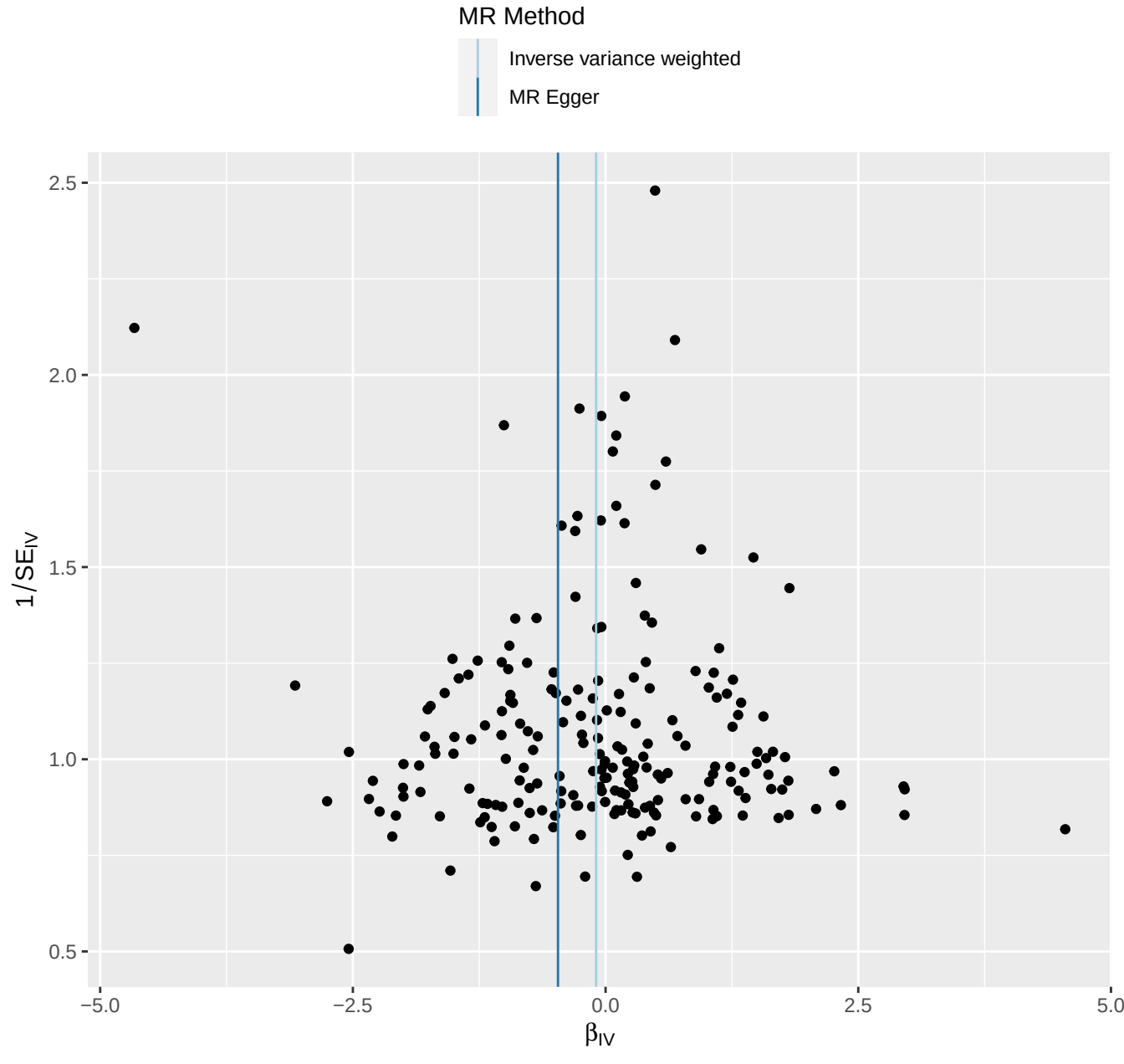
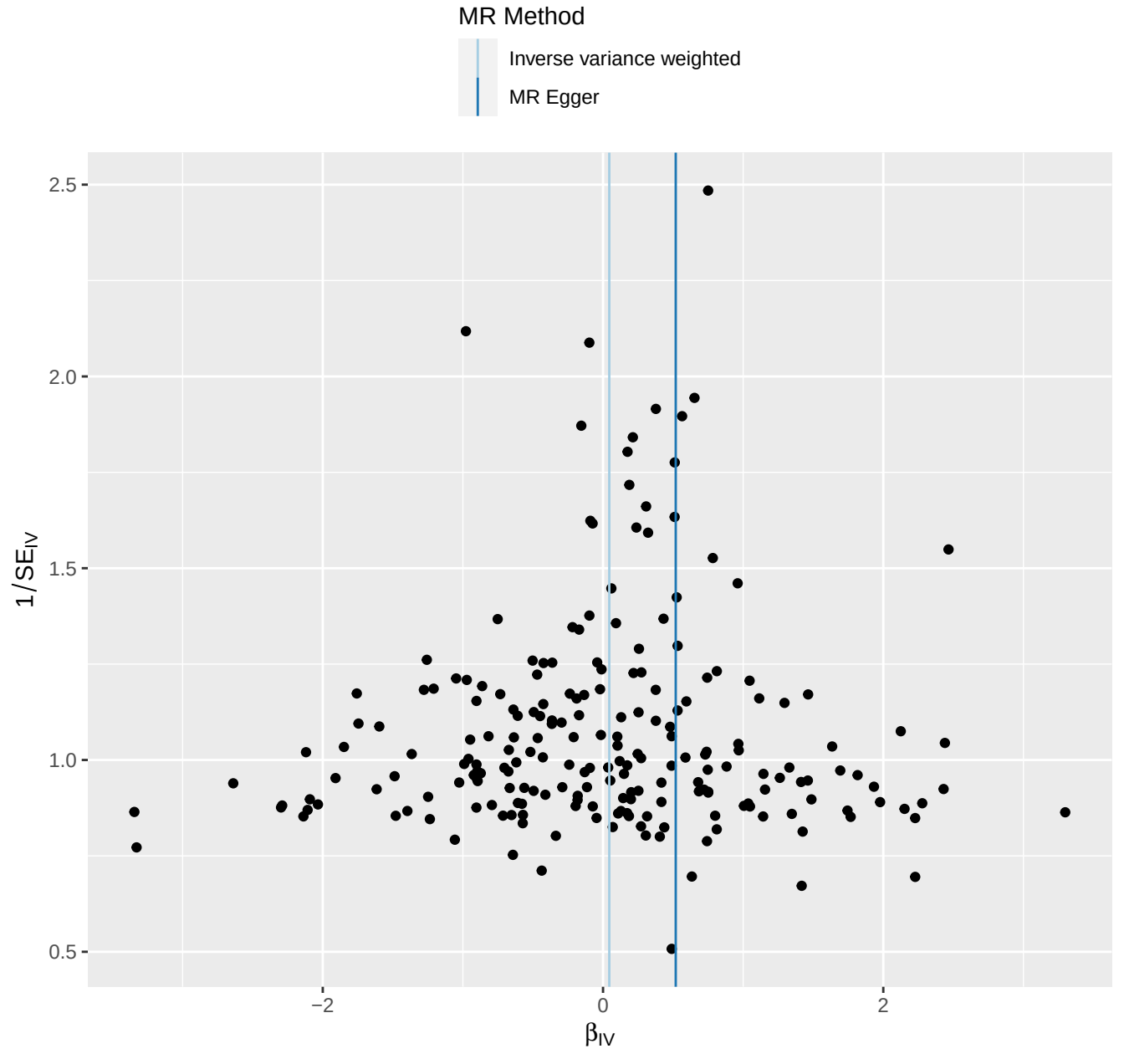
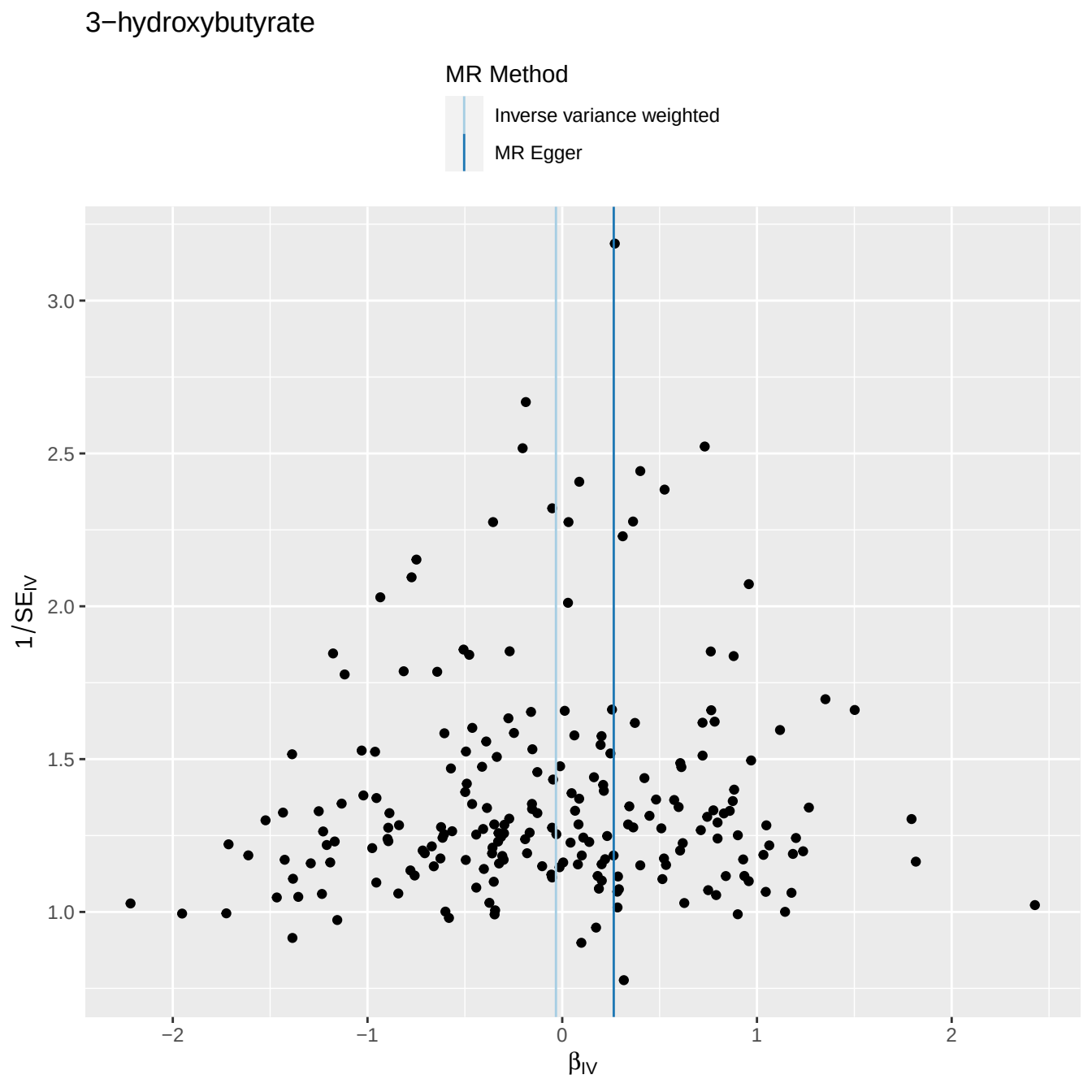
18:2, linoleic acid (LA)

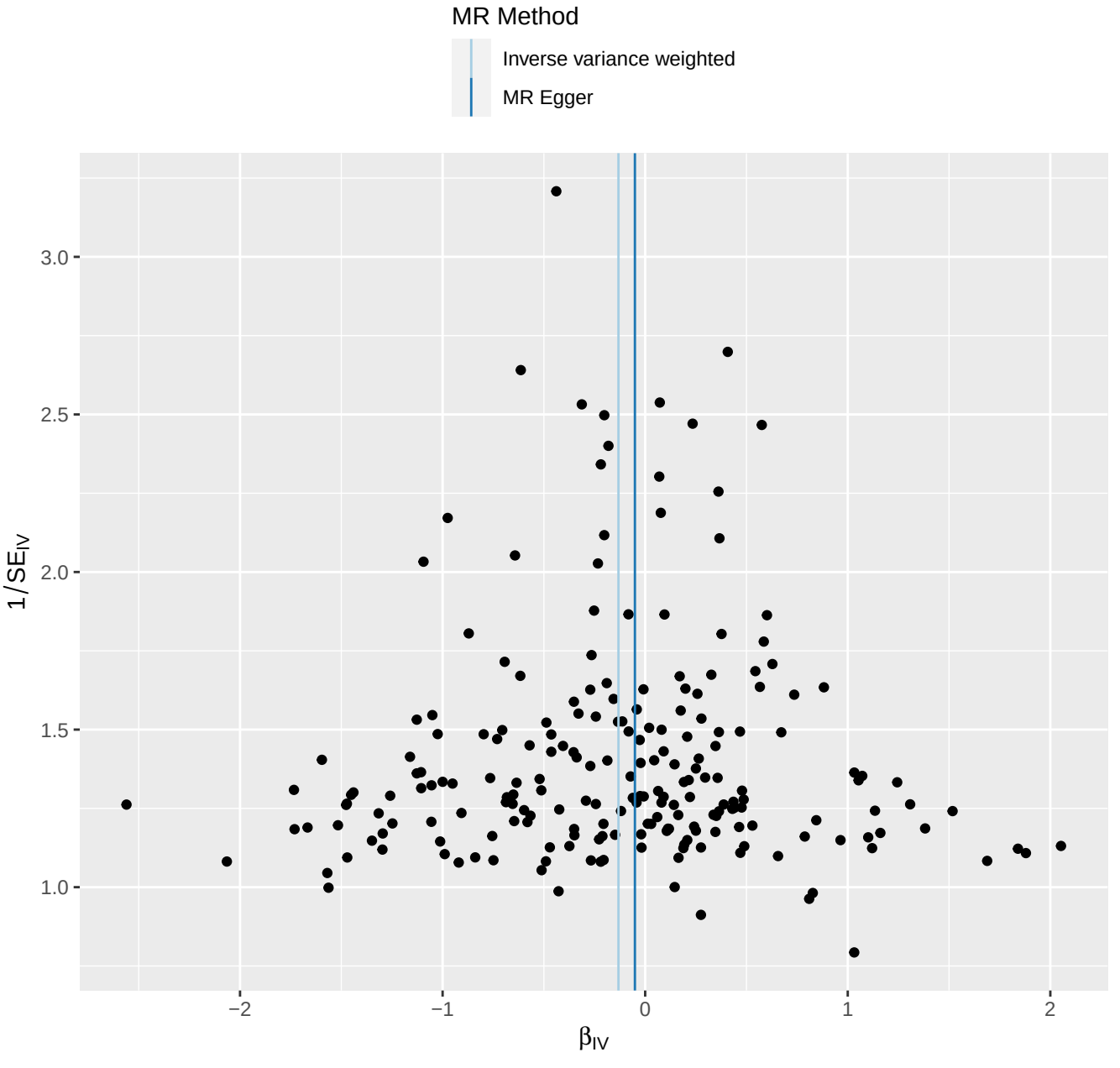


22:6, docosahexaenoic acid

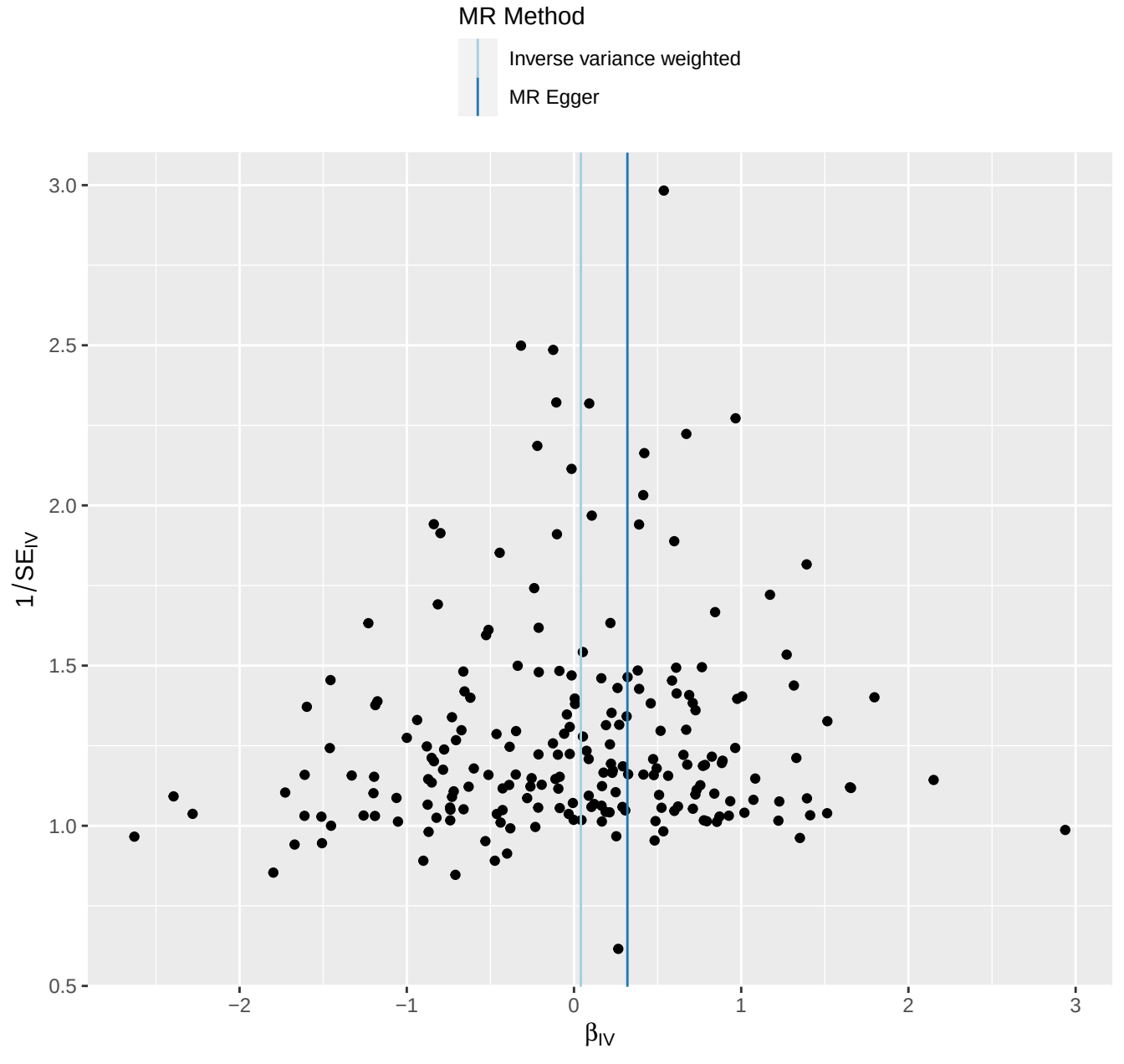


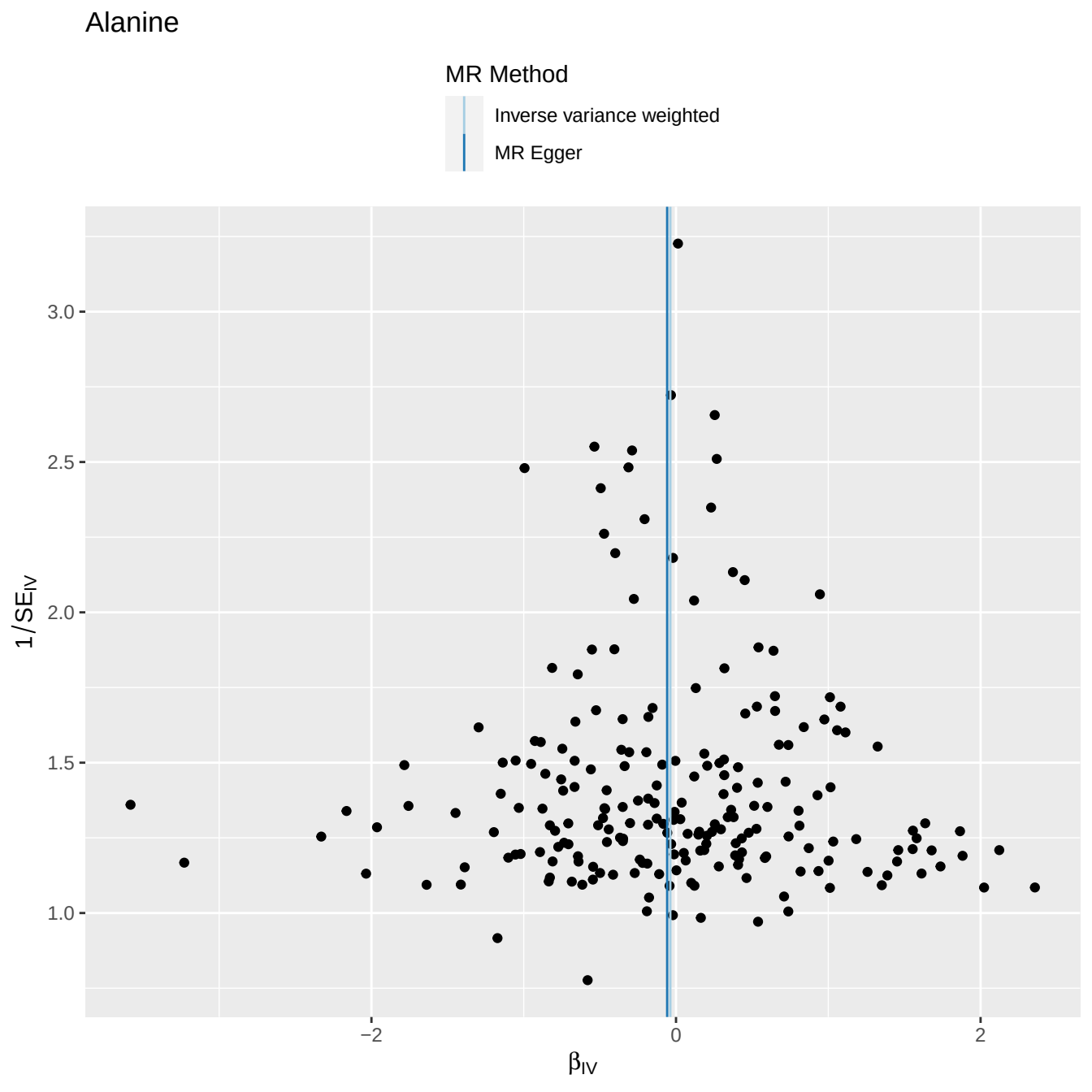

3−hydroxybutyrate
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

Acetate

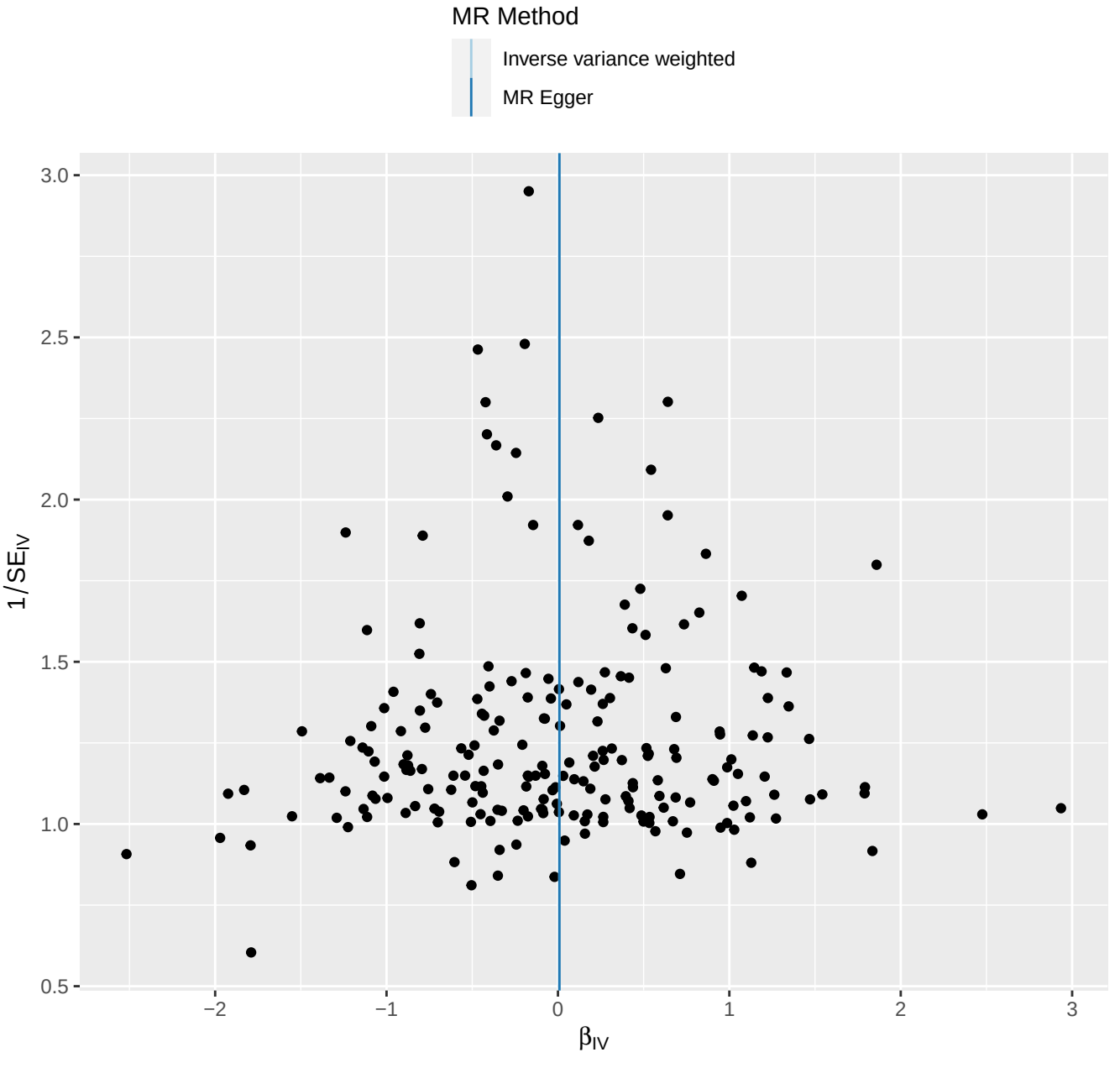

MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

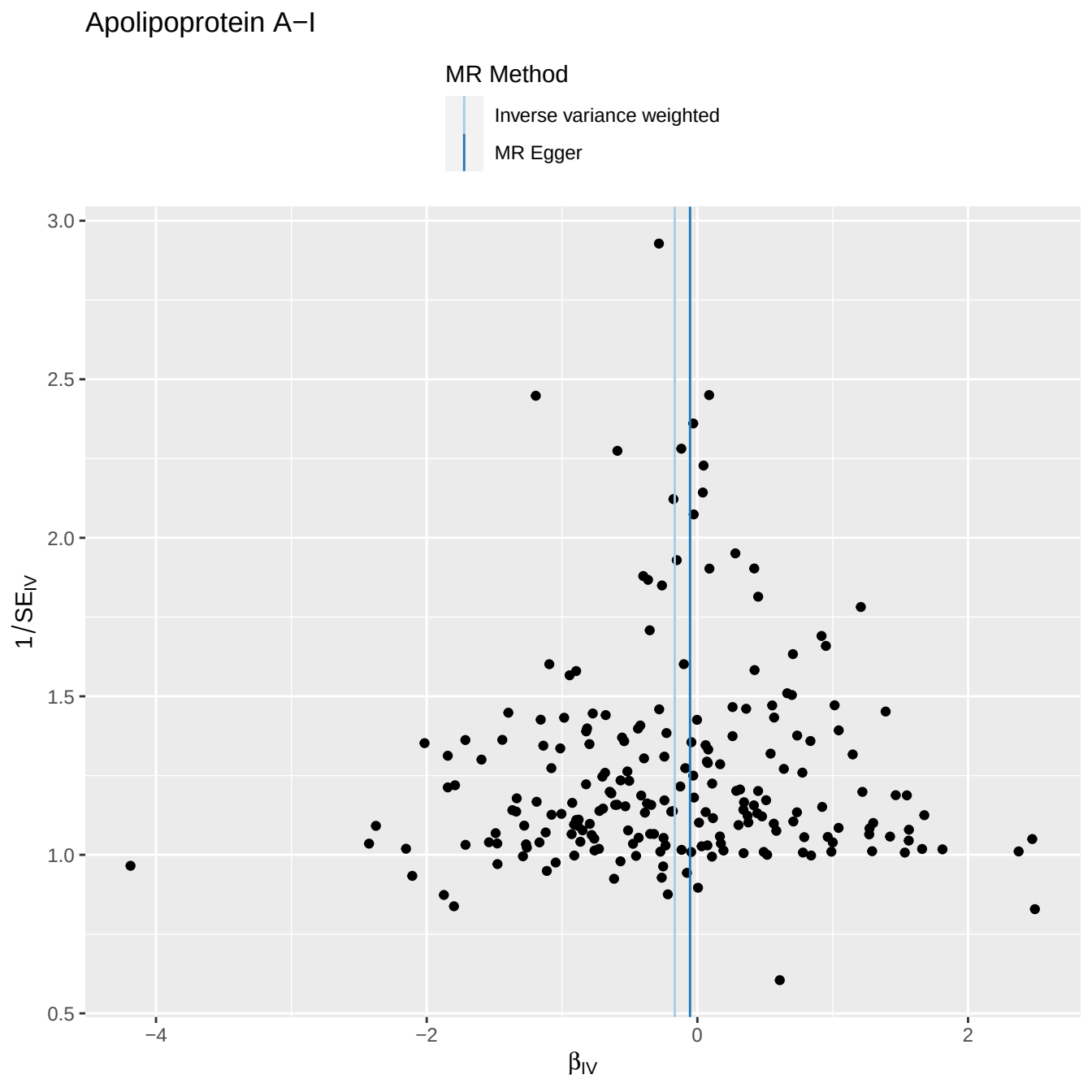
Acetoacetate



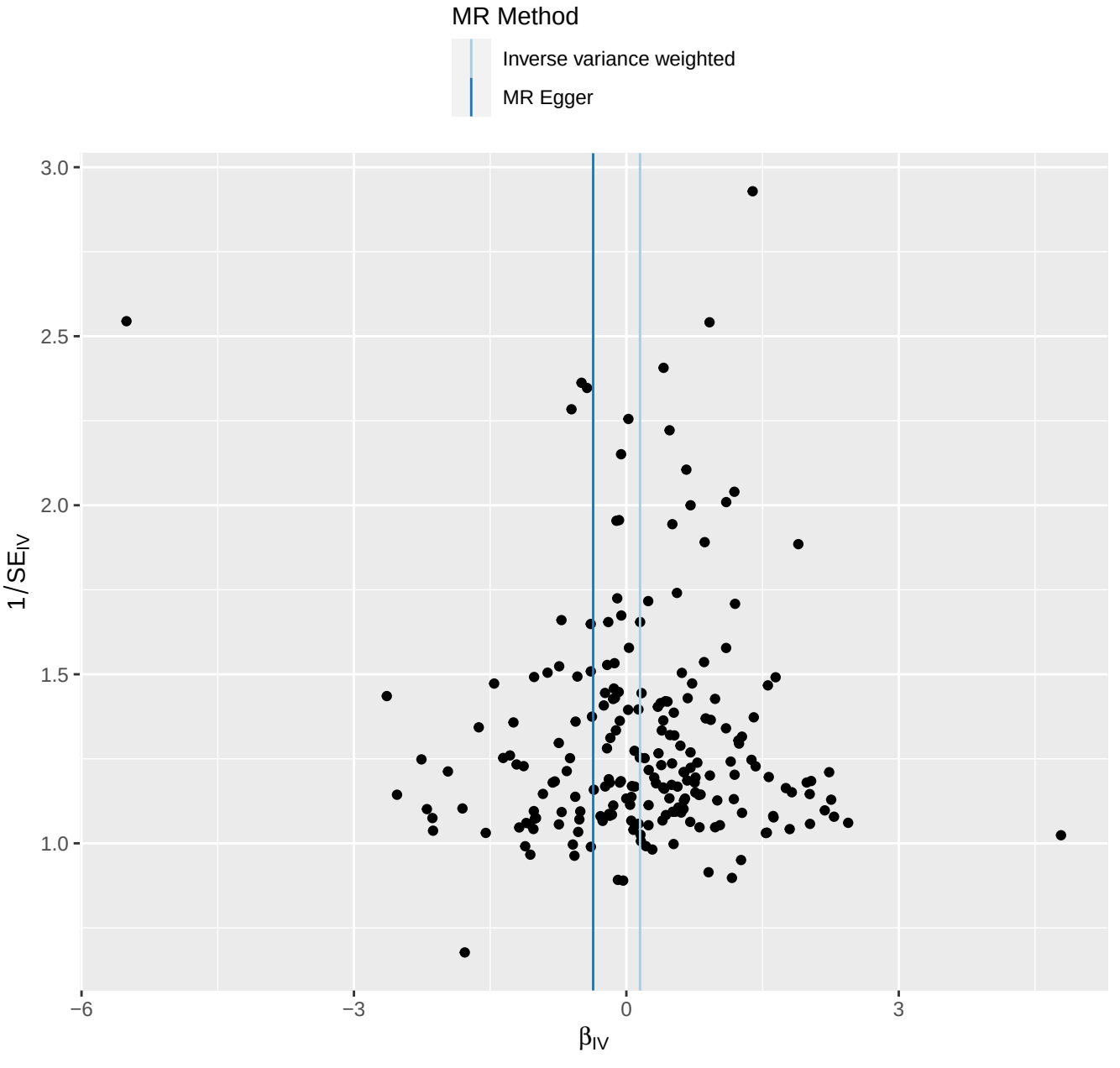

Alanine
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
β_IV

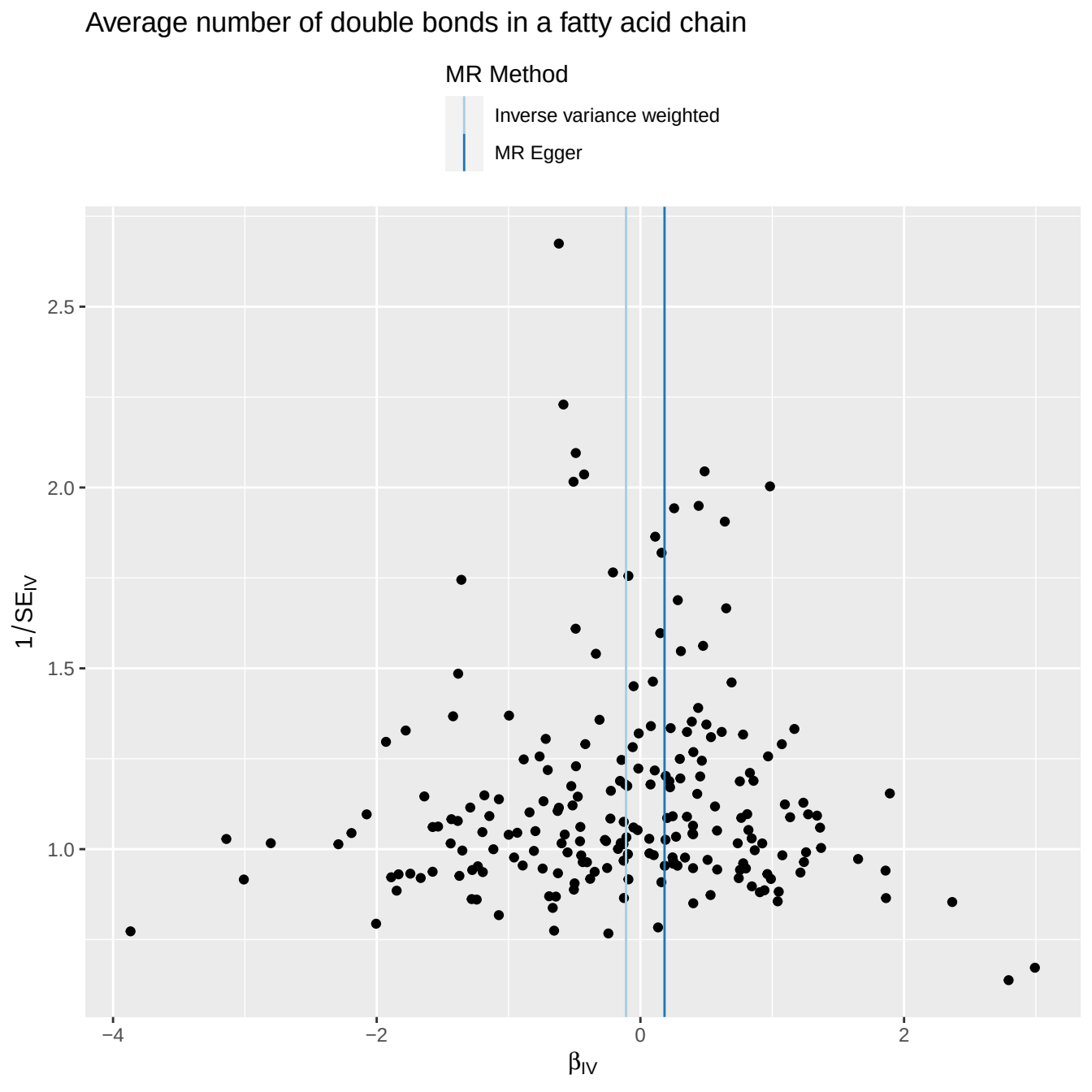
Albumin

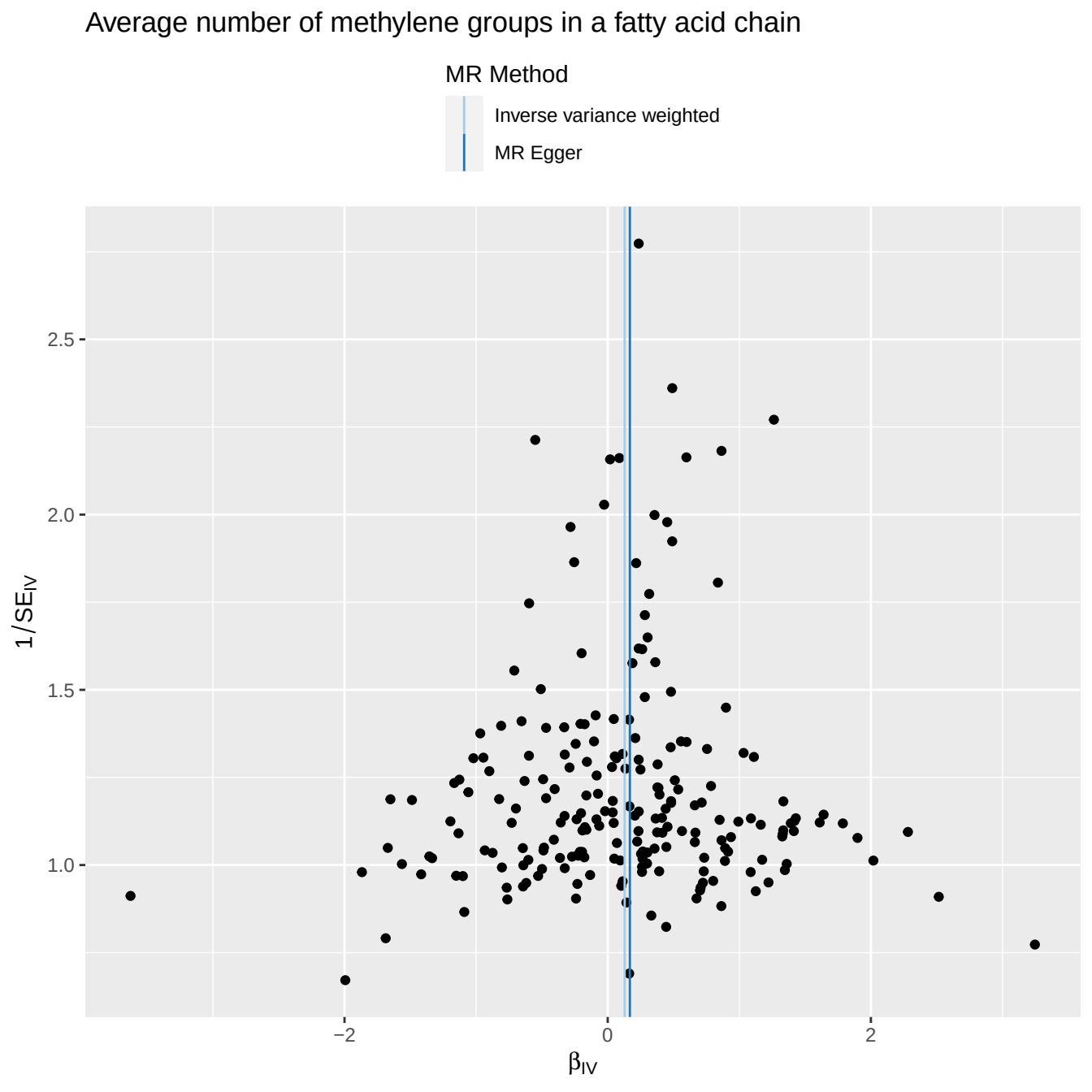

MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
−1
0
1
2
3
β_IV

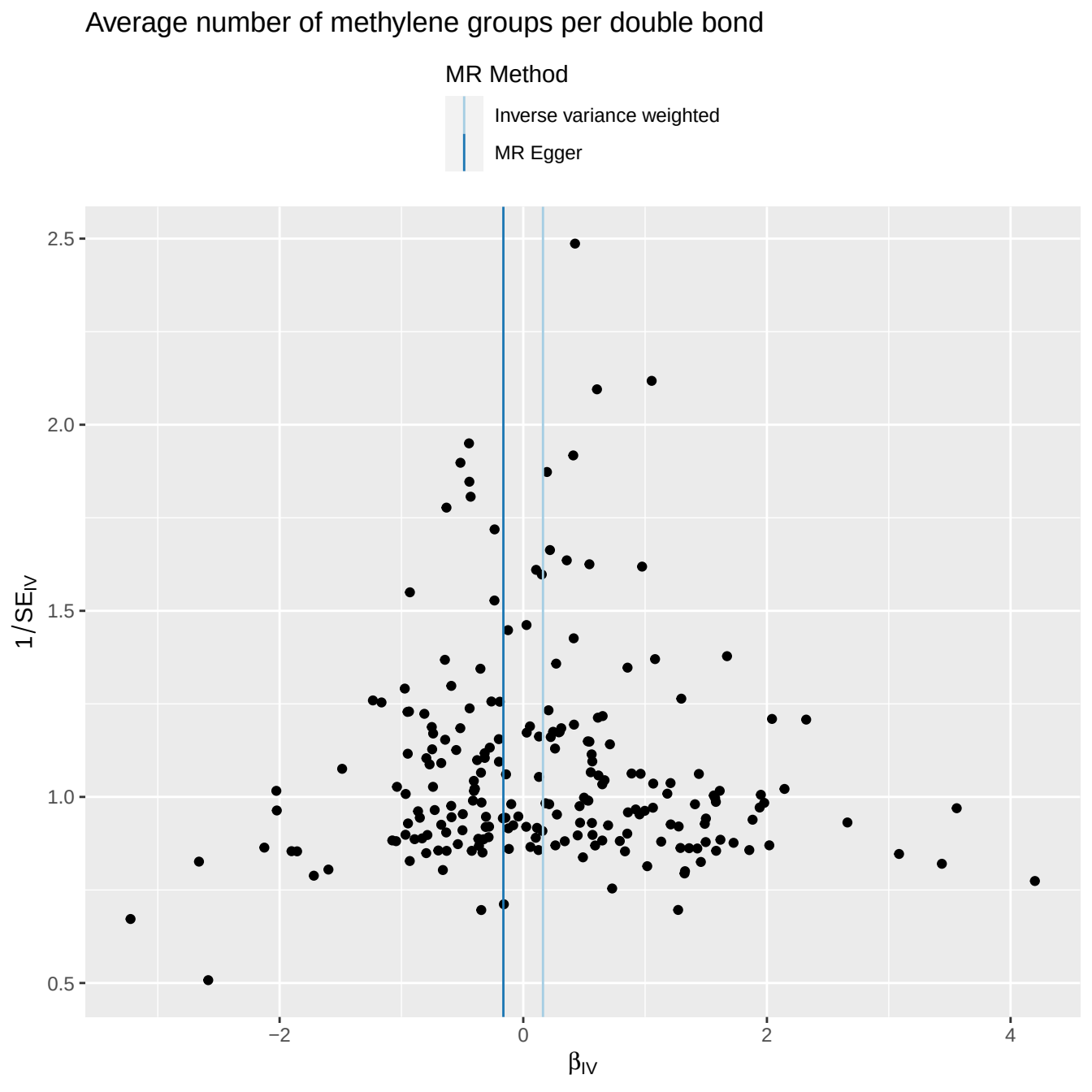

Apolipoprotein A−I
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
−2
0
2
β_IV

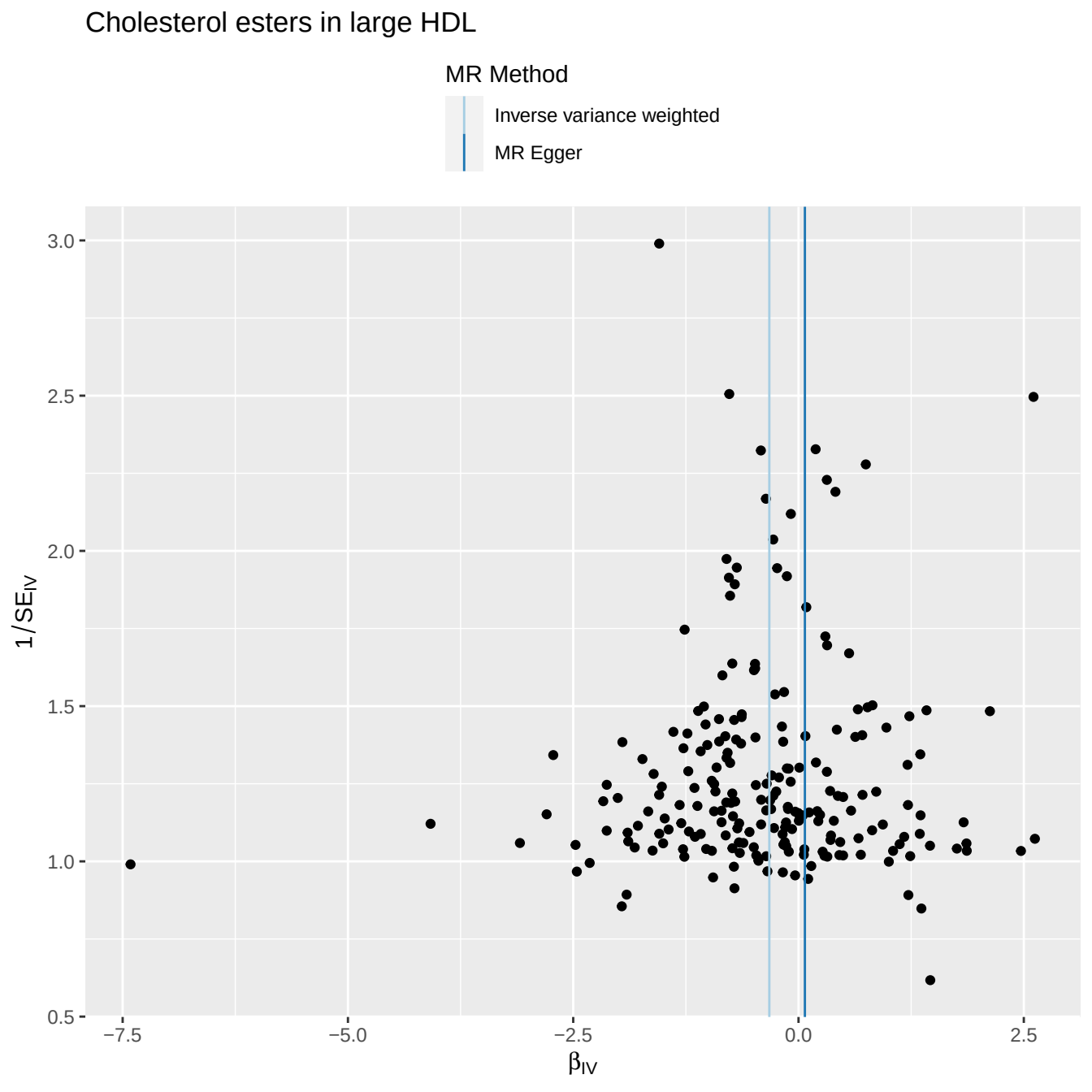
Apolipoprotein B

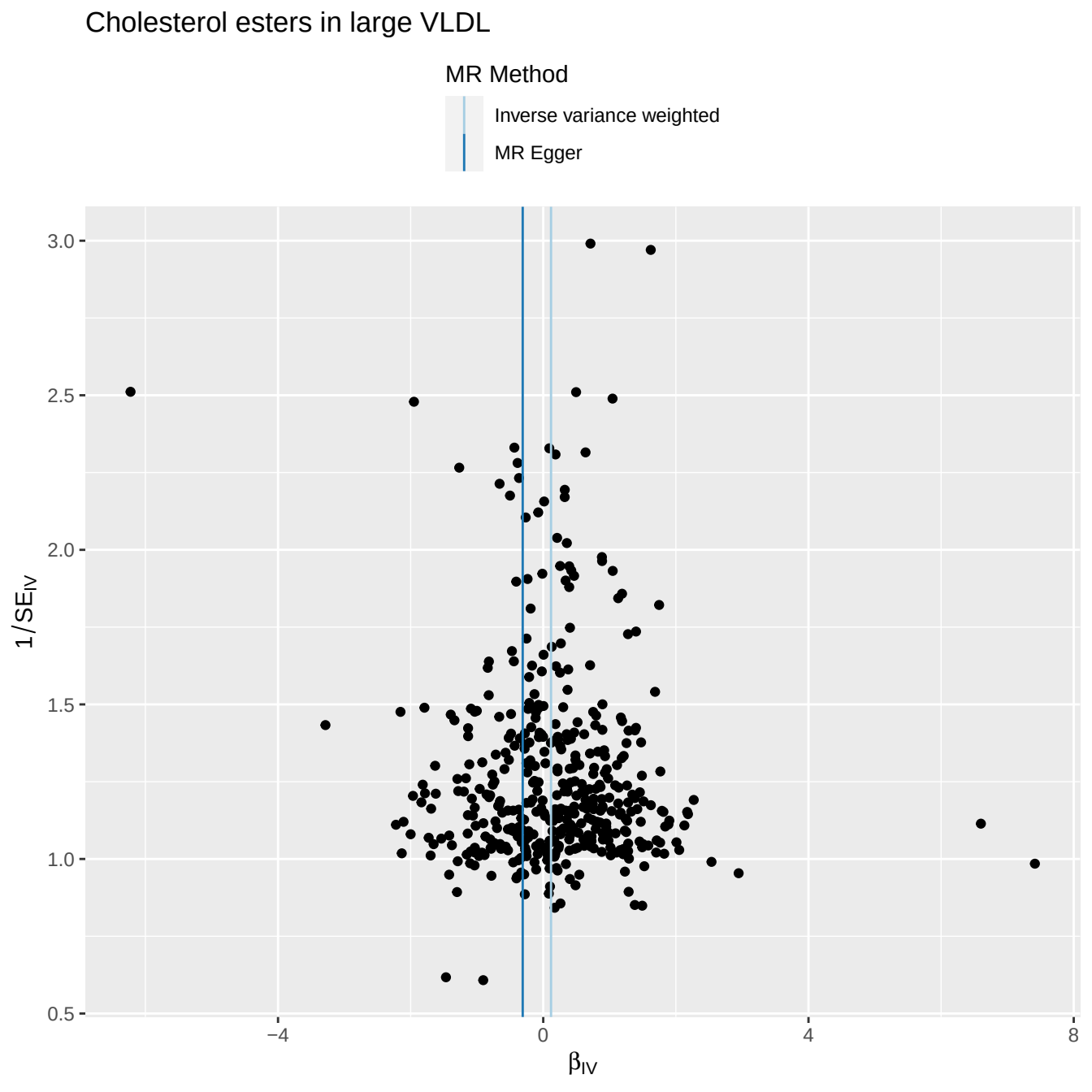


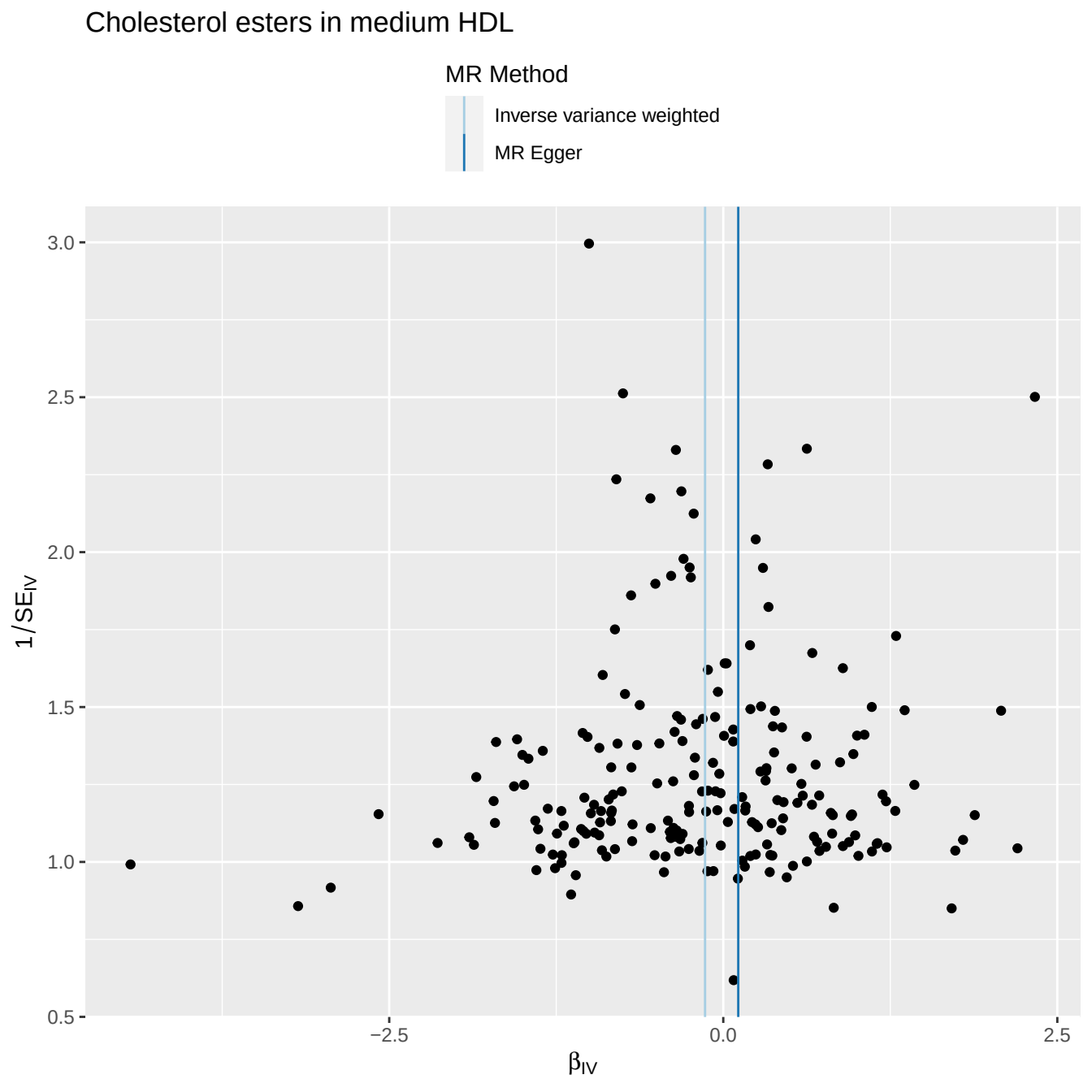

Average number of double bonds in a fatty acid chain
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
1/SE_IV
−4
−2
0
2
β_IV

