

Genetic overlap between the brain functional connectome and schizophrenia

Daniel Roelfs & Tobias Kaufmann



Background

- Apply structural vertex-wise genetic analyses from Tobias to functional domain
- Correlate with schizophrenia summary stats
- Correlate with mental health PCs summary statistics

1 **Cortico-genetic mapping links individual brain maturity in youths to cognitive and
2 psychiatric traits**

3 Tobias Kaufmann^{1,*}, Dennis van der Meer¹, Dag Alnæs¹, Oleksandr Frei¹, Olav B. Smeland¹, Ole
4 A. Andreassen¹, Lars T. Westlye^{1,2}

5 ¹ NORMENT, KG Jebsen Centre for Psychosis Research, Division of Mental Health and Addiction, Oslo

6 University Hospital & Institute of Clinical Medicine, University of Oslo, Oslo, Norway

7 ² Department of Psychology, University of Oslo, Oslo, Norway

8 * Correspondence: Tobias Kaufmann, Ph.D.

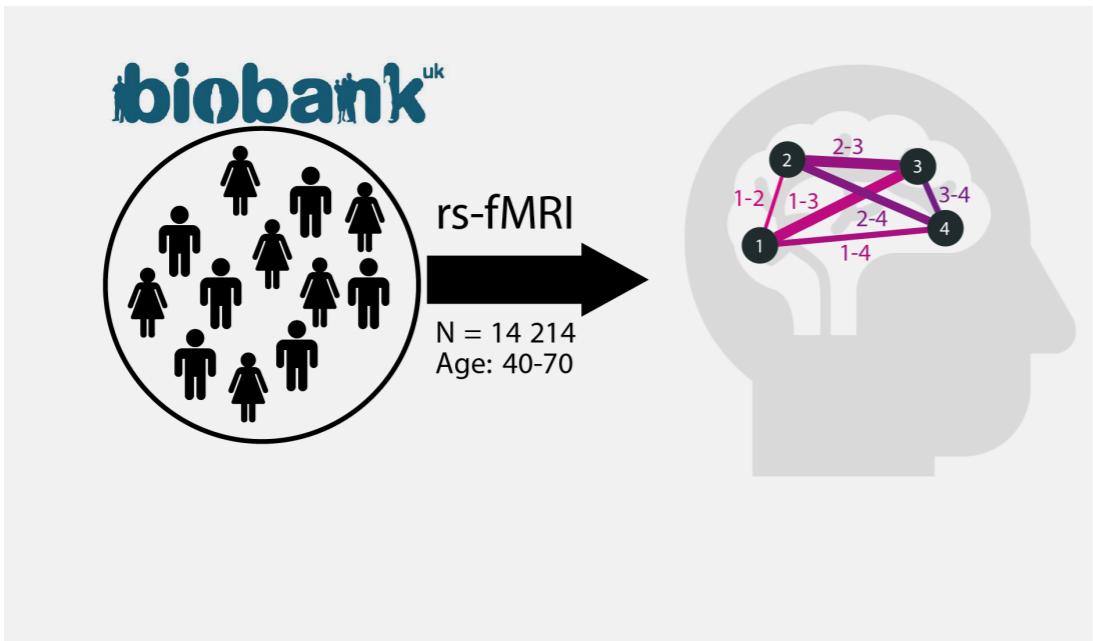
9 Email: tobias.kaufmann@medisin.uio.no

10 Postal address: OUS, POBox 4956 Nydalen, 0424 Oslo, Norway

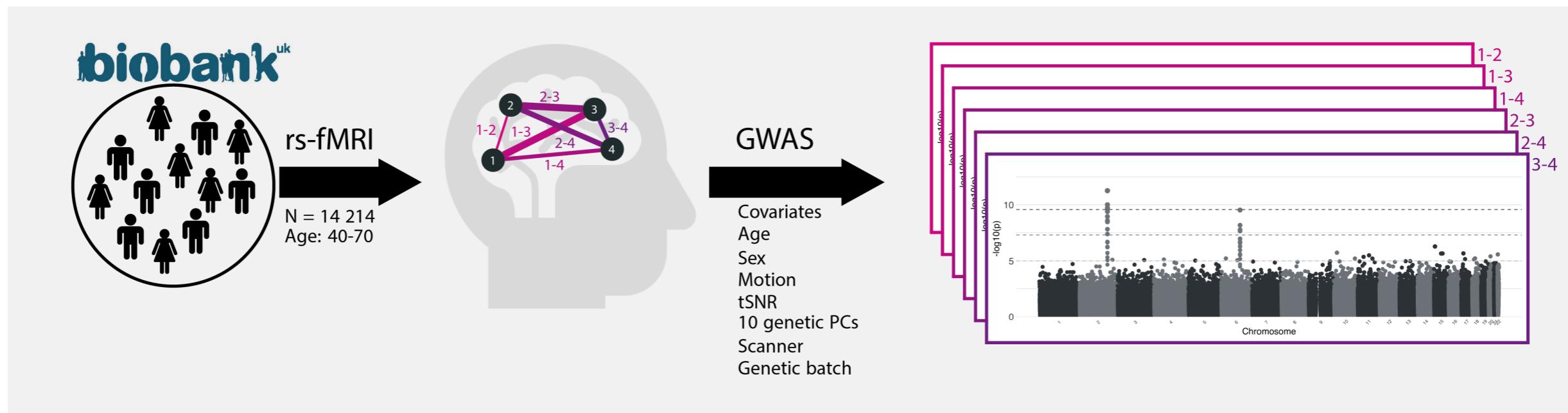
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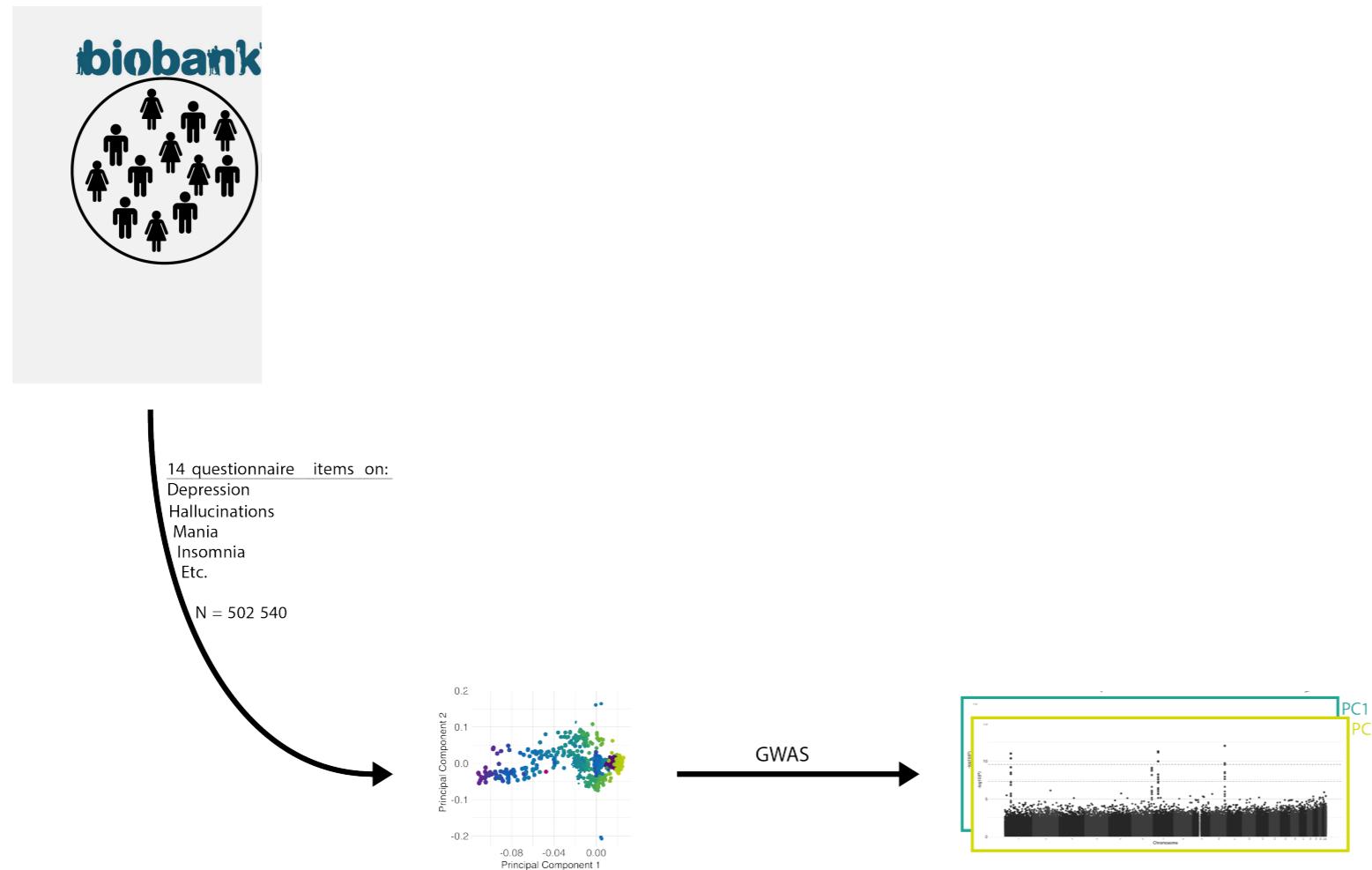
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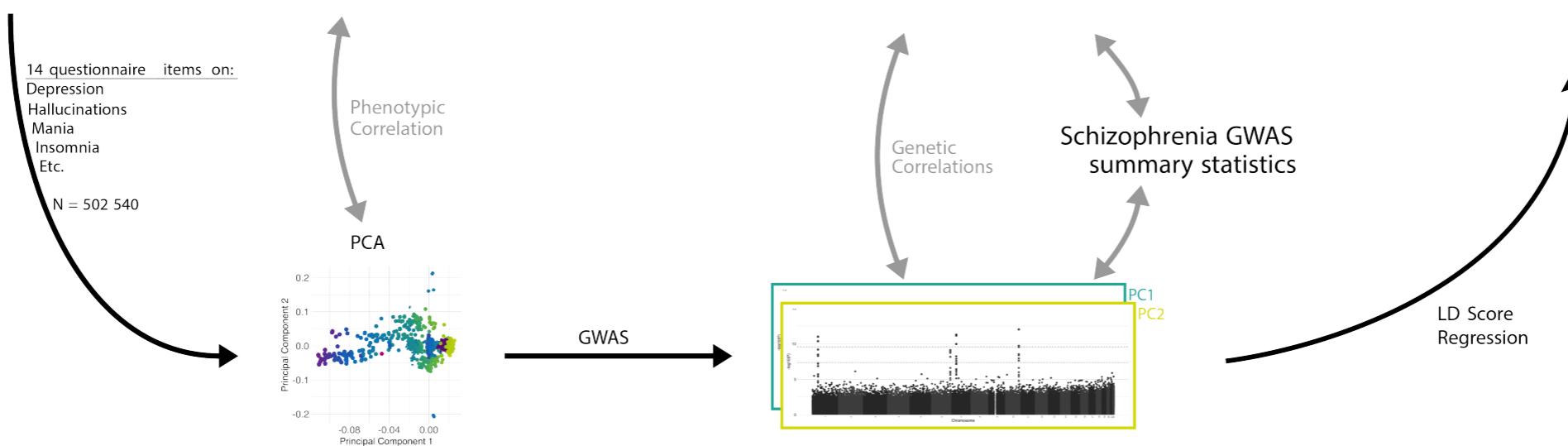
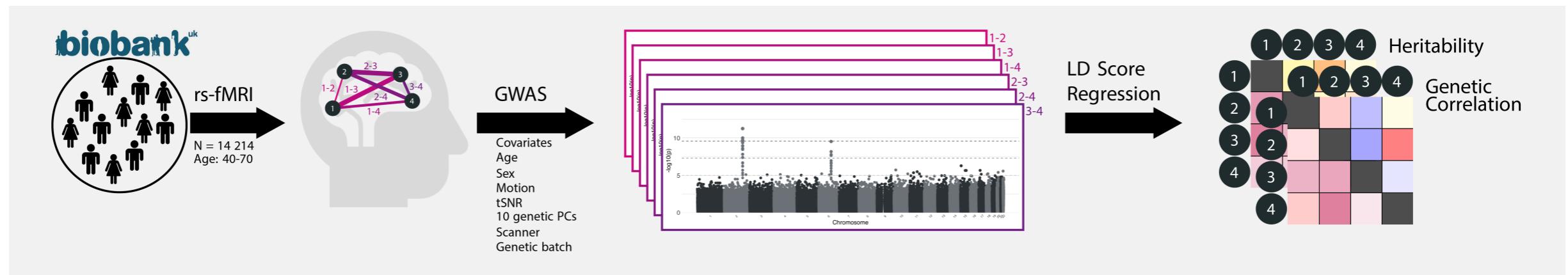
Method



