Supplementary File

Content

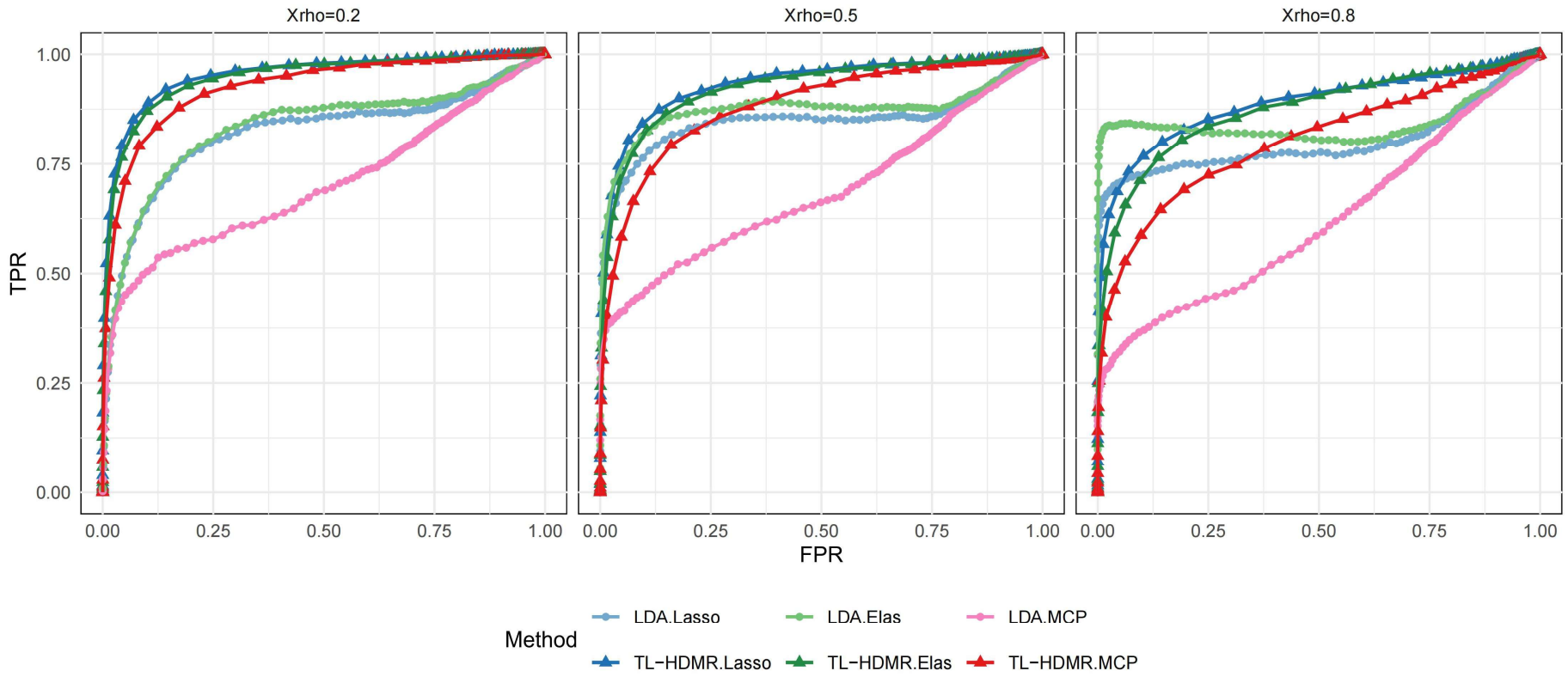

Figure S1. ROC curve of TL-HDMR simulation results.

$\rho_p = 0$, $\rho_g = 0.5$, ρ_X is 0.2, 0.5 or 0.8. The number of IVs in the target datasets is 80. The number of source datasets is K=3. The number of exposures is $P = 100$.

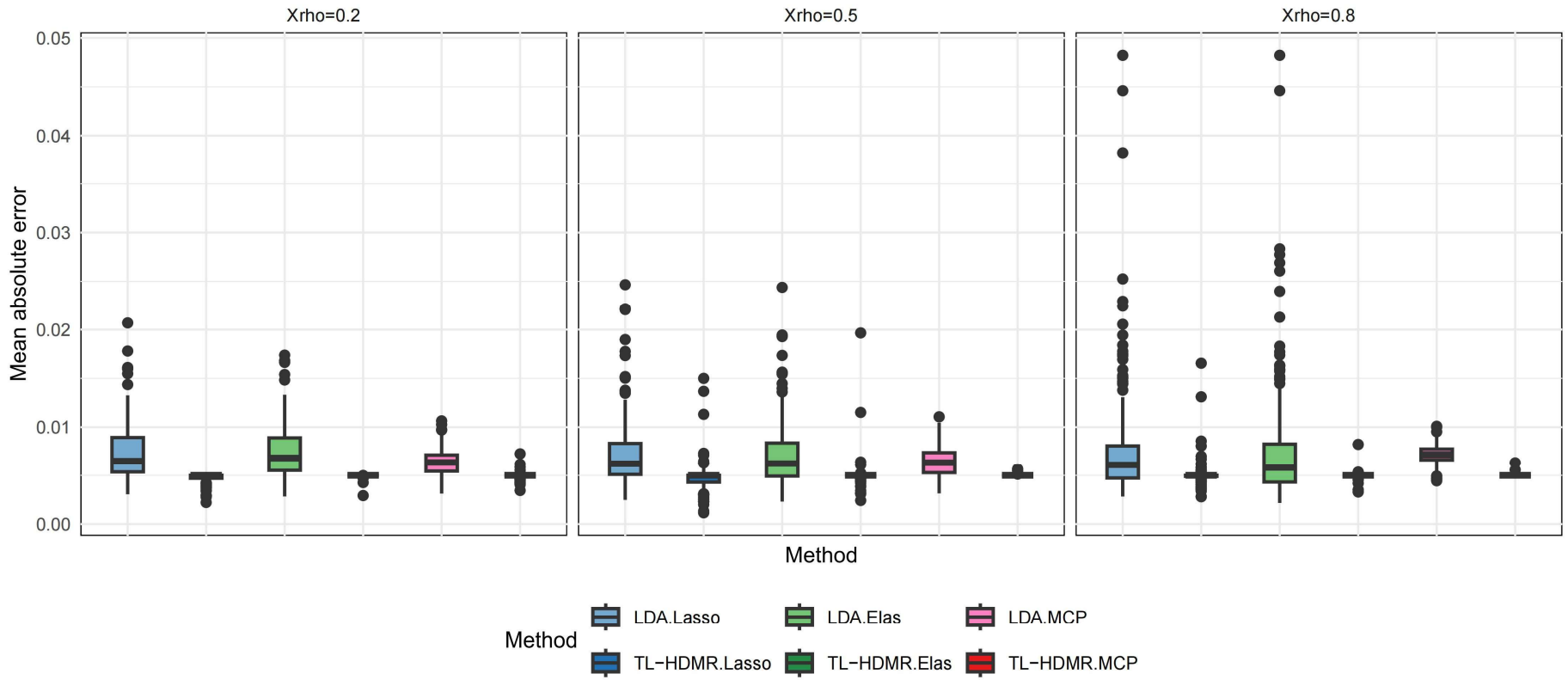

Figure S2. MAE of TL-HDMR simulation results.

$\rho_p = 0$, $\rho_g = 0.5$, ρ_X is 0.2, 0.5 or 0.8. The number of IVs in the target datasets is 80. The number of source datasets is K=3. The number of exposures is $P = 100$.

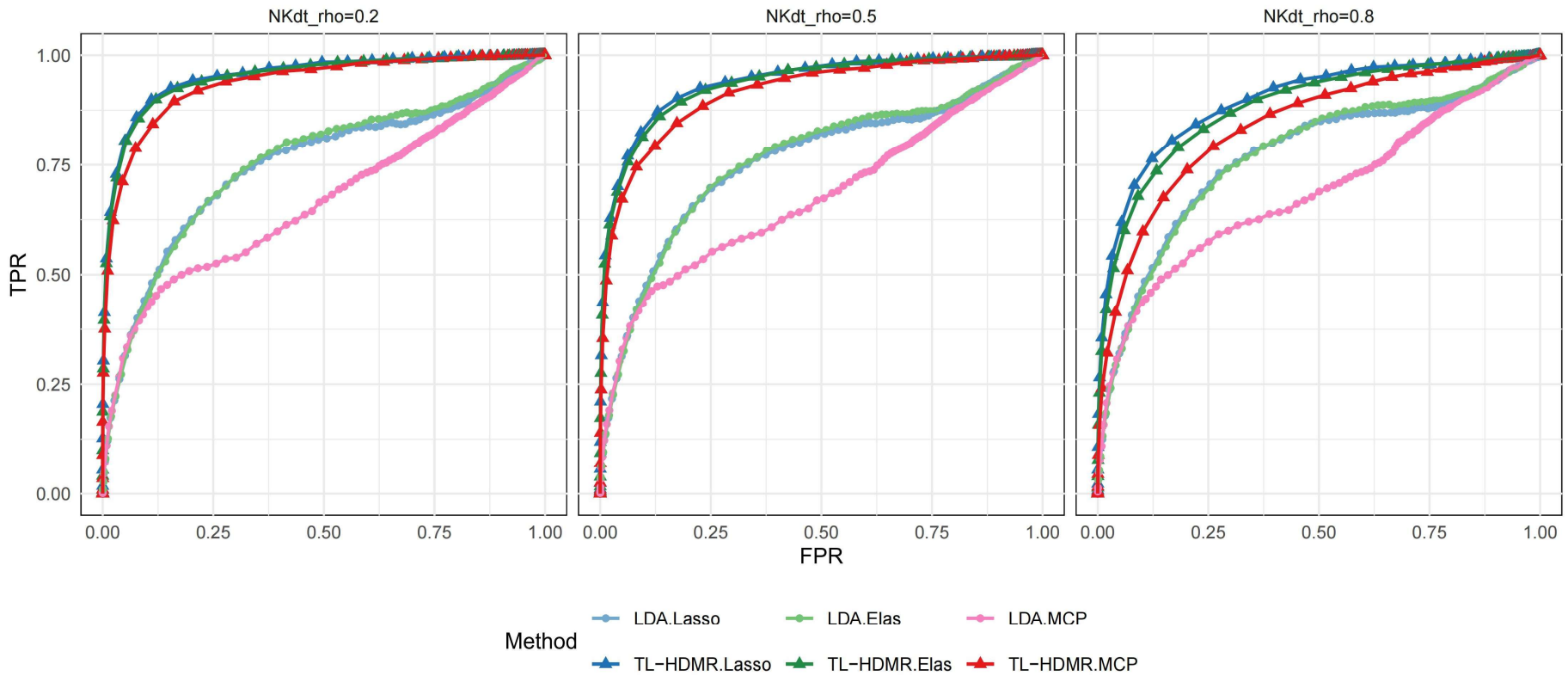

Figure S3. ROC curve of TL-HDMR simulation results.

$\rho_g = 0.5, \rho_X = 0$, ρ_p is 0.2, 0.5 or 0.8. The number of IVs in the target datasets is 80. The number of source datasets is K =3. The number of exposures is $P = 100$.

