

**Table S1. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with PD  $\geq$  4 mm**

	% PD $\geq$ 4 (n=402)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	30.14	21.46	1.07			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	22.82	19.21	0.96	-0.07	-24.29	<0.001***
Half NHANES III UL/LL	22.96	18.78	0.94	-0.07	-23.82	<0.001***
Half NHANES IV UR/LR	26.64	20.66	1.03	-0.04	-11.61	<0.001***
Half NHANES IV UL/LL	26.90	21.09	1.05	-0.03	-10.75	<0.001***
Half MB-B-DL UR/LR	28.70	20.84	1.04	-0.01	-4.78	<0.001***
Half MB-B-DL UL/LL	27.43	20.90	1.04	-0.03	-8.99	<0.001***
Half 6 Sites UR/LR	30.79	22.08	1.10	0.01	2.16	0.038*
Half 6 Sites UL/LL	29.28	22.32	1.11	-0.01	-2.85	<0.001***
Half RD6 UR/LL	29.17	21.77	1.09	-0.01	-3.22	<0.001***
Half RD6 UL/LR	30.75	22.39	1.12	0.01	2.02	<0.001***
<b>Full-Mouth PRPs</b>						
Ramfjord	30.19	23.80	1.19	0.00	0.17	0.925
Full MB-B	22.73	17.98	0.90	-0.07	-24.59	<0.001***
Full MB-B-DB	26.95	19.92	0.99	-0.03	-10.58	<0.001***
Full MB-B-DL	28.23	20.04	1.00	-0.02	-6.34	<0.001***
CPITN	37.78	23.90	1.19	0.08	25.35	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*Paired t-test, P<0.05; \*\*\*Paired t-test, P<0.001.

**Table S2. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with PD  $\geq$  5 mm.**

	% PD $\geq$ 5 (n=357)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	15.21	16.33	0.81			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	10.63	13.402	0.668	-0.05	-30.74	<0.001***
Half NHANES III UL/LL	10.93	13.246	0.661	-0.05	-27.76	<0.001***
Half NHANES IV UR/LR	12.94	15.315	0.764	-0.03	-12.44	<0.001***
Half NHANES IV UL/LL	13.2	15.098	0.753	-0.02	-13.44	<0.001***
Half MB-B-DL UR/LR	14.19	15.666	0.781	-0.01	-4.01	<0.001***
Half MB-B-DL UL/LL	13.75	15.719	0.784	-0.02	-10.46	<0.001***
Half 6 Sites UR/LR	15.59	17.039	0.85	0.00	3.98	0.094
Half 6 Sites UL/LL	14.82	16.726	0.834	0.00	-5.30	0.052
Half RD6 UR/LL	14.73	16.293	0.813	-0.01	-4.07	0.017*
Half RD6 UL/LR	15.64	17.522	0.874	0.00	2.71	0.053
<b>Full-Mouth PRPs</b>						
Ramfjord	15.52	18.427	0.919	0.00	-1.35	0.443
Full MB-B	10.67	12.429	0.62	-0.05	-30.44	<0.001***
Full MB-B-DB	13.15	14.441	0.72	-0.02	-12.36	<0.001***
Full MB-B-DL	14.06	15.064	0.751	-0.01	-6.44	<0.001***
CPITN	20.67	19.963	0.996	0.06	69.74	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*Paired t-test, P<0.05; \*\*\*Paired t-test, P<0.001.

**Table S3. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with PD ≥ 6 mm**

	% PD ≥ 6 (n=303)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	7.72	11.14	0.56			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	5.44	9.839	0.491	-0.03	-37.42	<0.001***
Half NHANES III UL/LL	5.27	9.352	0.466	-0.03	-25.67	<0.001***
Half NHANES IV UR/LR	6.61	10.794	0.538	-0.01	-14.07	<0.001***
Half NHANES IV UL/LL	6.39	10.547	0.526	-0.02	-12.25	<0.001***
Half MB-B-DL UR/LR	7.28	11.249	0.561	-0.01	-6.79	0.021*
Half MB-B-DL UL/LL	6.83	10.688	0.533	-0.01	-6.99	<0.001***
Half 6 Sites UR/LR	7.91	11.83	0.59	0.00	-0.09	0.255
Half 6 Sites UL/LL	7.44	11.425	0.57	0.00	-2.00	0.086
Half RD6 UR/LL	7.45	11.278	0.562	0.00	-4.79	0.08*
Half RD6 UL/LR	7.88	11.804	0.589	0.00	3.58	0.309
<b>Full-Mouth PRPs</b>						
Ramfjord	8.28	13.536	0.675	0.01	1.54	0.068
Full MB-B	5.25	8.787	0.438	-0.03	-34.92	<0.001***
Full MB-B-DB	6.55	9.963	0.497	-0.02	-12.70	<0.001***
Full MB-B-DL	7.09	10.48	0.523	-0.01	-5.58	<0.001***
CPITN	11.1	14.753	0.736	0.05	91.61	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*Paired t-test, P<0.05; \*\*\*Paired t-test, P<0.001.

