

Supplementary Table SI. Search strings employed across 3 databases till 20th March 2026

Research	Query	Items found
PubMed	("GLP-1 receptor agonists" OR Lixisenatide OR Liraglutide OR Exenatide OR Semaglutide OR Albiglutide OR Dulaglutide OR Efpeglenatide OR Tirzepatide) AND ("Major Adverse Cardiovascular Events" OR MACE OR "All-cause Mortality" OR "Cardiovascular death" OR "Myocardial infarction" OR "Non-fatal Myocardial infarction" OR Stroke OR "Non-fatal Stroke" OR "Unstable Angina" OR "Acute Coronary Syndrome" OR "Heart Failure" OR "Hospitalization for Heart Failure") AND (randomized controlled trial OR RCT)	383
Cochrane	("GLP-1 receptor agonists" OR Lixisenatide OR Liraglutide OR Exenatide OR Semaglutide OR Albiglutide OR Dulaglutide OR Efpeglenatide OR Tirzepatide) AND ("Major Adverse Cardiovascular Events" OR MACE OR "All-cause Mortality" OR "Cardiovascular death" OR "Myocardial infarction" OR "Non-fatal Myocardial infarction" OR Stroke OR "Non-fatal Stroke" OR "Unstable Angina" OR "Acute Coronary Syndrome" OR "Heart Failure" OR "Hospitalization for Heart Failure") AND (randomized controlled trial OR RCT)	482
Google Scholar	("GLP-1 receptor agonists" OR Lixisenatide OR Liraglutide OR Exenatide OR Semaglutide OR Albiglutide OR Dulaglutide OR Efpeglenatide OR Tirzepatide) AND ("Major Adverse Cardiovascular Events" OR MACE AND "All-cause Mortality" AND "Cardiovascular death" AND "Myocardial infarction" OR "Non-fatal Myocardial infarction" OR Stroke OR "Non-fatal Stroke" OR "Unstable Angina" OR "Acute Coronary Syndrome" OR "Heart Failure" OR "Hospitalization for Heart Failure") AND (randomized controlled trial OR RCT)	3,210

Supplementary Figure S1. Traffic light plot depicting the risk of bias across multiple domains using the RoB 2 tool

