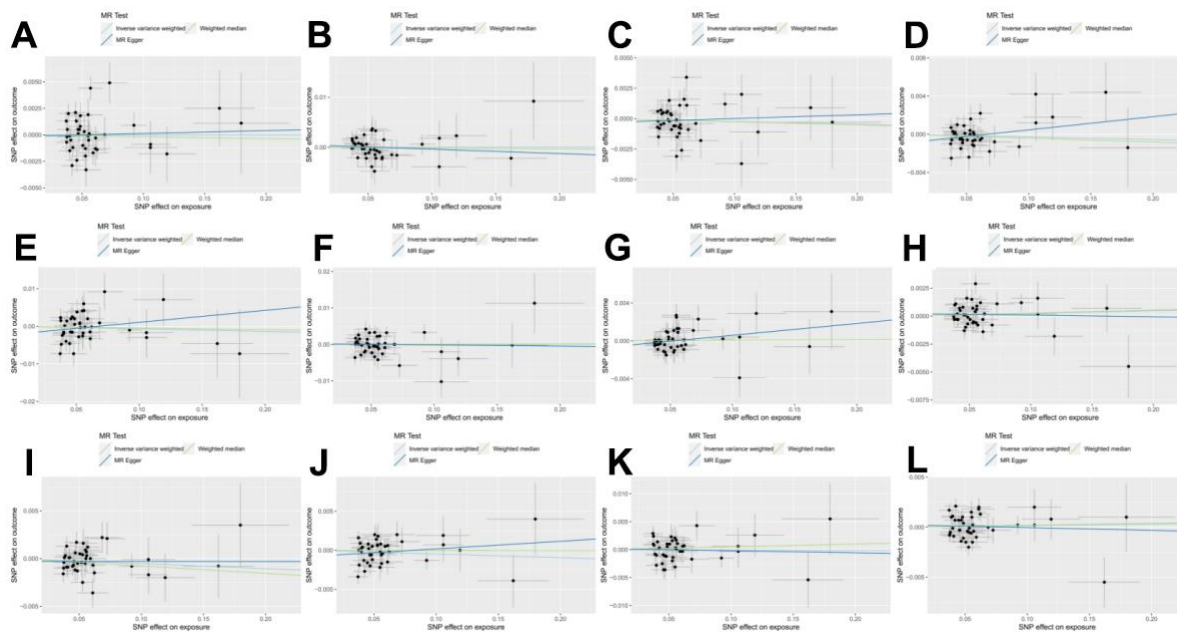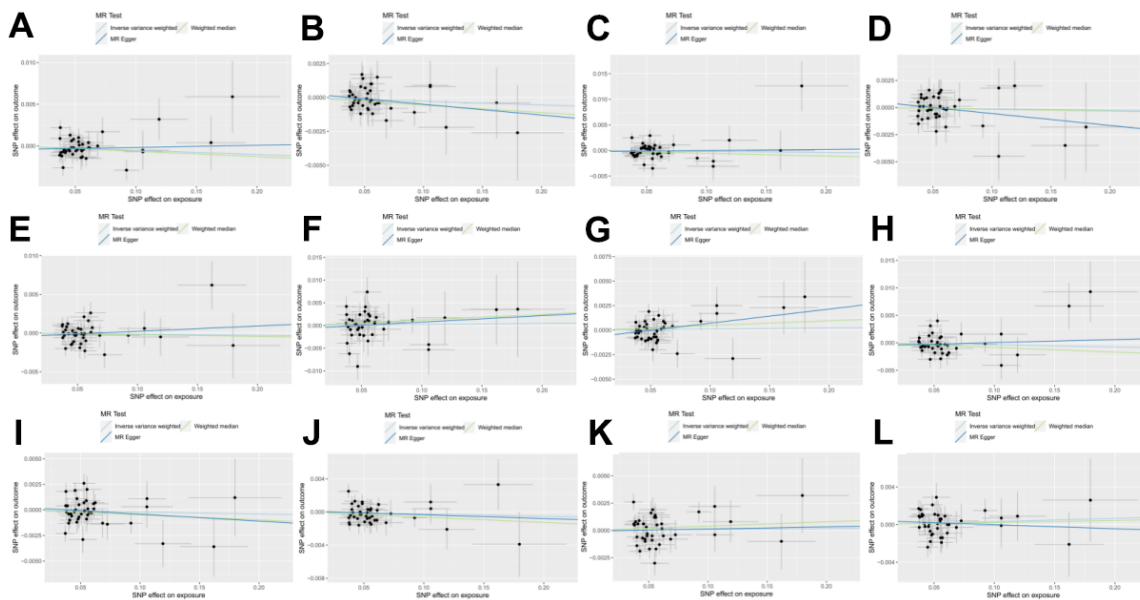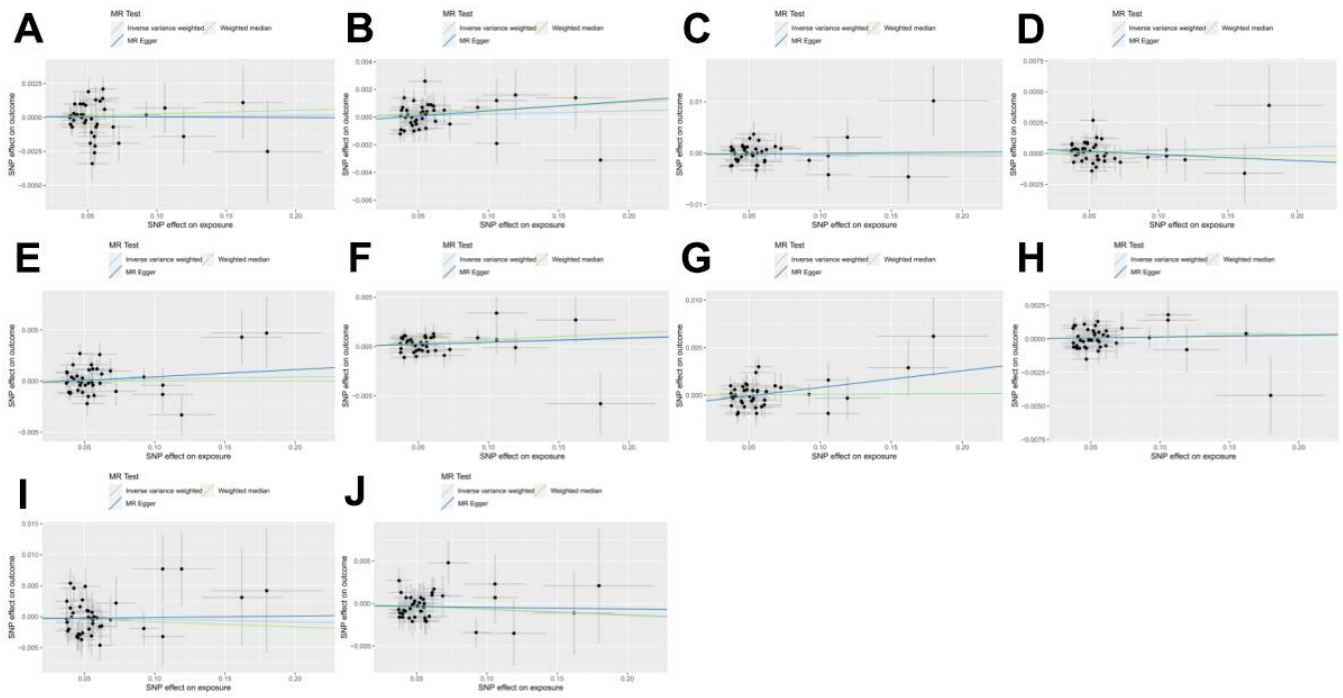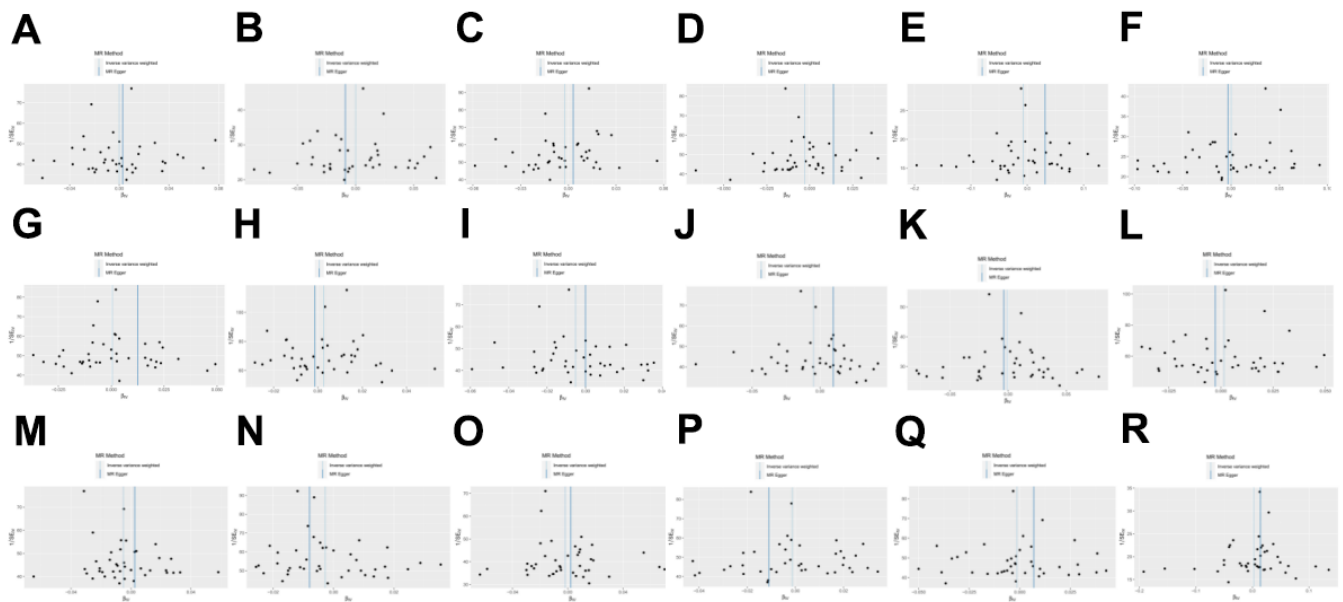# SUPPLEMENTARY FIGURES

Supplementary Figure 1. MR scatter plots of the relationship between heart failure and cortical thickness in cerebral functional areas 1. (A) Banksst, (B) caudal anterior cingulate, (C) caudal middle frontal, (D) cuneus, (E) entorhinal, (F) frontal pole, (G) fusiform, (H) inferior parietal, (I) inferior temporal, (J) insula, (K) isthmus cingulate, (L) lateral occipital.

Supplementary Figure 2. MR scatter plots of the relationship between heart failure and cortical thickness in cerebral functional areas 2. (A) Lateral orbitofrontal, (B) lingual, (C) posterior cingulate medial orbitofrontal, (D) middle temporal, (E) paracentral, (F) parahippocampal, (G) pars opercularis, (H) pars orbitalis, (I) pars triangularis, (J) pericalcarine, (K) postcentral, (L) posterior cingulate.