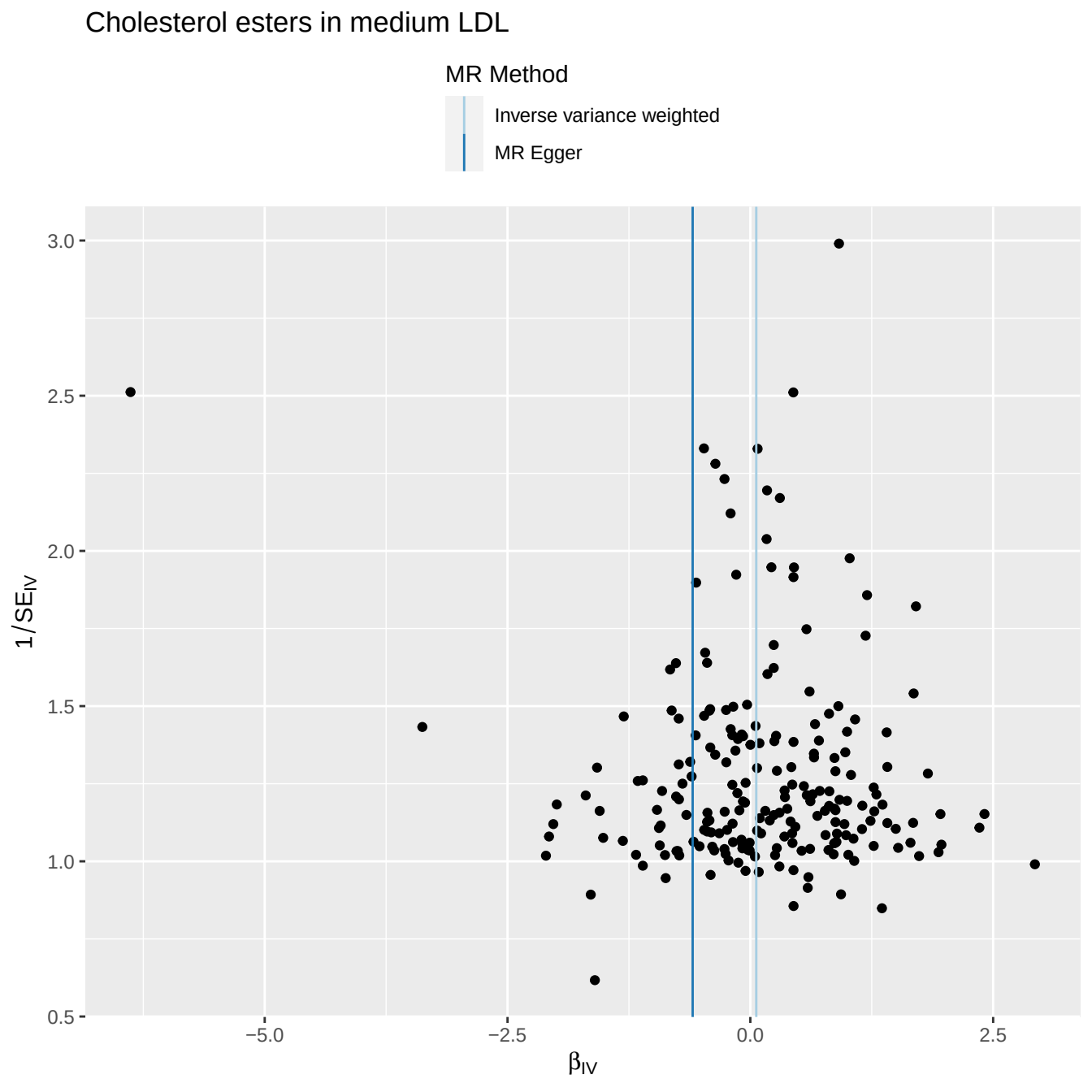

Average number of methylene groups in a fatty acid chain
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
β_IV

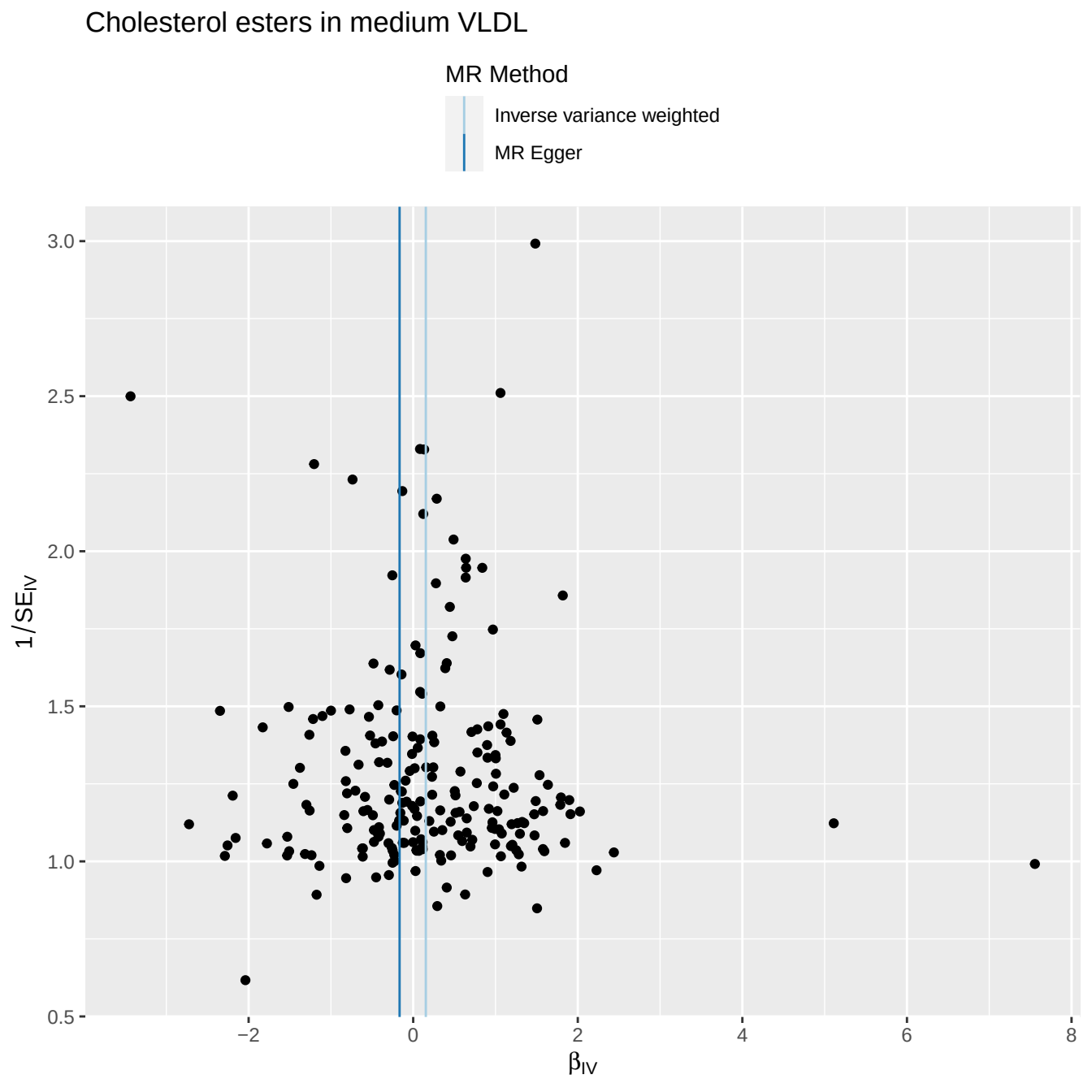

Average number of methylene groups per double bond
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
β_IV

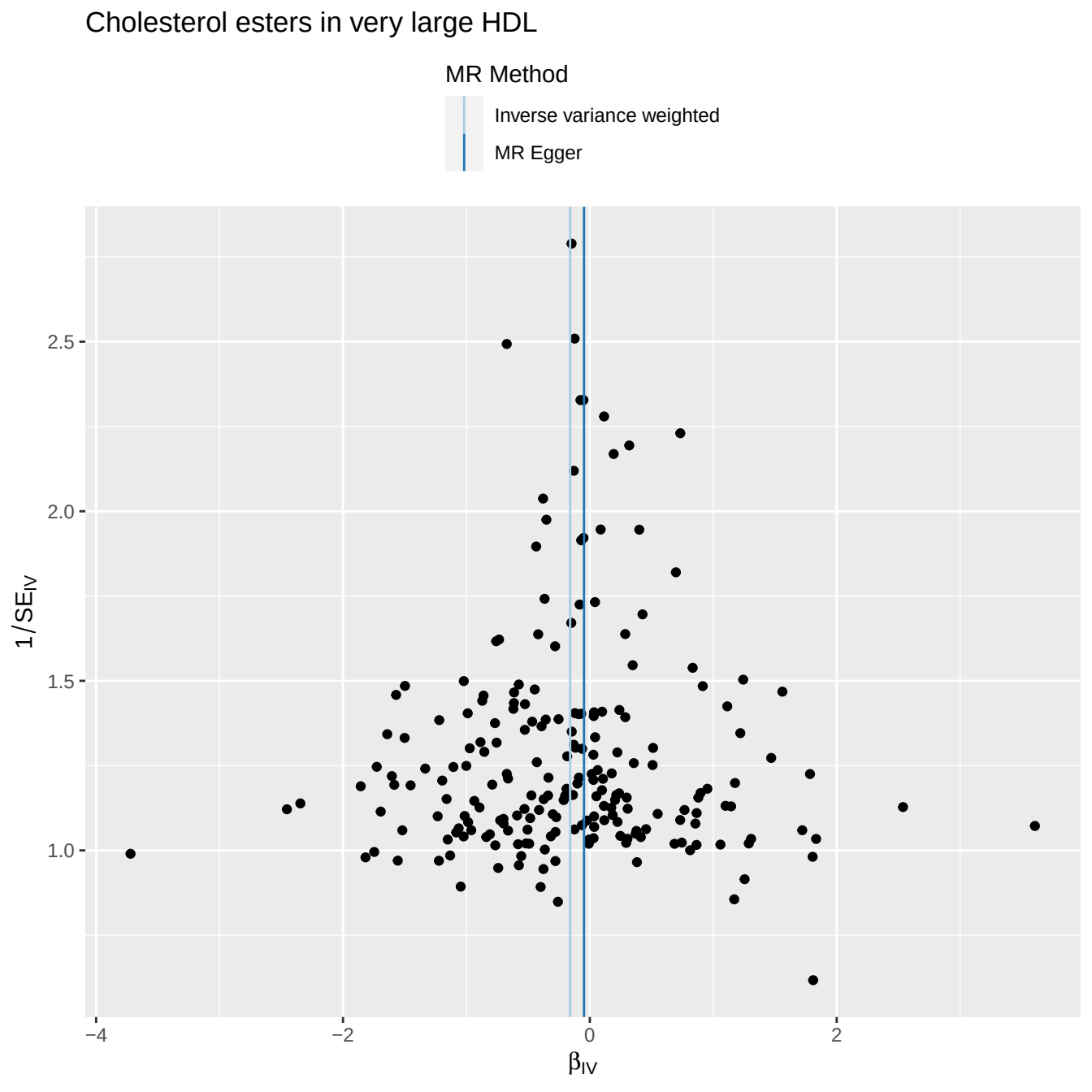

Cholesterol esters in large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−7.5
−5.0
−2.5
0.0
2.5
β_IV

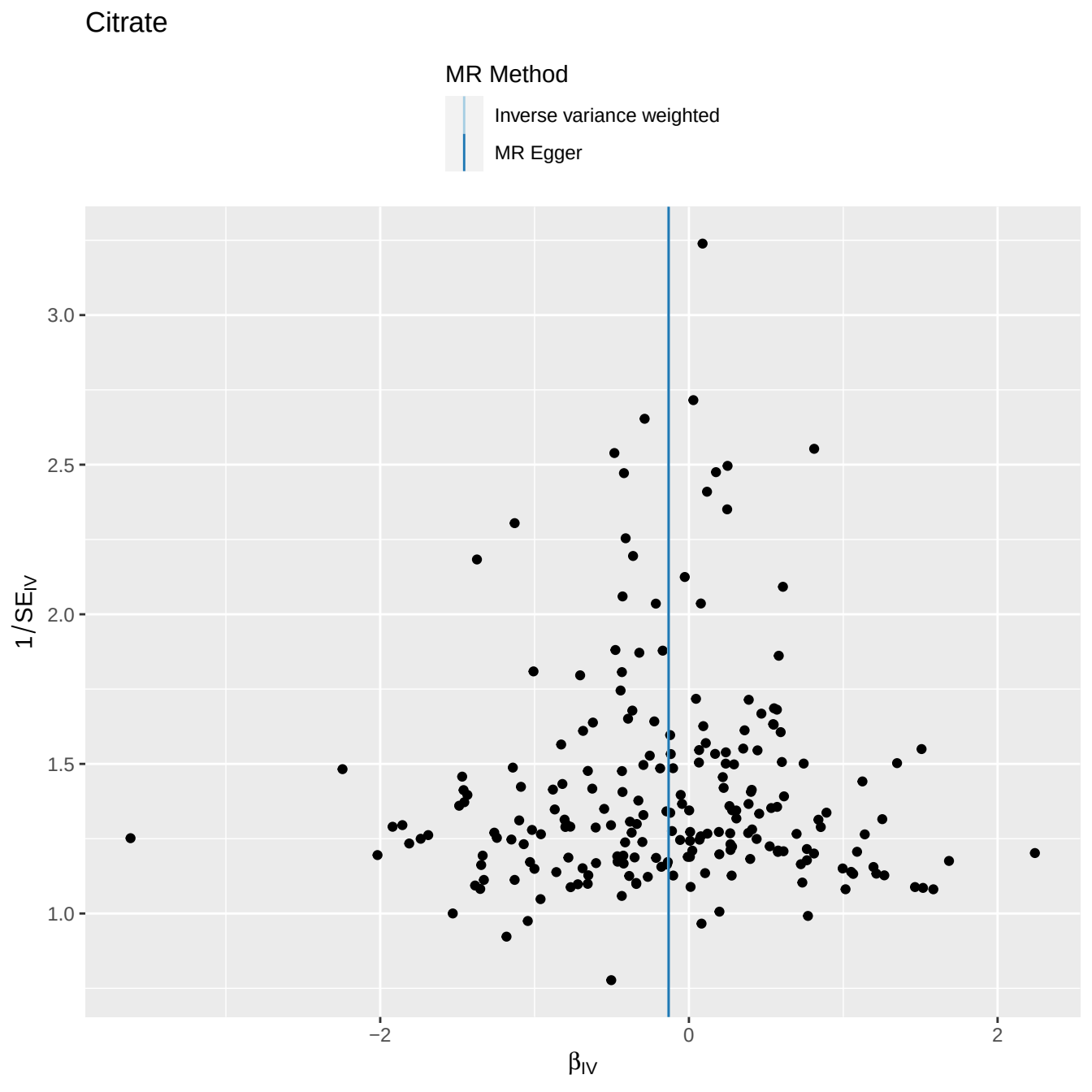

Cholesterol esters in large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
0
4
8
β_IV

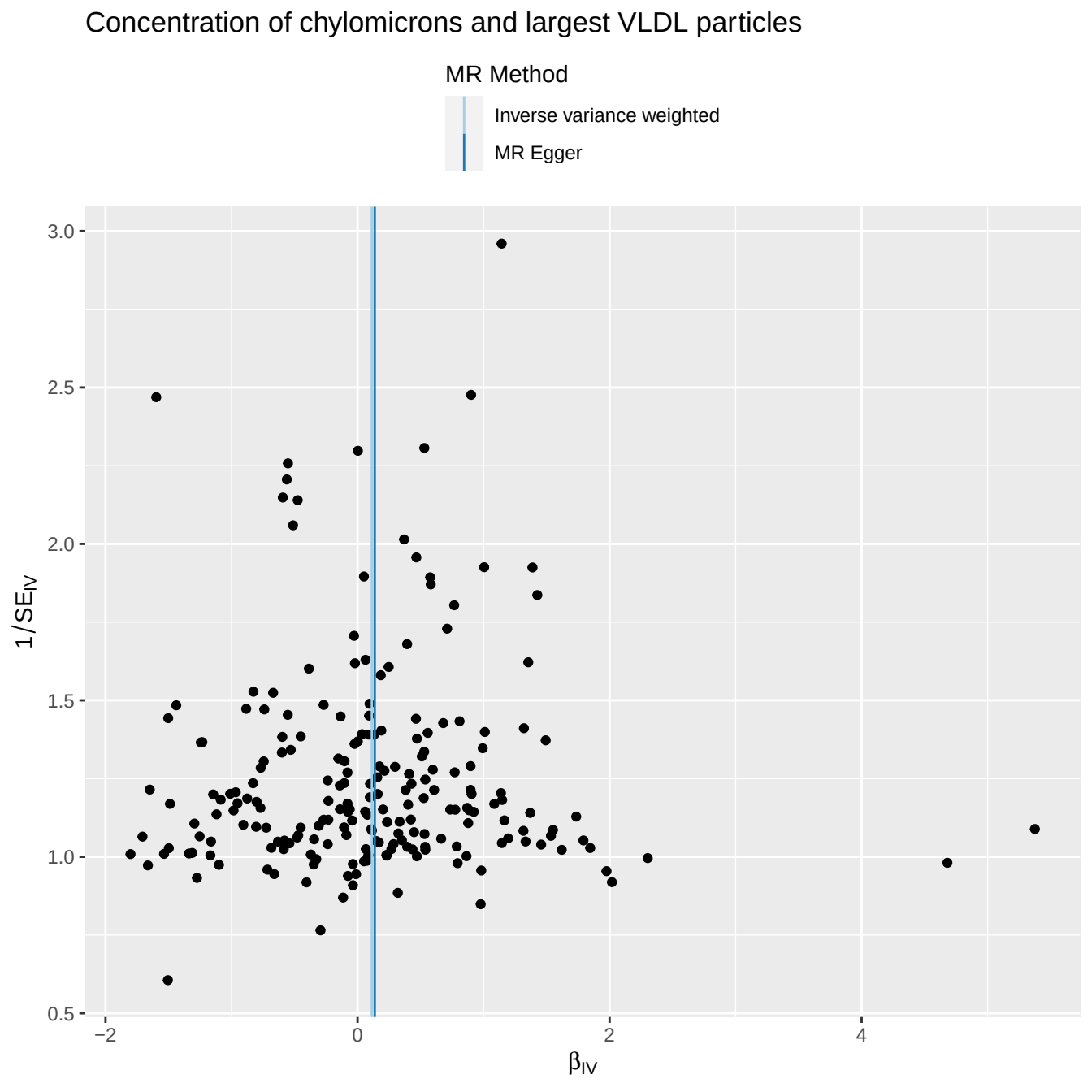

Cholesterol esters in medium HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2.5
0.0
2.5
β_IV

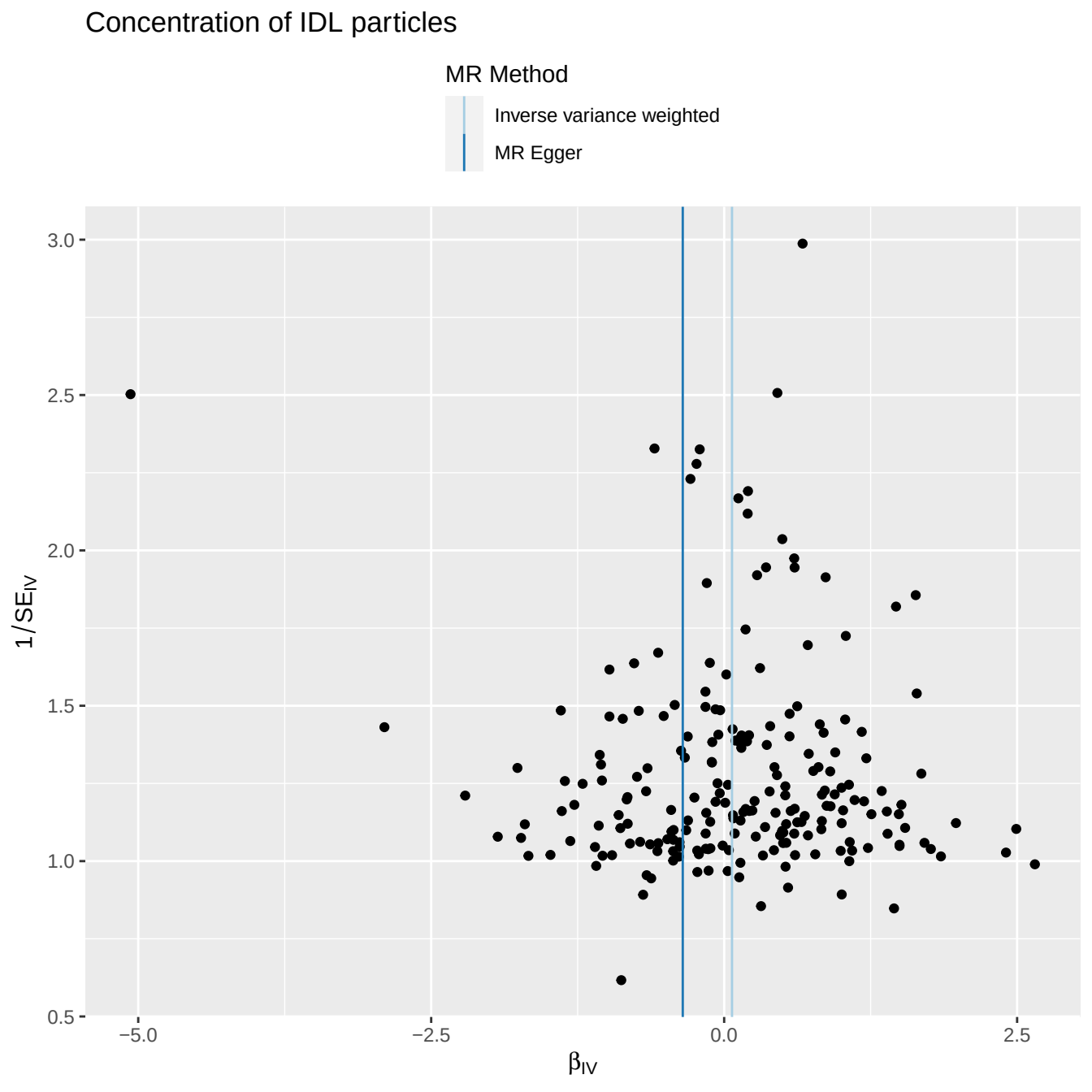

Cholesterol esters in medium LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

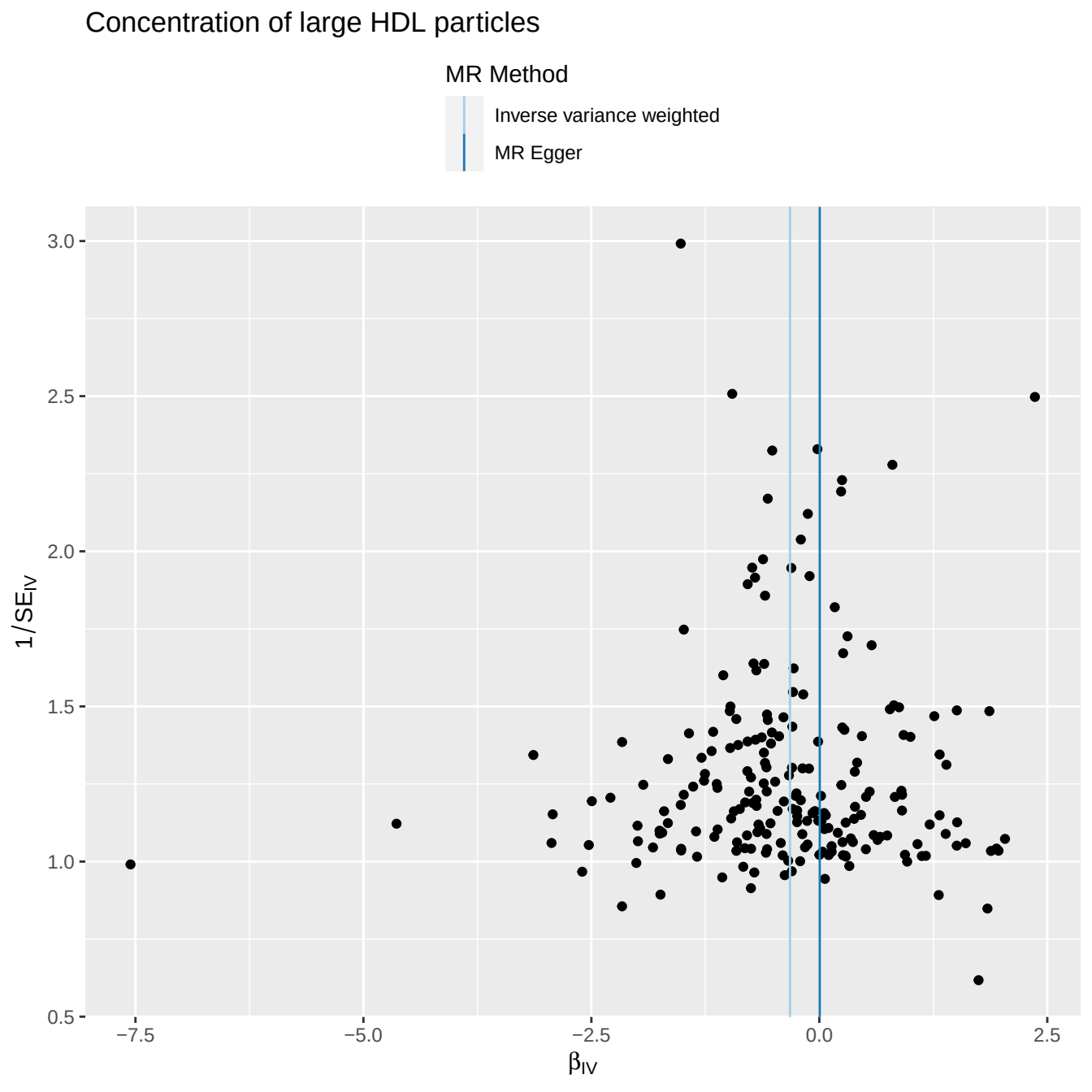

Cholesterol esters in medium VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
6
8
β_IV

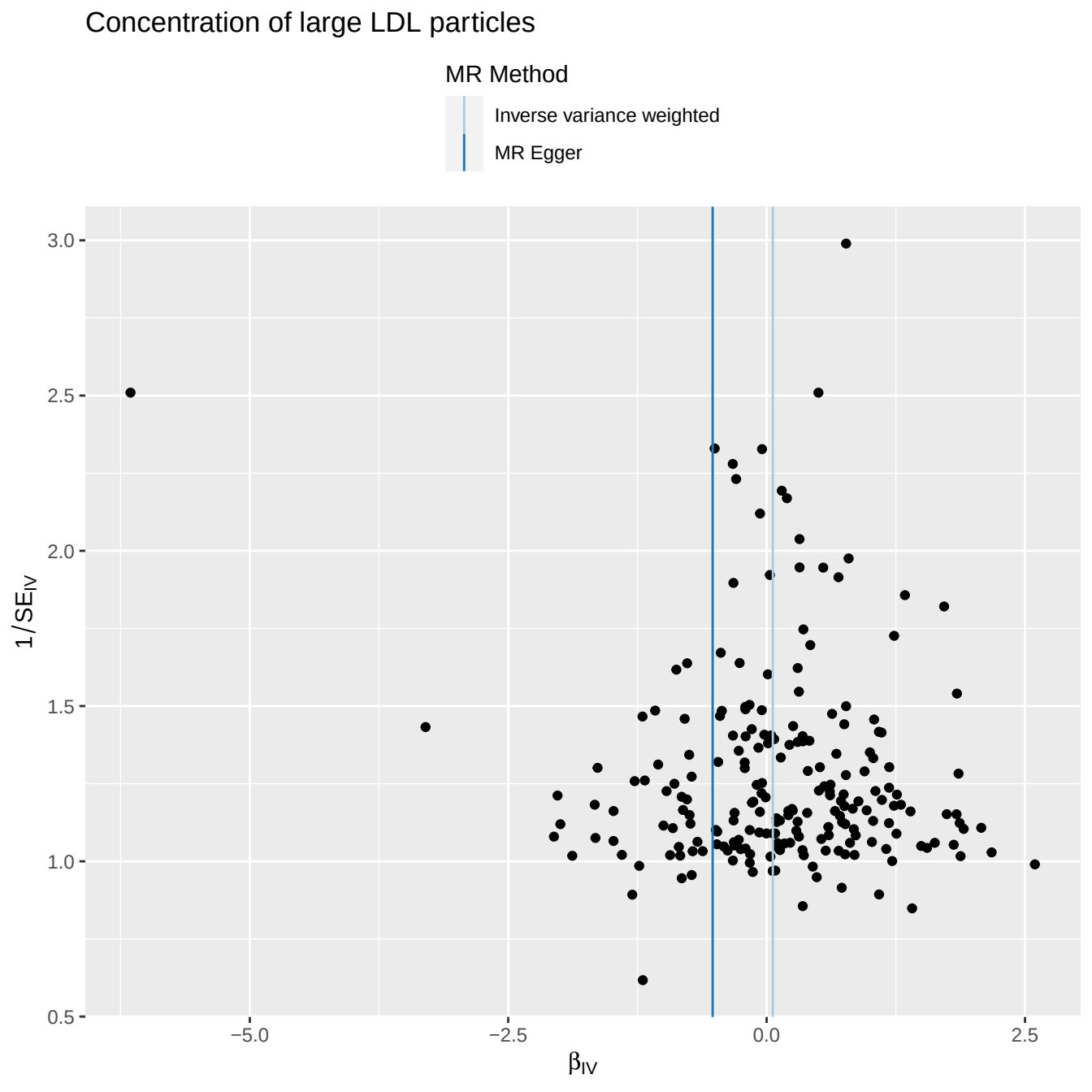

Cholesterol esters in very large HDL
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
1/SE_IV
−4
−2
0
2
β_IV

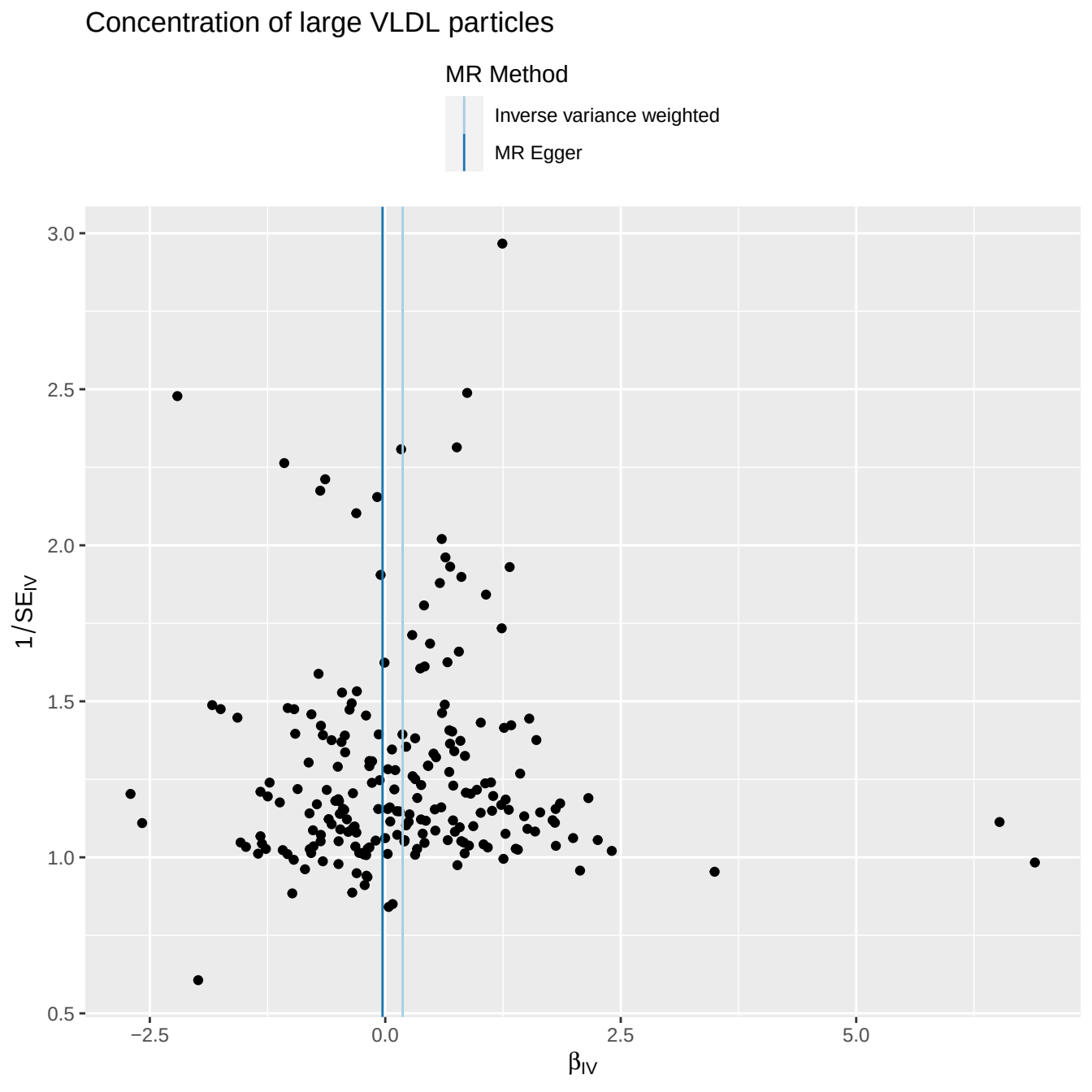

Citrate
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
β_IV

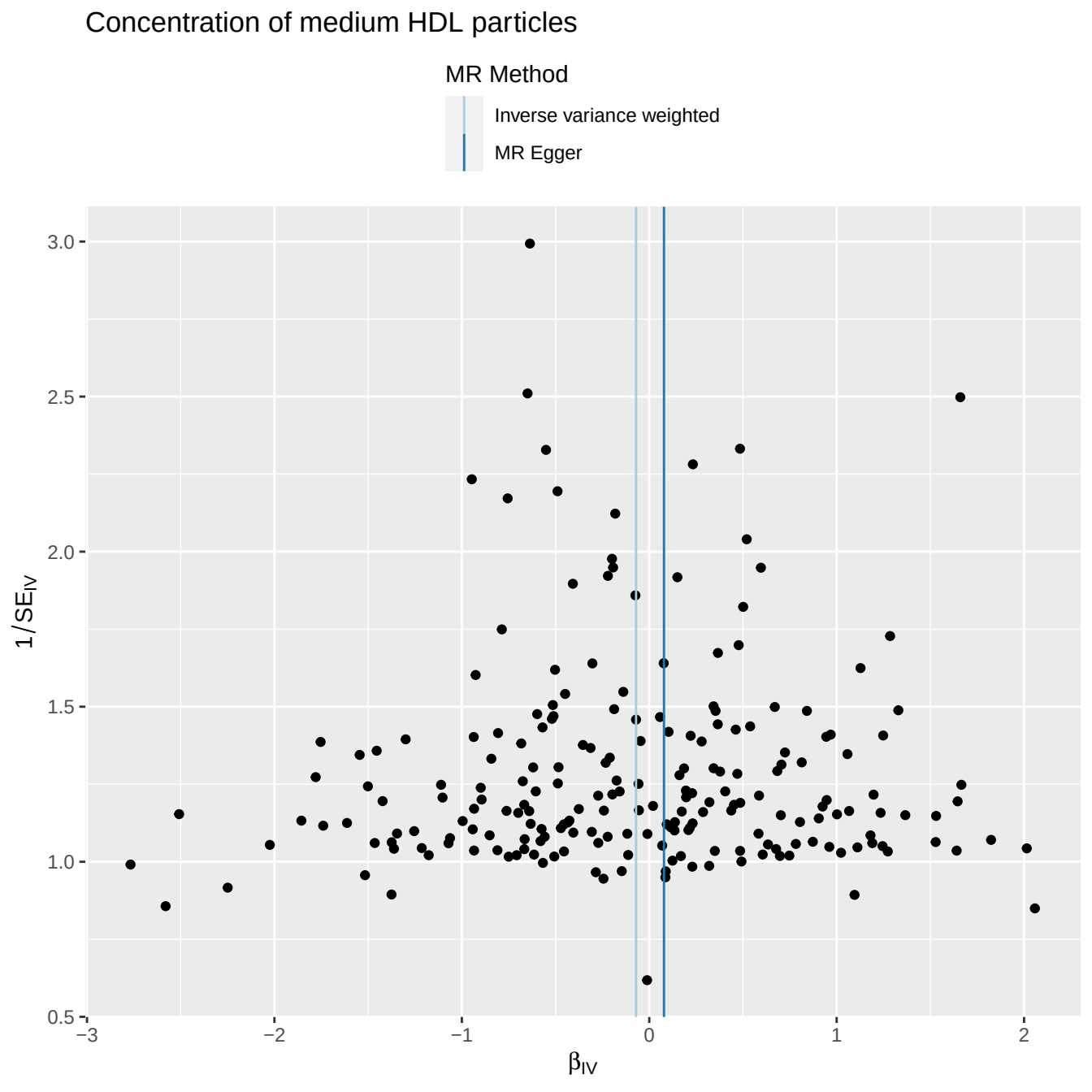

Concentration of chylomicrons and largest VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
β_IV

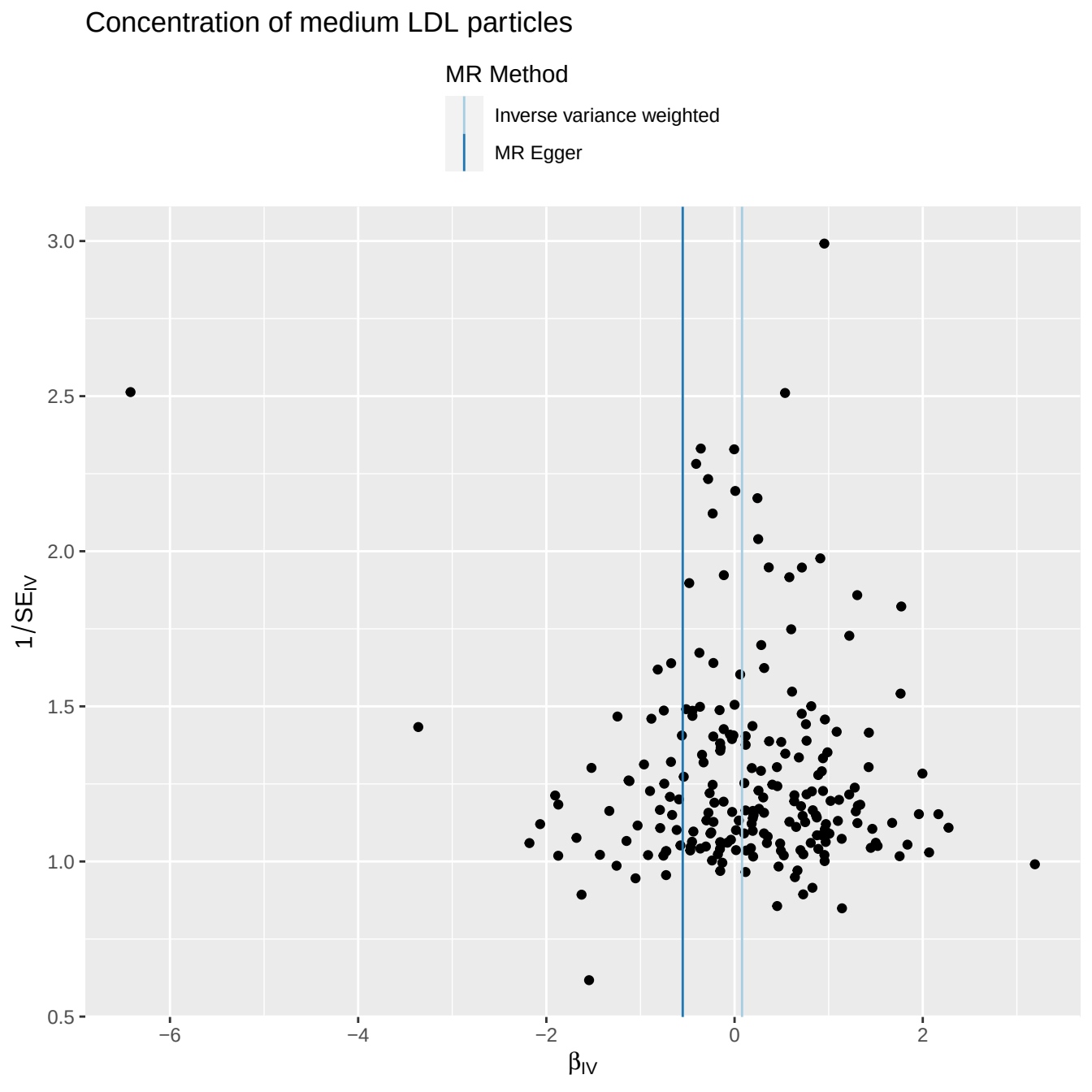

Concentration of IDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

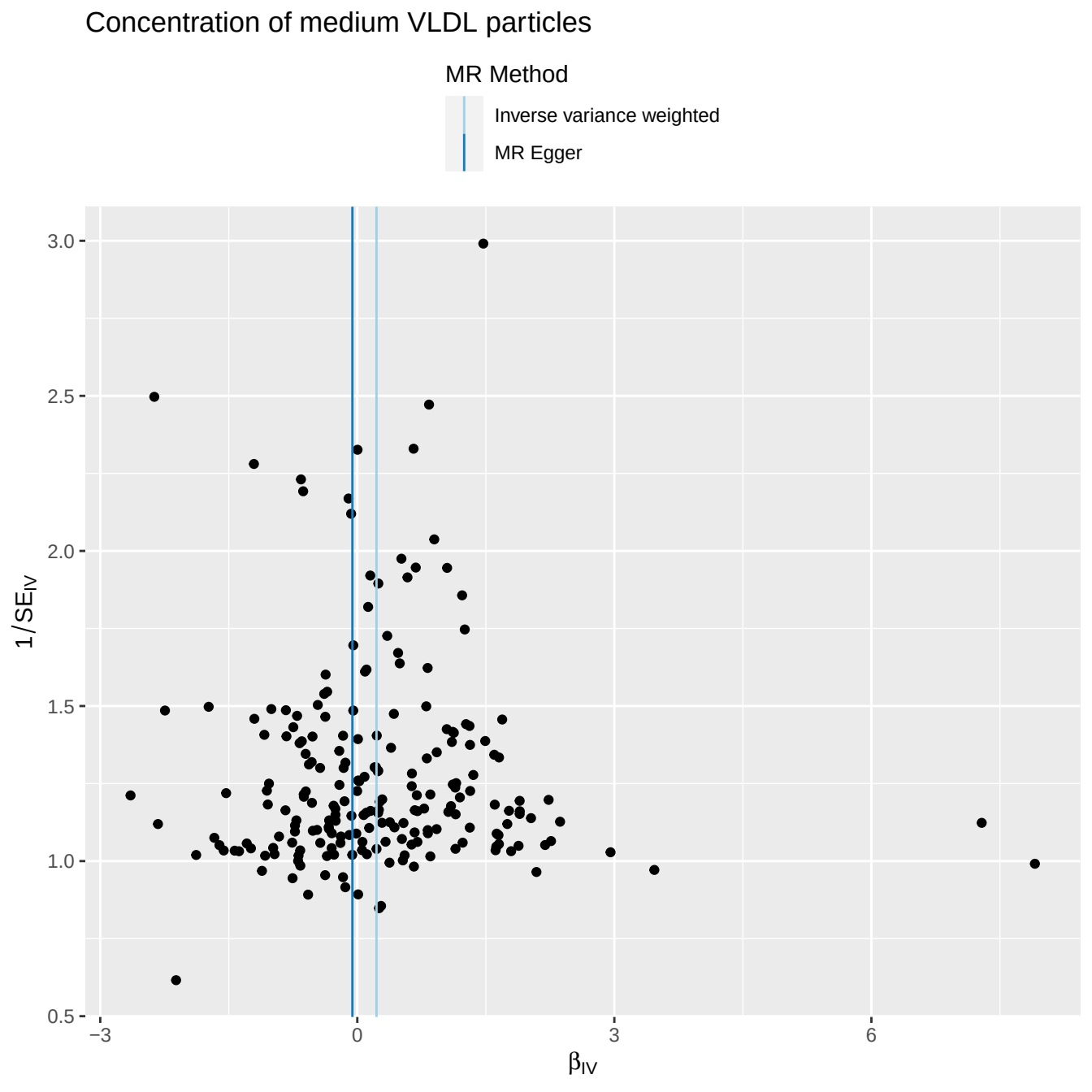

Concentration of large HDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−7.5
−5.0
−2.5
0.0
2.5
β_IV

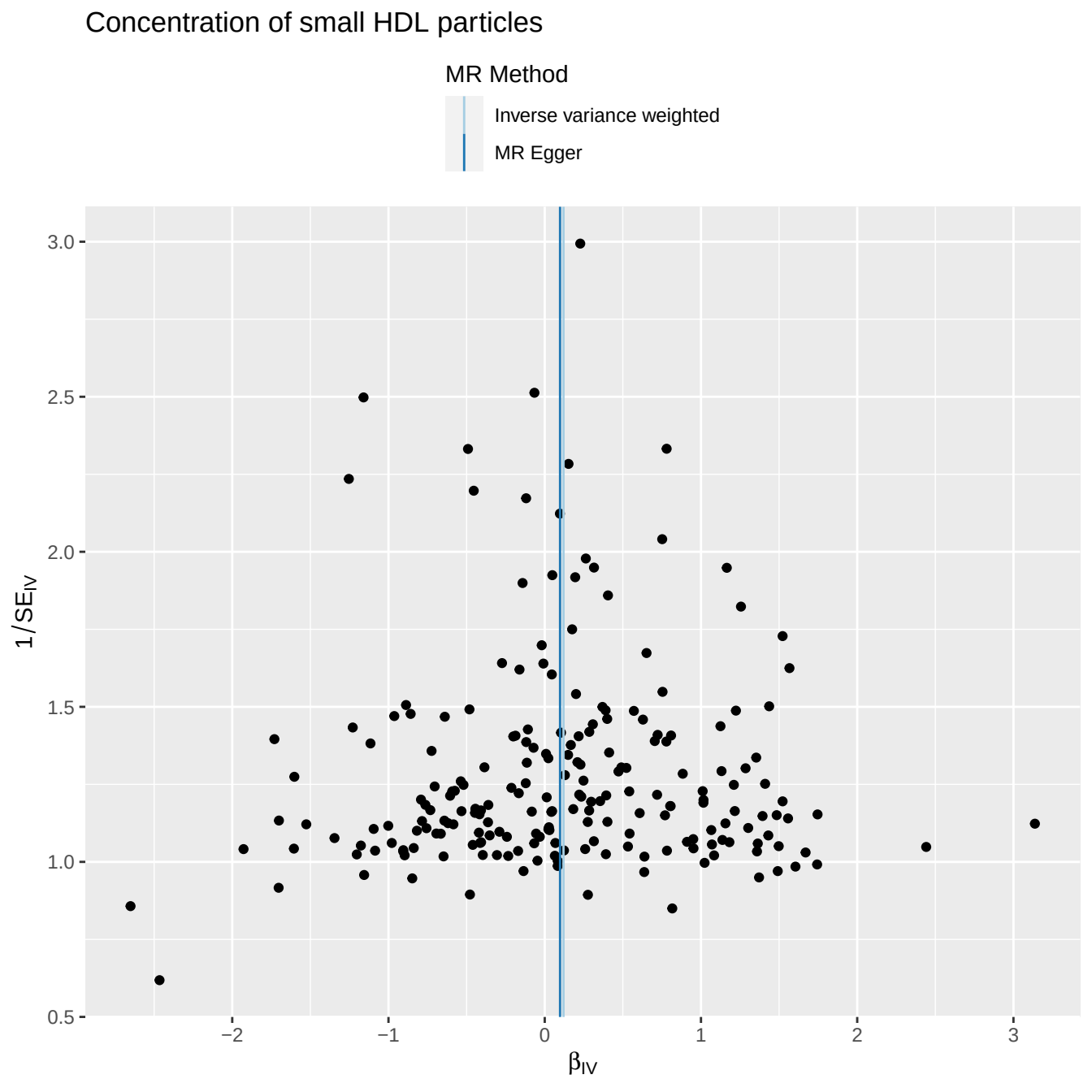

Concentration of large LDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

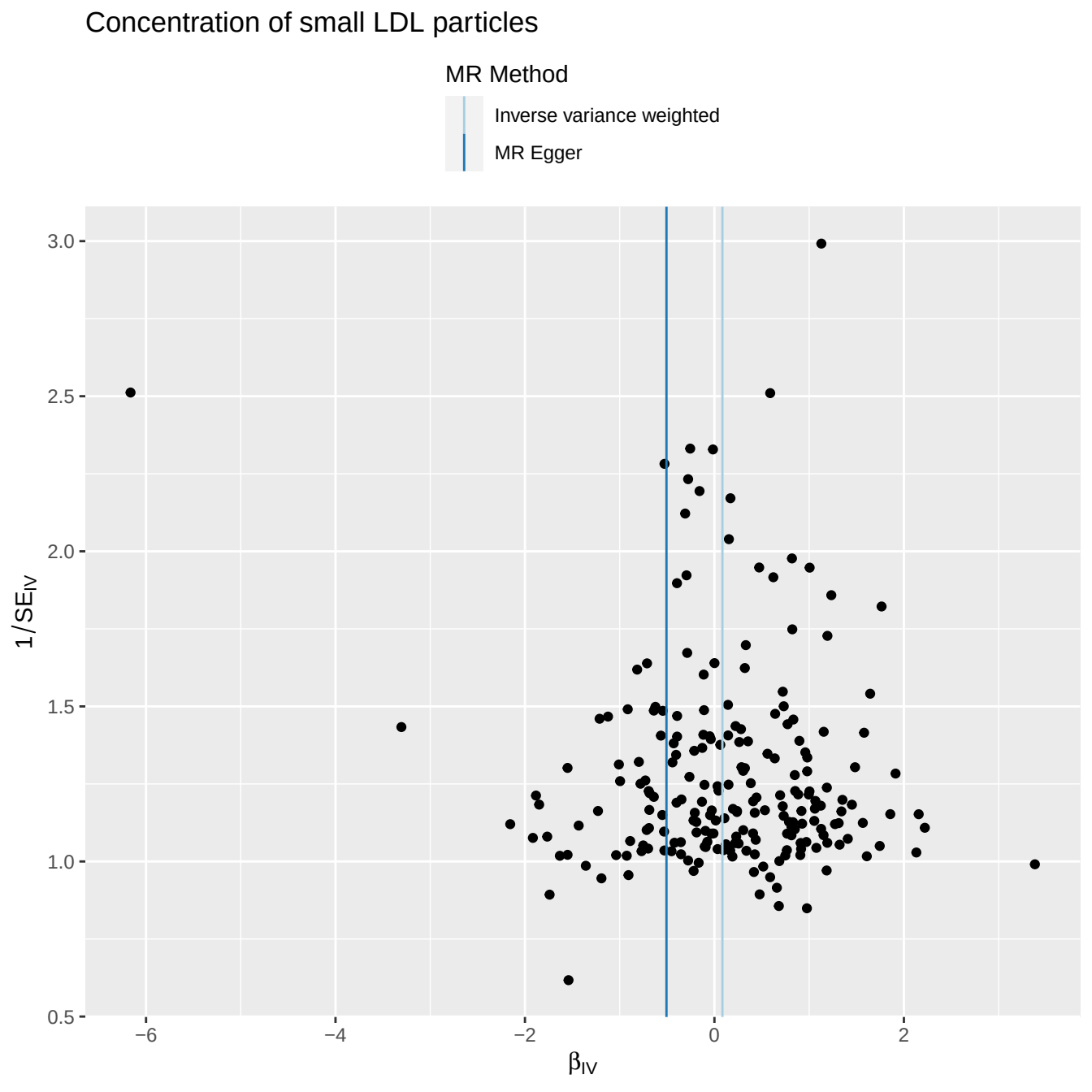

Concentration of large VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2.5
0.0
2.5
5.0
β_IV

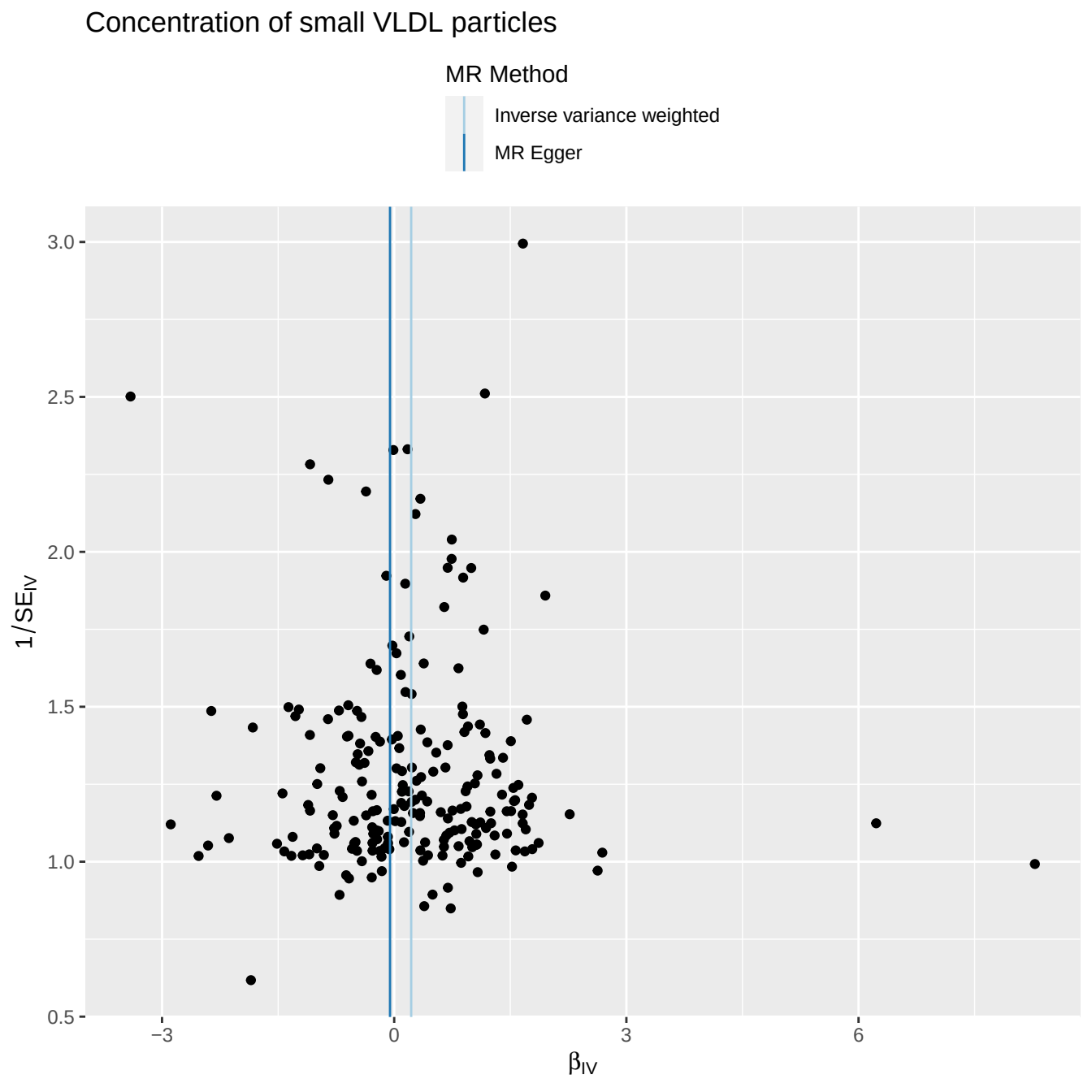

Concentration of medium HDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−3
−2
−1
0
1
2
β_IV

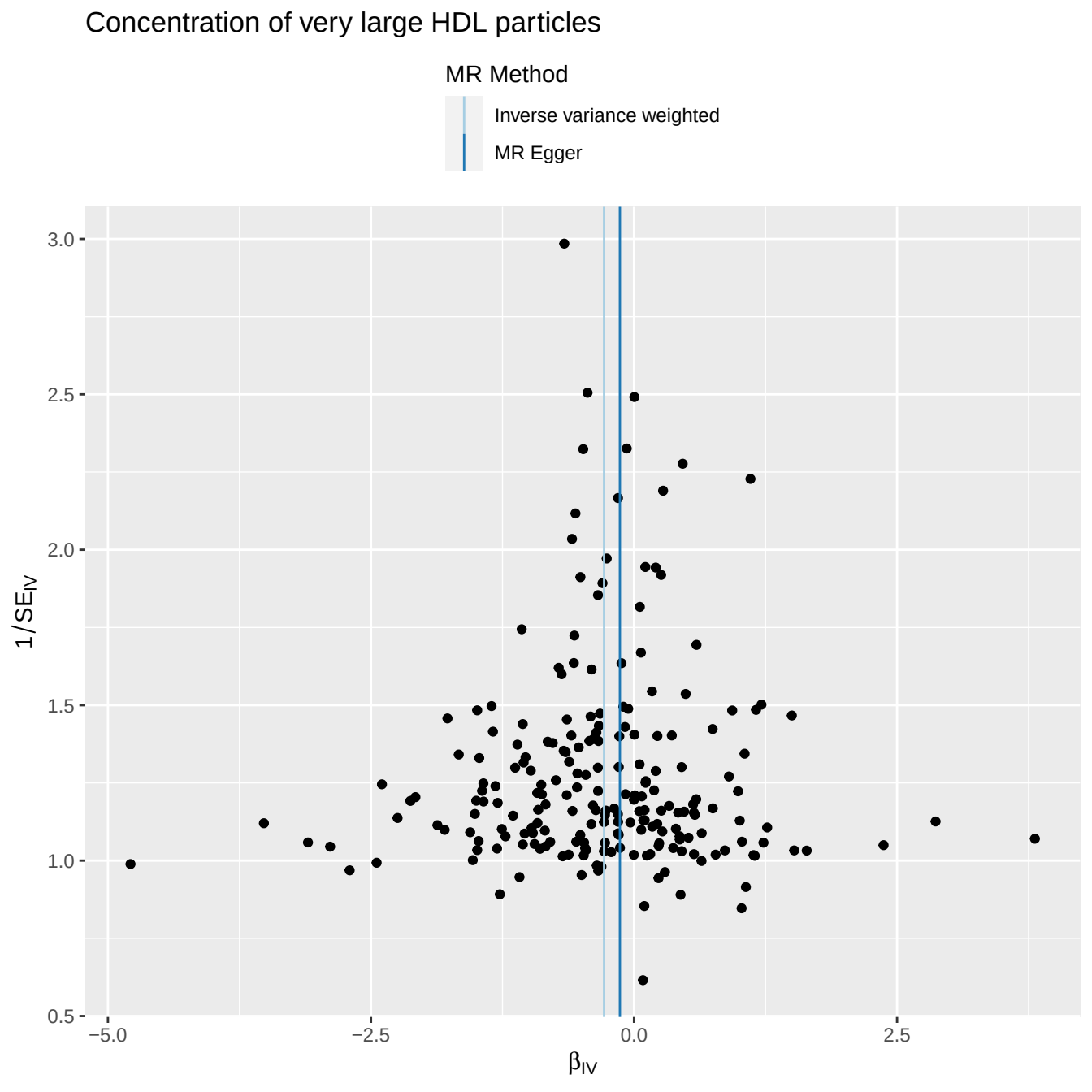

Concentration of medium LDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−6
−4
−2
0
2
β_IV