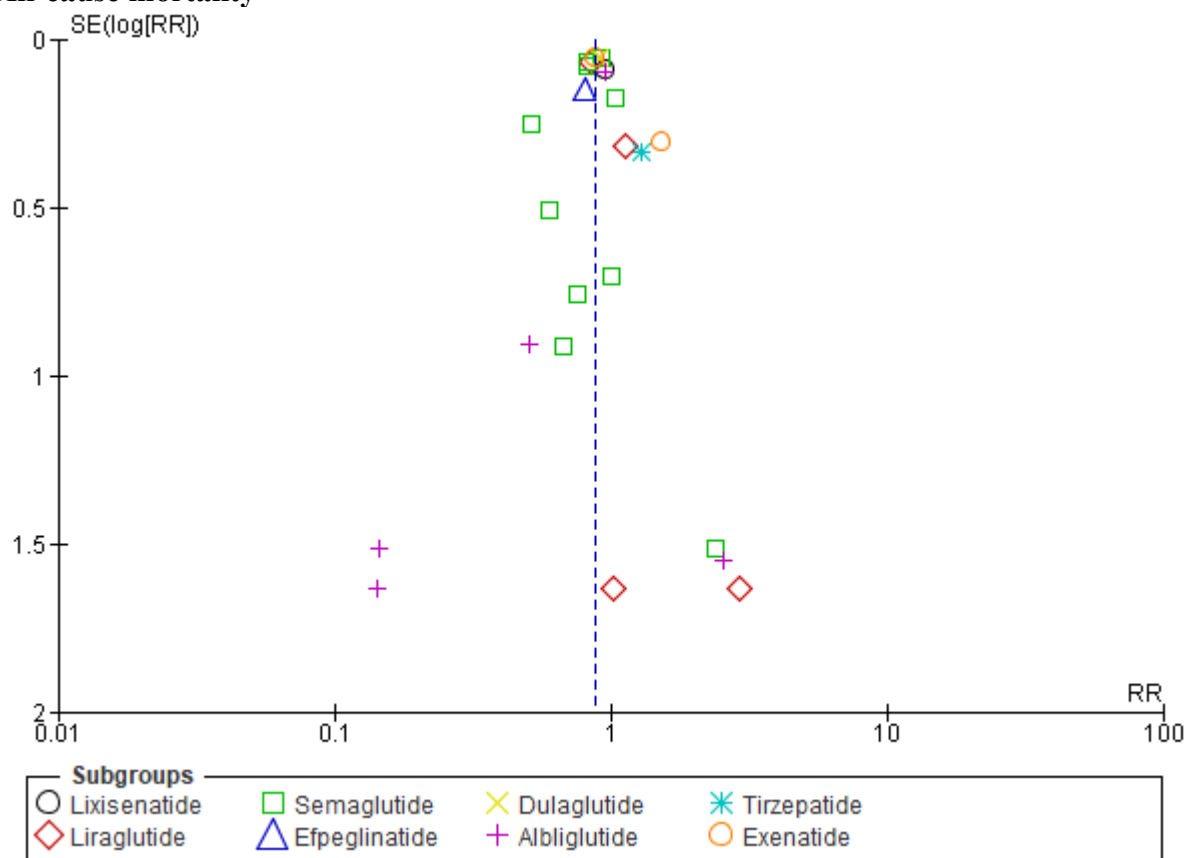
	Risk of bias domains					Overall
	D1	D2	D3	D4	D5	
ELIXA	+	+	+	+	+	+
LEADER	+	+	+	+	+	-
FIGHT	+	+	+	+	+	+
Zhang et al.	+	+	+	-	+	-
Chen et al.	+	+	+	-	+	-
LIVE	+	+	+	-	+	-
EXSCEL	+	+	+	+	+	+
Kyhl et al.	+	+	+	-	+	-
PIONEER 6	+	+	+	+	+	+
STEP-HFpEF	+	+	+	+	+	+
STEP-HFpEF DM	+	+	+	+	+	+
SUSTAIN-6	+	+	+	+	+	+
SELECT	+	+	+	+	+	+
AMPLITUDE-O	+	+	+	+	+	+
REWIND	+	+	+	+	+	+
HARMONY OUTCOME	+	+	+	+	+	+
FLOW	+	+	+	+	+	+
SUMMIT	+	+	+	+	+	+
SOUL	+	+	+	+	+	+
STRIDE	+	+	+	-	+	-
Ruff 2022	+	-	+	+	+	-
STEP 2	+	-	+	+	+	-
PIONEER 8	+	+	+	+	+	+
HARMONY 2	+	+	-	+	+	-
SCALE Diabetes	+	+	+	+	+	+
HARMONY 1	+	+	+	+	+	+
HARMONY 5	+	+	+	+	+	+
HARMONY 3	+	-	+	+	+	-