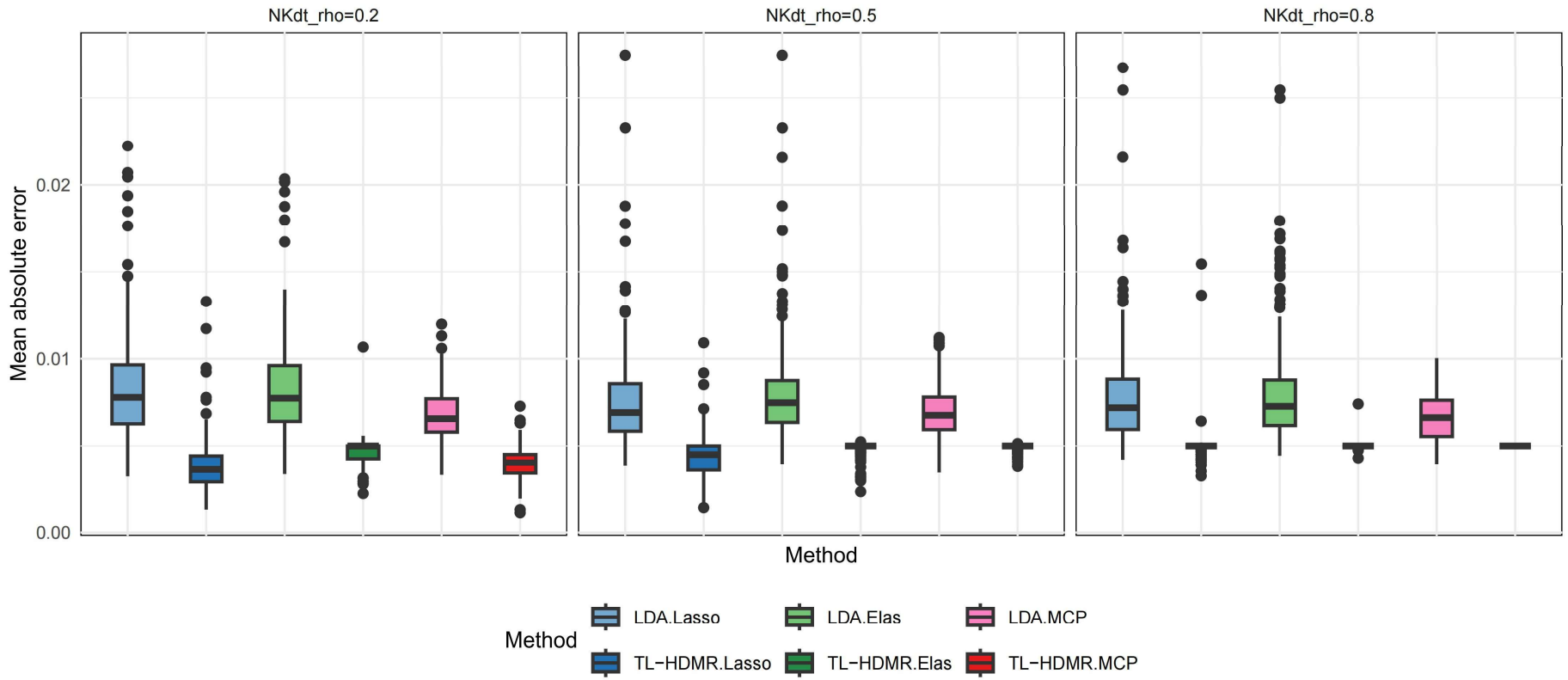

Figure S4. MAE of TL-HDMR simulation results.

$\rho_g = 0.5, \rho_X = 0,$ ρ_p is 0.2, 0.5 or 0.8. The number of IVs in the target datasets is 80. The number of source datasets is K=3. The number of exposures is $P = 100$.

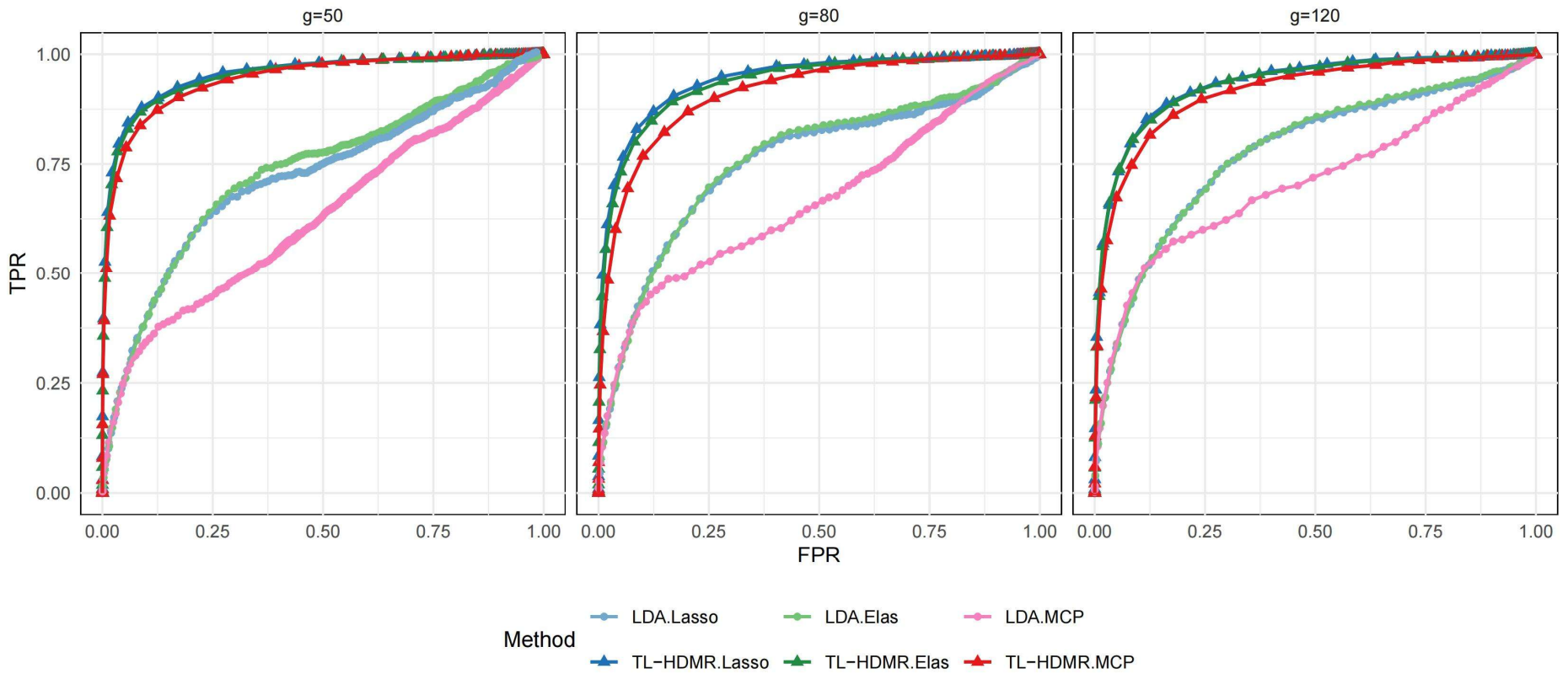

Figure S5. ROC curve of TL-HDMR simulation results.

$\rho_X = 0$, $\rho_p = 0$, $\rho_g = 0.5$, The number of IVs in the target datasets is 50, 80 and 120. The number of source datasets is K=3. The number of exposures is $P = 100$.

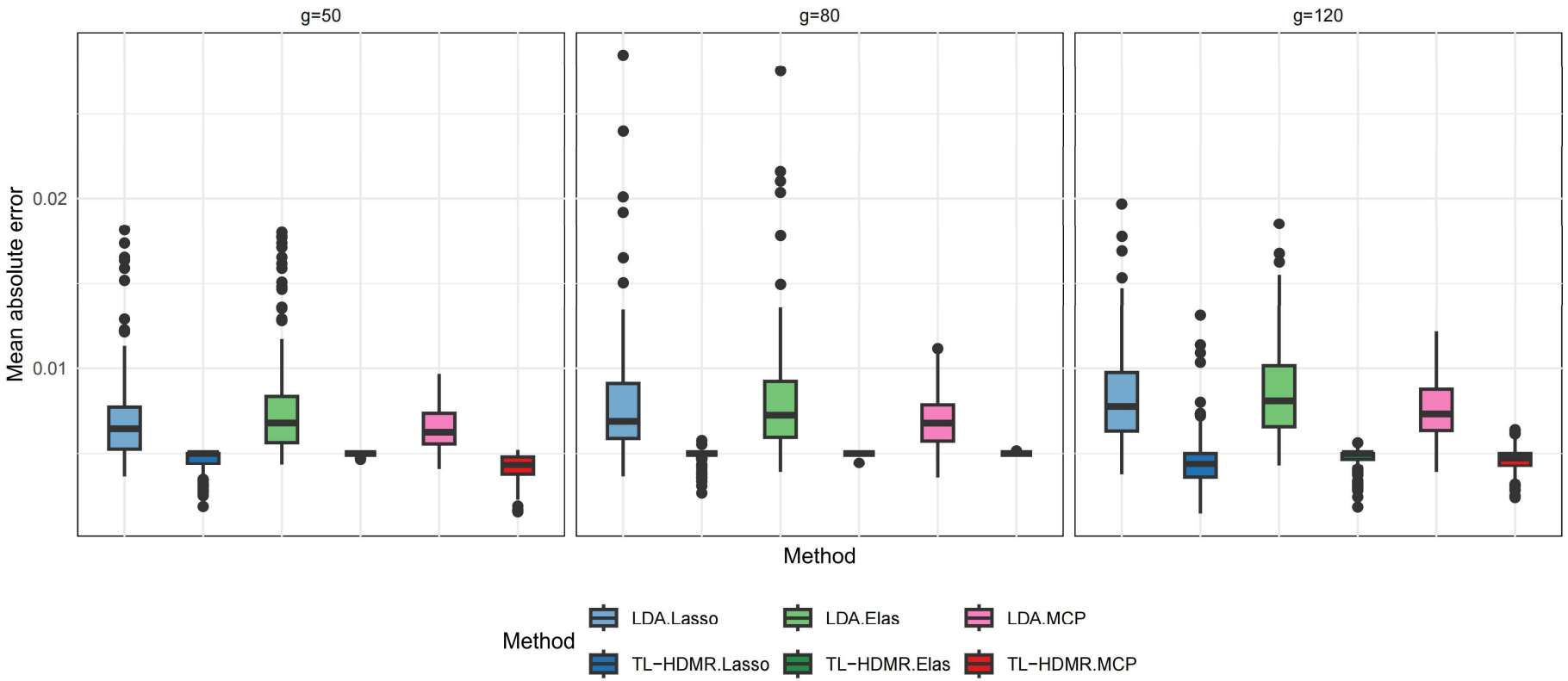

Figure S6. MAE of TL-HDMR simulation results.

$\rho_X = 0$, $\rho_p = 0$, $\rho_g = 0.5$, The number of IVs in the target datasets is 50, 80 and 120. The number of source datasets is K=3. The number of exposures is $P = 100$.

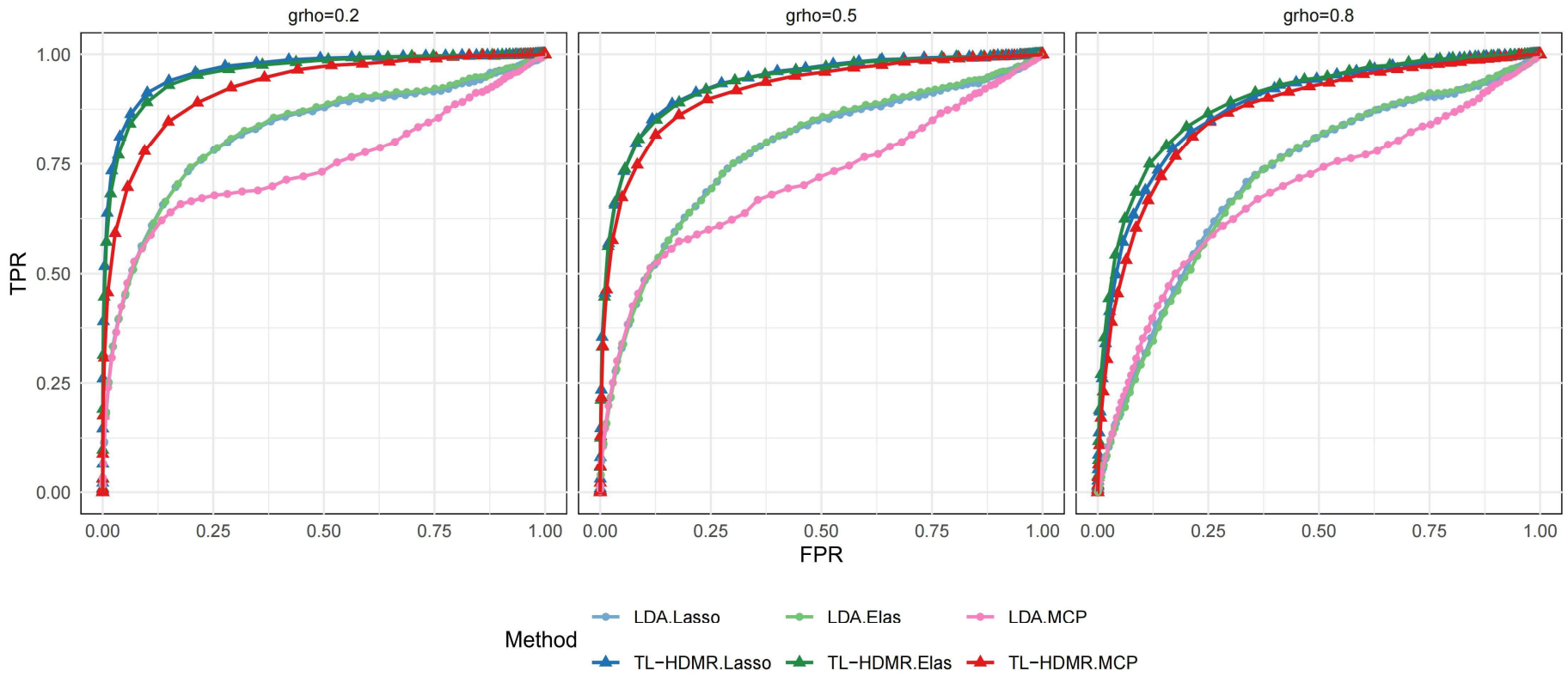

Figure S7. ROC curve of TL-HDMR simulation results.