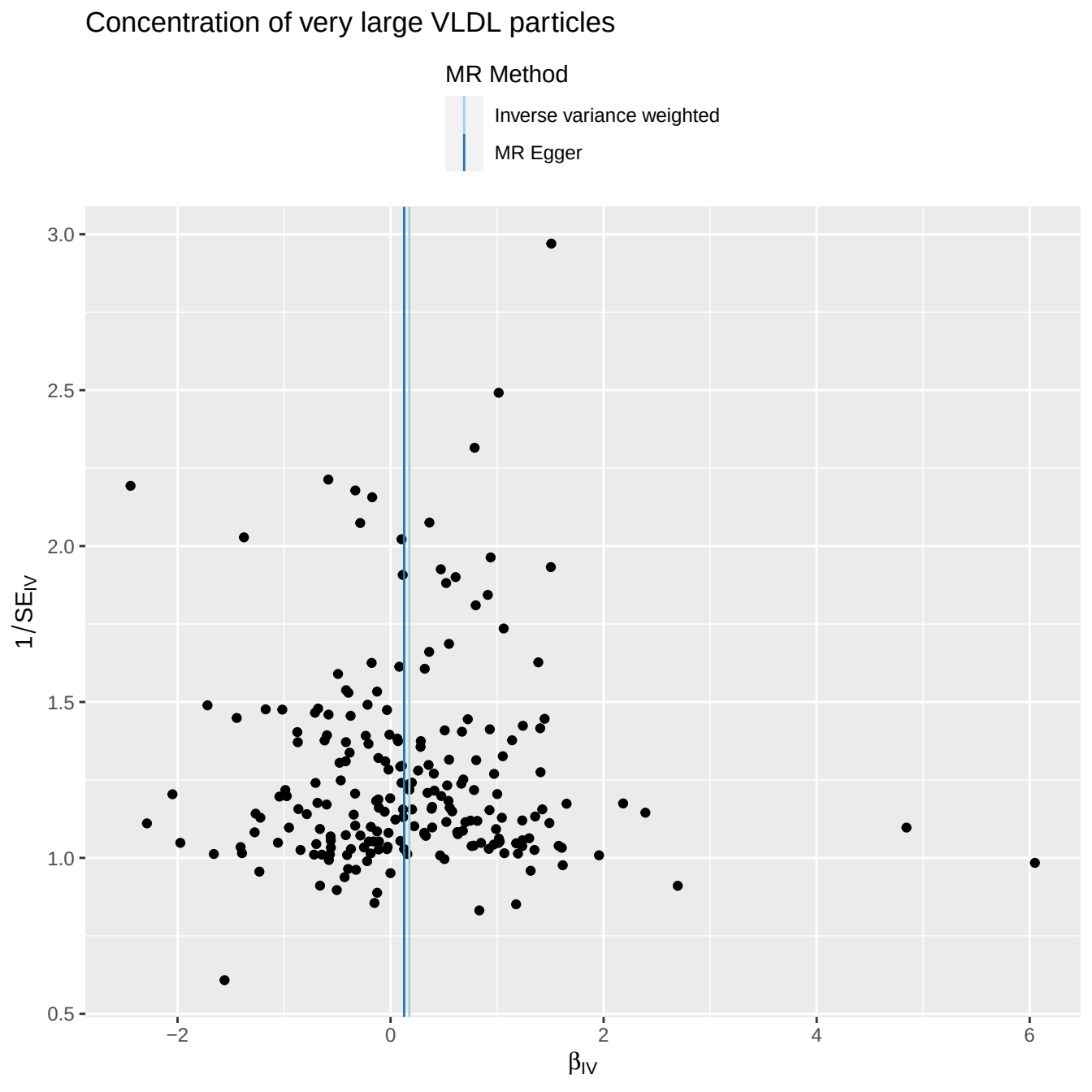

Concentration of medium VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−3
0
3
6
β_IV

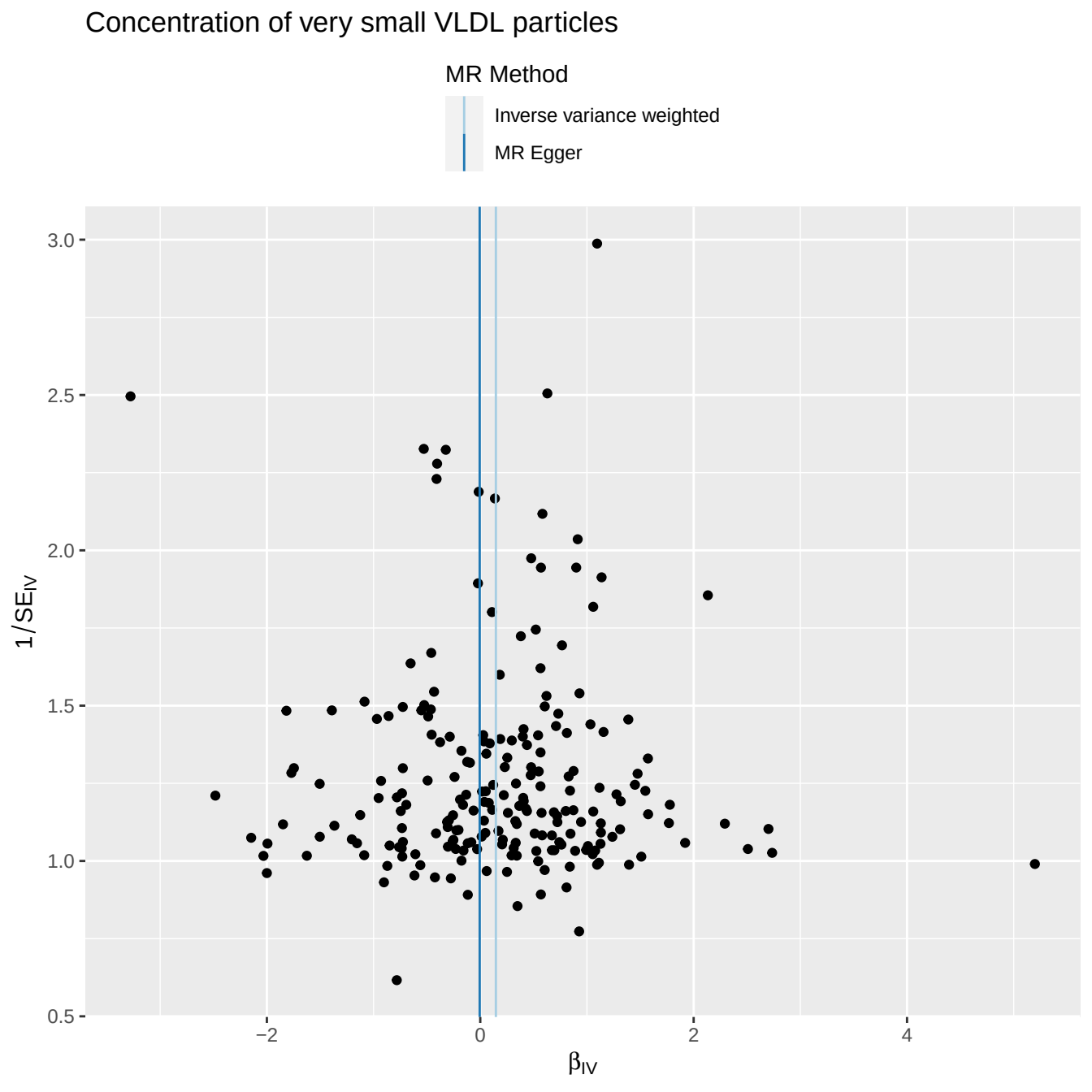

Concentration of small HDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
−1
0
1
2
3
β_IV


Concentration of small LDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−6
−4
−2
0
2
β_IV

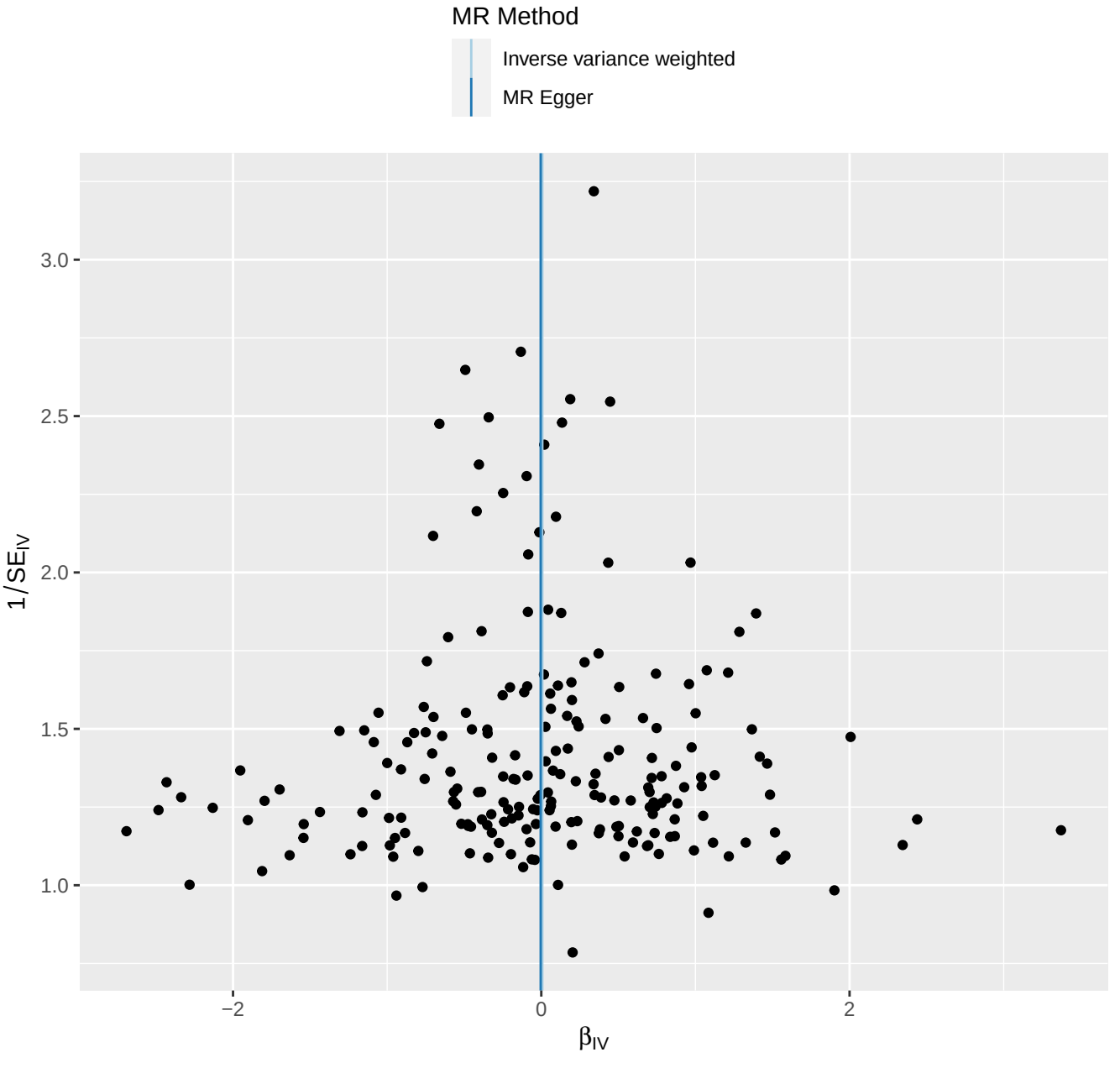

Concentration of small VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−3
0
3
6
β_IV


Concentration of very large HDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

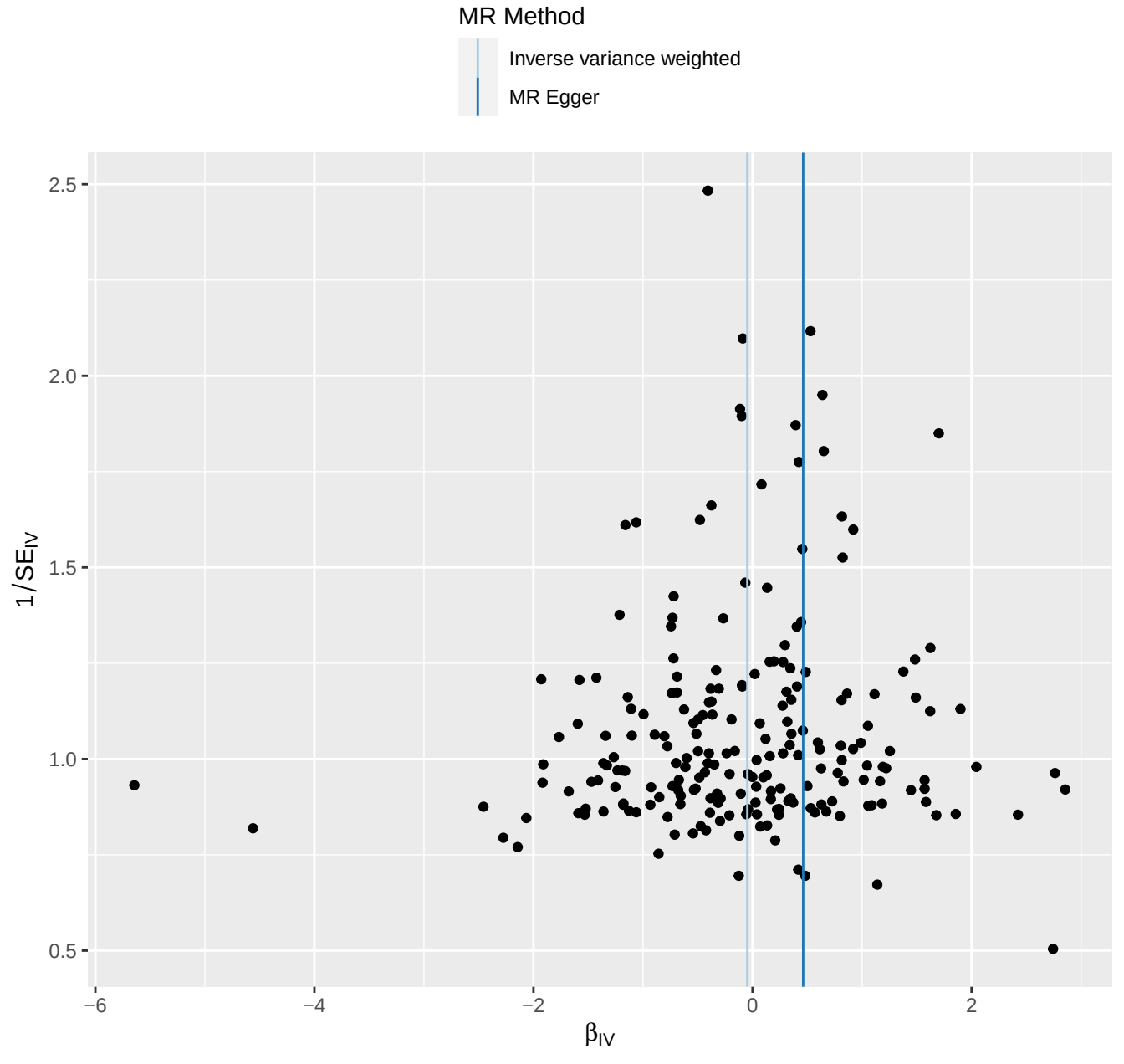

Concentration of very large VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
6
β_IV


Concentration of very small VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
β_IV

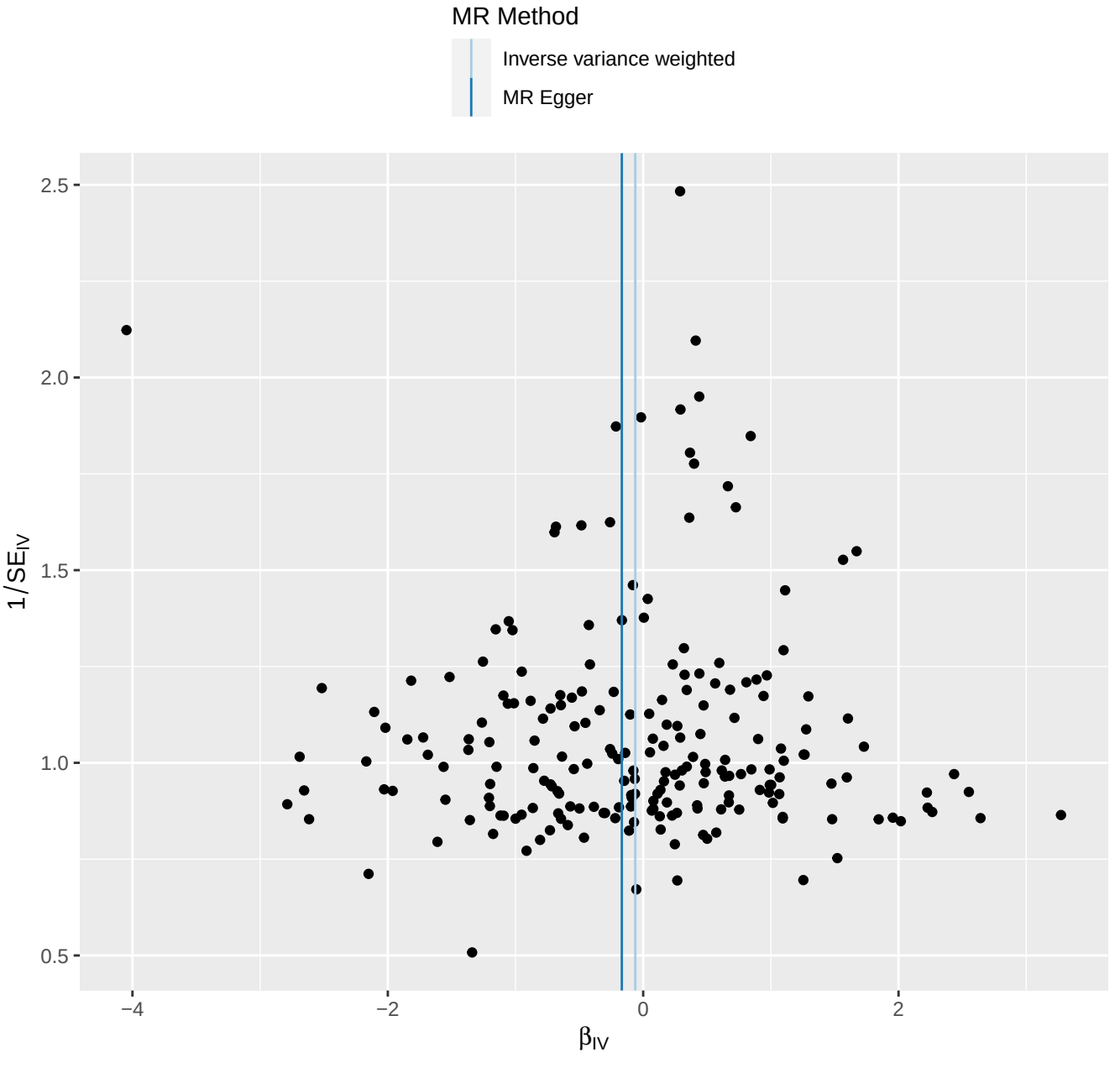
Creatinine

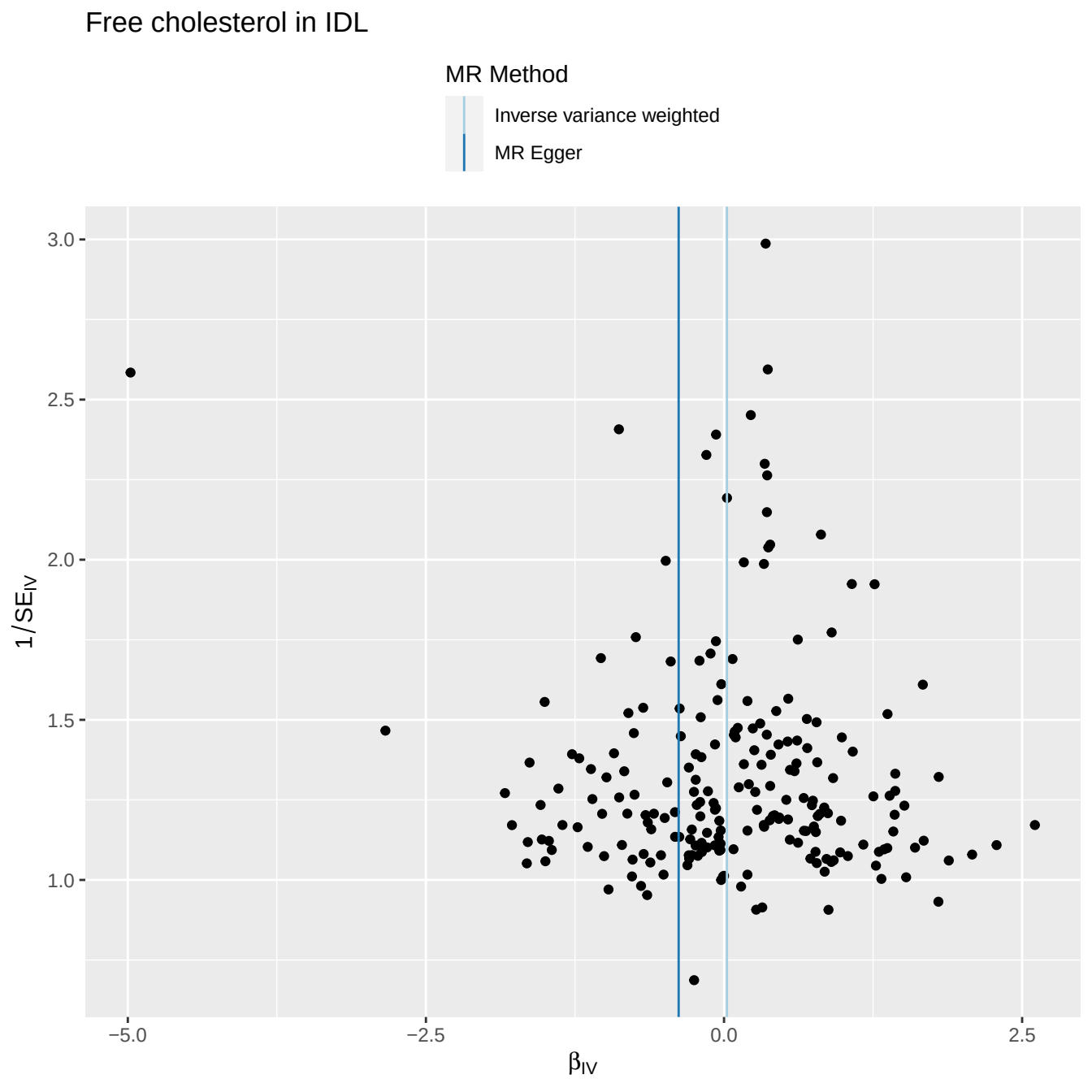

MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
β_IV

Description of average fatty acid chain length, not actual carbon number

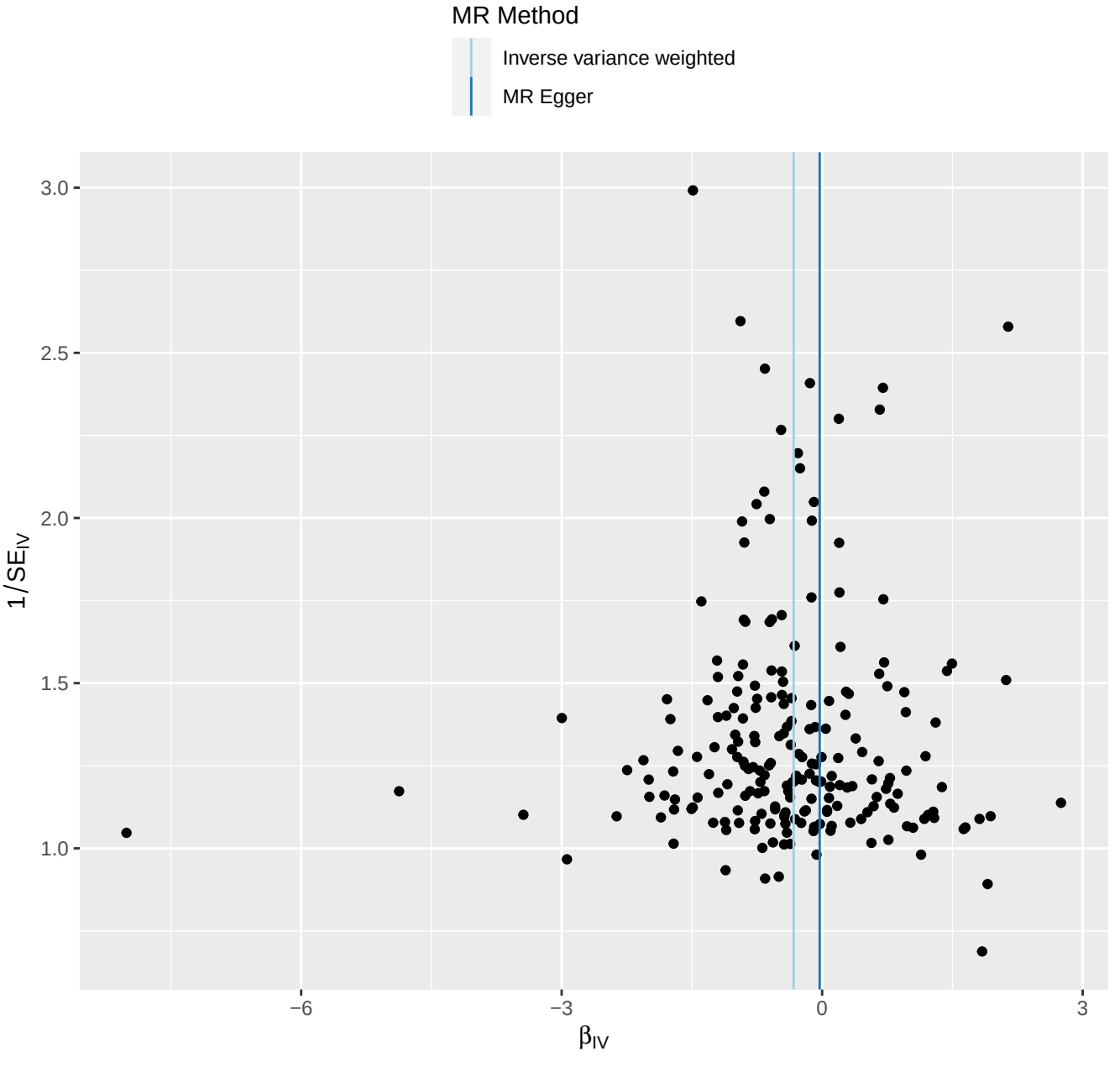


Free cholesterol

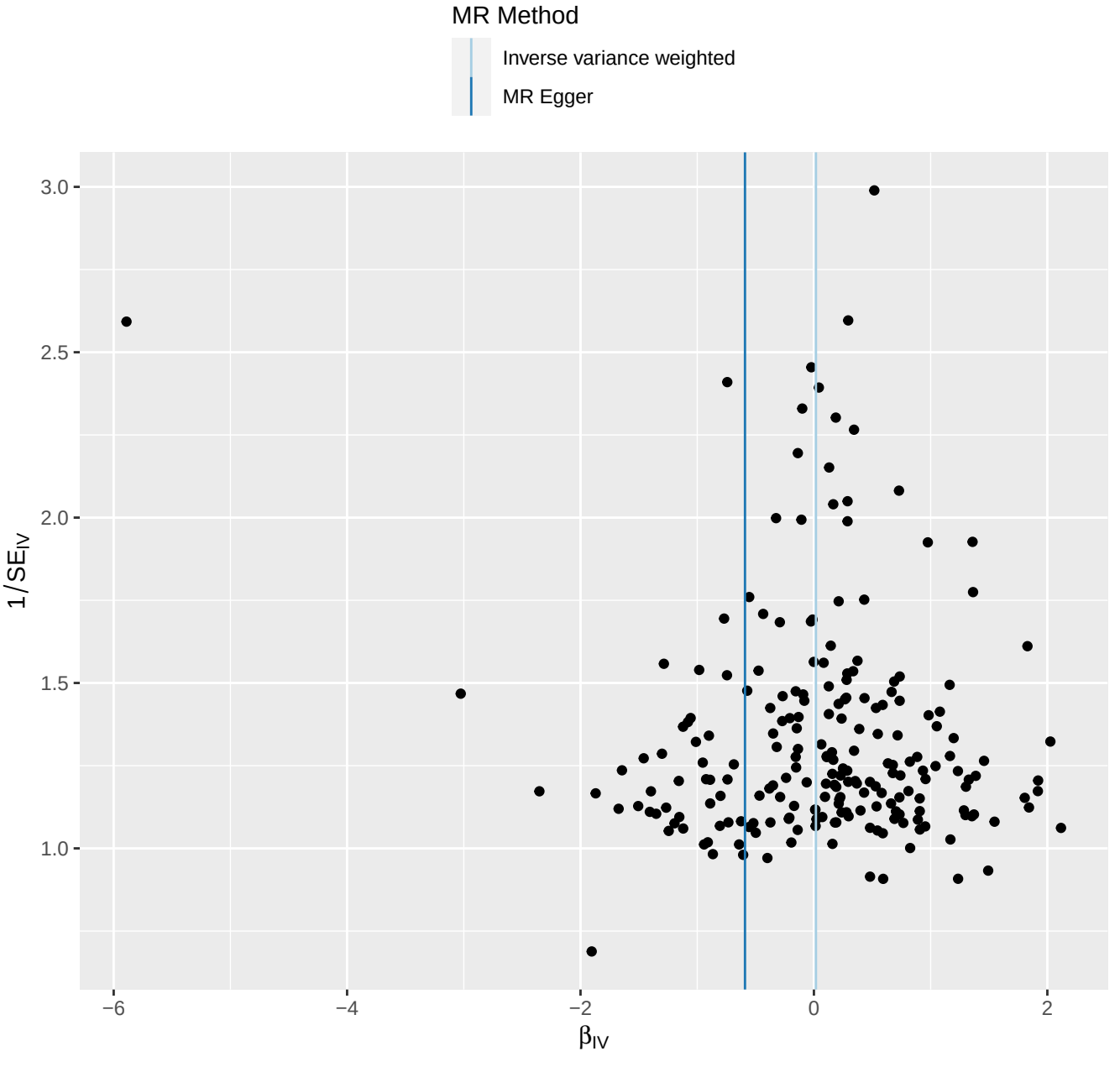


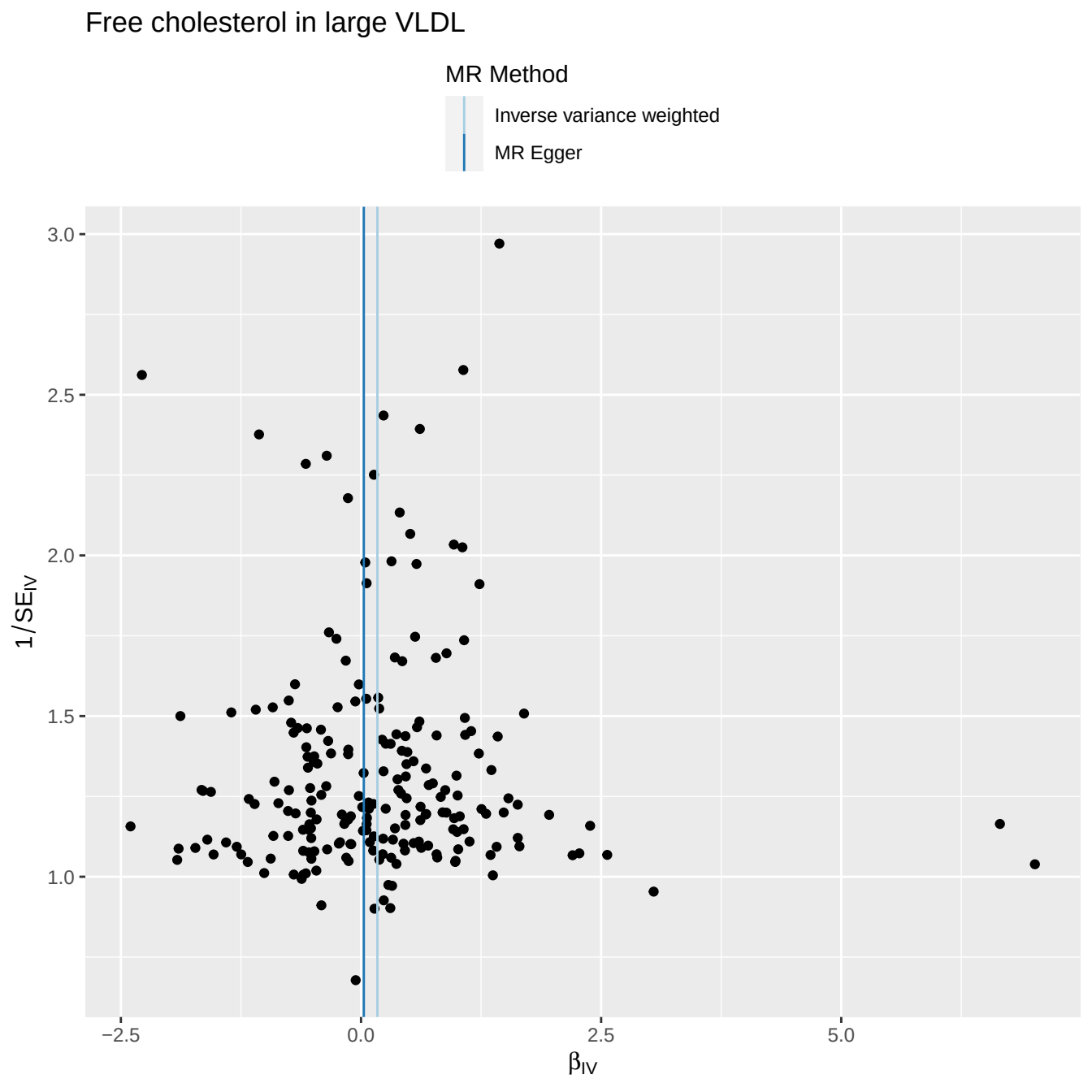

Free cholesterol in IDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

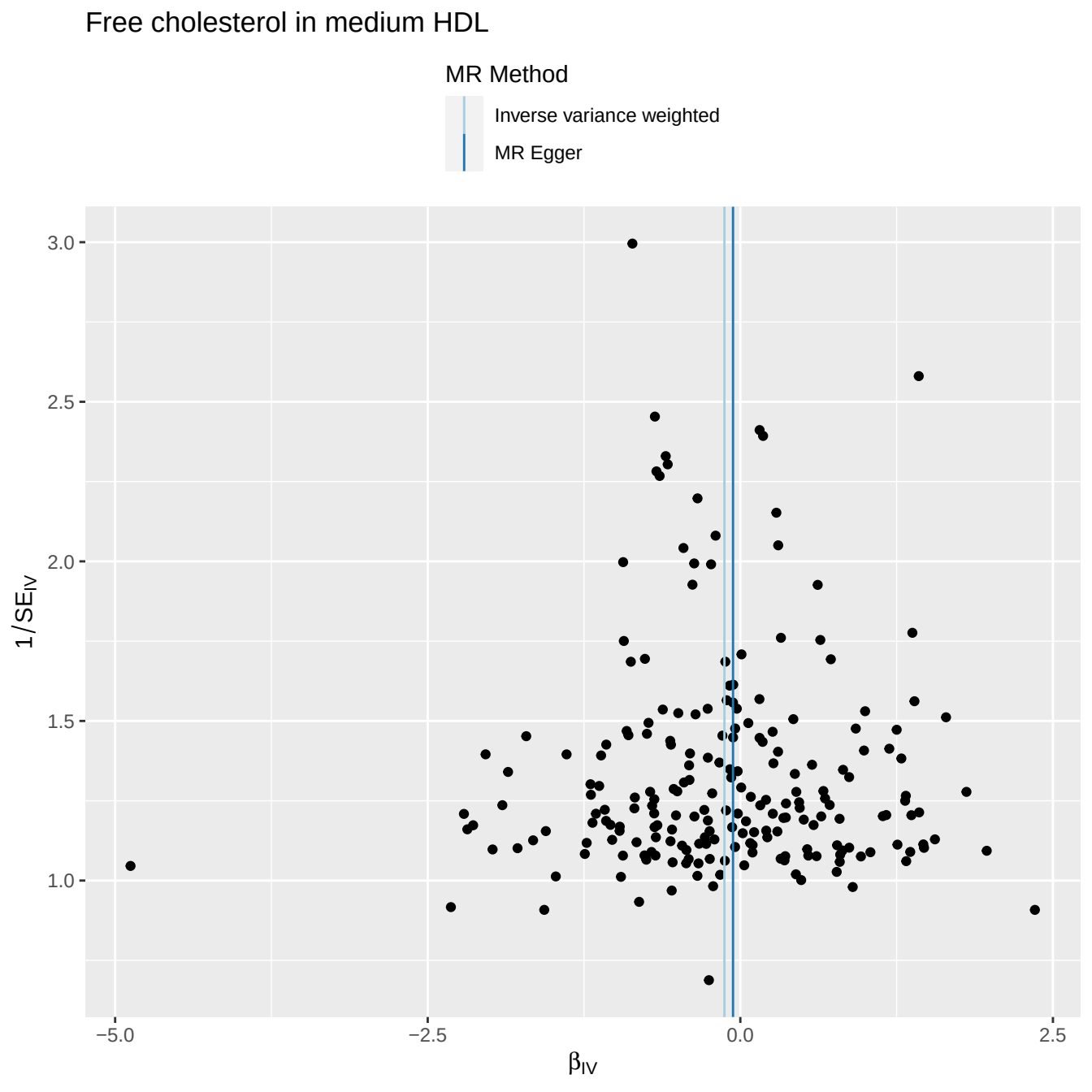
Free cholesterol in large HDL

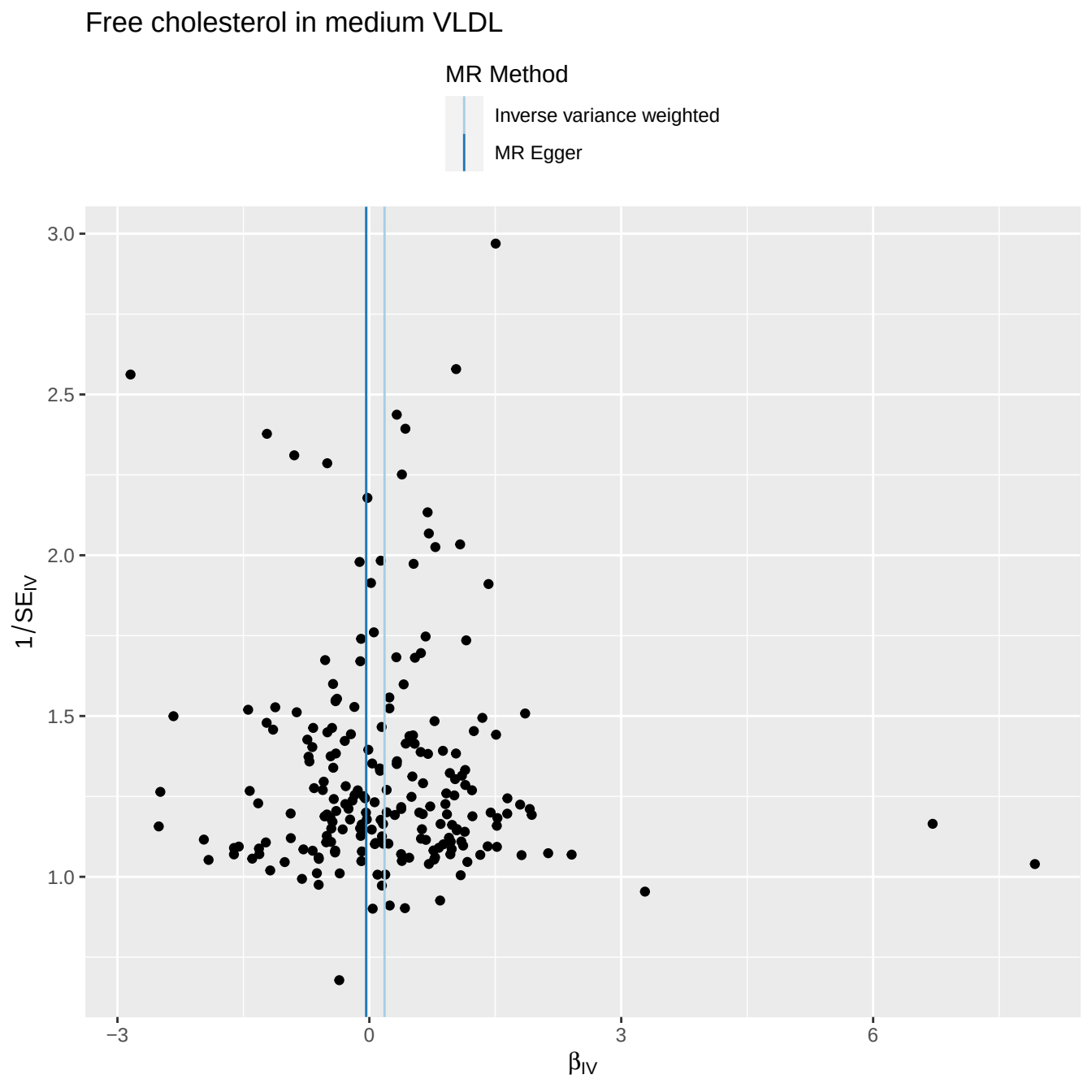


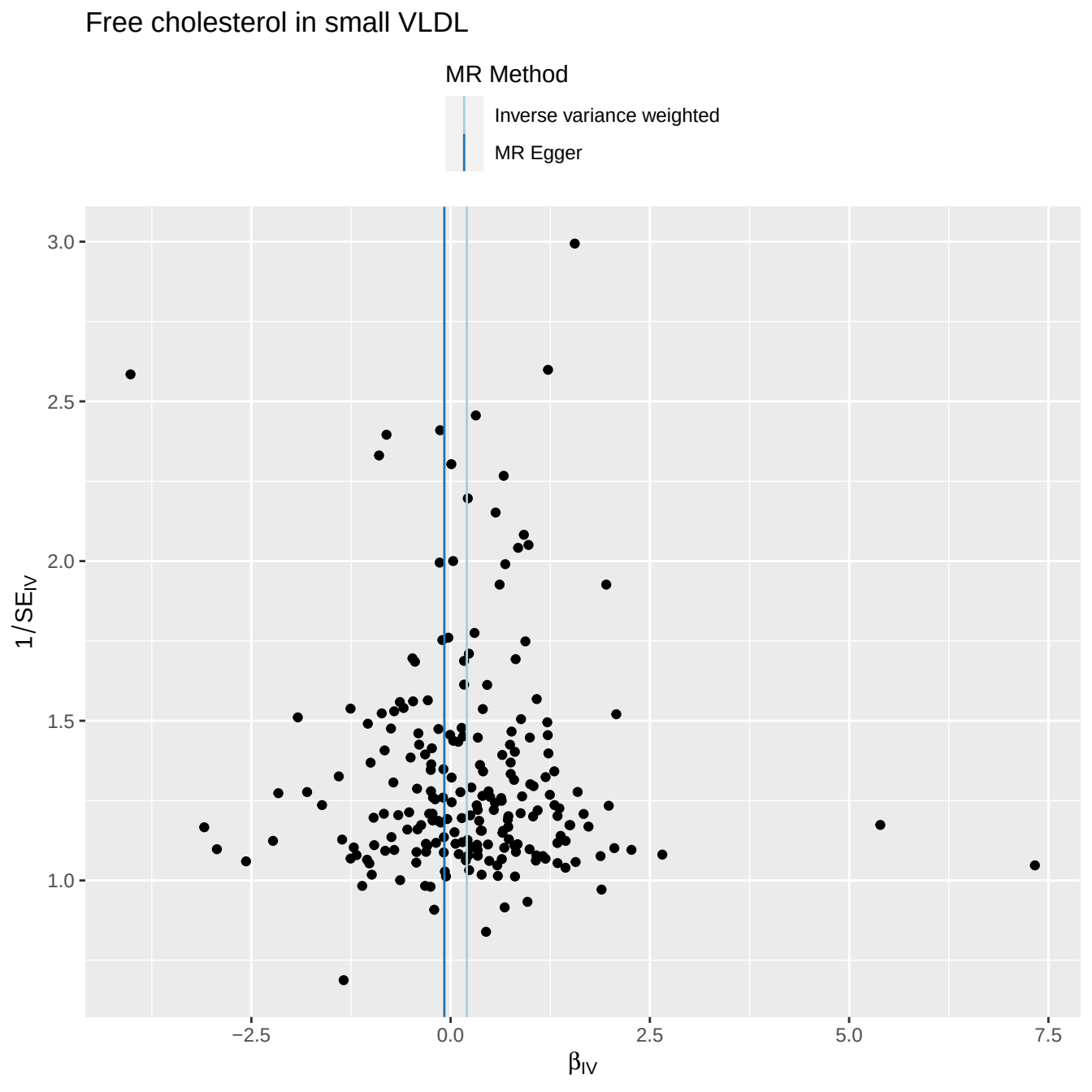
Free cholesterol in large LDL



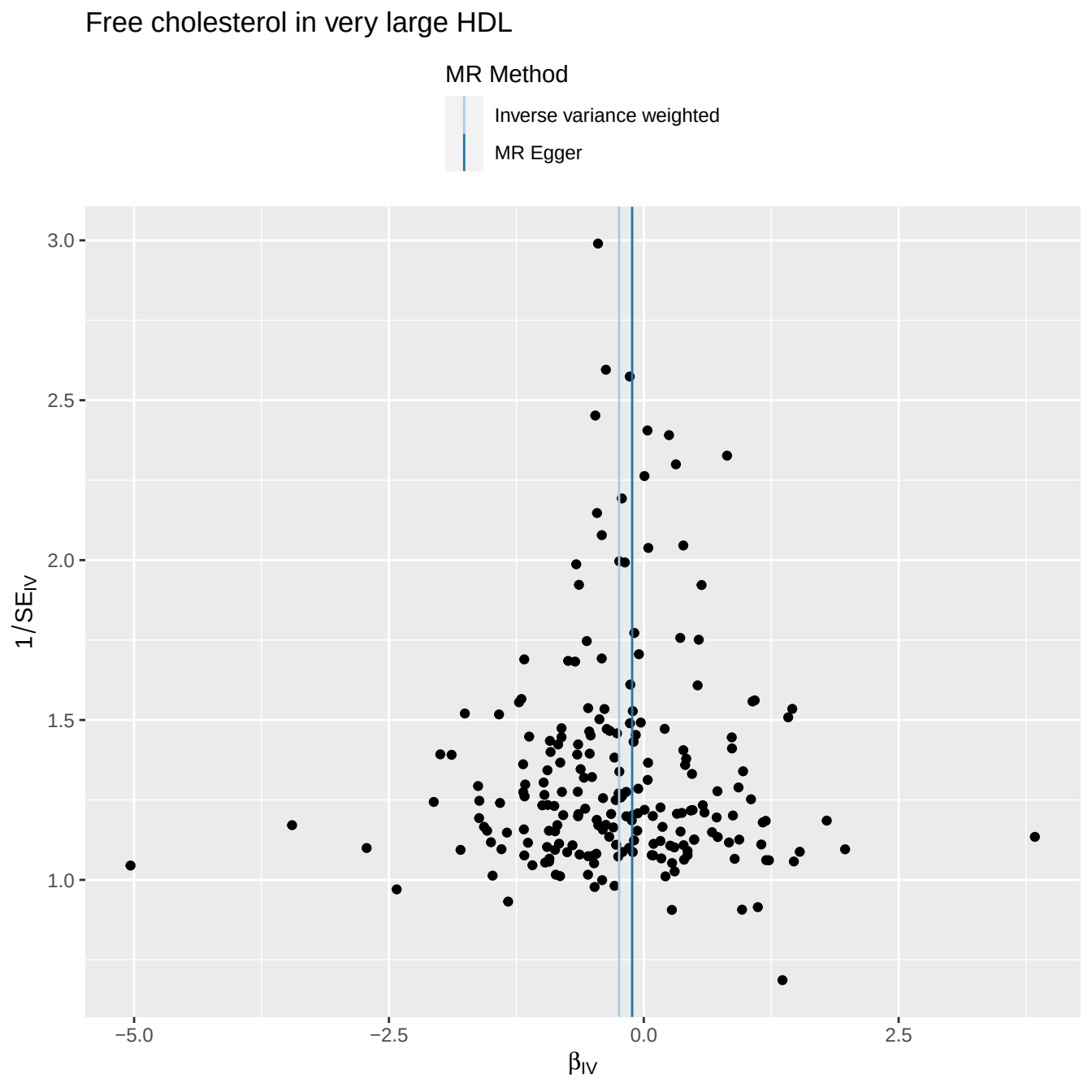

Free cholesterol in large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2.5
0.0
2.5
5.0
β_IV


Free cholesterol in medium HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

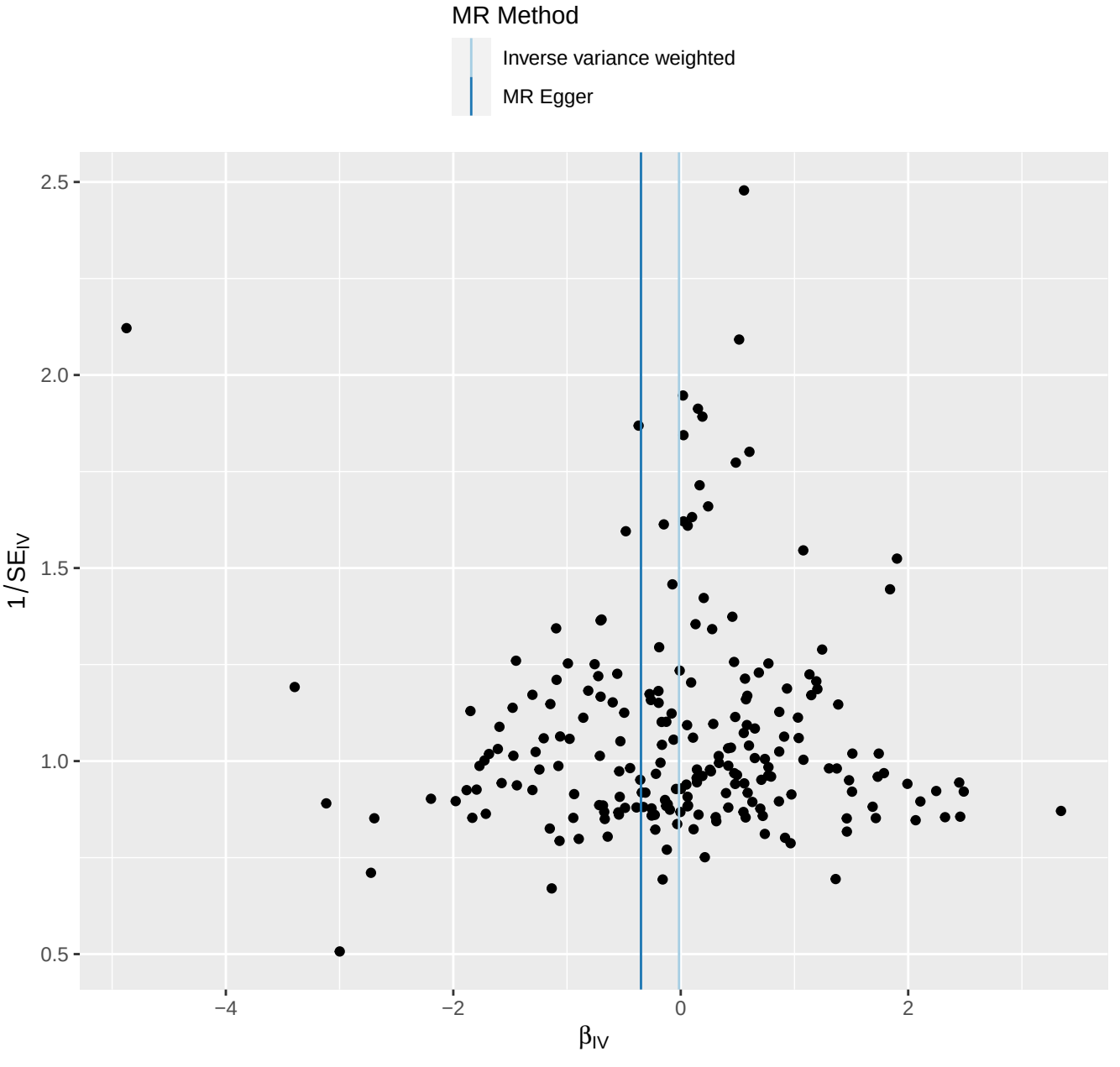

Free cholesterol in medium VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−3
0
3
6
β_IV

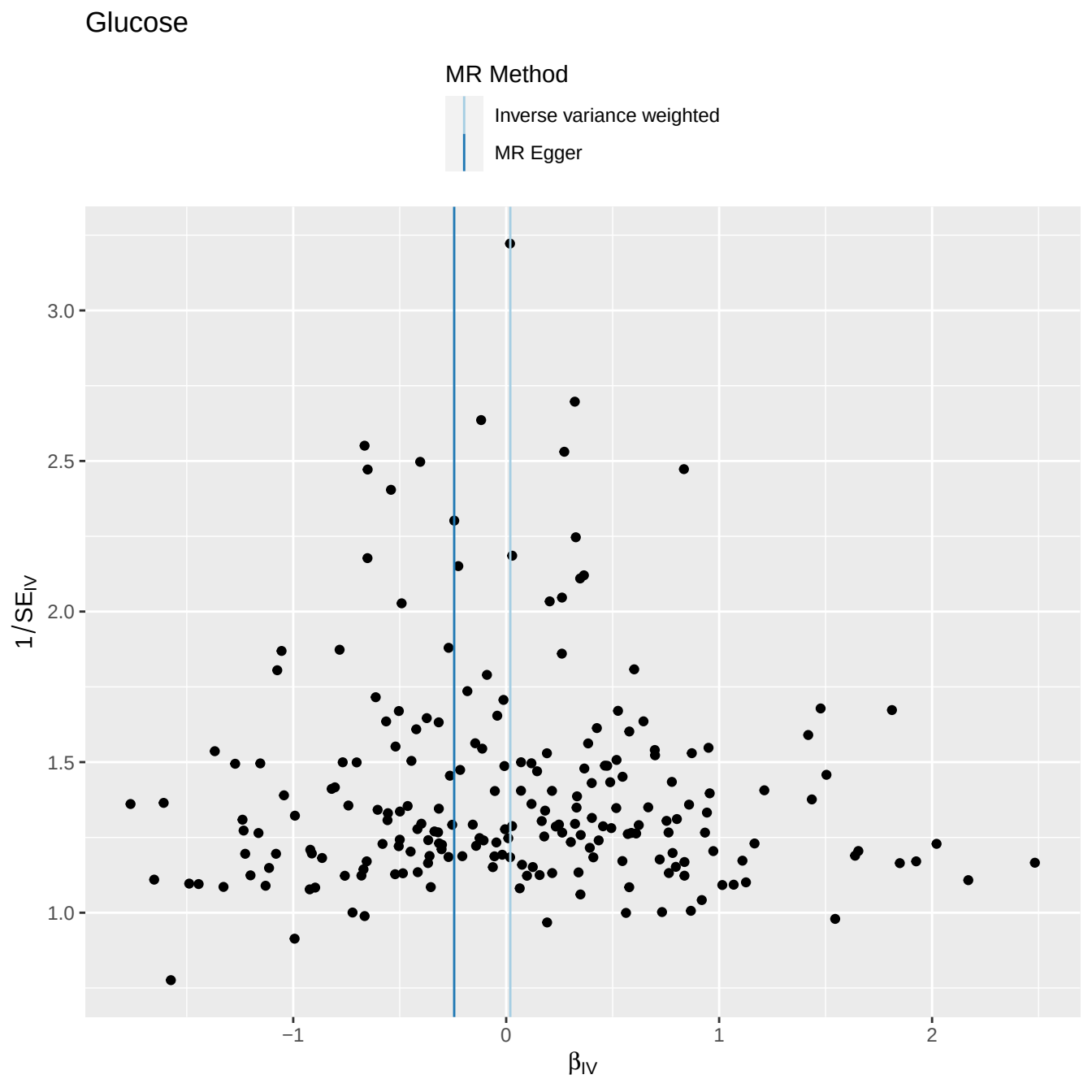

Free cholesterol in small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2.5
0.0
2.5
5.0
7.5
β_IV

