Supplementary Material

Bone Deleterious Effects of Different NRTIS in Treatment-naive HIV Patients After 12 and 48 Weeks of Treatment

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Supplemental Table 1: Association between Z-score and variables 48 weeks post-treatment in TDF treated patients.

Variable	Z-score LS		Z-score FN	
	Coef	**p Value**	**Coef**	**p Value**
Ca	0.25	0.410	-0.09	0.771
P	-0.43	0.108	-0.02	0.950
25 OH Vit. D	0.41	0.143	0.08	0.776
CD4	-0.45	0.094	0.08	0.776
CD8	-0.23	0.411	0.31	0.262
CD4/CD8 ratio	-0.41	0.125	-0.18	0.516
Total Cholesterol	-0.33	0.233	0.18	0.511
Triglycerides	-0.22	0.426	0.27	0.334
CTX	-0.13	0.687	0.01	0.991
P1NP	**-0.55**	**0.065**	-0.21	0.514
OC	-0.19	0.563	-0.01	0.991
TRAP	0.20	0.502	0.25	0.382
PTH	0.60	0.242	-0.31	0.564
DKK1	-0.23	0.422	0.07	0.805
OPG	0.28	0.352	**0.48**	**0.098**
OPN	-0.01	0.982	0.17	0.568
SOST	-0.14	0.648	0.23	0.459
FGF23	0.00	1.000	0.46	0.111
RANKL	-0.40	0.258	0.05	0.894

Supplemental Table 2: Association between Z-score and variables 48 weeks post-treatment in TAF treated patients.

Variable	Z-score LS		Z-score FN	
	Coef	p Value	Coef	p Value
Ca	**-0.49**	**0.056**	0.15	0.584
P	-0.03	0.914	-0.21	0.450
25 OH Vit D	-0.15	0.603	-0.06	0.834
CD4	-0.07	0.786	0.32	0.223
CD8	0.08	0.778	0.01	0.970
CD4/CD8 ratio	**-0.44**	**0.091**	0.38	0.142
Total Cholesterol	-0.47	0.063	0.03	0.905
Triglycerides	0.19	0.484	-0.16	0.557
CTX	0.01	0.987	0.86	0.002
P1NP	-0.36	0.280	0.06	0.852
OC	-0.40	0.120	0.22	0.411
TRAP	0.14	0.616	-0.10	0.708
PTH	-0.42	0.223	**0.77**	**0.009**
DKK1	0.47	0.064	-0.28	0.286
OPG	0.43	0.101	-0.38	0.147
OPN	0.07	0.794	-0.03	0.910
SOST	0.19	0.579	0.05	0.884
FGF23	-0.13	0.662	0.00	0.994
RANKL	0.62	0.115	0.60	0.132

Supplemental Table 3: Association between Z-score and variables 48 weeks post-treatment in ABC treated patients.

Variable	Z-score LS		Z-score FN	
	Coef	**p Value**	**Coef**	**p Value**
Ca	0.02	0.903	-0.05	0.785
P	-0.10	0.549	0.05	0.783
25 OH Vit. D	0.02	0.921	-0.15	0.375
CD4	-0.02	0.923	0.27	0.091
CD8	0.13	0.442	0.17	0.305
CD4/CD8 ratio	**-0.33**	**0.039**	-0.05	0.755
Total Cholesterol	-0.18	0.283	-0.49	0.002
Triglycerides	-0.09	0.583	-0.22	0.188
CTX	0.01	0.975	0.04	0.840
P1NP	-0.07	0.667	-0.20	0.233
OC	-0.10	0.523	-0.10	0.523
TRAP	0.00	0.991	-0.21	0.204
PTH	-0.29	0.210	-0.11	0.635
DKK1	-0.03	0.870	-0.11	0.526
OPG	**-0.39**	**0.016**	-0.13	0.441
OPN	0.04	0.813	0.06	0.740
SOST	**-0.29**	**0.088**	-0.06	0.713
FGF23	0.23	0.185	-0.18	0.299
RANKL	0.21	0.369	-0.05	0.840

Supplemental Table 4: Absolute changes analysis at 12 weeks of treatment with treatment x time interaction. ANOVA provides three p-values, for time effect, treatment effect and interaction between time and treatment.

Variable	TDF	TAF	ABC	Time p-value	Treatment p-value	Interaction p-value
Ca	0.07 ± 0.49	0.08 ± 0.55	0.14 ± 0.39	0.368	0.032	0.912
P	0.01 ± 1.23	0.12 ± 0.55	-0.24 ± 0.98	0.321	0.977	0.948
25OH Vit.D	2.20 ± 10.5	9.13 ± 12.8	0.19 ± 10.1	0.601	0.146	0.029
CD4	204 ± 222	131 ± 148	127 ± 211	**0.018**	0.946	0.303
CD8	-18.7 ± 465	41.0 ± 703	-79.4 ± 397	0.963	0.348	0.760
CD4/CD8 ratio	0.21 ± 0.28	0.18 ± 0.24	0.24 ± 0.32	**0.020**	0.996	0.840
Total Cholesterol	18.1 ± 28.7	35.1 ± 31.3	-2.53 ± 28.0	0.228	0.091	0.239
Triglycerides	14.9 ± 52.9	27.6 ± 45.0	10.8 ± 43.7	0.632	0.524	0.841
CTX	0.12 ± 0.15	0.08 ± 0.13	0.16 ± 0.27	0.151	0.218	0.207
P1NP	10.7 ± 15.1	6.61 ± 18.8	16.9 ± 7.85	**0.009**	0.186	0.613
OC	4.05 ± 6.08	6.13 ± 7.87	6.34 ± 5.33	**0.054**	0.438	0.566
TRAP	0.50 ± 1.65	0.65 ± 1.02	0.44 ± 0.70	0.669	0.741	0.944
PTH	1.03 ± 18.5	-1.81 ± 13.6	-0.00 ± 25.5	0.925	0.797	0.464

