

Supplementary

Supplementary Figures

Figure S1. Formation of the 450K Dataset

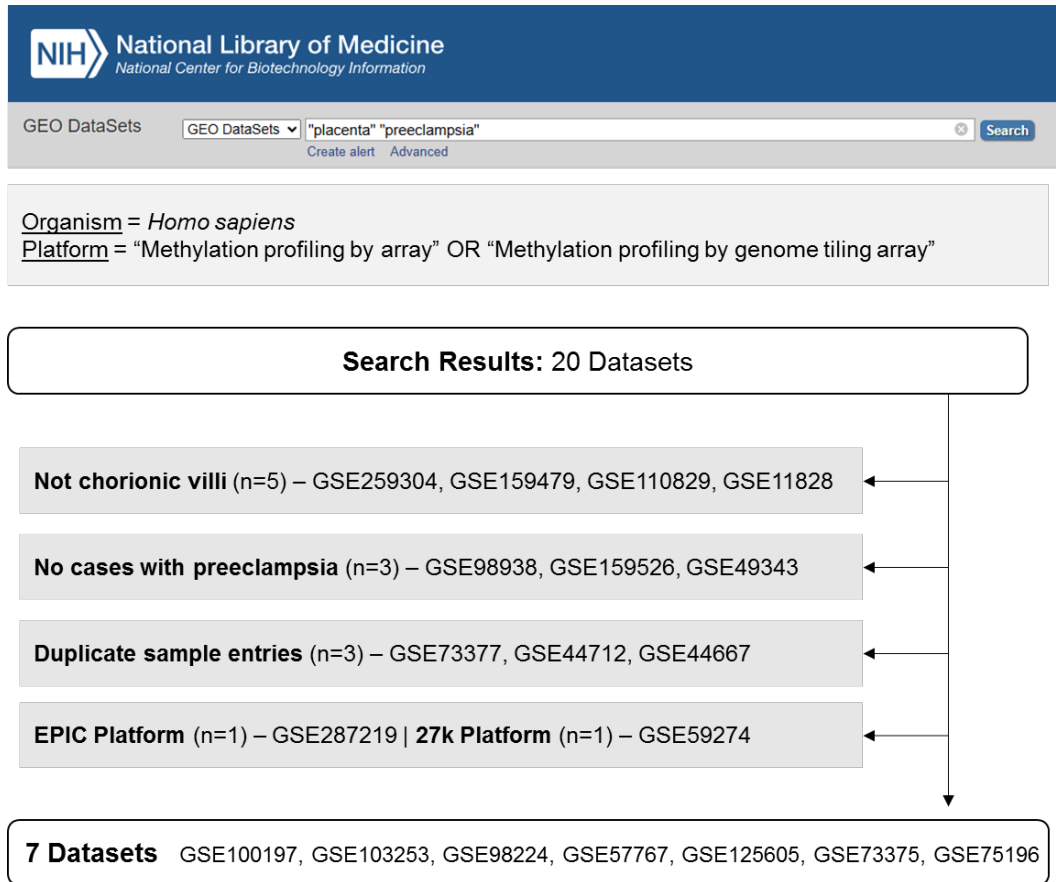


Figure S2. Defining sex-specific, sex-differential, and sex-opposite associations

Flow chart showing approach for evaluating sex-specific DNAm associations with X chromosome probes

