

## **Description of Additional Supplementary Files**

- Supplementary Data 1: HC (Pediatric) meta-analysis: Independent single variants ( $p < 1.0E-04$ )
- Supplementary Data 2: HC (Adult) meta-analysis: Independent single variants ( $p < 1.0E-04$ )
- Supplementary Data 3: HC (Pediatric+adult) meta-analysis: Independent single variants ( $p < 1.0E-04$ )
- Supplementary Data 4: Genome-wide summary statistics for HC (Pediatric and adult), standardised beta-coefficients
- Supplementary Data 5: HC (Pediatric) meta-analysis: Gene-based analysis (multiple testing threshold  $p < 1.7E-06$ )
- Supplementary Data 6: HC (Adult) meta-analysis: Gene-based analysis (multiple testing threshold  $p < 1.7E-06$ )
- Supplementary Data 7: HC (Pediatric+adult) meta-analysis: Gene-based analysis (multiple testing threshold  $p < 1.7E-06$ )
- Supplementary Data 8: S-prediXcan for HC (Pediatric+adult) for cerebellum, cortex and whole blood
- Supplementary Data 9: LDHUB unconstrained LDSC genetic correlations for HC (Pediatric+adult)
- Supplementary Data 10: Stratified LDSC regression for HC (Pediatric+adult)
- Supplementary Data 11: ICV+HC (Pediatric+adult) meta-analysis: Novel independent single variants ( $p < 5E-08$ )
- Supplementary Data 12: ICV+HC (Pediatric+adult) meta-analysis: Known single variant signals for head circumference (HC), intracranial volume (ICV) and brain volume
- Supplementary Data 13: Genome-wide summary statistics for ICV+HC(Pediatric+adult), standardised beta-coefficients
- Supplementary Data 14: Genome-wide FUMA for HC (Pediatric+adult)
- Supplementary Data 15: Genome-wide FUMA for ICV+HC (Pediatric+adult)
- Supplementary Data 16: FUMA. SNP annotation: ICV+HC (Pediatric+adult): Novel independent single variants ( $p < 5E-08$ )
- Supplementary Data 17: FUMA. Genes mapped by SNPs: ICV+HC (Pediatric+adult): Novel independent single variants ( $p < 5E-08$ )
- Supplementary Data 18: FUMA GWAS catalogue: ICV+HC (Pediatric+adult): Novel independent single variants ( $p < 5E-08$ )
- Supplementary Data 19: Brain xQTL query for rs35850753. Information about rs78378222 was not available.
- Supplementary Data 20: UKBiobank PheWAS for rs78378222 and rs35850753 (multiple testing threshold  $p < 2.26E-06$ )