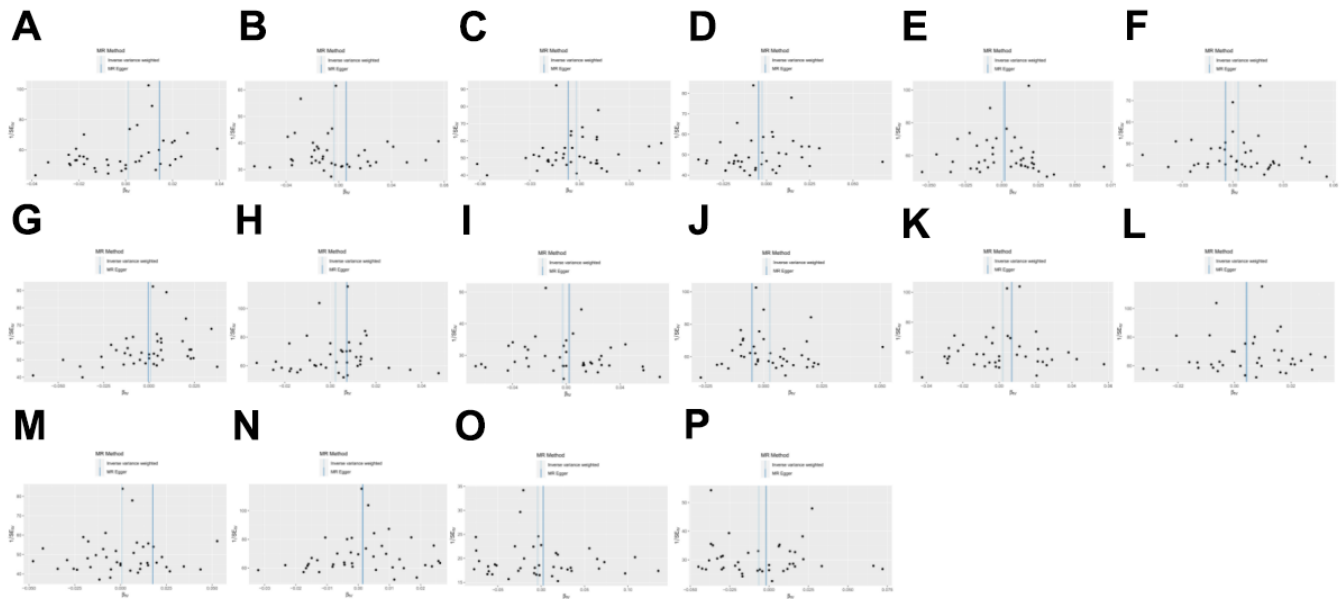
Supplementary Figure 3. MR scatter plots of the relationship between heart failure and cortical thickness in cerebral functional areas 3. (**A**) Precentral, (**B**) precuneus, (**C**) rostral anterior cingulate, (**D**) rostral middle frontal, (**E**) superior frontal, (**F**) superior parietal, (**G**) superior temporal, (**H**) supramarginal, (**I**) temporal pole, (**J**) transverse temporal.

Supplementary Figure 4. Funnel plot 1 of heterogeneity test results of the relationship between heart failure and cerebral functional area cortex thickness by MR. (**A**) Bankssts, (**B**) caudal anterior cingulate, (**C**) caudal middle frontal, (**D**) cuneus, (**E**) entorhinal, (**F**) frontal pole, (**G**) fusiform, (**H**) inferior parietal, (**I**) inferior temporal, (**J**) insula, (**K**) isthmus cingulate, (**L**) lateral occipital, (**M**) lateral orbitofrontal, (**N**) lingual, (**O**) medial orbitofrontal, (**P**) middle temporal, (**Q**) paracentral, (**R**) parahippocampal.

Supplementary Figure 5. Funnel plot 2 of heterogeneity test results of the relationship between heart failure and cerebral functional area cortex thickness by MR. (**A**) Pars opercularis, (**B**) pars orbitalis, (**C**) pars triangularis, (**D**) pericalcarine, (**E**) postcentral, (**F**) posterior cingulate, (**G**) precentral, (**H**) precuneus, (**I**) rostral anterior cingulate, (**J**) rostral middle frontal, (**K**) superior frontal, (**L**) superior parietal, (**M**) superior temporal, (**N**) supramarginal, (**O**) temporal pole, (**P**) transverse temporal.