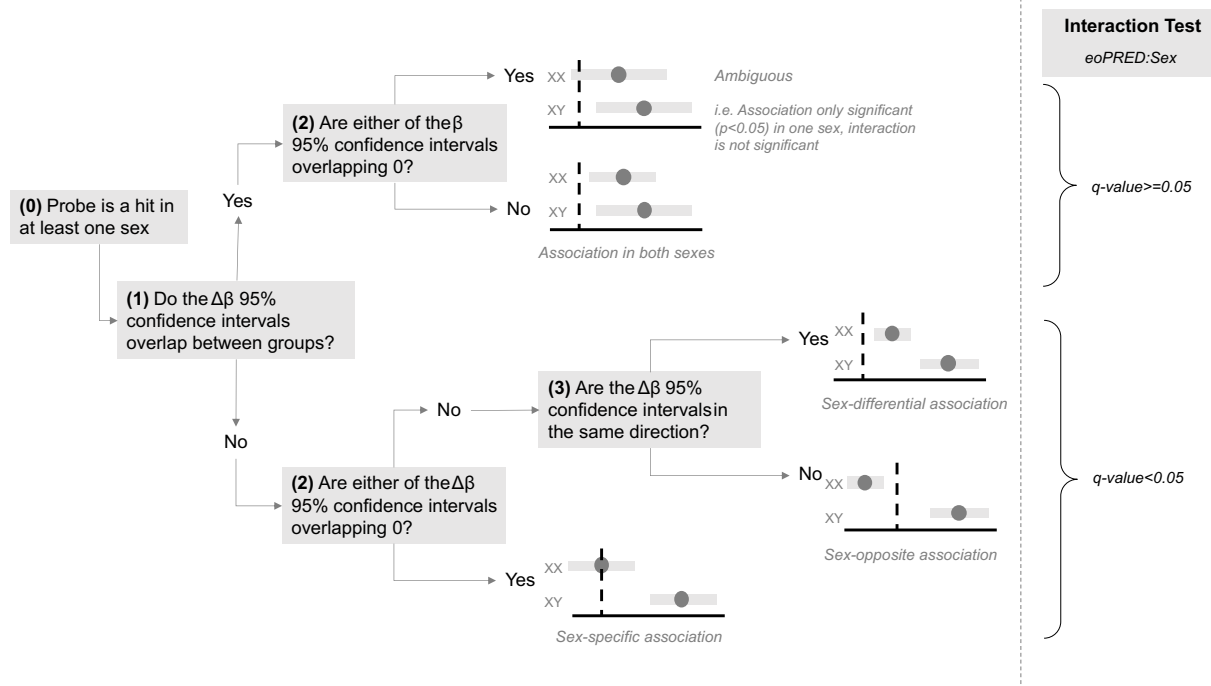


Figure S3. Distribution of eoPRED scores in the two datasets.

A eoPRED score distribution in the 450K and SPAH datasets. **B** Boxplot of eoPRED score in XX and XY groups showing median interquartile range. There was no difference in eoPRED score by sex (Wilcoxon test). **C** Boxplot of eoPRED score in the early-onset PE (EOPE), late-onset PE (LOPE), non-preeclamptic preterm birth (nPTB), and non-preeclamptic term birth (nTB) groups. Dashed line at 0.55, indicating the cutoff proposed by the initial study for discriminating between EOPE and nPTB. The significance test used was the Wilcoxon test with multiple test correction (*= $p<0.05$, **= $p<0.01$, ***= $p<0.001$, ****= $p<0.0001$).

