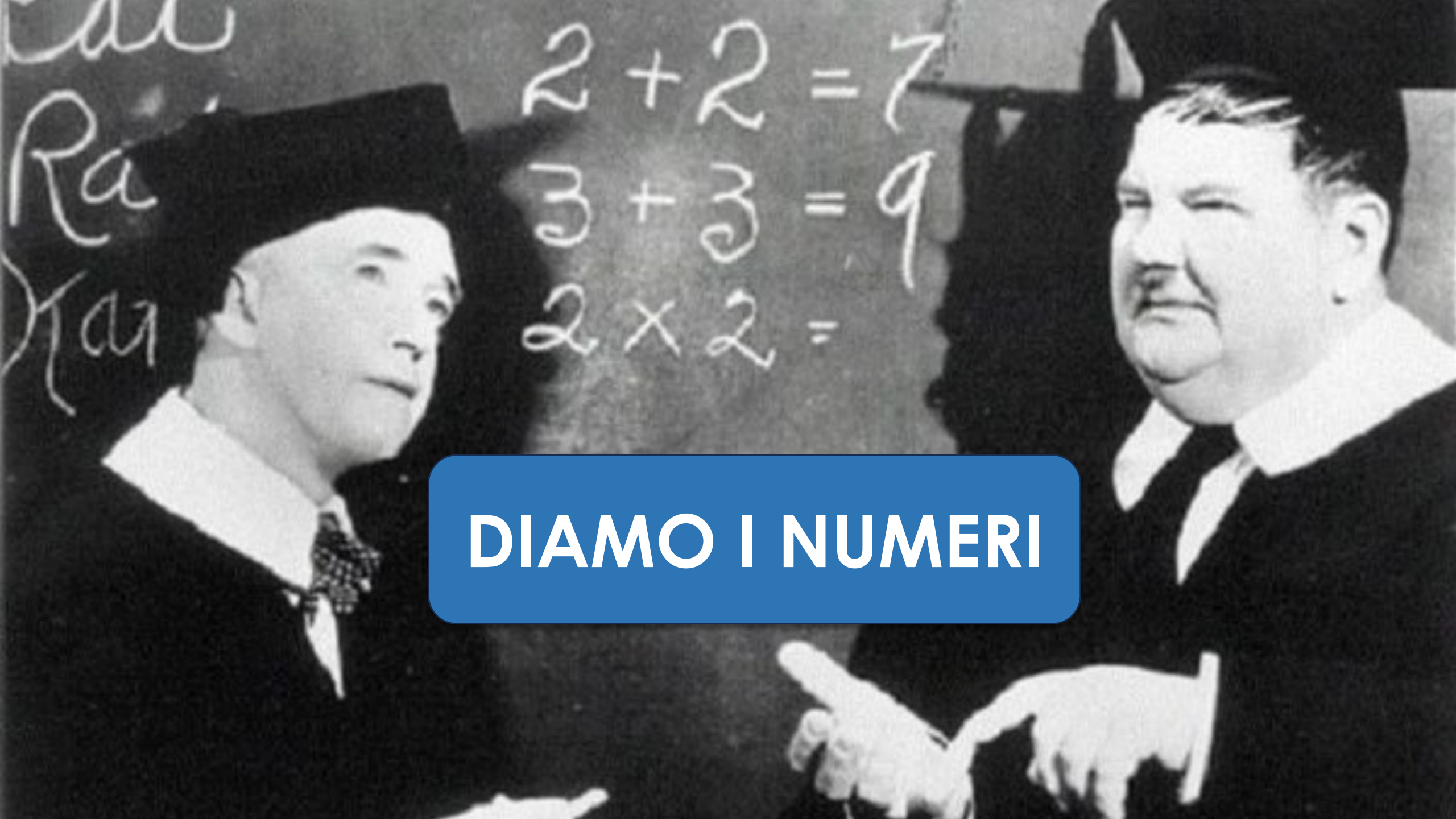
Abstract

Background/Aims: In this retrospective study, the efficacy of periodontal therapy and maintenance in preventing tooth loss was evaluated.