$\rho_X = 0$, $\rho_p = 0$, ρ_g is 0.2, 0.5 or 0.8. The number of IVs in the target datasets is 120. The number of source datasets is K=3. The number of exposures is $P = 100$.

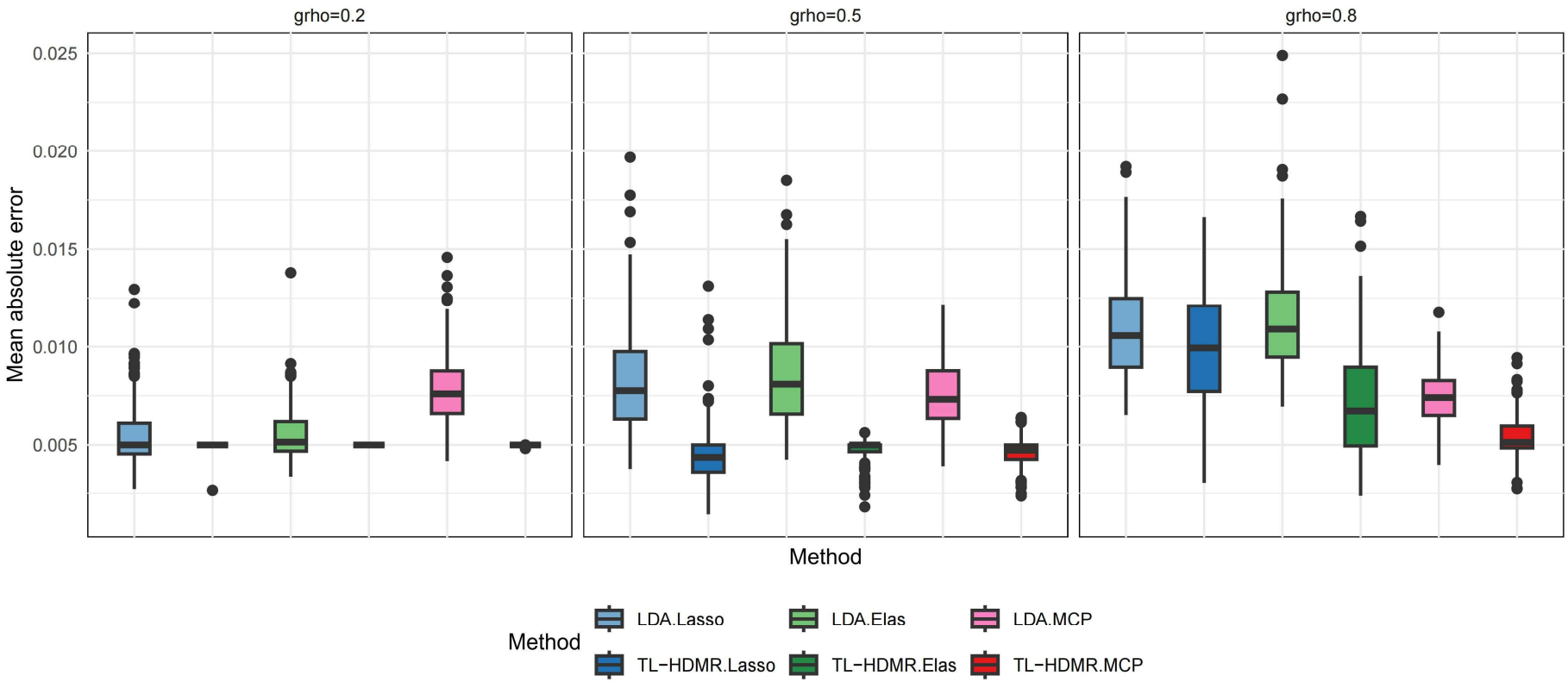

Figure S8. MAE of TL-HDMR simulation results.

$\rho_X = 0$, $\rho_p = 0$, ρ_g is 0.2, 0.5 or 0.8. The number of IVs in the target datasets is 120. The number of source datasets is K=3. The number of exposures is $P = 100$.

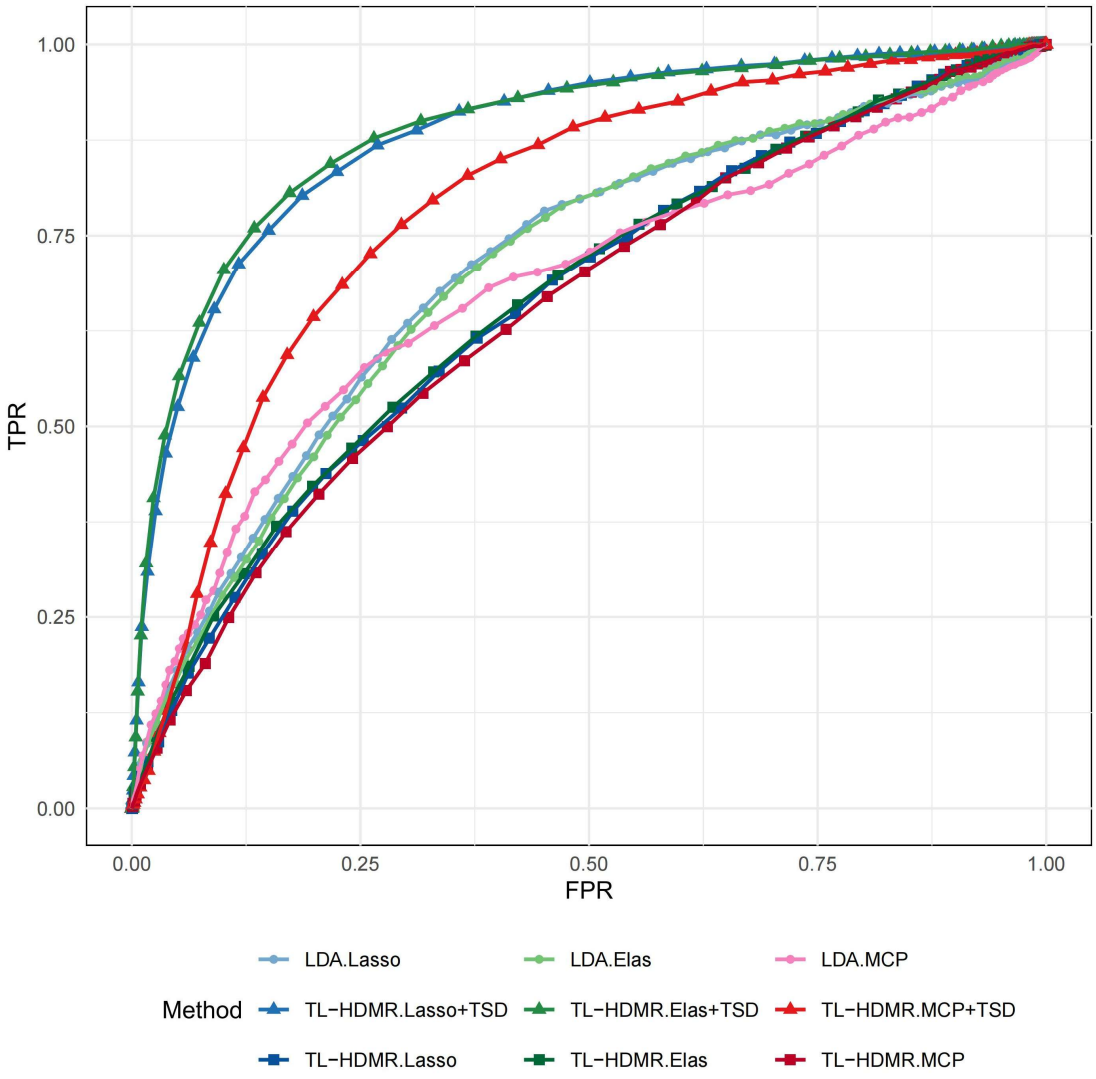

Figure S9. ROC curve of TL-HDMR.TSD simulation results.

The LD between SNPs is $\rho_g = 0.8$. The number of IVs in the target datasets is $J_0 = 120$. The number of exposures is $P = 100$. $\rho_X = 0$, $\rho_p = 0$. The number of candidate source datasets is K=5, and set $\delta = 0.05$ for three true source datasets, set $\delta = 0.2$ for the other two spurious source datasets.

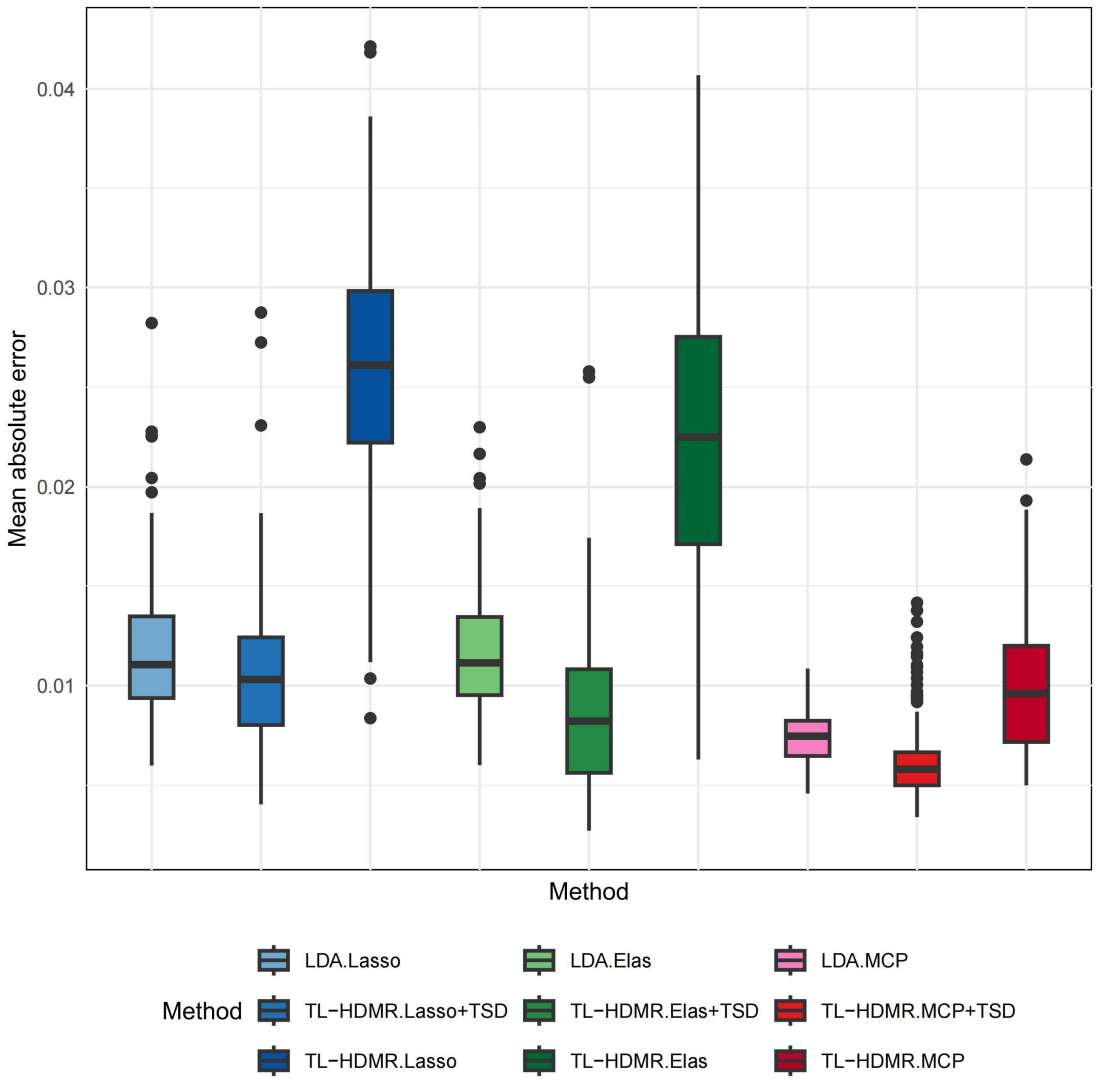

Figure S10. MAE of TL-HDMR.TSD simulation results.

