

Description of Additional Supplementary Files

File Name: Supplementary Data 1 a&b

Description: Demographics and biometrics of study cohort

File Name: Supplementary Data 1c

Description: Correlations of aortic traits with other biometrics in our cohort

File Name: Supplementary Data 2

Description: Heritability of aortic traits (LDSC)

File Name: Supplementary Data 3

Description: Phenotype correlations

File Name: Supplementary Data 4

Description: LDSC Genotype correlations

File Name: Supplementary Data 5 (a-f)

Description: Significant stage 1 GWAS associations

File Name: Supplementary Data 6 (a-f)

Description: Significant stage 2 (MTAG) GWAS associations

File Name: Supplementary Data 7

Description: Full list of 102 loci

File Name: Supplementary Data 7a-d

Description: Replication of lead aortic area SNPs in SHIP study

File Name: Supplementary Data 8

Description: LD between lead SNPs for distensibility

File Name: Supplementary Data 9

Description: eQTL and sQTL annotations (distensibility loci)

File Name: Supplementary Data 10 (a-d)

Description: Functional annotations

File Name: Supplementary Data 11

Description: Comparison of results with Tcheandjieu, Pirruccello and Benjamins – locus overlap

File Name: Supplementary Data 12

Description: Sex-specific GWAS comparison

File Name: Supplementary Data 13

Description: FUMA gene-based association results

File Name: Supplementary Data 14

Description: MAGMA gene-based association results

File Name: Supplementary Data 15a
Description: MAGMA GO associations

File Name: Supplementary Data 15b
Description: DEPICT GO associations

File Name: Supplementary Data 16
Description: Pathways analysis of co-expression data

File Name: Supplementary Data 17
Description: PheWAS full results

File Name: Supplementary Data 18
Description: MR-PheWAS full results

File Name: Supplementary Data 19 (a-c)
Description: LDSC and bidirectional MR results aorta-BP

File Name: Supplementary Data 20
Description: MR-ConMix results

File Name: Supplementary Data 21
Description: LDSC analysis of aortic traits with cerebral phenotypes

File Name: Supplementary Data 22
Description: Regional correlations between aortic and cerebral traits

File Name: Supplementary Data 23
Description: Two-sample MR: aortic with cerebral traits

File Name: Supplementary Data 24
Description: Multivariable MR: BP and aortic with WMH

File Name: Supplementary Data 25
Description: Replication of MVMR signal in the Rhineland study