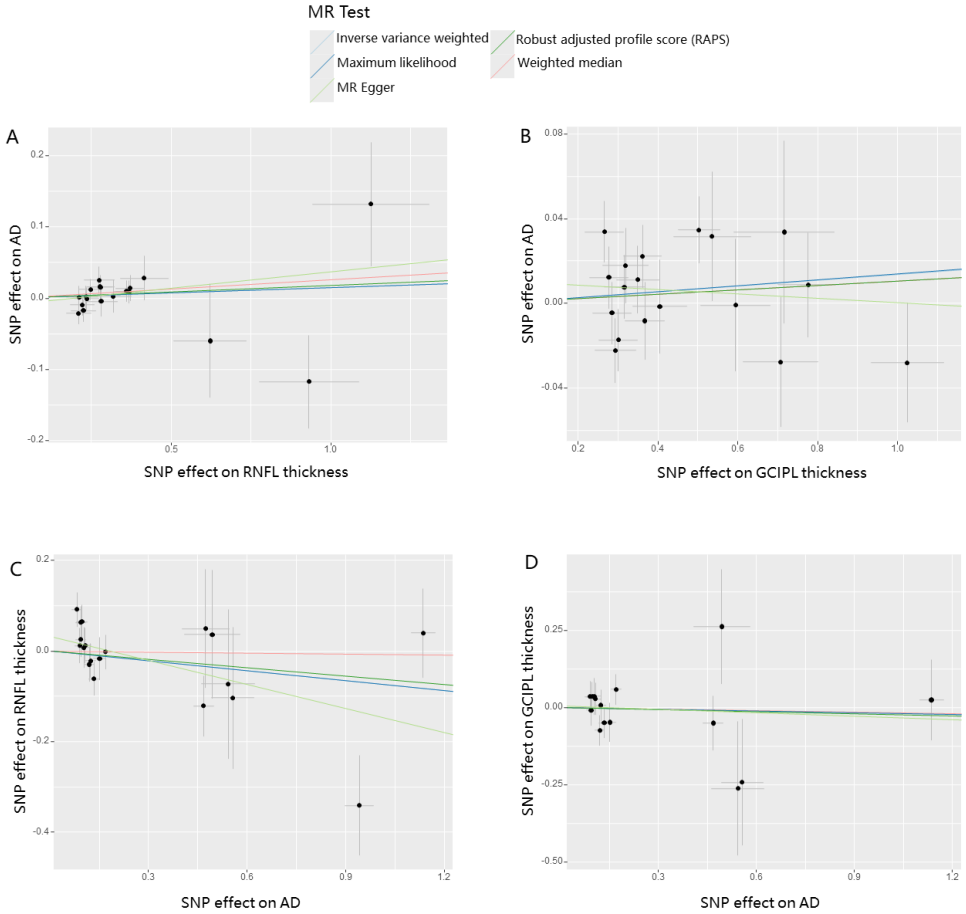
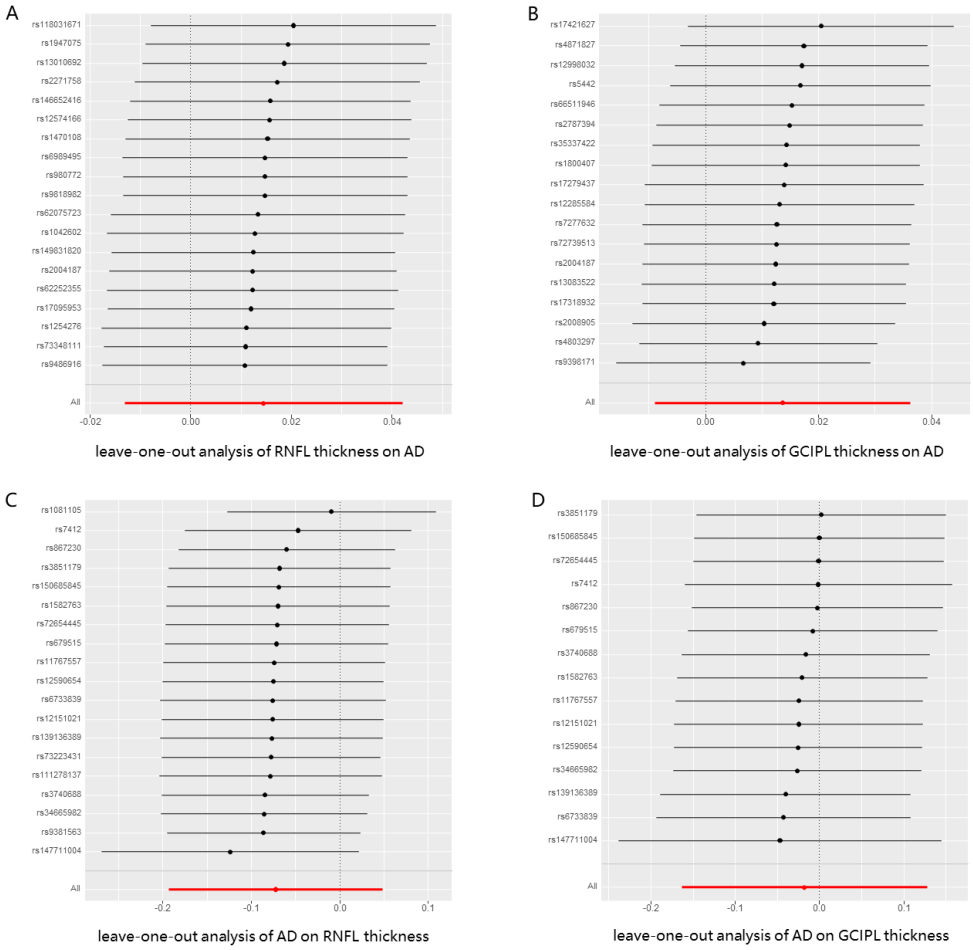