Study

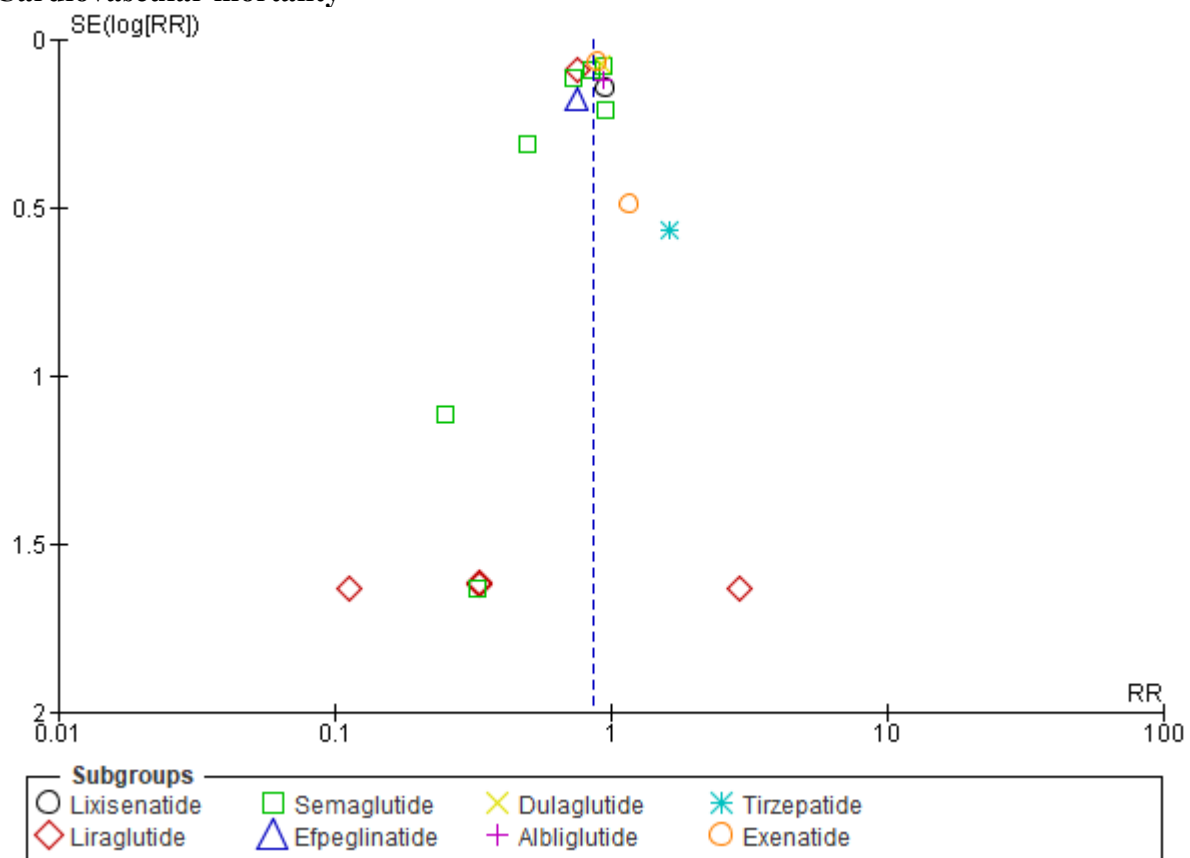
Domains:
D1: Bias arising from the randomization process.
D2: Bias due to deviations from intended intervention.
D3: Bias due to missing outcome data.
D4: Bias in measurement of the outcome.
D5: Bias in selection of the reported result.