Method

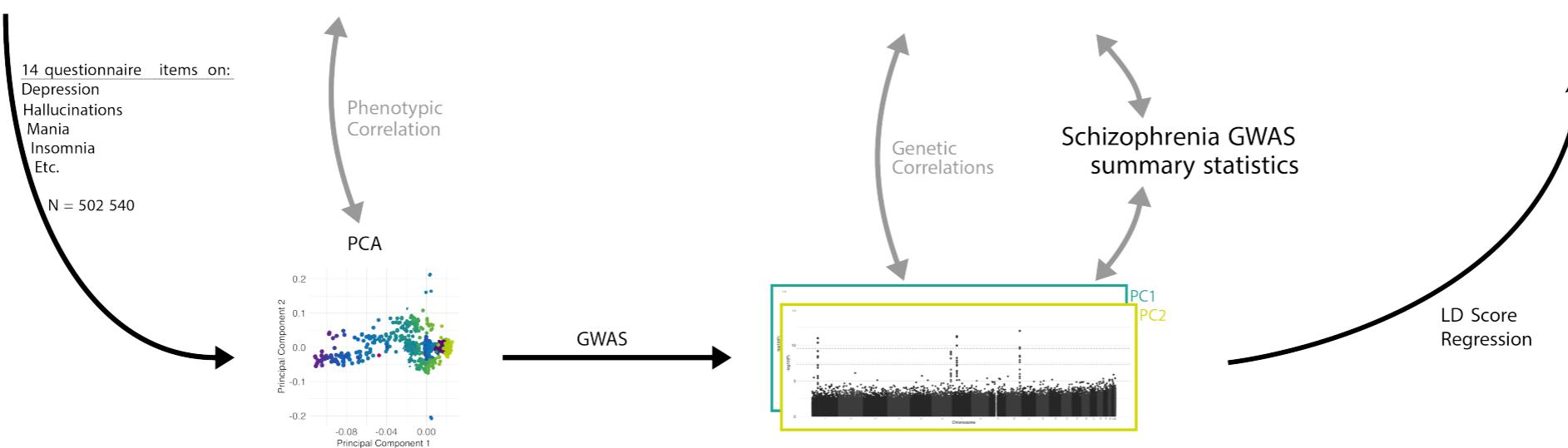
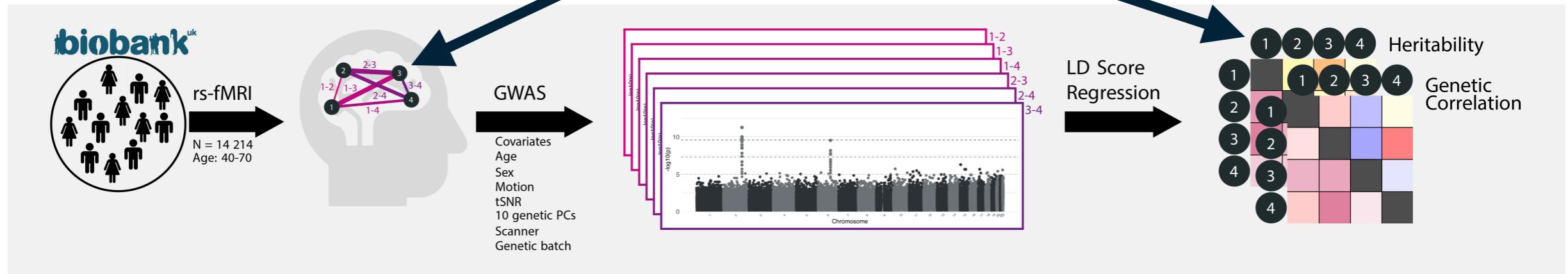


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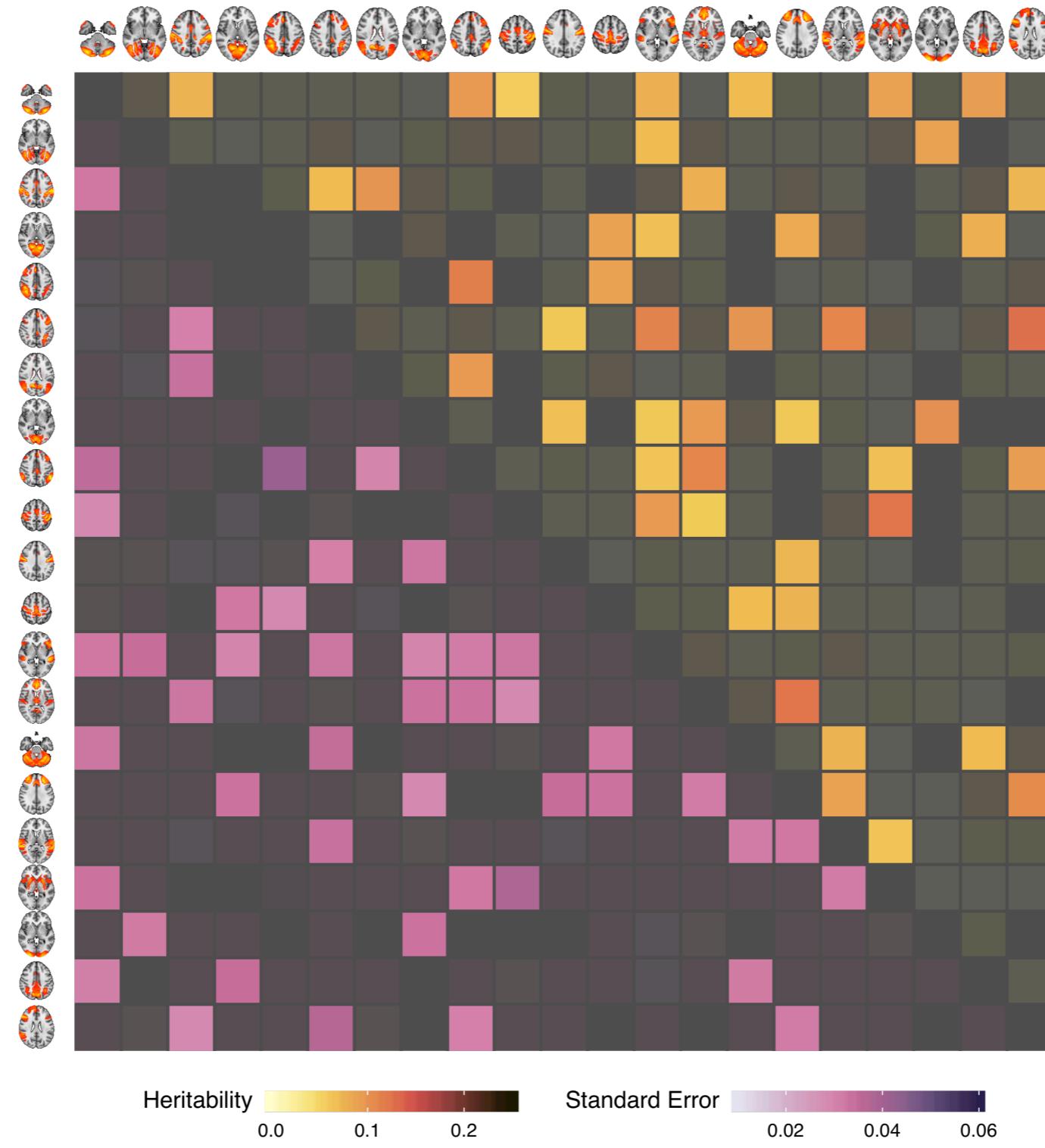


