

Table S2: Principal components analysis of variance-stabilized log2-transformed expression data. **(A)** P-values for association between first six principal components (PCs) and sample covariates, with proportion of variance in expression data explained by each principal component at the bottom row. **(B)** R-squared values measuring effect sizes of associations between PCs and covariates.

A.

P-values	PC1	PC2	PC3	PC4	PC5	PC6
Sample ID	0.966	0.993	0.205	0.094	5.01 x10 ⁻⁵	6.17 x10 ⁻⁵
Array Batch	0.164	0.265	4.95 x10 ⁻⁶	3.44 x10 ⁻¹⁶	0.392	0.757
Treatment	6.08 x10 ⁻¹⁷	4.68 E-06	0.332	0.334	0.695	0.711
Month	0.303	0.801	0.834	0.001	0.043	1.0 x10 ⁻³
Age	0.853	0.946	1.36 x10 ⁻⁶	0.617	4.0 x10 ⁻³	0.097
Gender	0.314	0.547	0.272	0.863	0.124	0.739
Ancestry	0.711	0.911	0.399	0.403	0.047	0.004
Serum 25D	0.205	0.920	1.0 x10 ⁻³	0.147	0.743	0.929
Serum PTH	0.569	0.615	6.1 x10 ⁻⁶	0.055	0.758	0.336
RNA concentration	1.54 x10 ⁻⁵	0.986	0.029	0.158	0.935	0.061
RIN	0.160	9.0 x10 ⁻³	5.0 x10 ⁻³	0.277	0.524	0.973
	PC1	PC2	PC3	PC4	PC5	PC6
Proportion of Variance	0.223	0.086	0.067	0.058	0.039	0.034

B.

R-squared values	PC1	PC2	PC3	PC4	PC5	PC6
Sample ID	2.47 x10 ⁻⁵	1.12 x10 ⁻⁶	0.021	0.037	0.196	0.191
Array Batch	0.025	0.016	0.241	0.586	0.010	1.0 x10 ⁻³
Treatment	0.604	0.242	0.012	0.012	2.0 x10 ⁻³	2.0 x10 ⁻³
Month	0.014	1 x10 ⁻³	1 x10 ⁻³	0.139	0.053	0.140
Age	4.56 x10 ⁻³	6.01 x10 ⁻⁵	0.266	3 x10 ⁻³	0.103	0.036
Gender	0.013	5.0 x10 ⁻³	0.016	3.95 x10 ⁻⁴	0.031	1 x10 ⁻³
Ancestry	0.002	1.65 x10 ⁻⁴	9 x10 ⁻³	9 x10 ⁻³	0.051	0.103
Serum 25D	0.021	1.35 x10 ⁻⁴	0.136	0.027	1.0 x10 ⁻³	1.05 x10 ⁻⁴
Serum PTH	0.004	3.0 x10 ⁻³	0.237	0.048	1.0 x10 ⁻³	0.012
RNA concentration	0.219	3.89 x10 ⁻⁶	0.061	0.026	8.80 x10 ⁻⁵	0.045
RIN	0.026	0.086	0.099	0.016	5 x10 ⁻³	1.0 x10 ⁻⁴