Methods: The study included 92 patients with 2310 teeth diagnosed with chronic adult periodontitis and observed over a mean period of 6.7 years, with each patient receiving surgical therapy in two or more quadrants. The group was divided into two subgroups: those who complied with the recommended maintenance schedule and those whose compliance was erratic. Individual tooth prognosis was assigned according to radiographic parameters.

Results: At the completion of active periodontal therapy, 2184 teeth were present. During the maintenance period, 44 teeth were lost due to periodontal reasons. Tooth mortality revealed a mean annual adjusted tooth loss rate of 0.07/year. Molars were the teeth most frequently lost; canines the least. The number of teeth lost in the three prognostic categories was: one (0.07%) for teeth with good prognoses, 21 (3.63%) for questionable prognoses and 22 (11.34%) for hopeless prognoses. Patients complying erratically with supportive periodontal therapy were at a 5.6 times greater risk for tooth loss following active therapy than regularly compliant patients.

Conclusions: The results demonstrated a low tooth mortality rate in periodontal patients following active treatment combined with a strict maintenance program.



DIAMO I NUMERI

$$2 + 2 = 7$$

$$3 + 3 = 9$$

$$2 \times 2 =$$

La
Ra
Ma

I NUMERI

36 società di parodontologia nazionali rappresentate all'interno dell'EFP

4 società scientifiche di livello Europeo oltre all'EFP proponente

E. Federation of Conservative Dentistry

E. Association of Dental Public Health

E. Society for Endodontology

E. Prosthodontic Association

+ Altre organizzazioni coinvolte: European Dental Hygienists' Association,...

15 revisioni sistematiche – schema PRISMA (pubblicate su numero speciale JCP)

4 gruppi di lavoro:

a. stadi di parodontite I-II

b. Parodontite stadio II

c. Parodontite stadio III con difetti intraossei e/o forcazioni

d. Terapia parodontale di supporto

62 raccomandazioni cliniche specifiche per il trattamento

Struttura delle raccomandazioni

- ❑ Ogni raccomandazione scaturisce da una domanda
 - Alla cui risposta corrisponde un **grado di raccomandazione**
- ❑ Viene riportata la letteratura di supporto
- ❑ La qualità dell'evidenza
- ❑ **Forza del consenso** al grado di raccomandazione
- ❑ E relativo background

GRADO DI RACCOMANDAZIONE

GRADO DI RACCOMANDAZIONE GRADO*	DESCRIZIONE	ESPRESSIONE
A	Forte raccomandazione	Raccomandiamo (↑↑)/ Raccomandiamo di non (↓↓)
B	Raccomandazione	Suggeriamo di (↑) / Suggeriamo di non (↓)
0	Raccomandazione aperta	Può essere considerato (↔)

German Association of the Scientific Medical Societies (AWMF) and Standing Guidelines Commission (2012)

FORZA DEL CONSENSO

Consenso unanime	Accordo di 100 % dei partecipanti
Forte consenso	Accordo di > 95 % dei partecipanti
Consenso	Accordo di 75 – 95 % dei partecipanti
Maggioranza semplice	Accordo di 50 – 74 % dei partecipanti
Nessun consenso	Accordo di <50 % dei partecipanti

German Association of the Scientific Medical Societies (AWMF) and Standing Guidelines Commission (2012)

R 3.13 *Qual è la scelta adeguata di biomateriali rigenerativi per il trattamento rigenerativo delle tasche profonde residue associate al coinvolgimento della forcazione vestibolare mandibolare e mascellare di classe II?*

Raccomandazione basata sull'evidenza

- **Raccomandiamo di trattare i molari con tasche residue associate al coinvolgimento di classe II della forcazione vestibolare mandibolare e mascellare con la terapia rigenerativa parodontale, usando solo un derivato della matrice dello smalto o un innesto derivato dall'osso con o senza membrane riassorbibili***
 - **Letteratura di supporto** (Jepsen, et al. 2019)
 - **Grado di raccomandazione** Grado A – ↑↑
 - **Forza di consenso** Maggioranza semplice [12,7% del gruppo si è astenuto a causa del potenziale conflitto di interessi (CoI)]
-