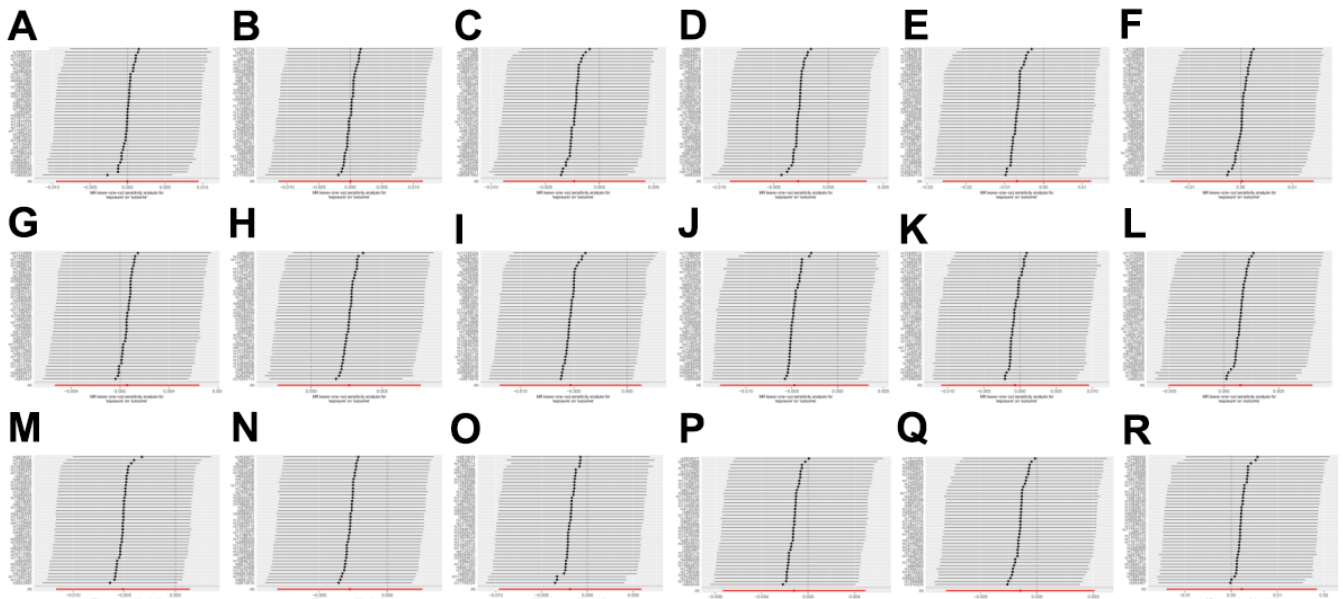
Supplementary Figure 6. "Leave-one-out" forest map 1 of MR analysis of in the relationship between heart failure and the cortical thickness of brain functional areas. (**A**) Bankssts, (**B**) caudal anterior cingulate, (**C**) caudal middle frontal, (**D**) cuneus, (**E**) entorhinal, (**F**) frontal pole, (**G**) fusiform, (**H**) inferior parietal, (**I**) inferior temporal, (**J**) insula, (**K**) isthmus cingulate, (**L**) lateral occipital, (**M**) lateral orbitofrontal, (**N**) lingual, (**O**) medial orbitofrontal, (**P**) middle temporal, (**Q**) paracentral, (**R**) parahippocampal.
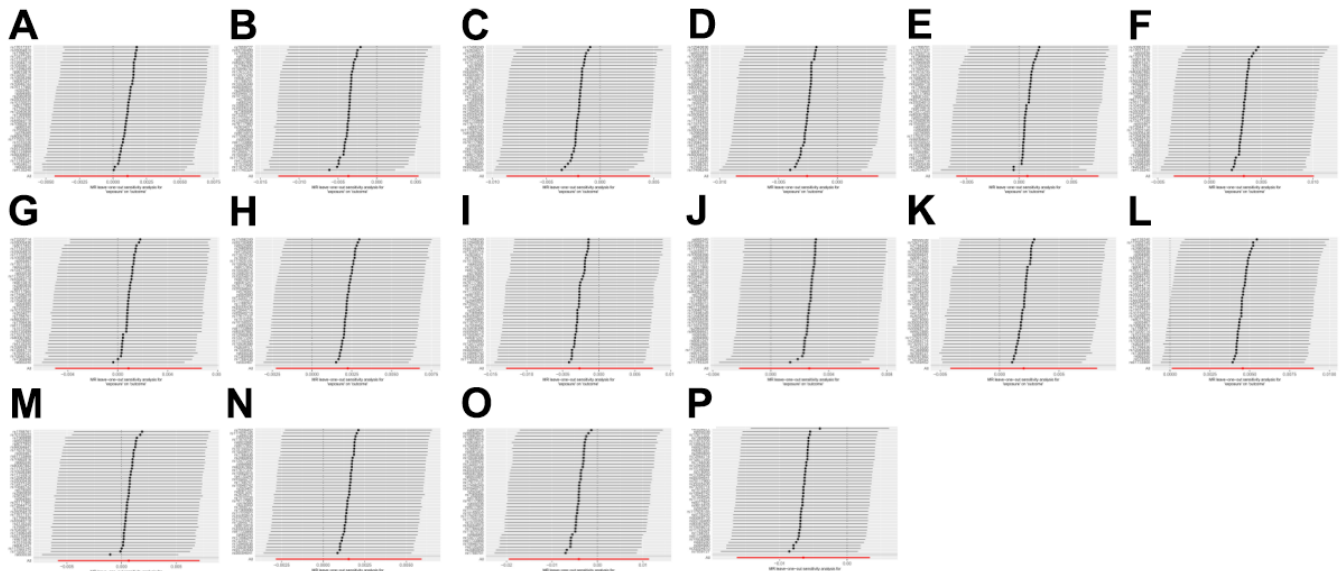