Free cholesterol in very large HDL

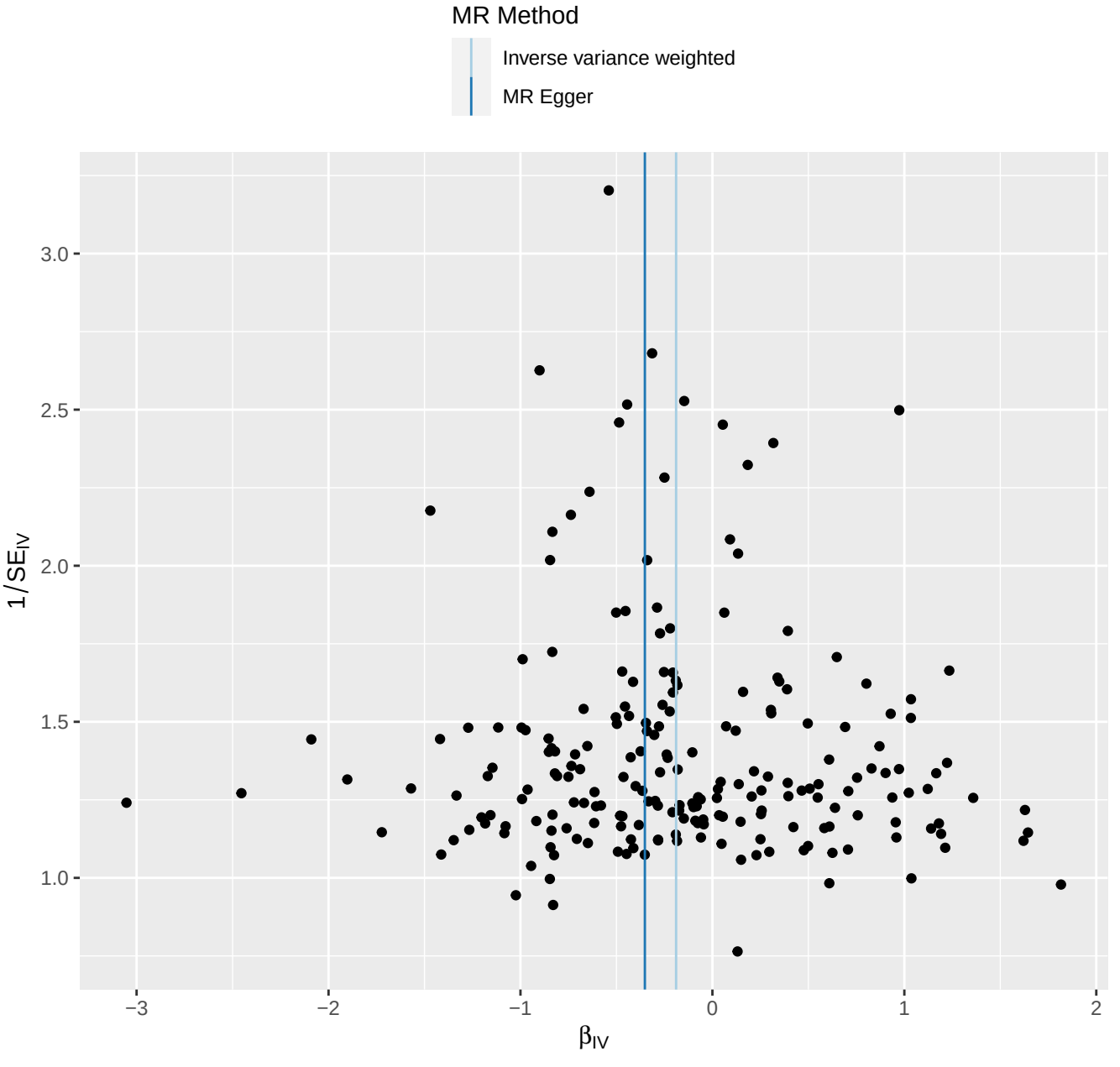


Free cholesterol to esterified cholesterol ratio

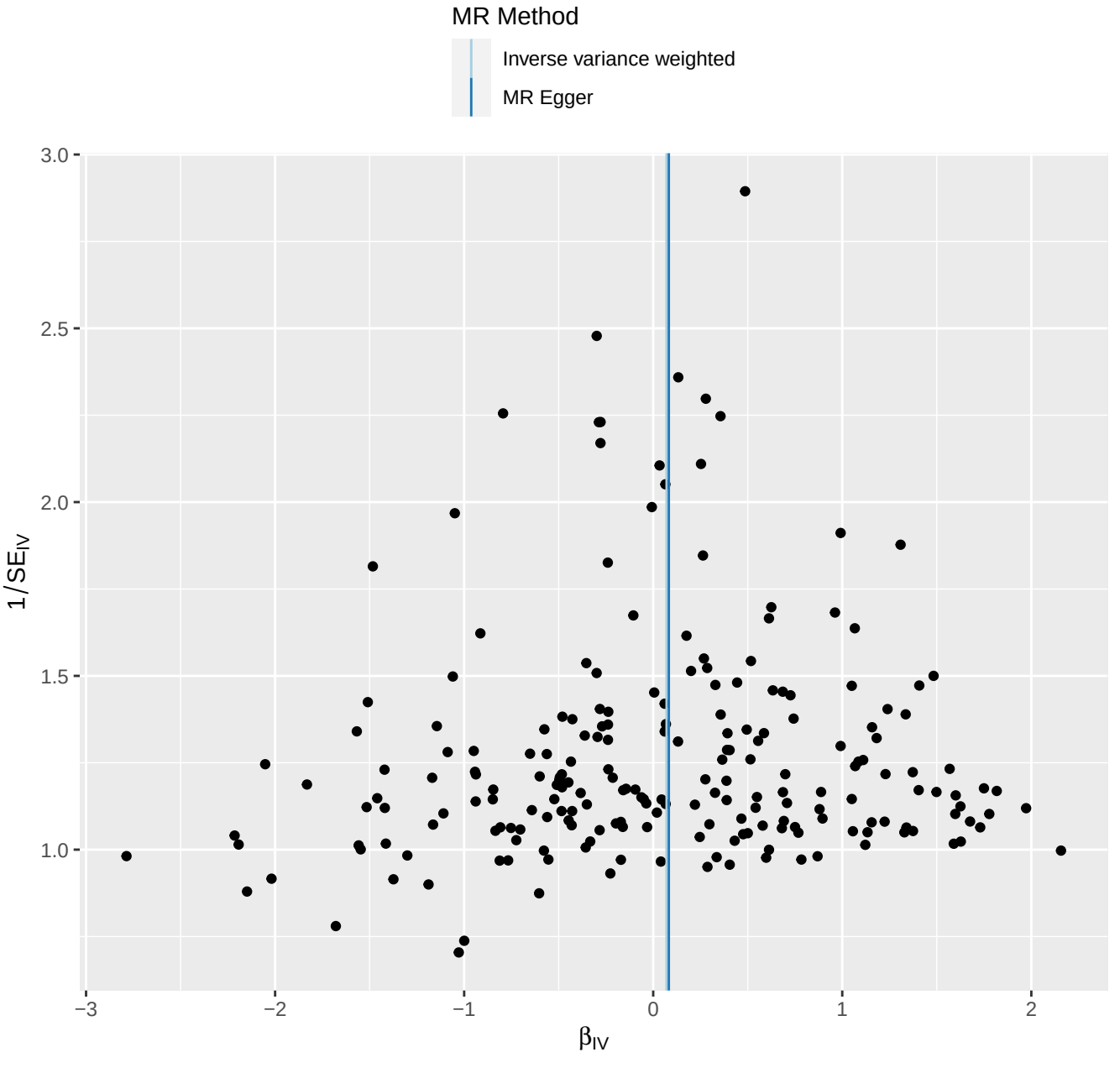


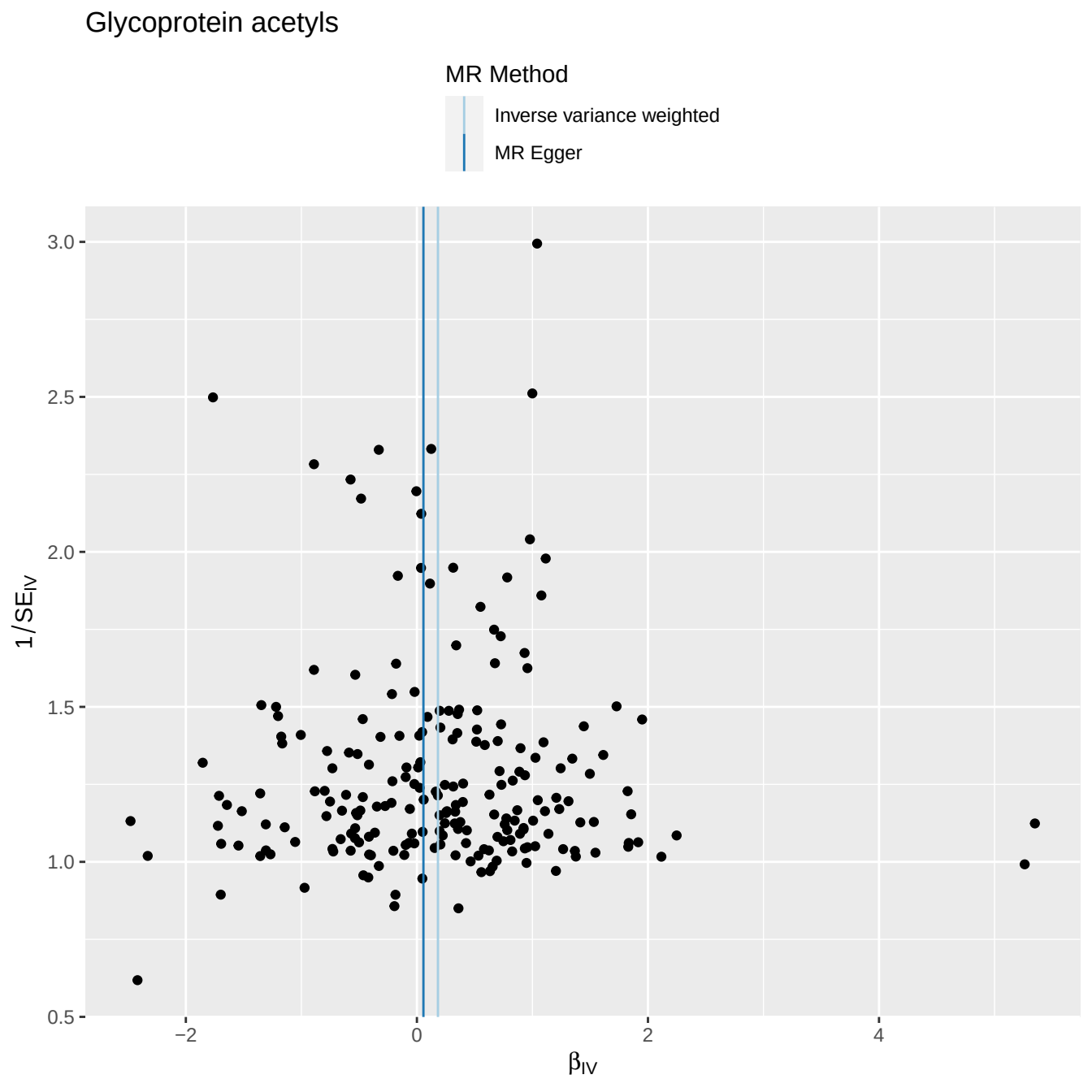

Glucose
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−1
0
1
2
β_IV

Glutamine

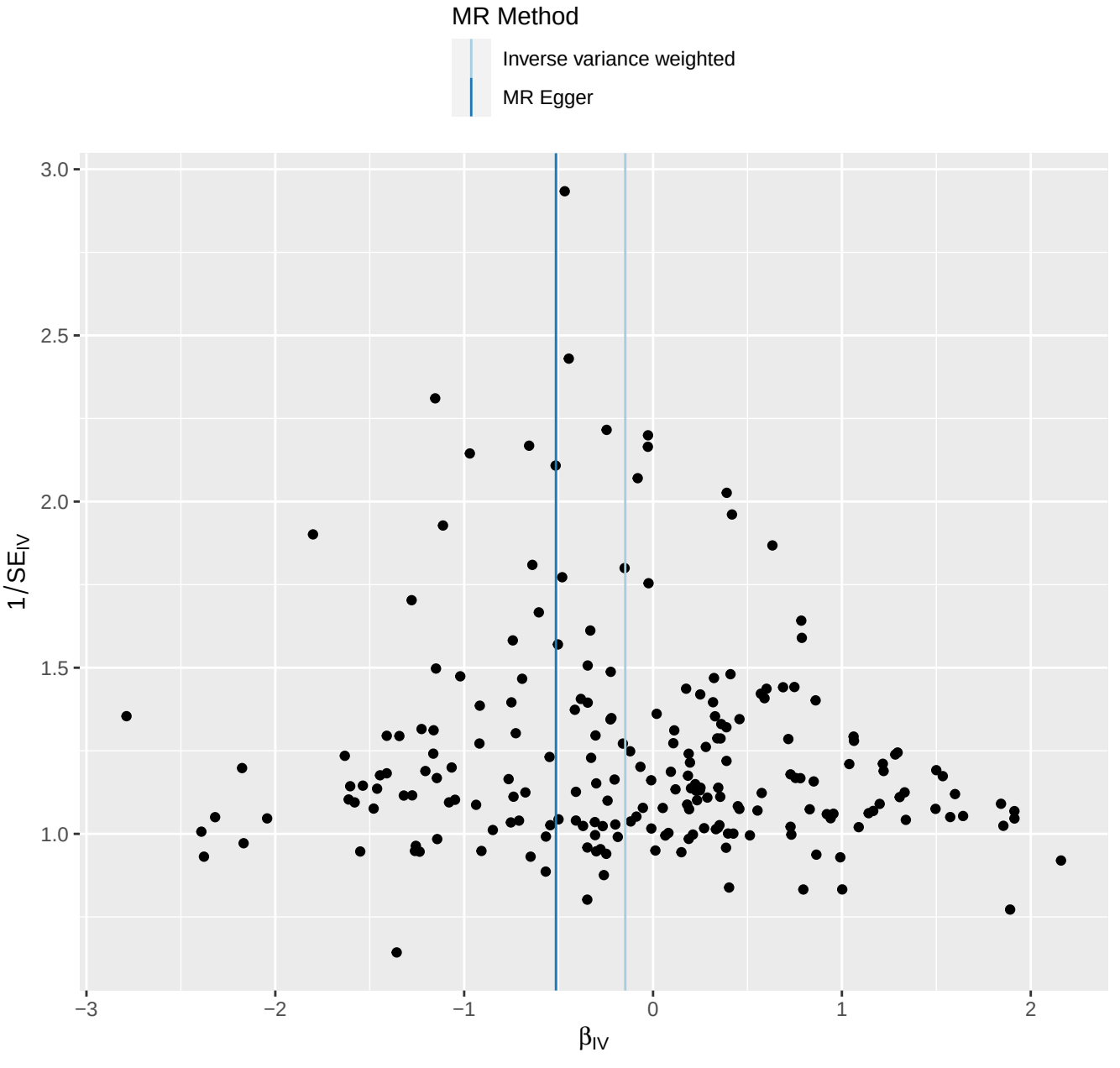

MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−3
−2
−1
0
1
2
β_IV

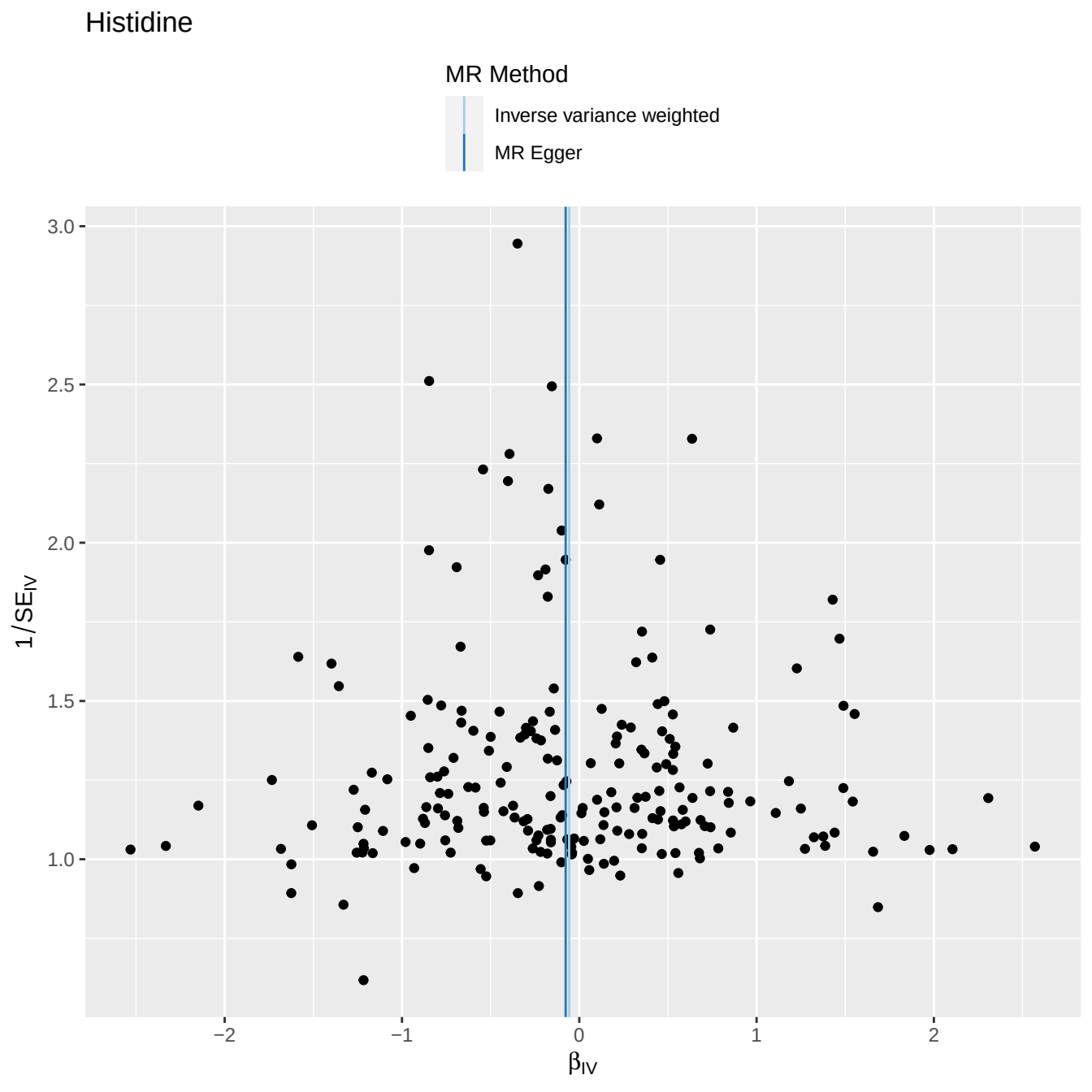
Glycerol


MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−3
−2
−1
0
1
2
β_IV

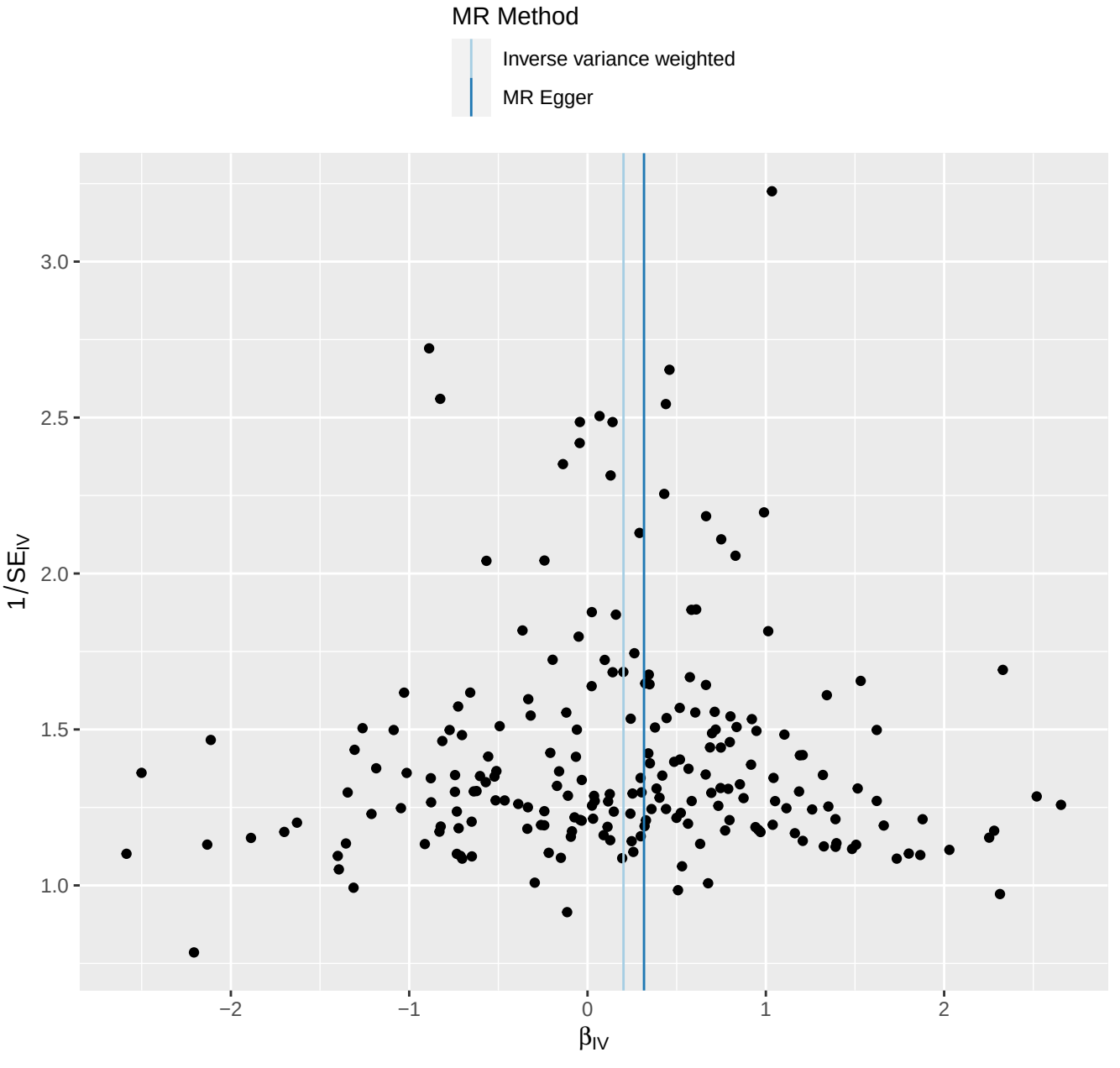

Glycoprotein acetyls
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
β_IV

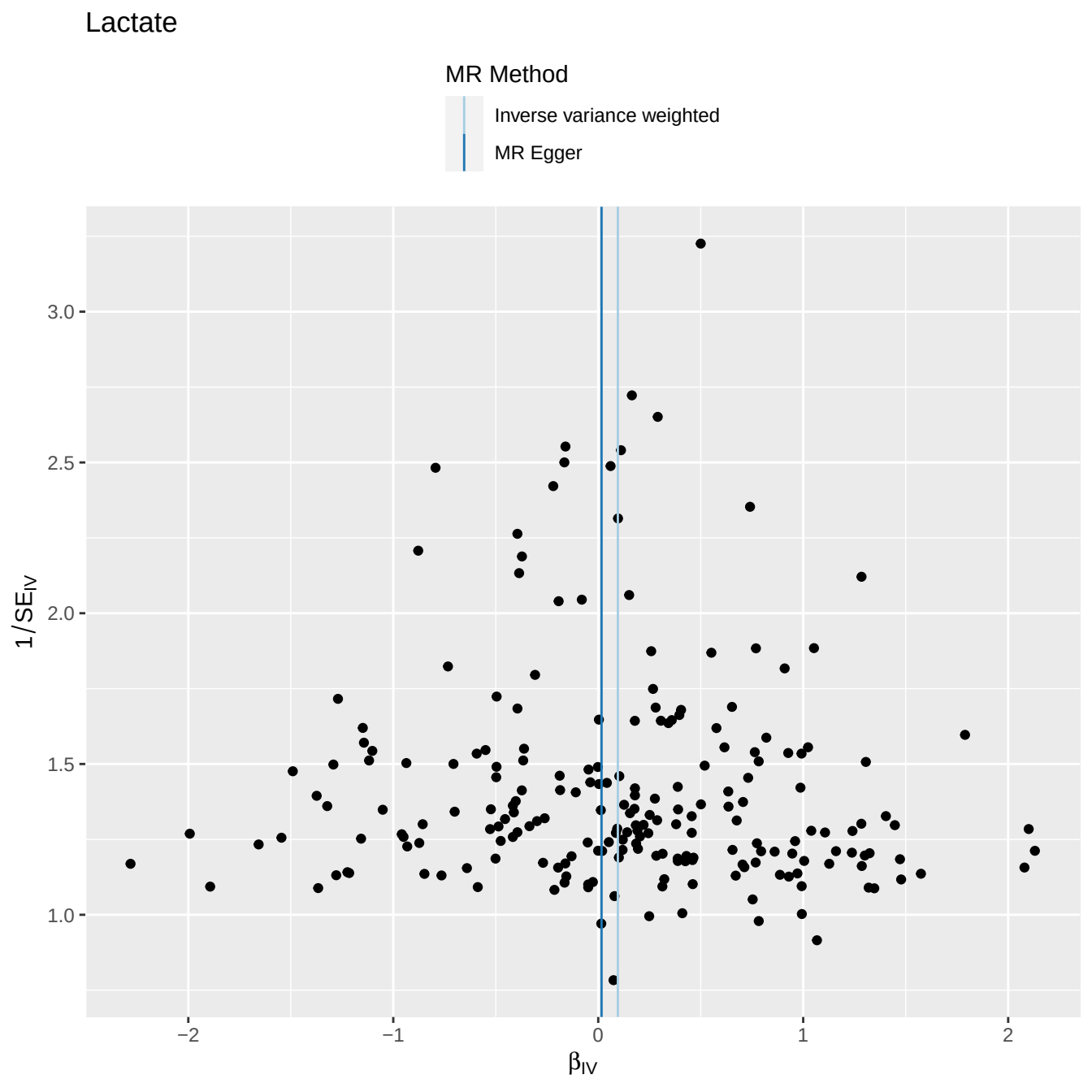
Glycoproteins



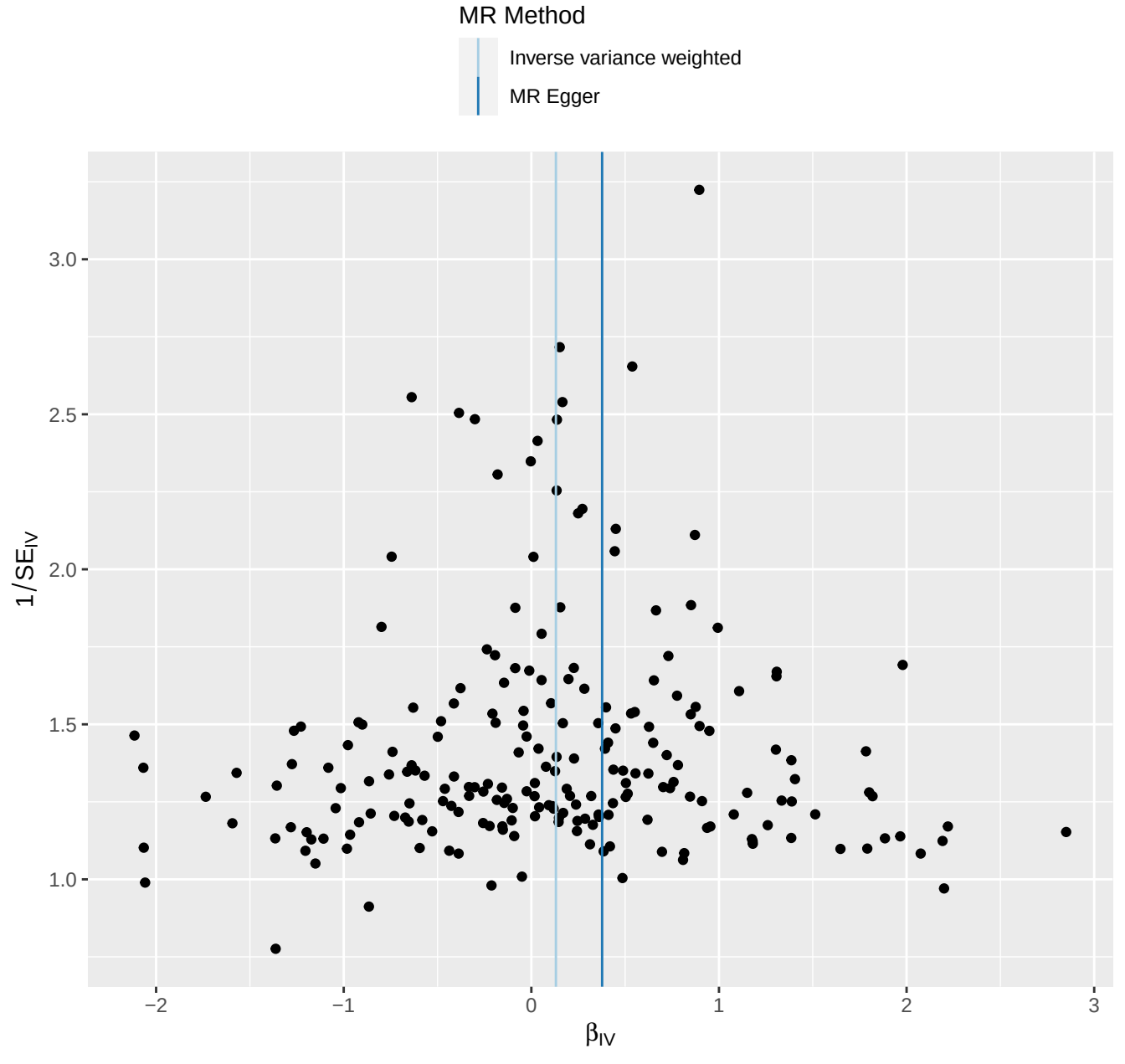

Histidine
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

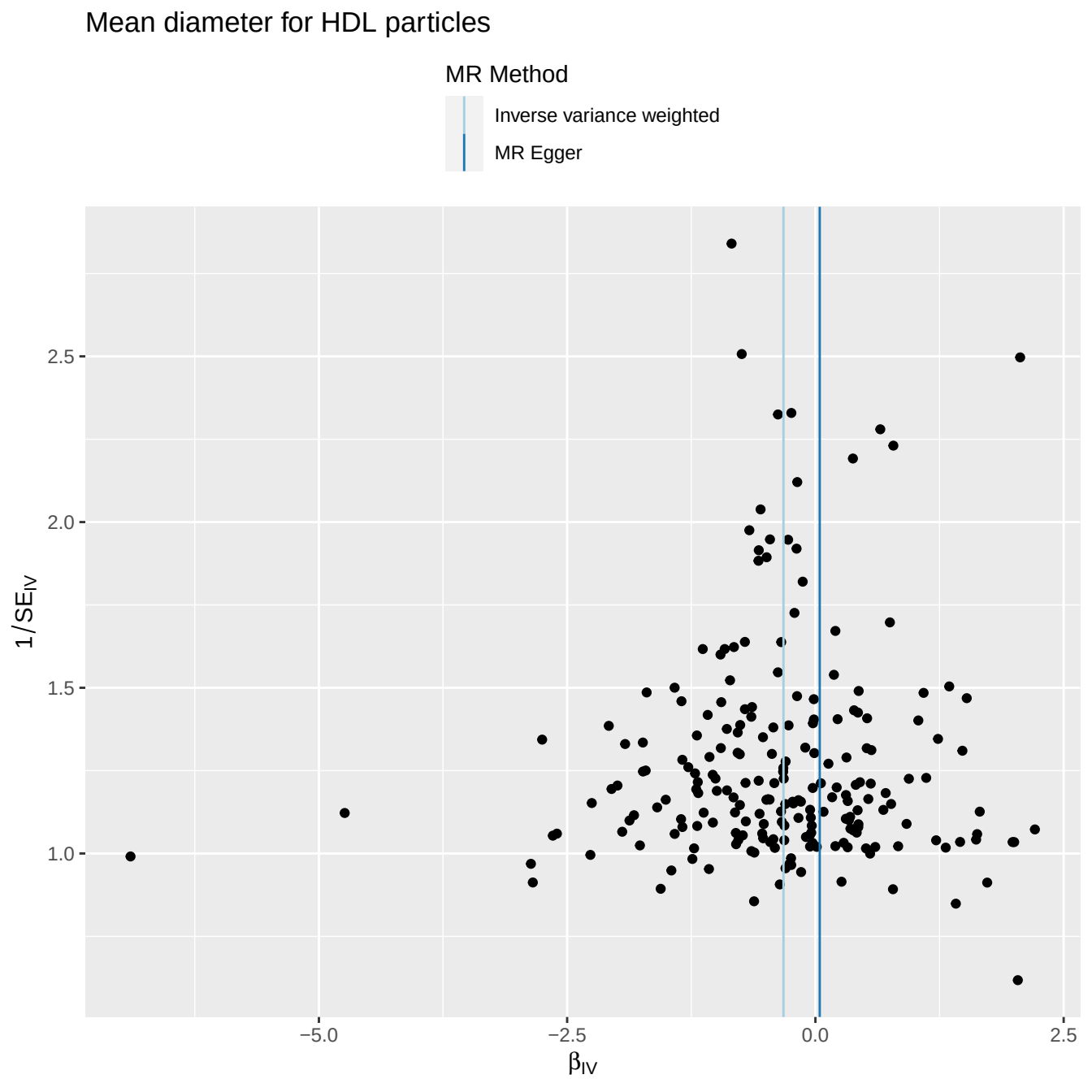
Isoleucine

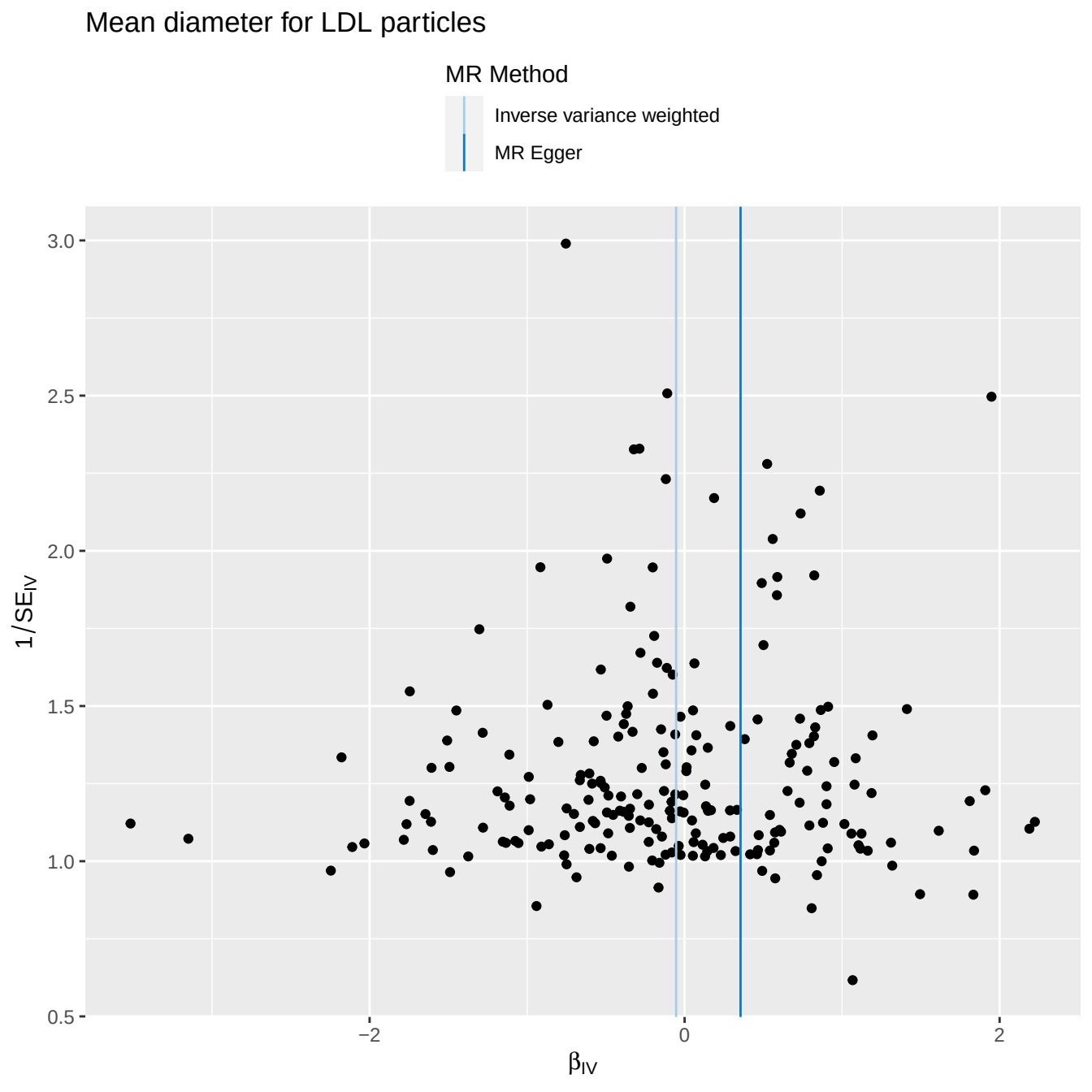

MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

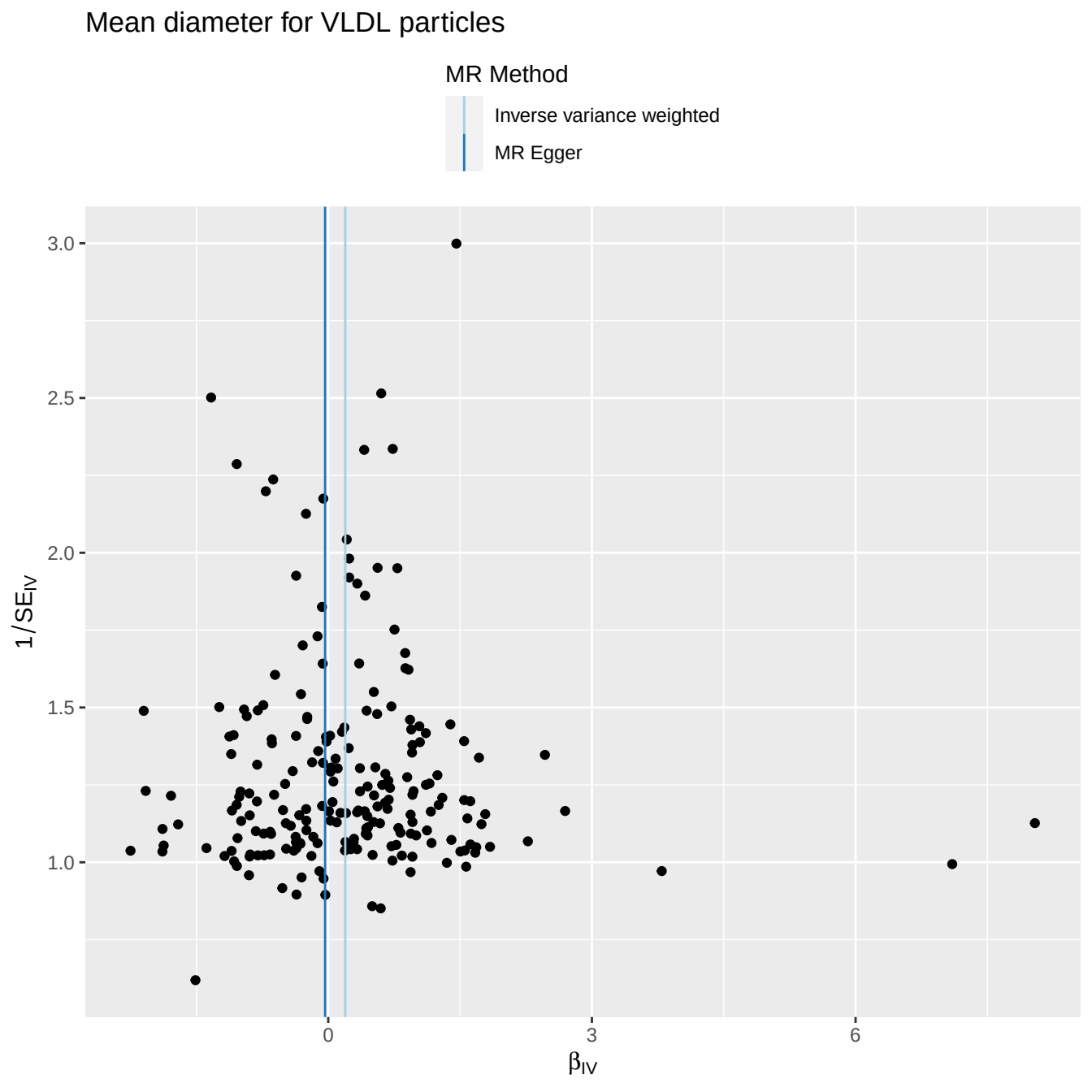

Lactate
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

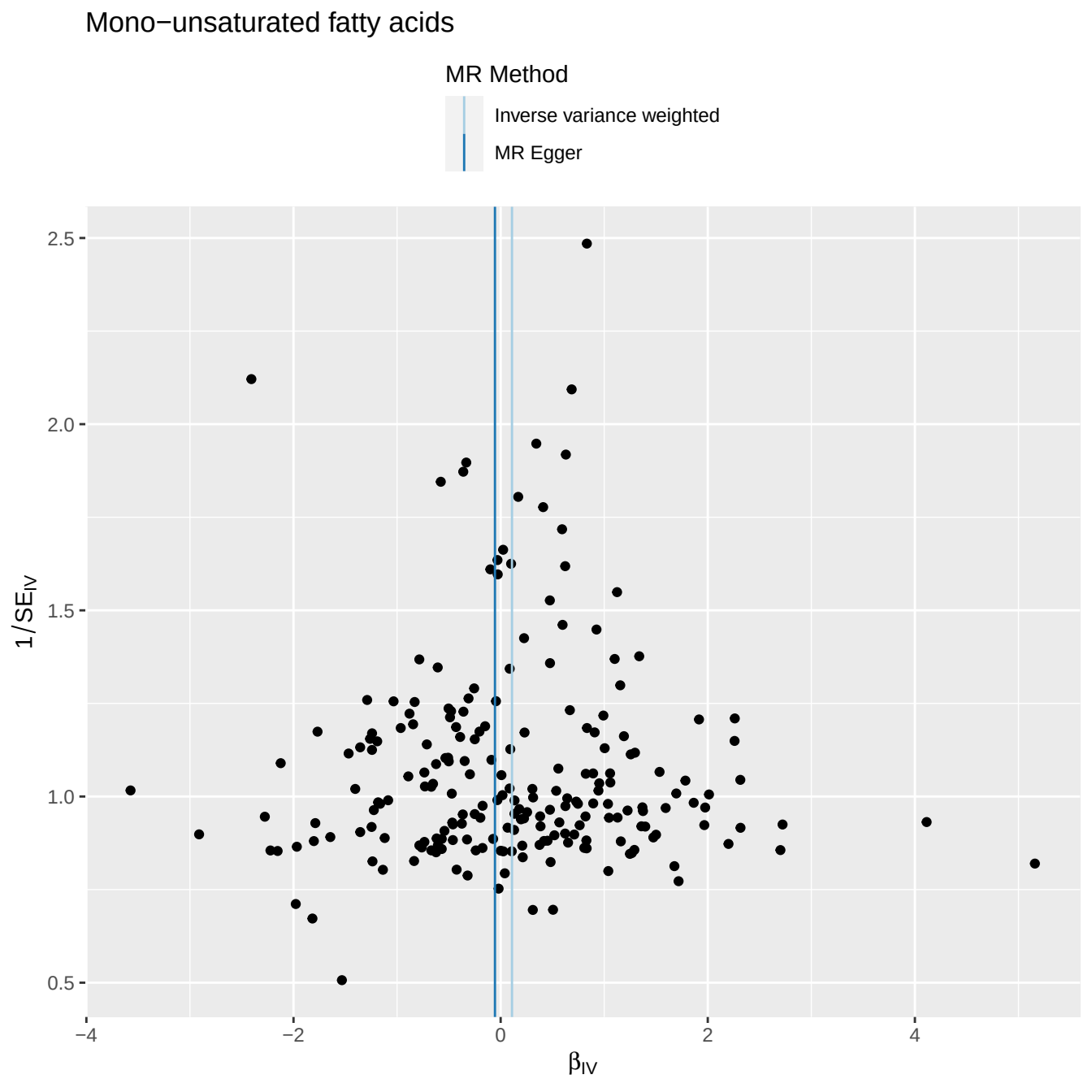
Leucine


MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
3
β_IV

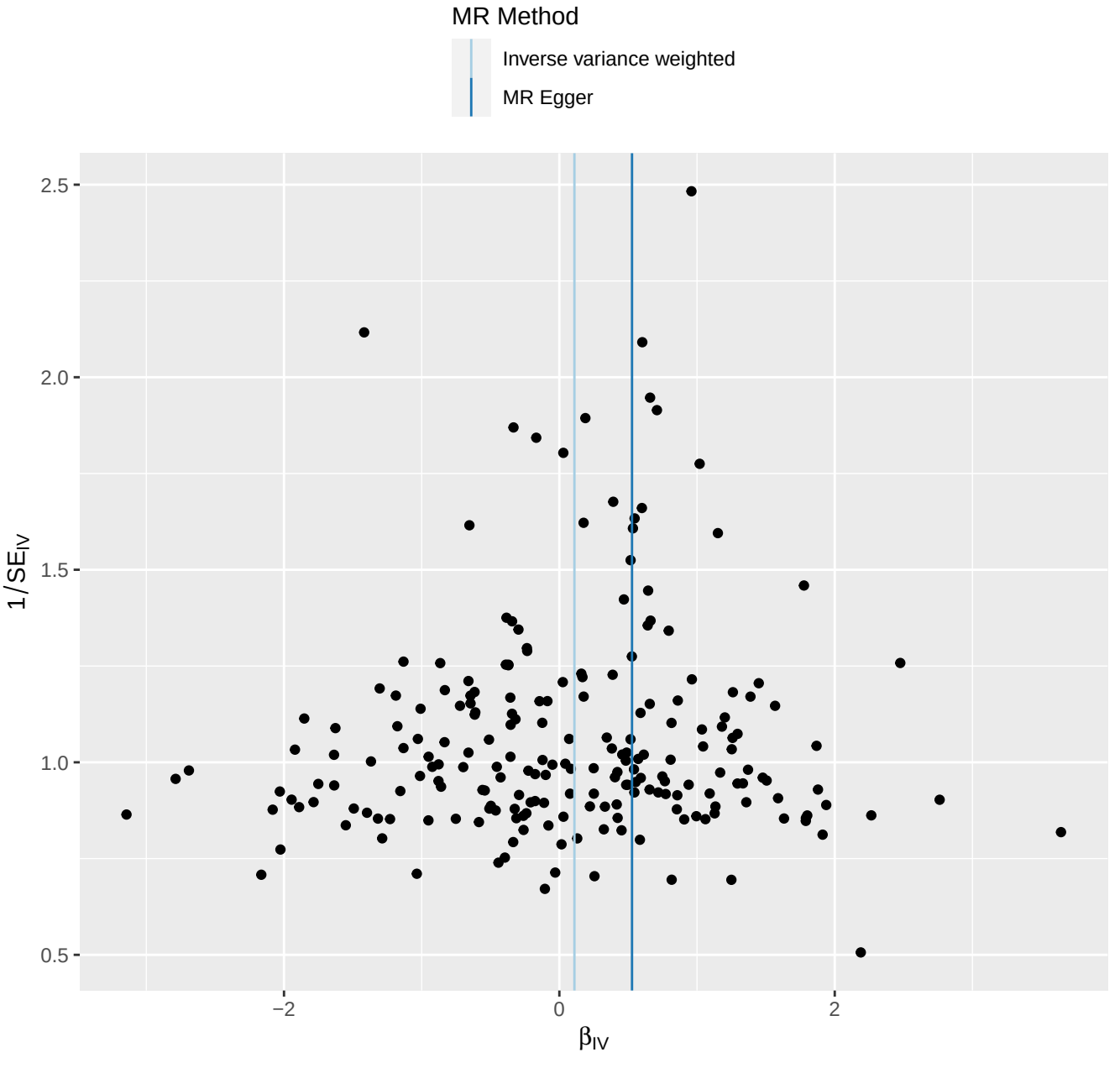

Mean diameter for HDL particles
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

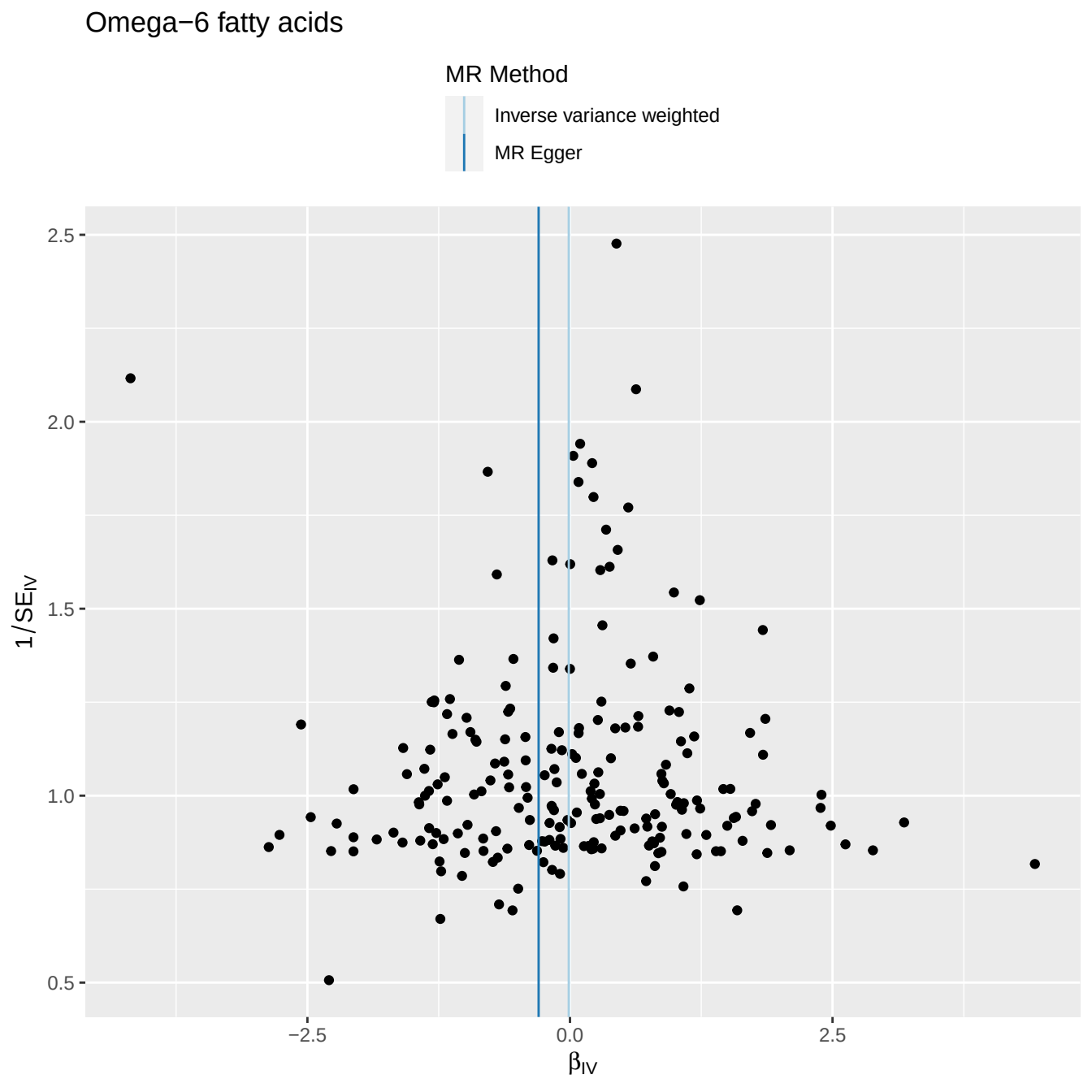

Mean diameter for LDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
β_IV

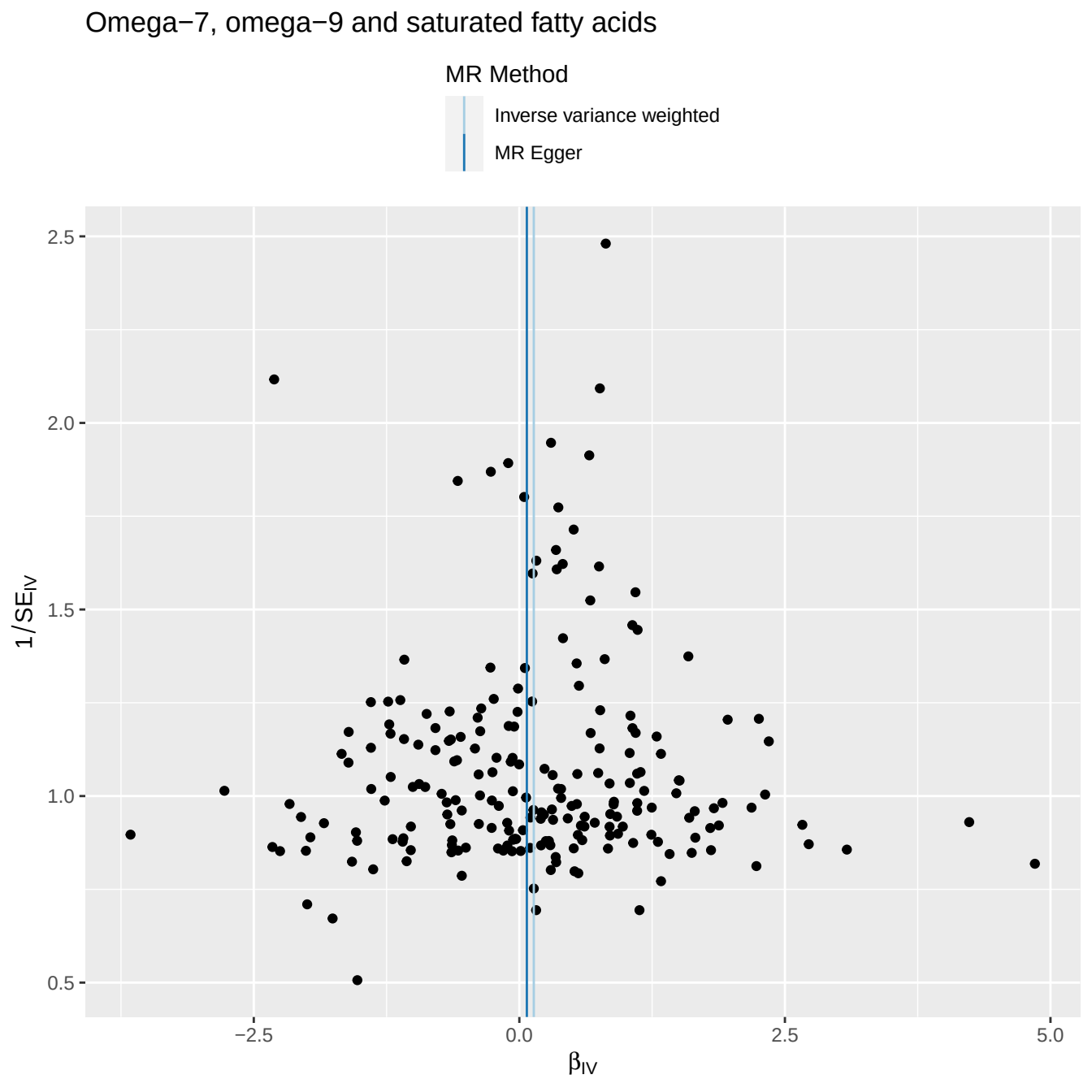

Mean diameter for VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
0
3
6
β_IV


Mono−unsaturated fatty acids
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
−2
0
2
4
β_IV