Progetto «gengive sane per salvare il sorriso, le linee guida della terapia delle parodontiti»

Società Italiana di Parodontologia ed Implantologia - SIdP **Commissione Albo Odontoiatri - CAO**

Panel inter-societario

- Accademia Italiana di Endodonzia - AIE
- Accademia Italiana di Odontoiatria Conservativa e Restaurativa - AIC
- Associazione Igienisti Dentali Italiani -AIDI
- Associazione Medici Cardiologi Ospedalieri - ANMCO
- Associazione Nazionale Medici Diabetologi - AMD
- Società Italiana dell'Ipertensione Arteriosa - SIIA
- Società Italiana di Diabetologia - SID
- Società Italiana Odontoiatria e Chirurgia Maxillo-Facciale - SIOCMF
- Società Scientifica dei Medici Legali e delle Aziende Sanitarie del Servizio Sanitario Nazionale - COMLAS



Istituto Superiore di Sanità - ISS





Roma, 16 novembre 2023

“Treatment of Stage IV Periodontitis: The EFP S3-level Clinical Practice Guideline”

13 revisioni sistematiche

Received: 19 February 2022 | Accepted: 22 April 2022
DOI: 10.1111/jcpe.13639

CLINICAL PRACTICE GUIDELINE

Journal of Clinical
Periodontology WILEY

Treatment of stage IV periodontitis: The EFP S3 level clinical practice guideline

David Herrera¹ | Mariano Sanz¹ | Moritz Kebschull^{2,3,4} | Søren Jepsen⁵ |
Anton Sculean⁶ | Tord Berglundh⁷ | Panos N. Papapanou⁴ |
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and Methodological Consultant

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Funding Information

European Federation of Periodontology (EFP)

Abstract

Background: The recently published clinical practice guideline (CPG) for the treatment of periodontitis in stages I–III provided evidence-based recommendations for the treatment of periodontitis patients, defined according to the 2018 classification. Stage IV periodontitis shares the severity and complexity characteristics of stage III periodontitis, but includes the anatomical and functional sequelae of tooth and periodontal attachment loss (tooth flaring and drifting, bite collapse, etc.), which require additional interventions following completion of active periodontal therapy.

Aim: To develop an S3 Level CPG for the treatment of stage IV periodontitis, focusing on the implementation of inter-disciplinary treatment approaches required to treat/rehabilitate patients following associated sequelae and tooth loss.

Materials and Methods: This S3 Level CPG was developed by the European Federation of Periodontology (EFP), following methodological guidance from the Association of Scientific Medical Societies in Germany and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) process. A rigorous and transparent process included synthesis of relevant research in 13 specifically commissioned systematic reviews, evaluation of the quality and strength of evidence, the formulation of specific recommendations and a structured consensus process with leading experts and a broad base of stakeholders.

Results: The S3 Level CPG for the treatment of stage IV periodontitis culminated in recommendations for different interventions, including orthodontic tooth movement,

EFP workshop participants and methodological consultant are listed in Appendix.

4 | © 2022 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. [wileyonlinelibrary.com/doi/10.1111/jcpe.13639](https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13639) | J Clin Periodontol. 2022;49(Suppl. 24):4–71.