The LD between SNPs is $\rho_g = 0.8$. The number of IVs in the target datasets is $J_0 = 120$. The number of exposures is $P = 100$. $\rho_X = 0$, $\rho_p = 0$. The number of candidate source datasets is K=5, and set $\delta = 0.05$ for three true source datasets, set $\delta = 0.2$ for the other two spurious source datasets.

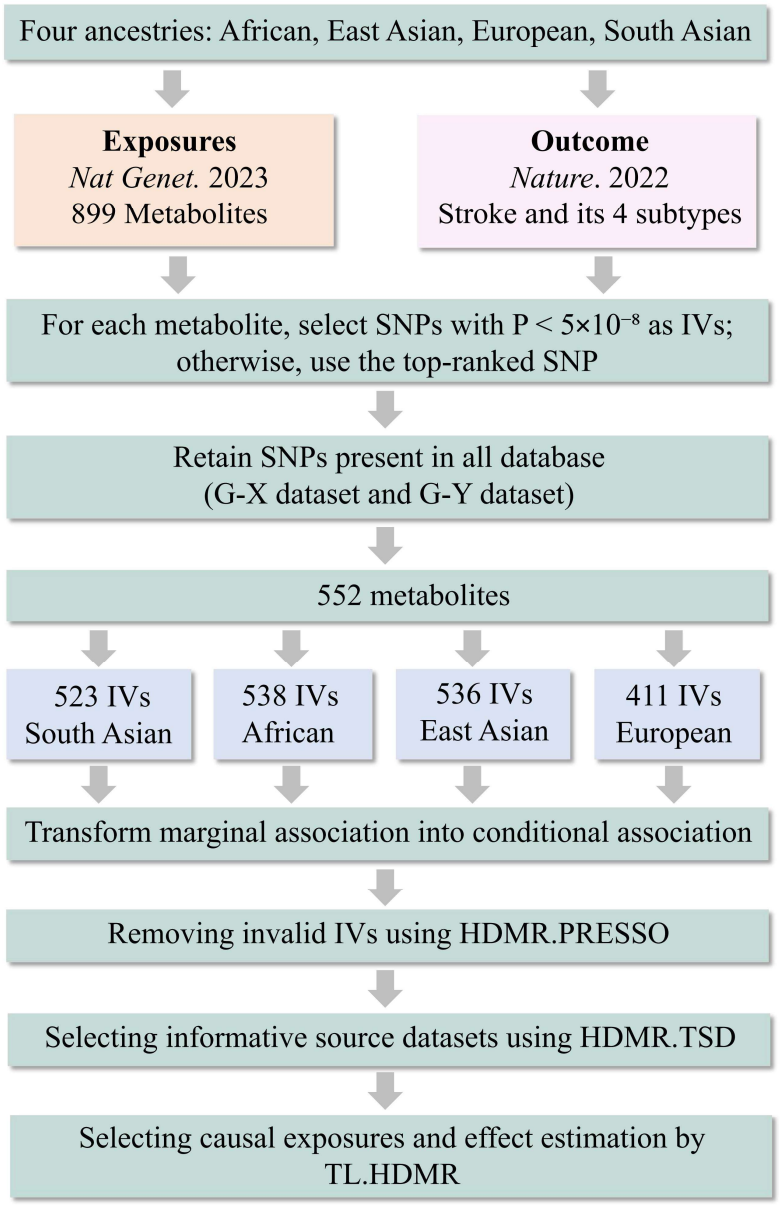

Figure S11. Workflow of application.

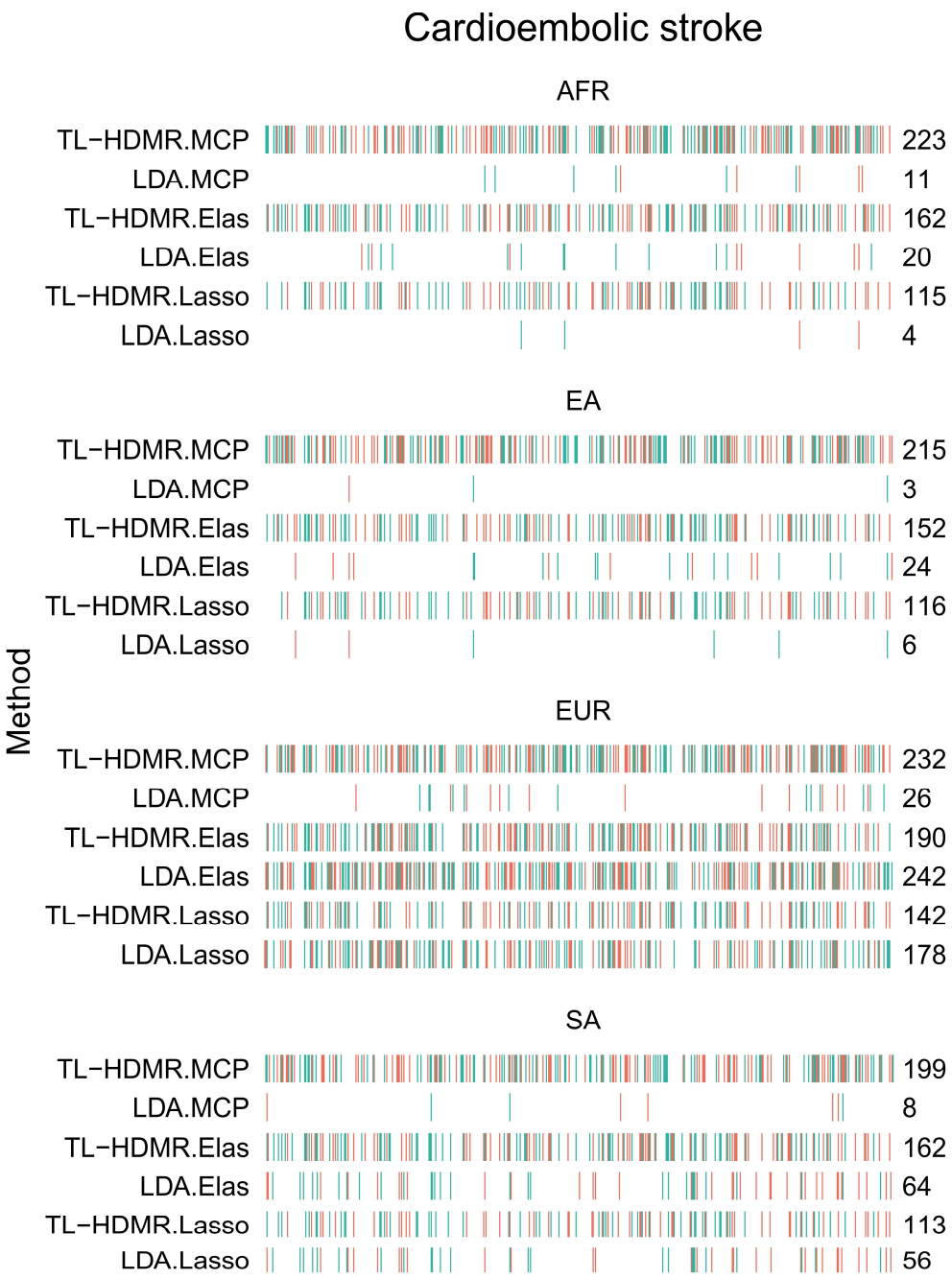

Figure S12. The number of causal metabolites in application (Cardioembolic stroke).

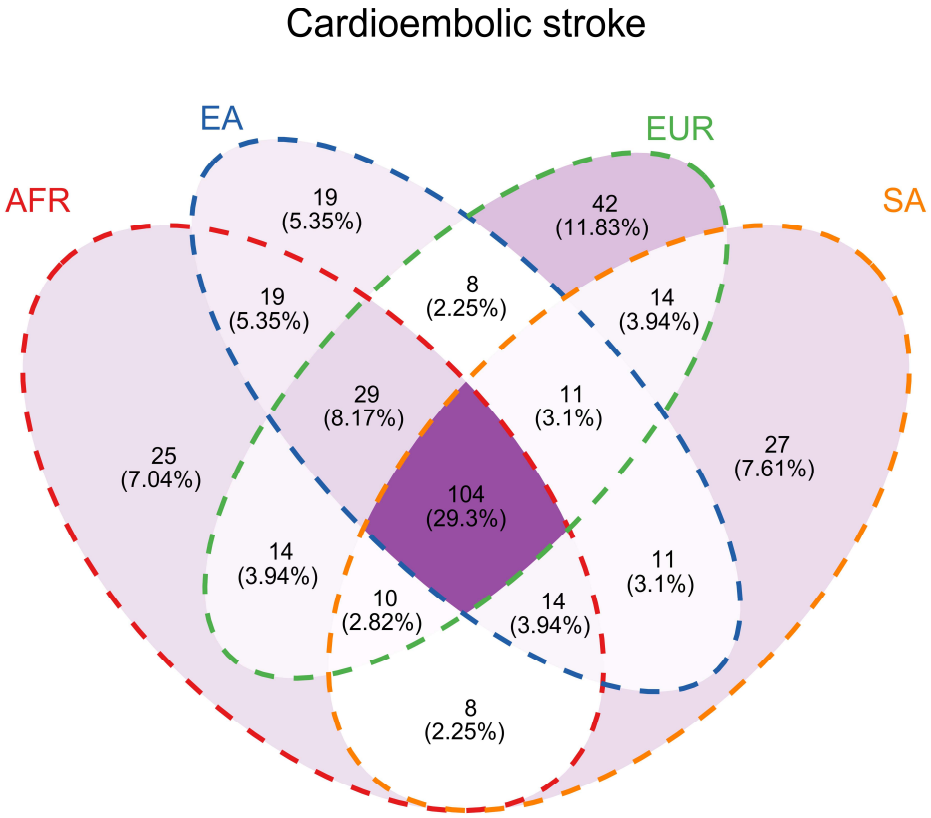

Figure S13. Difference of causal metabolites among four ethnics (Cardioembolic stroke).

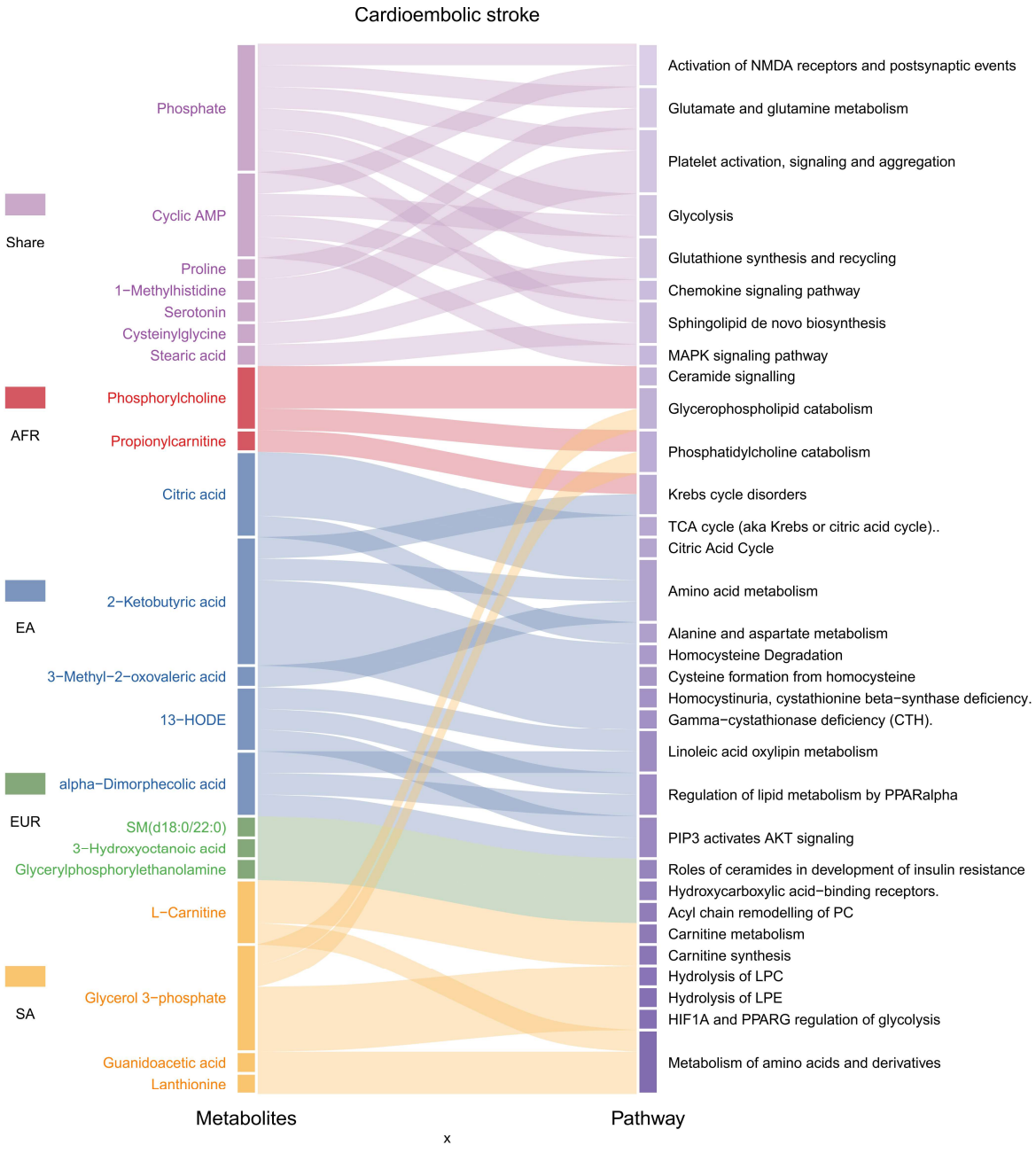

Figure S14. Enrichment results causal metabolites for four ethnics (Cardioembolic stroke).