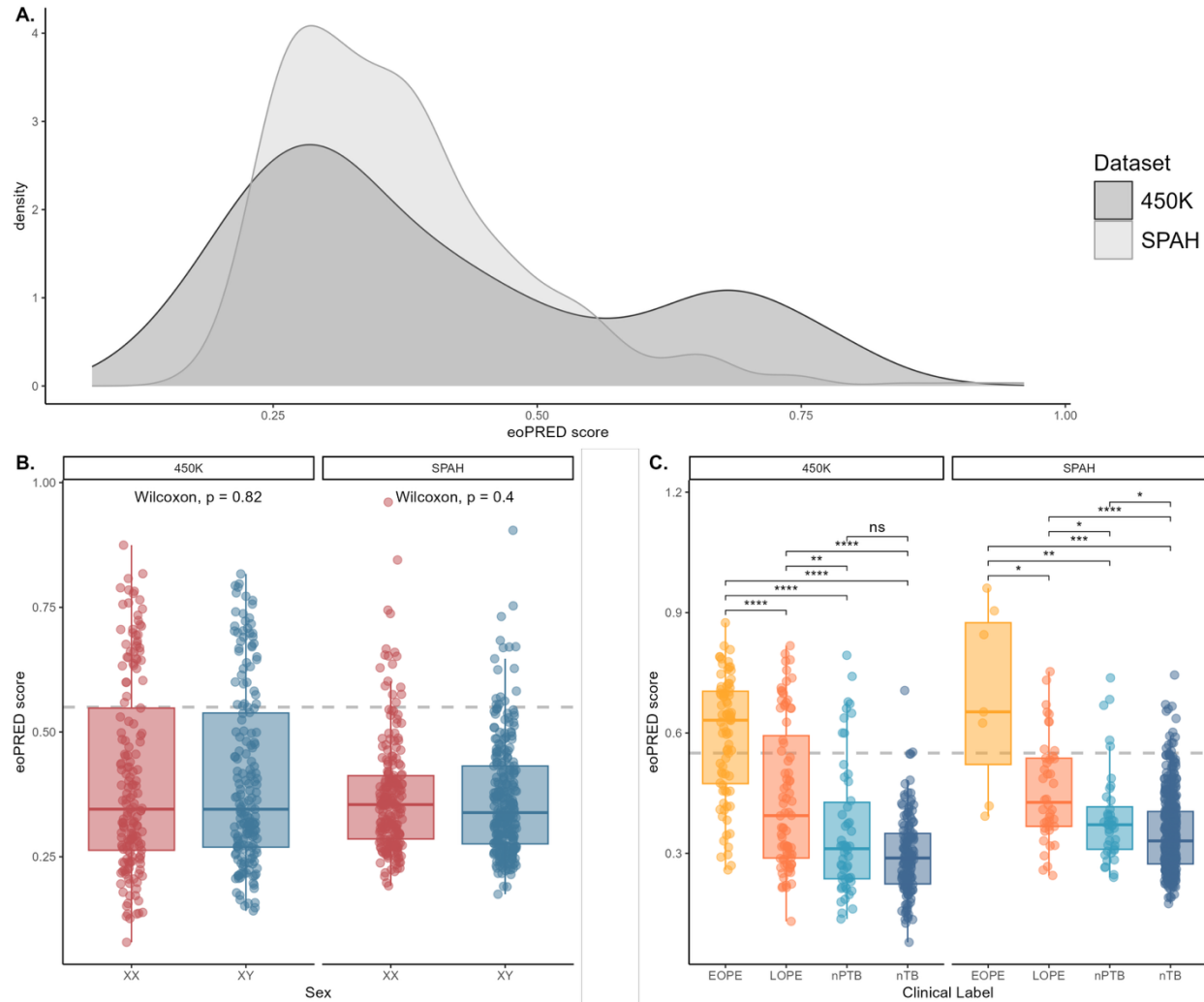


Figure S4. Variables associated with the first four Principal Components (PCs) in both datasets
 Top row= 450K Dataset, Bottom row= SPAH Dataset. L-R= PCA on X chr (XX), X chr (XY), Y chr (XY).
 Heatmaps show the R^2 values for linear regressions of the first four PCs on metadata variables. Only significant (FDR<0.05) R^2 values are shown. Below the heatmaps are boxplots showing the proportion of variation explained by the first four PCs. PE= Preeclampsia, GA = gestational age, nRBC = nucleated red blood cell.

