



*Recurrence of periodontal disease: need for re-treatment in a
Stage III, Grade C, Generalized periodontitis patient.
How to deal with?*

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UNIVERSITÀ
DEGLI STUDI
FIRENZE



July 2022

patient

Tania M
Female
41 yo
Teacher

medical history

General
good
health

stress 7/10

ASA II

- A patient with mild systemic disease
- Mild disease only without substantive functional limitations. Examples include (but not limited to): Current smoker, social alcohol drinker, pregnancy, obesity (30 < BMI < 40), well controlled DM/HTN, mild lung disease

”My gums bleed again.”

Patient factor	Periodontium	Functional	Esthetics
Compliant	Generalized gingival recession	No major occlusal discrepancies or interferences	Inter-incisive line ok
Smoker 5/die	Generalized loss of attachment		Crowding lower incisors





Dental history

conservative
treatment

periodontal
treatment

last check up:
6 months
ago

Buccal	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28																											
PD		4	2	5	5	1	7	6	1	3	3	1	3	6	2	6	7	1	7	5	1	8	6	1	6	5	1	3	6	1	2	4	1	2	5	1	5	5	2	7	7	2	5
REC		2	2	3	5	4	3	3	1	3	6	2	1	3	1	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
PI																																											
BoP																																											
Furcatio		^		^																																							

Lingual	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28																											
PD		3	2	5	5	1	7	5	1	4	4	1	4	4	1	4	4	1	5	6	1	7	6	1	6	7	2	6	3	1	3	5	1	3	5	1	3	5	1	5	5	3	5
REC				2	2	6	5	4	2																																		
PI																																											
BoP																																											
Furcatio		^	^	^	^																																						
Other																																											
Mobilit					1		1																																				

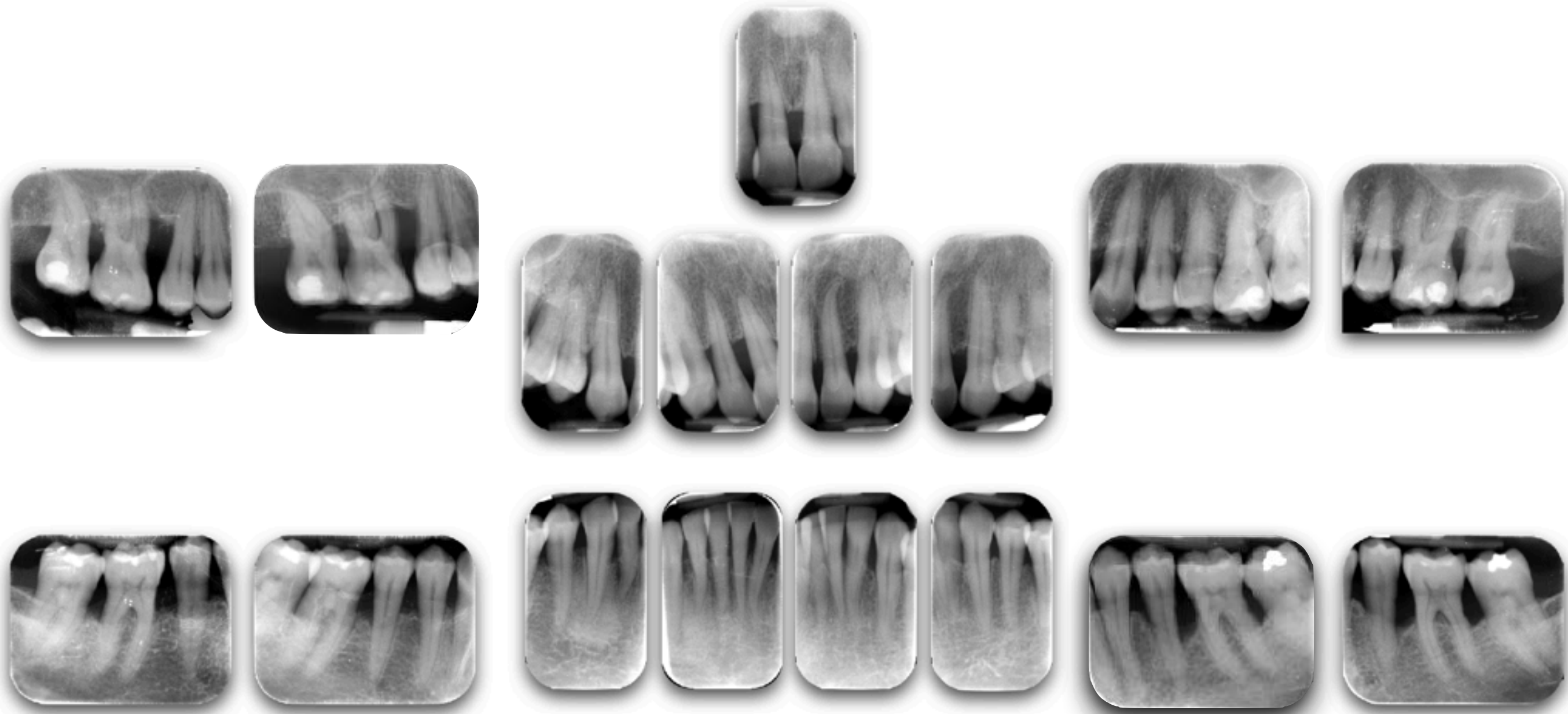
Lingual	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38																											
PD		3	3	5	6	3	5	5	3	4	5	3	4	5	3	4	6	1	5	5	1	4	3	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REC		1	1	1	2	2	2	2	3	2																																	
PI																																											
BoP																																											
Furcatio		^		^																																							

Buccal	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38																										
PD		3	3	4	6	2	3	5	1	3	4	1	3	5	1	7	4	2	4	4	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REC		1				2	2	2	4	2																																
PI																																										
BoP																																										
Furcatio		^		^																																						
Other																																										
Mobilit		1		1		1				1		1		1		1		1		1		1																				

Oral hygiene habits

manual toothbrush
2/die

interproximal
devices



Teeth present: 28

Teeth with PPD≥ 5 mm: 23

Baseline - July 2022		n/total	%
FMBS		85/168	51%
FMPS		105/168	63%
PPD	≤3 mm	91/168	54%
	4 mm	17/168	10%
	≥5 mm	60/168	36%

2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions

Papapanou et al.