**Table S4. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with PD ≥ 7 mm**

	% PD ≥ 7 (n=193)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	2.31	4.91	0.25			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	1.72	5.484	0.274	-0.01	-38.49	0.001**
Half NHANES III UL/LL	1.86	6.225	0.31	-0.01	-21.12	0.026*
Half NHANES IV UR/LR	2.02	5.644	0.281	-0.01	-17.33	0.049*
Half NHANES IV UL/LL	2.11	6.355	0.317	0.00	-4.71	0.325
Half MB-B-DL UR/LR	2.28	5.761	0.287	0.00	-9.99	0.831
Half MB-B-DL UL/LL	2.13	5.477	0.273	0.00	3.55	0.151
Half 6 Sites UR/LR	2.28	5.517	0.275	0.00	-8.10	0.807
Half 6 Sites UL/LL	2.29	5.189	0.259	0.00	5.86	0.867
Half RD6 UR/LL	2.25	5.203	0.26	0.00	-7.38	0.553
Half RD6 UL/LR	2.39	5.568	0.278	0.00	6.48	0.395
<b>Full-Mouth PRPs</b>						
Ramfjord	2.61	6.605	0.329	0.01	-0.64	0.135
Full MB-B	1.74	5.191	0.259	-0.01	-33.45	<0.001***
Full MB-B-DB	2.07	5.43	0.271	0.00	-10.52	0.051
Full MB-B-DL	2.23	5.16	0.257	0.00	-2.90	0.241
CPITN	3.46	7.237	0.361	0.02	87.93	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*Paired t-test, P<0.05; \*\*Paired t-test, P<0.01; \*\*\*Paired t-test, P<0.001.

**Table S5. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with CAL  $\geq$  4 mm**

	% CAL $\geq$ 4 (n=402)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	52.50	26.60	1.33			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	50.13	28.05	1.40	-0.02	-4.51	<0.001***
Half NHANES III UL/LL	48.97	27.93	1.39	-0.04	-6.72	<0.001***
Half NHANES IV UR/LR	52.36	27.22	1.36	0.00	-0.27	0.816
Half NHANES IV UL/LL	51.85	27.48	1.37	-0.01	-1.24	0.219
Half MB-B-DL UR/LR	52.76	26.84	1.34	0.00	0.50	0.605
Half MB-B-DL UL/LL	51.20	27.38	1.37	-0.01	-2.48	0.001**
Half 6 Sites UR/LR	53.10	27.07	1.35	0.01	1.14	0.160
Half 6 Sites UL/LL	51.52	27.71	1.38	-0.01	-1.87	0.001**
Half RD6 UR/LL	51.55	27.44	1.37	-0.01	-1.81	0.006**
Half RD6 UL/LR	52.95	27.24	1.36	0.00	0.86	0.226
<b>Full-Mouth PRPs</b>						
Ramfjord	53.33	29.39	1.47	0.01	1.58	0.228
Full MB-B	49.73	26.47	1.32	-0.03	-5.28	<0.001***
Full MB-B-DB	52.27	26.11	1.30	0.00	-0.44	0.531
Full MB-B-DL	52.19	26.05	1.30	0.00	-0.59	0.132
CPITN	60.28	26.66	1.33	0.08	14.82	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*\*Paired t-test, P<0.01; \*\*\*Paired t-test, P<0.001.

