

Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: BrCa CpGs identified using the bioinformatics pipeline

File name: Supplementary Data 2

Description: Distribution of identified BrCa CpGs across genomic regions, CpG islands, and chromosomes

File name: Supplementary Data 3

Description: PrCa CpGs identified using the bioinformatics pipeline

File name: Supplementary Data 4

Description: Distribution of identified PrCa CpGs across genomic regions, CpG islands, and chromosomes

File name: Supplementary Data 5

Description: Differentially expressed genes based on ANNOVAR annotation associated with BrCa CpGs

File name: Supplementary Data 6

Description: Mediation analysis results for ANNOVAR-based genes associated with BrCa CpGs

File name: Supplementary Data 7

Description: Differentially expressed genes based on ANNOVAR annotation associated with PrCa CpGs

File name: Supplementary Data 8

Description: Mediation analysis results for ANNOVAR-based genes associated with PrCa CpGs

File name: Supplementary Data 9

Description: Enrichment results of distance-based differentially expressed genes associated with BrCa CpGs

File name: Supplementary Data 10

Description: Differentially expressed genes located within 25kb of BrCa CpGs

File name: Supplementary Data 11

Description: Mediation analysis results for distance-based genes (genes with ± 25 kb flanking window) associated with BrCa CpGs

File name: Supplementary Data 12

Description: Enrichment results of distance-based differentially expressed genes associated with PrCa CpGs

File name: Supplementary Data 13

Description: Differentially expressed genes located within 10kb of PrCa CpGs

File name: Supplementary Data 14

Description: meQTL SNPs enriched-genetically influenced genes that were differentially expressed in breast tissue and whole blood

File name: Supplementary Data 15

Description: meQTL SNPs enriched-genetically influenced genes that were differentially expressed in prostate tissue and whole blood

File name: Supplementary Data 16

Description: Genomewide enrichment results of hyper- and hypo-methylated CpGs in BrCa and PrCa

File name: Supplementary Data 17

Description: Site-specific enrichment analysis of hypermethylated CpGs

File name: Supplementary Data 18

Description: Pathways enriched by DEGs associated with enriched hypomethylated CpGs in breast cancer and prostate cancer

File name: Supplementary Data 19

Description: GWAS SNPs around BrCa CpGs

File name: Supplementary Data 20

Description: GWAS SNPs around PrCa CpGs

File name: Supplementary Data 21

Description: Iterative conditional analysis of the meQTL SNPs of BrCa CpGs identified in suggestive and novel regions

File name: Supplementary Data 22

Description: Iterative conditional analysis of the meQTL SNPs of PrCa CpGs identified in suggestive and novel regions

File name: Supplementary Data 23

Description: LD between selected meQTL SNPs of BrCa CpGs in genome-wide significant regions and genome-wide significant SNP

File name: Supplementary Data 24

Description: LD between selected meQTL SNPs of PrCa CpGs in genome-wide significant regions and genome-wide significant SNP

File name: Supplementary Data 25

Description: Pairwise overlap to identify common cross-cancer CpGs

File name: Supplementary Data 26

Description: Most significant SNPs around the eight overlapping CpGs in BrCa and PrCa GWAS

File name: Supplementary Data 27

Description: Association results for the predictor SNPs of cg08129017 in breast cancer, prostate cancer, and meta-analysis

File name: Supplementary Data 28

Description: BrCa CpGs found within 1Mb of known and novel BrCa risk loci

File name: Supplementary Data 29

Description: PrCa CpGs found within 1Mb of known and novel PrCa risk loci

File name: Supplementary Data 30

Description: Direction of influence of GWAS SNPs and the BrCa CpGs on BrCa

File name: Supplementary Data 31

Description: Direction of influence of GWAS SNPs and the PrCa CpGs on PrCa

File name: Supplementary Data 32

Description: BrCa CpGs associated druggable genes identified from DGIdb

File name: Supplementary Data 33

Description: PrCa CpGs associated druggable genes identified from DGIdb

File name: Supplementary Data 34

Description: Survival analysis of BrCa CpGs using MethSurv tool. Survival analysis was conducted for each of the enriched BrCa CpG using Cox regression models. Covariates in the model included age, clinical stage, and ER status