Supplementary Figure S1. Scatter plots showing the lack of causal association between RNFL, GC-IPL thickness and AD in the discovery stage.

A: RNFL on AD, B: GC-IPL on AD, C: AD on RNFL, D: AD on GC-IPL.

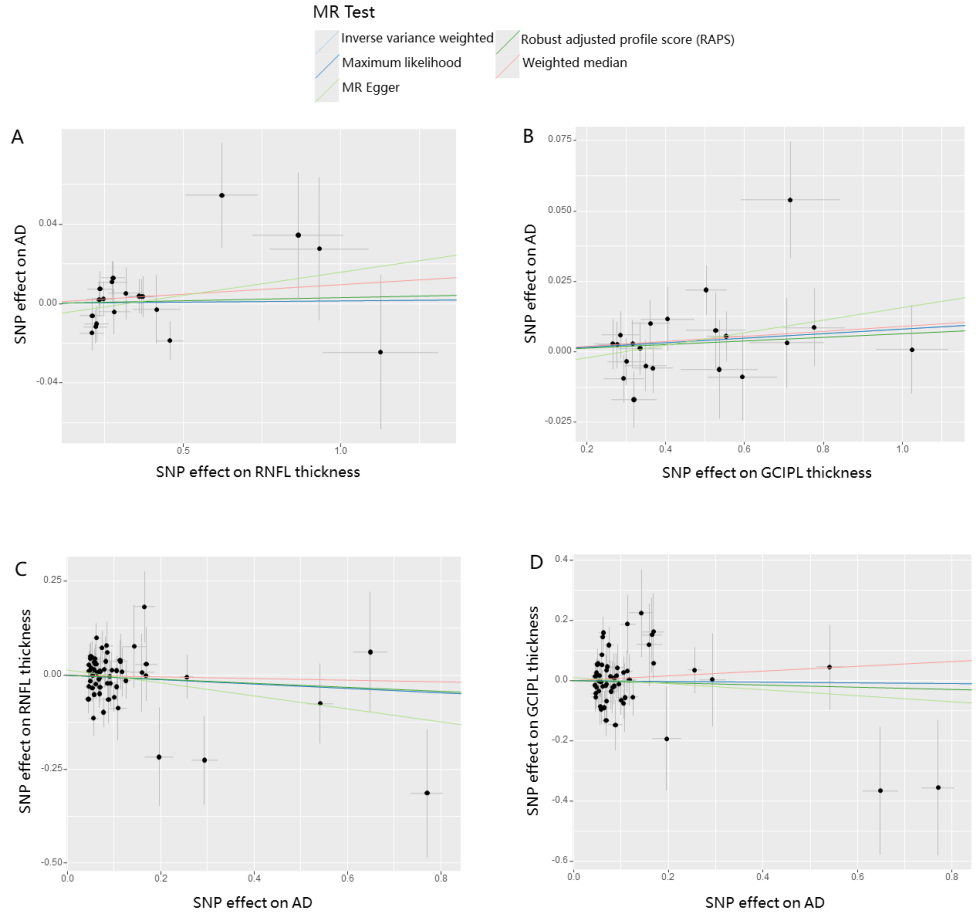
AD, Alzheimer's disease; RNFL, retinal nerve fiber layer; GC-IPL, ganglion cell-inner plexiform layer.