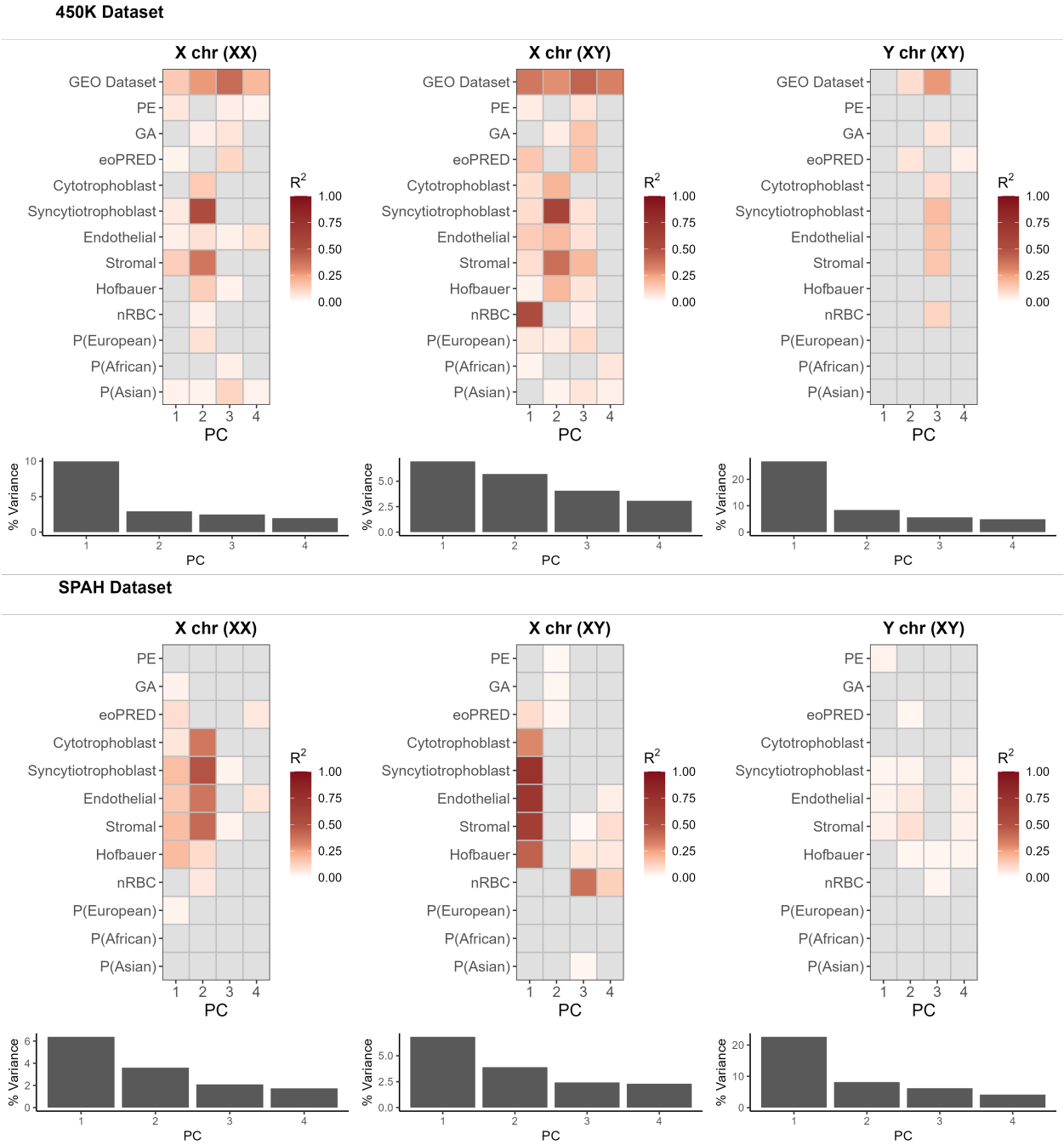


Figure S5. Correlation of regression coefficients across EOPE and eoPRED models

A-C comparing the EOPE vs. nPTB model regression coefficients against the eoPRED model regression coefficients in the 450K Dataset. Pearson's correlations are shown.

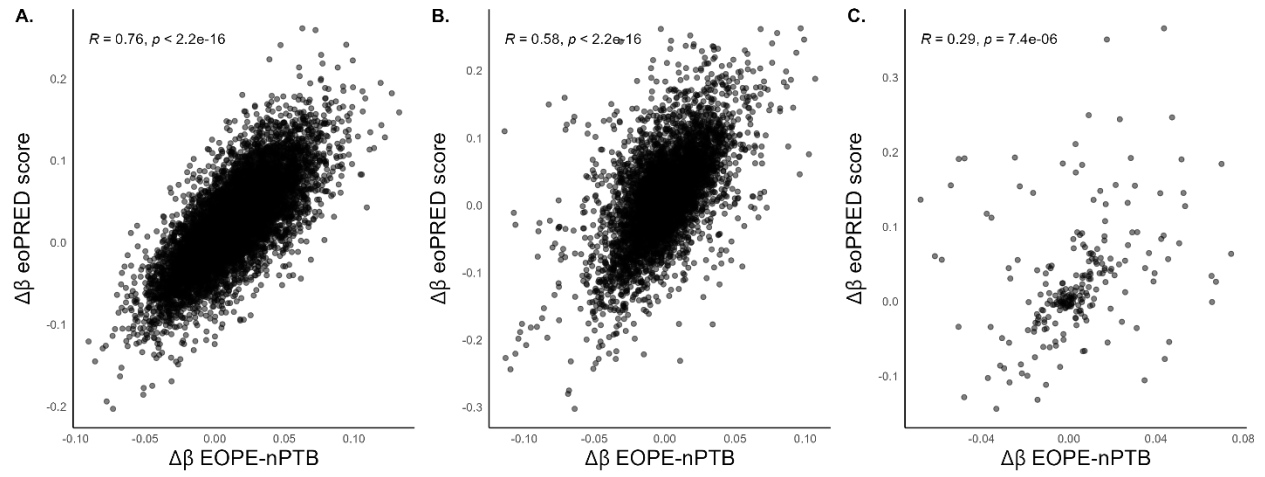


Figure S6. Replicated sex chromosome hits in both datasets

Top = 450K Dataset, Bottom = SPAH Dataset. Scatterplots showing DNAm at the 15 hits that replicated across both datasets in XX and XY samples.

