

SUPPLEMENTARY MATERIAL

Regression independent of non-cavitated caries lesion depth in a retrospective study of the biomimetic P₁₁-4 self-assembling peptide in school children

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Caries, Initial caries lesion, Self-assembling peptide, P₁₁-4, Curodont Repair

1 Supplementary Figures

Supplementary Figure S1 Patient's images. Subject "SA".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 26 distal (E1/E0)
- 27 mesial (E1/E0)
- 34 distal (E1/E0)
- 35 mesial (E1/E0)

SA1: Baseline X-ray from April 2018

SA2: Follow-up X-ray from October 2018 (6-month)



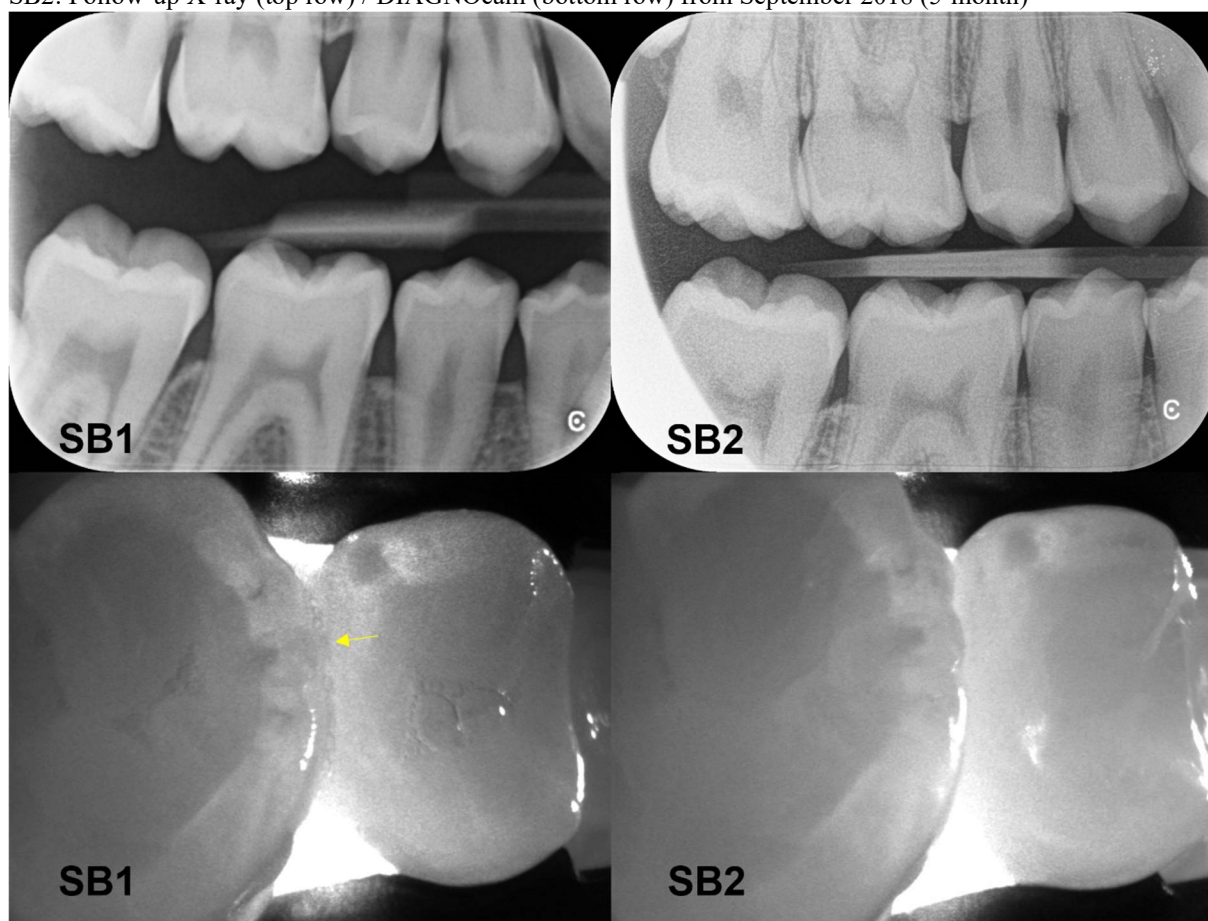
Supplementary Figure S2 Patient's images. Subject "SB".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 16 mesial (E1/E0)