Judgement
- Some concerns
+ Low

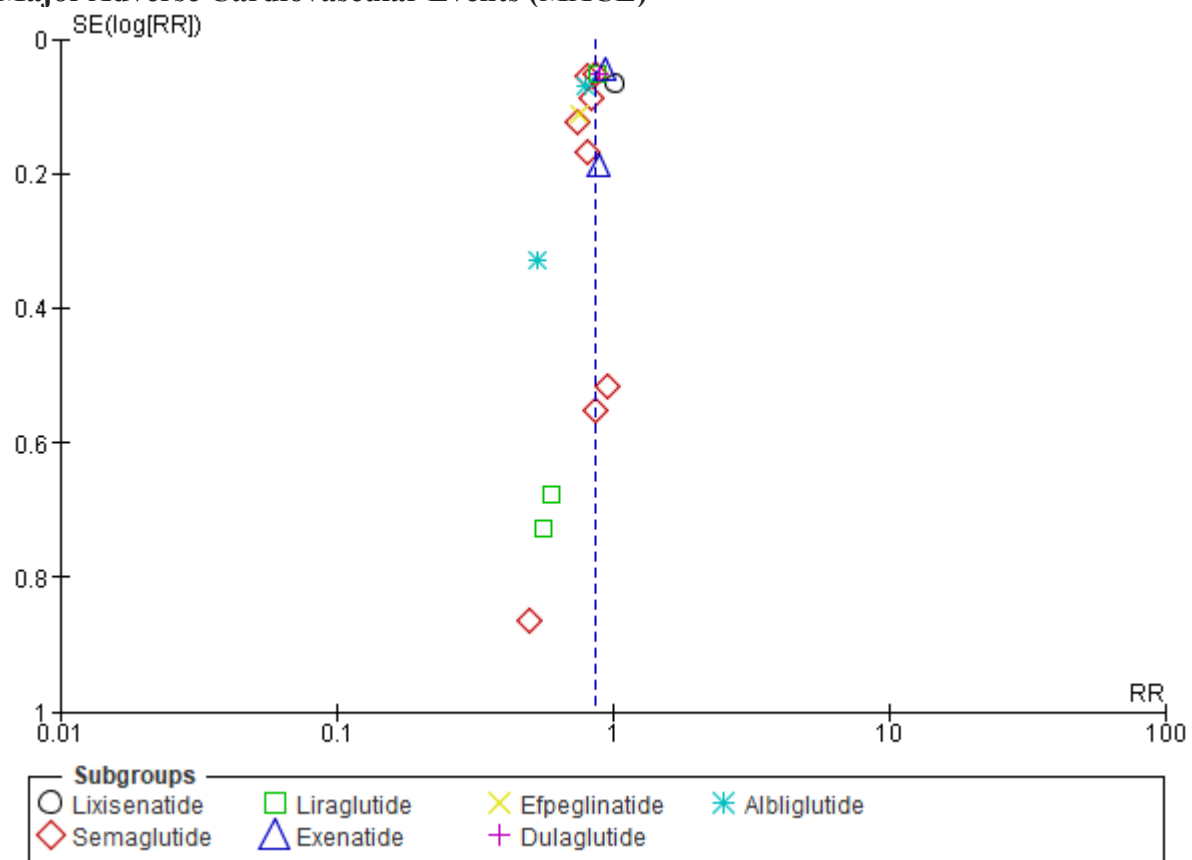
Supplementary Figure S2. Funnel plot illustrating publication bias for the outcome of All-cause mortality



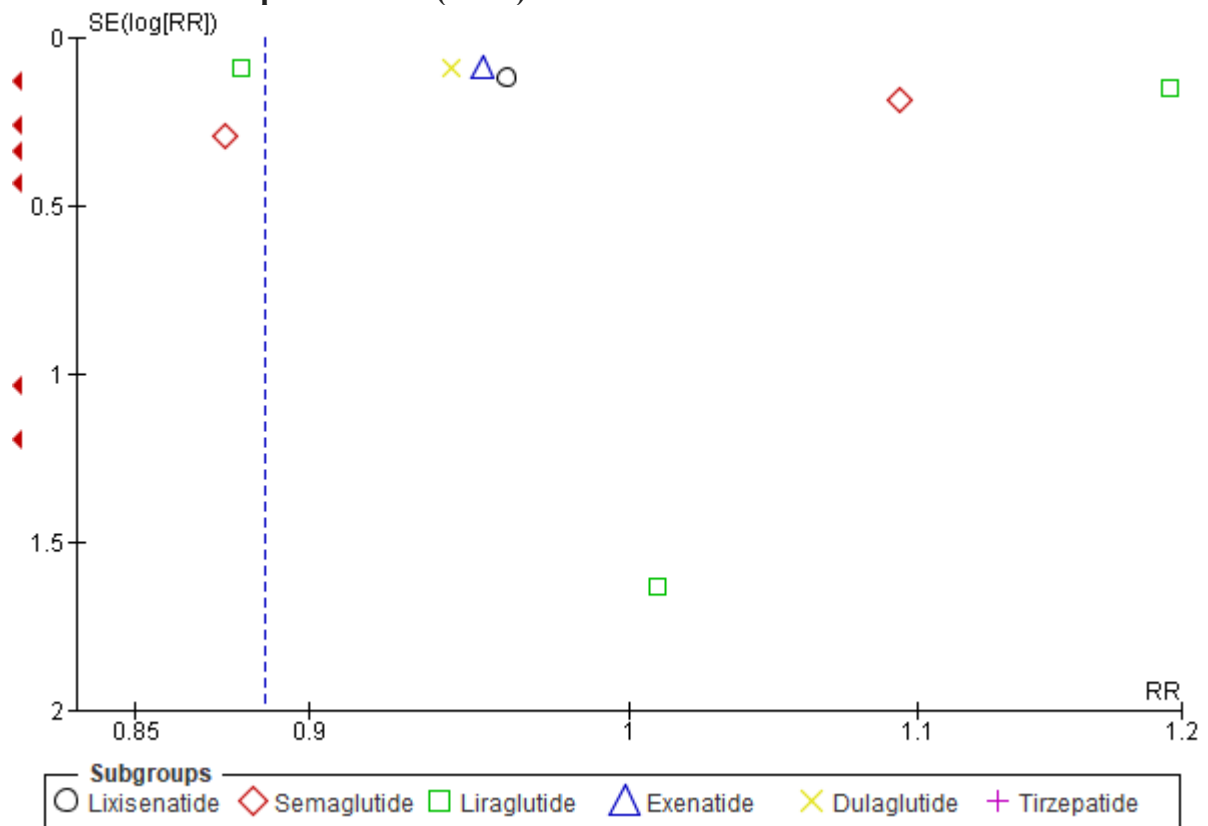
Supplementary Figure S3. Funnel plot illustrating publication bias for the outcome of Cardiovascular mortality