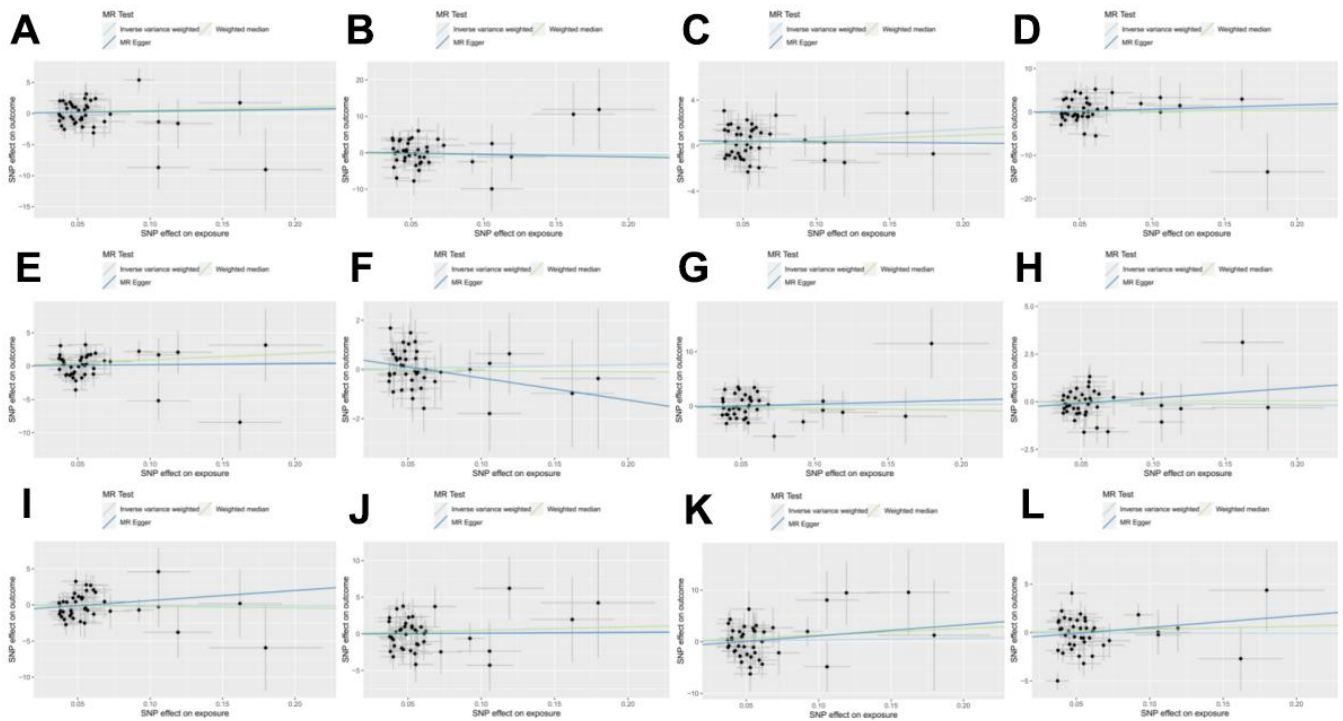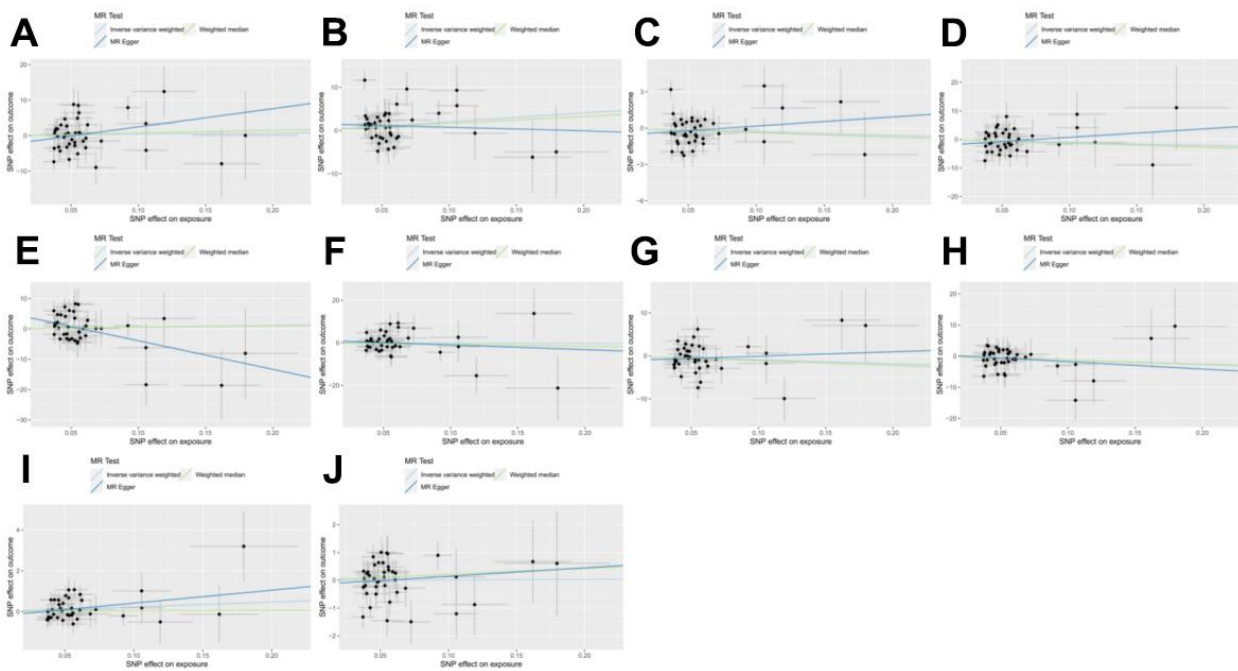**Supplementary Figure 7. "Leave-one-out" forest map 2 of MR analysis of in the relationship between heart failure and the cortical thickness of functional brain areas.** (**A**) Pars opercularis, (**B**) pars orbitalis, (**C**) pars triangularis, (**D**) pericalcarine, (**E**) postcentral, (**F**) posterior cingulate, (**G**) precentral, (**H**) precuneus, (**I**) rostral anterior cingulate, (**J**) rostral middle frontal, (**K**) superior frontal, (**L**) superior parietal, (**M**) superior temporal, (**N**) supramarginal, (**O**) temporal pole, (**P**) transverse temporal.