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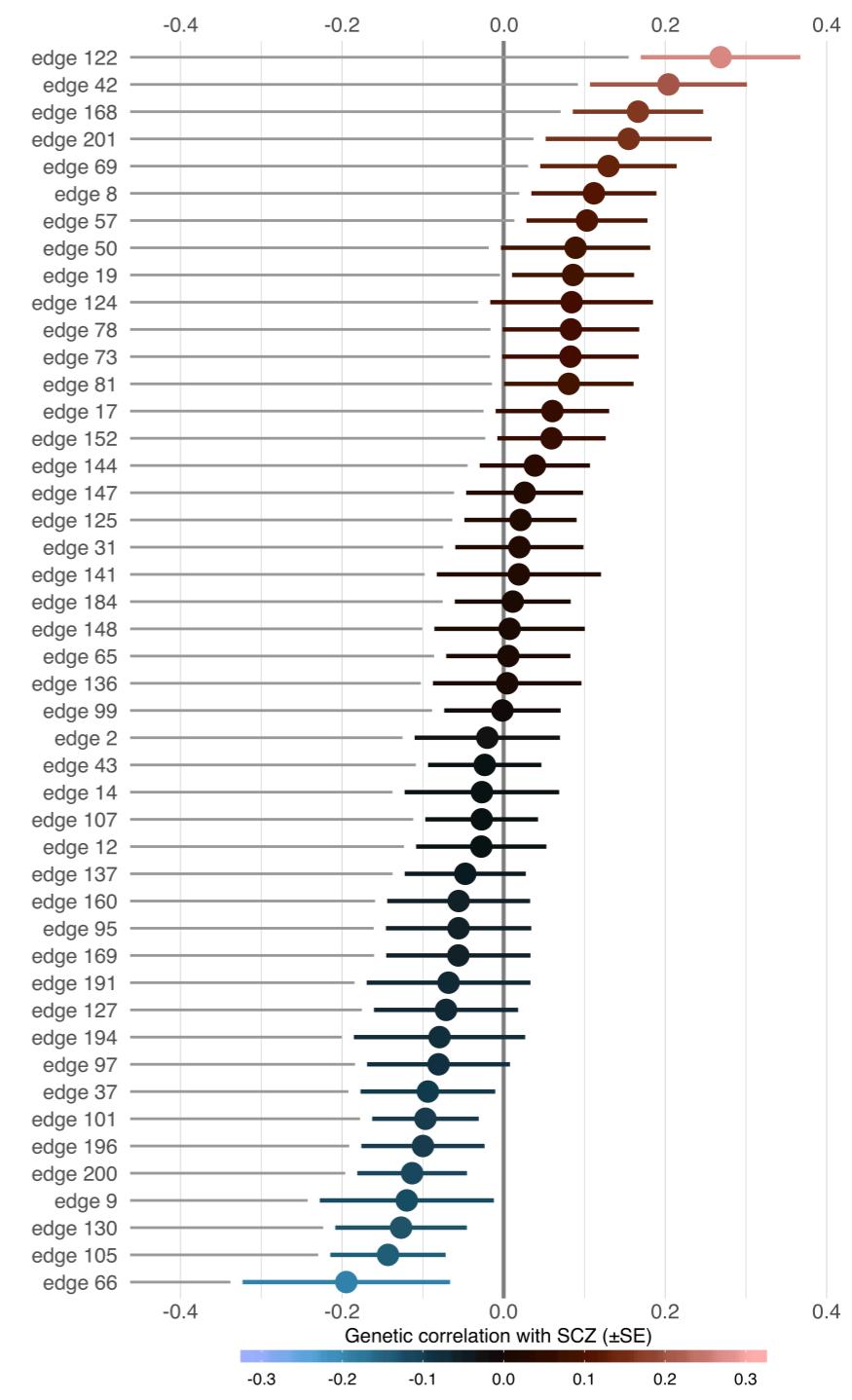
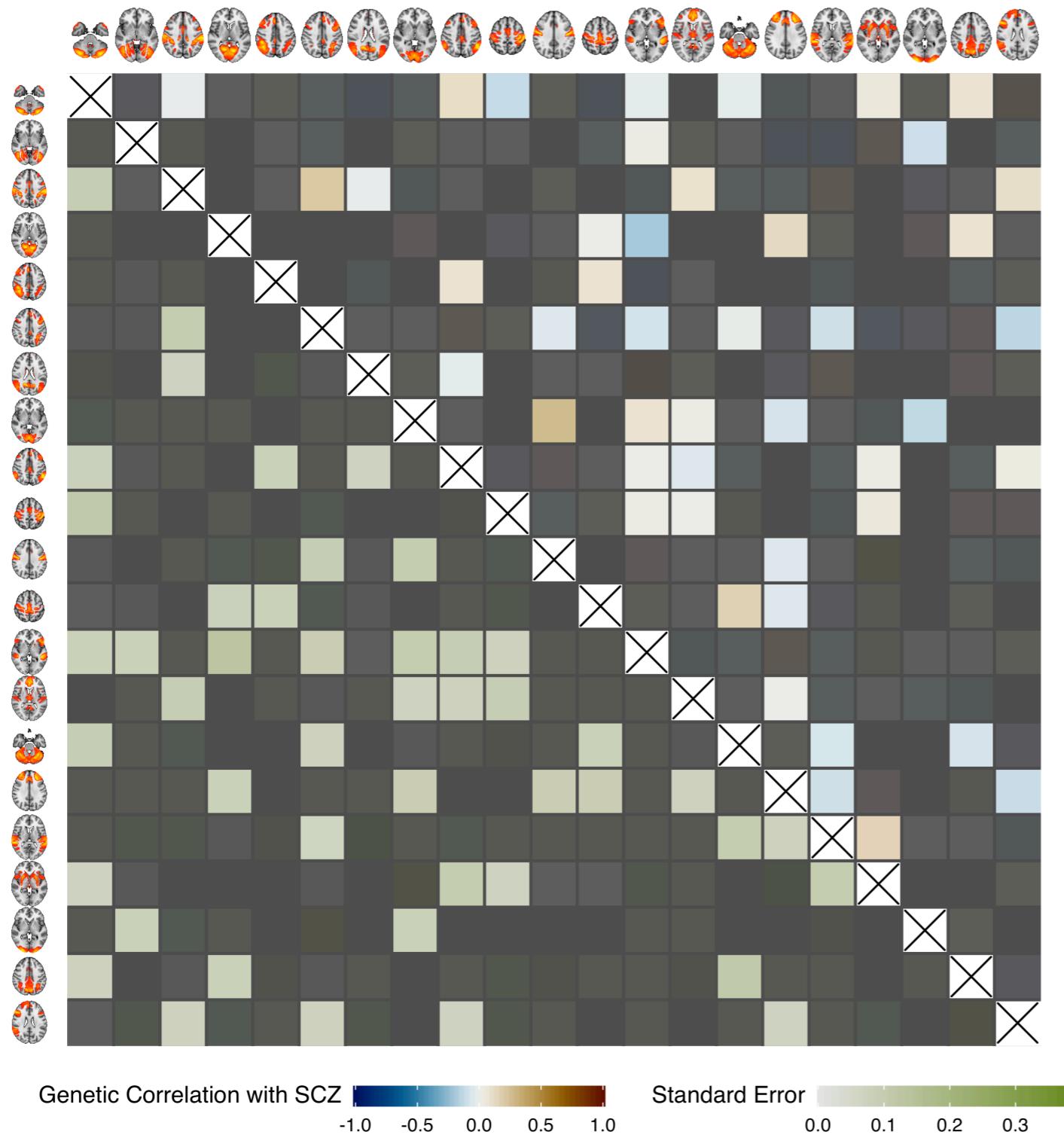
Temporal node variance



