

Table S3: Principal components analysis of variance-stabilized log₂-transformed expression data adjusted for covariates. **(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	0.937	0.716	4.5 x 10 ⁻⁷	7.0 x 10 ⁻³	0.041	3.50 x 10 ⁻⁴
Array Batch	0.853	0.865	0.961	0.938	0.963	0.989
Treatment	1.62 x 10 ⁻¹⁷	2.76 x 10 ⁻⁷	0.715	0.402	0.865	0.996
Month	0.829	0.843	0.955	0.927	0.956	0.987
Age	0.634	0.714	0.810	0.886	0.882	0.799
Gender	0.969	0.940	0.081	0.151	0.299	0.056
Ancestry	0.866	0.689	1.04 x 10 ⁻⁵	1.0 x 10 ⁻³	0.017	1.66 x 10 ⁻⁶
Serum 25D	0.518	0.888	0.037	0.129	0.253	0.026
Serum PTH	0.381	0.992	0.536	0.850	0.851	0.565
RNA concentration	3.56 x 10 ⁻⁵	0.754	0.667	0.045	0.378	0.820
RIN score	0.345	3.0 x 10 ⁻³	0.516	0.576	0.374	0.499
	PC1	PC2	PC3	PC4	PC5	PC6
Proportion of Variance	0.248	0.109	0.050	0.042	0.034	0.031

B.

R-squared values	PC1	PC2	PC3	PC4	PC5	PC6
Sample ID	8.34 x 10 ⁻⁵	2.0 x 10 ⁻³	0.286	0.090	0.054	0.156
Array Batch	4.52 x 10 ⁻⁴	3.83 x 10 ⁻⁴	3.16 x 10 ⁻⁵	8.09 x 10 ⁻⁵	2.92 x 10 ⁻⁵	2.53 x 10 ⁻⁶
Treatment	0.617	0.295	2.0 x 10 ⁻³	9.0 x 10 ⁻³	3.83 x 10 ⁻⁴	3.50 x 10 ⁻⁷
Month	0.001	1.0 x 10 ⁻³	4.30 x 10 ⁻⁵	1.10 x 10 ⁻⁴	3.97 x 10 ⁻⁵	3.44 x 10 ⁻⁶
Age	0.003	2.0 x 10 ⁻³	1.0 x 10 ⁻³	2.72 x 10 ⁻⁴	2.94 x 10 ⁻⁴	1.0 x 10 ⁻³
Gender	1.99 x 10 ⁻⁵	7.58 x 10 ⁻⁵	0.040	0.027	0.014	0.047
Ancestry	3.79 x 10 ⁻⁴	2.0 x 10 ⁻³	0.227	0.140	0.073	0.262
Serum 25D	6.0 x 10 ⁻³	2.62 x 10 ⁻⁴	0.056	0.030	0.017	0.063
Serum PTH	0.010	1.31 x 10 ⁻⁶	5.0 x 10 ⁻³	4.76 x 10 ⁻⁴	4.64 x 10 ⁻⁴	4.0 x 10 ⁻³
RNA concentration	0.203	1.0 x 10 ⁻³	2.0 x 10 ⁻³	0.052	0.010	1.0 x 10 ⁻³
RIN score	0.012	0.113	6.0 x 10 ⁻³	4.0 x 10 ⁻³	0.010	6.0 x 10 ⁻³