

Supplementary Information for: The Genetic Architecture of the Human Corpus Callosum and its Subregions

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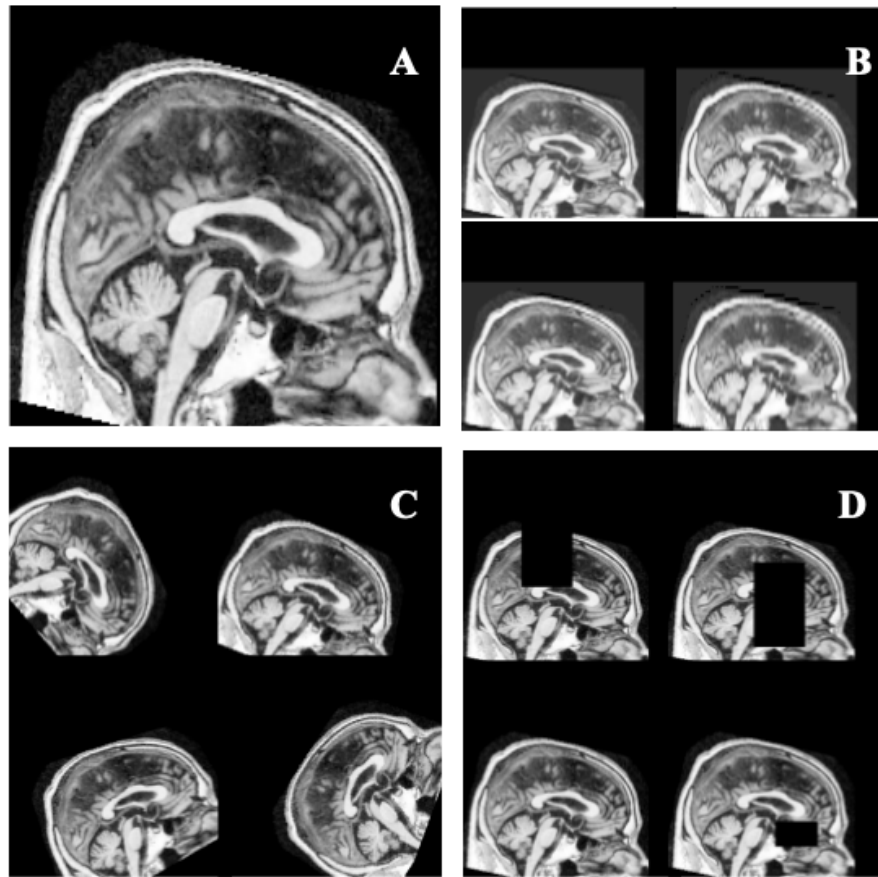
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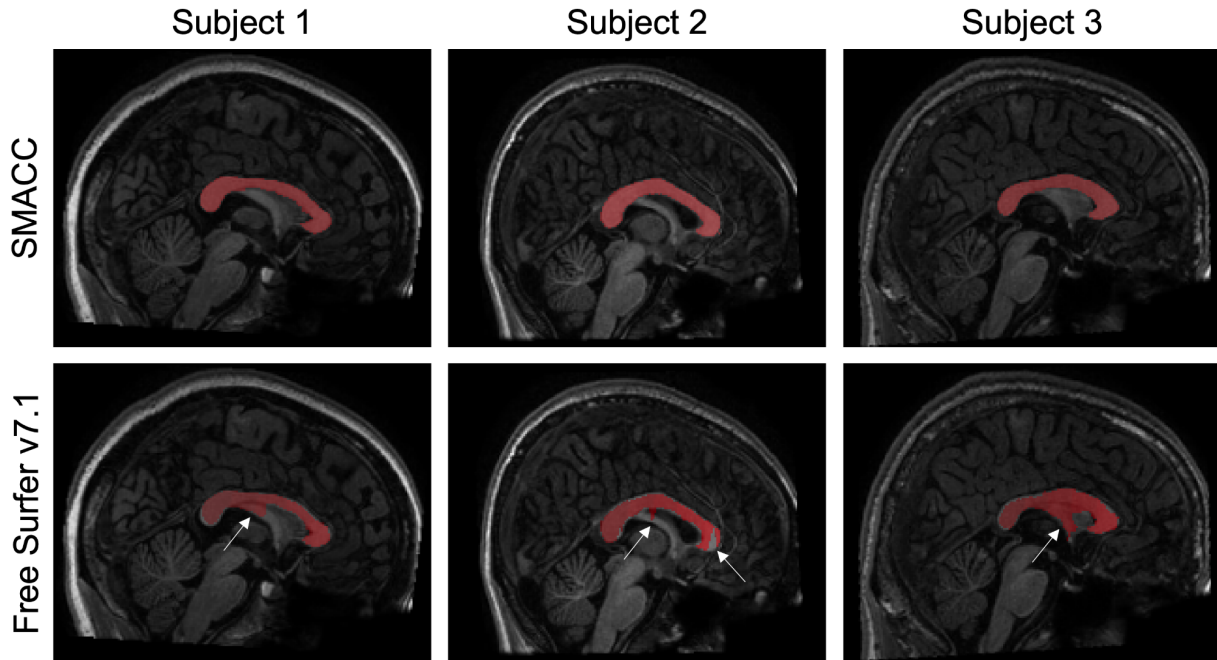
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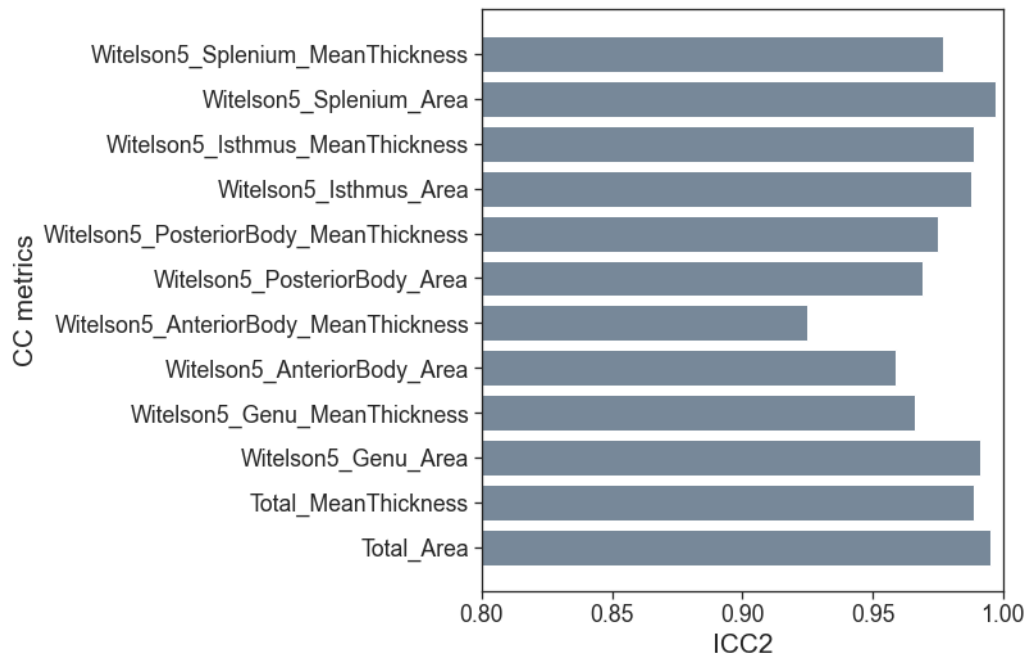
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Supplementary Figure 1: Data augmentation techniques - **A.** A T1w MR image **B.** Downsampled MR images by a factor of 2, 3, 4 and 5. **C.** MR images rotated in increments of 15 degrees. **D.** Black boxes of various width X height ((100 X 60), (60 X 100), (50 X 30), (30 X 50)) were added at random locations in the midCC slice to imitate partial agenesis cases.