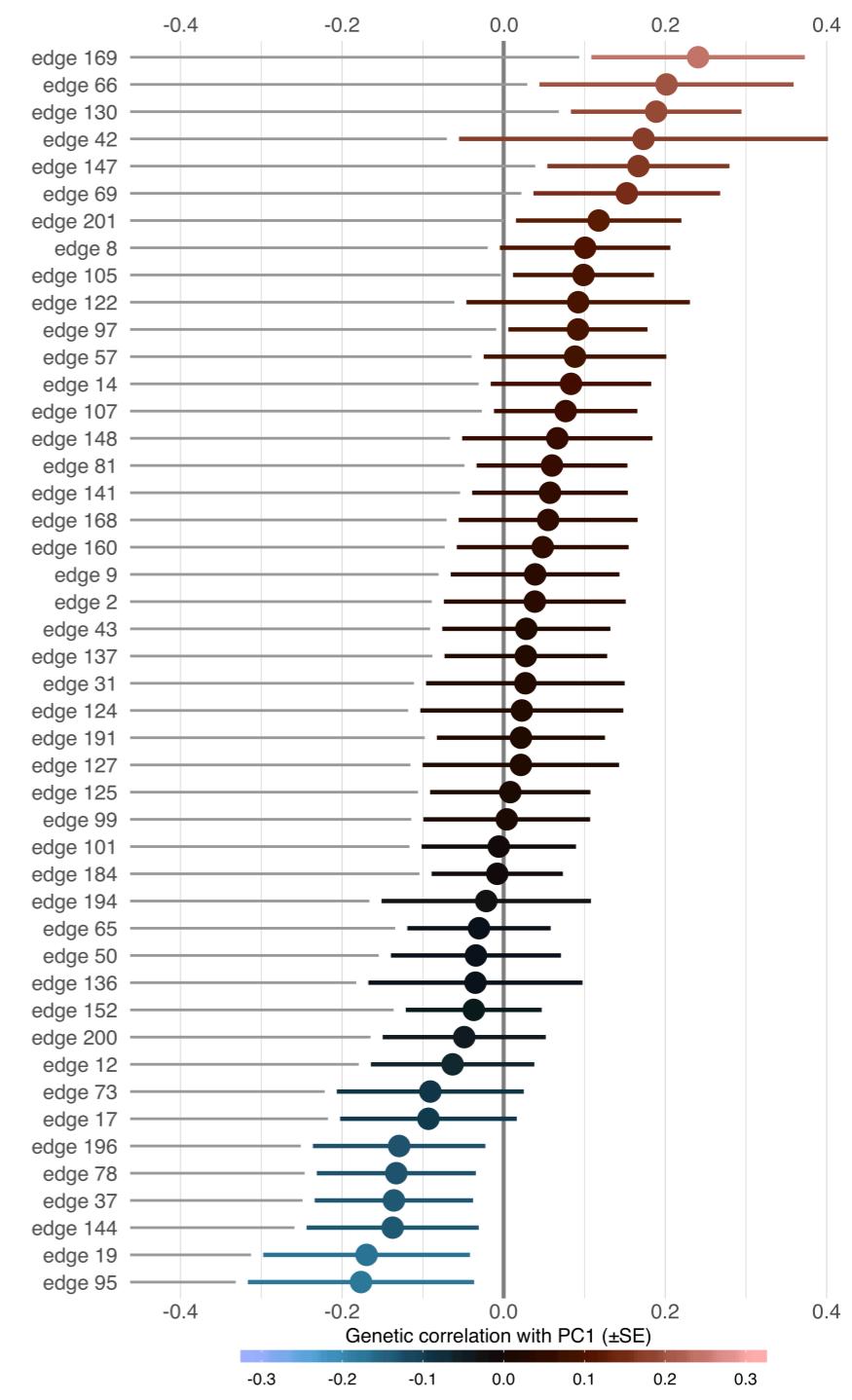
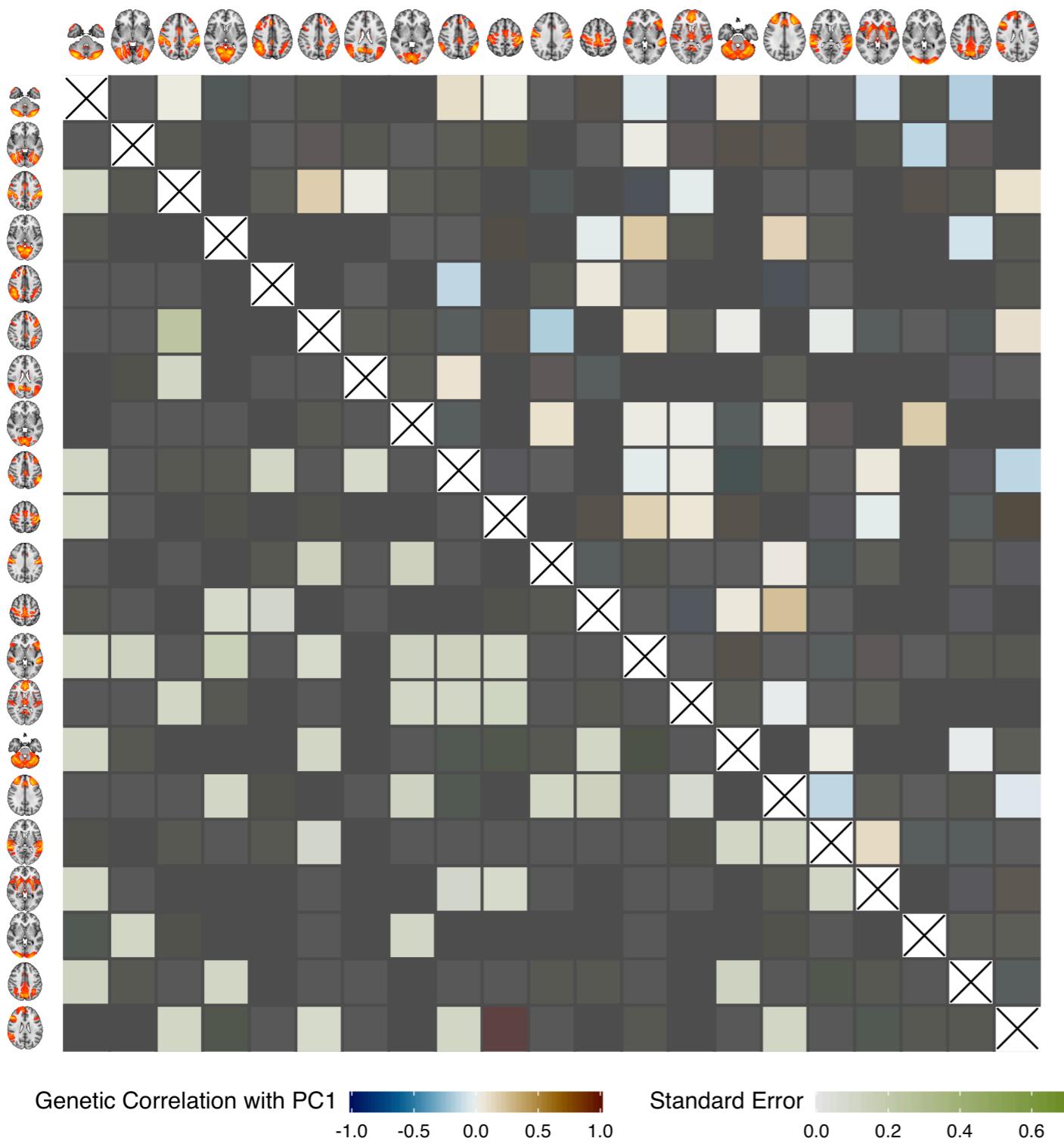
Results (h² FC)



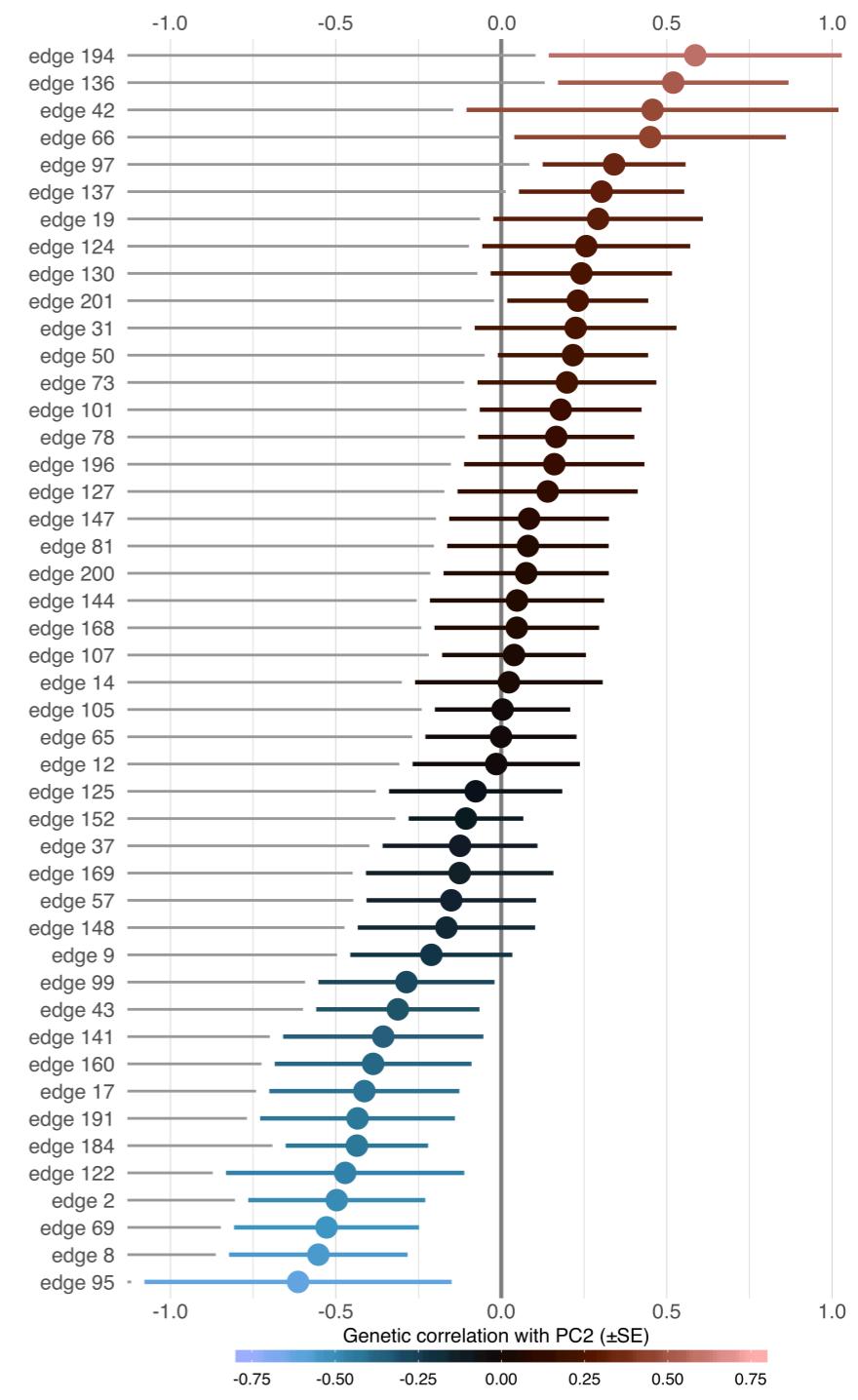
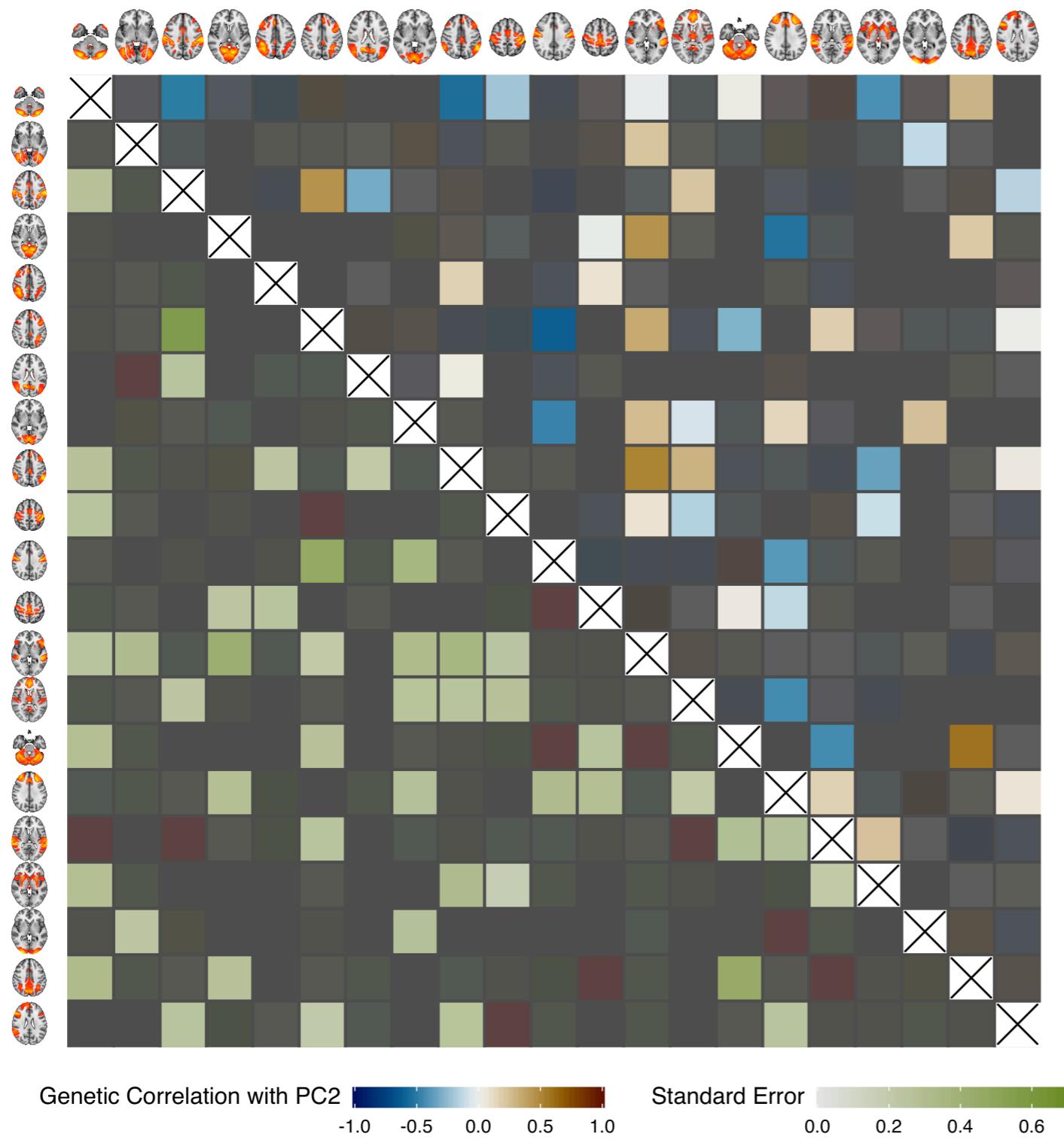
Results (FC x SCZ)