**Table S6. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with CAL  $\geq$  5 mm**

	% CAL $\geq$ 5 (n=393)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	35.62	25.80	1.29			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	34.31	26.41	1.32	-0.01	0.85	0.029*
Half NHANES III UL/LL	31.86	25.62	1.28	-0.04	-6.52	<0.001***
Half NHANES IV UR/LR	35.72	26.33	1.31	0.00	6.96	0.923
Half NHANES IV UL/LL	34.49	25.54	1.27	-0.01	1.76	0.031*
Half MB-B-DL UR/LR	36.01	26.19	1.31	0.00	4.93	0.452
Half MB-B-DL UL/LL	34.04	25.97	1.30	-0.02	-2.36	<0.001***
Half 6 Sites UR/LR	36.20	26.73	1.33	0.01	3.11	0.176
Half 6 Sites UL/LL	34.71	26.47	1.32	-0.01	-3.92	0.004**
Half RD6 UR/LL	34.59	26.17	1.31	-0.01	-5.17	0.002**
Half RD6 UL/LR	36.29	26.78	1.34	0.01	4.59	0.083
<b>Full-Mouth PRPs</b>						
Ramfjord	37.13	28.47	1.42	0.02	12.62	0.029*
Full MB-B	33.18	24.54	1.22	-0.03	-2.58	<0.001***
Full MB-B-DB	35.28	24.75	1.23	0.00	4.68	0.292
Full MB-B-DL	35.18	25.04	1.25	0.00	1.65	0.028*
CPITN	20.67	19.96	1.00	0.09	47.14	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*Paired t-test, P<0.05; \*\*Paired t-test, P<0.01; \*\*\*Paired t-test, P<0.001

**Table S7. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with CAL  $\geq$  6 mm**

	% CAL $\geq$ 6 (n=381)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	22.27	21.83	1.09			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	21.41	22.84	1.14	-0.01	-2.75	0.140
Half NHANES III UL/LL	18.94	21.12	1.05	-0.04	-12.46	<0.001***
Half NHANES IV UR/LR	22.43	22.83	1.14	0.00	5.26	0.764
Half NHANES IV UL/LL	20.81	21.54	1.07	-0.02	1.46	0.001**
Half MB-B-DL UR/LR	22.87	22.92	1.14	0.01	6.29	0.173
Half MB-B-DL UL/LL	20.47	21.74	1.08	-0.02	-7.50	<0.001***
Half 6 Sites UR/LR	23.00	23.01	1.15	0.01	4.78	0.057
Half 6 Sites UL/LL	21.38	22.33	1.11	-0.01	-5.80	0.002**
Half RD6 UR/LL	21.34	21.92	1.09	-0.01	-5.92	0.002**
Half RD6 UL/LR	22.91	23.08	1.15	0.01	5.51	0.066
<b>Full-Mouth PRPs</b>						
Ramfjord	23.07	24.65	1.23	0.01	7.39	0.165
Full MB-B	20.21	20.49	1.02	-0.02	-7.05	<0.001***
Full MB-B-DB	21.70	20.94	1.04	-0.01	4.17	0.066
Full MB-B-DL	21.72	21.30	1.06	-0.01	-0.17	0.001**
CPITN	11.10	14.75	0.74	0.08	64.87	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*\*Paired t-test, P<0.01; \*\*\*Paired t-test, P<0.001.

**Table S8. Comparison of means, standard deviations, standard error, bias, and percent relative bias percentages of sites with CAL  $\geq$  7 mm**

	% CAL $\geq$ 7 (n=348)					
	Mean (%)	SD (%)	SE (%)	Bias*	Relative Bias (%)	P-value
<b>Full Mouth (standard)</b>	13.13	17.16	0.86			
<b>Partial Mouth PRPs</b>						
Half NHANES III UR/LR	12.39	18.31	0.91	-0.01	-2.04	0.133
Half NHANES III UL/LL	11.14	16.78	0.84	-0.02	-10.75	<0.001***
Half NHANES IV UR/LR	13.01	18.43	0.92	0.00	6.92	0.779
Half NHANES IV UL/LL	12.10	17.02	0.85	-0.01	0.28	0.008**
Half MB-B-DL UR/LR	13.70	18.71	0.93	0.01	9.97	0.131
Half MB-B-DL UL/LL	11.99	17.06	0.85	-0.01	-6.79	<0.001***
Half 6 Sites UR/LR	13.65	18.69	0.93	0.01	6.69	0.112
Half 6 Sites UL/LL	12.53	17.39	0.87	-0.01	-7.83	0.019*
Half RD6 UR/LL	12.42	16.68	0.83	-0.01	-4.38	0.01*
Half RD6 UL/LR	13.62	18.86	0.94	0.01	3.89	0.089
<b>Full-Mouth PRPs</b>						
Ramfjord	13.85	19.96	1.00	0.01	11.56	0.123
Full MB-B	11.81	16.18	0.81	-0.02	-5.52	<0.001***
Full MB-B-DB	12.59	16.53	0.83	-0.01	4.34	0.038*
Full MB-B-DL	12.91	16.81	0.84	0.00	2.25	0.089
CPITN	3.46	7.24	0.36	0.06	77.01	<0.001***

SD – standard deviation; SE – standard error; UR – upper right; LR – lower right; UL – upper left; LL – lower left; MB – mesiobuccal; B – buccal; DB – distobuccal; DL – distolingual; PRPs – partial recording protocols, RD – random diagonal quadrants; CPITN – community periodontal index of treatment needs.