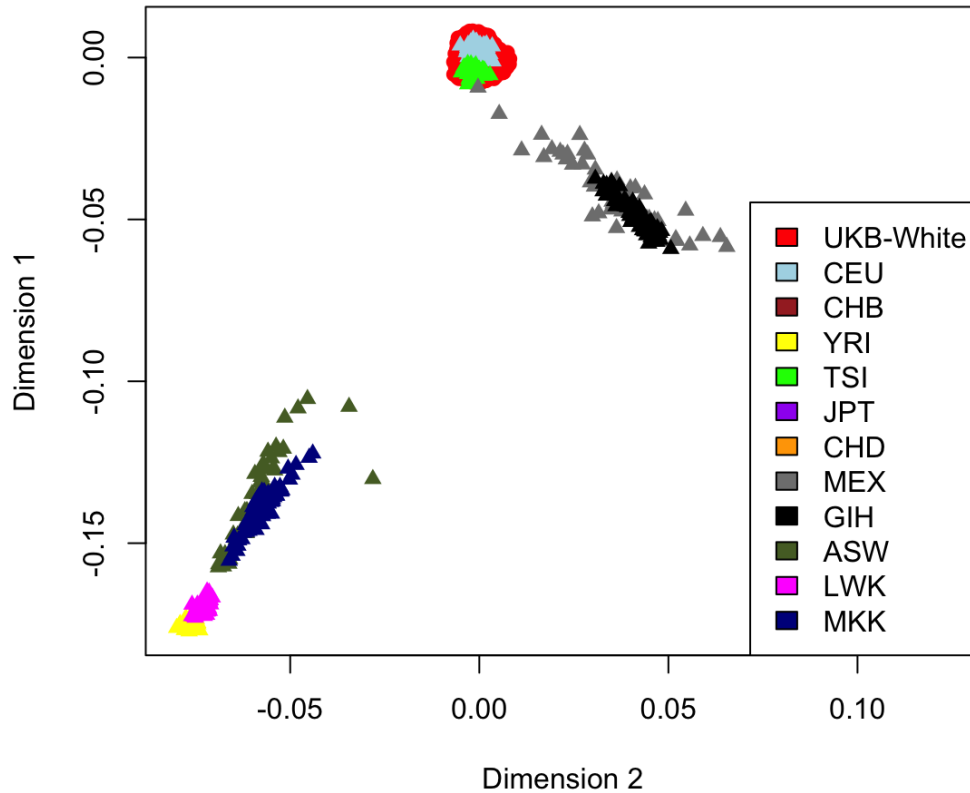


Supplementary Figure 2: Midsagittal corpus callosum segmentation via SMACC: Examples of midsagittal corpus callosum (midCC) segmentation from three different participants (left to right) using our SMACC tool¹ (top) and FreeSurfer (bottom) in Hangzhou Normal University (HNU) dataset².