J Clin Periodontol 2018

Generalized Stage III grade C periodontitis

Risk factors

- smoking
- illness or low defenses
- stress
- genetics
- oral hygiene
- personal medical condition

Indicators of risk

- occlusion
- hormonal changes
- cardiovascular disease
- obesity

Local aggravating factors

- overcrowding/retaining fillings
- tooth anatomical factors
- root fracture/intern resorption
- root proximity
- altered passive eruption
- endo-periodontal lesions
- buccal breathing

2017



Buccal	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
PD		4 2 3	4 1 5	4 1 3	3 1 3	3 2 4	4 1 4	4 1 4	3 1 4	3 1 3	4 1 2	4 1 2	4 1 4	3 2 5	5 2 3	
REC			1 1	4 4 3		1	2	1 1				1		2 2		
PI																
BoP																
Furcatio		Λ	Λ											Λ		
Lingual	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
PD		3 2 4	3 1 5	3 1 4	3 1 3	4 1 3	4 1 4	4 1 4	5 2 4	3 1 3	3 1 3	4 1 3	4 2 3	3 1 4	4 4 3	3
REC			1 1	5 5 3	1				1					5 4	2 2	
PI																
BoP																
Furcatio		Λ	Λ	Δ	Δ									Λ		Λ
Other																
Mobilit																
Buccal	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
PD		3 3 3	5 3 3	3 3 4	4 3 4	4 1 3	3 1 4	3 1 1	2 2 2	1 1 1	3 1 2	2 2 4	3 2 4	3 2 4	4 4 2	3
REC			1 2 2	1 2 2			2 1 2	1 2 1	2 1 2	1 1 2	2 1 2		1 3 2	2 3 1	1 1 2	1
PI																
BoP																
Furcatio		Λ	Δ											Λ		
Lingual	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
PD		3 3 4	5 2 3	4 1 3	4 1 3	3 1 4	4 2 4	4 1 2	1 1 1	2 1 4	3 2 1	2 1 2	3 1 5	3 3 4	4 4 3	3
REC		1 1	1	1 2 2	1		1	1 2	1 1	2 1 1	2 1 1	1 2 1	3 1	1 1	2 1	
PI																
BoP																
Furcatio		Λ	Λ											Λ	Λ	
Other																
Mobilit																

Teeth present: 28

Teeth with PPD ≥ 5 mm

Baseline - June 2022

2022



Buccal	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
PD		4 2 5	5 1 7	6 1 3	3 1 3	6 2 6	7 1 7	5 1 8	6 1 6	5 1 3	6 1 2	4 1 2	5 1 5	5 2 7	7 2 5	
REC		2	2 3	5 4 3	1	2	1 3	1 2 2	1	1	1	2	5 1	5 2	2 2	
PI																
BoP																
Furcatio		Λ	Λ											Λ		
Lingual	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
PD		3 2 5	5 1 7	5 1 4	4 1 4	4 1 5	6 1 7	6 1 6	7 2 6	3 1 3	5 1 3	5 1 3	5 2 3	5 1 5	5 3 5	
REC			2 2 6	5 4 2			3	1 1	1 1 1	2 1 1	1 1 1	2 1 1	2 1 1	5 4 2	2 2	
PI																
BoP																
Furcatio		Λ	Λ	Λ	Λ									Λ	Λ	
Other							sup dist									
Mobilit				1	1			1								
Buccal	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
PD		3 3 5	6 3 5	5 3 4	5 3 4	6 1 5	5 1 4	3 1 1	2 2 2	1 1 1	3 1 2	2 2 2	5 5 2	8 5 2	5 5 2	5
REC		1 1 1	2 2 2	2 2 3	2		1 3	1 1 1	2 1 1	1 1 1	2 1 1	2 1 1	2 5 3	3 3 3	2 2 2	
PI																
BoP																
Furcatio		Λ	Λ											Λ	Λ	
Lingual	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
PD		3 3 4	6 2 3	5 1 3	4 1 3	5 1 7	4 2 4	4 1 2	1 1 1	2 1 1	4 3 2	1 2 1	2 1 2	3 1 8	4 3 6	4 3 5
REC		1	2	2 4 2	1		1 1	1 1	1 2	1 1 1	1 1 1	2 1 1	2 1 1	3 1 1	1 2 1	3
PI																
BoP																
Furcatio		Λ	Λ											Λ	Λ	
Other																
Mobilit		1	1	1		1	1	1	1	1			1			

≥5 mm

60/168

36%

Teeth present: 28

Teeth with $PPD \geq 5$ mm: 23

Baseline - July 2022		n/total	%
FMBS		85/168	51%
FMPS		105/168	63%
PPD	≤ 3 mm	91/168	54%
	4 mm	17/168	10%
	≥ 5 mm	60/168	36%

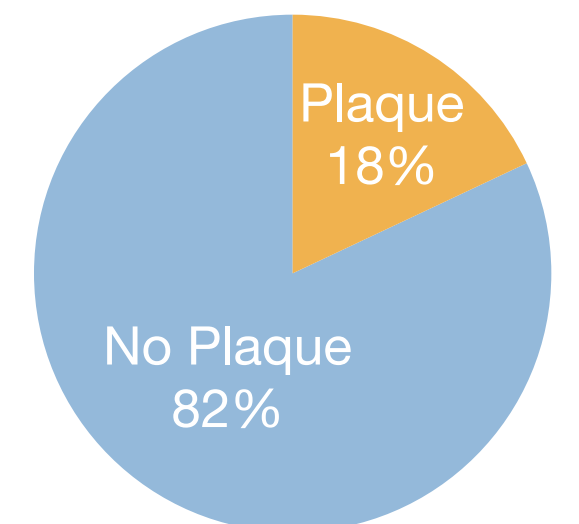
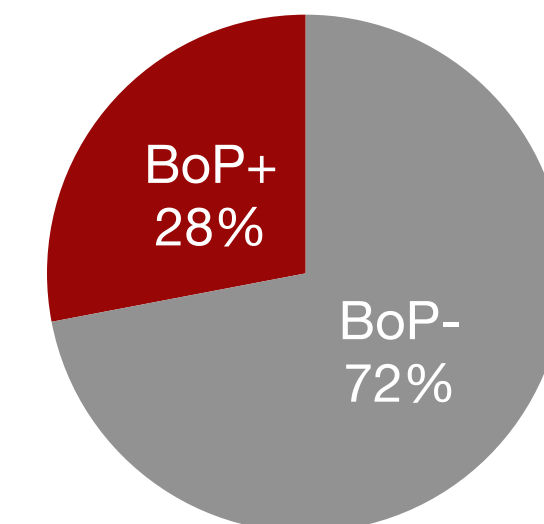


Teeth present: 28

Teeth with $PPD \geq 5$ mm: 15

Re-evaluation - Nov 2022		n/total	%
FMBS		47/168	28%
FMPS		31/168	18%
PPD	≤ 3 mm	114/168	68%
	4 mm	25/168	15%
	≥ 5 mm	29/168	17%

- OHI and motivation
- Smoke cessation
- Quadrant-wise approach



BoP + BoP - P + P -



Re-instrumentation with systemic antibiotics

- Amoxicillin 500mg x 3/die, 14 days
- Metronidazole 400mg x 3/die, 14 days

Teeth present: 28			
Teeth with PPD≥ 5 mm: 10			
Re-evaluation - May 2023		n/total	%
FMBS		21/168	13%
FMPS		19/168	11%
PPD	≤3 mm	123/168	73%
	4 mm	23/168	14%
	≥5 mm	22/168	13%