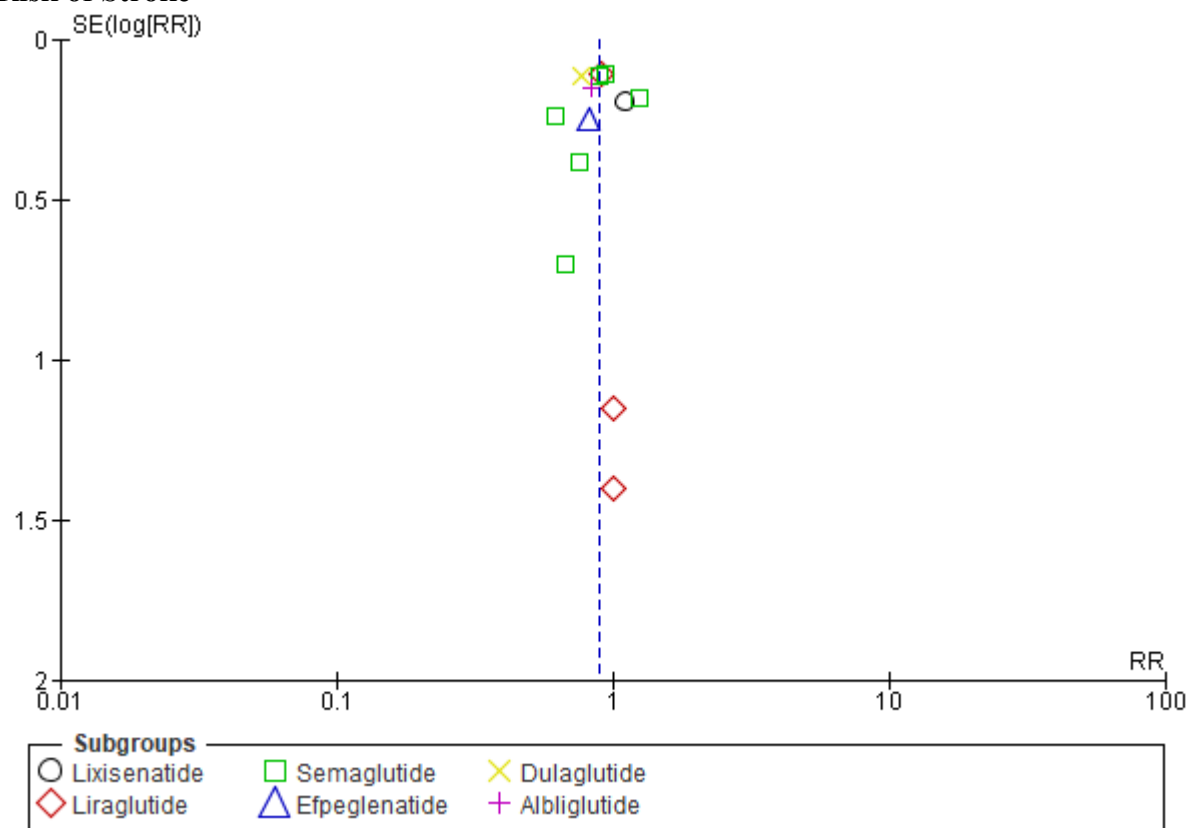
Supplementary Figure S4. Funnel plot illustrating publication bias for the outcome of Major Adverse Cardiovascular Events (MACE)