Supplementary Figure S2. Leave-one-out plots showing no SNP outlier in the discovery stage.

A: RNFL on AD, B: GC-IPL on AD, C: AD on RNFL, D: AD on GC-IPL.

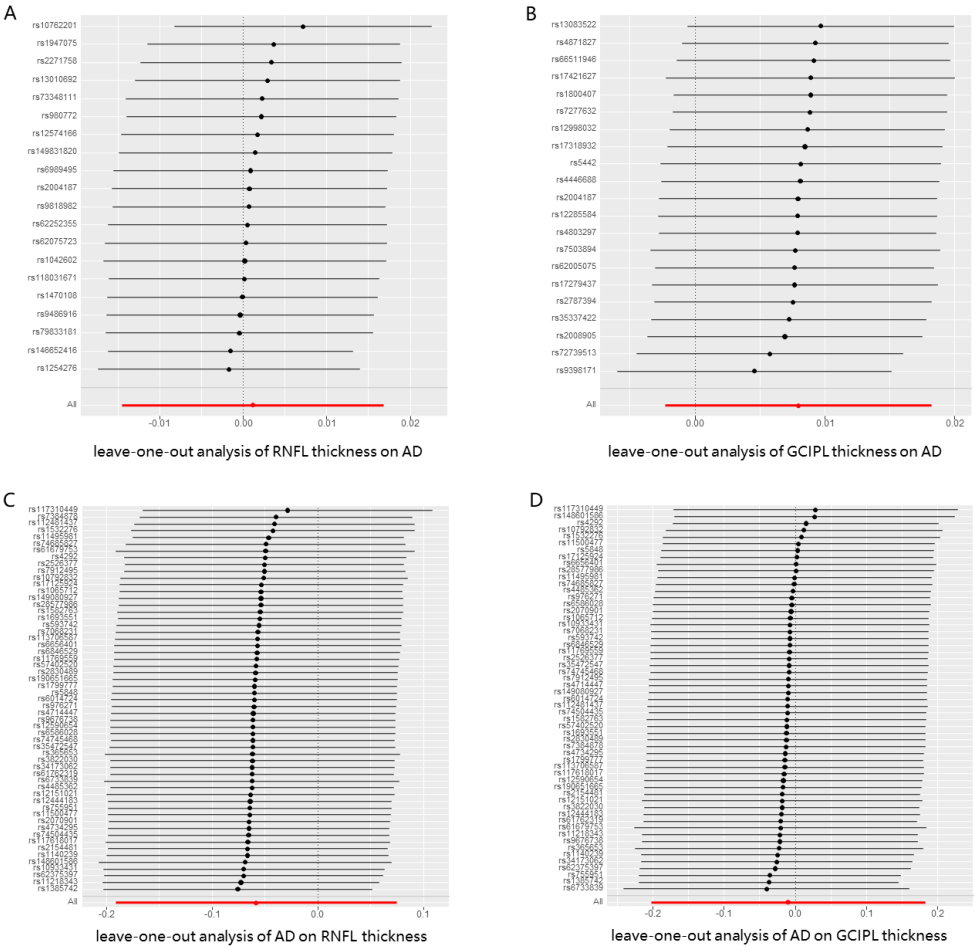
AD, Alzheimer's disease; RNFL, retinal nerve fiber layer; GC-IPL, ganglion cell-inner plexiform layer.