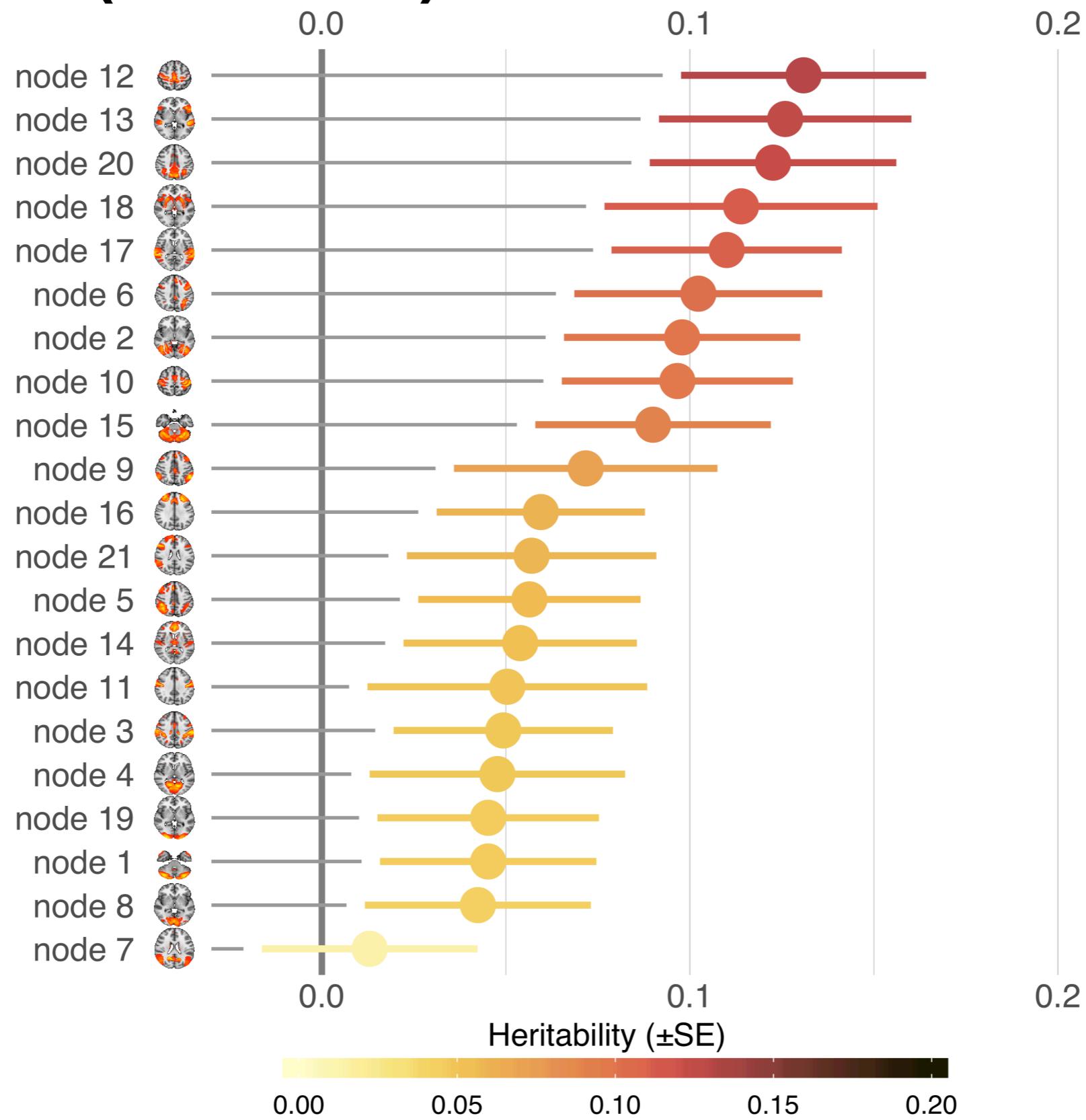
Results (FC x PC1)



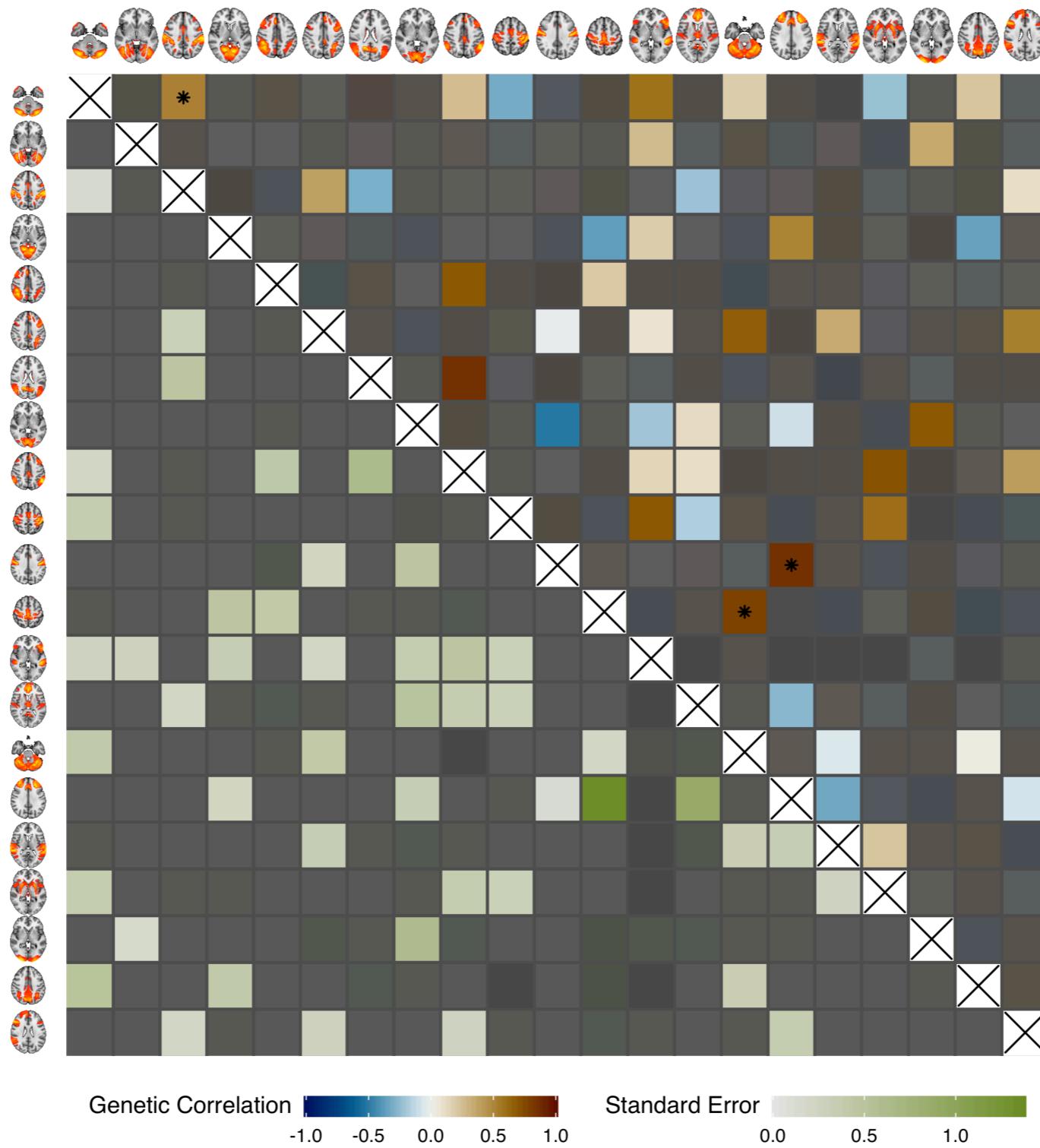
Results (FC x PC2)