Premio Giorgio Vogel 2025

Step 3 - Treatment plan

Buccal	18	17			16			15			14			13			12			11			
PD			3	2	3	3	1	4	3	1	3	3	1	3	6	2	6	7	1	7	6	1	6
REC				2	2	2	3	6	3	3			1			2		1	3	2	3	2	2
PI																							
BoP																							
Furcation			^			^																	
Lingual	18	17			16			15			14			13			12			11			
PD			3	2	3	3	1	4	4	1	4	3	1	3	3	1	4	4	1	7	4	1	4
REC					3	2	6	6	3	2								2	1	2	2	1	2
PI																							
BoP																							
Furcation			Δ		^	Δ		Δ															
Other																							
Mobility																							
Lingual	48	47			46			45			44			43			42			41			
PD			3	3	3	4	3	3	3	2	3	3	3	3	4	1	3	3	2	3	3	1	1
REC			1	1	2	2	2	2	2	3	2				1			1	1	3	1	1	2
PI																							
BoP																							
Furcation			^			Δ																	
Buccal	48	47			46			45			44			43			42			41			
PD			3	3	4	4	2	3	3	1	3	4	1	3	3	2	4	3	2	3	3	2	2
REC				1		2	2	2	3	4	2		1		1		2			1	1		1
PI																							
BoP																							
Furcation			^			^																	
Other																							
Mobility																							

sextant I	sextant II	sextant III
- SPC	- Access flap, SFA	- MWF + DW
sextant VI	sextant V	sextant IV
- SPC	- SPC	- Reg, SFA #3.5

	21	22	23	24	25	26	27	28	Buccal											
PD	5	1	4	3	2	3	3	1	2	3	1	2	5	1	4	5	2	5		
REC	2		1		1			1			2					2	3	1	2	2
PI																				
BoP																				
Furcation																				