European Federation of Periodontology (EFP) & World Heart Federation (WHF)

Perio-Cardio Workshop

Madrid, febbraio 2019

Consensus Report

Journal of Clinical Periodontology (2020)

Global Heart (2020)

Received: 6 June 2019 | Revised: 13 August 2019 | Accepted: 22 August 2019
DOI: 10.1111/jcpe.13189

ORIGINAL ARTICLE

Journal of Clinical Periodontology

WILEY

Periodontitis and cardiovascular diseases: Consensus report

Mariano Sanz¹ | Alvaro Marco del Castillo² | Søren Jepsen³ | Jose R. Gonzalez-Juanatey⁴ | Francesco D'Alto⁵ | Philippe Bouchard⁶ | Iain Chapple⁷ | Thomas Dietrich⁷ | Israel Gotsman⁸ | Filippo Graziani⁹ | David Herrera¹⁰ | Bruno Loos¹⁰ | Phoebe Madianos¹¹ | Jean-Baptiste Michel¹² | Pablo Perel^{13,14} | Burkert Pieske^{15,16} | Lior Shapira¹⁷ | Michael Shechter¹⁸ | Maurizio Tonetti¹⁹ | Charalambos Vlachopoulos²⁰ | Gernot Wimmer²¹

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⁸Heart Institute, Hadassah University Hospital, Jerusalem, Israel
⁹Department of Surgical, Medical and Molecular Pathology and Critical Care Medicine, University of Pisa, Pisa, Italy
¹⁰ACTA University, Amsterdam, The Netherlands
¹¹Department of Periodontology, School of Dentistry, National and Kapodistrian University of Athens, Athens, Greece
¹²Inserm Unit 1148, Laboratory for Translational CV Science, X. Bichat Hospital, Paris, France
¹³World Heart Federation, Geneva, Switzerland
¹⁴Centre for Global Chronic Conditions, London School of Hygiene & Tropical Medicine, London, UK
¹⁵Department of Internal Medicine & Cardiology, Charité Universitätsmedizin Berlin, Berlin, Germany
¹⁶DZHK (German Center for Cardiovascular Research) Partnersite Berlin, German Heart Institut Berlin, Berlin, Germany
¹⁷Department of Periodontology, Hebrew University - Hadassah Faculty of Dental Medicine, Jerusalem, Israel
¹⁸Levi Heart Center, Chaim Sheba Medical Center, Tel Hashomer and the Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv-Yafo, Israel
¹⁹Department of Periodontology, Prince Philip Dental Hospital, The University of Hong Kong, Hong Kong, Hong Kong
²⁰1st Department of Cardiology, National and Kapodistrian University of Athens, Athens, Greece
²¹Department of Prosthetic Dentistry, School of Dental Medicine, Karl-Franzens University Graz, Graz, Austria

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Email: mariano.sanz@ucm.es

Funding information
DENTAD Oral Health Experts

Abstract

Background: In Europe cardiovascular disease (CVD) is responsible for 3.9 million deaths (45% of deaths), being ischaemic heart disease, stroke, hypertension (leading to heart failure) the major cause of these CVD related deaths. Periodontitis is a chronic non-communicable disease (NCD) with a high prevalence, being severe periodontitis, affecting 11.2% of the world's population, the sixth most common human disease.

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GLOBAL HEART

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EXPERT CONSENSUS DOCUMENT

Periodontitis and Cardiovascular Diseases. Consensus Report

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Background: In Europe cardiovascular disease (CVD) is responsible for 3.9 million deaths (45% of deaths), being ischaemic heart disease, stroke, hypertension (leading to heart failure) the major cause of these CVD related deaths. Periodontitis is also a chronic non-communicable disease (NCD) with a high prevalence, being severe periodontitis, affecting 11.2% of the world's population, the sixth most common human disease.

Material and Methods: There is now a significant body of evidence to support independent associations between severe periodontitis and several NCDs, in particular CVD. In 2012 a joint workshop was held between the European Federation of Periodontology (EFP) and the American Academy of Periodontology to review the literature relating periodontitis and systemic diseases, including CVD. In the last five years important new scientific information has emerged providing important emerging evidence to support these associations.

Results and Conclusions: The present review reports the proceedings of the workshop jointly organised by the EFP and the World Heart Federation (WHF), which has updated the existing epidemiological evidence for significant associations between periodontitis and CVD, the mechanistic links and the impact of periodontal therapy on cardiovascular and surrogate