\*Paired t-test, P<0.05; \*\*Paired t-test, P<0.01; \*\*\*Paired t-test, P<0.001

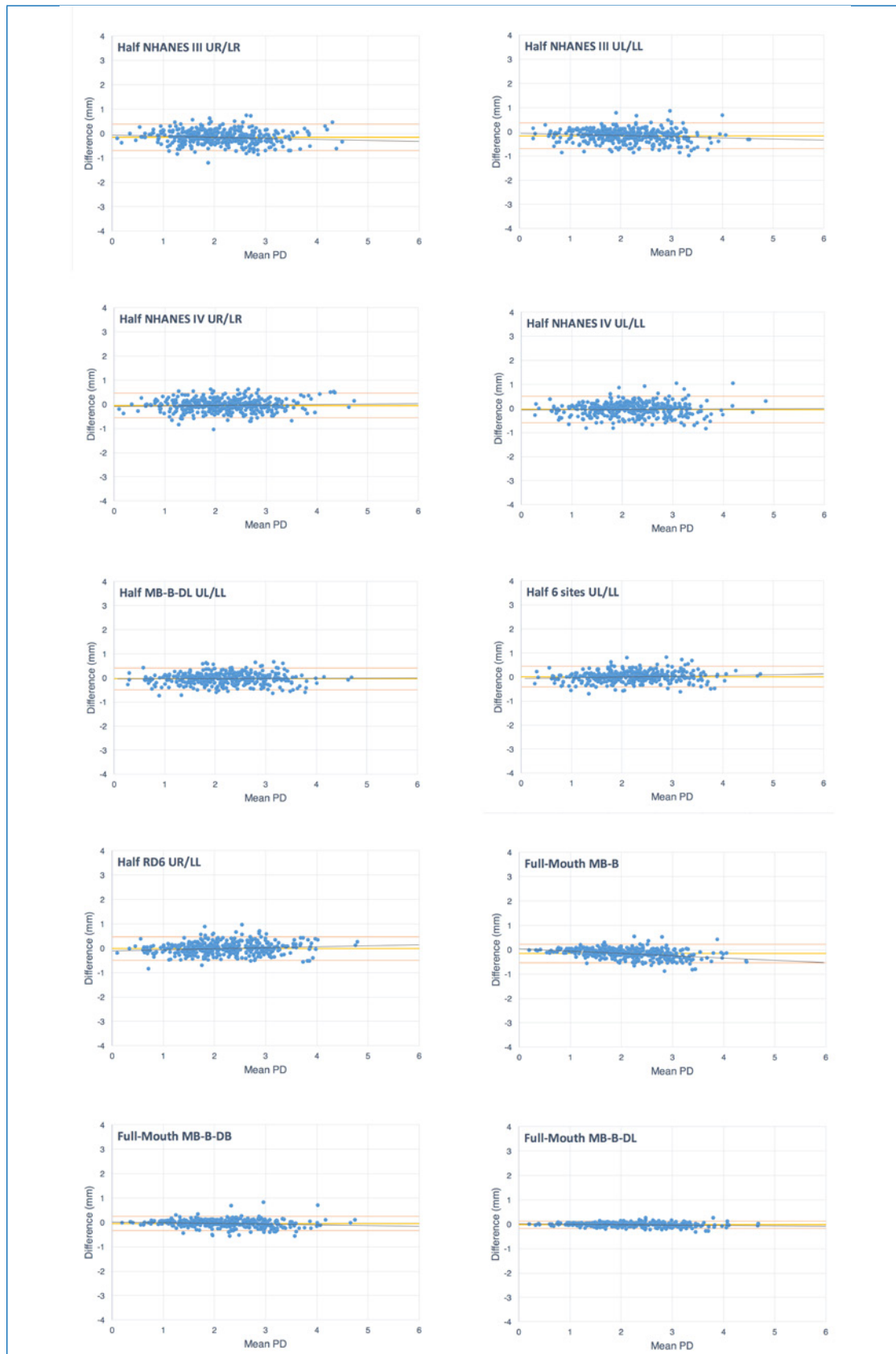


Figure S9. Bland-Altman plots to evaluate bias between the Mean PD (MPD) differences for Half NHANES III UR/LR, Half NHANES III UL/LL, Half NHANES IV UR/LR, Half NHANES IV UL/LL, Half MB-B-DL UL/LL, Half 6 sites UL/LL, Half RD6 UR/LL, Full-Mouth MB, Full-Mouth MB-B-DB and Full-Mouth MB-B-DL. The area within the upper and lower orange lines sets 95% confidence interval and the yellow line the mean value.