SB1: Baseline X-ray (top row) / DIAGNOcam (bottom row) from April 2018

SB2: Follow-up X-ray (top row) / DIAGNOcam (bottom row) from September 2018 (5-month)



Supplementary Figure S3 Patient's images. Subject "SC".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 45 distal (E2/E1)

SC1: Baseline X-ray from January 2019

SC2: Follow-up X-ray from August 2019 (7-month)



Supplementary Figure S4 Patient's images. Subject "SD".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 26 mesial (E1/E0)

SD1: Baseline X-ray from March 2019

SD2: Follow-up X-ray from August 2019 (6-month)



Supplementary Figure S5 Patient's images. Subject "SE".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 16 mesial (E1/E0)

SE1: Baseline X-ray from December 2019

SE2: Follow-up X-ray from June 2020 (6-month)



Supplementary Figure S6 Patient's images. Subject "SF".

Location of the treated lesion (stage at baseline/stage at the 1st follow-up stage/stage at the 2nd follow-up):

- 37 mesial (E2/E1/E0)

SF1: Baseline X-ray from February 2017

SF2: 1st follow-up X-ray from September 2017 (6-month)

SF3: 2nd follow-up X-ray from February 2019 (24-month)



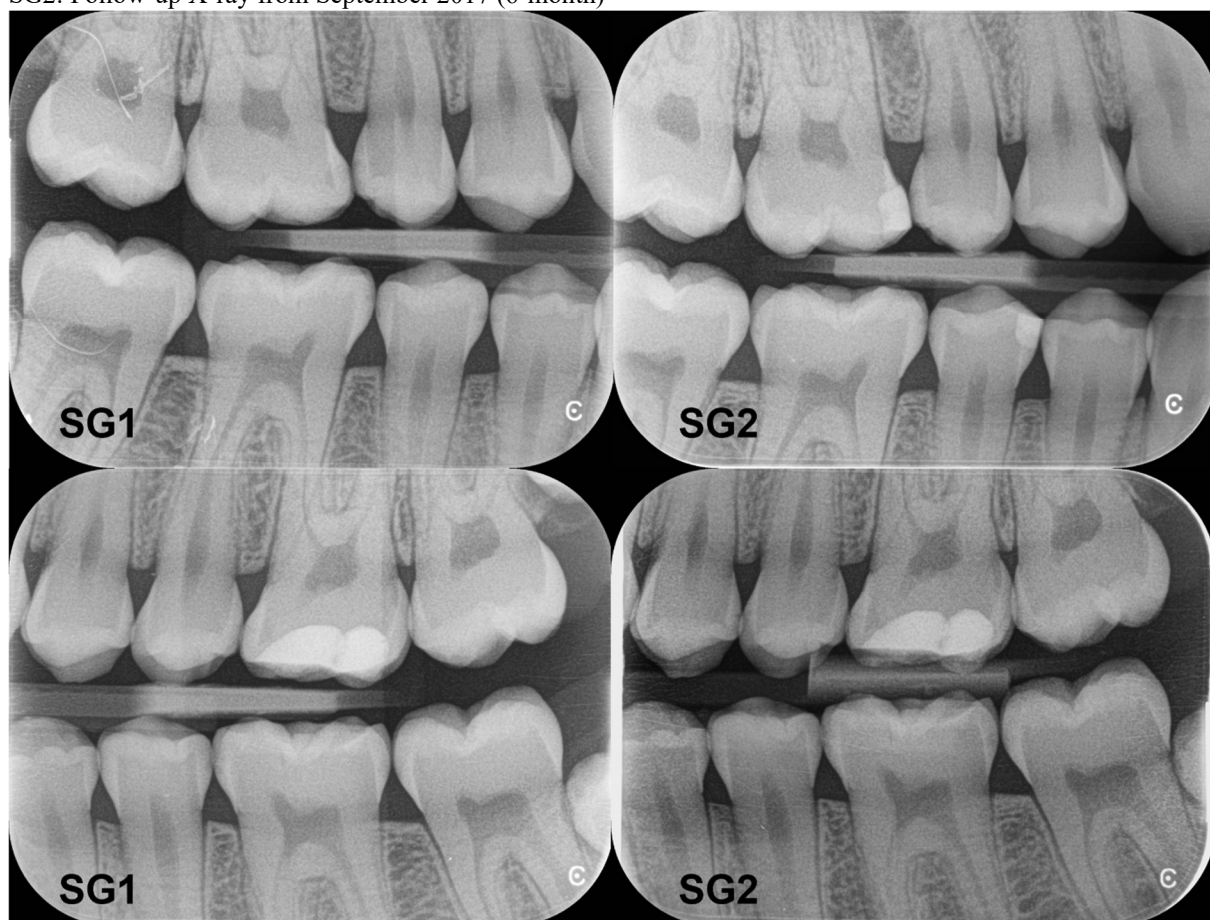
Supplementary Figure S7 Patient's images. Subject "SG".