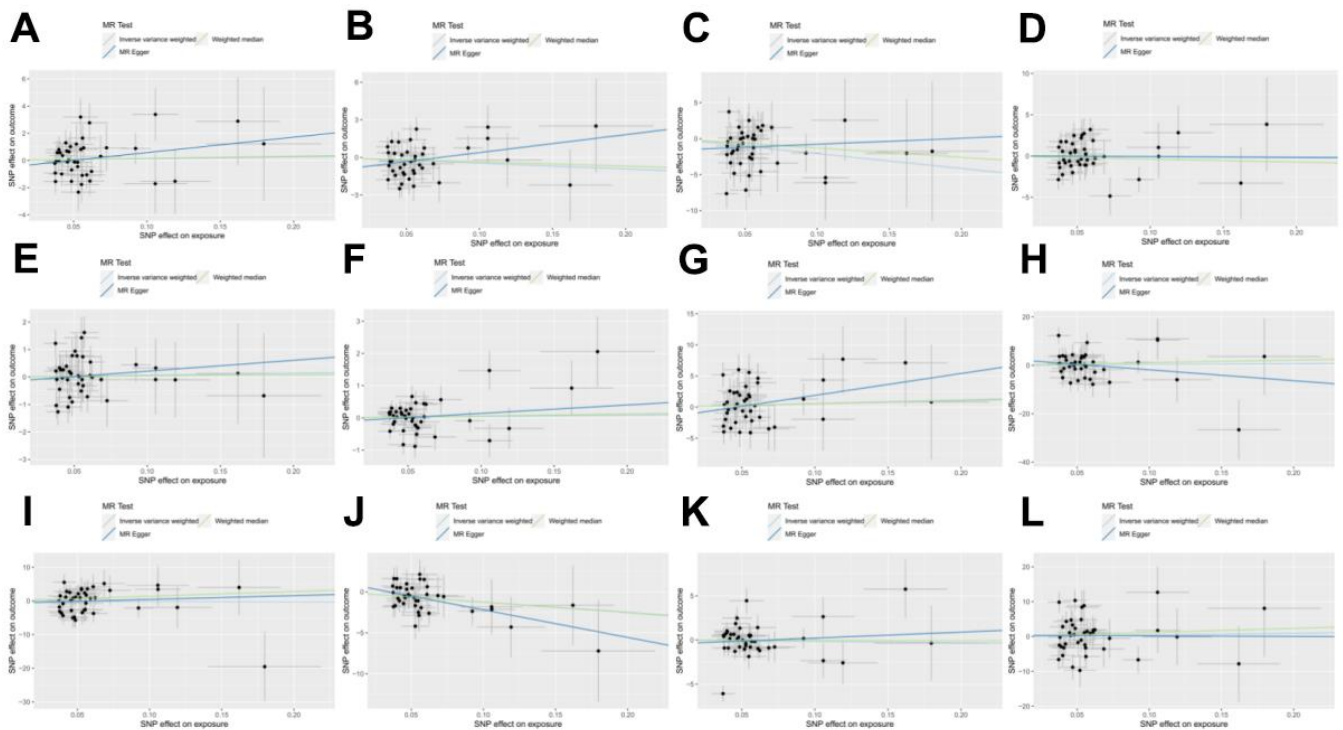
Supplementary Figure 8. MR scatter plot 1 of the relationship between heart failure and the cortical surface area of functional brain areas. (**A**) Banksst, (**B**) caudal anterior cingulate, (**C**) caudal middle frontal, (**D**) cuneus, (**E**) entorhinal, (**F**) frontal pole, (**G**) fusiform, (**H**) inferior parietal, (**I**) inferior temporal, (**J**) insula, (**K**) isthmus cingulate, (**L**) lateral occipital.
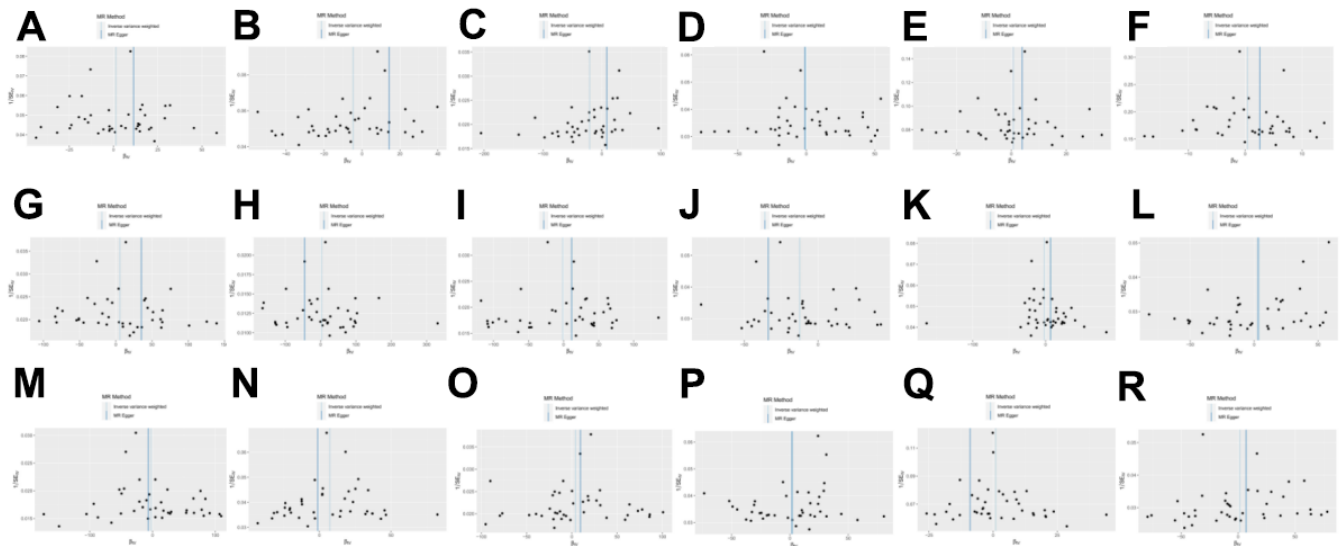
Supplementary Figure 9. MR scatter plot 2 of the relationship between heart failure and the cortical surface area of functional brain areas. (**A**) Lateral orbitofrontal, (**B**) lingual, (**C**) posterior cingulate medial orbitofrontal, (**D**) middle temporal, (**E**) paracentral, (**F**) parahippocampal, (**G**) pars opercularis, (**H**) pars orbitalis, (**I**) pars triangularis, (**J**) pericalcarine, (**K**) postcentral, (**L**) posterior cingulate.