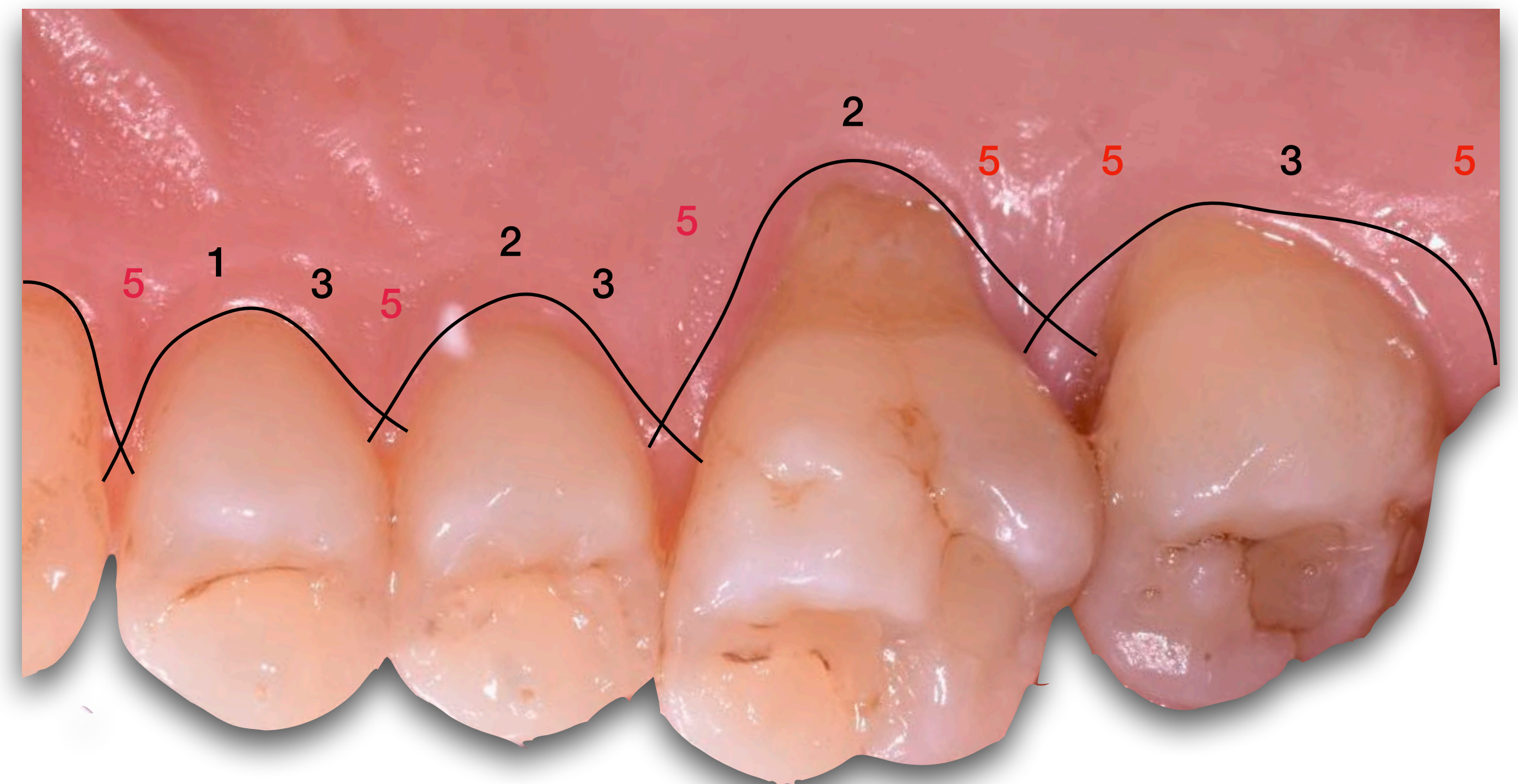
Premio Giorgio Vogel 2025

step 3 - July 2023

III sextant

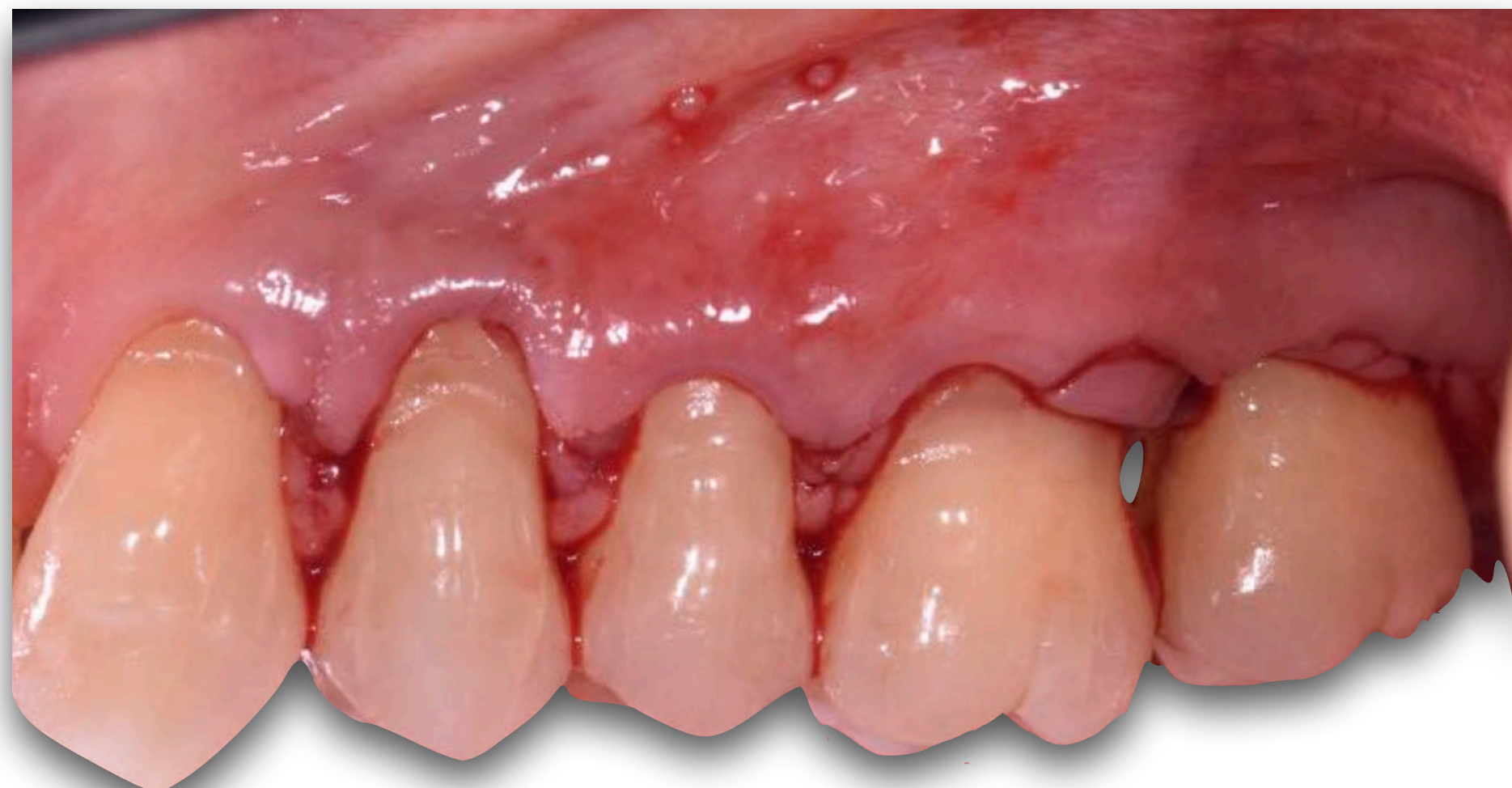


Buccal		24			25			26			27			28		
PD		3	1	2	5	1	4	5	2	5	5	2	5			
REC			2						2	3	1	2	2			
PI																
BoP																
Furcation																
								Λ								
Lingual		24			25			26			27			28		
PD		5	1	3	5	2	3	5	2	5	5	3	5			
REC									5	4	2	2				
PI																
BoP																
Furcation																
Other																
Mobility																



III sextant

Flap incision



Degranulation



Secondary
flap removal



Sutures



III sextant

Re-evaluation

<i>Buccal</i>	24			25			26			27			28	
PD	3	1	2	5	1	4	5	2	5	5	2	5		
REC		2						2	3	1	2	2		
PI														
BoP														
Furcatio														

<i>Lingua</i>	24			25			26			27			28	
PD	5	1	3	5	2	3	5	2	5	5	3	5		
REC								5	4	2	2			
PI														
BoP														
Furcatio														
Other														
Mobility														



1.5 year
after surgery

<i>Buccal</i>	24			25			26			27			28	
PD	3	1	2	3	1	3	3	2	4	4	2	3		
REC	1	2	1					2	2	2	2	2		
PI														
BoP														
Furcatio								Λ						

<i>Lingua</i>	24			25			26			27			28	
PD	2	1	3	3	2	3	3	1	4	3	3	3		
REC	1	2	1	1	2	1	1	6	4	4	2			
PI														
BoP														
Furcatio														
Other														
Mobility														

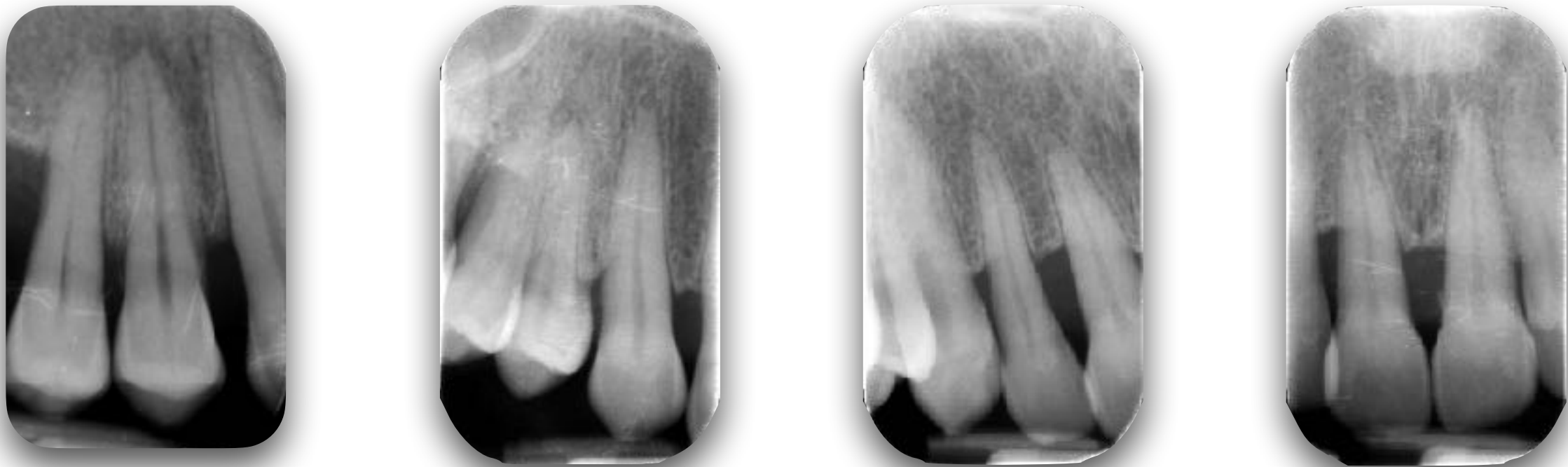


I-II sextant



<i>Buccal</i>	14			13			12			11			21		
PD	3	1	3	6	2	6	7	1	7	6	1	6	5	1	4
REC		1			2			1	3		2	3	2	2	1
PI															
BoP															
Furcation															

<i>Lingual</i>	14			13			12			11			21		
PD	3	1	3	3	1	4	4	1	7	4	1	4	7	2	4
REC							2	1	2	2	1	2	2		
PI															
BoP															
Furcation															
Other															
Mobility															