Location of the lesions that were treated with SAP P₁₁₋₄ (stage at baseline/stage at the follow-up):

- 46 mesial (E1/E1)
- 26 mesial (E1/E1)
- 36 mesial (E1/E1)

SG1: Baseline X-ray from March 2017

SG2: Follow-up X-ray from September 2017 (6-month)



Supplementary Figure S8 Patient's images. Subject "SH".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 23 distal (E2/E0)

SH1: Baseline X-ray from April 2017

SH2: Follow-up X-ray from December 2017 (7-month)



Supplementary Figure S9 Patient's images. Subject "SI".

Location of the treated lesion (stage at baseline/stage at the 1st follow-up stage/stage at the 2nd follow-up):

- 46 distal (E1/E1/E0)

SI1: Baseline X-ray from January 2016

SI2: 1st follow-up X-ray from June 2016 (6-month)

SI3: 2nd follow-up X-ray from April 2018 (27-month)



Supplementary Figure S10 Patient's images. Subject "SJ" was treated with SAP P₁₁-4 two times.

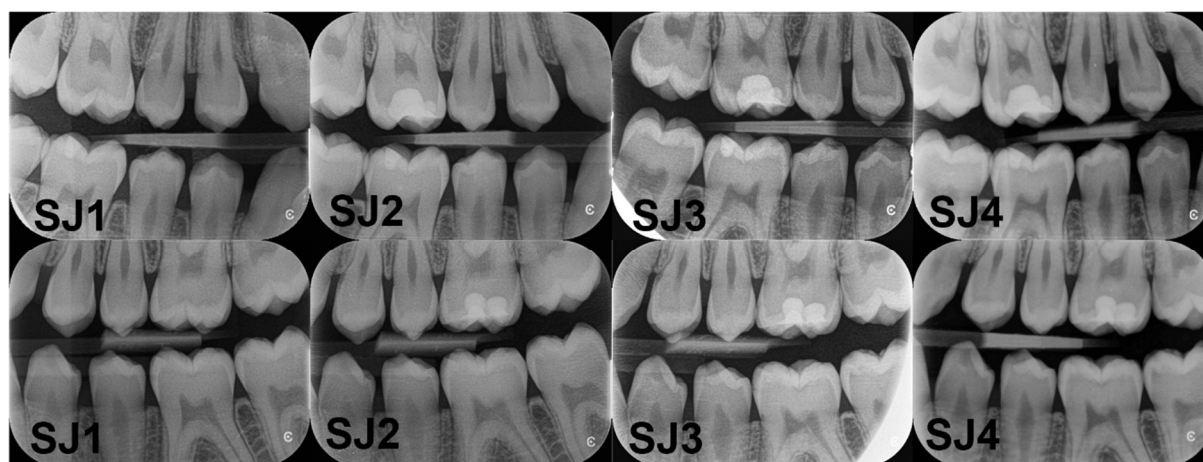
Location of the lesion treated during the 1st session (stage at baseline/stage at the 1st follow-up stage/stage at the 2nd follow-up/stage at the 3rd follow-up):

- 46 mesial (E2/E1/E1/E1)
- 36 mesial (E2/E1/E1/E1)

Location of the lesion treated during the 2nd session (stage at baseline/stage at the 1st follow-up stage):

- 15 distal (E2/E2)
- 16 mesial (E2/E1)
- 26 mesial (D1/E2)

	X-ray taken in	1 st treatment session (May 2017)	2 nd treatment session (December 2018)
SJ1:	May 2017	Baseline X-ray	-
SJ2:	November 2017	1 st follow-up X-ray (7-month)	-
SJ3:	December 2018	2 nd follow-up X-ray (19-month)	Baseline X-ray
SJ4:	August 2019	3 rd follow-up X-ray (28-month)	1 st follow-up X-ray (8-month)



Supplementary Figure S11 Patient's images. Subject "SK".