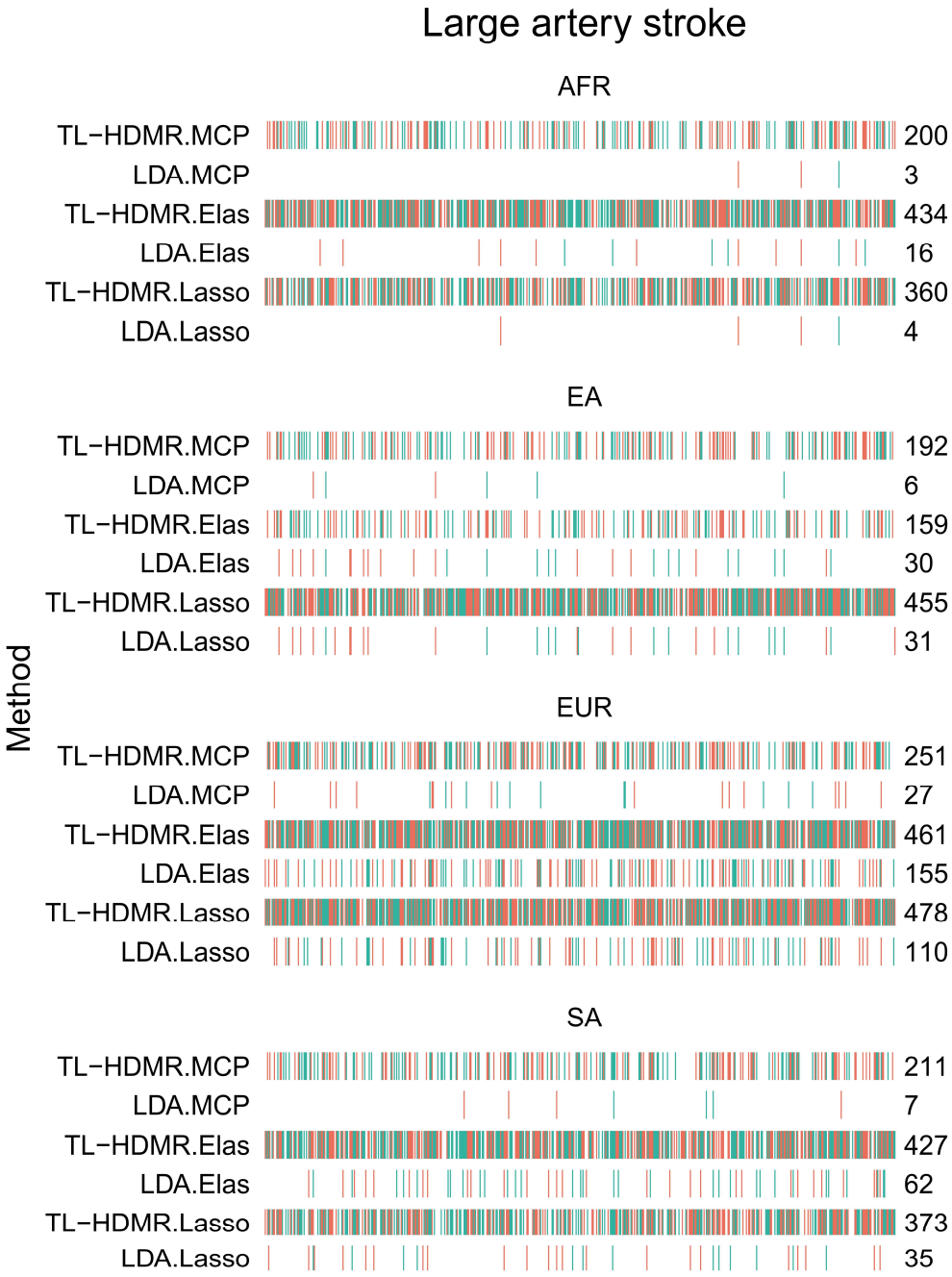

Figure S15. The number of causal metabolites in application (Large artery stroke).

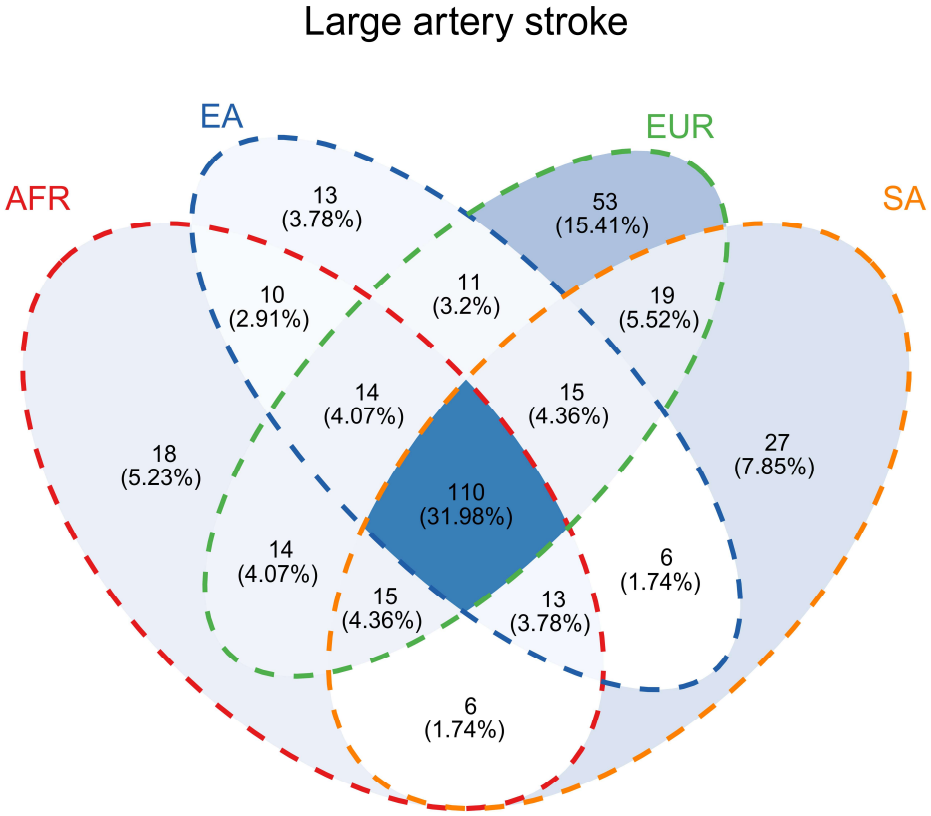

Figure S16. Difference of causal metabolites among four ethnics (Large artery stroke).

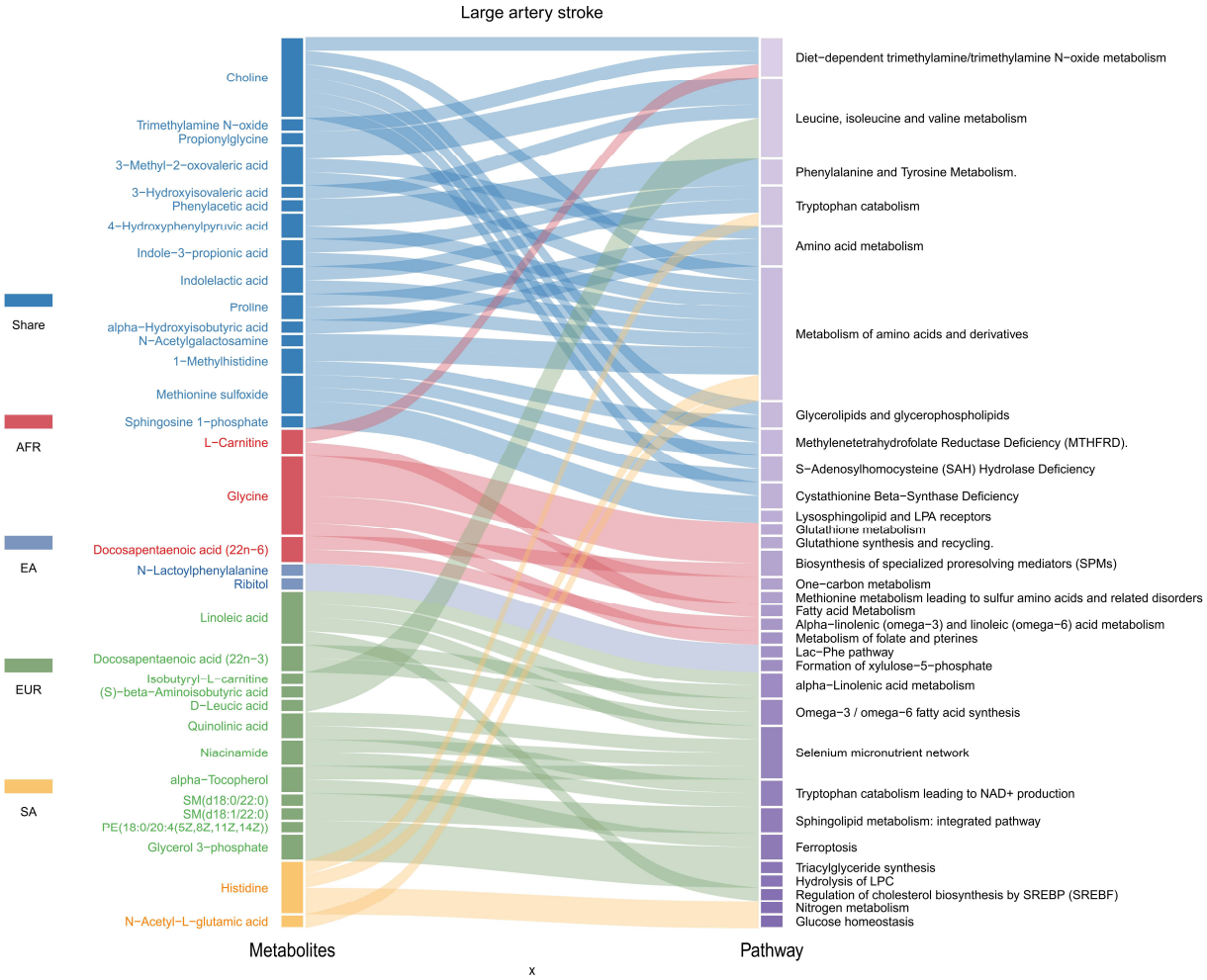

Figure S17. Enrichment results causal metabolites for four ethnics (Large artery stroke).