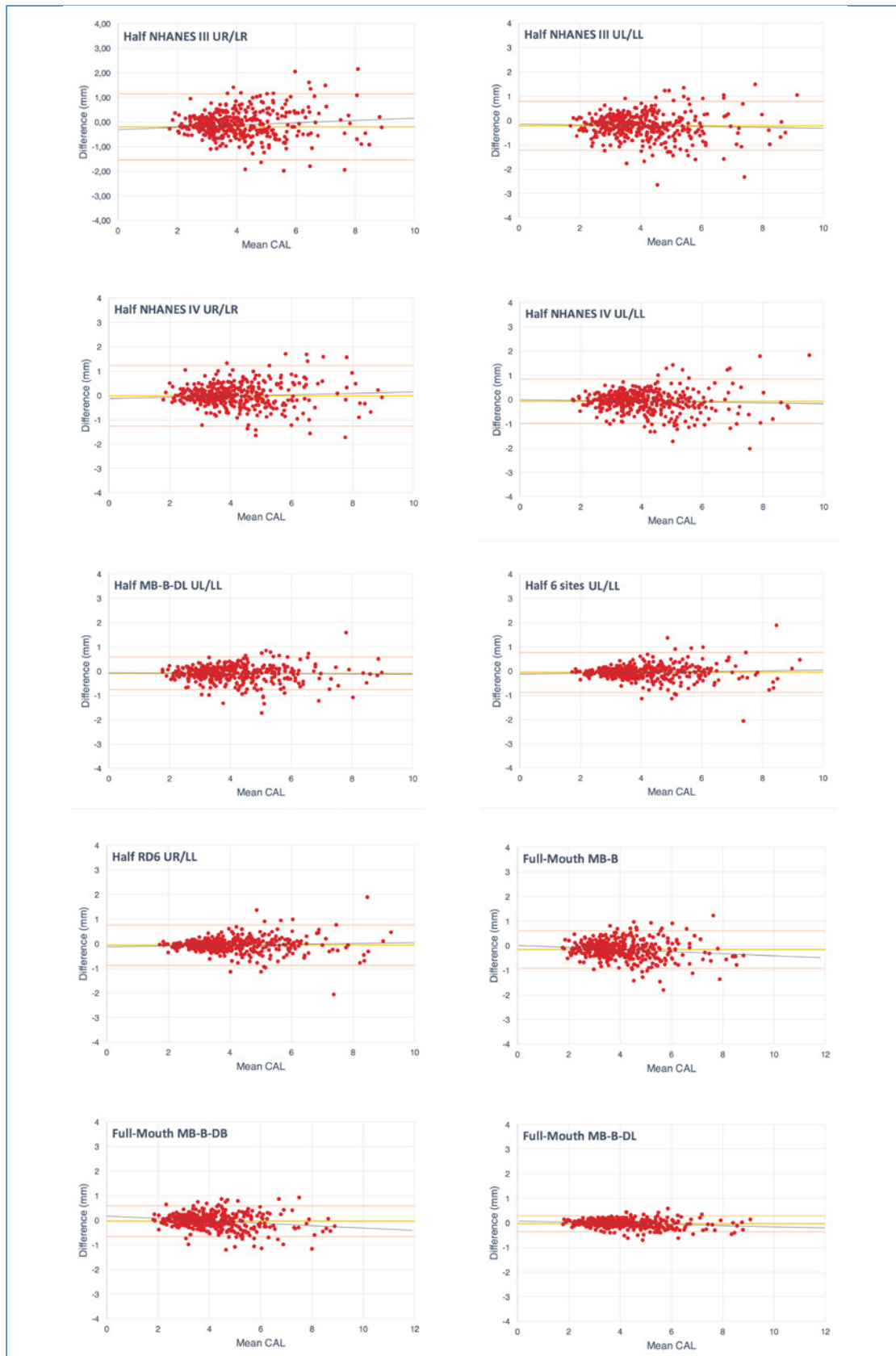


Figure S10. Bland-Altman plots to evaluate bias between the Mean CAL (MCAL) differences for Half NHANES III UR/LR, Half NHANES III UL/LL, Half NHANES IV UR/LR, Half NHANES IV UL/LL, Half MB-B-DL UL/LL, Half 6 sites UL/LL, Half RD6 UR/LL, Full-Mouth MB, Full-Mouth MB-B-DB and Full-Mouth MB-B-DL. The area within the upper and lower orange lines sets 95% confidence interval and the yellow line the mean value.