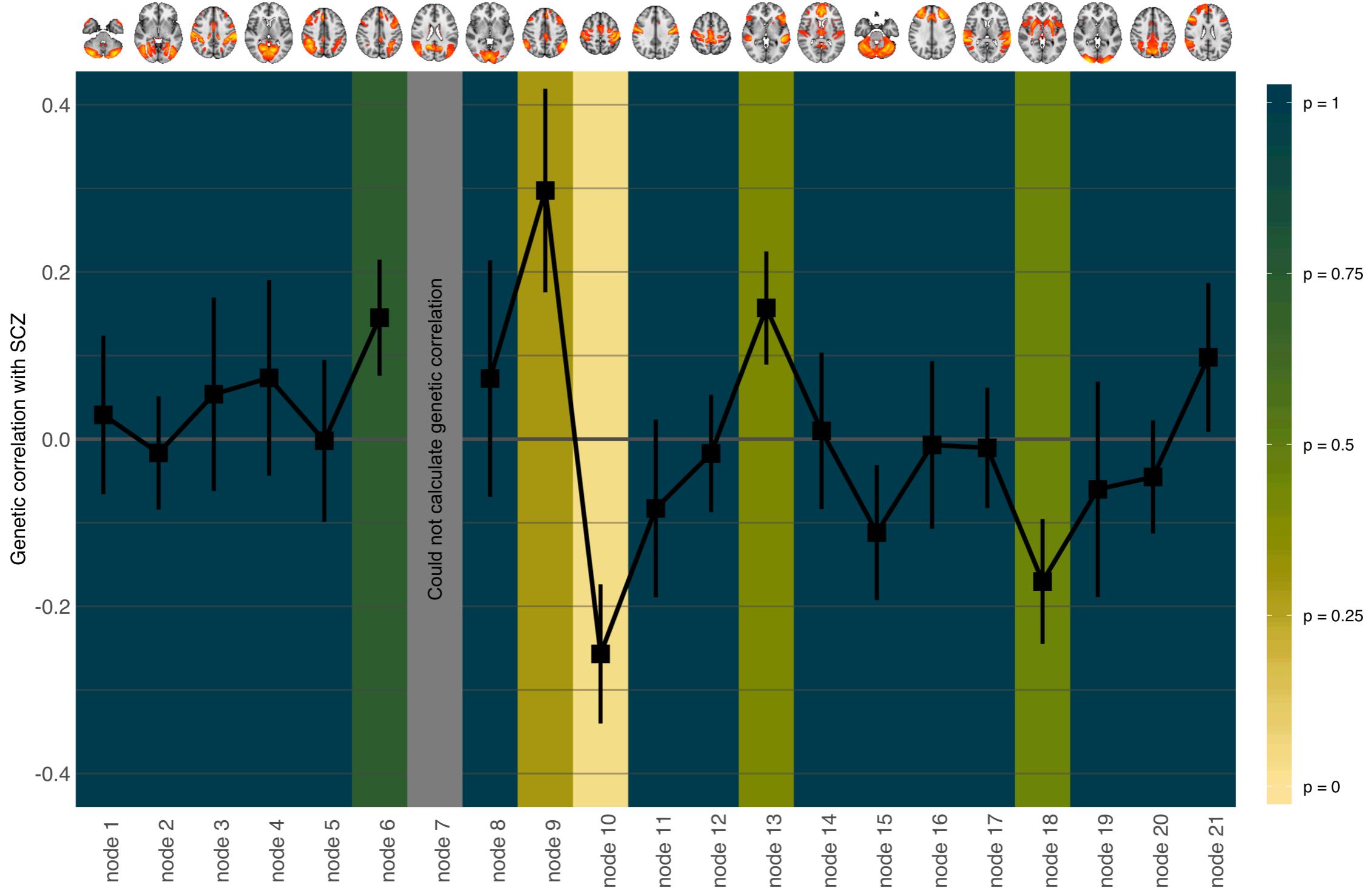
Results (node h2)



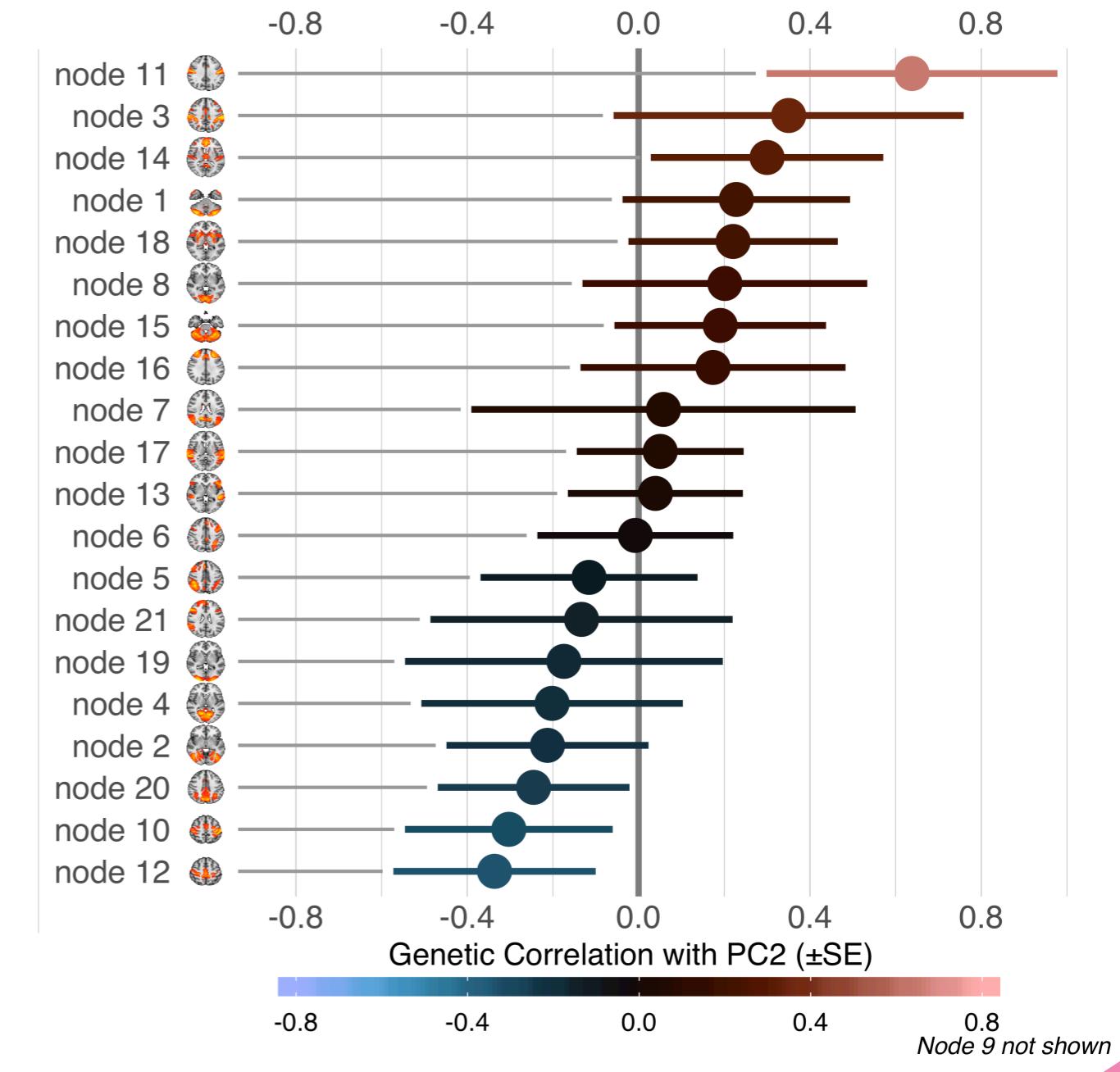
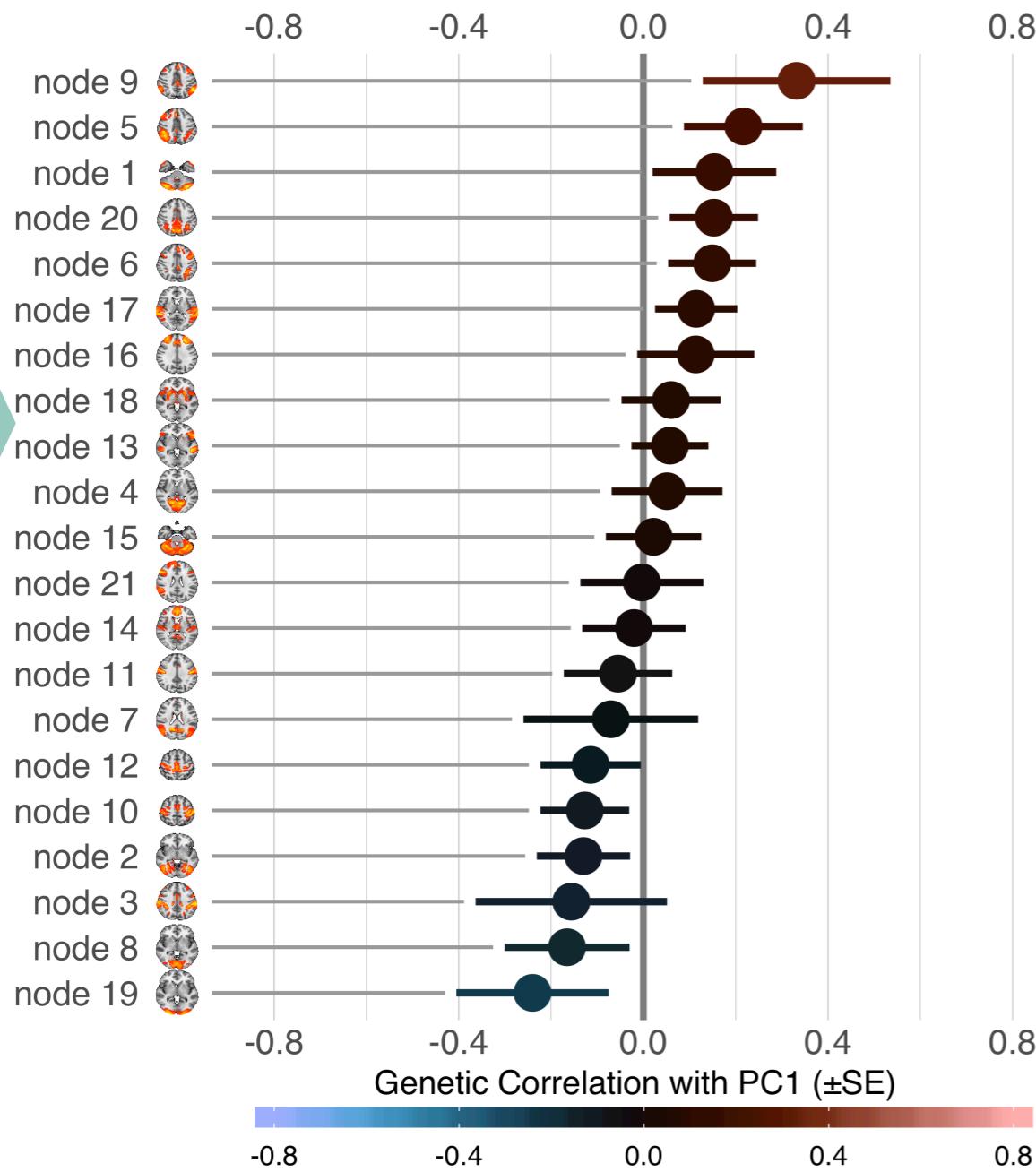
Results (node variance)