I - II sextant

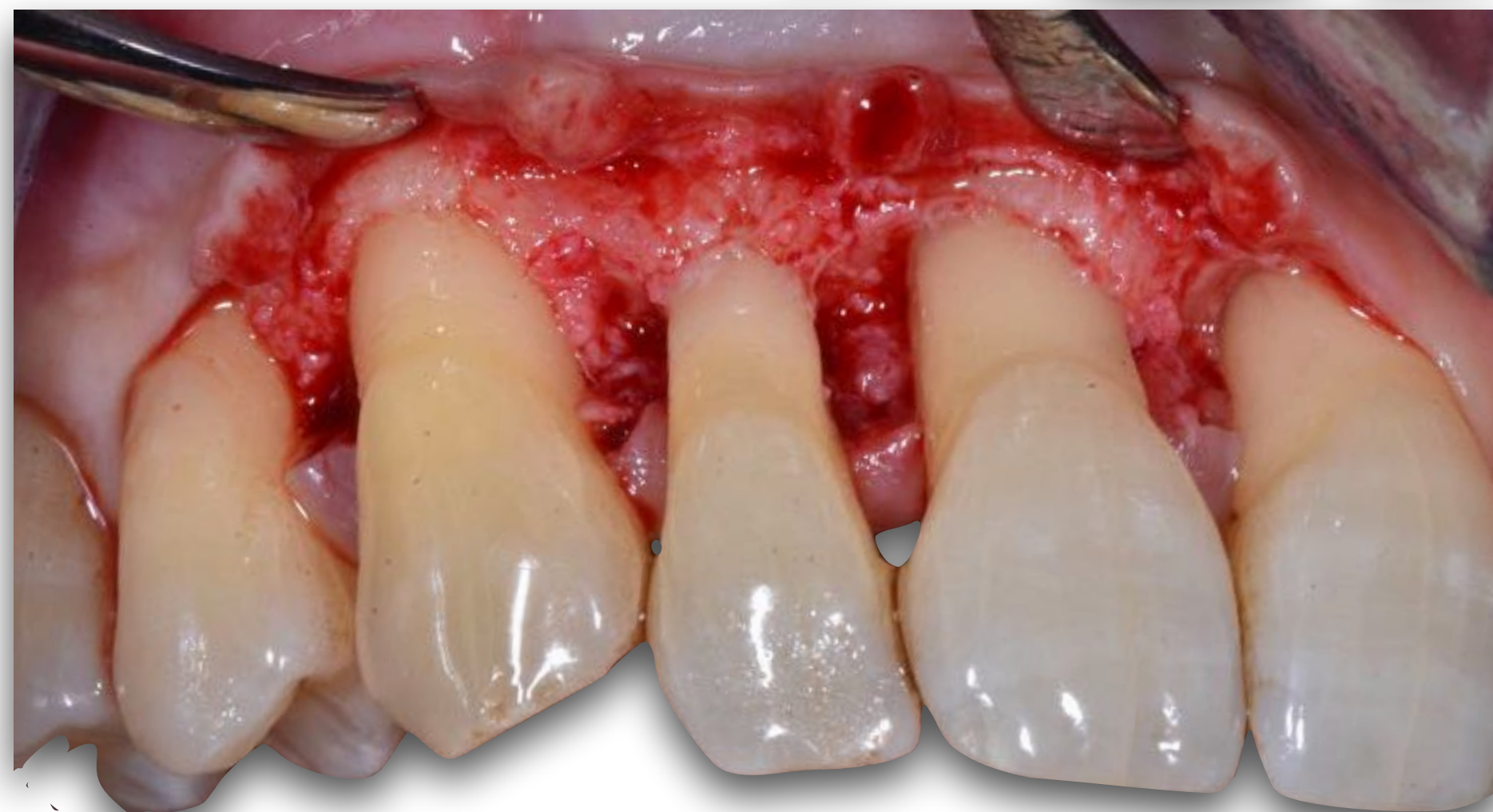
Flap
incision



Biomodulator
PN-HA

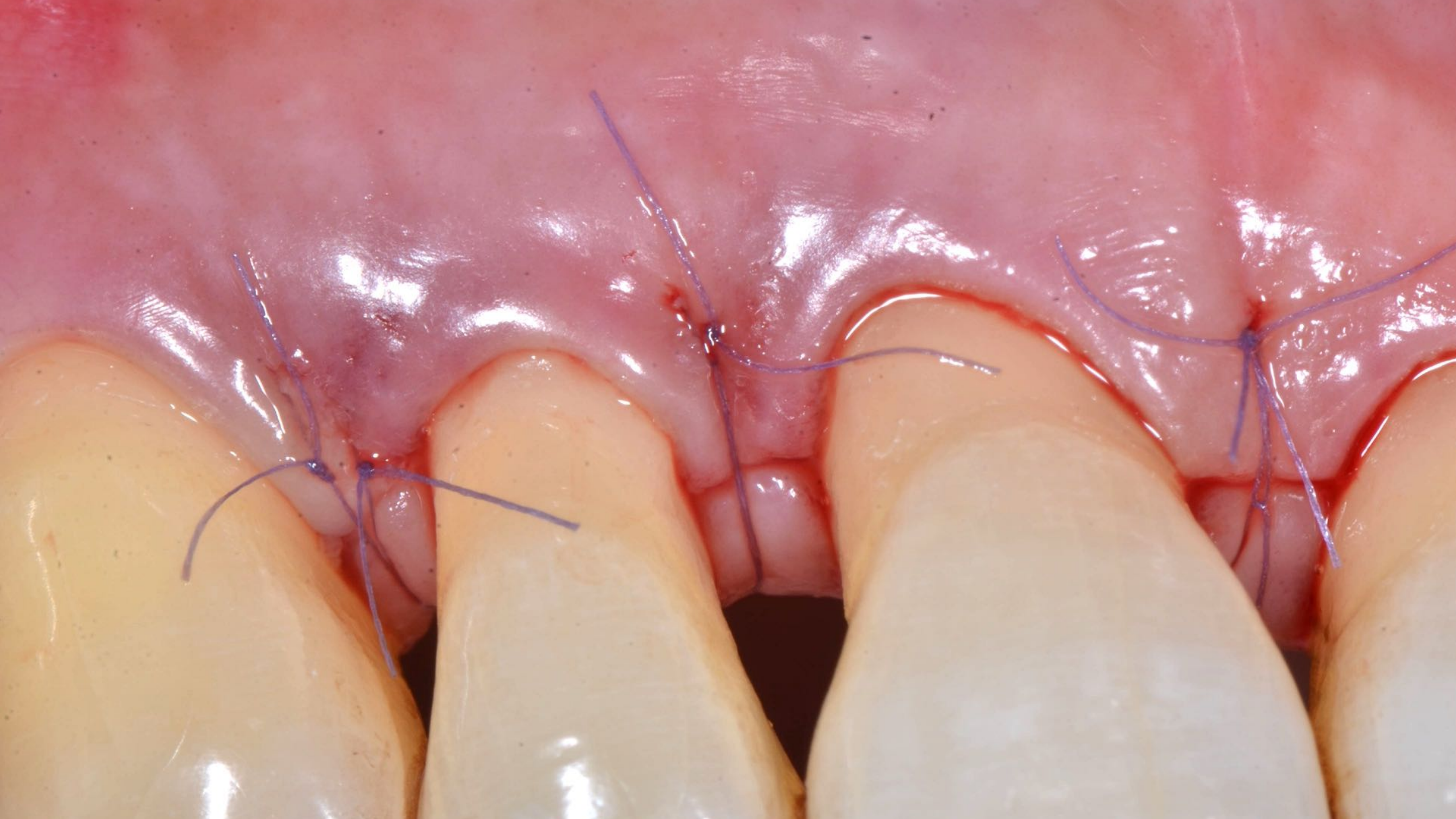


Defect
morphology



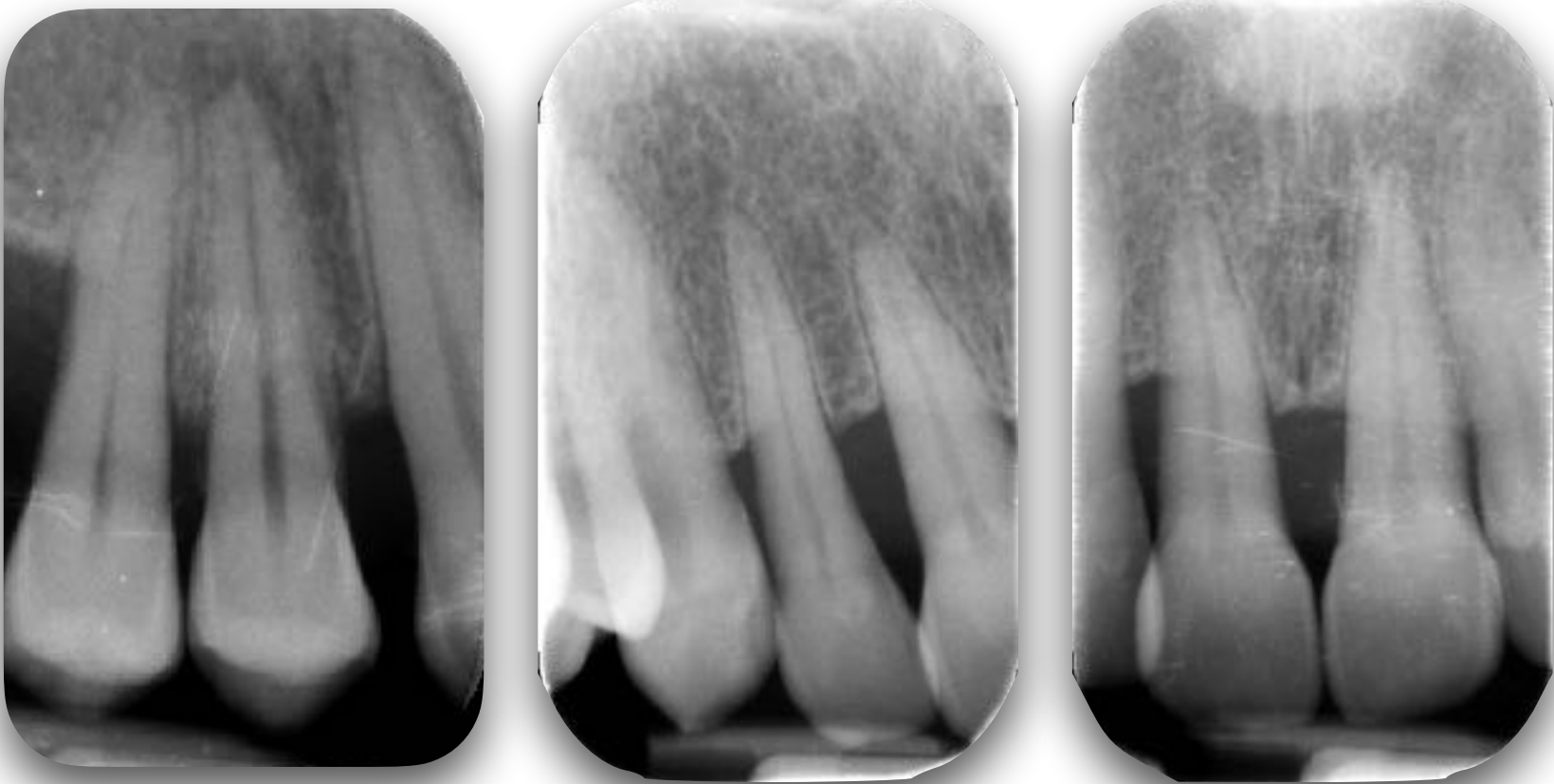
Sutures





Re-evaluation

<i>Buccal</i>	14			13			12			11			21		
PD	3	1	3	6	2	6	7	1	7	6	1	6	5	1	4
REC		1			2		1	3	2	3	2	2	2		1
PI															
BoP															
Furcation															
<i>Lingual</i>	14			13			12			11			21		
PD	3	1	3	3	1	4	4	1	7	4	1	4	7	2	4
REC							2	1	2	2	1	2	2		
PI															
BoP															