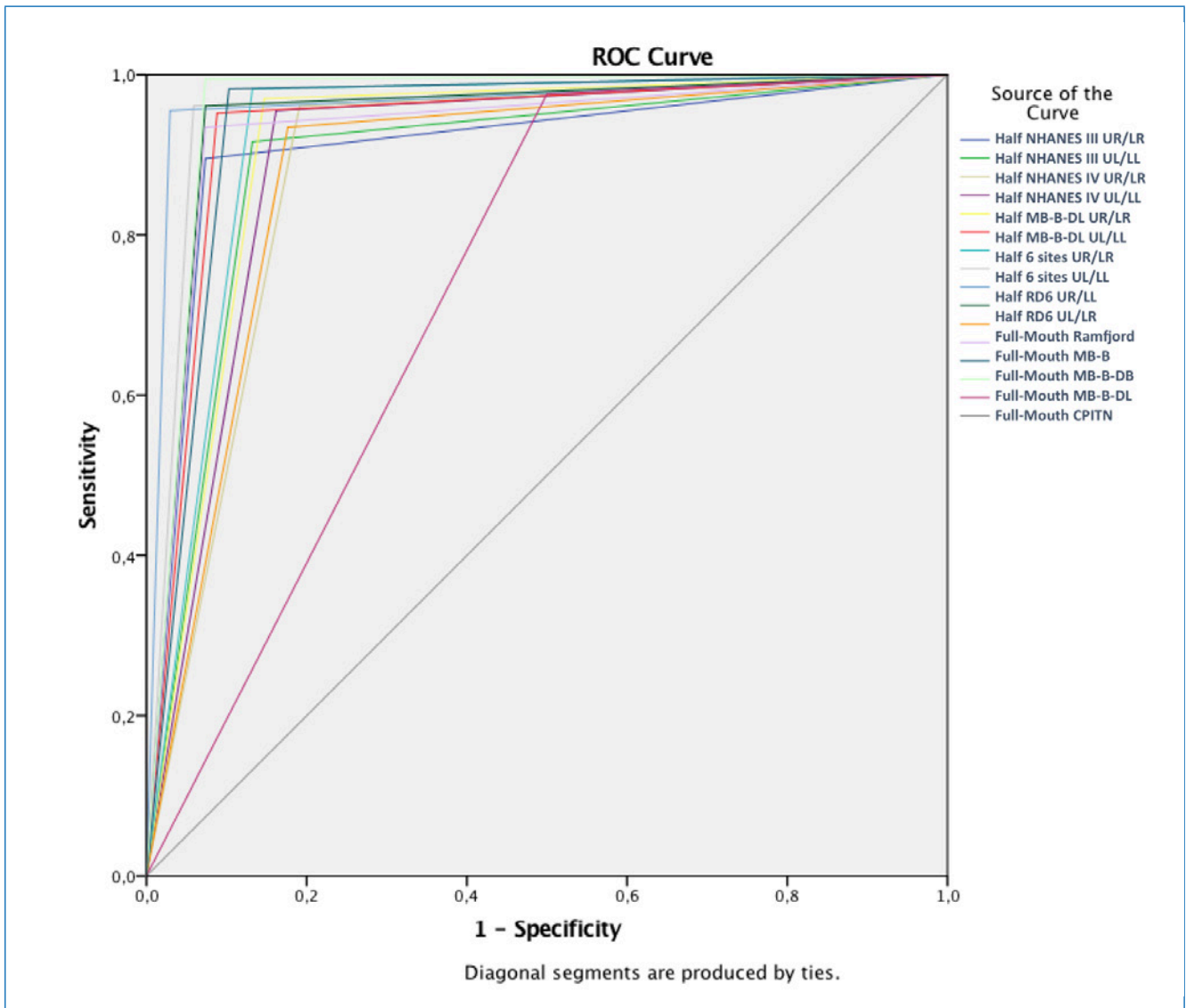


Figure S11. ROC curves for markers PRPs in discriminating patients with periodontal disease from healthy subjects.