Results (node variance x SCZ)



Results (node variance x PC)



Node 9 not shown



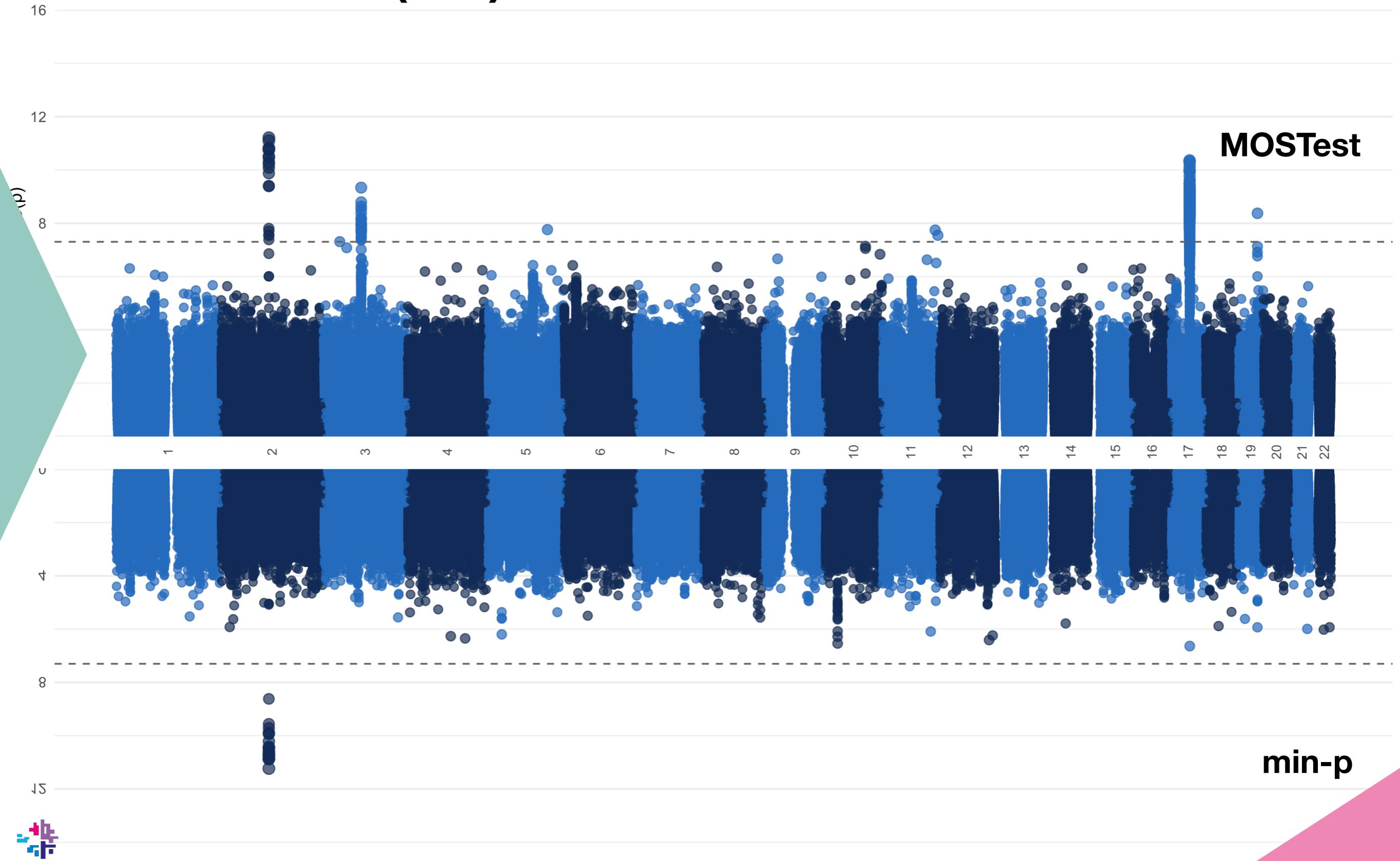
MOSTest

- MOSTest applied to residuals of FC
- Will also apply to node temporal variance

```
MEX completed successfully.  
loading /cluster/projects/p33/users/dtroelfs/NORMENT/MOSTest/MOSTest_out/FC_LW_zmat.mat... OK.  
running MOSTest analysis...Done.  
GWAS yield minP: 19; MOST: 2267  
210    104.24  0.952  181.547 101.110 0.451  
saving /cluster/projects/p33/users/dtroelfs/NORMENT/MOSTest/MOSTest_out/FC_LW.mat... Done.  
MOSTest analysis is completed.  