DKK1	-146 ± 371	-105 ± 306	-118 ± 338	0.097	0.318	0.988
OPG	-24.7 ± 156	-62.6 ± 101	-75.7 ± 116	0.362	0.167	0.595
OPN	229 ± 6935	2351 ± 8396	3083 ± 6431	0.914	0.169	0.670
SOST	-139 ± 802	-390 ± 619	-228 ± 547	0.490	0.089	0.749
RANKL	6.36 ± 48.5	9.30 ± 75.5	9.68 ± 44.0	0.465	0.302	0.406

Supplemental Table 5: Absolute changes analysis at 48 weeks of treatment with treatment x time interaction. ANOVA provides three p-values, for time effect, treatment effect and interaction between time and treatment.

Variable	TDF	TAF	ABC	Time	Treatment	Interaction
Ca	0.05 ± 0.42	0.14 ± 0.50	0.35 ± 0.37	**0.023**	0.126	0.785
P	-0.10 ± 1.31	0.02 ± 0.64	-0.26 ± 0.89	0.060	0.958	0.972
25OH Vit. D	2.96 ± 9.51	3.43 ± 7.23	2.38 ± 9.88	**0.007**	0.068	0.951
CD4	310 ± 327	213 ± 216	57.2 ± 245	0.503	0.576	0.081
CD8	-118 ± 483	-151 ± 880	-301 ± 515	0.727	0.416	0.576
CD4/CD8 ratio	0.40 ± 0.37	0.30 ± 0.23	0.30 ± 0.27	0.191	0.632	0.346
Total Cholesterol	22.9 ± 31.1	28.5 ± 39.6	14.6 ± 34.8	0.217	0.121	0.673
Triglycerides	33.1 ± 89.5	15.8 ± 42.5	-6.50 ± 40.9	0.788	0.299	0.104
CTX	0.17 ± 0.18	0.09 ± 0.16	0.23 ± 0.17	**0.036**	0.136	**0.007**
P1NP	12.8 ± 17.1	13.2 ± 17.4	29.7 ± 19.6	**0.002**	**0.001**	**0.003**
OC	4.92 ± 7.93	2.56 ± 8.42	8.92 ± 4.90	0.162	**0.029**	**0.003**
TRAP	2.06 ± 2.21	6.05 ± 8.25	1.81 ± 2.16	0.111	0.016	**0.006**
PTH	6.15 ± 25.0	9.68 ± 15.5	8.74 ± 15.5	0.249	0.949	0.588
DKK1	-36.9 ± 327	-154 ± 329	105 ± 549	0.085	0.308	0.834
OPG	-21.6 ± 121	-23.1 ± 150	-9.15 ± 146	0.510	0.622	0.942
OPN	-1329 ± 6066	651 ± 4700	2955 ± 7875	0.232	0.122	0.486
SOST	173 ± 1116	-9.16 ± 1125	240 ± 1109	0.824	0.118	0.693
RANKL	337 ± 444	83.5 ± 356	835 ± 500	**<0.001**	0.263	0.136

Supplemental Table 6: Correlations between changes in Z-scores and changes in BMI. Table shows Pearson correlation coefficients and p-values.

	TDF	TAF	ABC
Z-score LS	-0.05 (p=0.868)	-0.05 (p=0.852)	-0.19 (p=0.221)
Z-score FN	0.33 (p=0.249)	0.04 (p=0.865)	-0.09 (p=0.569)

Supplemental Table 7: Comparisons of changes in Z-score between treatments adjusting by BMI. ANCOVA model. Table shows p-values.

	TDF vs. TAF	TDF vs. ABC	TAF vs. ABC
Z-score LS	0.513	0.501	0.660
Z-score FN	0.131	0.206	0.629

Supplemental Table 8: Association between Z-score and variables 48 weeks post-treatment in total cohort.

Variable	Z-score LS		Z-score FN	
	Coef	**p Value**	**Coef**	**p Value**
Ca	-0.04	0.730	-0.02	0.853
P	-0.14	0.258	0.02	0.903
25 OH Vit. D	0.08	0.533	-0.12	0.329
CD4	-0.13	0.265	**0.23**	**0.055**
CD8	0.08	0.525	0.14	0.245
CD4/CD8 ratio	**-0.36**	**0.002**	0.02	0.861
Total Cholesterol	-0.28	0.018	-0.21	0.074
Triglycerides	-0.02	0.868	-0.06	0.626
CTX	-0.05	0.711	0.12	0.385
P1NP	-0.16	0.240	-0.14	0.275
OC	-0.19	0.116	-0.05	0.667
TRAP	0.07	0.560	-0.01	0.932
PTH	-0.15	0.371	0.06	0.727
DKK1	0.04	0.723	-0.14	0.258
OPG	0.02	0.870	-0.11	0.360
OPN	0.07	0.589	-0.02	0.872
SOST	-0.13	0.310	-0.01	0.948
FGF23	0.06	0.625	-0.17	0.183
RANKL	0.21	0.209	0.10	0.526

Supplemental Table 9: Absolute changes analysis in Z-score with treatment x time interaction. ANOVA provides three p-values, for time effect, treatment effect and interaction between time and treatment

Variable	TDF	TAF	ABC	Time	Treatment	Interaction
Z-score LS	-0.117 ± 0.35	-0.059 ± 0.654	-0.140 ± 0.427	0.816	0.245	0.905
Z-score FN	-0.136 ± 0.302	-0.095 ± 0.275	-0.214 ± 0.343	0.370	0.296	0.838