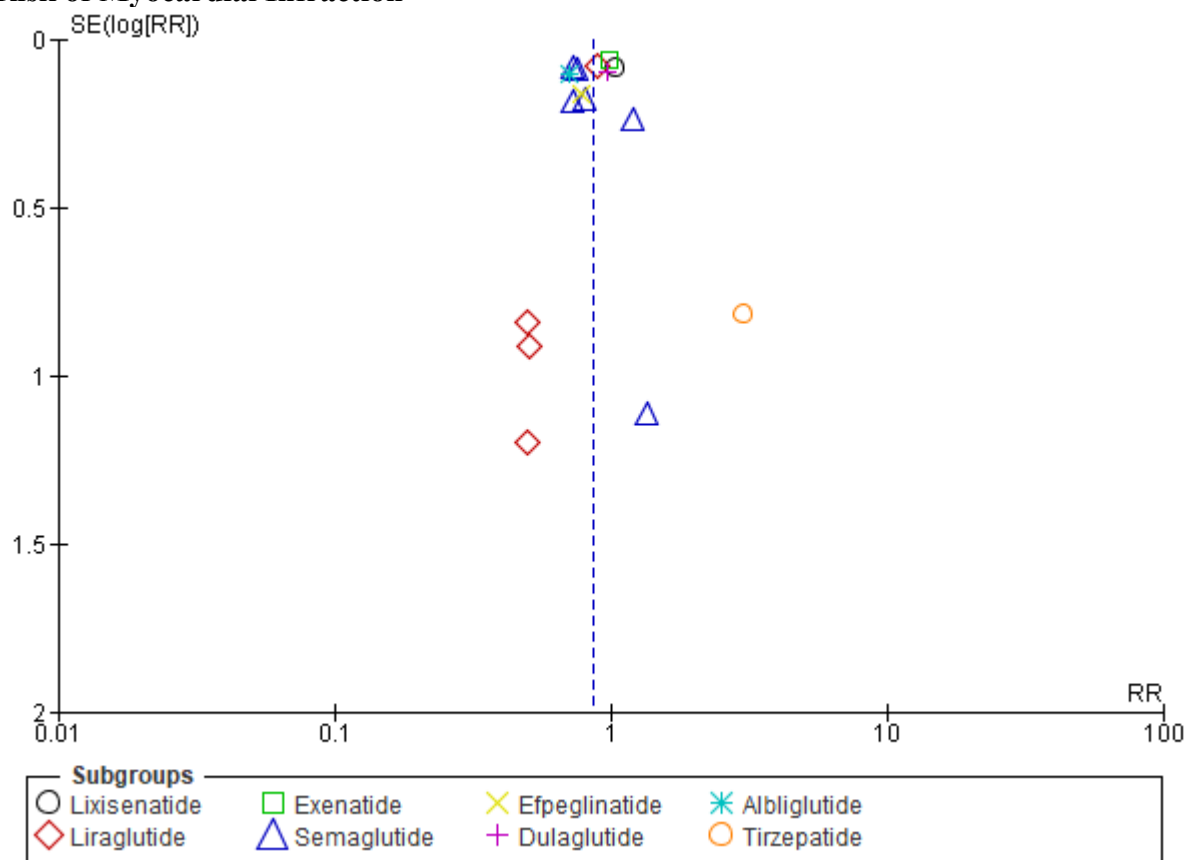
Supplementary Figure S5. Funnel plot illustrating publication bias for the outcome of Heart Failure Hospitalizations (HHF)