Furcation															
Other															
Mobility															



16 months after surgery

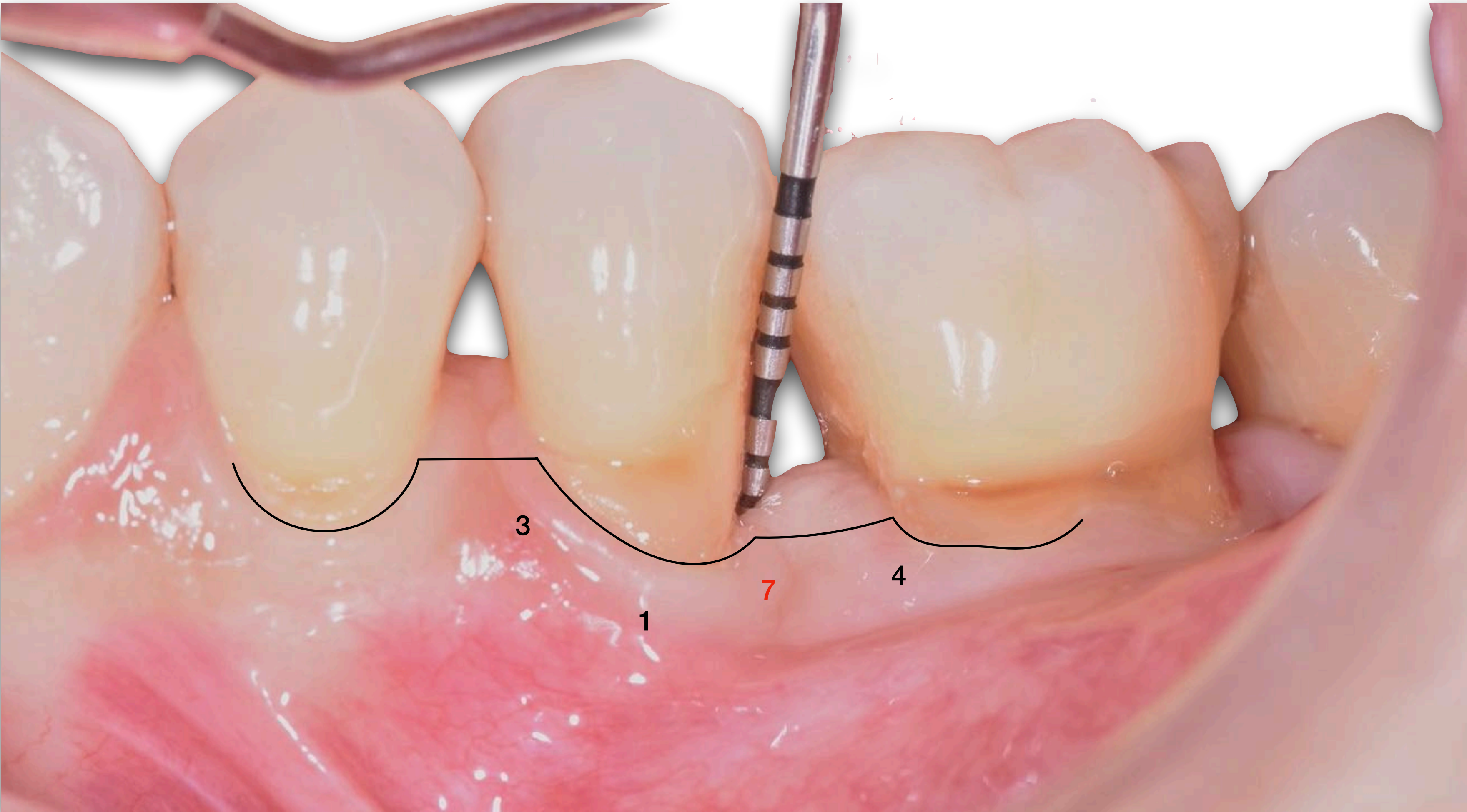
<i>Buccal</i>	14			13			12			11			21		
PD	3	1	3	3	2	3	4	1	4	4	1	4	3	1	3
REC		1			2			3	2	3	2	1	2	2	1
PI															
BoP															
Furcation															
<i>Lingual</i>	14			13			12			11			21		
PD	3	1	3	3	1	3	4	1	4	4	1	3	4	2	4
REC								1	2	3	1	2	2		
PI															
BoP															
Furcation															
Other															
Mobility															