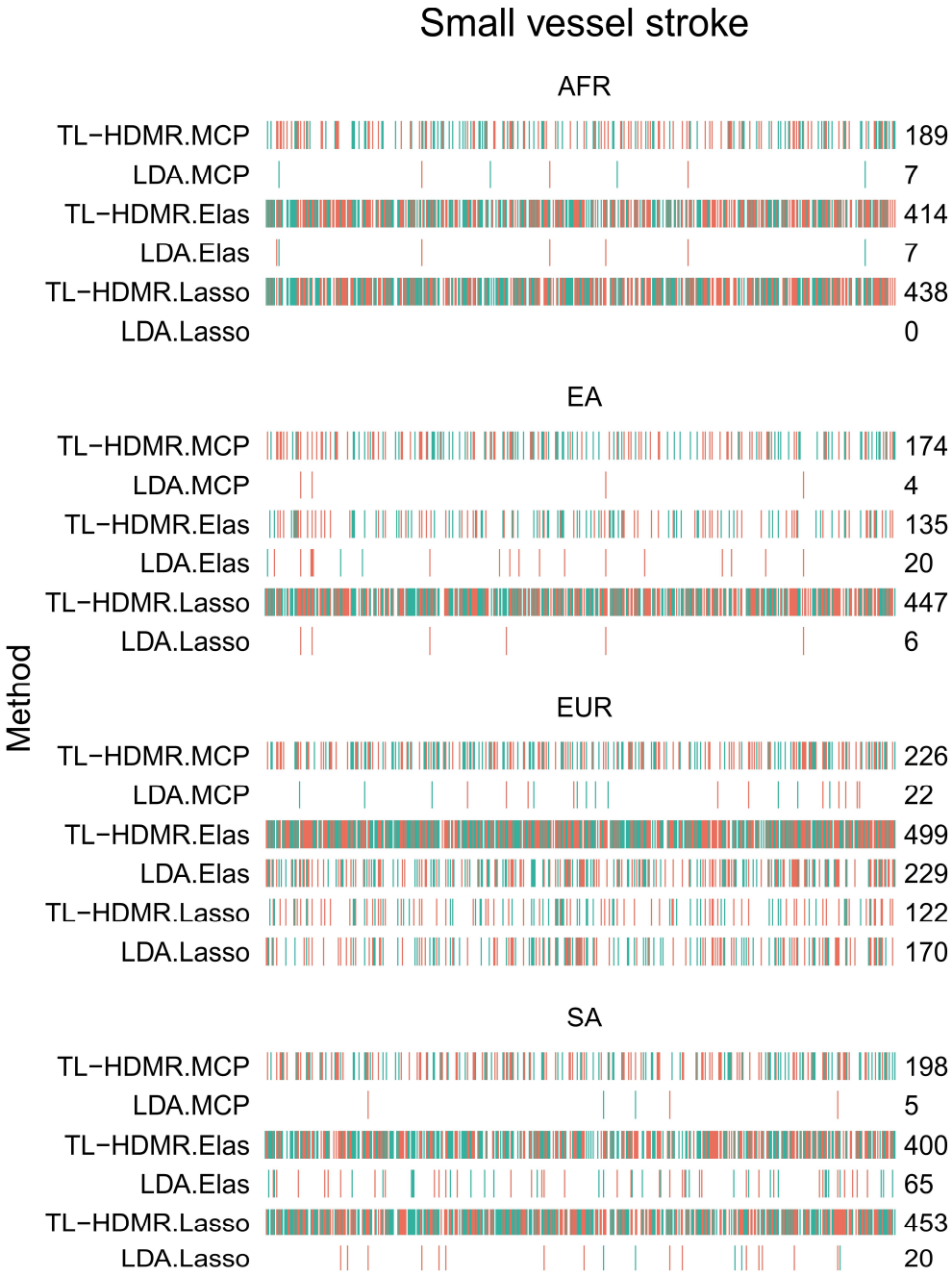

Figure S18. The number of causal metabolites in application (Small vessel stroke).

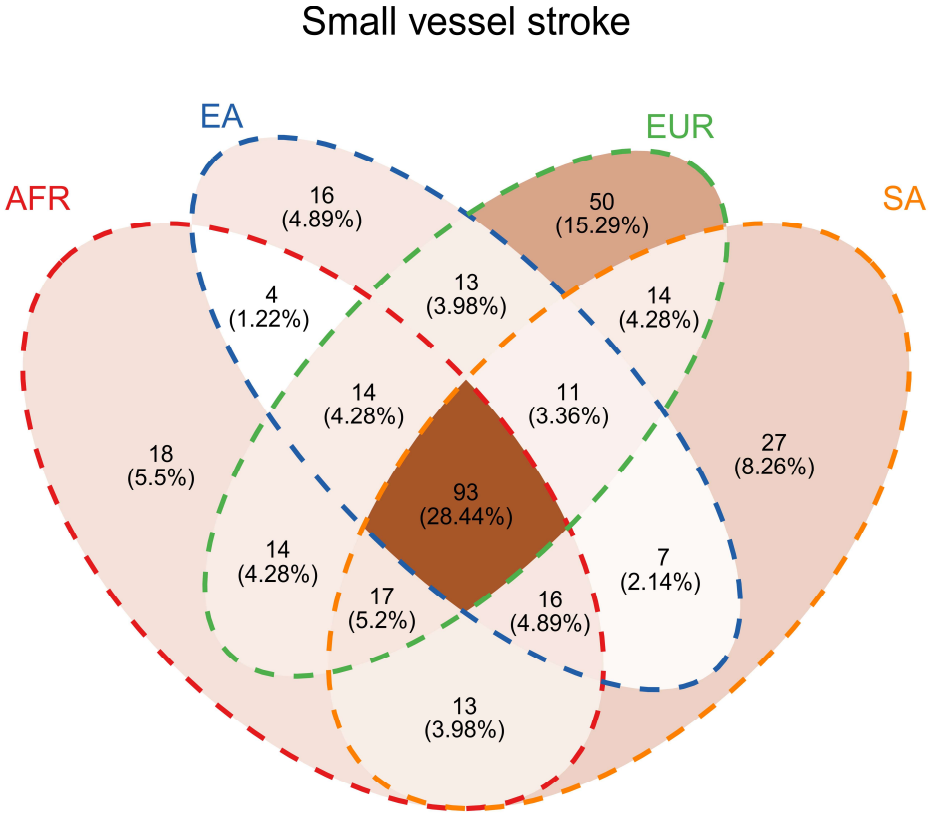

Figure S19. The number of causal metabolites in application (Small vessel stroke).

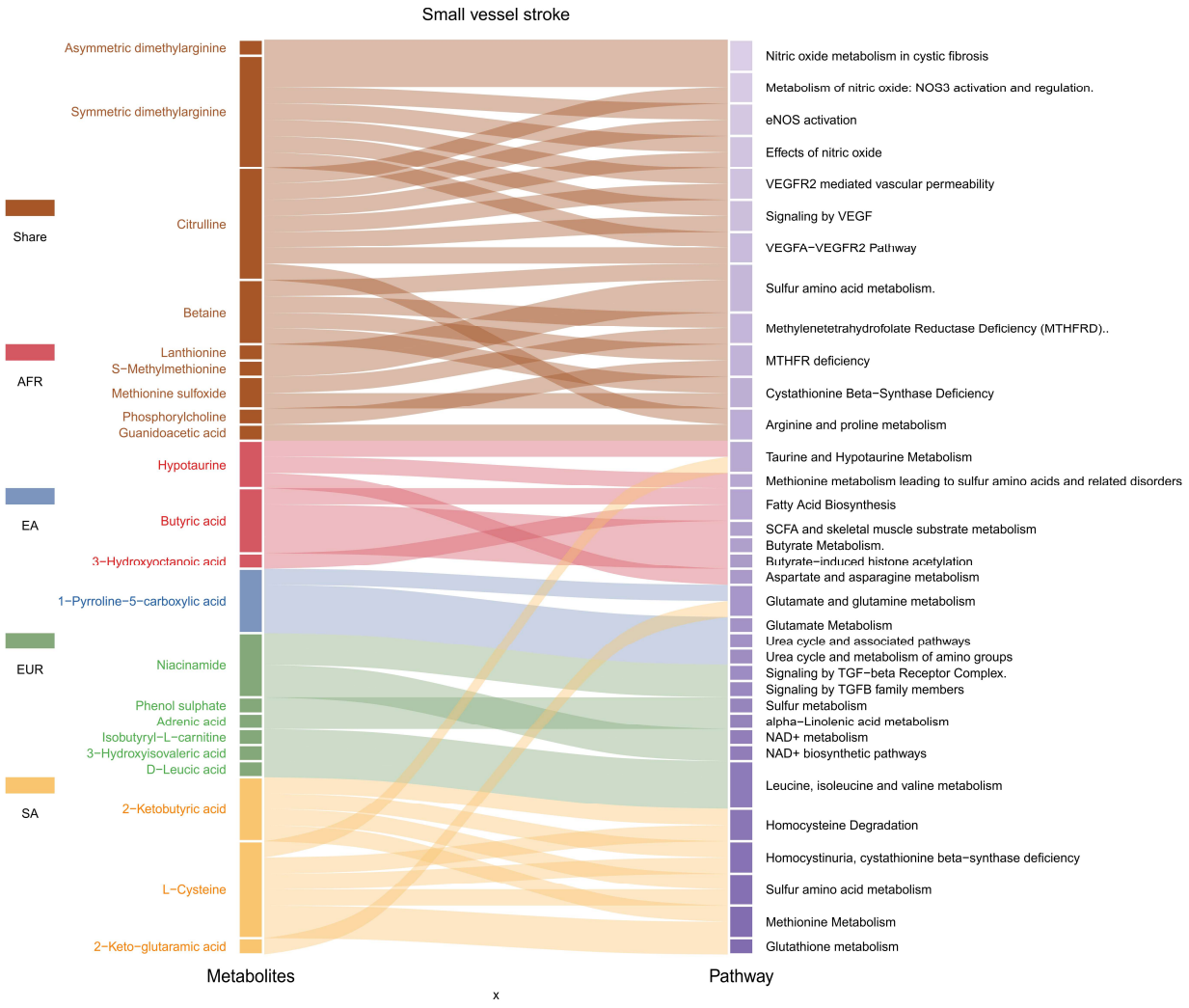

Figure S20. Enrichment results causal metabolites for four ethnics (Small vessel stroke).

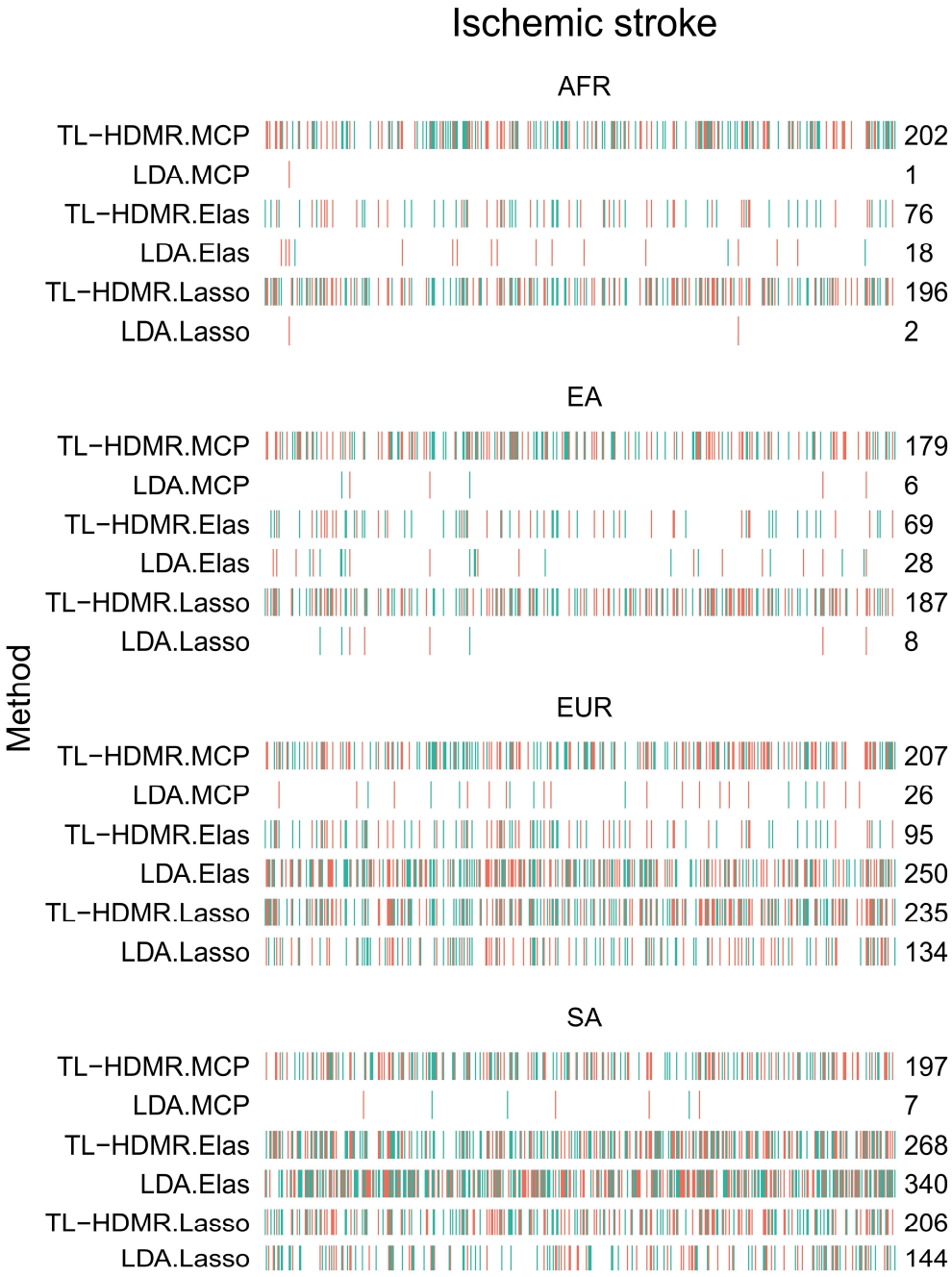

Figure S21. The number of causal metabolites in application (Ischemic stroke).

