PubMed search:

Embase search:
('non insulin dependent diabetes mellitus'/exp OR 'diabetes mellitus type 2':ab,ti OR 'type 2 diabetes mellitus':ab,ti OR T2D*:ab,ti) AND ('glucagon-like peptide 1 receptor agonists':ab,ti OR lixisenatide:ab,ti OR liraglutide:ab,ti OR semaglutide:ab,ti OR exenatide:ab,ti OR albiglutide:ab,ti OR dulaglutide:ab,ti) AND ('cardiovascular death':ab,ti OR 'myocardial infarction':ab,ti OR stroke:ab,ti OR 'Cardiovascular Events':ab,ti OR 'cardiac Events':ab,ti OR 'major adverse cardiac event'/exp OR 'MACE':ab,ti OR 'major adverse cardiovascular event*':ab,ti) AND ((randomized controlled trial'/exp OR 'controlled clinical study'/exp OR random$:ab,ti OR placebo:ab,ti OR 'drug therapy':lnk OR ((double OR single OR doubly OR singly) AND (blind OR blinded OR blindly):ti,ab OR ‘double blind procedure’/exp) OR trial:ab,ti OR groups:ab,ti) NOT (‘animal experiment’/exp NOT ‘human experiment’/exp))

Supplementary methods:
The endpoint of major adverse cardiovascular events (MACE) in this study was defined as a composite of cardiovascular death, nonfatal myocardial infarction, or nonfatal stroke.

Seven factors of interest by which participants were divided into groups were sex, duration of diabetes, history of heart failure, prior myocardial infarction or stroke, antihyperglycemic oral agent therapy, insulin therapy, and DPP-4 inhibitor therapy; and subgroups defined by these seven factors were pre-specified in the study protocol.
Fig. S1 Flow graph of study selection

Identification
- 653 records identified
  - 221 from PubMed
  - 432 from Embase

Screening
- 522 records screened
- 131 duplicates removed

Eligibility
- 74 full-text articles assessed for eligibility
- 448 excluded
  - 176 outcomes
  - 121 study design
  - 68 population
  - 64 intervention
  - 19 other

Included
- 7 unique trials included in qualitative synthesis

- 67 excluded
  - 32 outcomes
  - 19 study design
  - 12 population
  - 4 other

- 7 unique trials included in quantitative synthesis
### Fig. S2 Risk of bias summary

<table>
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<th>Study</th>
<th>Random sequence generation (selection bias)</th>
<th>Allocation concealment (selection bias)</th>
<th>Blinding of participants and personnel (performance bias)</th>
<th>Blinding of outcome assessment (detection bias)</th>
<th>Incomplete outcome data (attrition bias)</th>
<th>Selective reporting (reporting bias)</th>
<th>Other bias</th>
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Fig. S3 Risk of bias graph

Random sequence generation (selection bias)
Allocation concealment (selection bias)
Blinding of participants and personnel (performance bias)
Blinding of outcome assessment (detection bias)
Incomplete outcome data (attrition bias)
Selective reporting (reporting bias)
Other bias

Legend:
- Low risk of bias
- Unclear risk of bias
- High risk of bias
Fig. S4 Funnel plot and Egger test for the female diabetic subgroup

$P$ from Egger test for publication bias = 0.826
Fig. S5 Funnel plot and Egger test for the male diabetic subgroup

P from Egger test for publication bias = 0.157
Fig. S6 Funnel plot and Egger test for the subgroup with duration of diabetes $\geq 10$ yr
Fig. S7 Funnel plot and Egger test for the subgroup with duration of diabetes <10 yr.

P from Egger test for publication bias = 0.445
Fig. S8 Funnel plot and Egger test for the diabetic subgroup with history of heart failure

P from Egger test for publication bias = 0.932
Fig. S9 Funnel plot and Egger test for the diabetic subgroup without history of heart failure

P from Egger test for publication bias = 0.434
Fig. S10 Funnel plot and Egger test for the diabetic subgroup with prior myocardial infarction or stroke

\[ P \text{ from Egger test for publication bias} = 0.768 \]
Fig. S11 Funnel plot and Egger test for the diabetic subgroup without prior myocardial infarction or stroke
Fig. S12 Funnel plot and Egger test for the diabetic subgroup with antihyperglycemic oral agent therapy

P from Egger test for publication bias = 0.092
Funnel plot and Egger test for the diabetic subgroup without antihyperglycemic oral agent therapy.
Fig. S14 Funnel plot and Egger test for the diabetic subgroup with insulin therapy

P from Egger test for publication bias = 0.398
Fig. S15 Funnel plot and Egger test for the diabetic subgroup without insulin therapy

\[ P \text{ from Egger test for publication bias} = 0.073 \]
Fig. S16 Funnel plot and Egger test for the diabetic subgroup with DPP-4 inhibitor therapy
Fig. S17 Funnel plot and Egger test for the diabetic subgroup without DPP-4 inhibitor therapy