Done!
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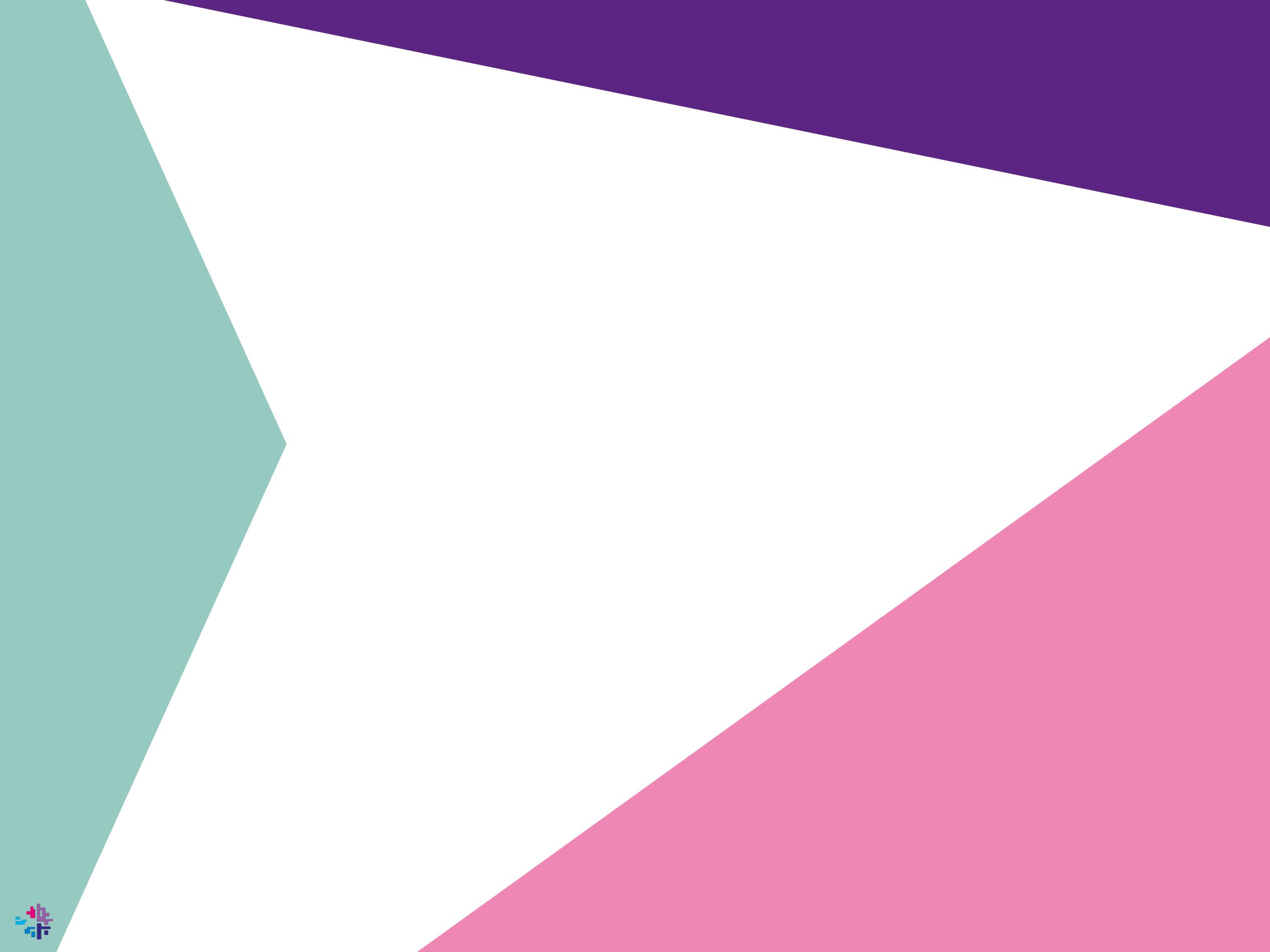
MOSTest (FC)



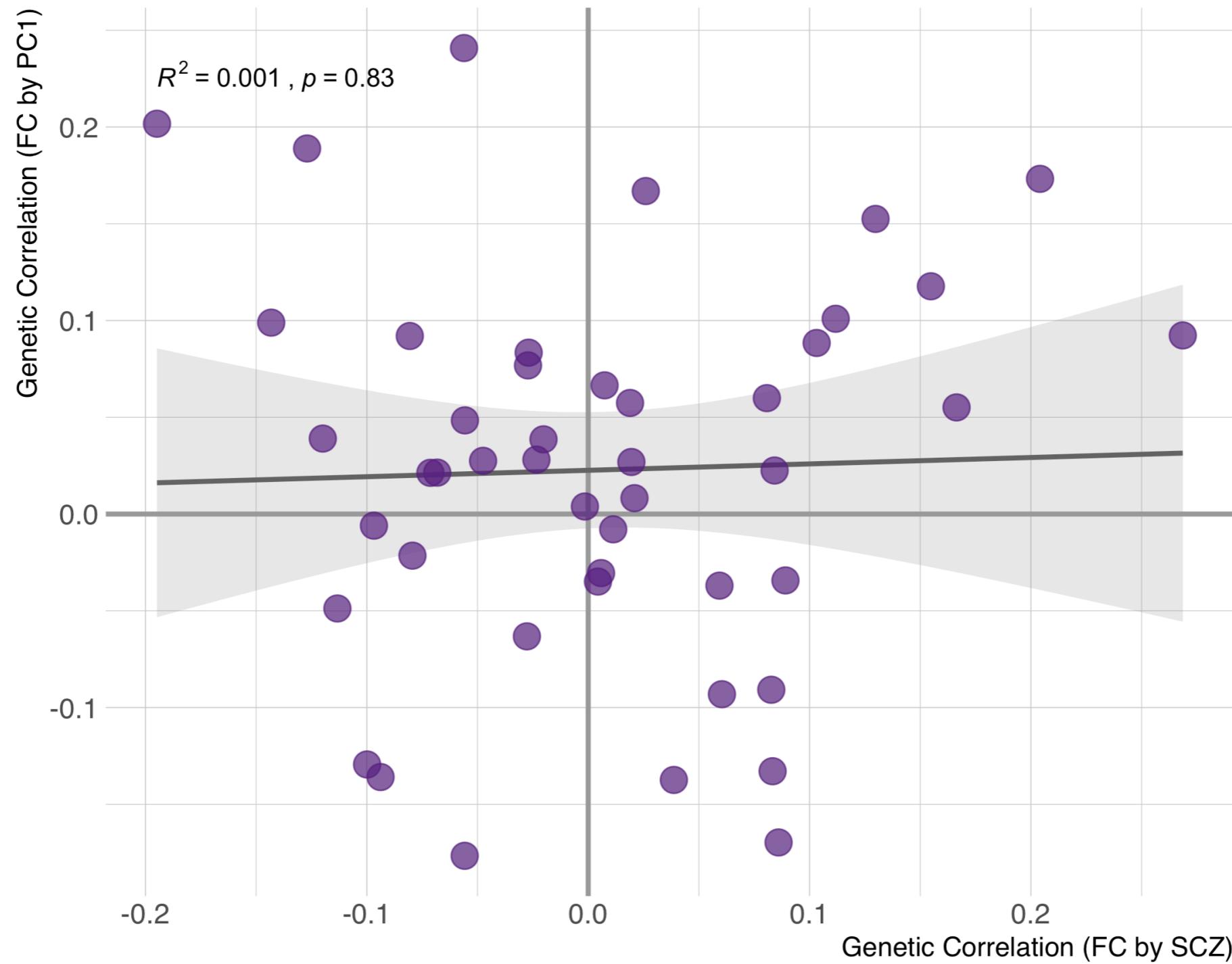
MOSTest

- MOSTest summary statistics contain unusable Z-scores (right?)
- Is it possible to perform genetic correlations using MOSTest output?
 - LDSR
 - pleioFDR

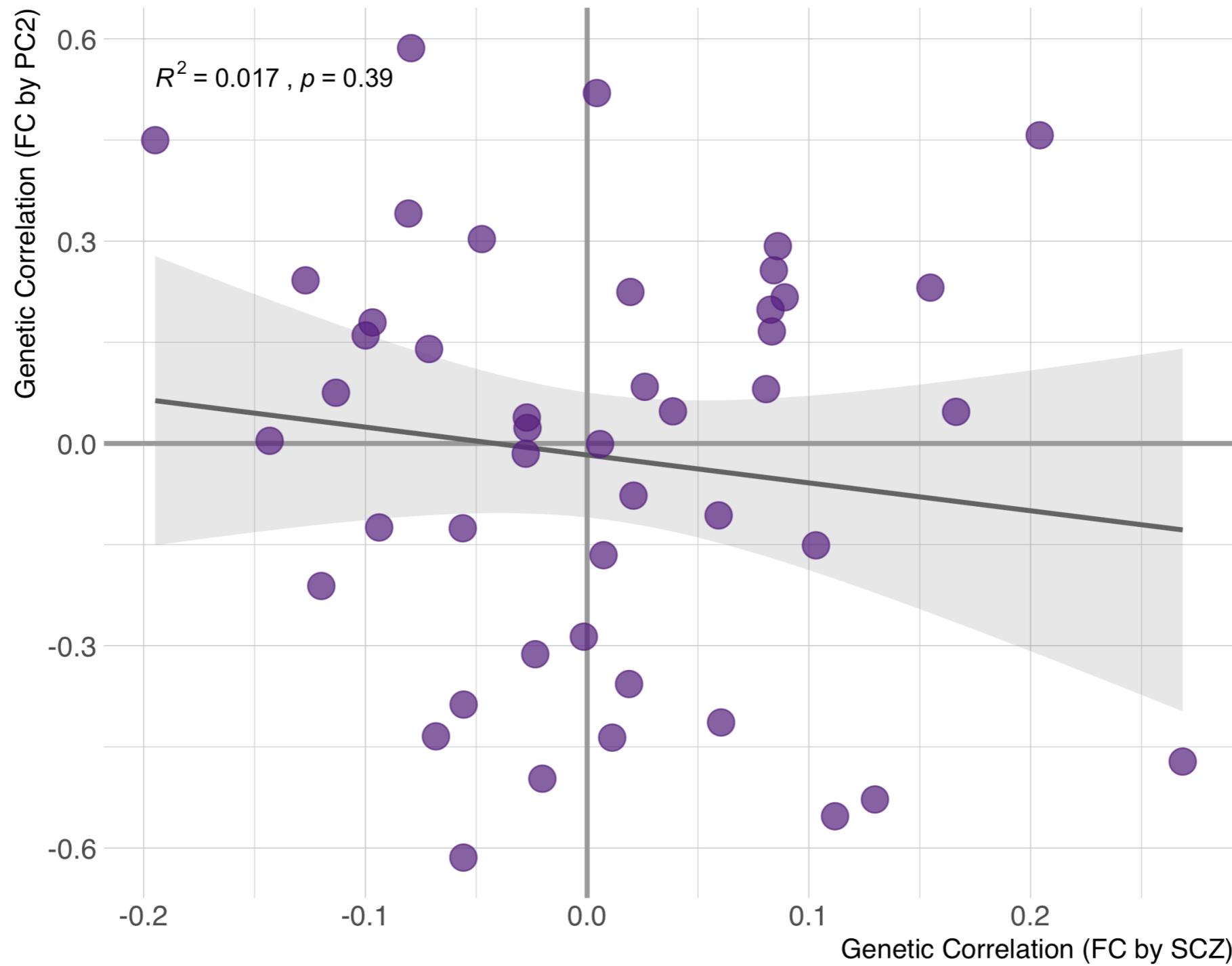




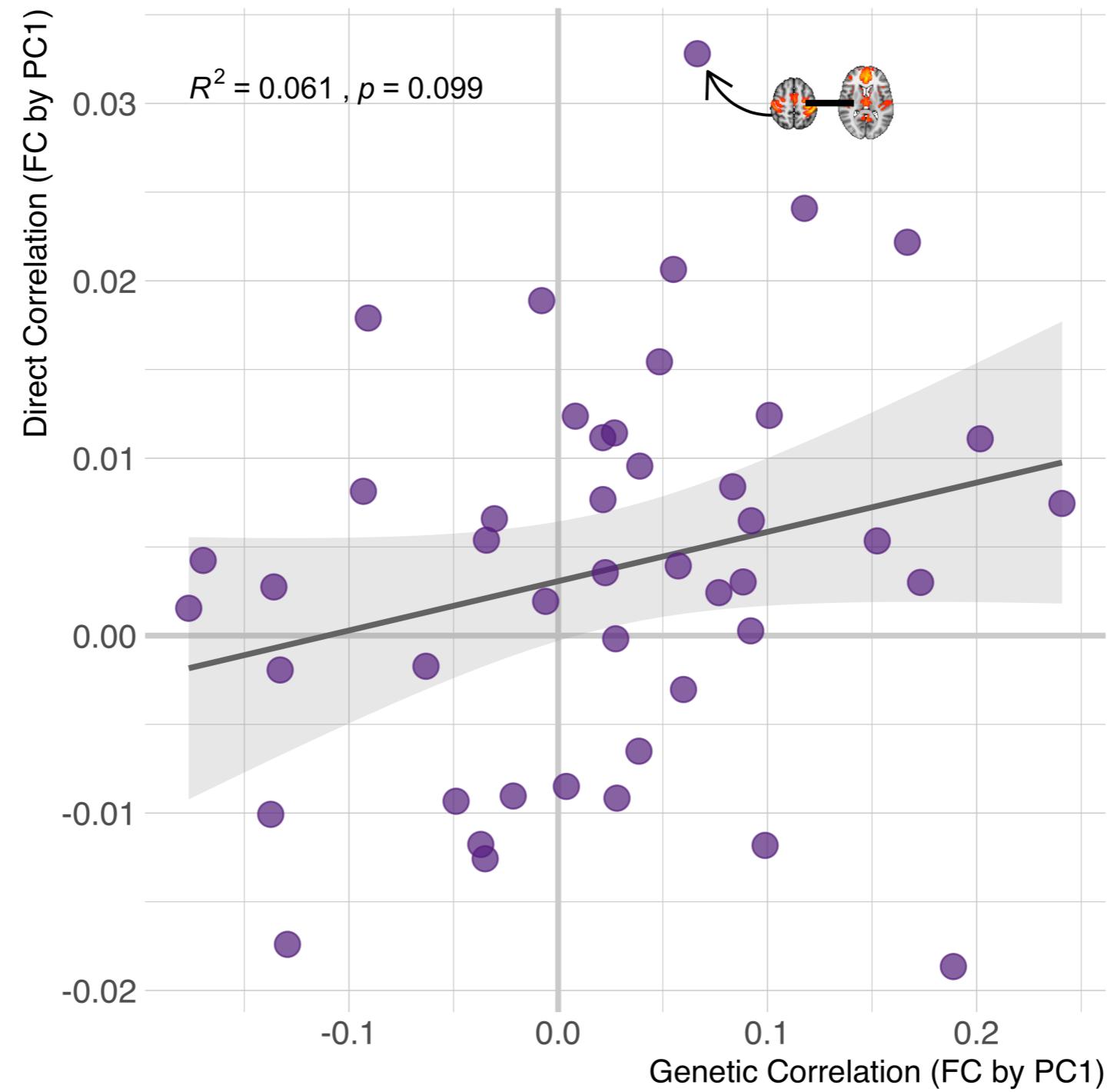
Results (genetic PC1 x genetic SCZ)



Results (genetic PC2 x genetic SCZ)



Results (phenotypic PC1 x genetic PC1)



Results (phenotypic PC2 x genetic PC2)