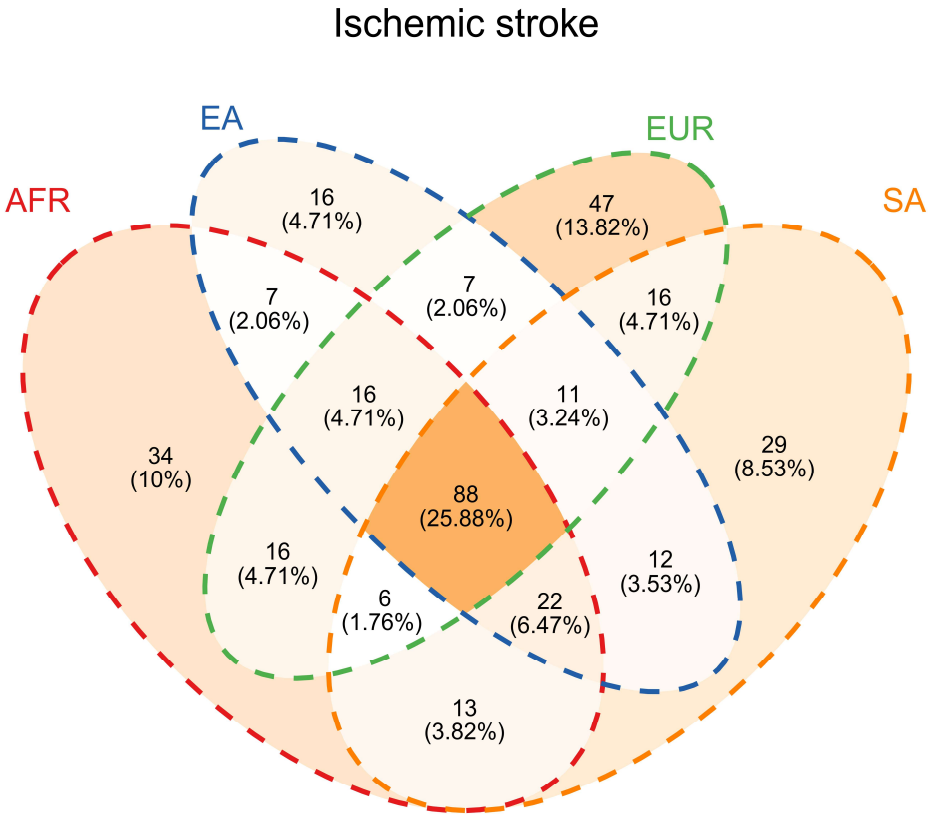

Figure S22. Difference of causal metabolites among four ethnics (Ischemic stroke).

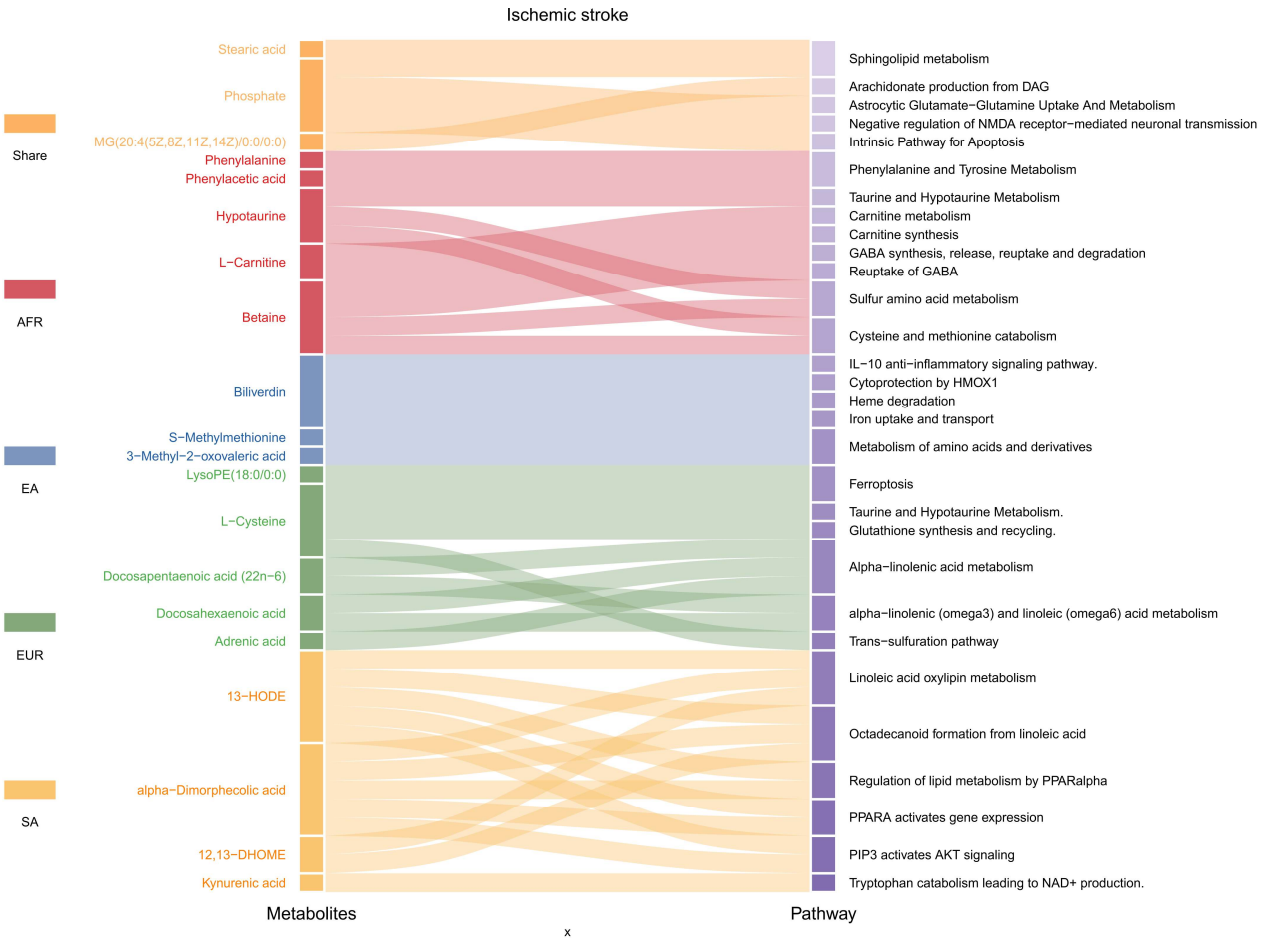

Figure S23. Enrichment results causal metabolites for four ethnics (Ischemic stroke).

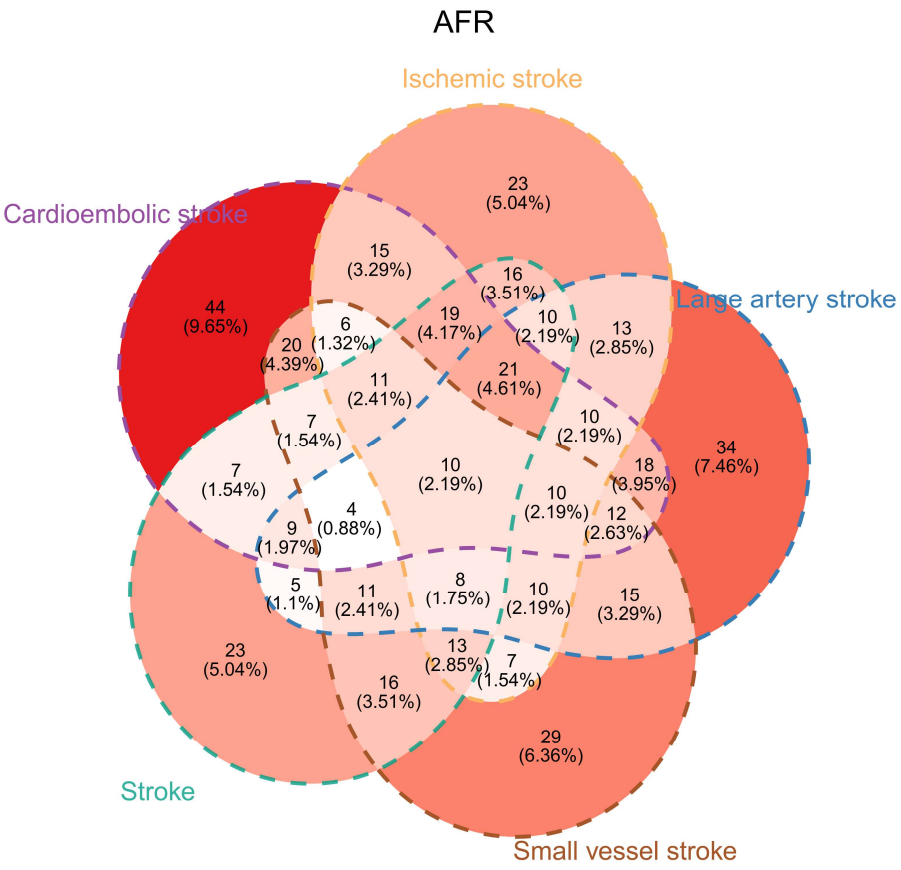

Figure S24. Difference of causal metabolites among stroke and its four subtypes (AFR).

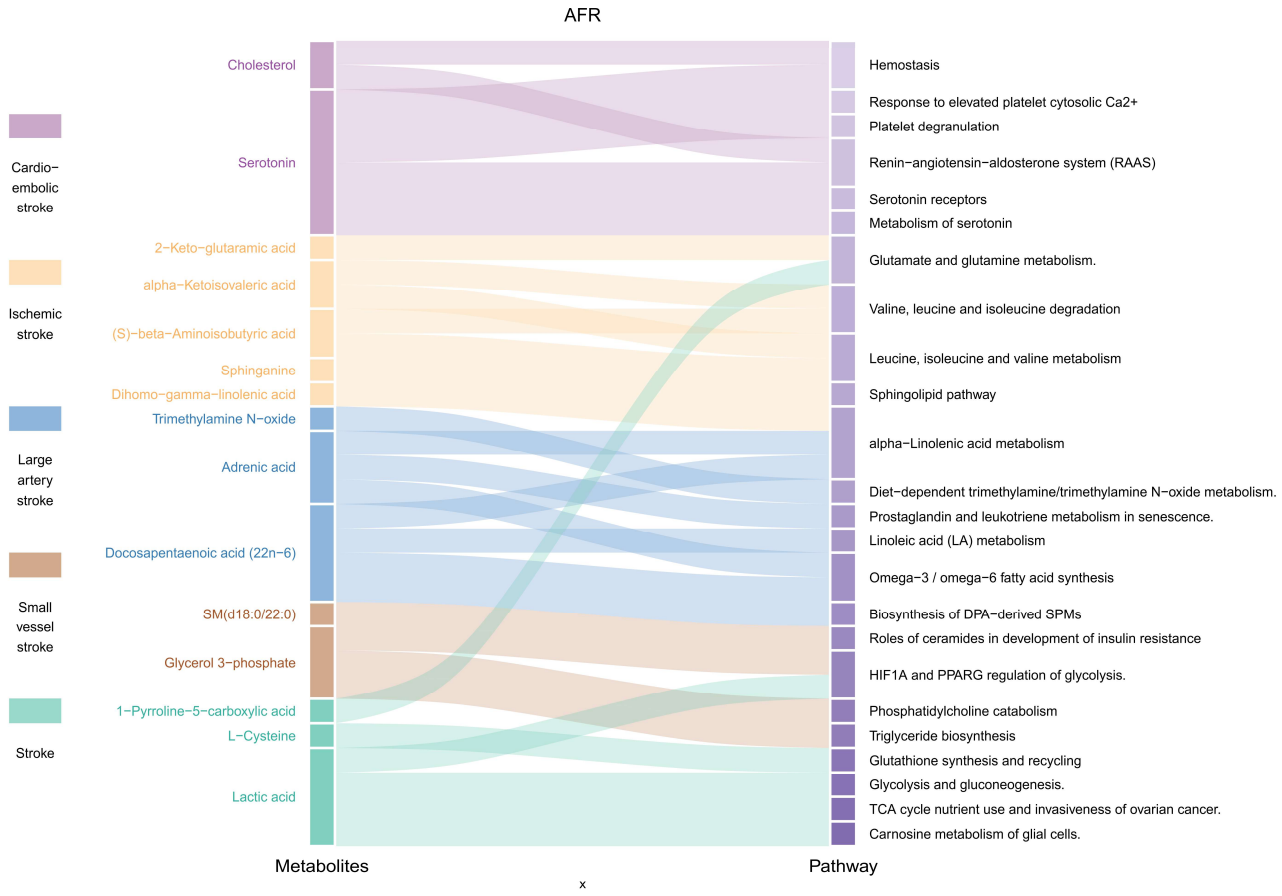

Figure S25. Enrichment results causal metabolites for stroke and its four subtypes (AFR).