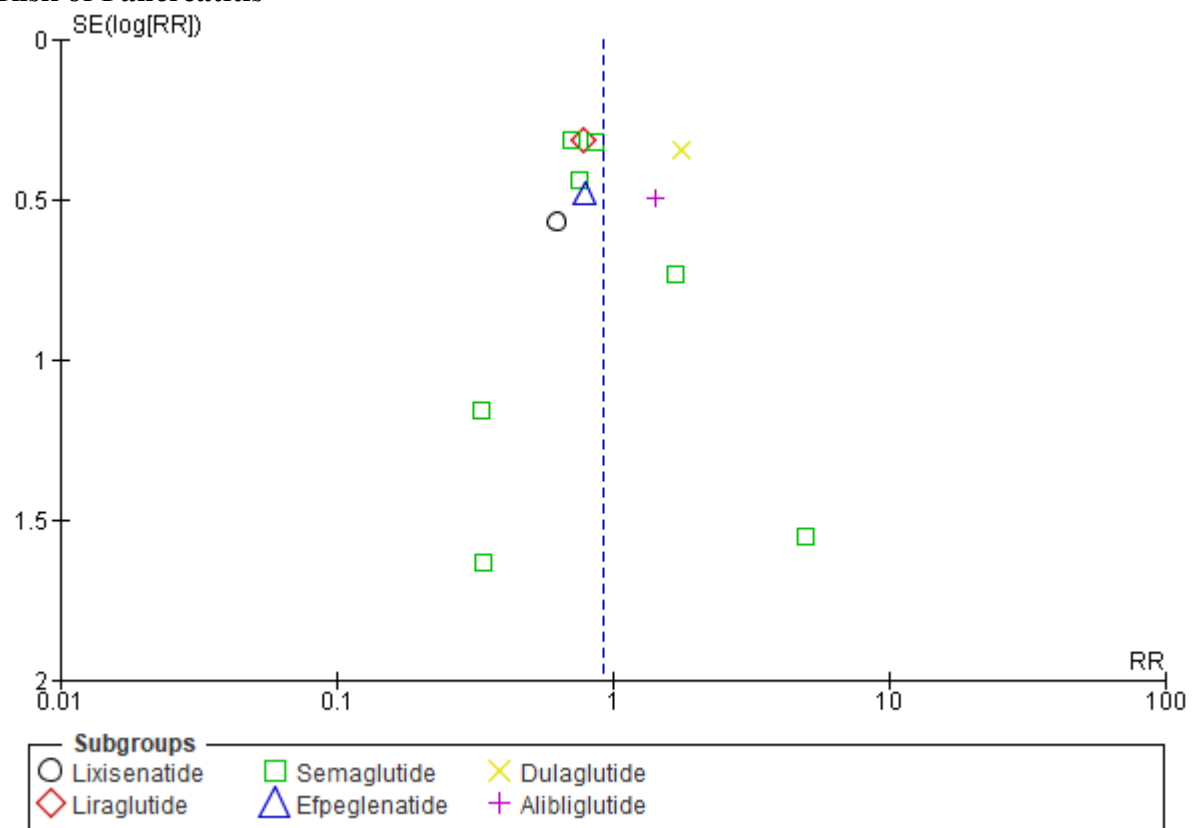
Supplementary Figure S6. Funnel plot illustrating publication bias for the outcome of Risk of Stroke



Supplementary Figure S7. Funnel plot illustrating publication bias for the outcome of Risk of Myocardial Infraction



Supplementary Figure S8. Funnel plot illustrating publication bias for the outcome of Risk of Pancreatitis



Supplementary Figure S9. Funnel plot illustrating publication bias for the outcome of Risk of Infections