Supplementary Figure S3. Scatter plots showing the lack of causal association between RNFL, GC-IPL thickness and AD in the replication stage.

A: RNFL on AD, B: GC-IPL on AD, C: AD on RNFL, D: AD on GC-IPL.

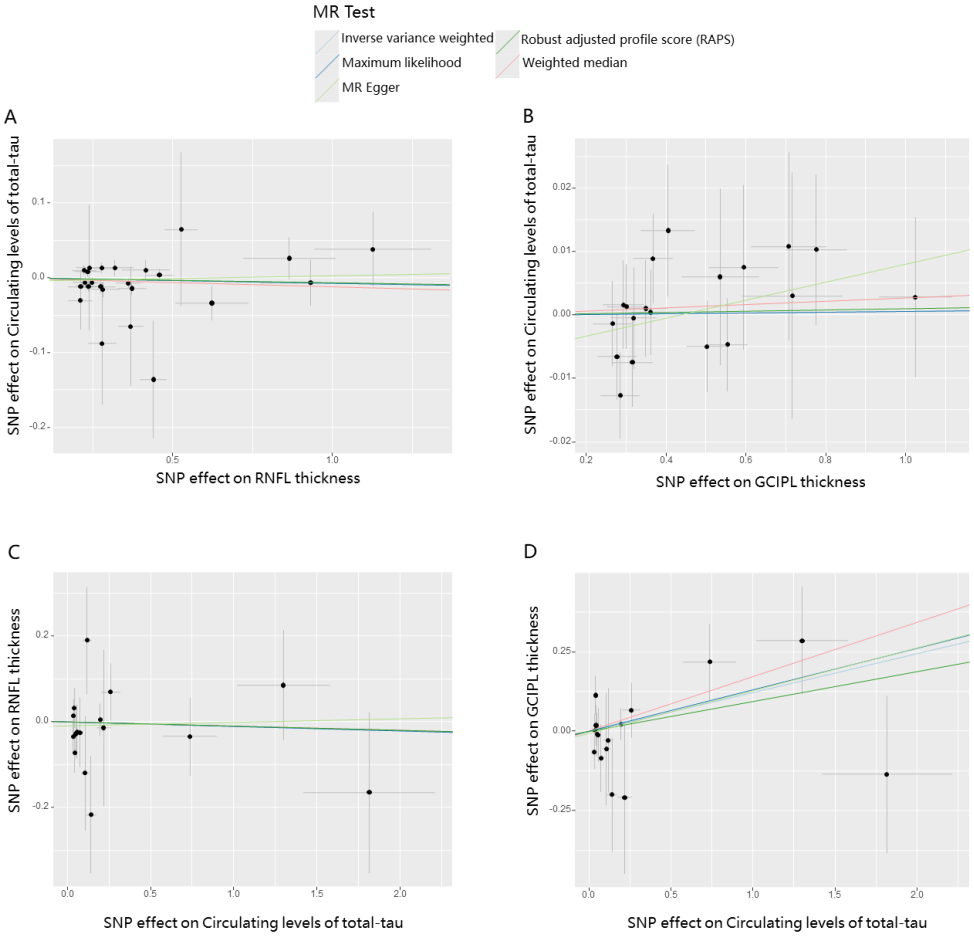
AD, Alzheimer's disease; RNFL, retinal nerve fiber layer; GC-IPL, ganglion cell-inner plexiform layer.



Supplementary Figure S4. Leave-one-out plots showing no SNP outlier in the replication stage.

A: RNFL on AD, B: GC-IPL on AD, C: AD on RNFL, D: AD on GC-IPL.