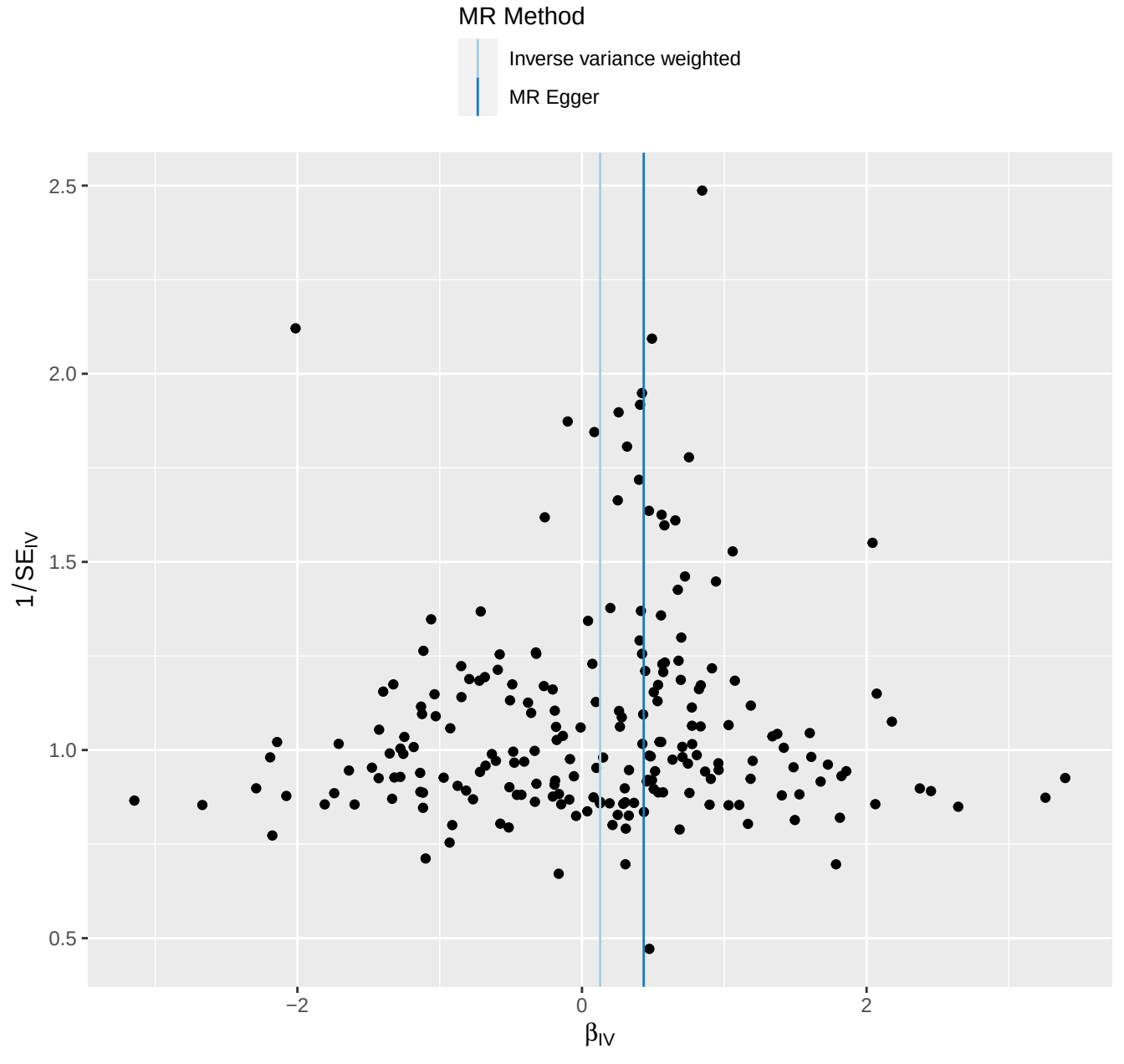
Omega−3 fatty acids

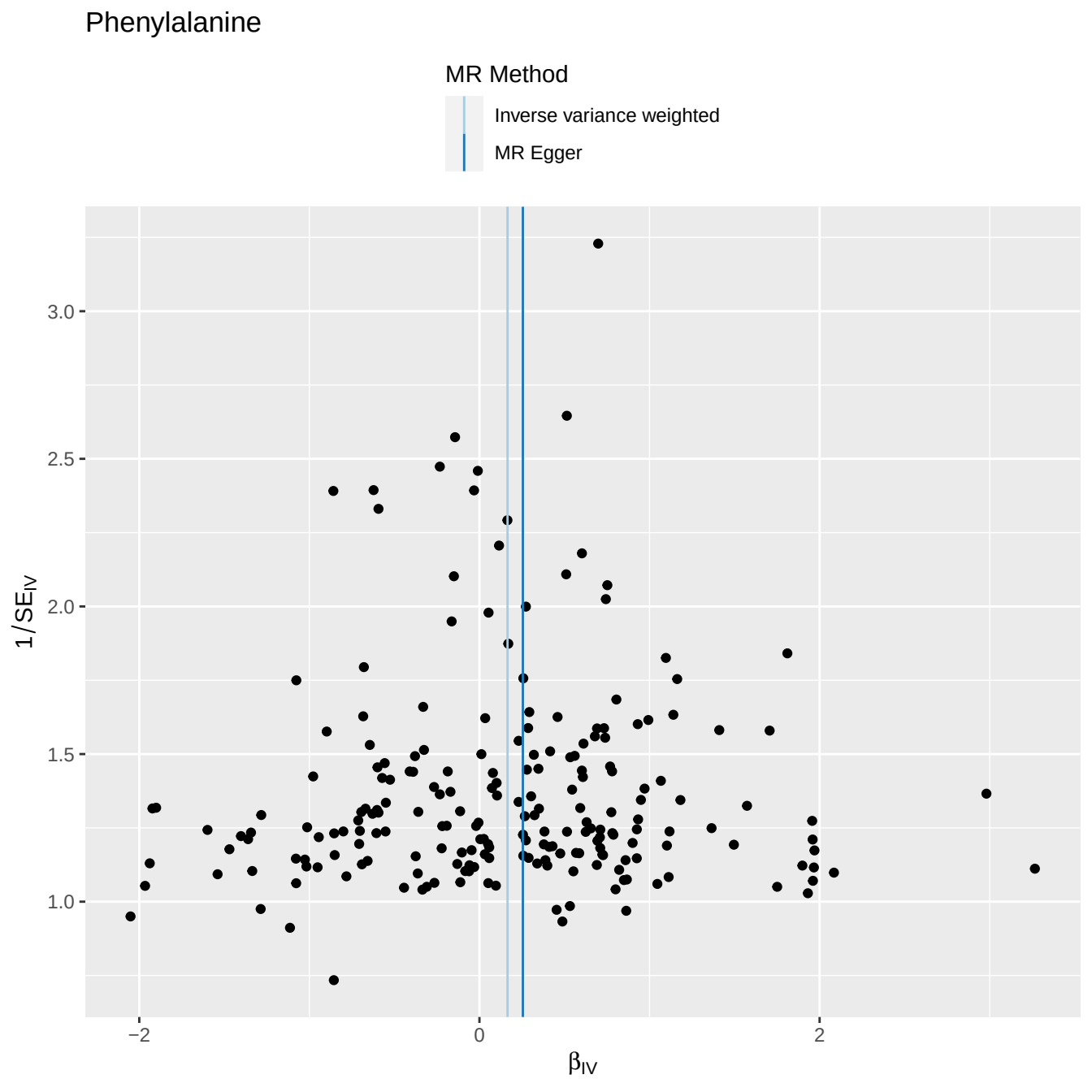


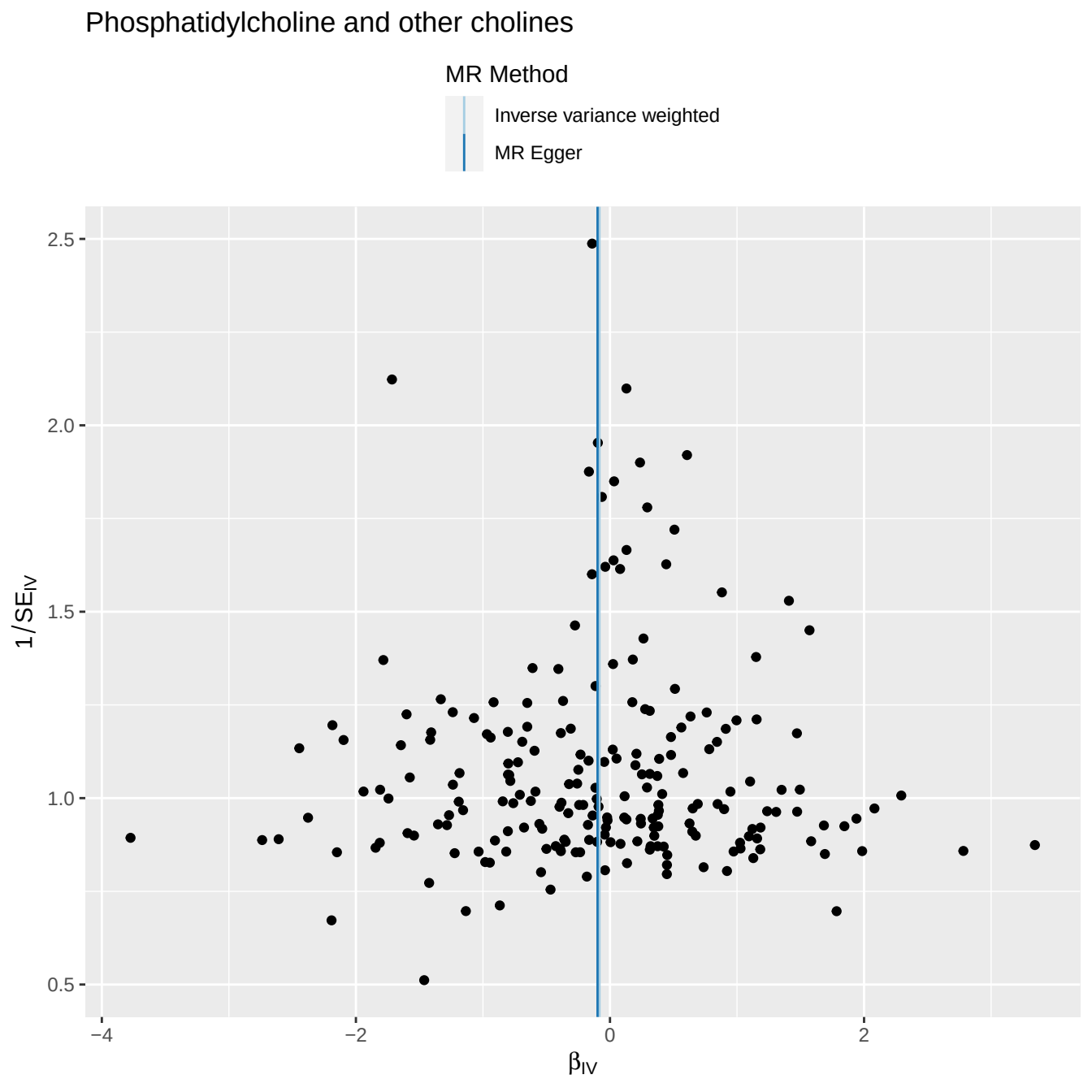

Omega−6 fatty acids
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2.5
0.0
2.5
β_IV

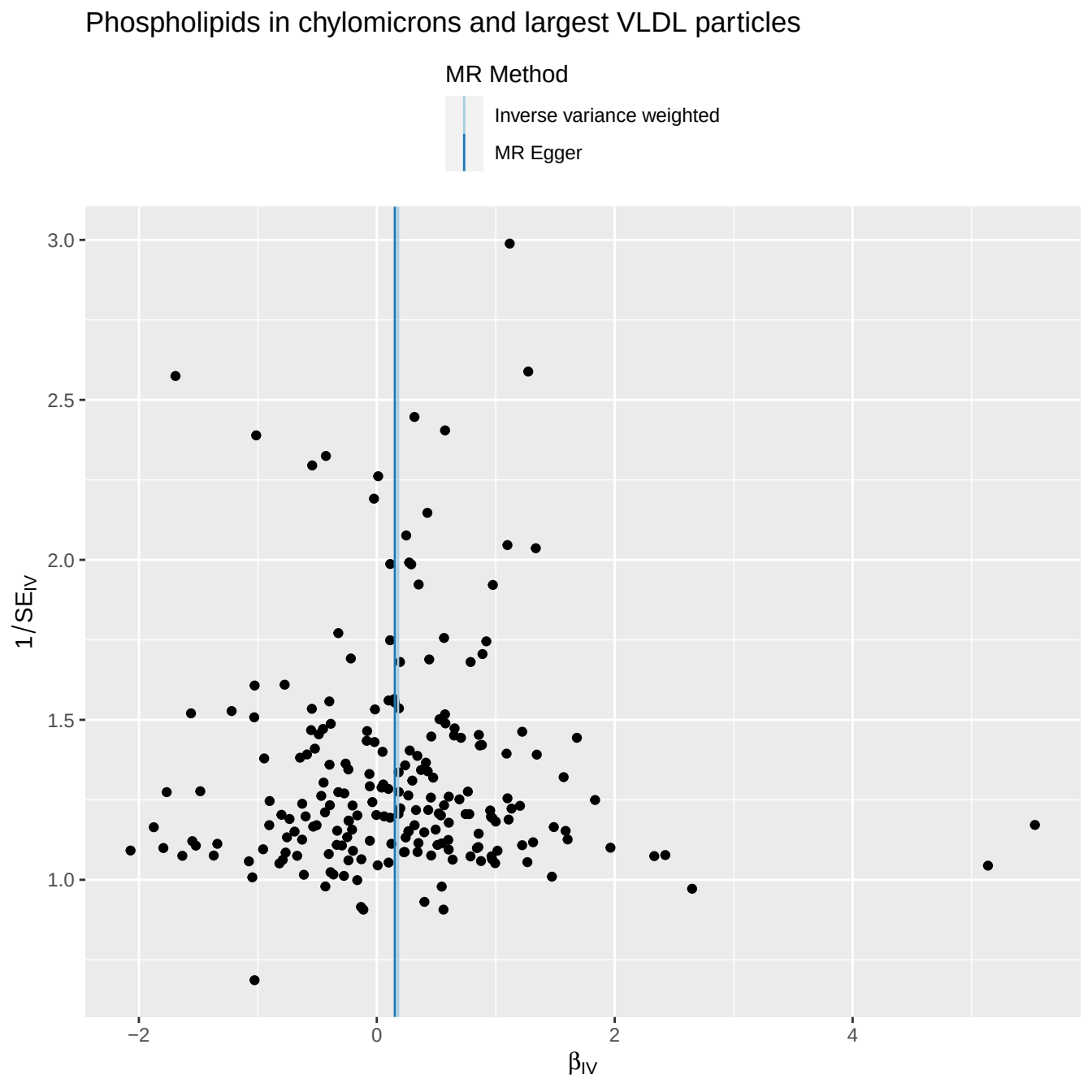

Omega−7, omega−9 and saturated fatty acids
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2.5
0.0
2.5
5.0
β_IV

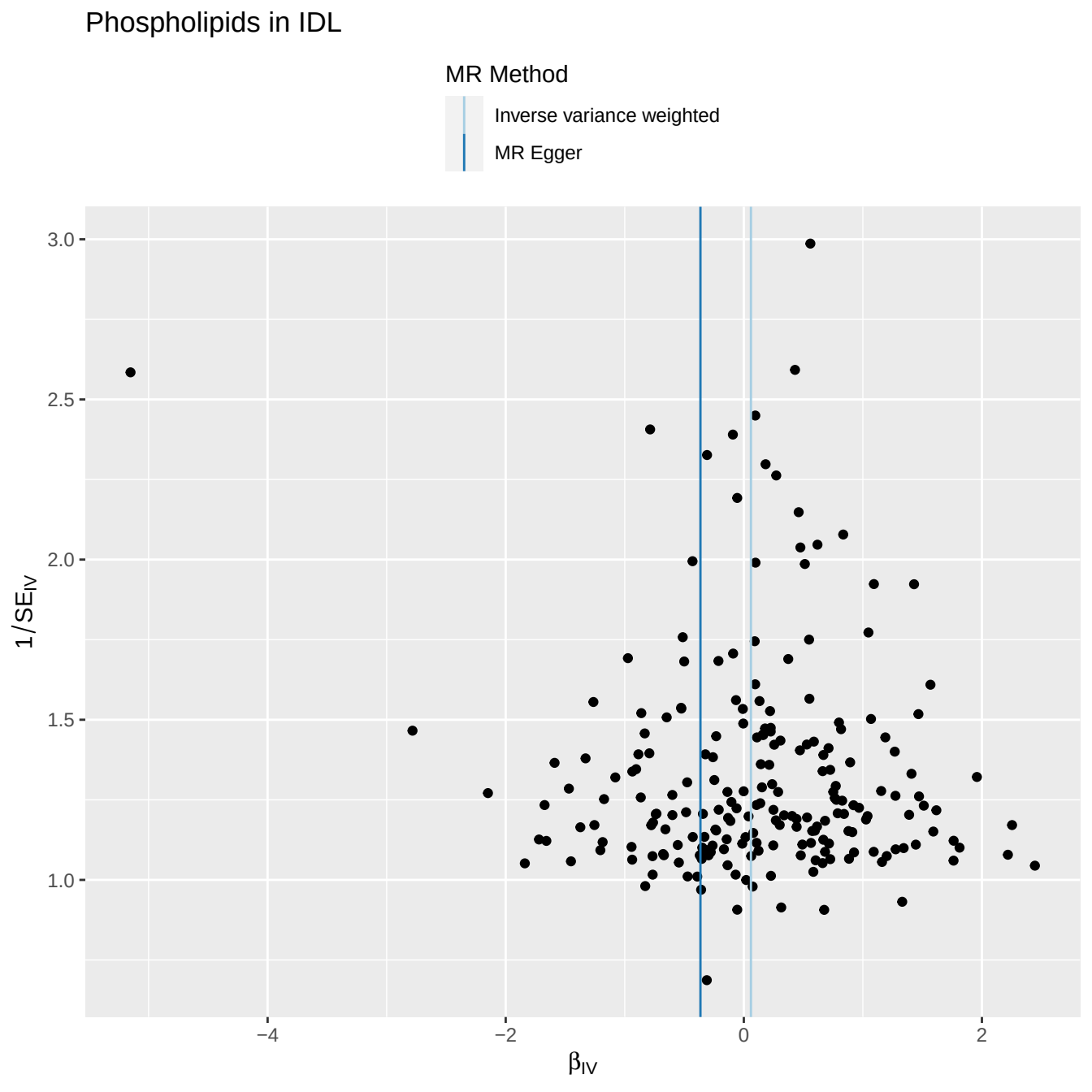
Other polyunsaturated fatty acids than 18:2

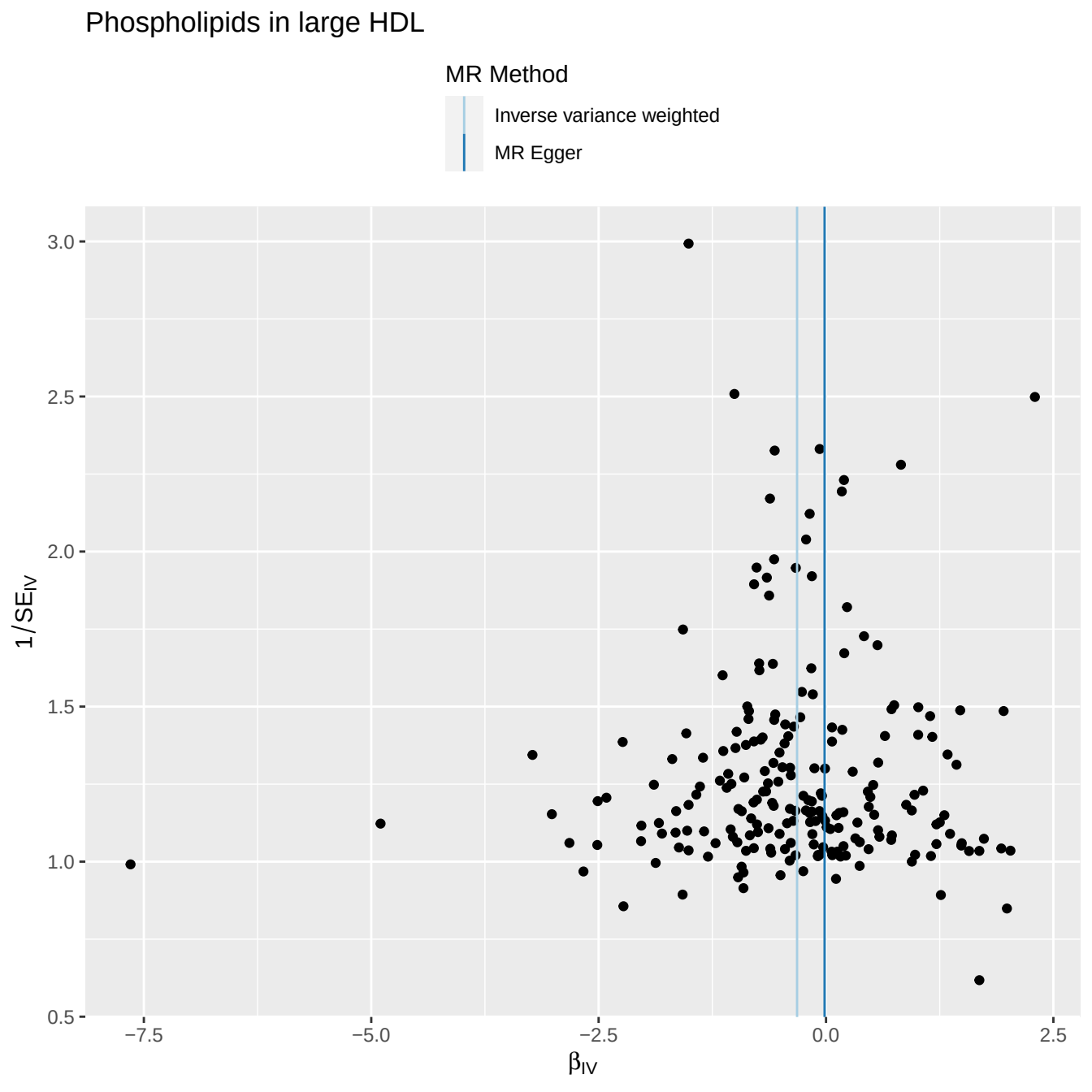


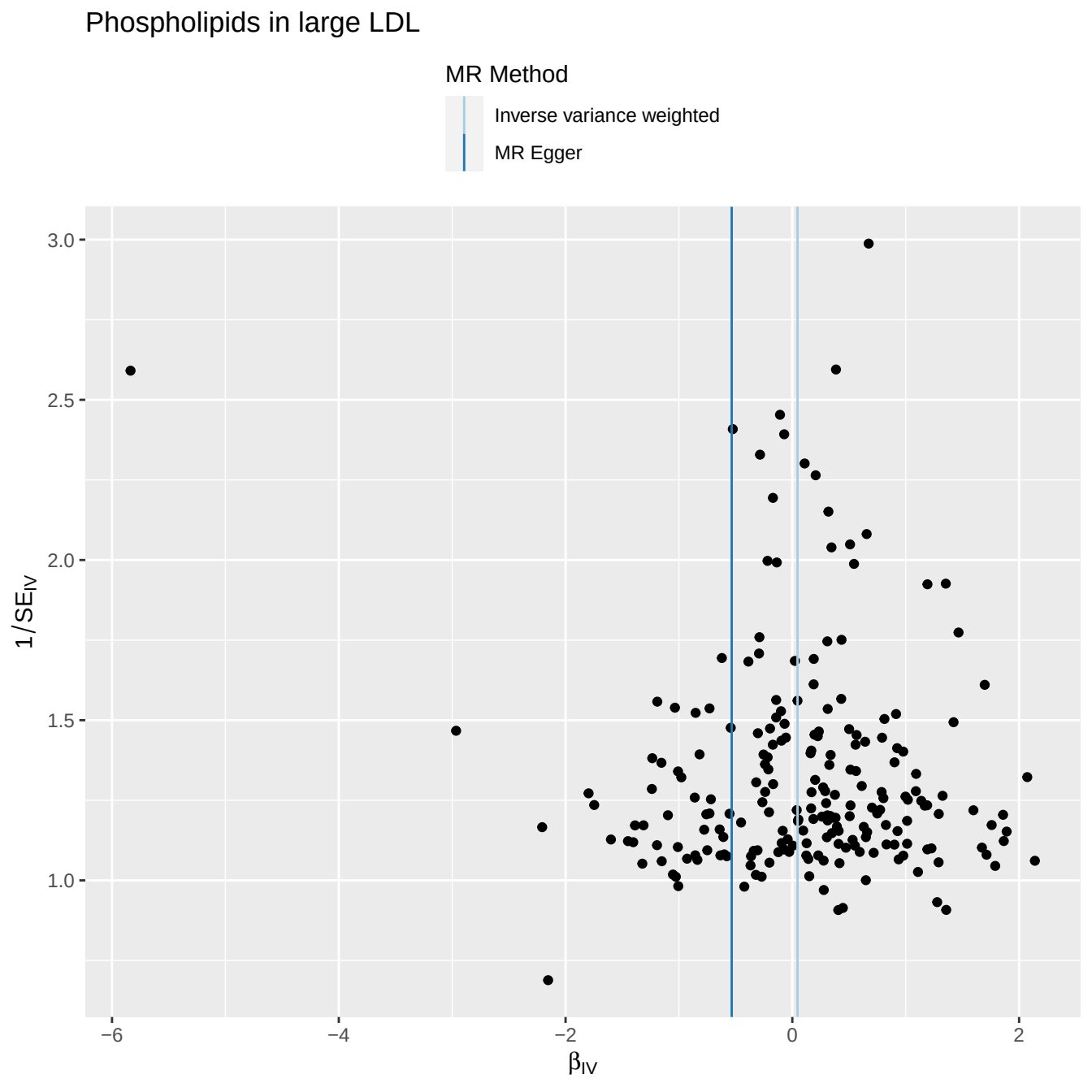

Phenylalanine
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
β_IV

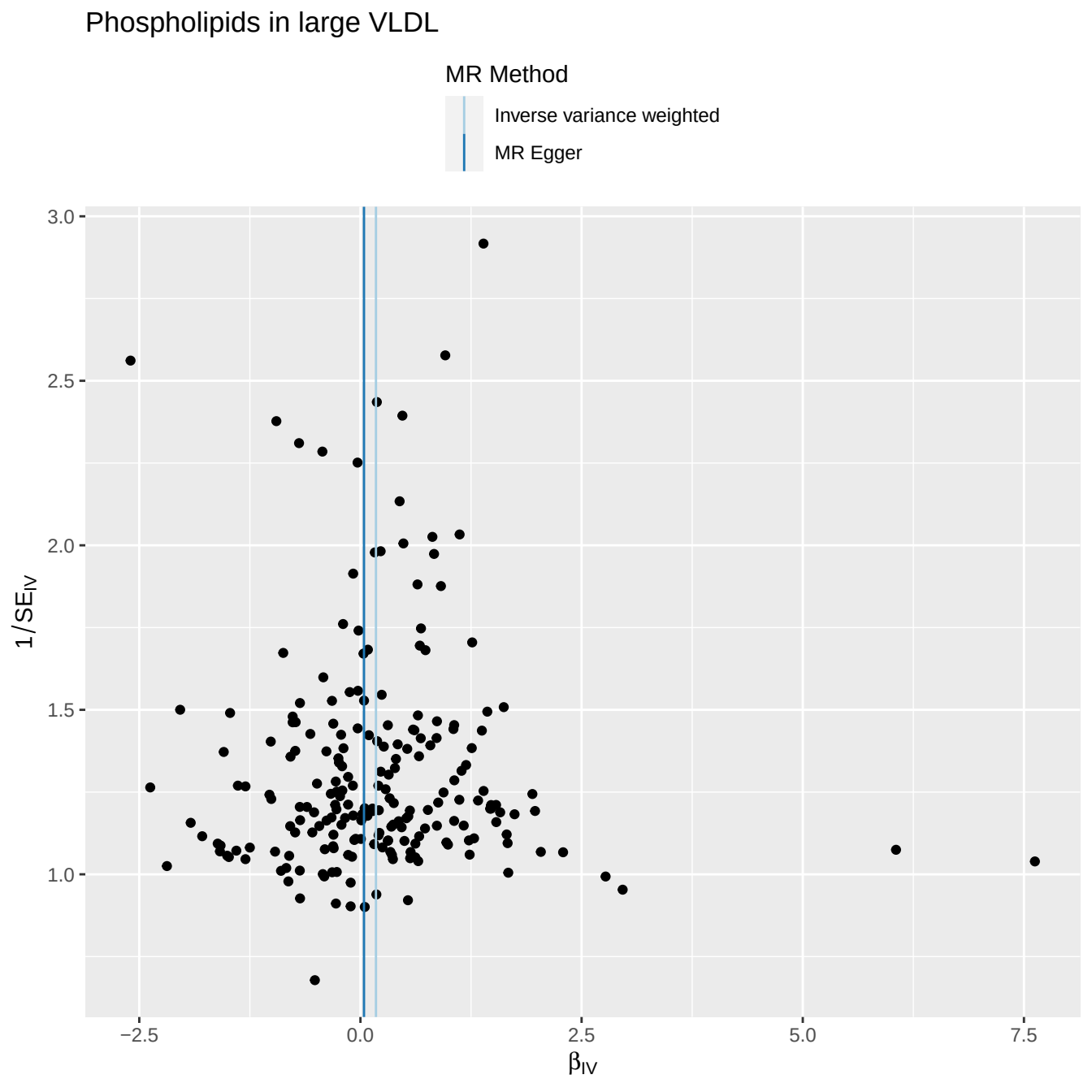

Phosphatidylcholine and other cholines
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
−2
0
2
β_IV

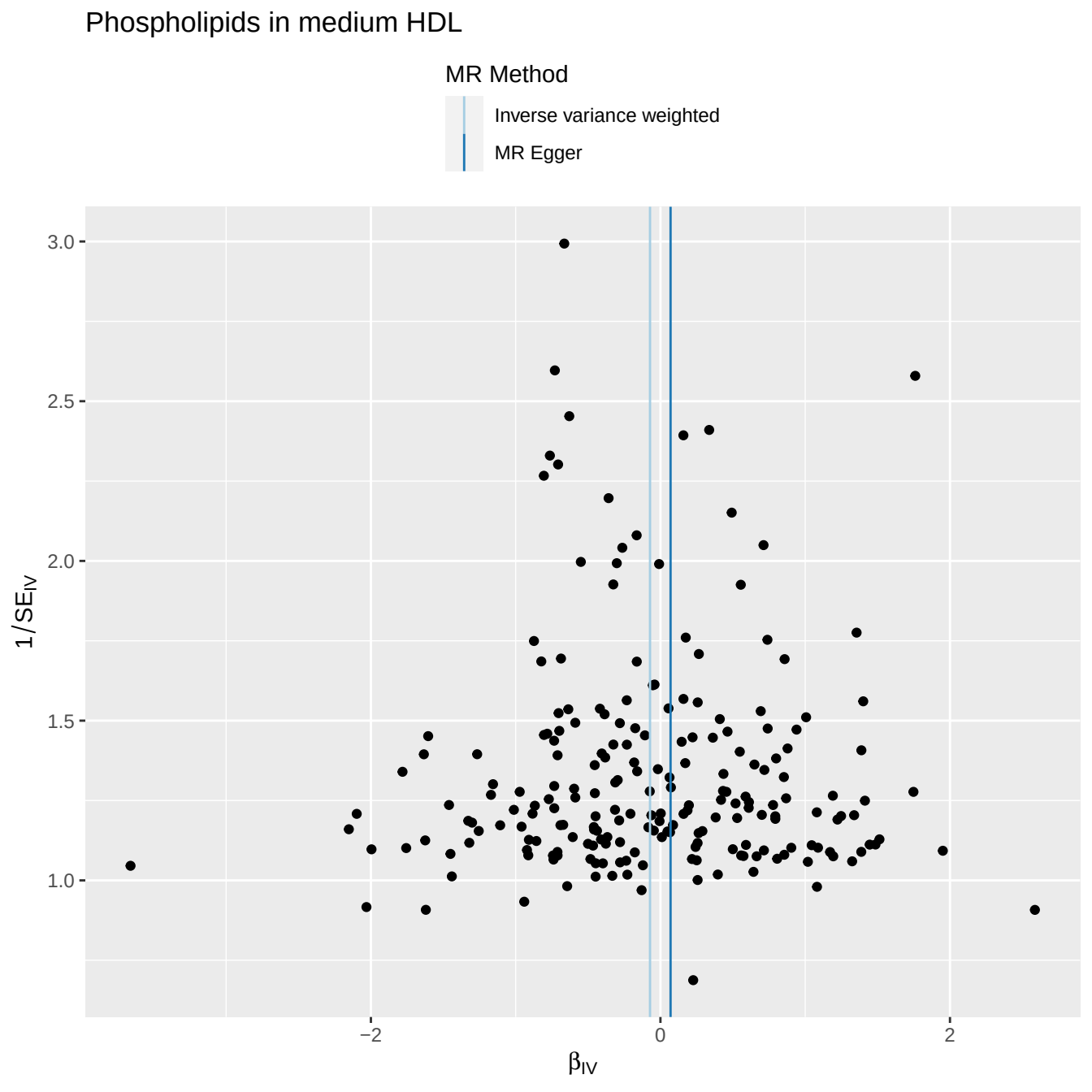

Phospholipids in chylomicrons and largest VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
4
β_IV

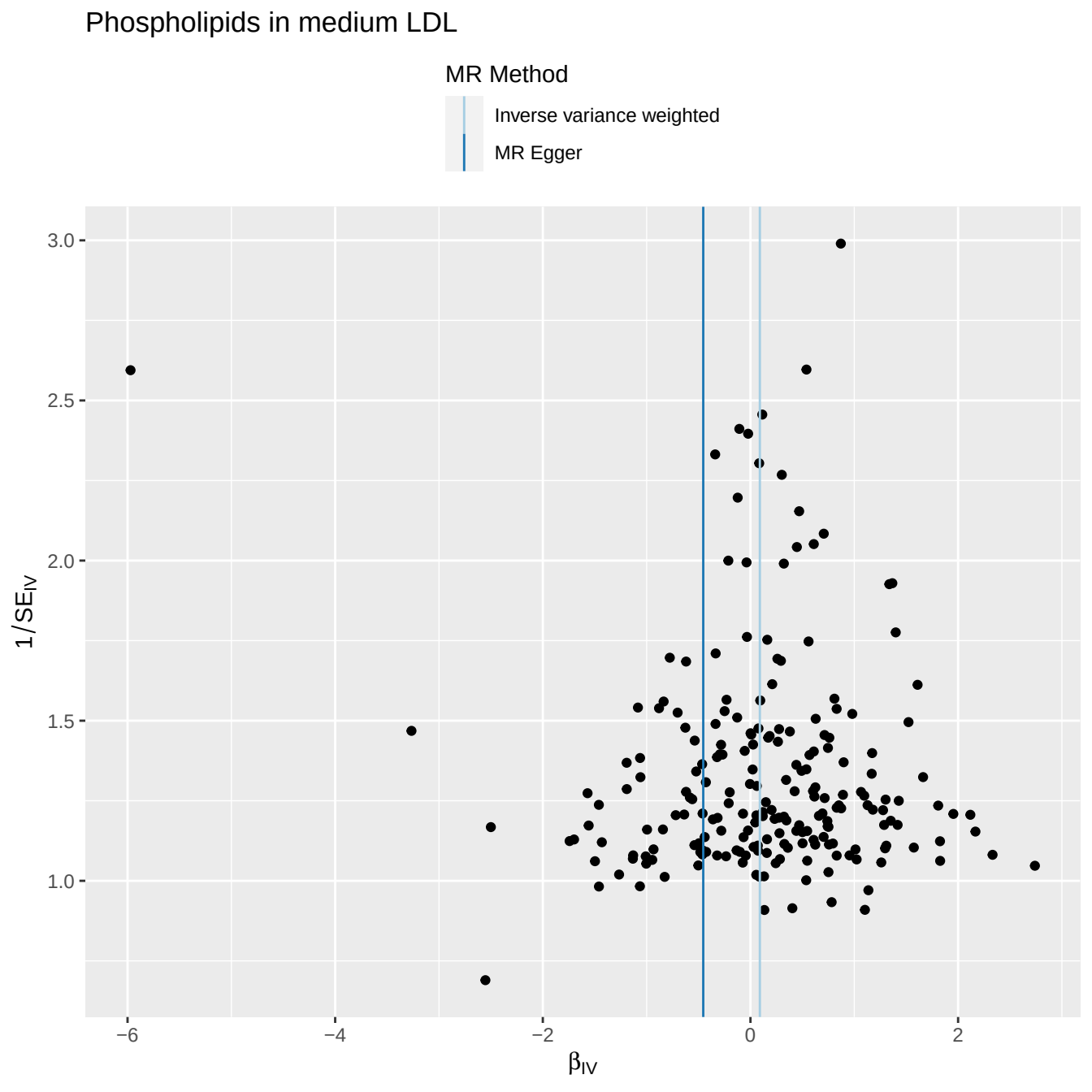

Phospholipids in IDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−4
−2
0
2
β_IV

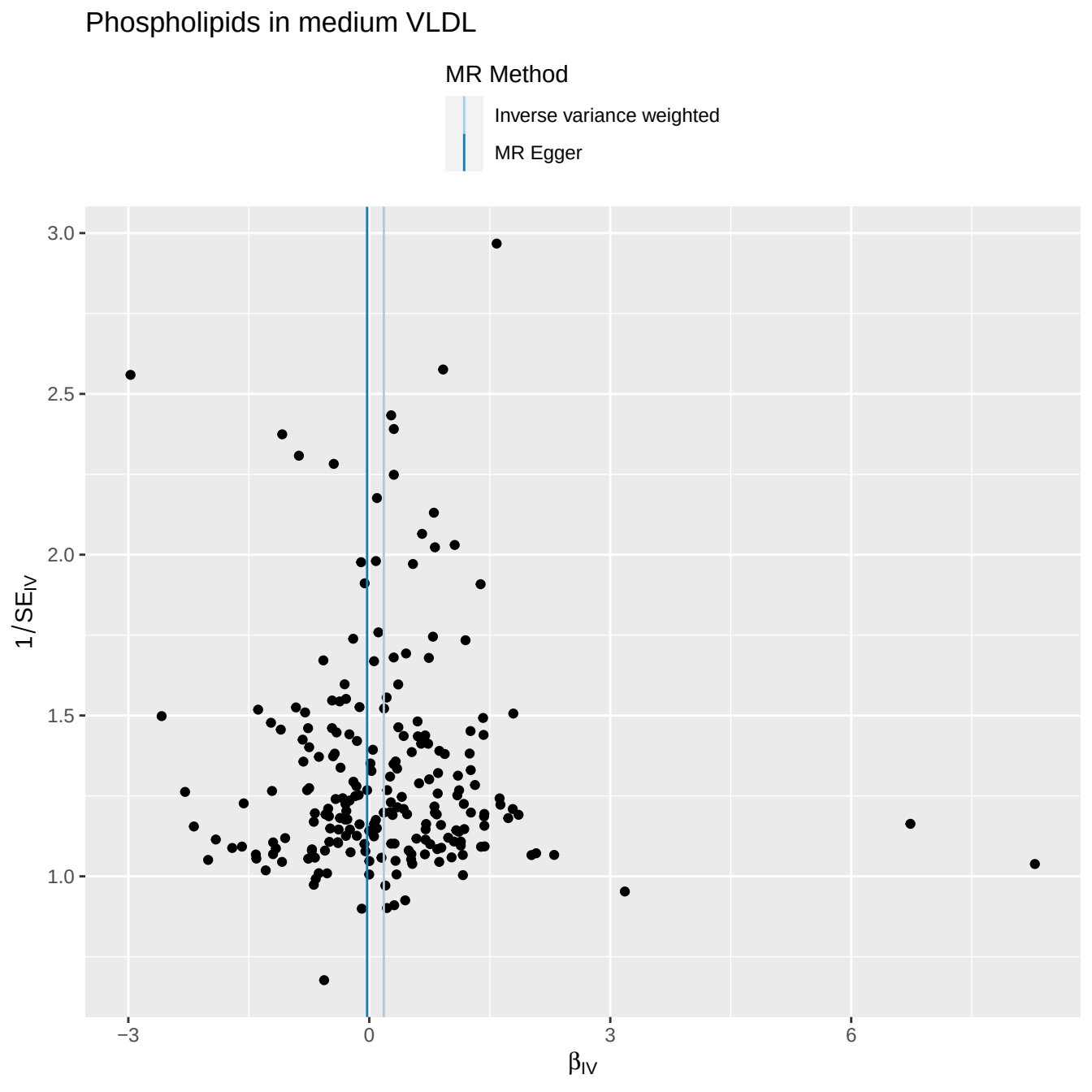

Phospholipids in large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−7.5
−5.0
−2.5
0.0
2.5
β_IV

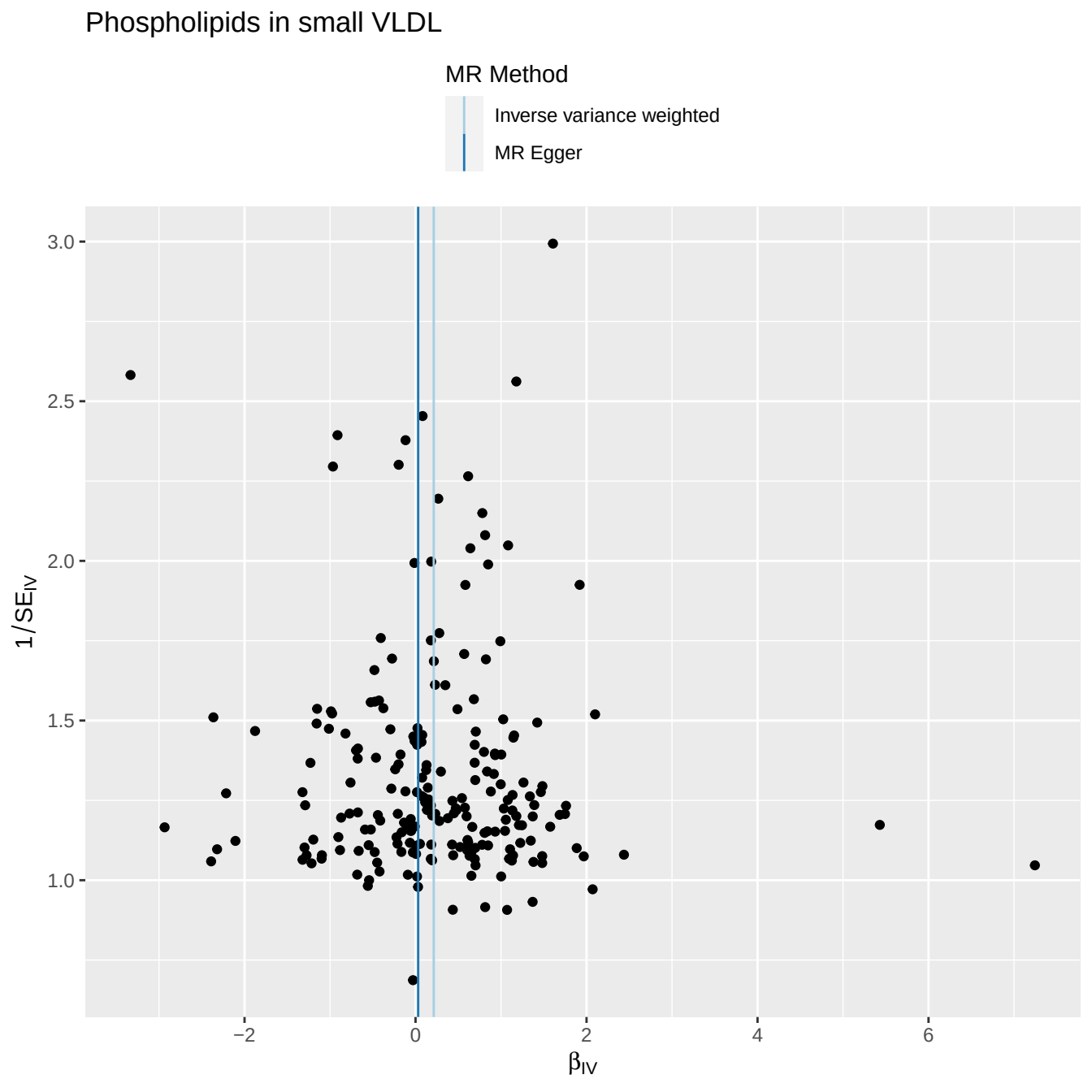

Phospholipids in large LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−6
−4
−2
0
2
β_IV

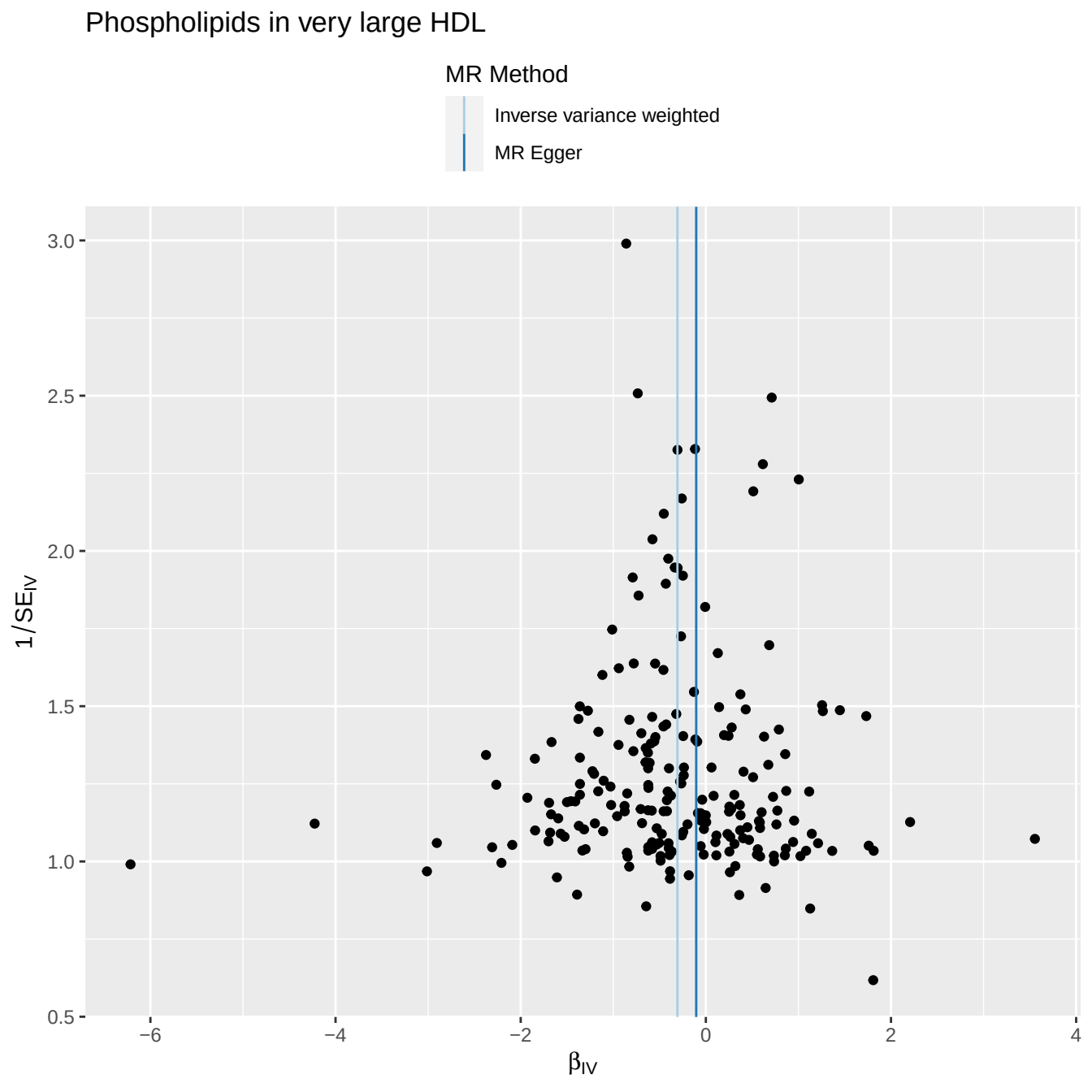

Phospholipids in large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2.5
0.0
2.5
5.0
7.5
β_IV

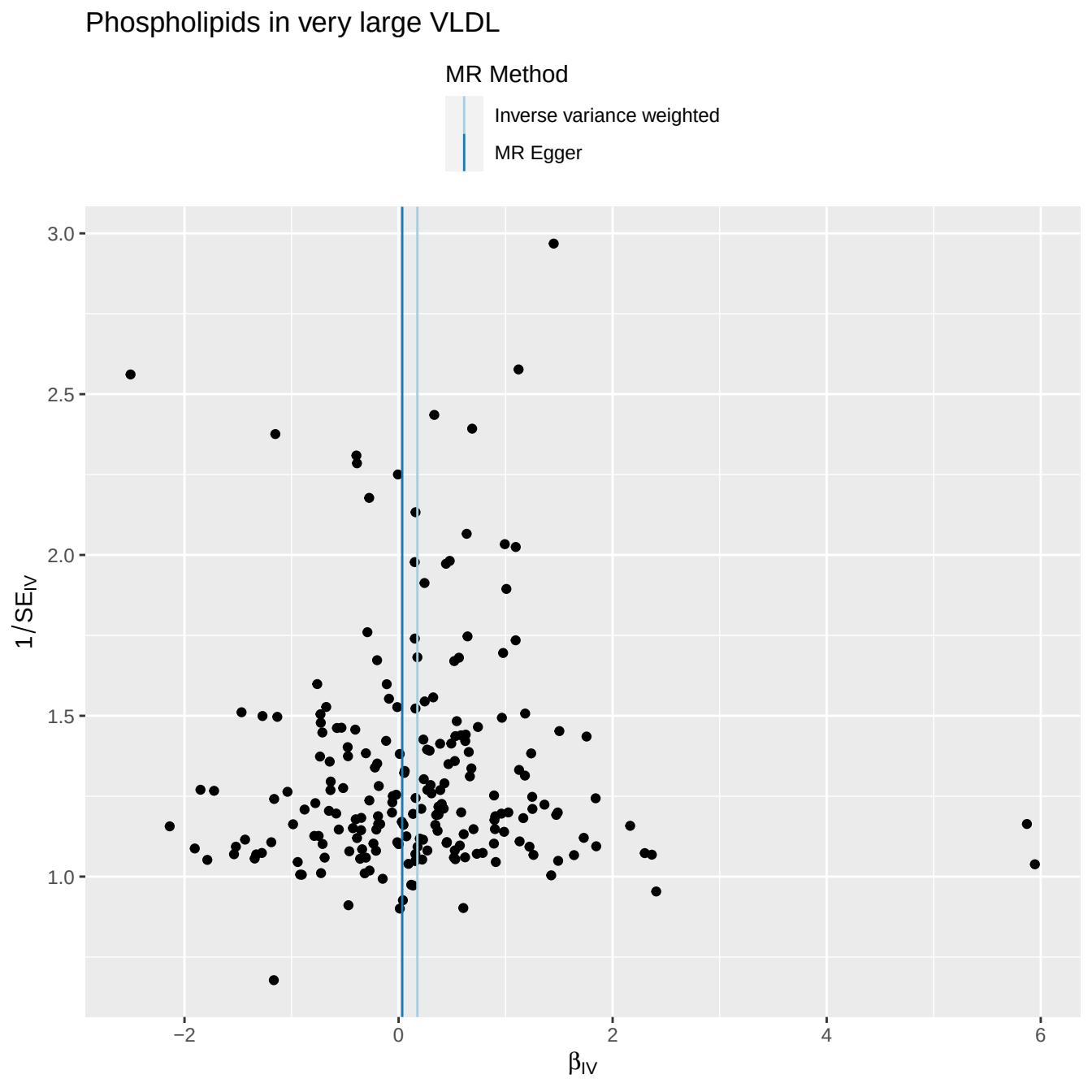

Phospholipids in medium HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
β_IV

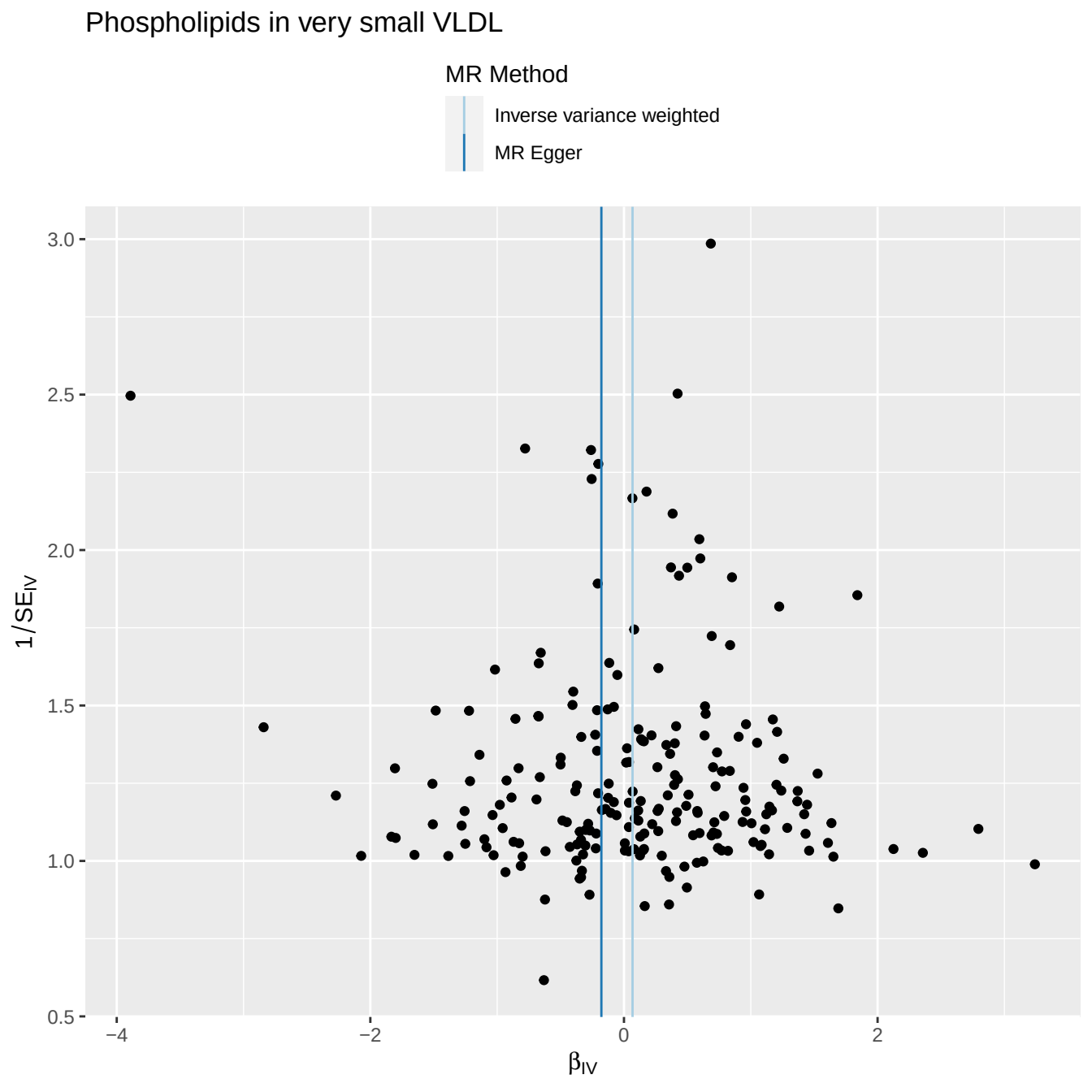

Phospholipids in medium LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−6
−4
−2
0
2
β_IV