IV sextant



Lingual	34			35			36			37			38	
PD	2	2	3	3	2	7	4	2	4	3	2	4		
REC				2	5	3	3	3	3	2	2	2		
PI														
BoP														
Furcation							^							
Buccal	34			35			36			37			38	
PD	2	1	2	3	1	7	4	3	3	4	3	4		
REC		2	1	1	3	3	1	1	2	1	3			
PI														
BoP														
Furcation							^			^				
Other														
Mobility														





IV sextant

Flap
incision



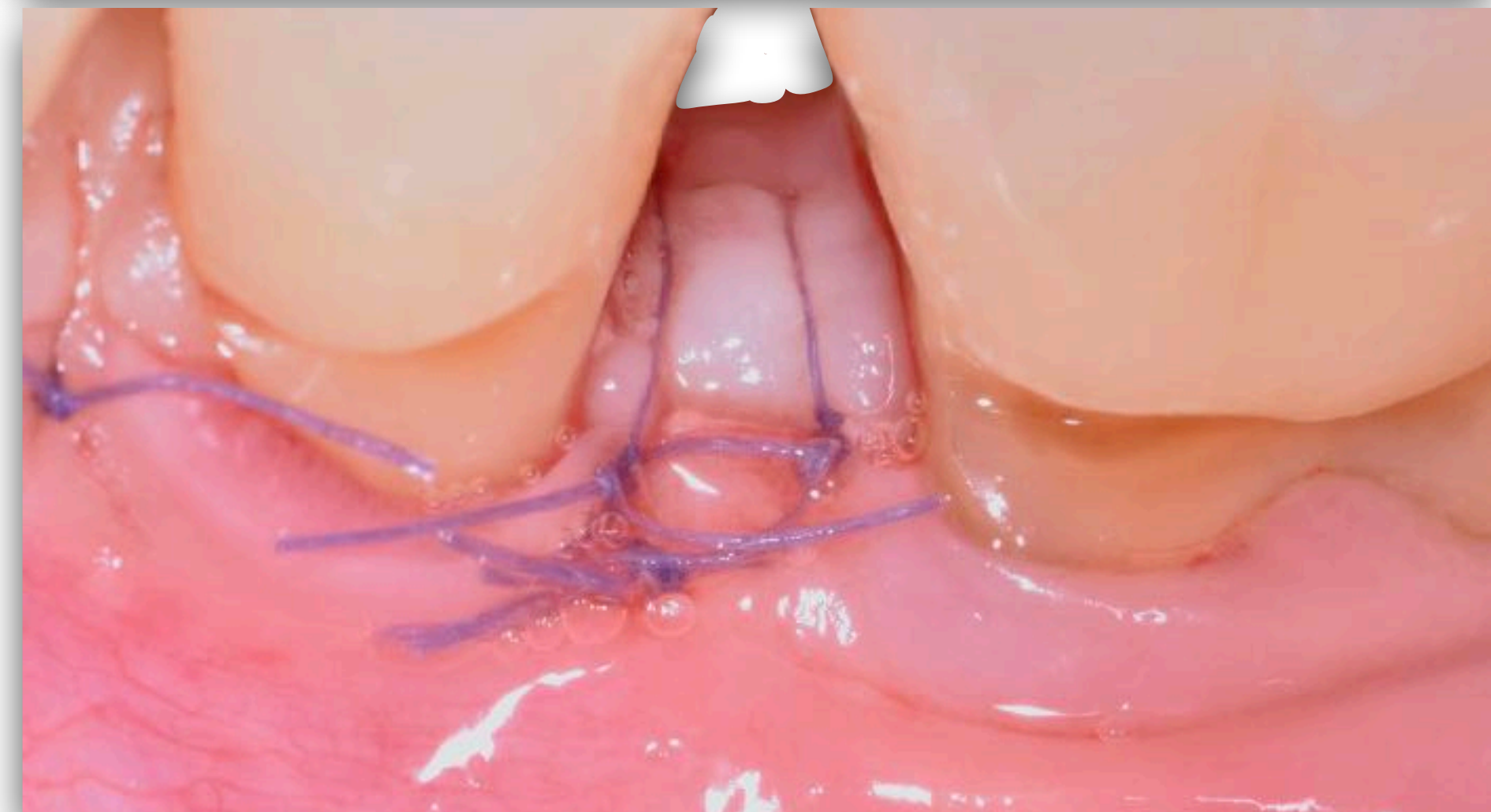
DBBM
+
EMD



Defect
morphology



Sutures



Premio Giorgio Vogel 2025

15/01/2025

Re-evaluation

Lingual	34			35			36			37			38	
PD	2	2	3	3	2	7	4	2	4	3	2	4		
REC				2	5	3	3	3	3	2	2	2		
PI														
BoP														
Furcation							^							
Buccal	34			35			36			37			38	
PD	2	1	2	3	1	7	4	3	3	4	3	4		
REC		2	1	1	3	3	1	1	2	1	3			
PI														
BoP														
Furcation							^			^				
Other														
Mobility														



14 months
after surgery

Lingual	34			35			36			37			38		
PD	2	2	3	3	2	4	4	2	4	3	2	4			
REC				2	5	3	3	3	3	2	2	2			
PI															
BoP															
Furcation							^								
Buccal	34			35			36			37			38		
PD	2	1	2	3	1	4	4	3	3	4	3	4			
REC		2	1	1	3	3	1	1	2	1	3				
PI															
BoP															
Furcation							^			^					
Other															
Mobility															



Premio Giorgio Vogel 2025

Dr. Folco Spoletti, University of Florence

Baseline

Buccal	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28																											
PD		4	2	5	5	1	7	6	1	3	3	1	3	6	2	6	7	1	7	5	1	8	6	1	6	5	1	3	6	1	2	4	1	2	5	1	5	5	2	7	7	2	5
REC		2		2	3	5	4	3			1				2		1	3	1	2	2			1		1		1															
PI																																											
BoP																																											
Furcati			^			^																																^					