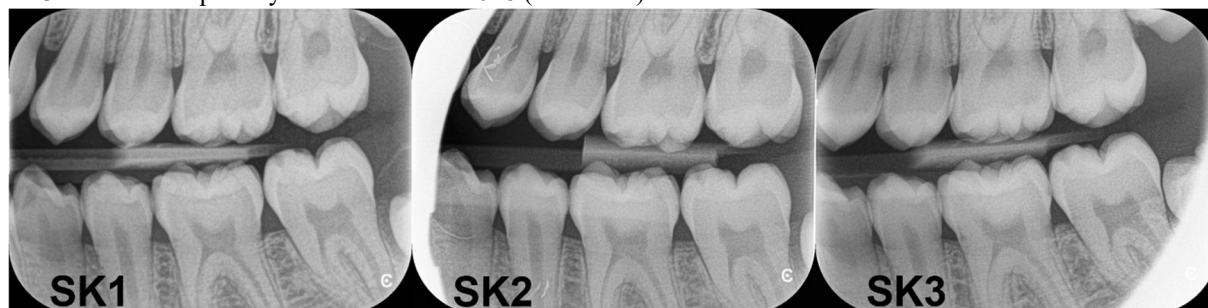
Location of the treated lesion (stage at baseline/stage at the 1st follow-up stage/stage at the 2nd follow-up):

- 26 mesial (E1/E0/ *no clinical findings in the inner half of the enamel even if overlapping*)

SK1: Baseline X-ray from March 2016

SK2: 1st follow-up X-ray from September 2016 (6-month)

SK3: 2nd follow-up X-ray from December 2018 (22-month)



Supplementary Figure S12 Patient's images. Subject "SL".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 16 mesial (E2/E1)
- 46 mesial (E2/E1)

SL1: Baseline X-ray from April 2016

SL2: Follow-up X-ray from October 2016 (7-month)



Supplementary Figure S13 Patient's images. Subject "SM".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 26 mesial (E2/E1)

SM1: Baseline X-ray from May 2016

SM2: Follow-up X-ray from December 2016 (7-month)