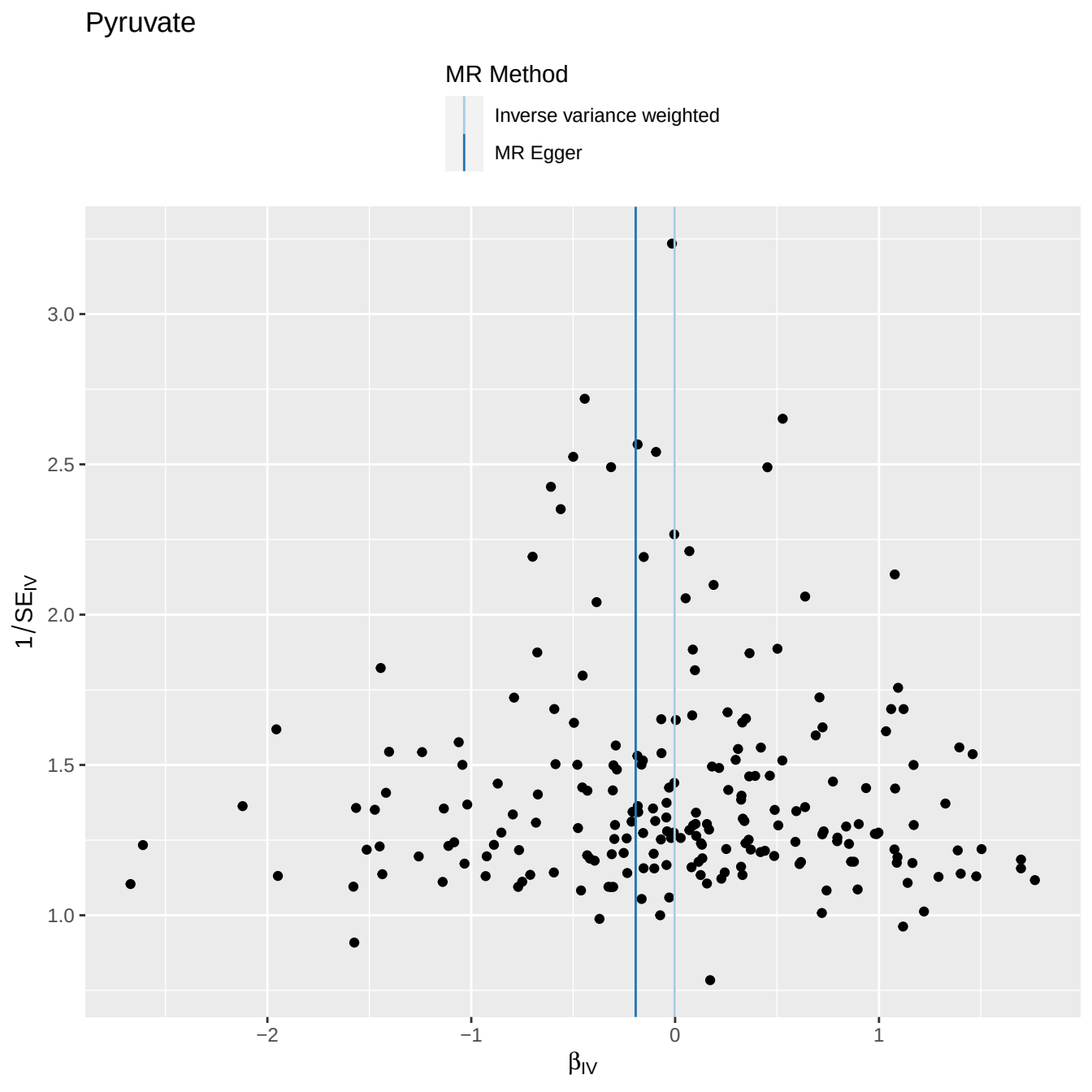

Phospholipids in medium VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−3
0
3
6
β_IV

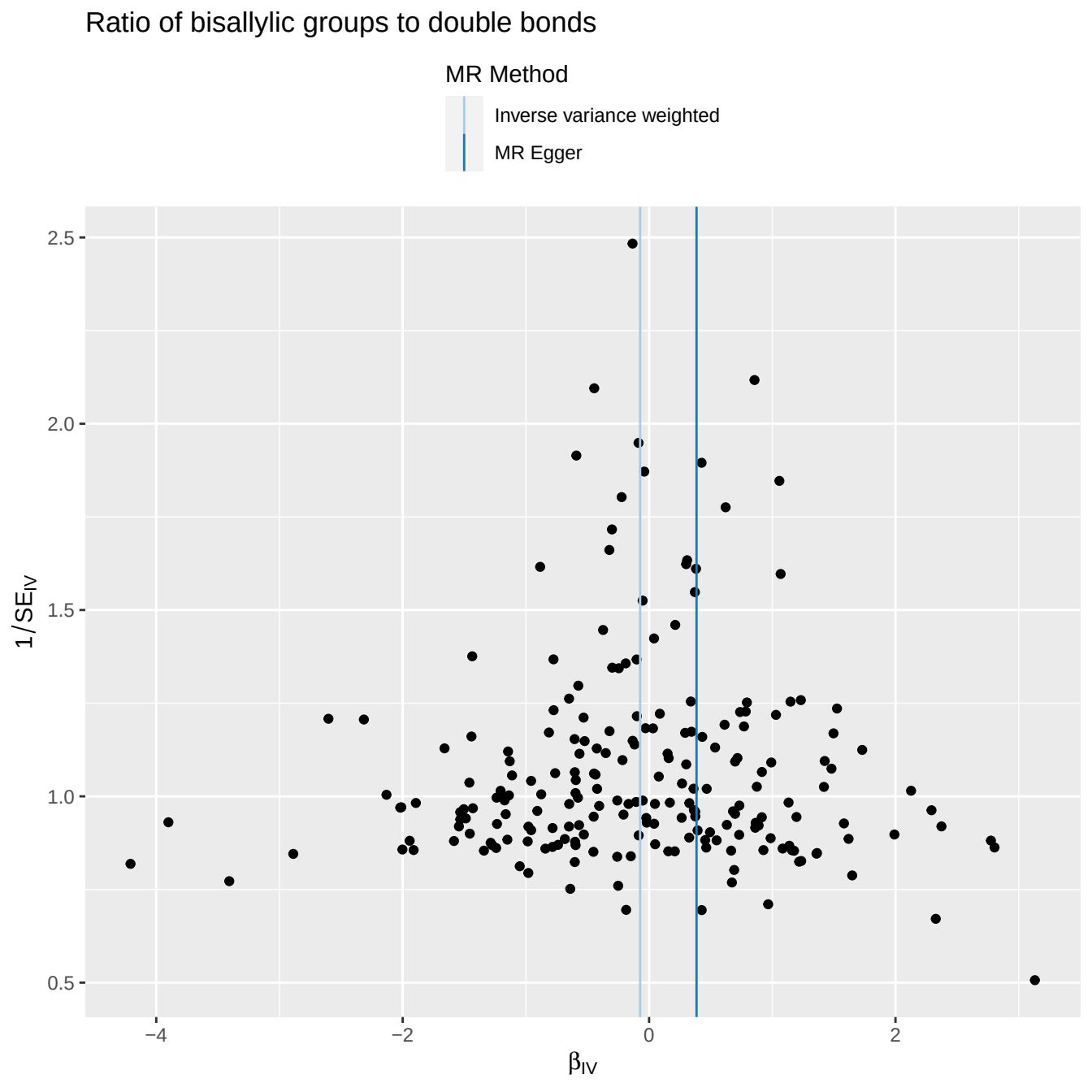

Phospholipids in small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
4
6
β_IV

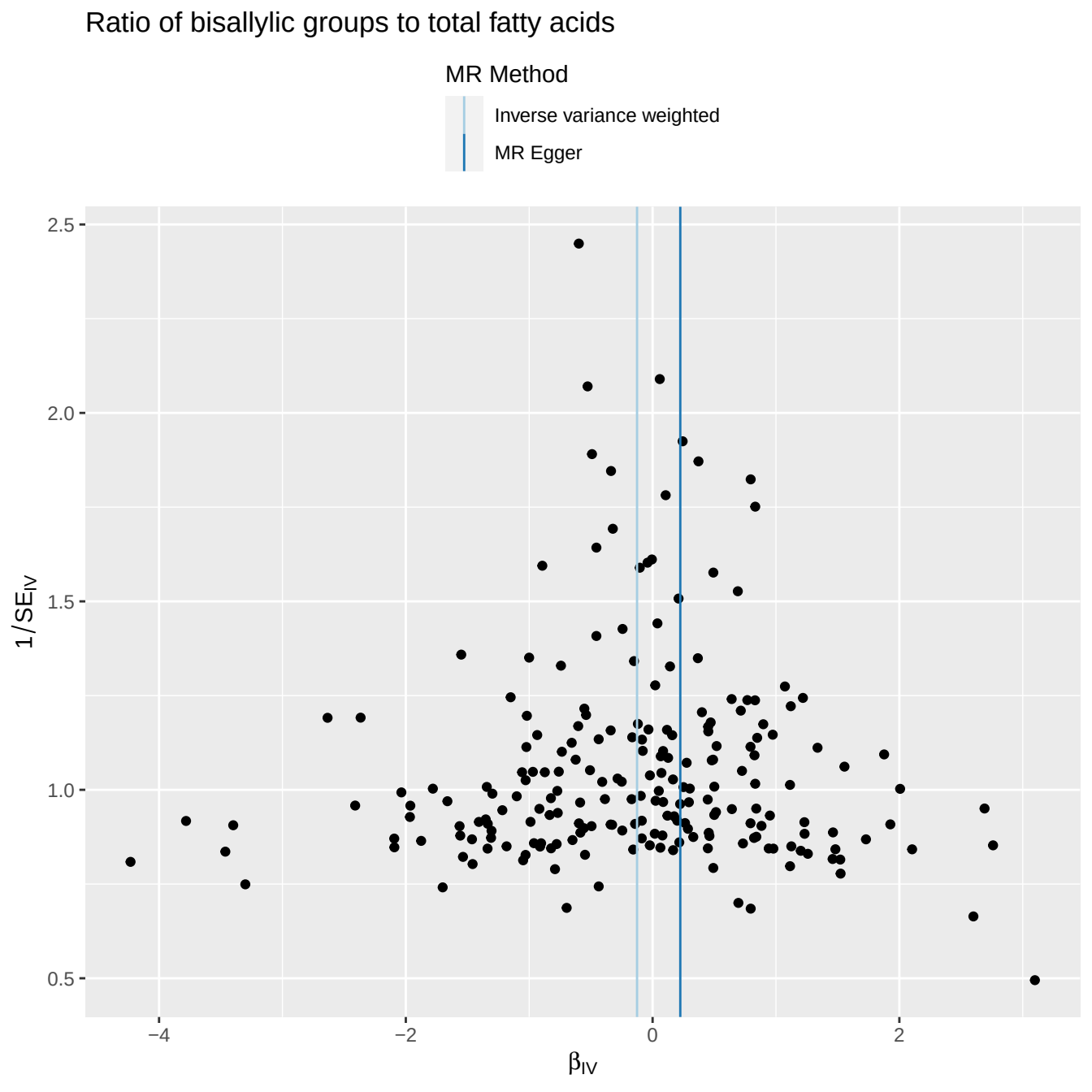

Phospholipids in very large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−6
−4
−2
0
2
4
β_IV


Phospholipids in very large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
4
6
β_IV

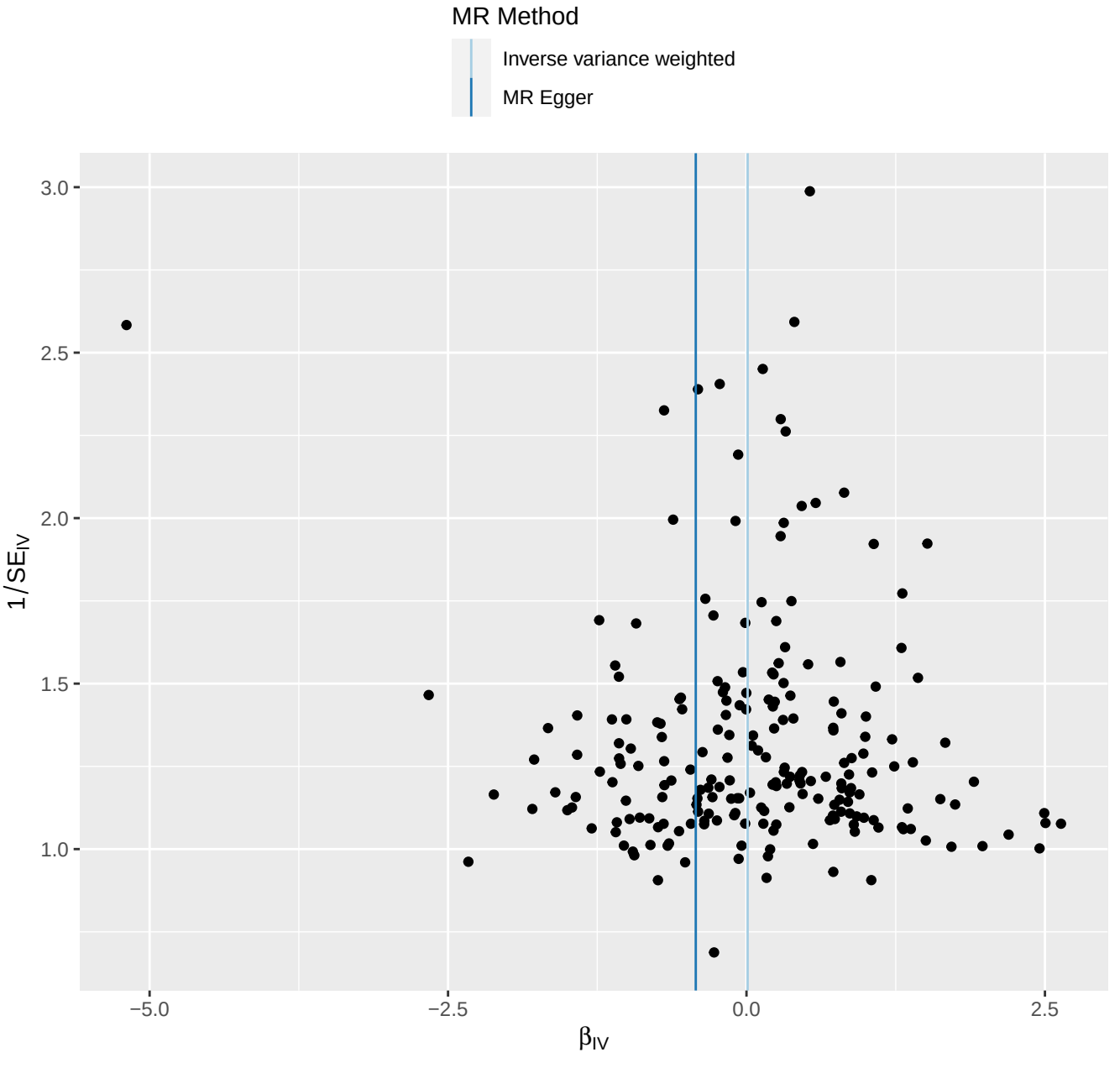

Phospholipids in very small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
−2
0
2
β_IV

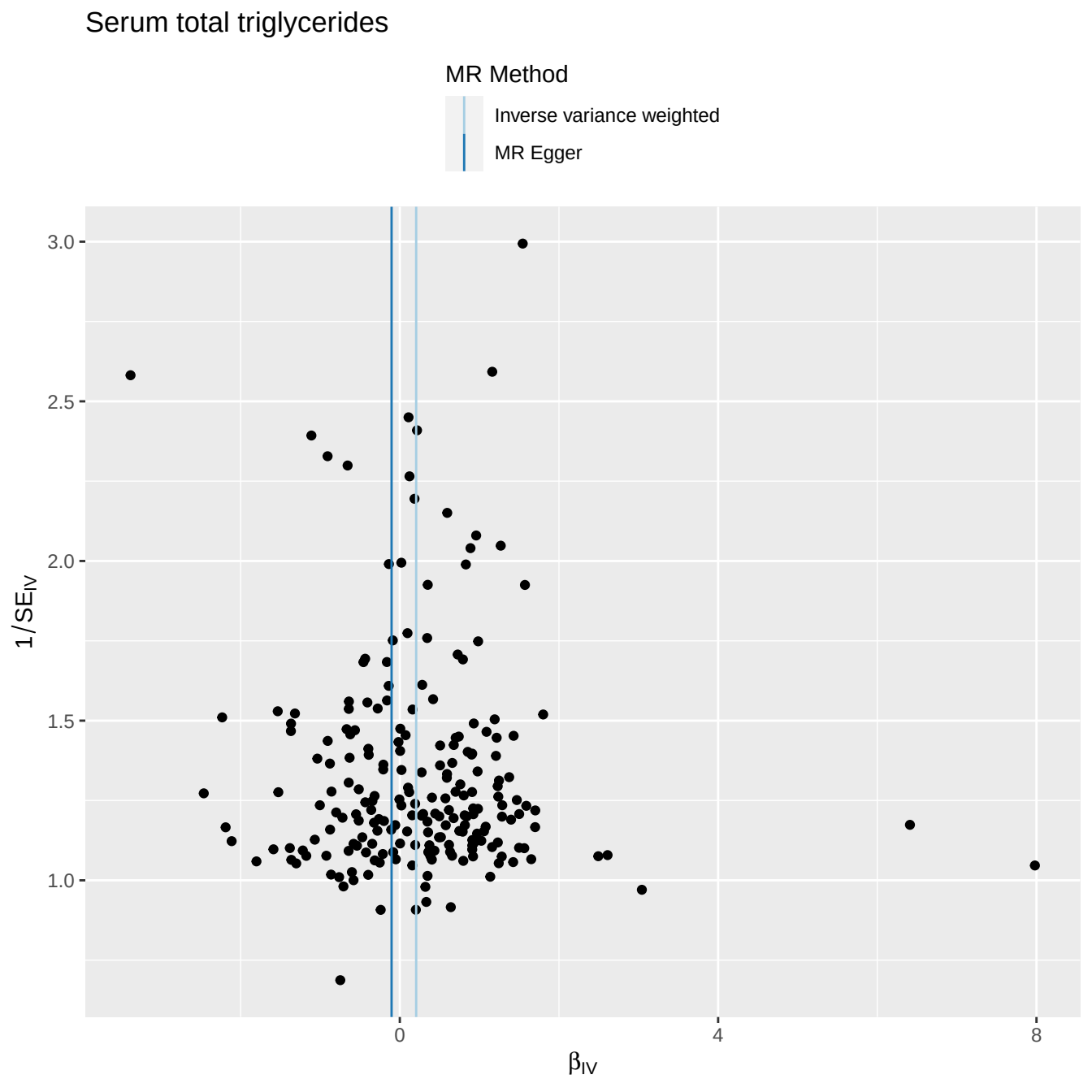

Pyruvate
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
β_IV


Ratio of bisallylic groups to double bonds
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
−2
0
2
β_IV

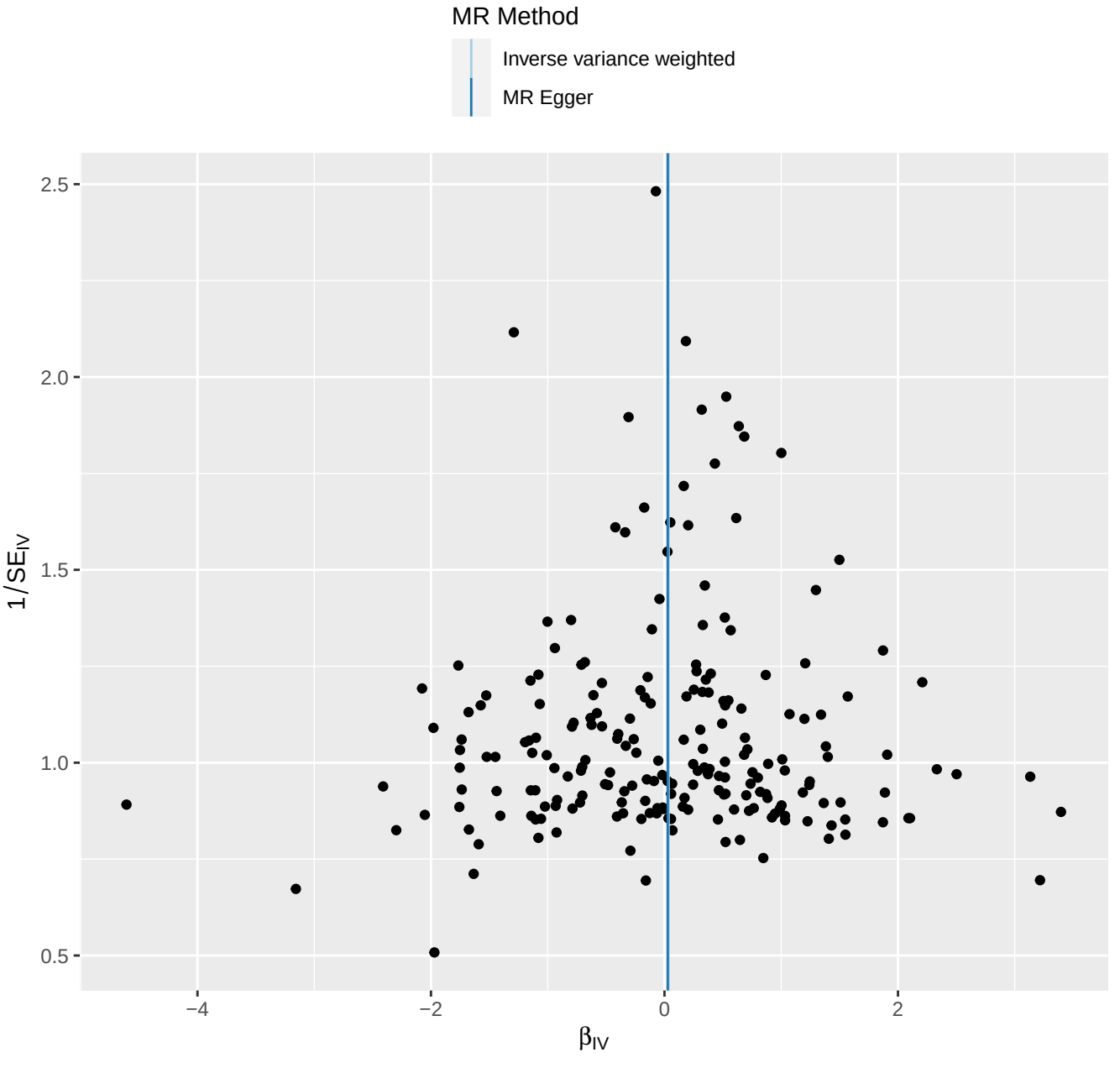

Ratio of bisallylic groups to total fatty acids
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
−2
0
2
β_IV

Serum total cholesterol

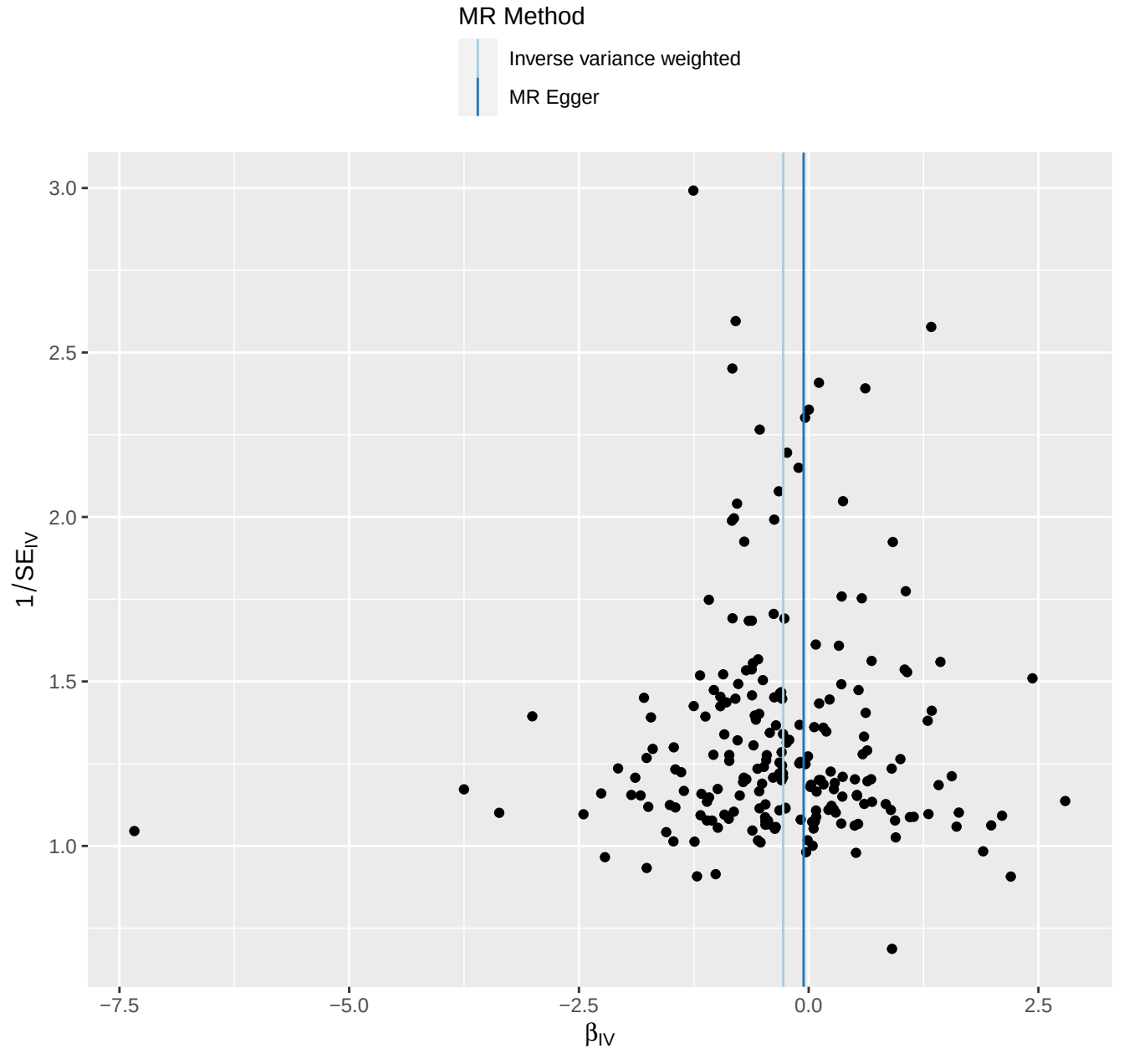


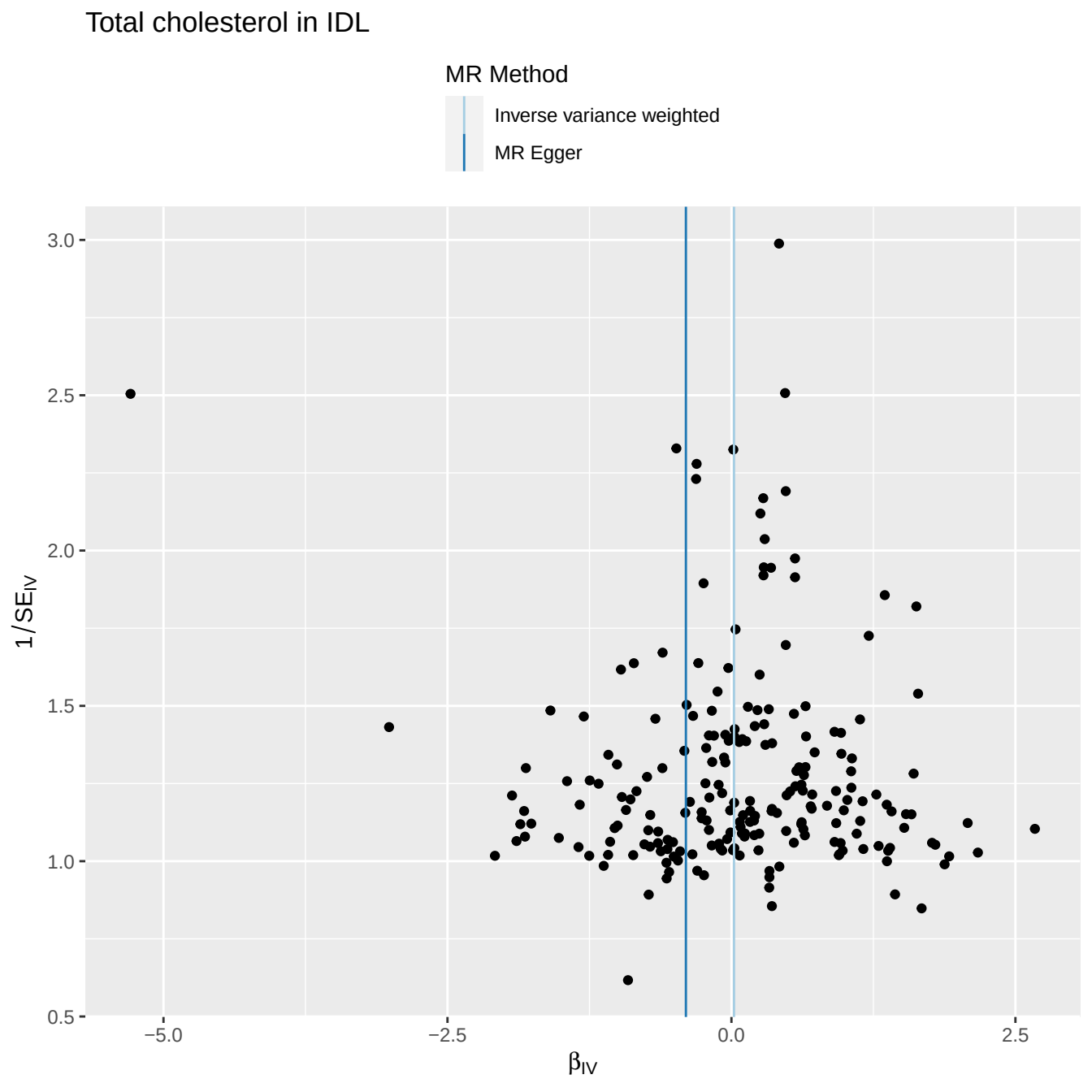

Serum total triglycerides
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
0
4
8
β_IV

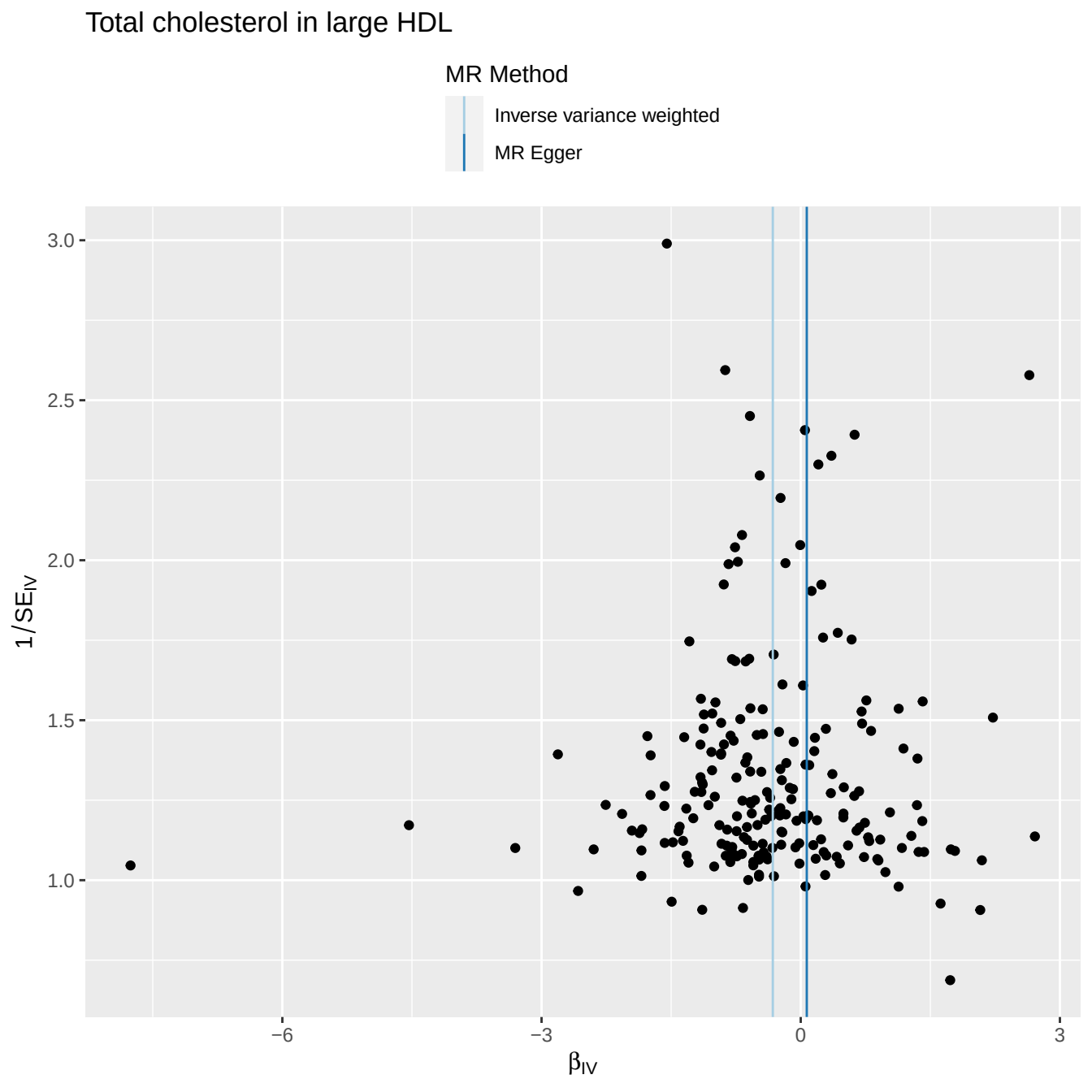
Sphingomyelins

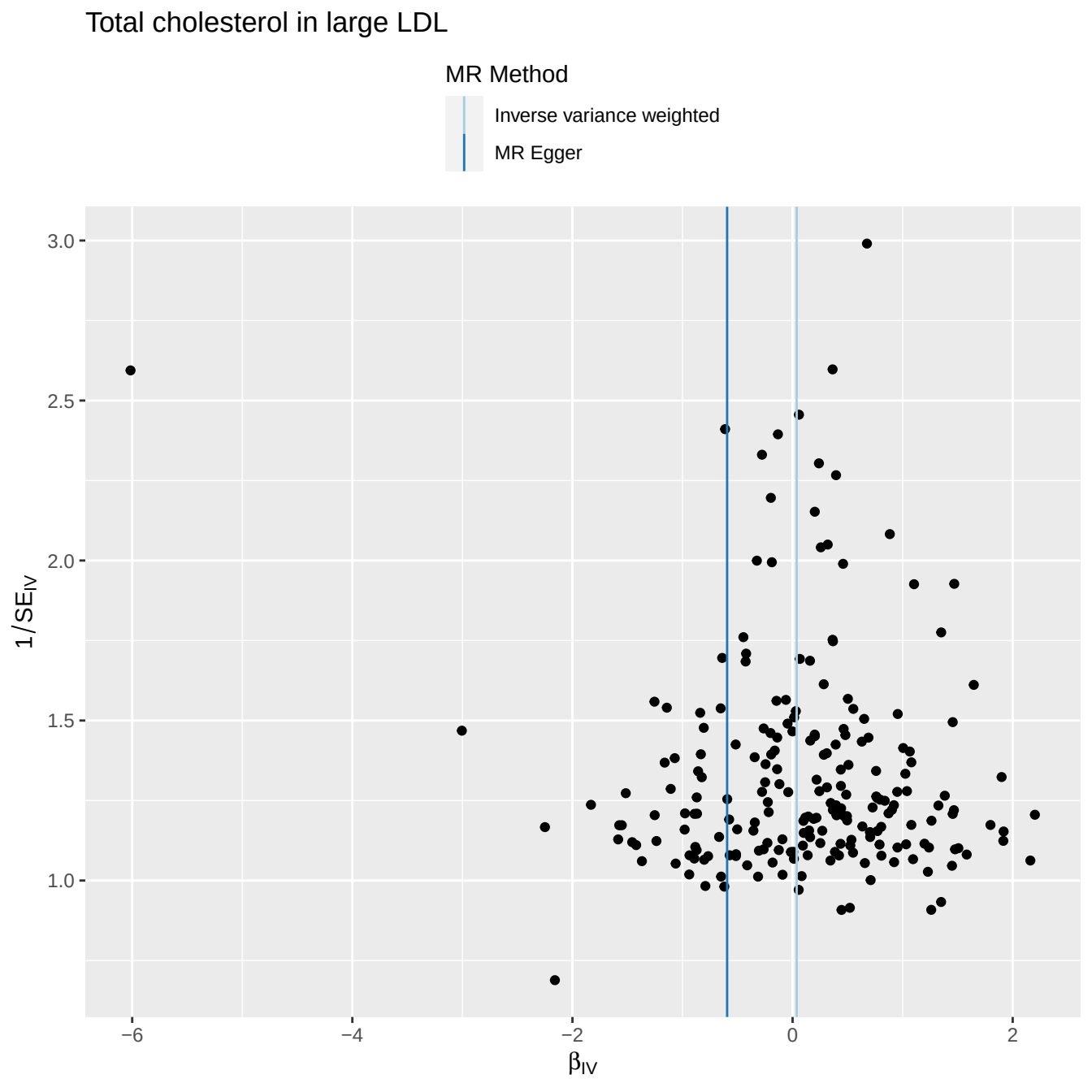


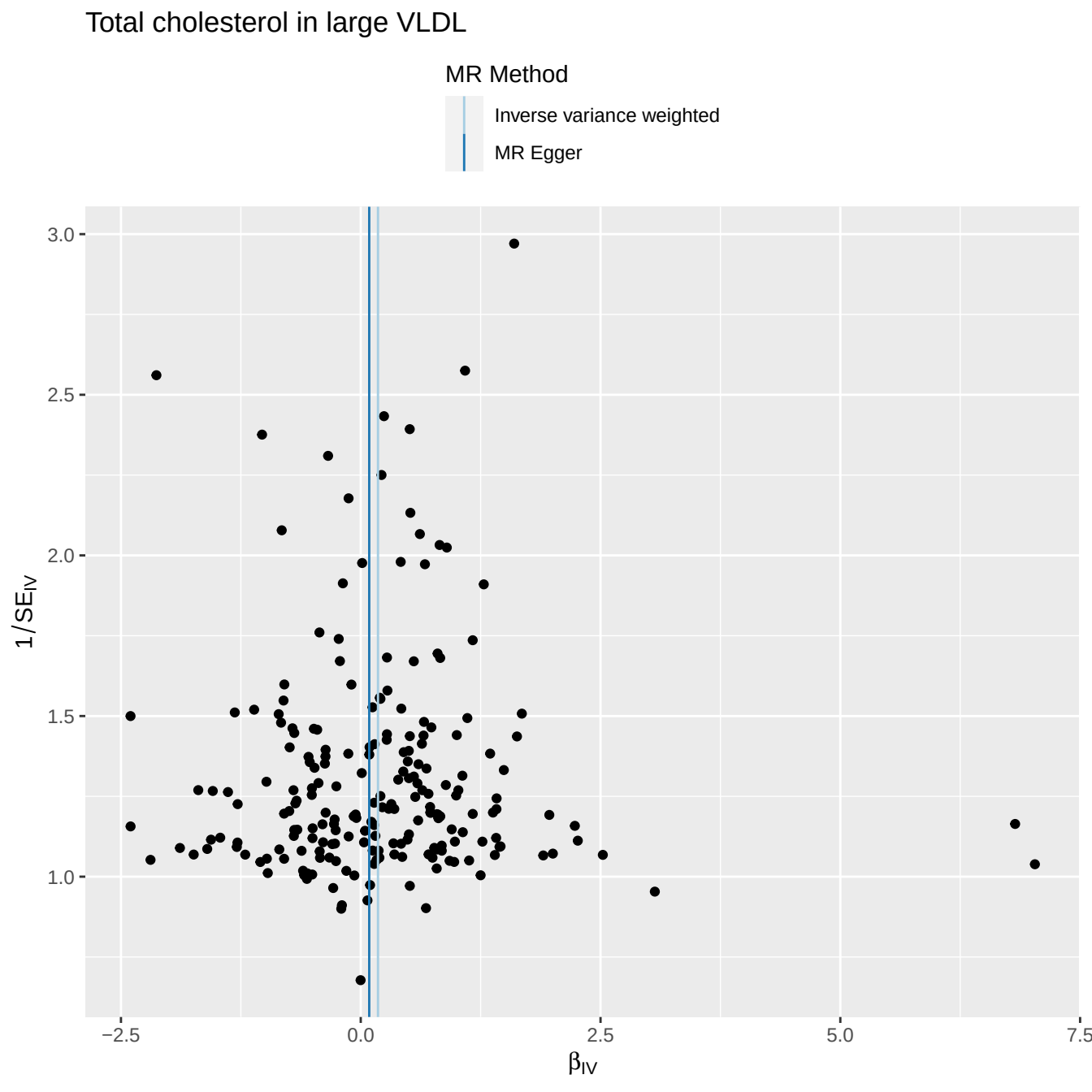
Total cholesterol in HDL

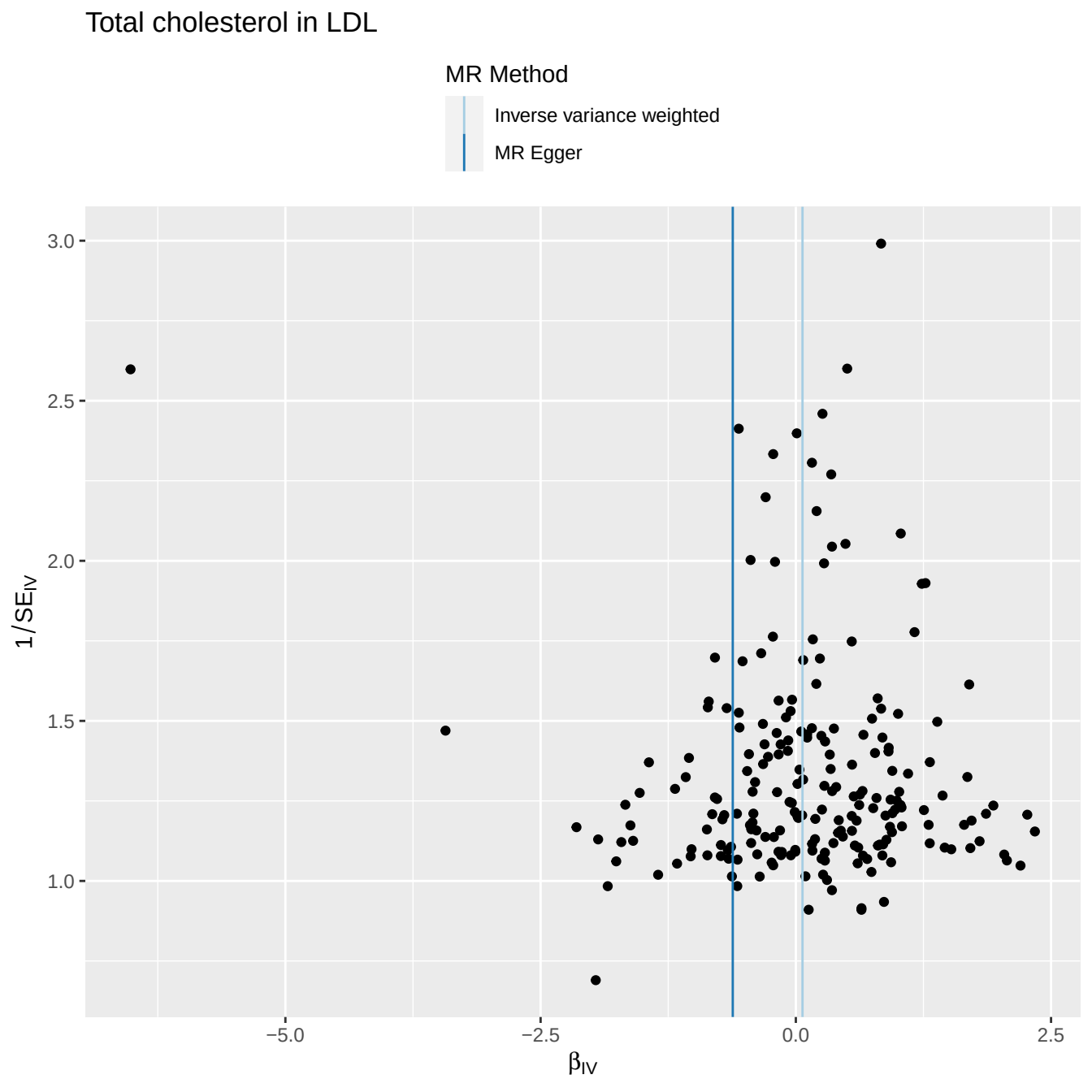


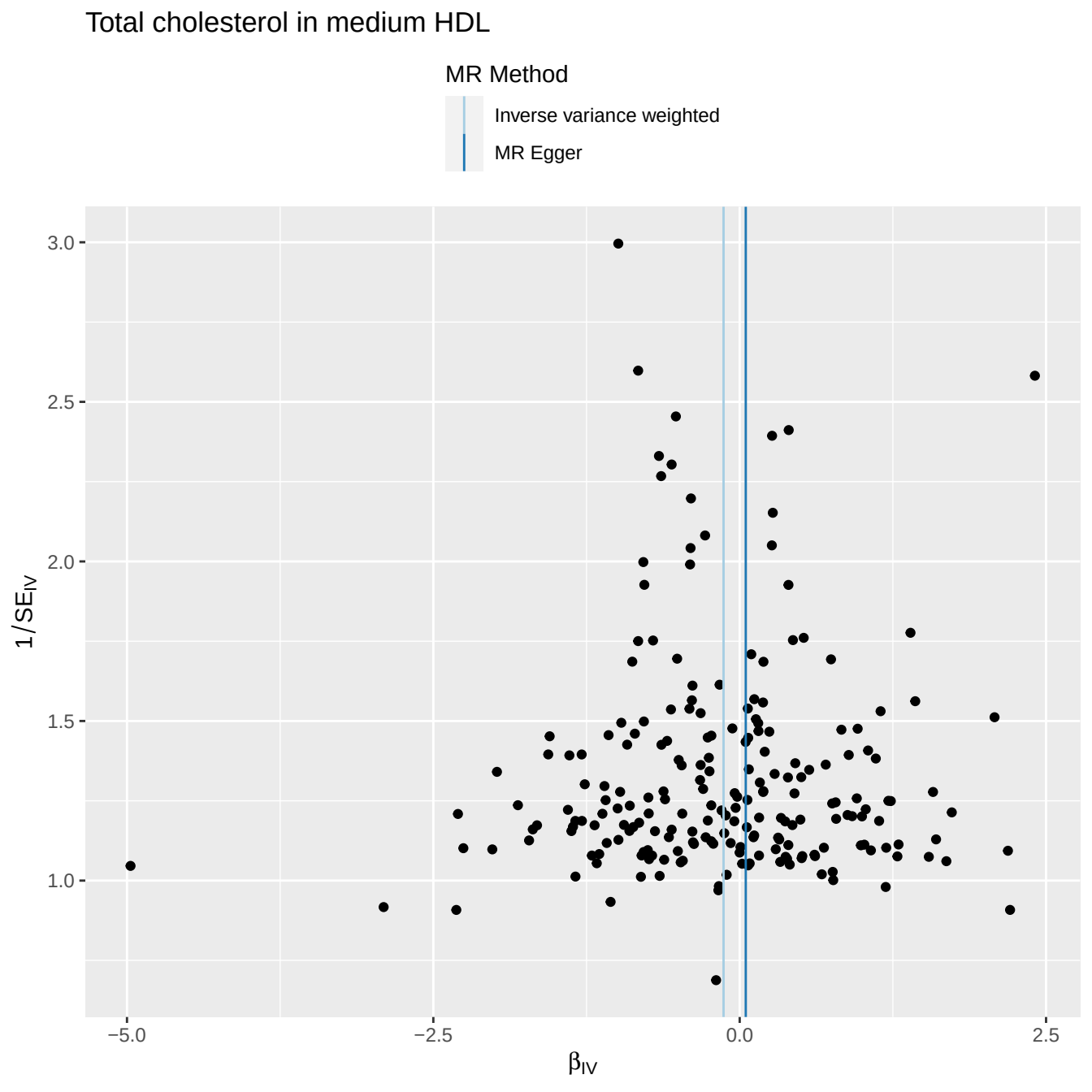

Total cholesterol in IDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV


Total cholesterol in large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−6
−3
0
3
β_IV

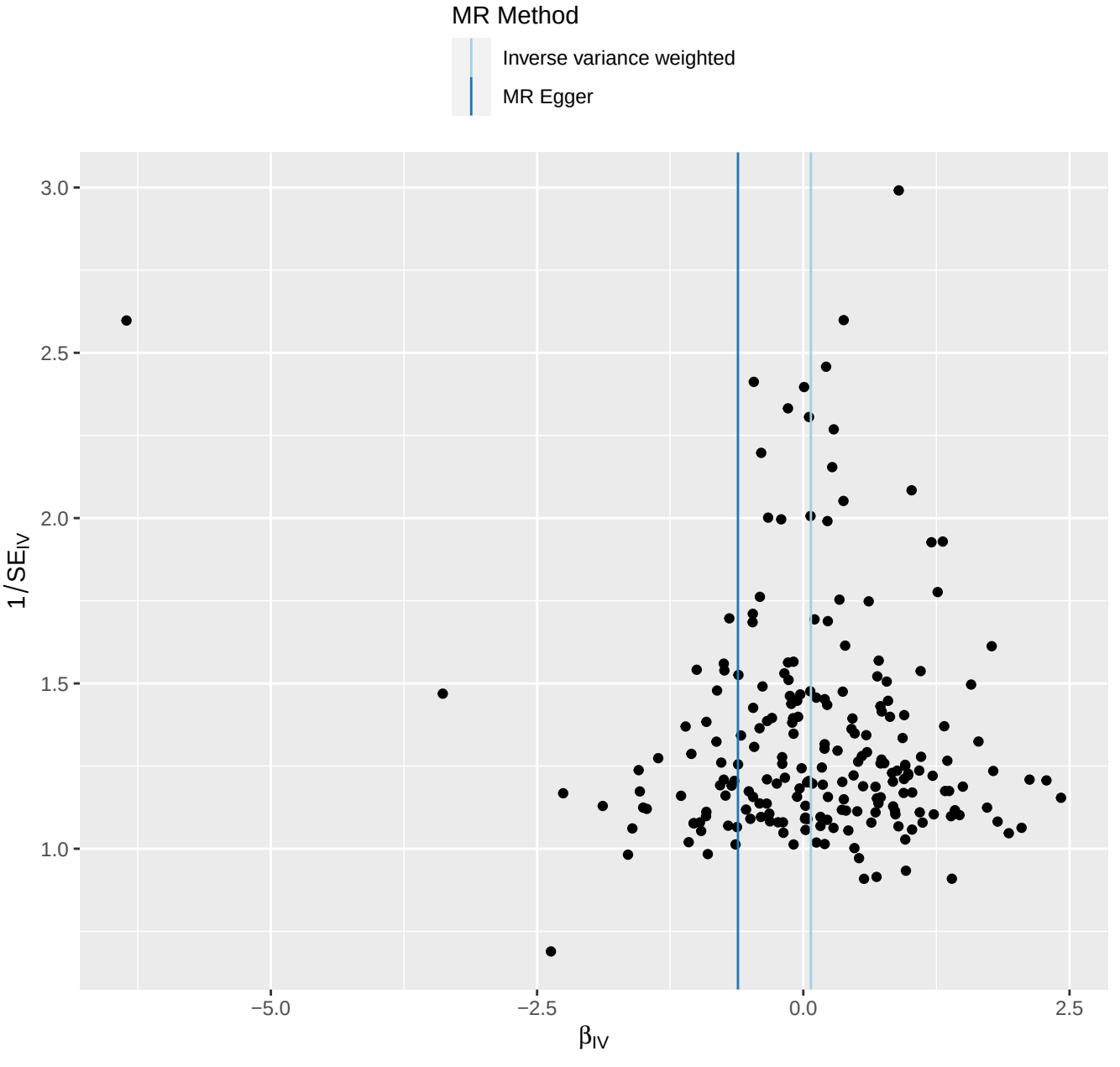

Total cholesterol in large LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−6
−4
−2
0
2
β_IV

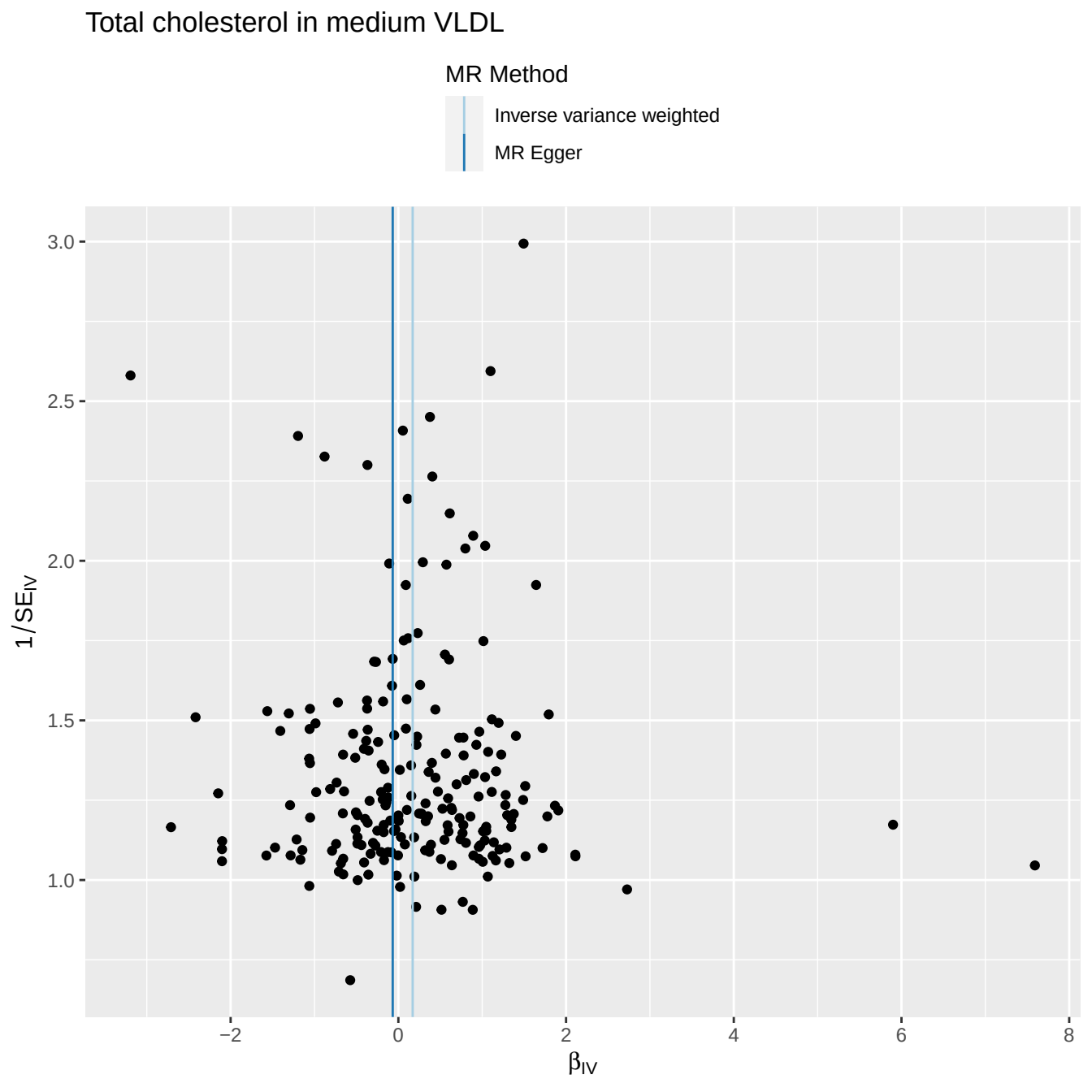

Total cholesterol in large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2.5
0.0
2.5
5.0
7.5
β_IV


Total cholesterol in LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

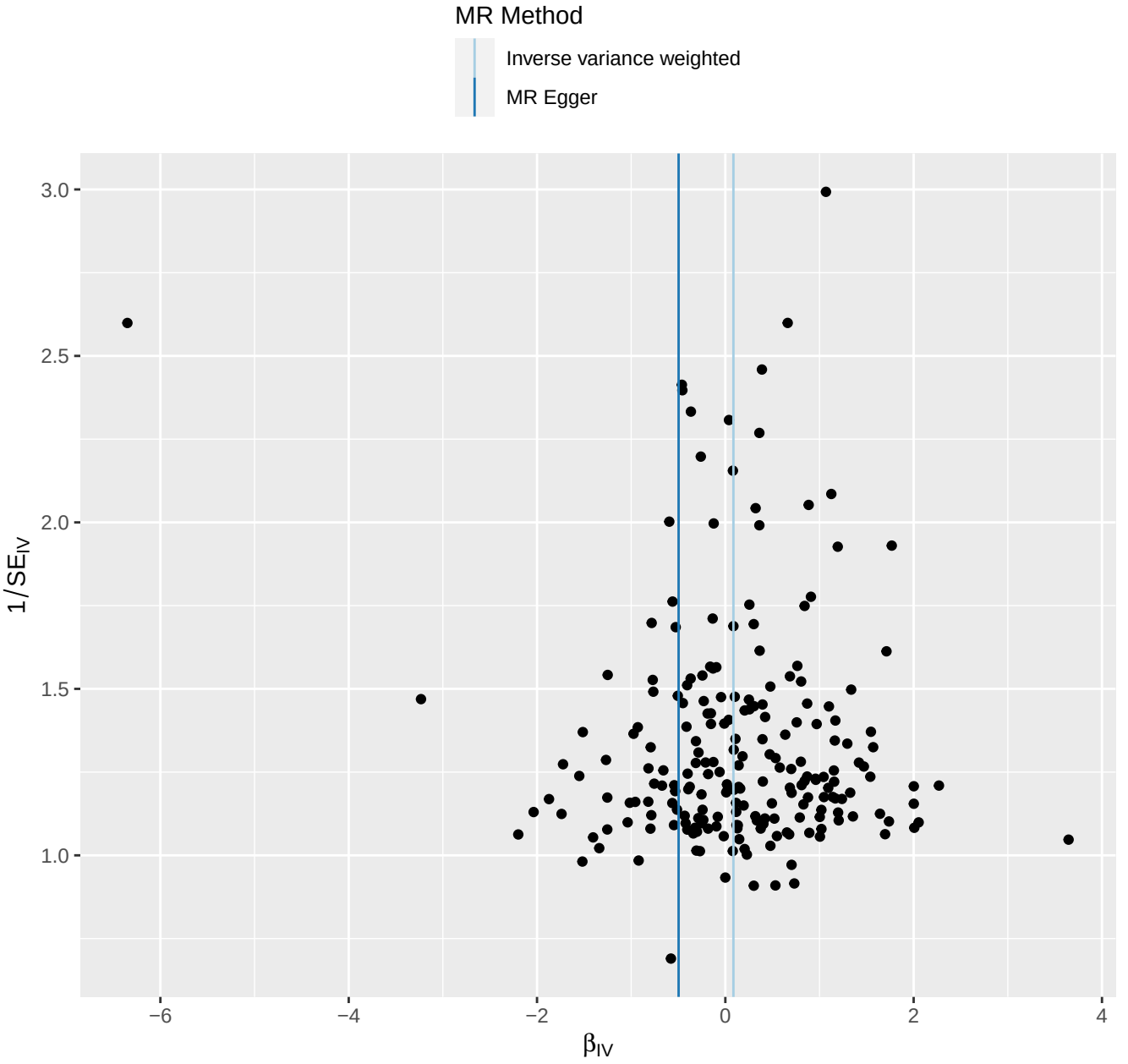

Total cholesterol in medium HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