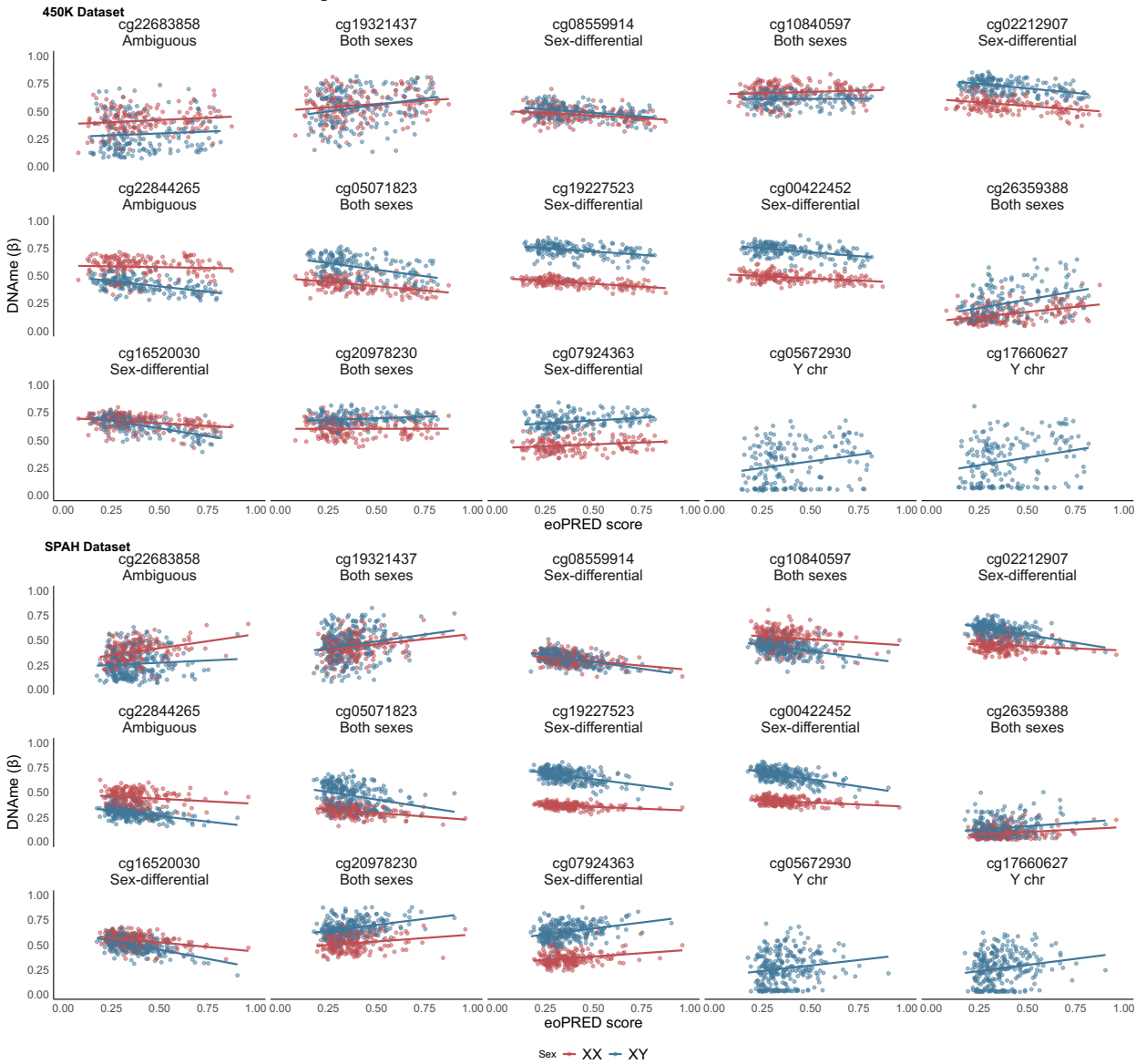


Figure S7. Functional analysis with KnowYourCG