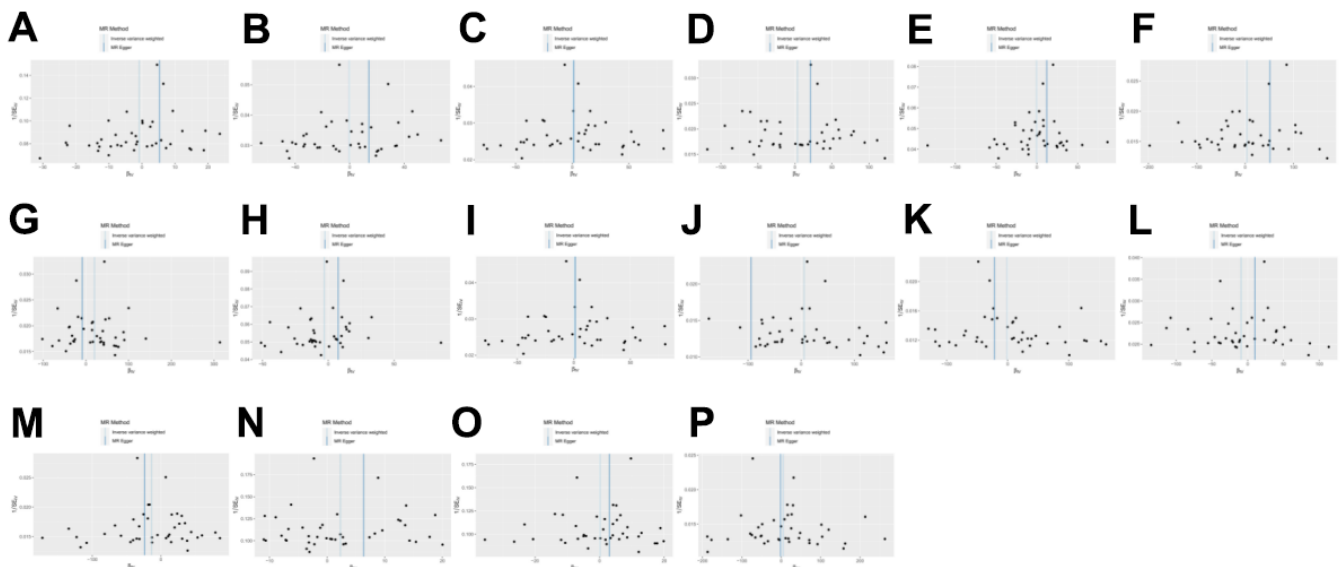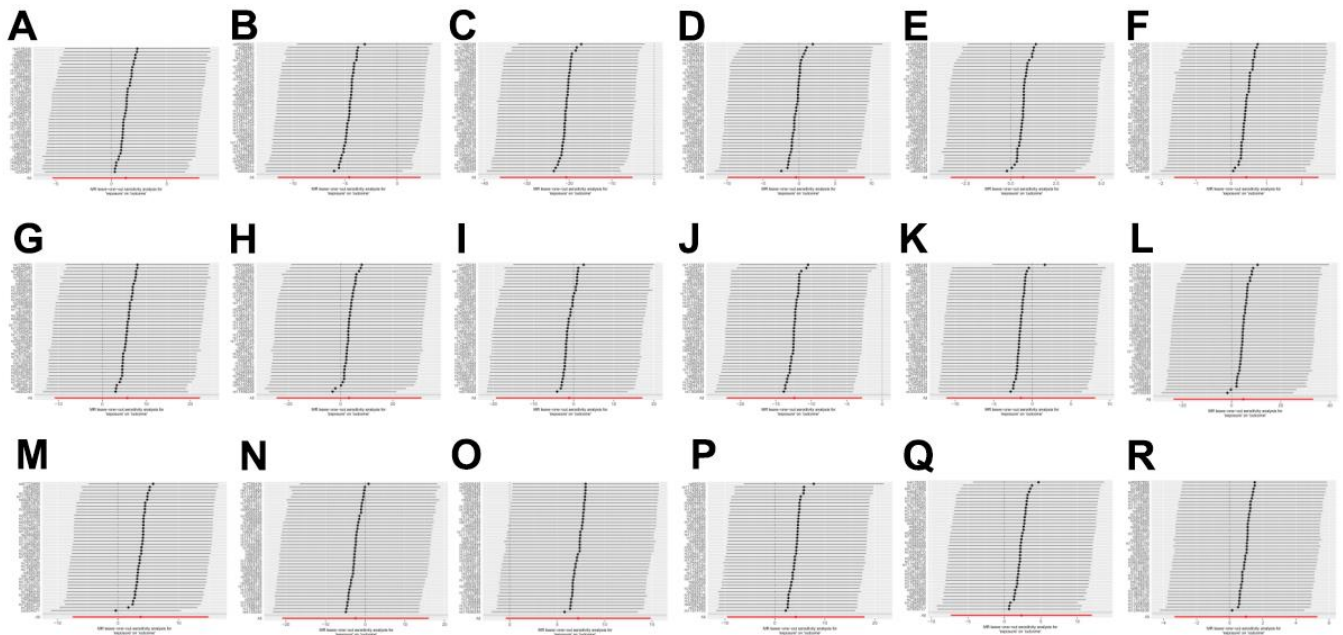**Supplementary Figure 10. MR scatter plot 3 of the relationship between heart failure and the cortical surface area of functional brain areas.** (**A**) Precentral, (**B**) precuneus, (**C**) rostral anterior cingulate, (**D**) rostral middle frontal, (**E**) superior frontal, (**F**) superior parietal, (**G**) superior temporal, (**H**) supramarginal, (**I**) temporal pole, (**J**) transverse temporal.