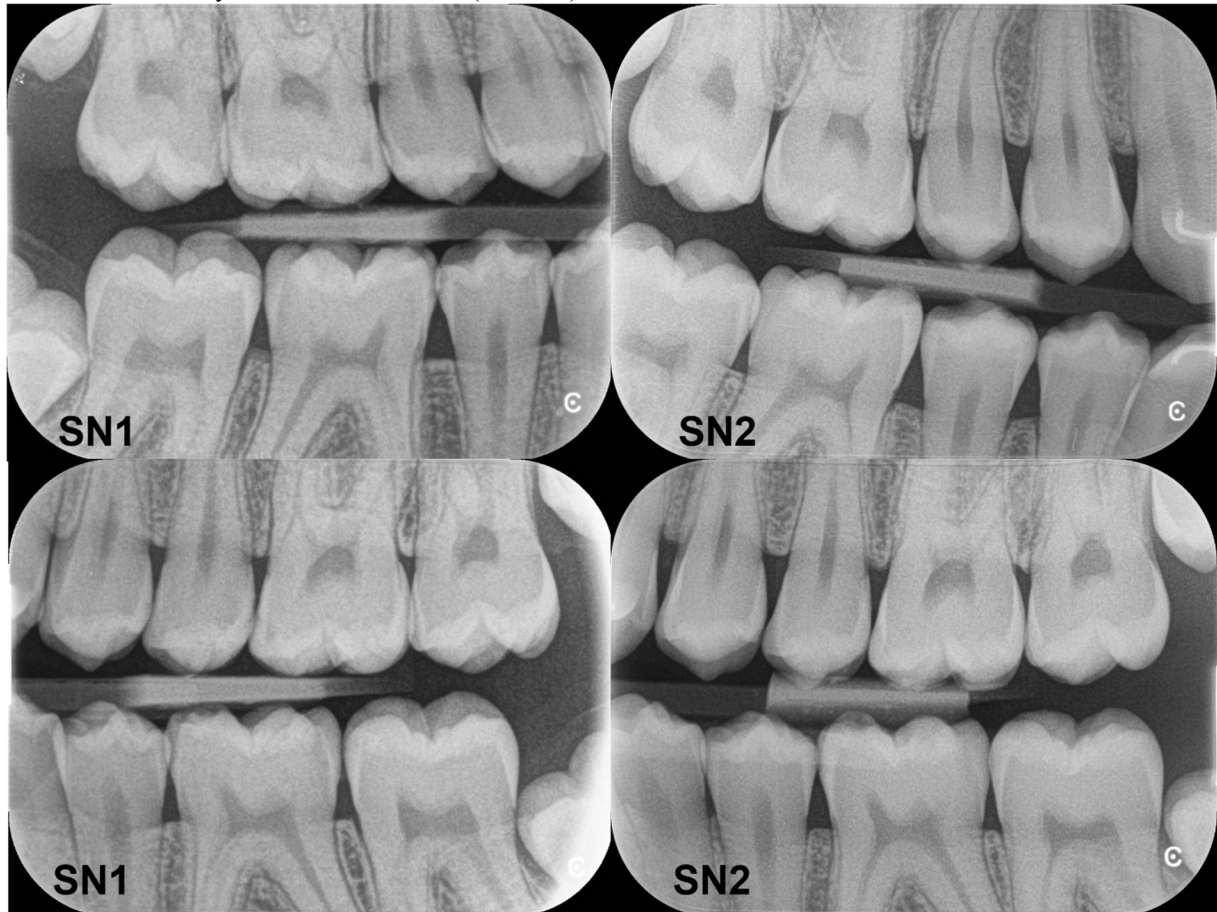
Supplementary Figure S14 Patient's images. Subject "SN".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 16 mesial (E1/E0)
- 45 distal (E2/E1)
- 46 mesial (E2/E1)
- 24 distal (E1/E0)
- 25 distal (E1/E0)
- 26 mesial (E1/E1)

SN1: Baseline X-ray from June 2016

SN2: Baseline X-ray from December 2016 (6-month)



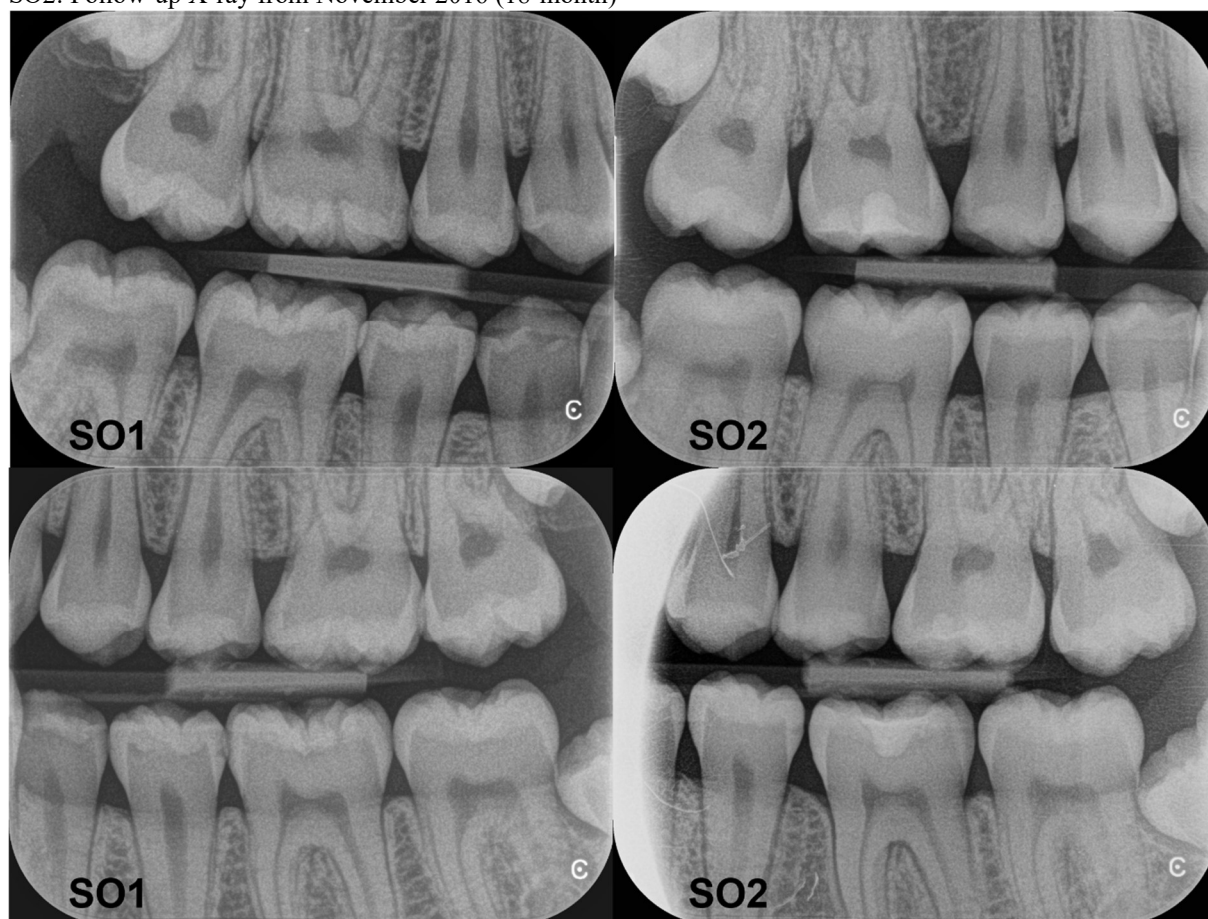
Supplementary Figure S15 Patient's images. Subject "SO".