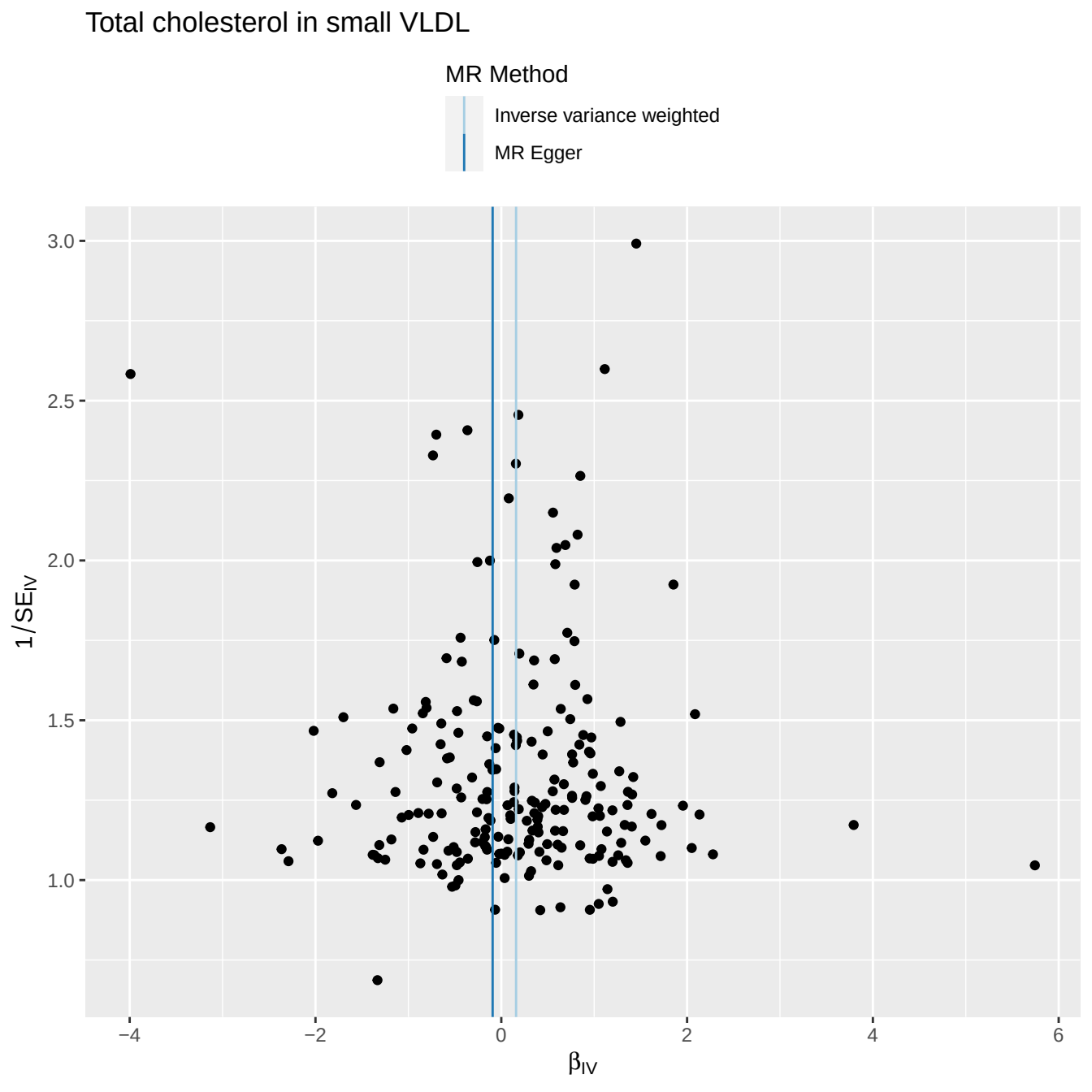
Total cholesterol in medium LDL

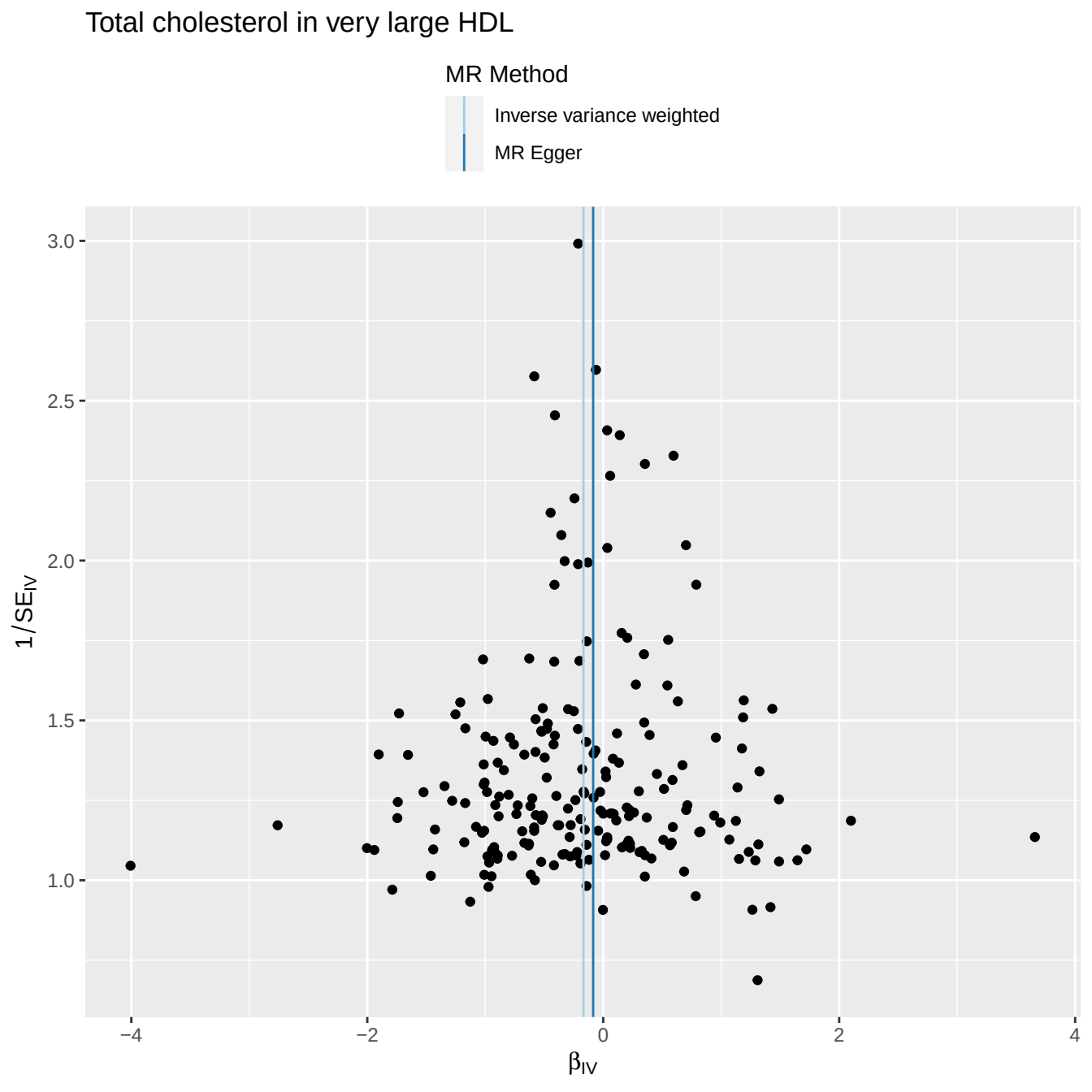



Total cholesterol in medium VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
4
6
8
β_IV

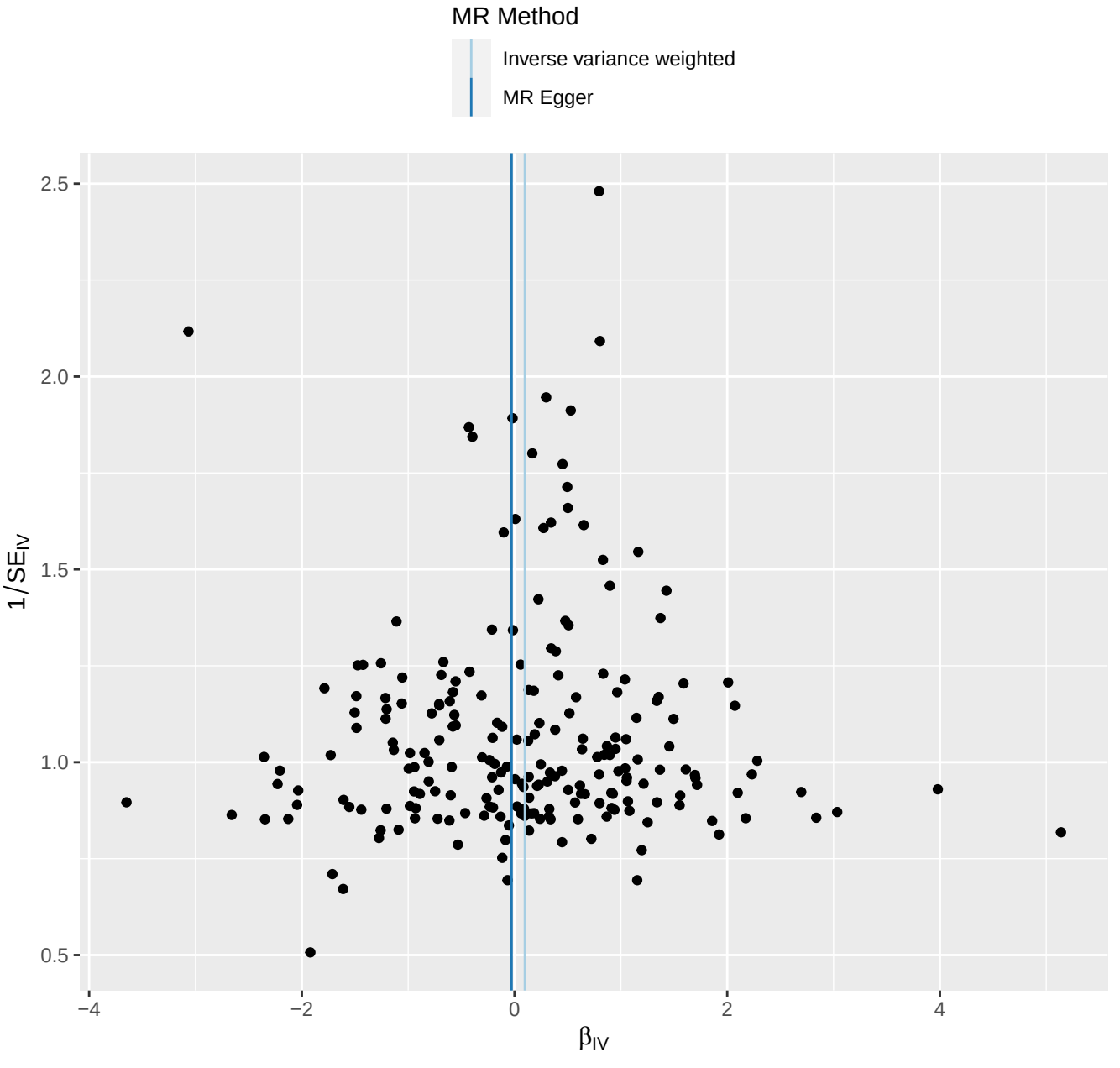
Total cholesterol in small LDL

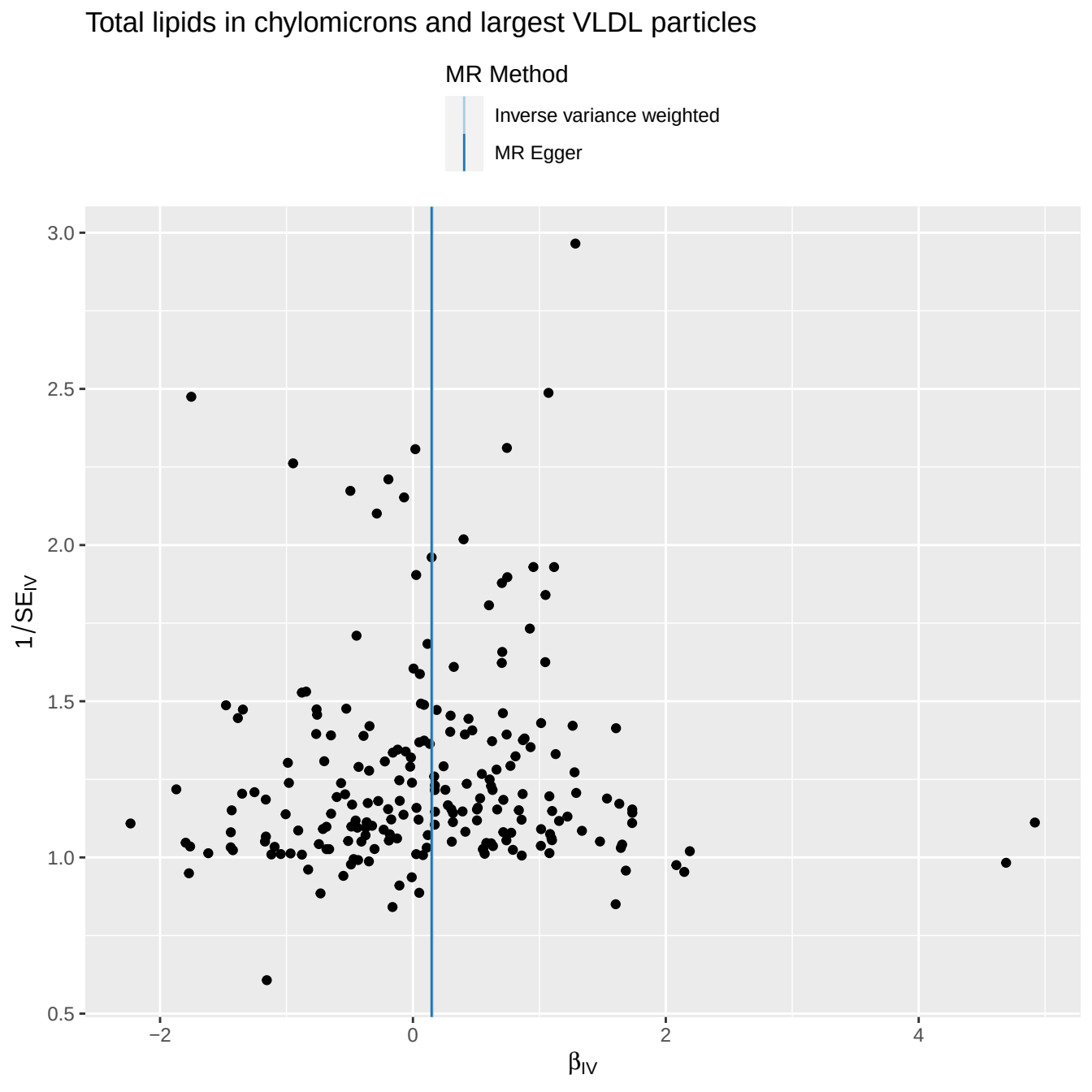



Total cholesterol in small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−4
−2
0
2
4
6
β_IV

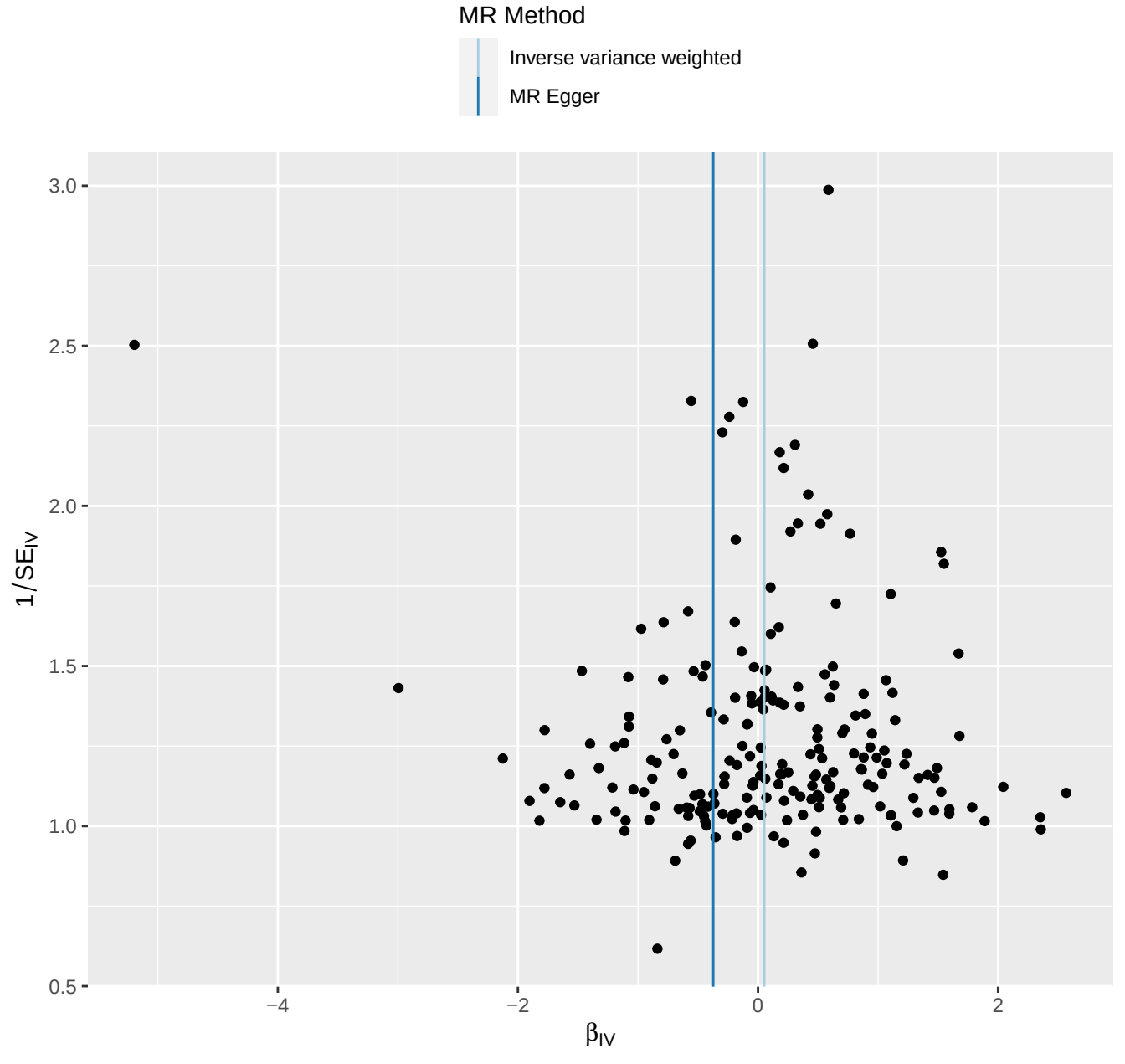

Total cholesterol in very large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−4
−2
0
2
4
β_IV

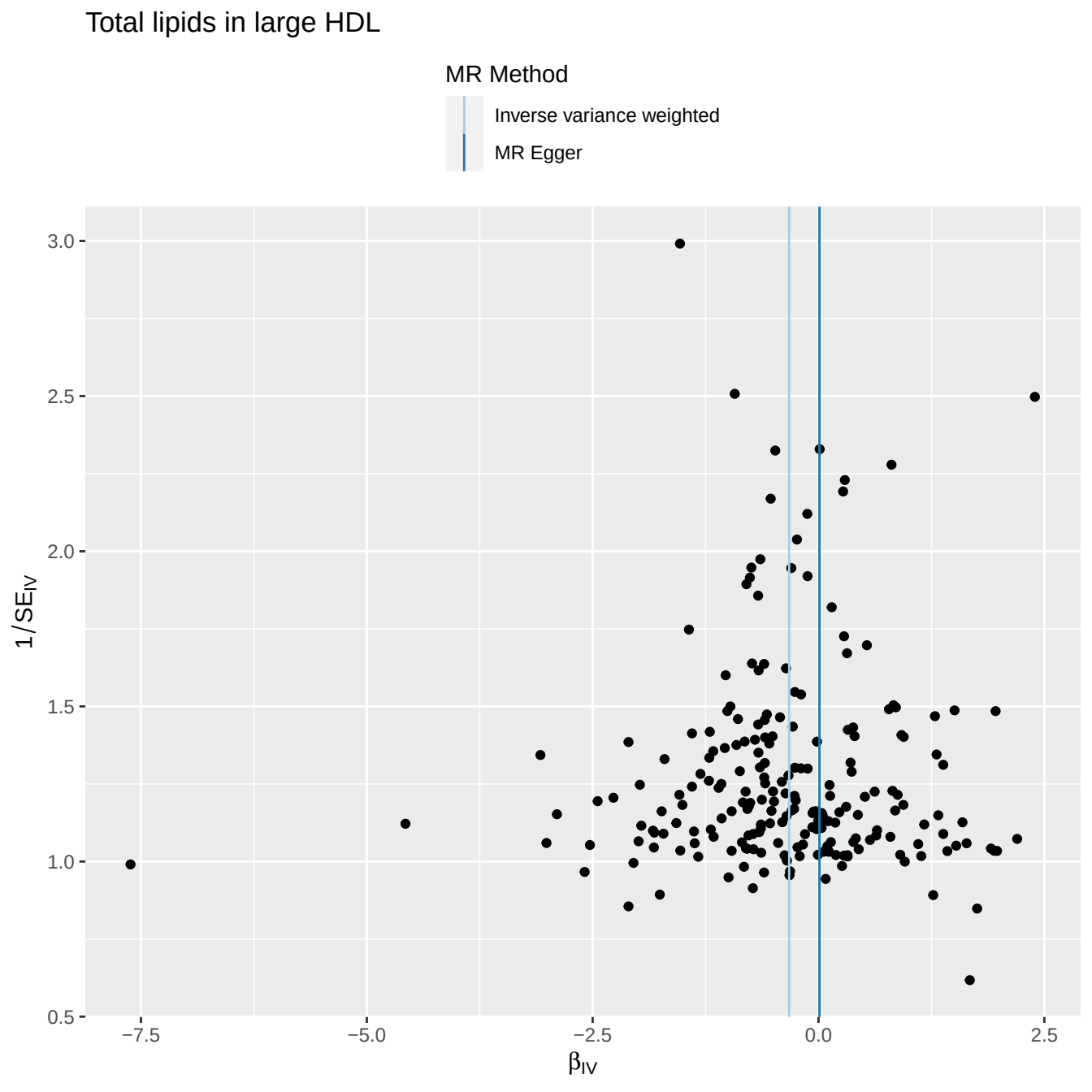
Total fatty acids

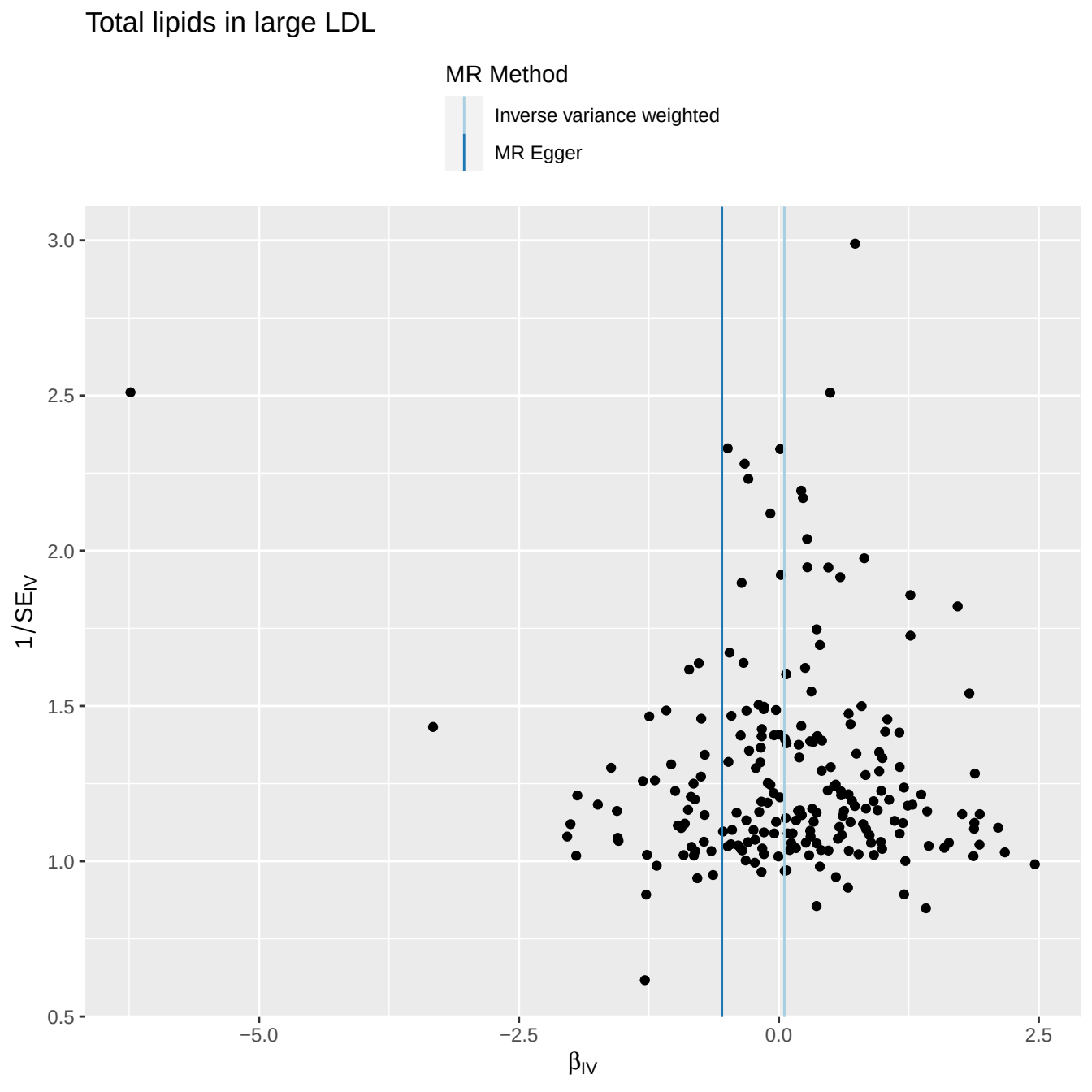


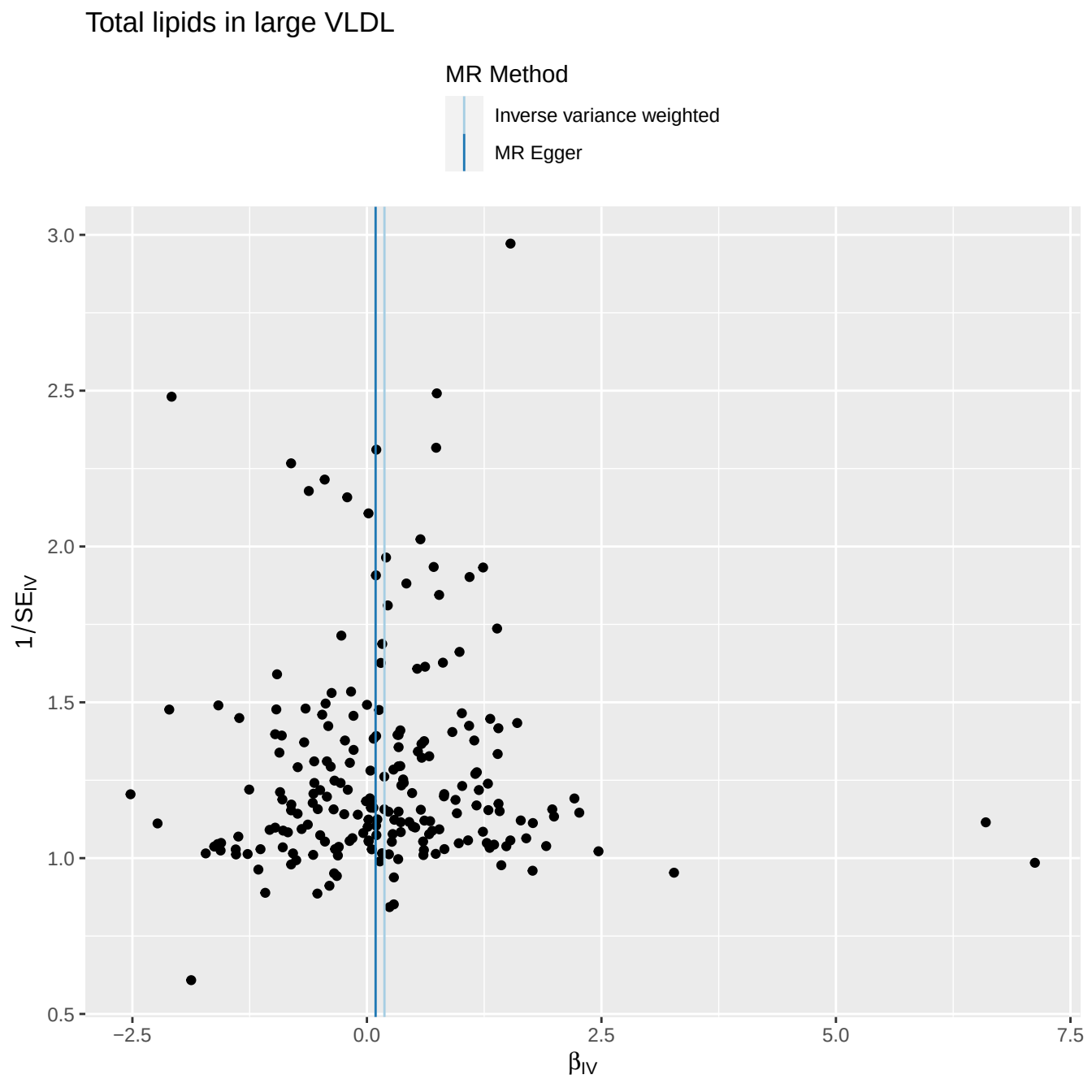

Total lipids in chylomicrons and largest VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
β_IV

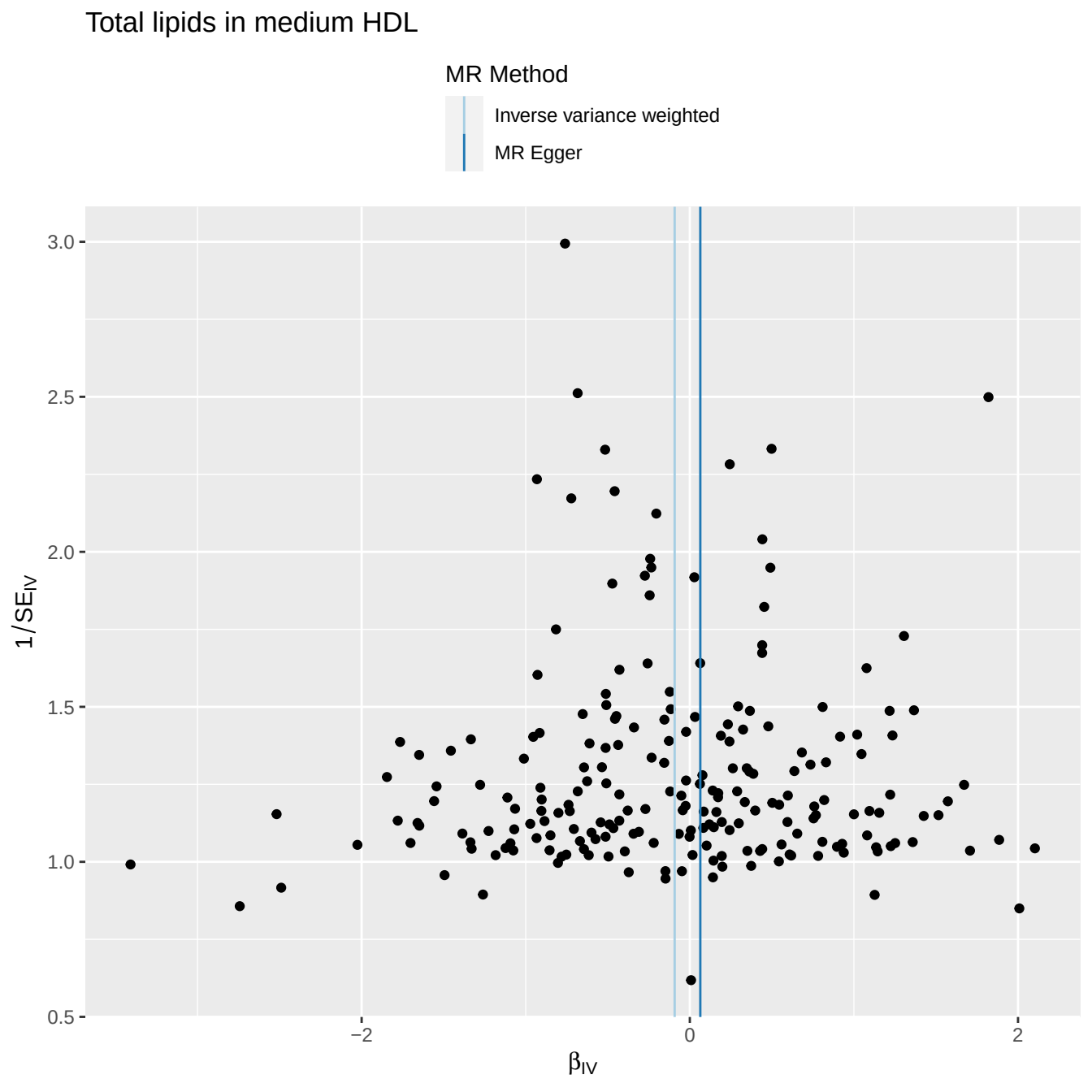
Total lipids in IDL

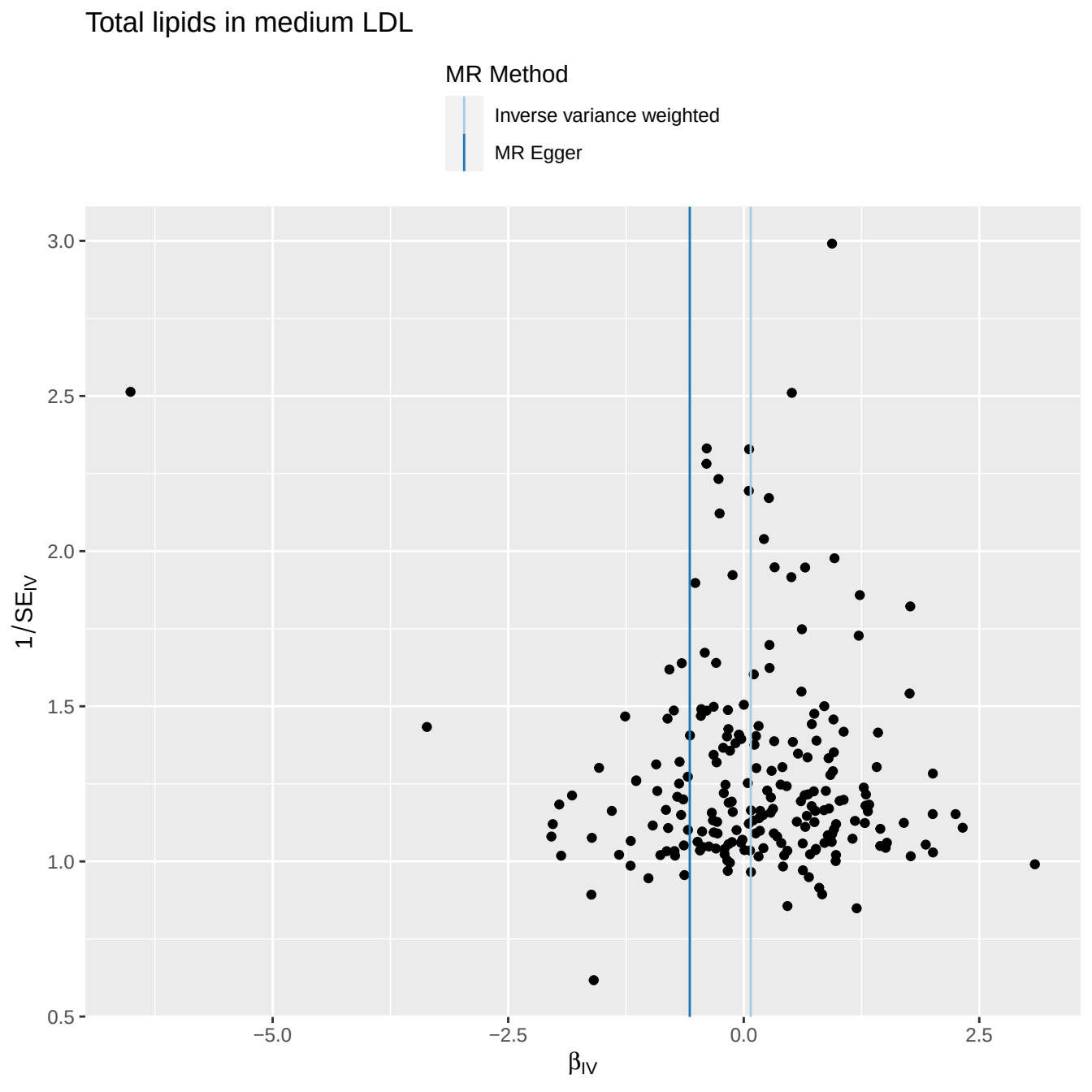


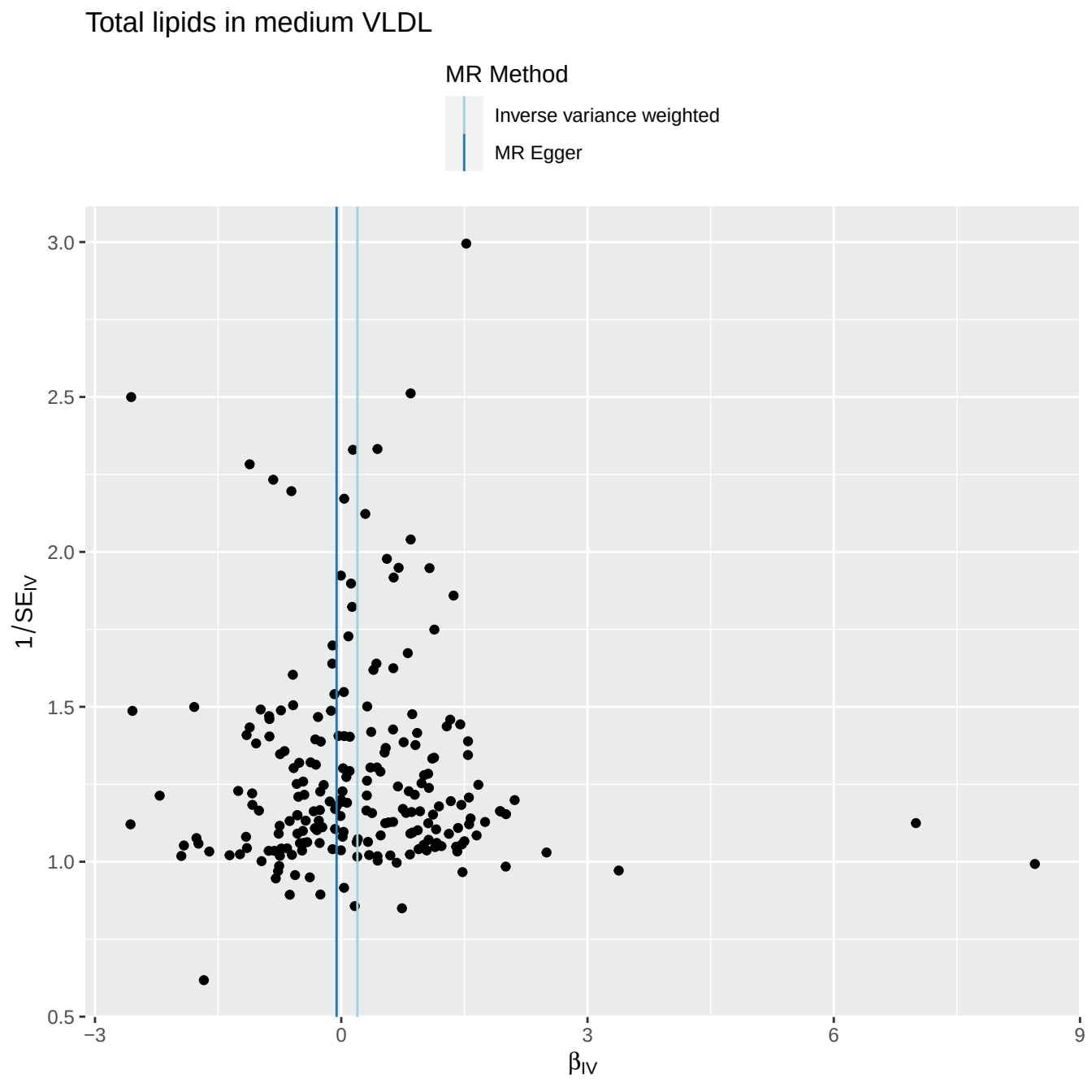

Total lipids in large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−7.5
−5.0
−2.5
0.0
2.5
β_IV

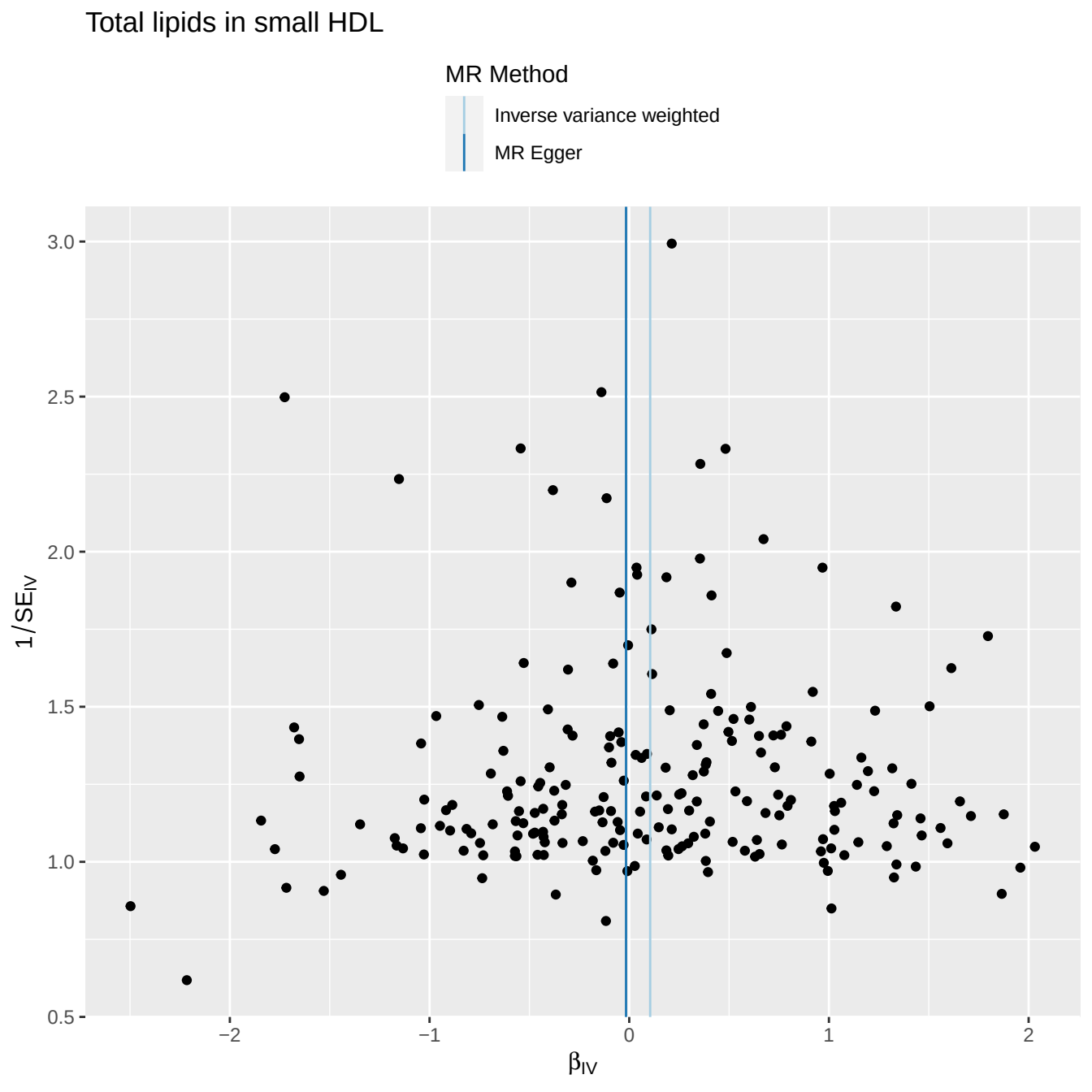

Total lipids in large LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

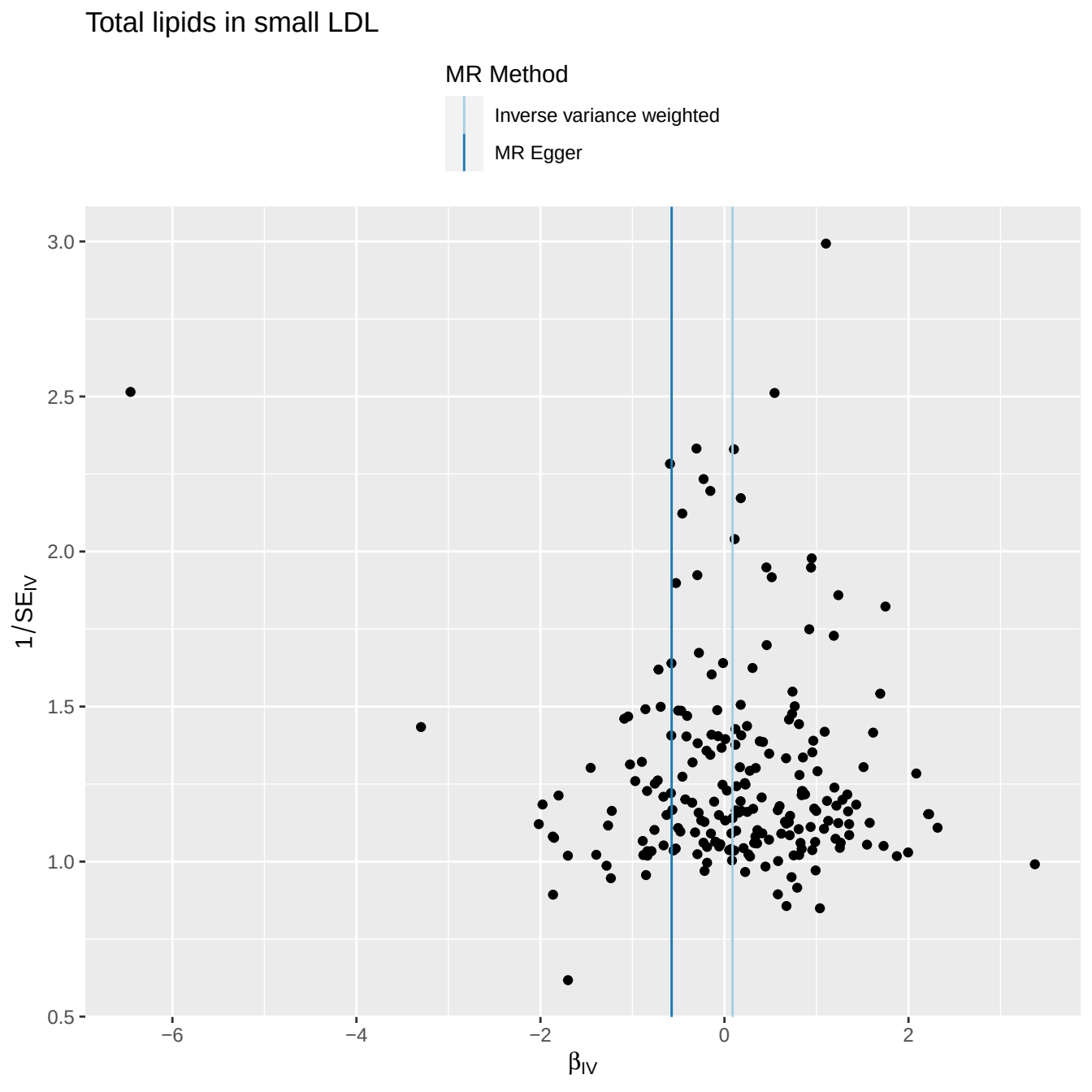

Total lipids in large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2.5
0.0
2.5
5.0
7.5
β_IV

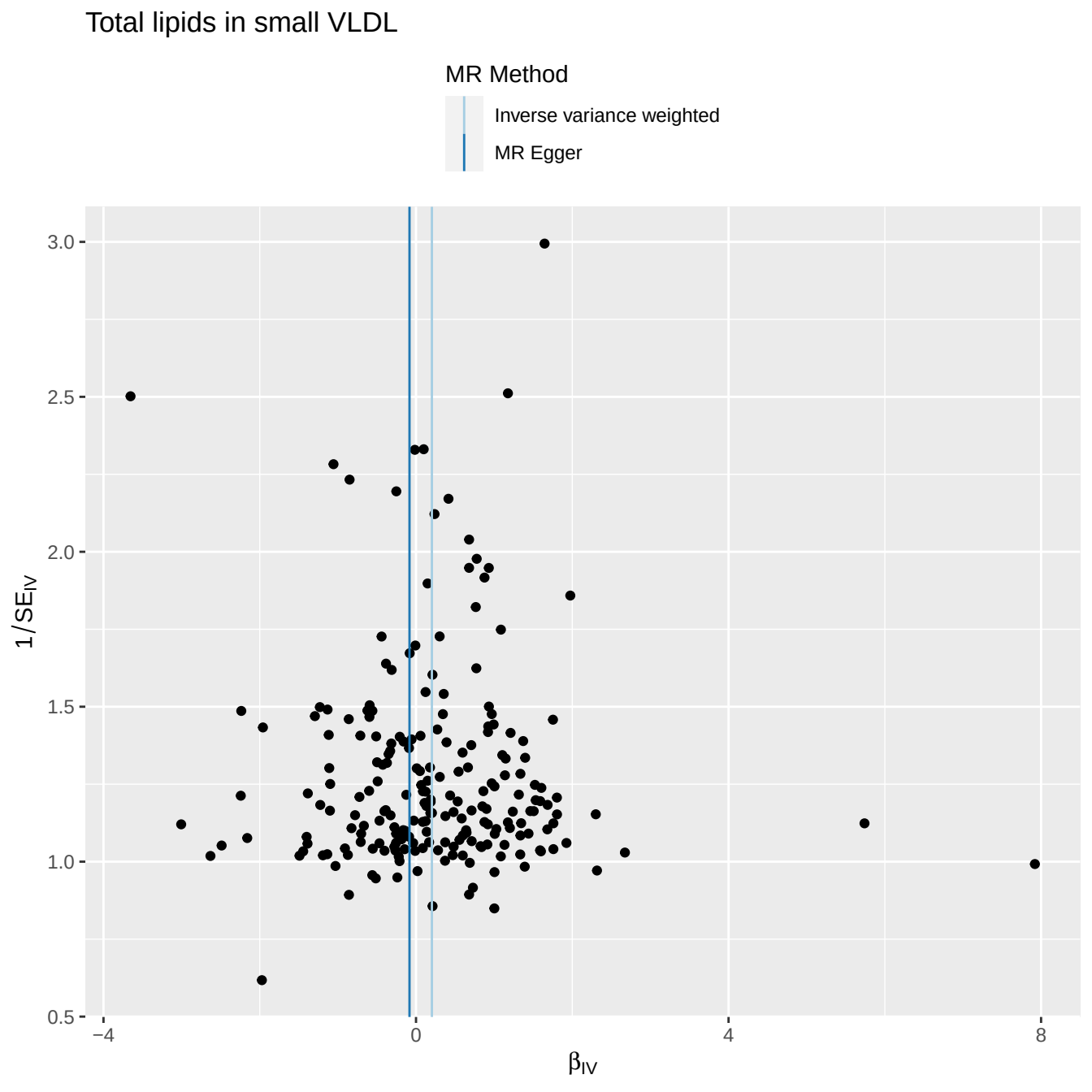

Total lipids in medium HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
β_IV


Total lipids in medium LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−5.0
−2.5
0.0
2.5
β_IV

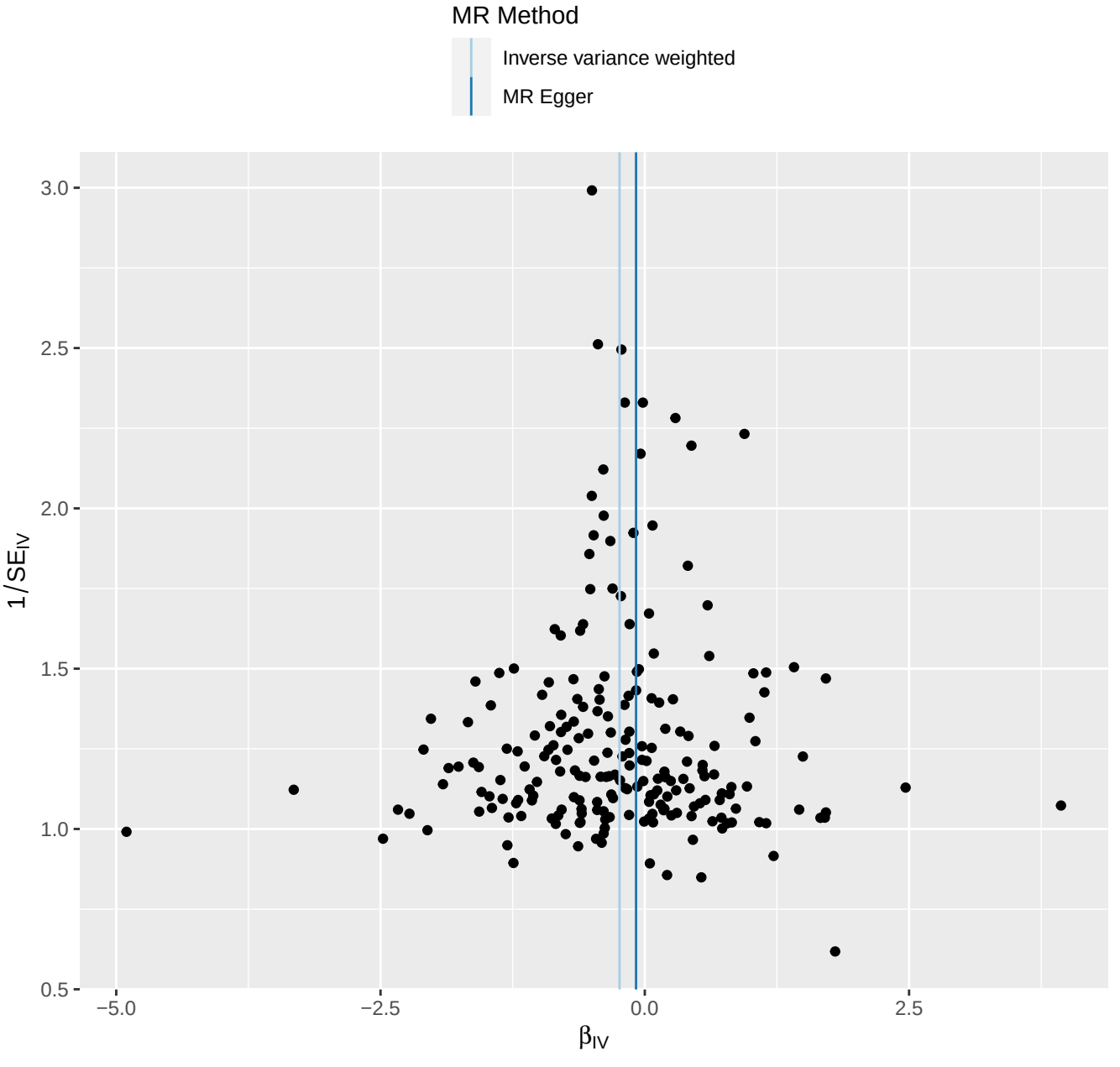

Total lipids in medium VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−3
0
3
6
9
β_IV