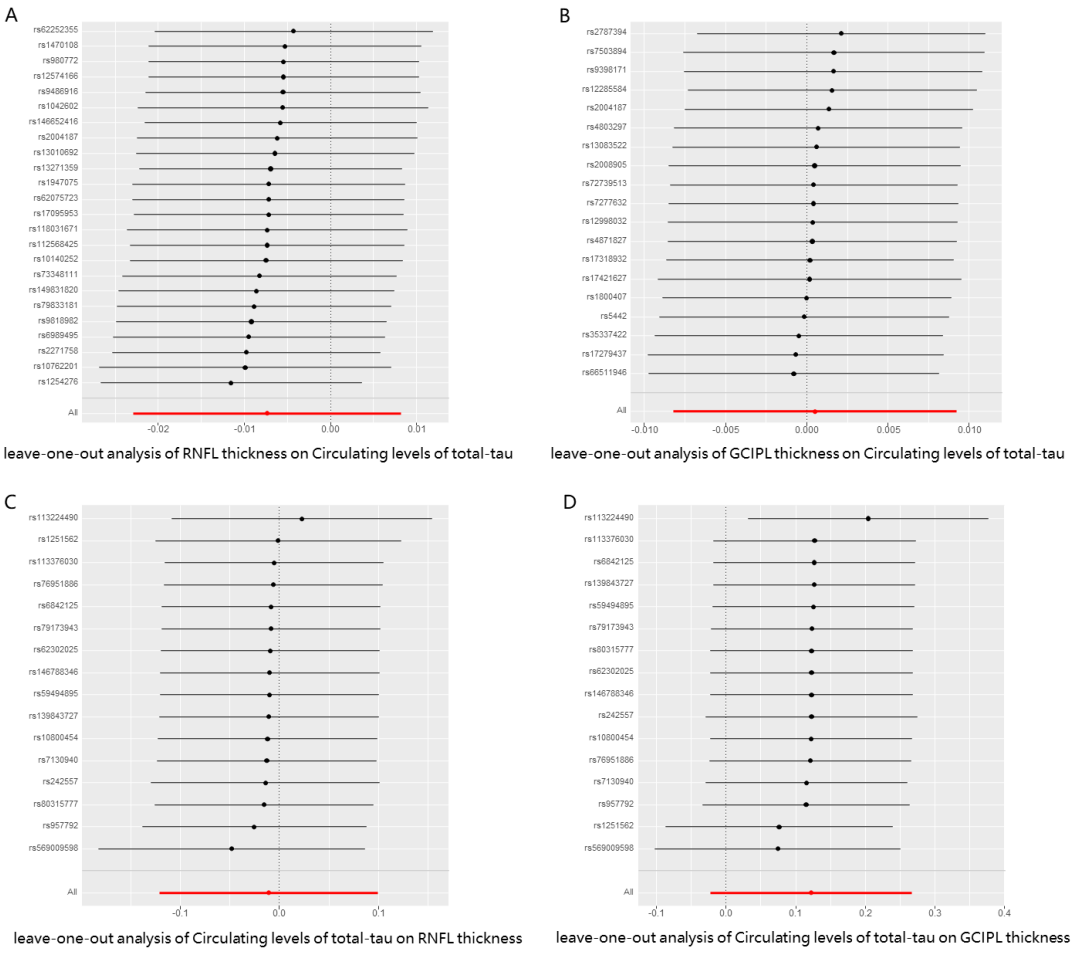
AD, Alzheimer's disease; RNFL, retinal nerve fiber layer; GC-IPL, ganglion cell-inner plexiform layer.



Supplementary Figure S5. Scatter plots showing the lack of causal association between RNFL, GC-IPL thickness and circulating levels of total-tau.

A: RNFL on Circulating levels of total-tau, B: GC-IPL on Circulating levels of total-tau, C: Circulating levels of total-tau on RNFL, D: Circulating levels of total-tau on GC-IPL.

RNFL, retinal nerve fiber layer; GC-IPL, ganglion cell-inner plexiform layer.



Supplementary Figure S6. Leave-one-out plots showing no SNP outlier in Mendelian randomization estimates between the thinning of RNFL, GC-IPL and circulating levels of total-tau.

A: RNFL on Circulating levels of total-tau, B: GC-IPL on Circulating levels of total-tau, C: Circulating levels of total-tau on RNFL, D: Circulating levels of total-tau on GC-IPL.

RNFL, retinal nerve fiber layer; GC-IPL, ganglion cell-inner plexiform layer.