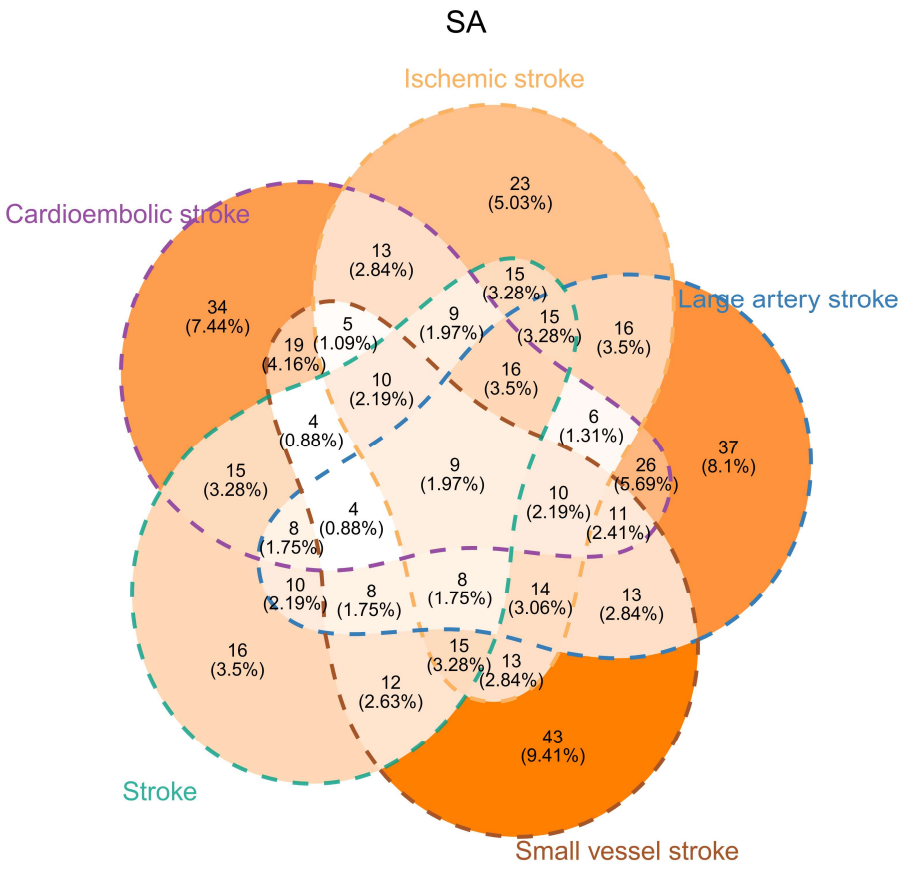

Figure S26. Difference of causal metabolites among stroke and its four subtypes (SA).

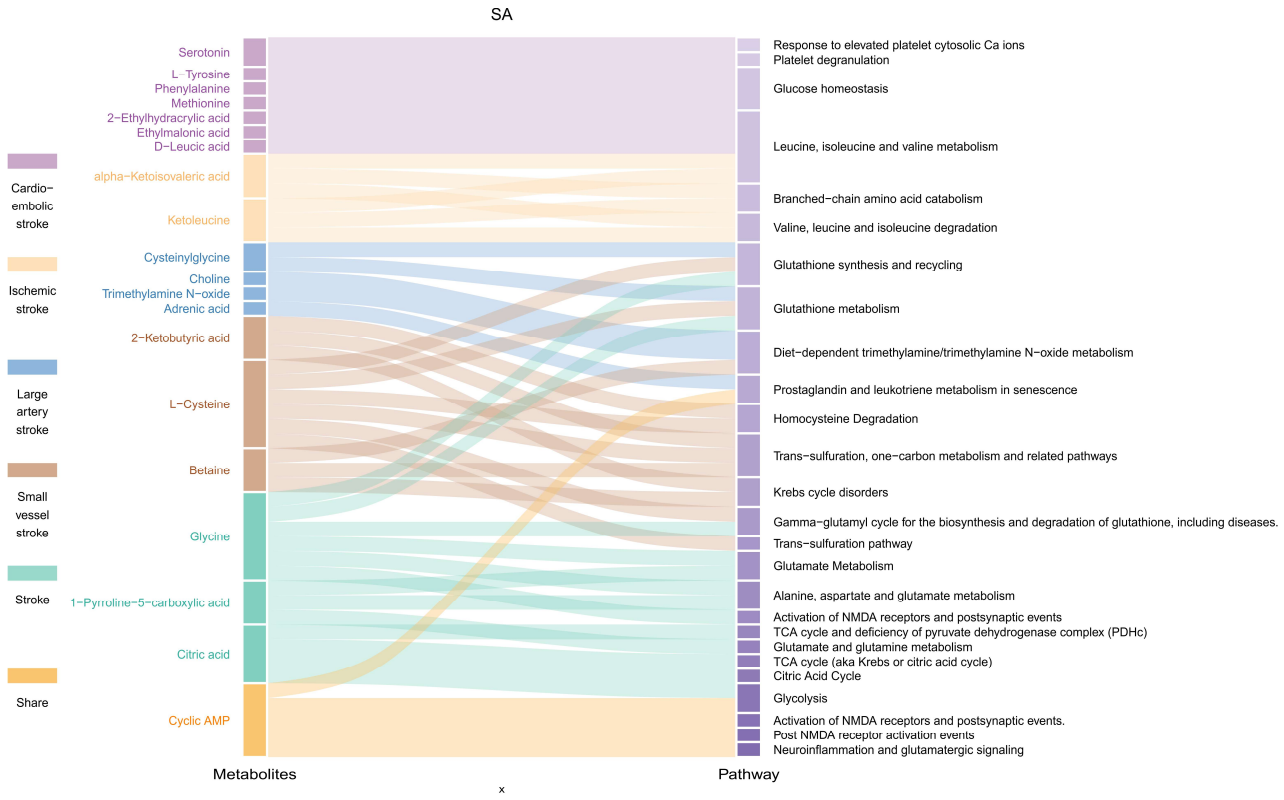

Figure S27. Enrichment results causal metabolites for stroke and its four subtypes (SA).

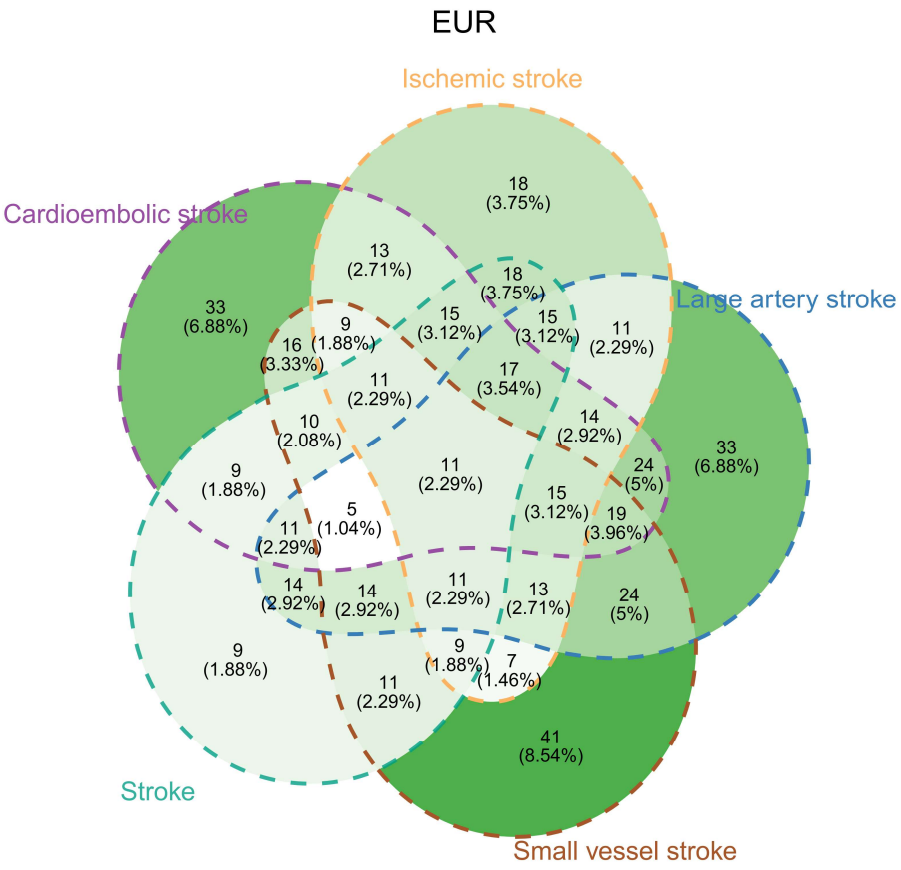

Figure S28. Difference of causal metabolites among stroke and its four subtypes (EUR).

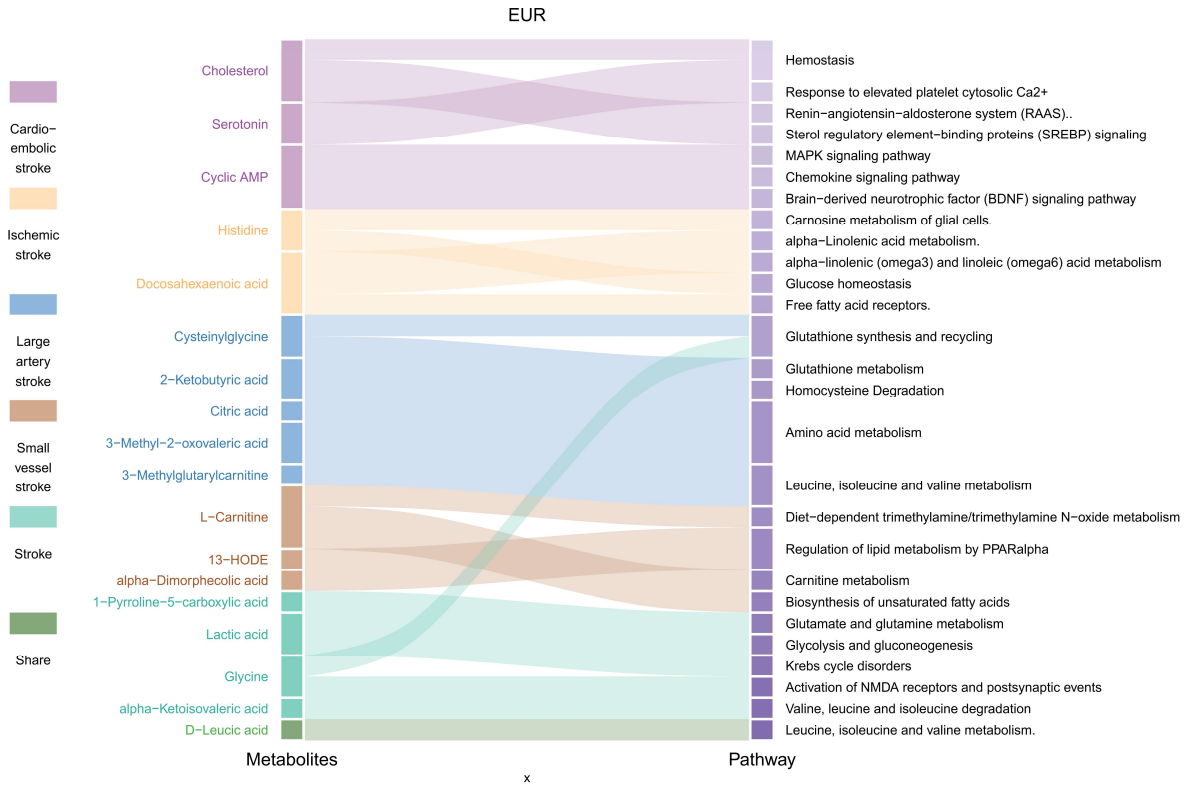

Figure S29. Difference of causal metabolites among stroke and its four subtypes (EUR).