Location of the treated lesion (stage at baseline/stage at the follow-up):

- 14 distal (E2/E1)
- 15 distal (E2/E1)
- 16 mesial (E2/E1)
- 26 mesial (E2/E1)
- 35 distal (E2/E2)
- 36 mesial (E1/E0)

SO1: Baseline X-ray from April 2015

SO2: Follow-up X-ray from November 2016 (18-month)



2 Supplementary Tables

Supplementary Table S1 Tabulation of cavitation and restoration, subdivided by the duration of the last follow-up (TlastFU) at tooth and child level

Cavitation & Filling		Lesion level				Child level			
TlastFU		Cavitation		Restoration		Cavitation		Restoration	
		no	yes	no	yes	no	yes	no	yes
≤ 1 year	n (%)	231 (96)	10 (4)	220 (91)	21 (9)	135 (94)	9 (6)	129 (90)	15 (10)
1-2 years	n (%)	104 (83)	22 (17)	98 (78)	28 (22)	45 (83)	9 (17)	46 (85)	8 (15)
>2 years	n (%)	42 (91)	4 (9)	40 (87)	6 (13)	24 (89)	3 (11)	23 (85)	4 (15)

Supplementary Table S2 Overview of the explored relationships between potential influencing factors and various outcomes, as well as the results

Factor - outcome	GEE ¹ (p-value)
Stage at baseline (E1 vs. E2/D1/D2) - regression	ns²
Stage at baseline (E1 vs. E2/D1/D2) - cavitation	p<0.0005
Stage at baseline - restoration	ns
Number of treated lesions (1-2 vs. ≥3) - regression	p<0.0005
Number of treated lesions - mineralization	ns
Number of treated lesions (1-2 vs. ≥3) - cavitation	ns
Number of treated lesions (1-2 vs. ≥3) - restoration	ns
DMFT at baseline - regression	p<0.0005
DMFT at baseline - cavitation	ns
DMFT at baseline - restoration	ns
Oral hygiene at baseline - change in stage	ns
Oral hygiene at baseline - mineralization	ns
Oral hygiene at baseline - cavitation	ns
Oral hygiene at baseline - restoration	ns
Oral hygiene at last follow-up - change in stage	ns
Gender - cavitation	ns

¹ Generalized estimating equations models

² not statistically significant (ns)

Supplementary Table S3 Overview of image comparisons made (DC: DiagnoCam images)

	Children (n=225)	Lesions (n=413)
xray-xray (all time points: baseline, T1 and/or T2)	216	399
xray-xray (baseline and T1); DC-DC (T1 and T2)	5	5
xray baseline - xray T1 - DC T2	2	7
xray baseline - DC T1	2	2