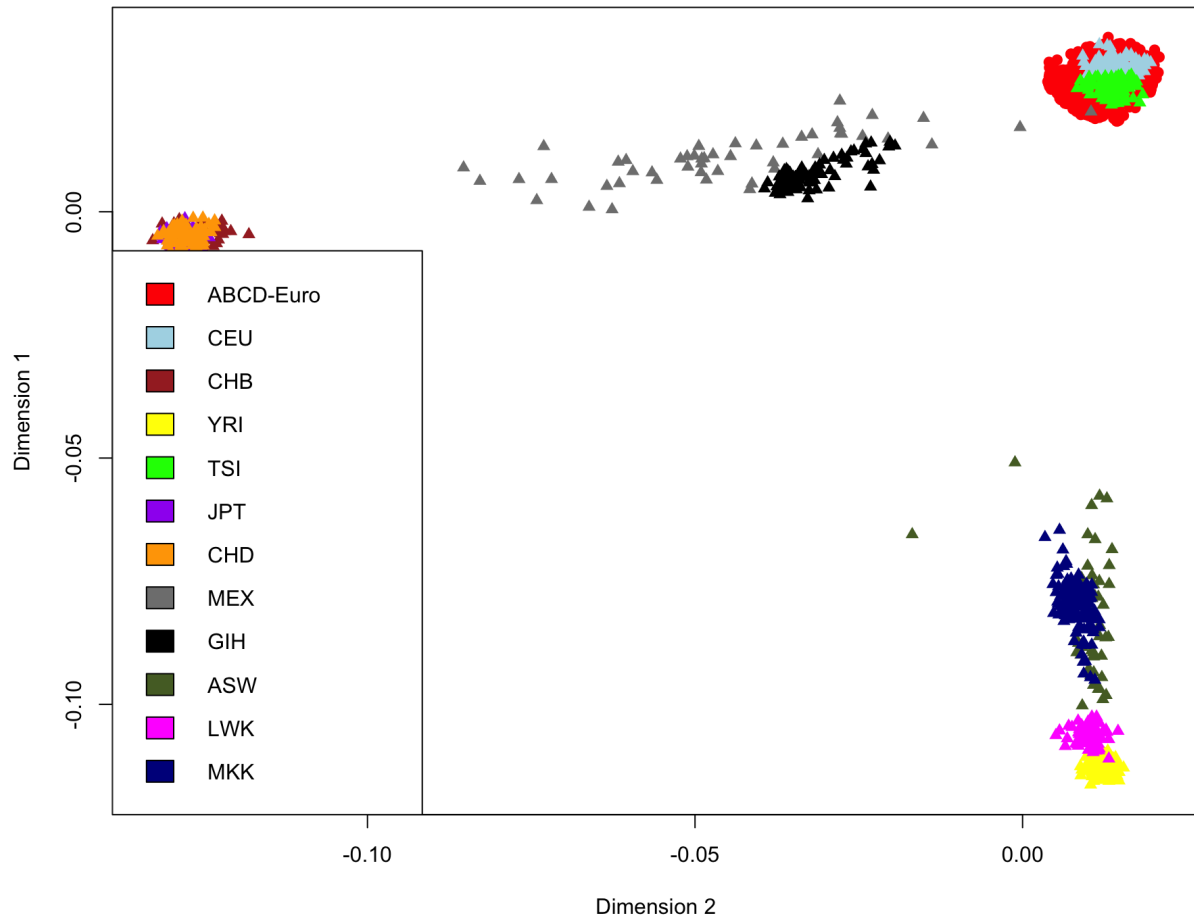


Supplementary Figure 3: Reliability of SMACC metrics in a test-retest dataset: Average intraclass correlation (ICC) coefficients for different CC metrics between sessions for all subjects

in Hangzhou Normal University (HNU) dataset². Higher ICC shows that our segmentations across all the sessions for a subject are very similar and hence highly reliable.



Supplementary Figure 4: UK Biobank MDS in European Ancestry Individuals: European individuals (red points) in UK Biobank³ as defined via MDS. UK Biobank sample is overlaid with the HapMap3 data release⁴. CEU individuals represent Utah residents with Northern and Western European ancestry from the Centre d'Etudes du Polymorphisme Humain (CEPH) collection. TSI individuals represent Toscani in Italy.



Supplementary Figure 5: Adolescent Behavioral Cognitive Development study MDS in European Ancestry Individuals: European Individuals (red points) in the Adolescent Behavioral Cognitive Development study (ABCD) as defined via MDS⁵. The ABCD sample is overlaid with the HapMap3 data release⁴. CEU individuals represent Utah residents with Northern and Western European ancestry from the Centre d'Etudes du Polymorphisme Humain (CEPH) collection. TSI individuals represent Toscani in Italy.

References

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