Supplementary Figure 11. Funnel plot 1 of heterogeneity test results of MR analysis of the relationship between heart failure and the cortical surface area of functional cerebral areas. (**A**) Bankssts, (**B**) caudal anterior cingulate, (**C**) caudal middle frontal, (**D**) cuneus, (**E**) entorhinal, (**F**) frontal pole, (**G**) fusiform, (**H**) inferior parietal, (**I**) inferior temporal, (**J**) insula, (**K**) isthmus cingulate, (**L**) lateral occipital, (**M**) lateral orbitofrontal, (**N**) lingual, (**O**) medial orbitofrontal, (**P**) middle temporal, (**Q**) paracentral, (**R**) parahippocampal.
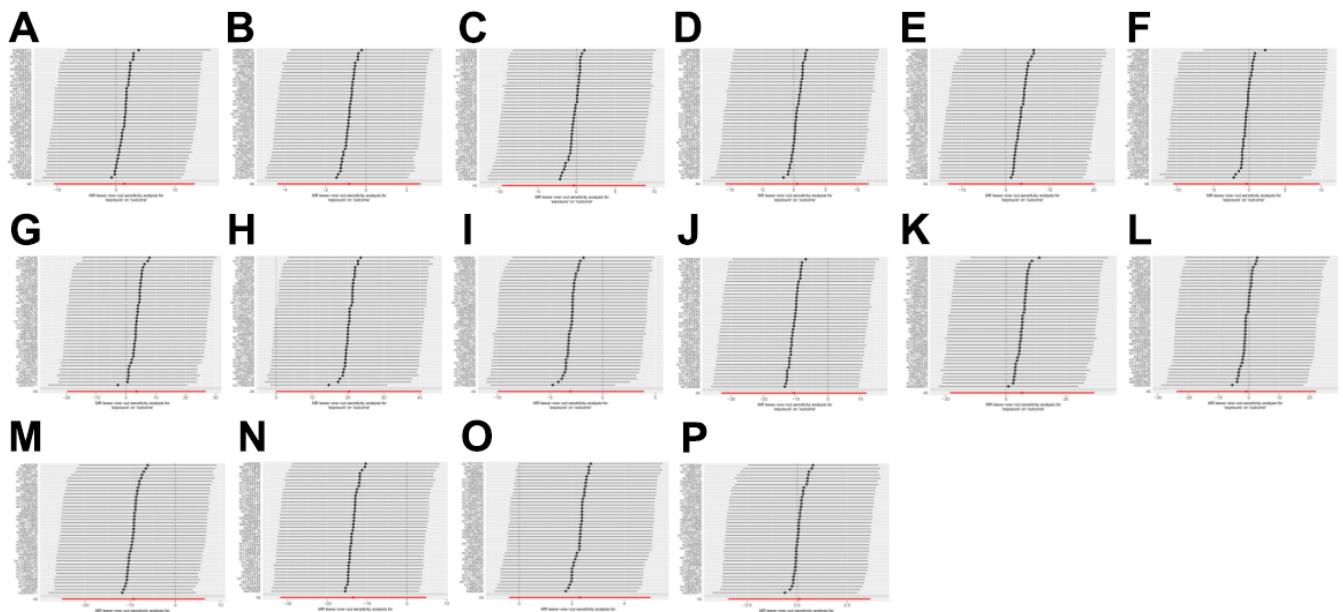

Supplementary Figure 12. Funnel plot 2 of heterogeneity test results of MR analysis of in the relationship between heart failure and the cortical surface area of functional cerebral areas. (**A**) Pars opercularis, (**B**) pars orbitalis, (**C**) pars triangularis, (**D**) pericalcarine, (**E**) postcentral, (**F**) posterior cingulate, (**G**) precentral, (**H**) precuneus, (**I**) rostral anterior cingulate, (**J**) rostral middle frontal, (**K**) superior frontal, (**L**) superior parietal, (**M**) superior temporal, (**N**) supramarginal, (**O**) temporal pole, (**P**) transverse temporal.

Supplementary Figure 13. "Leave-one-out" forest map 1 of MR analysis of the relationship between heart failure and the cortical surface area of functional brain areas. (**A**) Bankssts, (**B**) caudal anterior cingulate, (**C**) caudal middle frontal, (**D**) cuneus, (**E**) entorhinal, (**F**) frontal pole, (**G**) fusiform, (**H**) inferior parietal, (**I**) inferior temporal, (**J**) insula, (**K**) isthmus cingulate, (**L**) lateral occipital, (**M**) lateral orbitofrontal, (**N**) lingual, (**O**) medial orbitofrontal, (**P**) middle temporal, (**Q**) paracentral, (**R**) parahippocampal.

Supplementary Figure 14. "Leave-one-out" forest map 2 of MR analysis of the relationship between heart failure and the cortical surface of functional brain areas. (**A**) Pars opercularis, (**B**) pars orbitalis, (**C**) pars triangularis, (**D**) pericalcarine, (**E**) postcentral, (**F**) posterior cingulate, (**G**) precentral, (**H**) precuneus, (**I**) rostral anterior cingulate, (**J**) rostral middle frontal, (**K**) superior frontal, (**L**) superior parietal, (**M**) superior temporal, (**N**) supramarginal, (**O**) temporal pole, (**P**) transverse temporal.