Linaual	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28																											
PD		3	2	5	5	1	7	5	1	4	4	1	4	4	1	5	6	1	7	6	1	6	7	2	6	3	1	3	5	1	3	5	1	3	5	2	3	5	1	5	5	3	5
REC			2	2	6	5	4	2																																			
PI																																											
BoP																																											
Furcati																																											
Other																																											
Mobilit																																											

Linaual	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38																											
PD		3	3	5	6	3	5	5	3	4	5	3	4	6	1	5	5	1	4	3	1	1	2	2	1	1	1	1	3	1	2	2	2	5	5	2	8	5	2	5	5	2	5
REC		1	1	1	2	2	2	2	3	2																																	
PI																																											
BoP																																											
Furcati																																											

Buccal	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38																										
PD		3	3	4	6	2	3	5	1	3	4	1	3	5	1	7	4	2	4	4	1	2	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	
REC			1			2	2	2	4	2																																
PI																																										
BoP																																										
Furcati																																										
Other																																										
Mobilit																																										

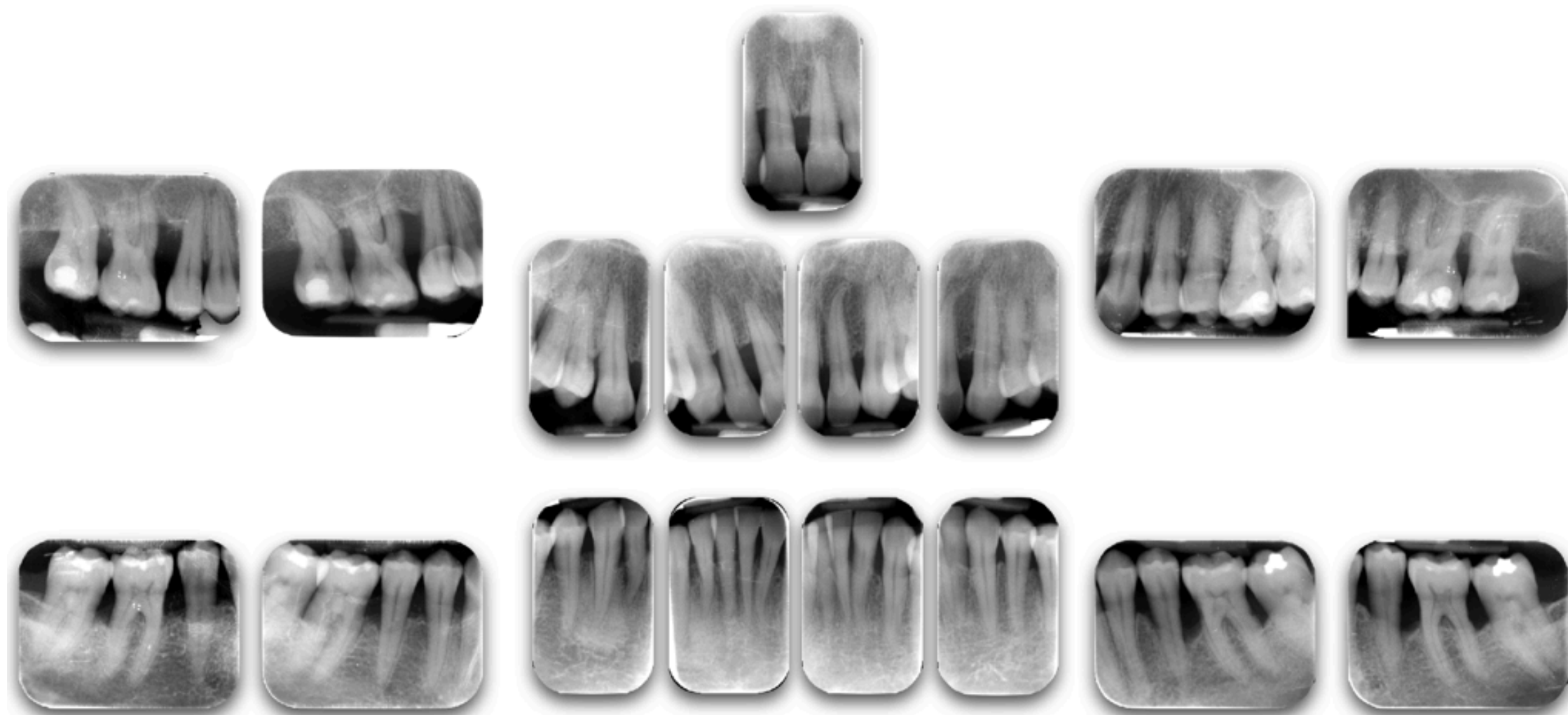
2.5 years of treatment

Buccal	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28																					
PD		4	2	3	3	1	4	4	1	3	3	1	3	3	2	3	4	1	4	4	1	4	3	1	3	4	1	3	3	2	4	4	2	3			
REC			2	2	2	3	6	3	3			1		2				3	2	3	2	1	2	2	1		1		1	1	2	1		2	2	2	
PI																																					
BoP																																					
Furcati			^			^																												^			

Linaual	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28																								
PD		3	2	3	3	1	4	4	1	4	3	1	3	3	1	3	4	1	4	4	1	3	4	2	4	3	1	3	3	1	3	2	1	3	3	1	4	3	3	3
REC				3	2	6	6	3	2									1	2	3	1	2	2													6	4	4	2	
PI																																								
BoP																																								
Furcati																																								
Other																																								
Mobilit																																								

Linaual	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38																							
PD		3	3	3	4	3	4	3	3	4	3	3	4	3	3	4	3	3	4	4	1	3	4	1	3	4	1	3	4	1	3	4	2	2	2	4	3	2	4
REC		1	1	2	2	2	2	2	3	2																													
PI																																							
BoP																																							
Furcati																																							

Buccal	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38																						
PD		3	3	4	4	2	3	3	1	3	4	1	3	3	1	4	4	2	4	4	1	2	1	1	1	2	1	1	1	2	1	1	1	1	1	2	1	1
REC			1																																			
PI																																						
BoP																																						
Furcati																																						
Other																																						
Mobilit																																						



Baseline



Baseline - July 2022		n/total	%
FMBS		85/168	51%
FMPS		105/168	63%
PPD	≤3 mm	91/168	54%
	4 mm	17/168	10%
	≥5 mm	60/168	36%

2.5 years of treatment



January 2025		n/total	%
FMBS		9/168	5%
FMPS		13/168	8%
PPD	≤3 mm	125/168	74%
	4 mm	43/168	26%
	≥5 mm	0/168	0%

Baseline

2.5 years of treatment

Tailored SPC will play a key-role

Intercept first signs of a possible recurrence

Continuous evaluation of teeth with questionable prognosis

Baseline - July 2022					January 2025			
		n/total	%				n/total	%
FMBS		85/168	51%	+	FMBS		9/168	5%
FMPS		105/168	63%		FMPS		13/168	8%
PPD	≤3 mm	91/168	54%		PPD	≤3 mm	125/168	74%
	4 mm	17/168	10%			4 mm	43/168	26%
	≥5 mm	60/168	36%			≥5 mm	0/168	0%

Aesthetic concern in a young patient



*Recurrence of periodontal disease: need for re-treatment in a Stage III, Grade C, Generalized periodontitis patient.
How to deal with?*

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