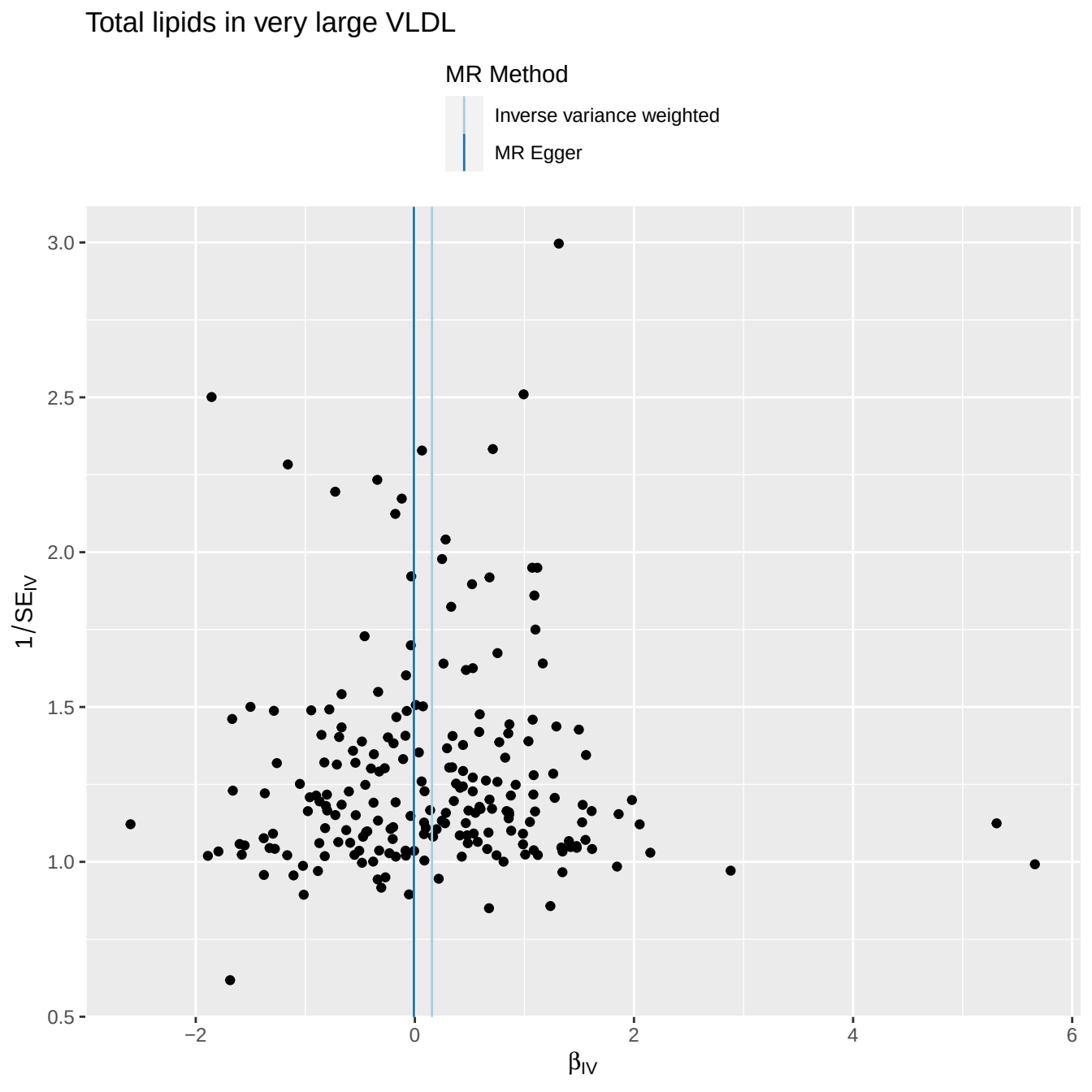

Total lipids in small HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
−1
0
1
2
β_IV


Total lipids in small LDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−6
−4
−2
0
2
β_IV

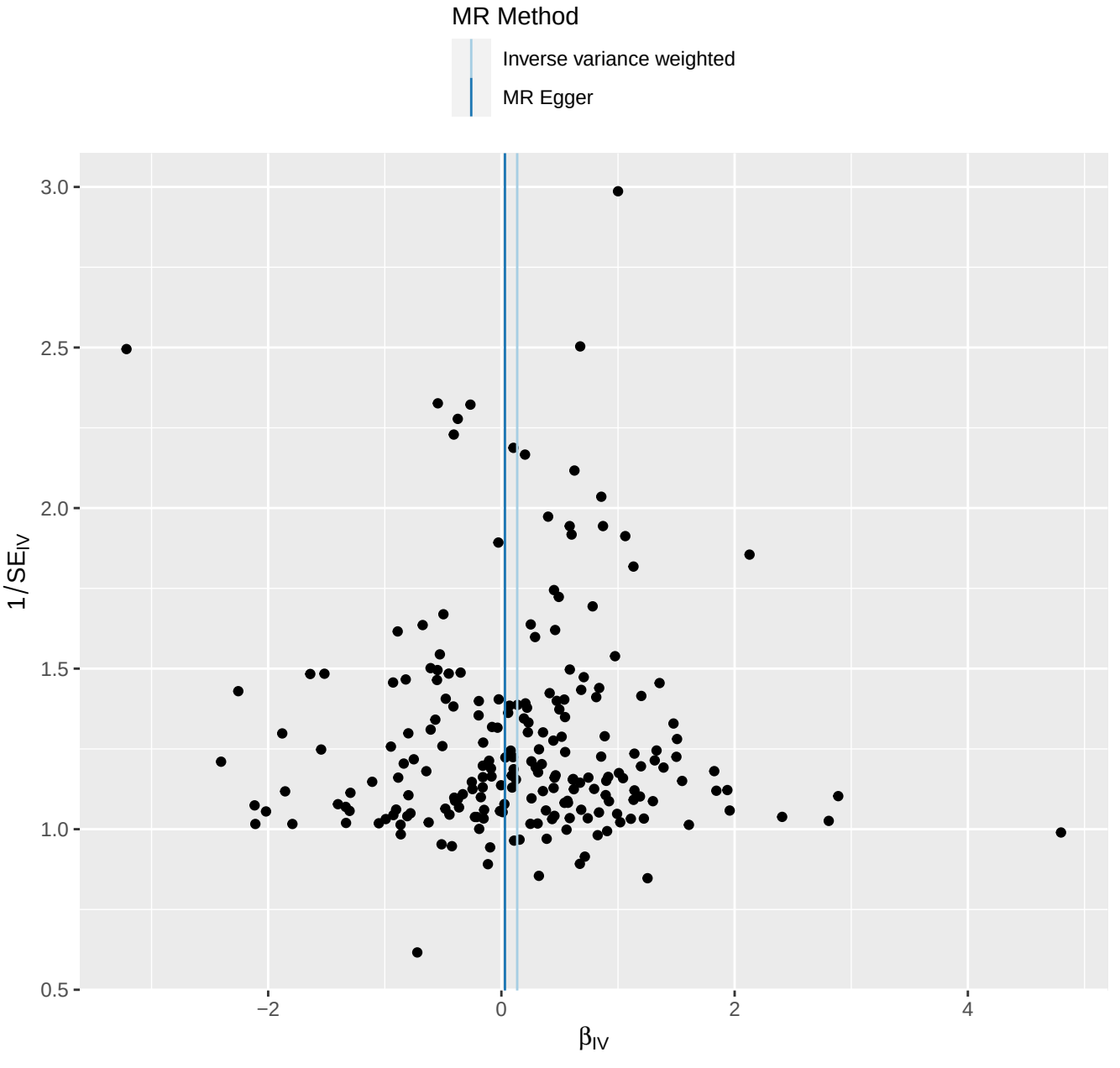

Total lipids in small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−4
0
4
8
β_IV

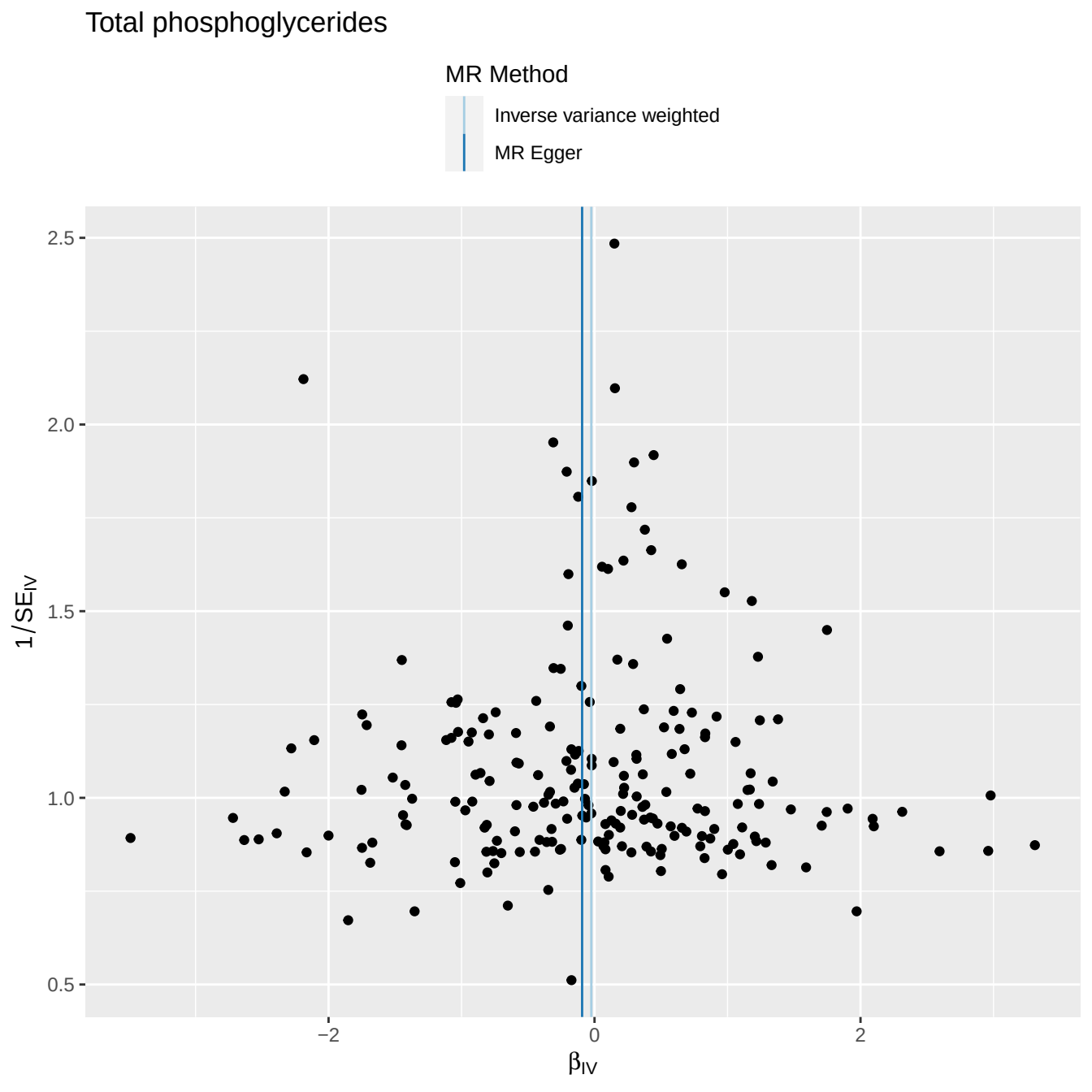
Total lipids in very large HDL

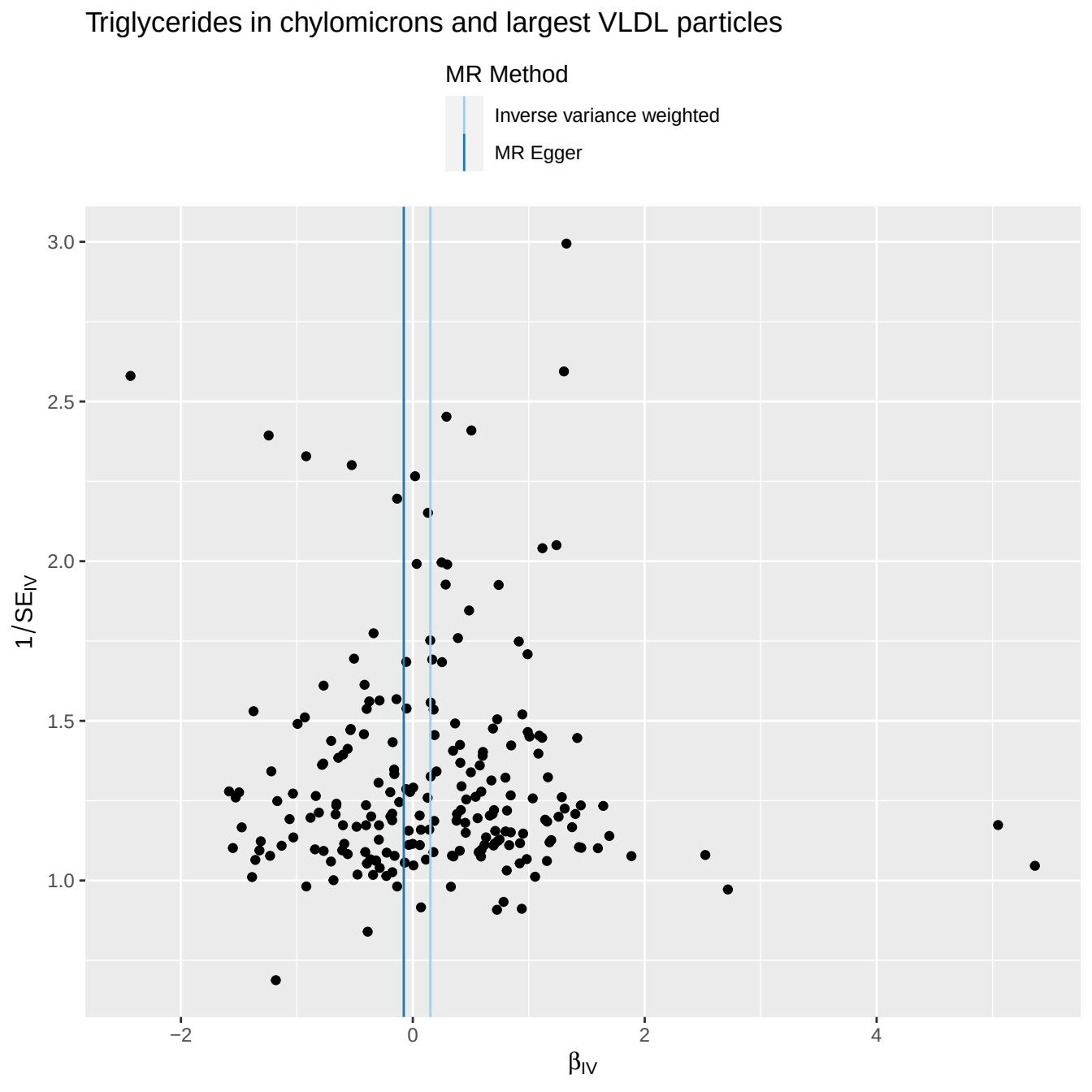


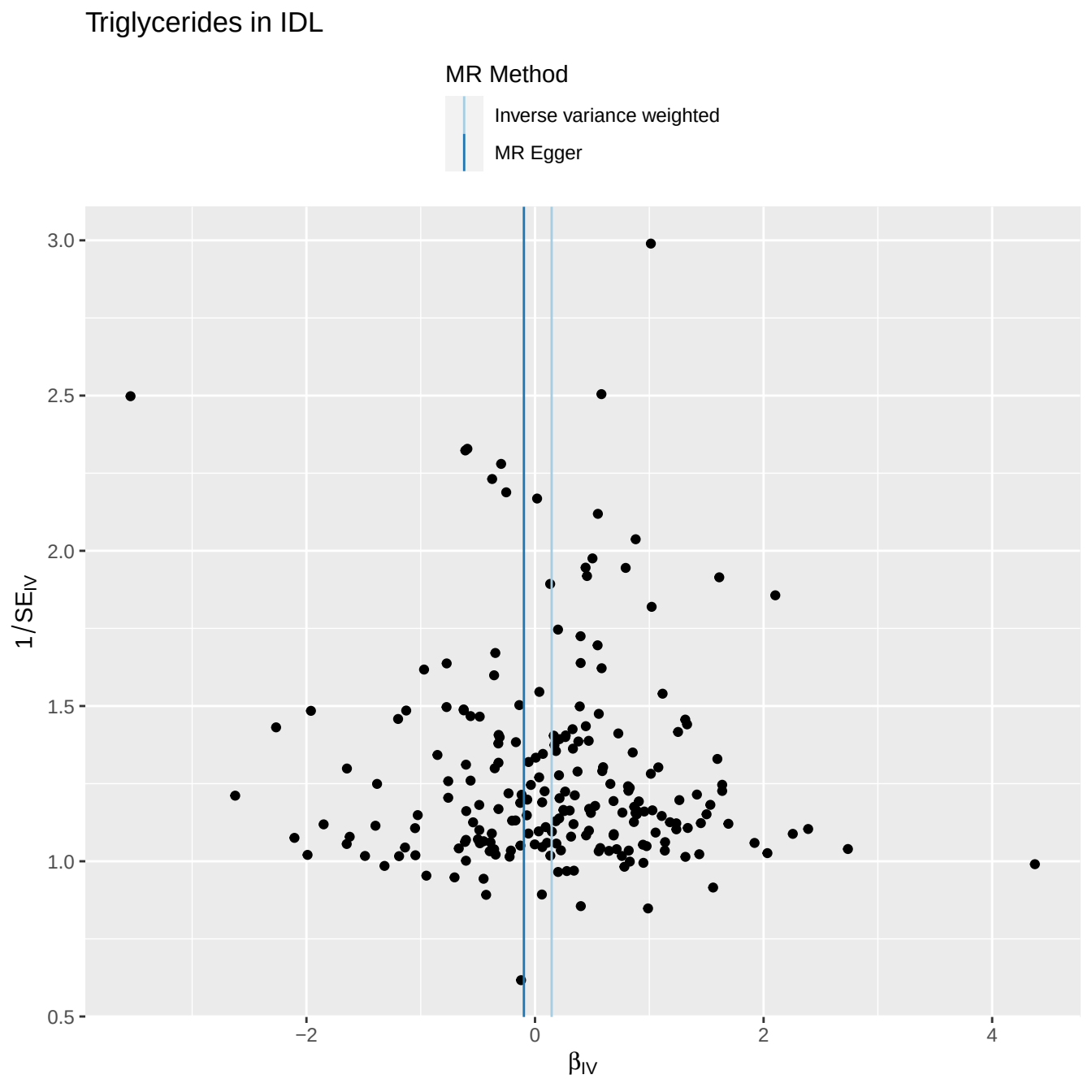

Total lipids in very large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
6
β_IV

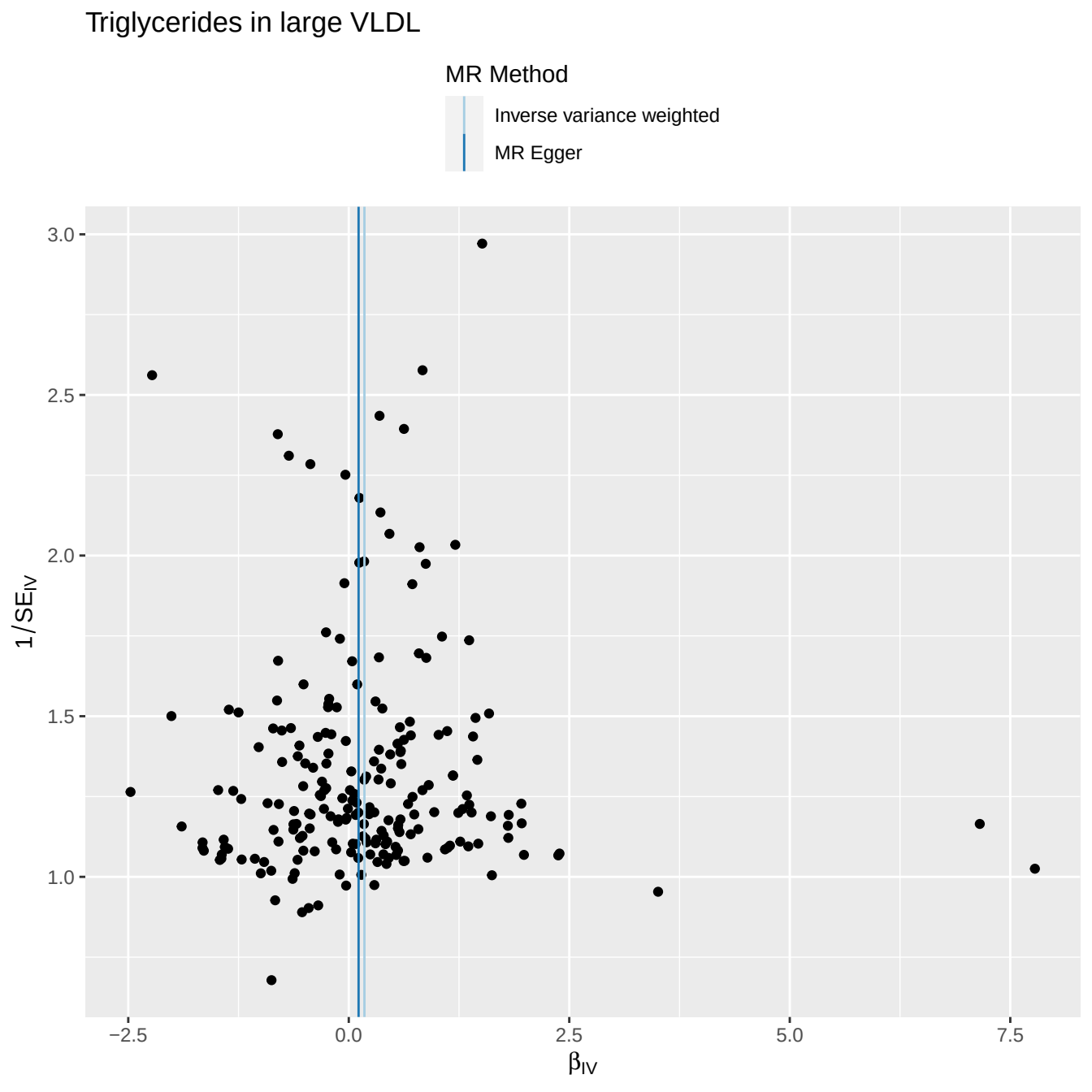
Total lipids in very small VLDL

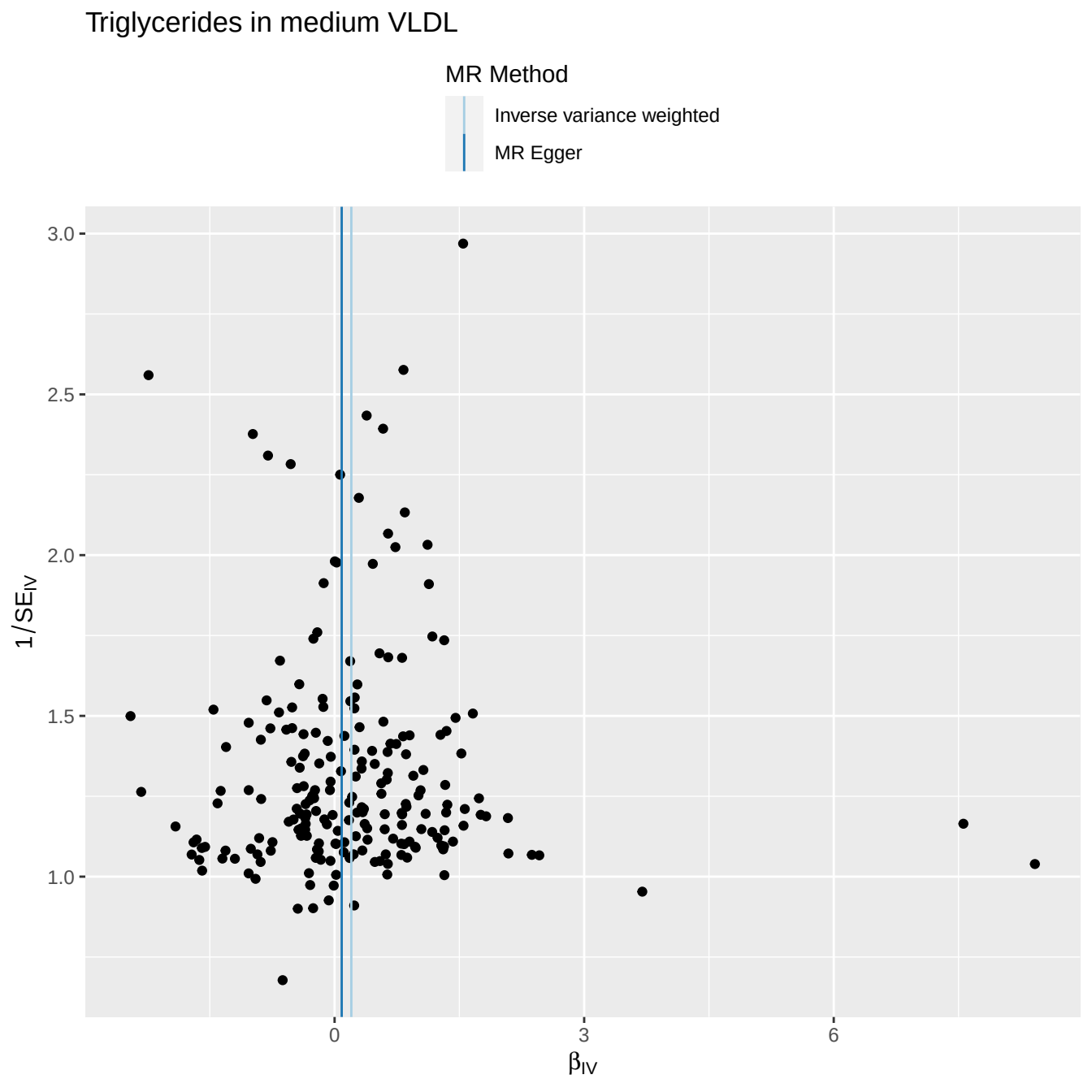


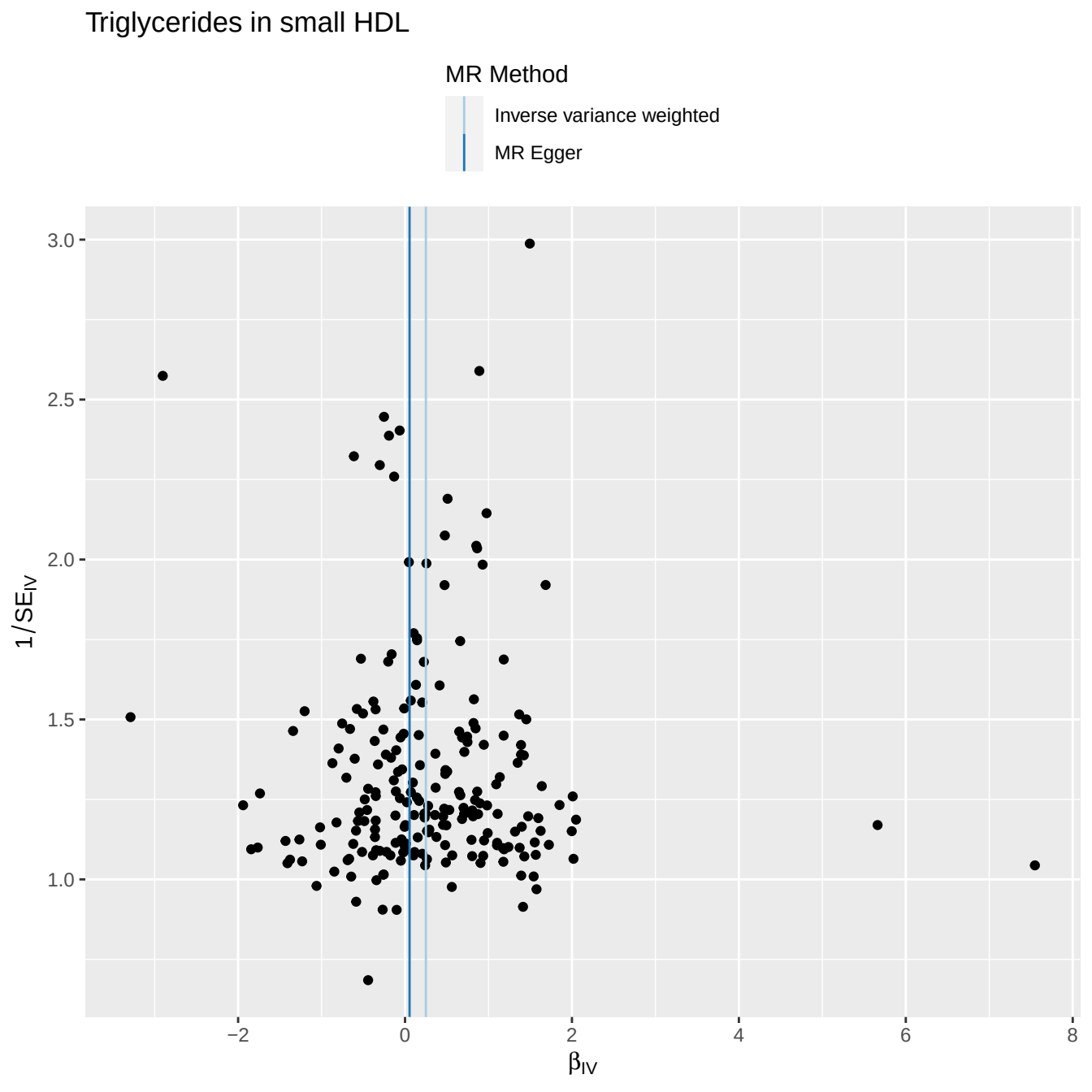

Total phosphoglycerides
MR Method
Inverse variance weighted
MR Egger
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
β_IV

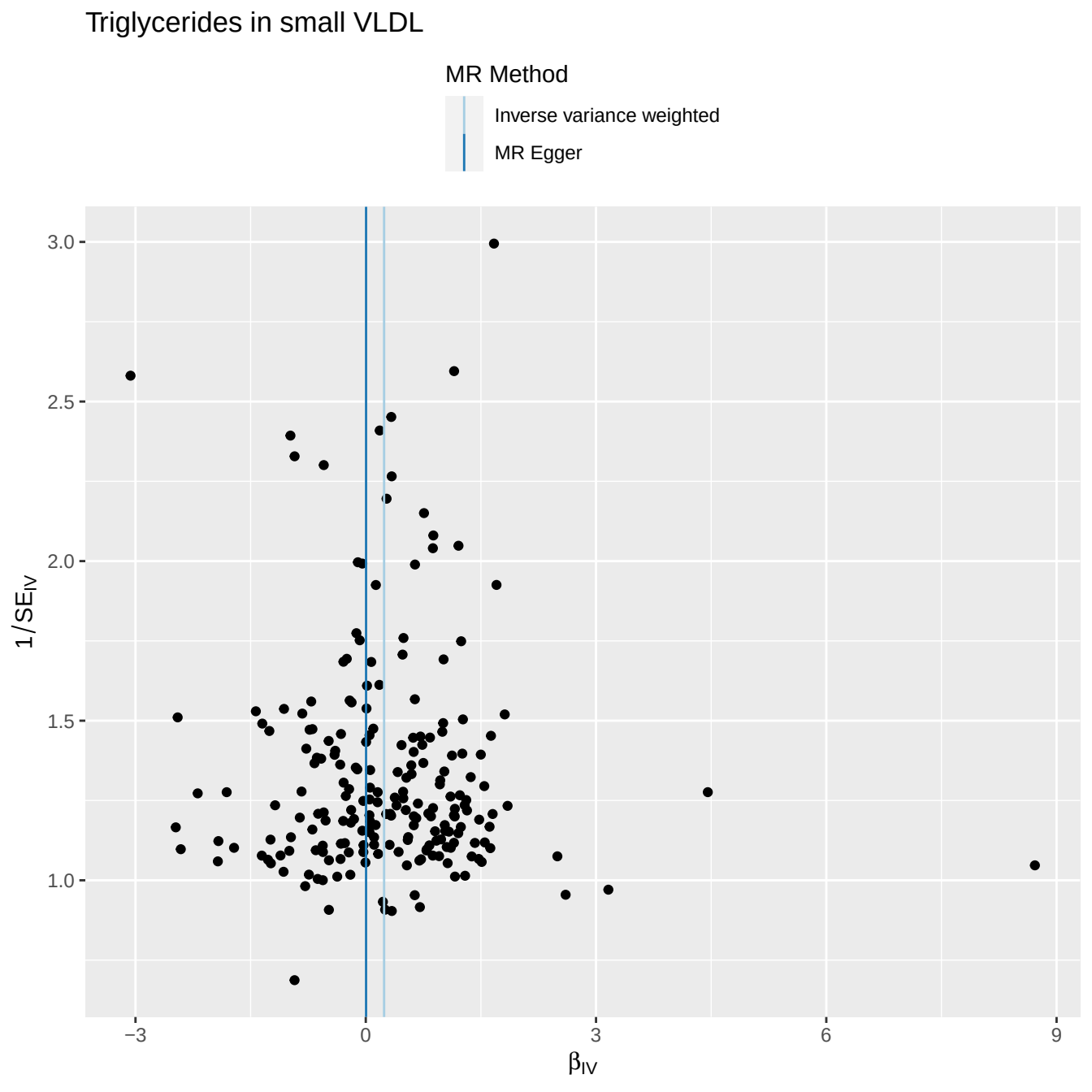

Triglycerides in chylomicrons and largest VLDL particles
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
4
β_IV

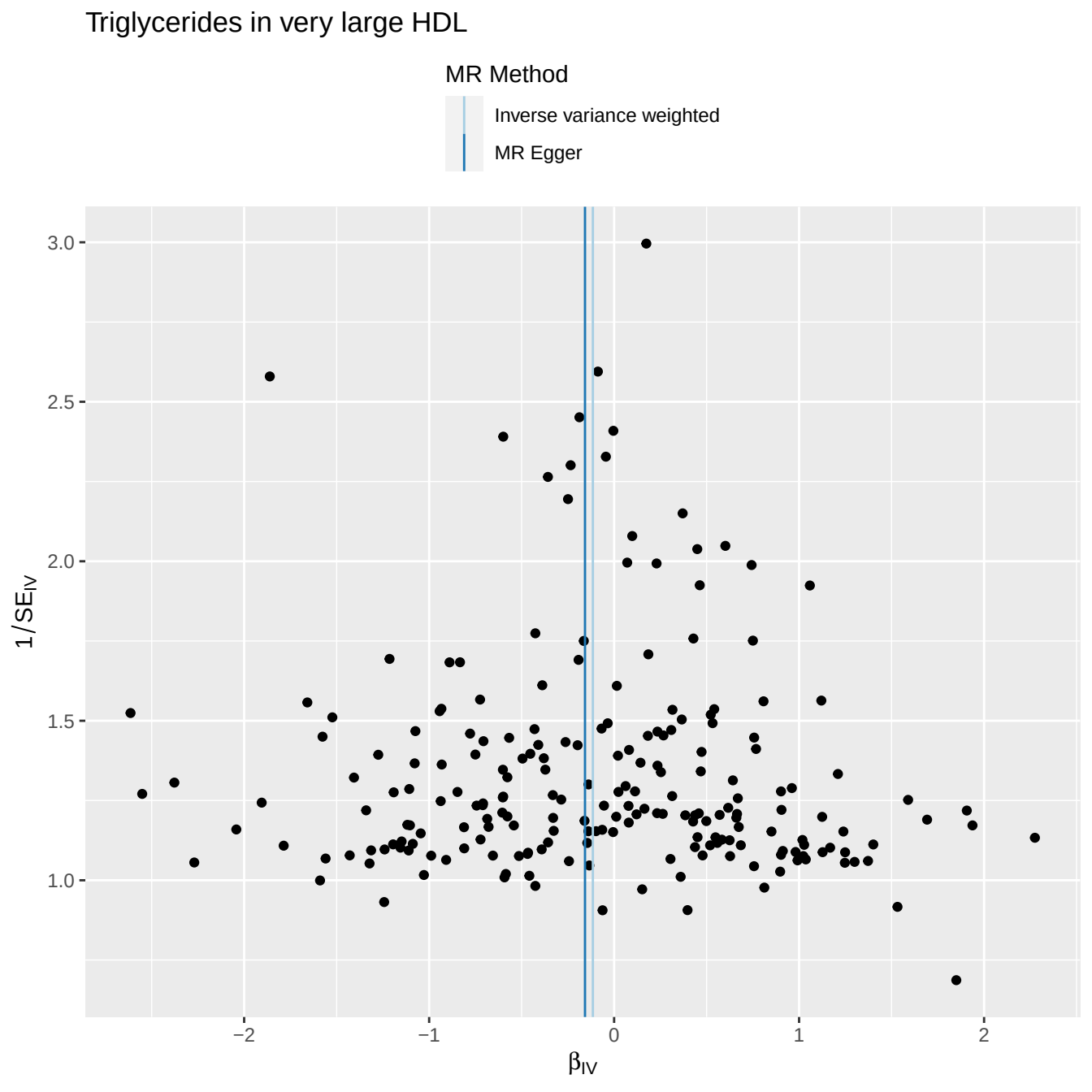

Triglycerides in IDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2
0
2
4
β_IV

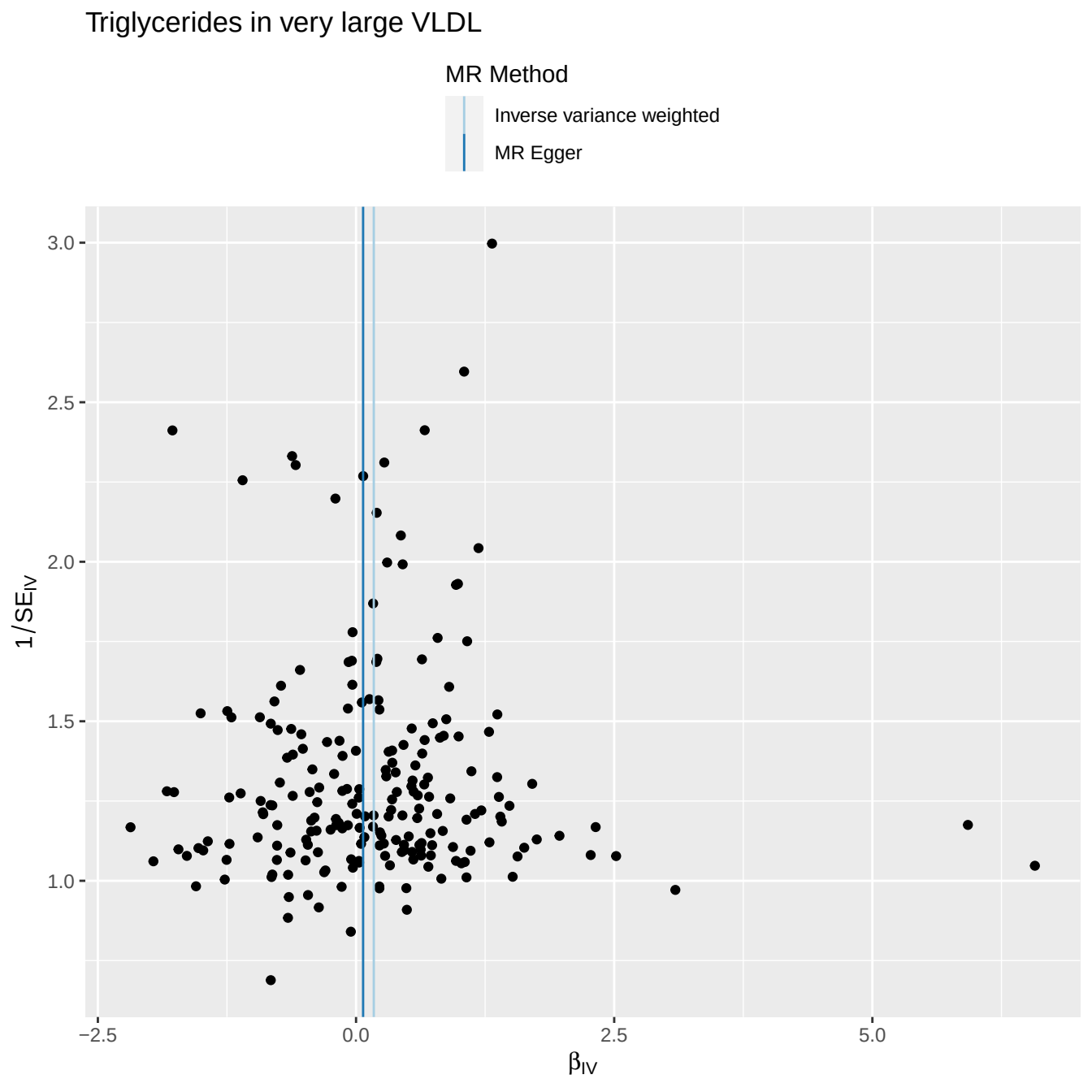

Triglycerides in large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2.5
0.0
2.5
5.0
7.5
β_IV

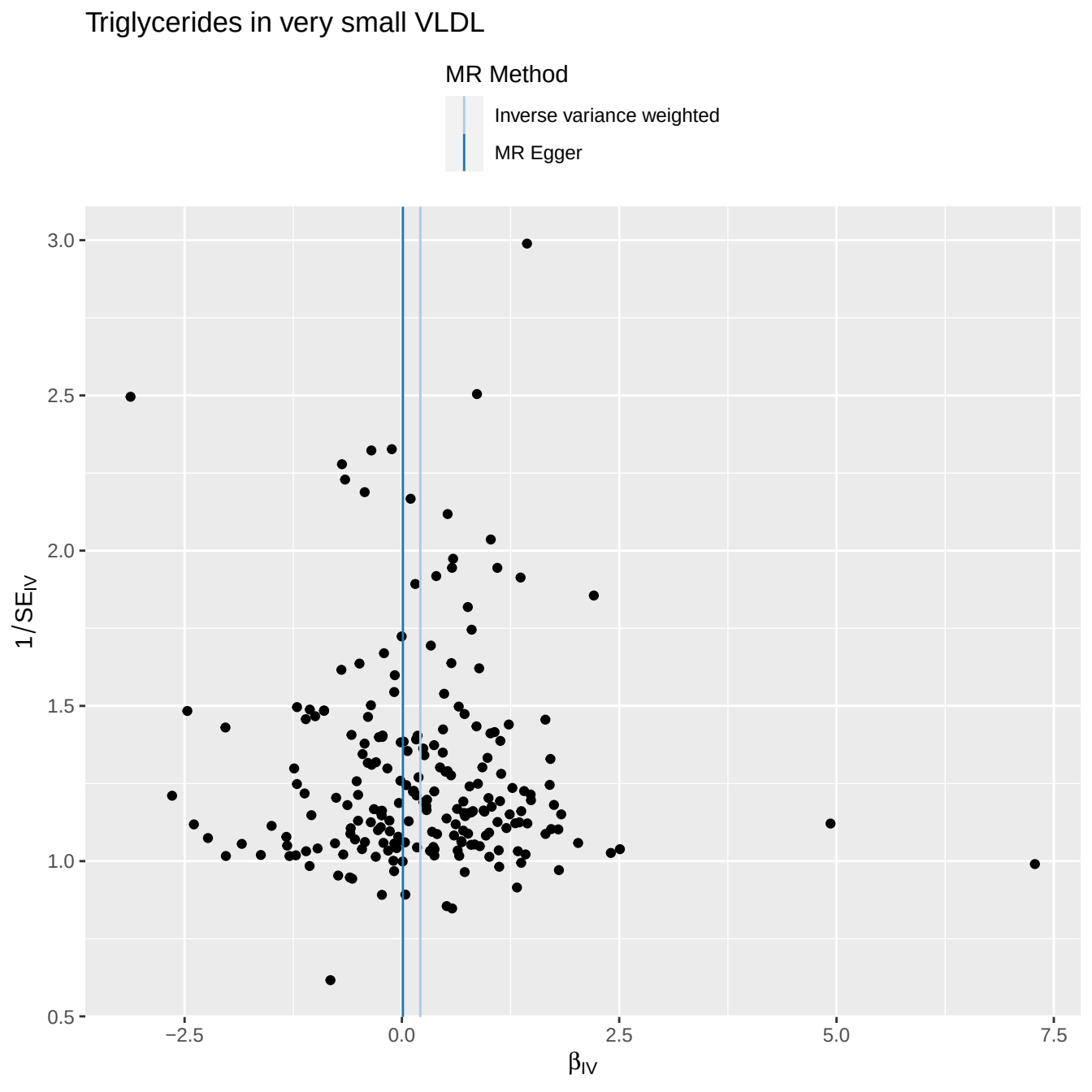

Triglycerides in medium VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
0
3
6
β_IV


Triglycerides in small HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
0
2
4
6
8
β_IV

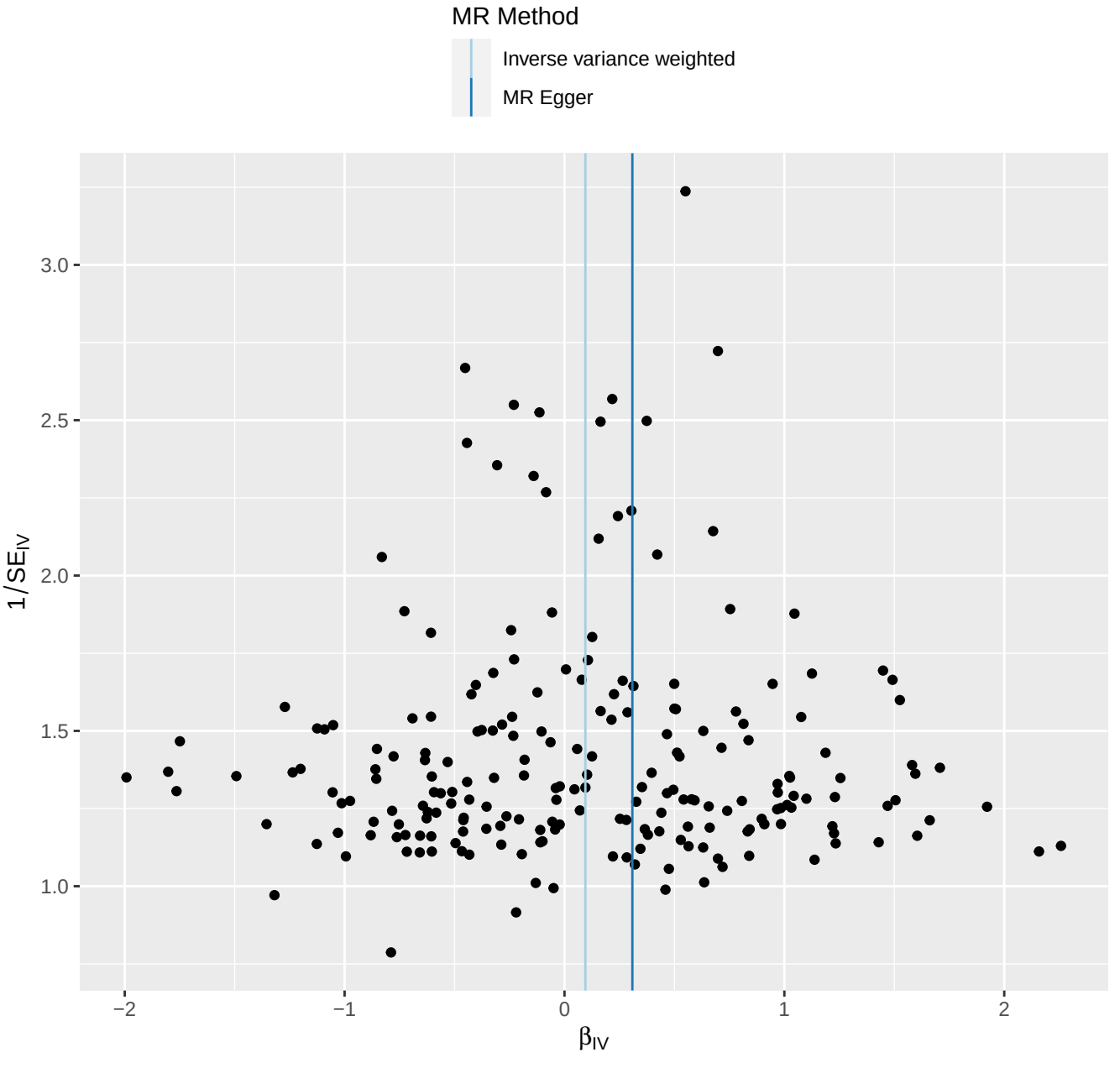

Triglycerides in small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−3
0
3
6
9
β_IV


Triglycerides in very large HDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

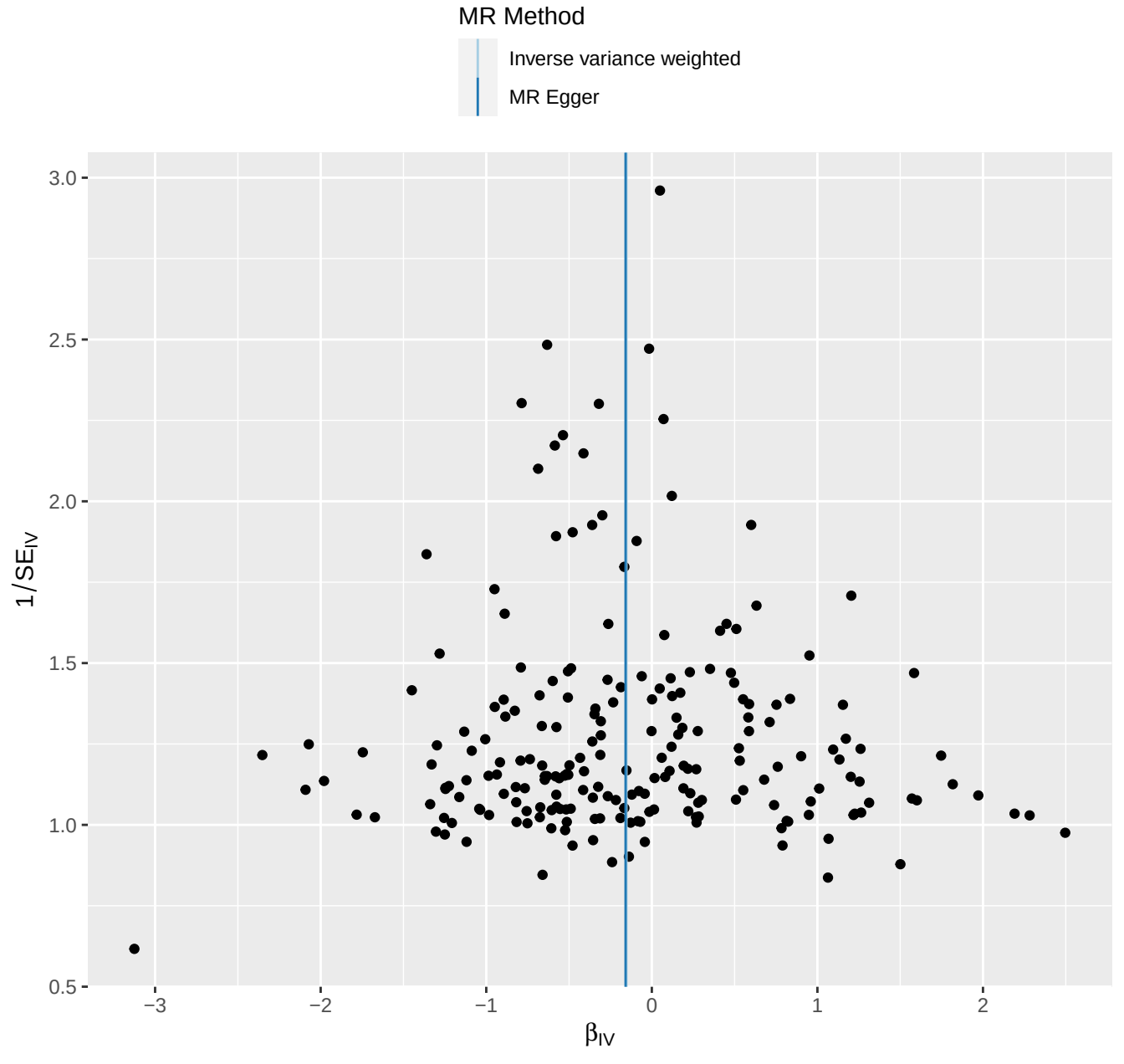

Triglycerides in very large VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2.5
0.0
2.5
5.0
β_IV


Triglycerides in very small VLDL
MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−2.5
0.0
2.5
5.0
7.5
β_IV

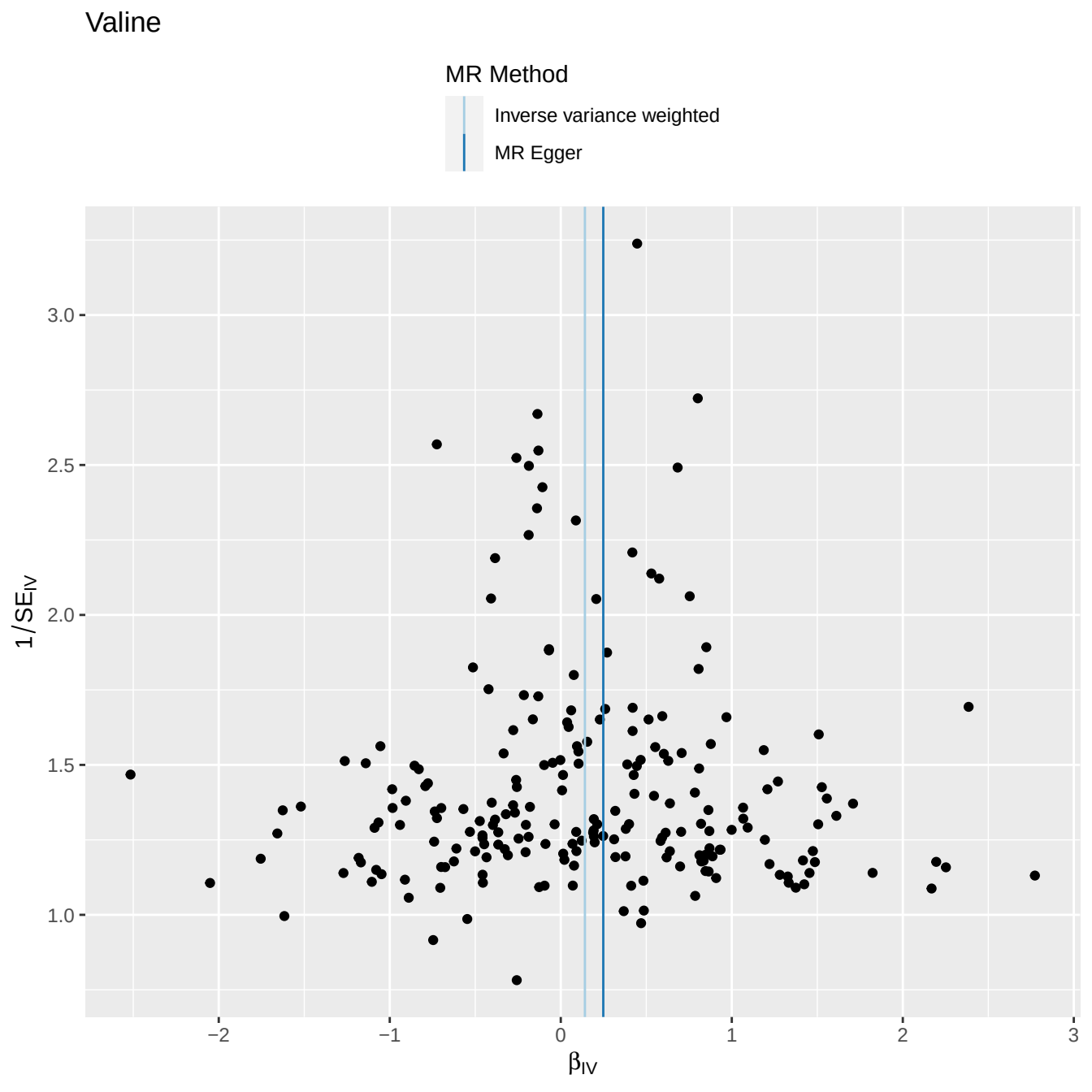
Tyrosine


MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
β_IV

Urea


MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
0.5
1/SE_IV
−3
−2
−1
0
1
2
β_IV

Valine


MR Method
Inverse variance weighted
MR Egger
3.0
2.5
2.0
1.5
1.0
1/SE_IV
−2
−1
0
1
2
3
β_IV