

Supplementary Table S1. HIV infection features of enrolled patients

	Median	Interquartile range
Baseline CD4+ T-Cell Count (X10⁶ cells/L)	493	85 – 682
HIV-RNA, copies/mL	50	13 – 36186
Time from HIV diagnosis (years)	11.5	0.98 – 16.0
Time on ART (months)	45.0	3.0 – 147.0
PI-containing regimen (%)	50.1	17.1 – 66.7

Supplementary Table S2. Quality assessment of cohort studies

Author's name	Study design	Representativeness of the exposed cohort	Selection of non-exposed cohort	Ascertainment of exposure	Demonstration that outcome was not present at start of the study	Comparability	Assessment of outcome	Was follow-up long enough for outcome to occur	Adequacy of follow-up of cohorts	Total	Grade
Visnegarwala et al	Retrospective cohort	1	0	1	0	0	1	1	1	5	Fair
Benesic et al	Prospective cohort	0	0	0	1	0	0	1	1	3	Poor
Johns et al	Retrospective cohort	1	0	0	0	0	0	1	1	3	Poor
Townsend et al	Retrospective cohort	1	0	1	1	0	1	1	0	5	Fair
Rahman et al	Retrospective cohort	1	0	1	1	0	1	1	1	6	Fair
Silverberg et al	Retrospective cohort	1	0	1	1	2	1	1	0	7	Good
Singh et al	Retrospective cohort	1	0	1	0	2	1	1	1	7	Good
Moore et al	Retrospective cohort	1	1	1	1	2	0	1	1	8	Good
Calza et al	Retrospective cohort	0	0	0	1	2	0	1	1	5	Fair
Overton et al	Prospective cohort	1	0	1	1	2	0	1	1	7	Good
Rasmussen et al	Prospective cohort	1	1	1	1	2	1	1	1	9	Good
Calza et al	Prospective cohort	1	0	1	1	0	0	1	1	5	Fair
Calza et al	Prospective cohort	1	1	1	1	1	0	1	1	7	Good
Krsak et al	Retrospective cohort	1	0	1	1	2	1	1	0	7	Good
Lang et al	Prospective cohort	1	1	1	1	2	0	1	0	7	Good
De Socio et al	Prospective cohort	1	0	1	0	2	0	1	0	5	Fair
Clement et al	Retrospective cohort	1	0	1	1	0	1	1	0	5	Fair
Boccara et al	Prospective	1	0	1	0	2	0	1	0	5	Fair

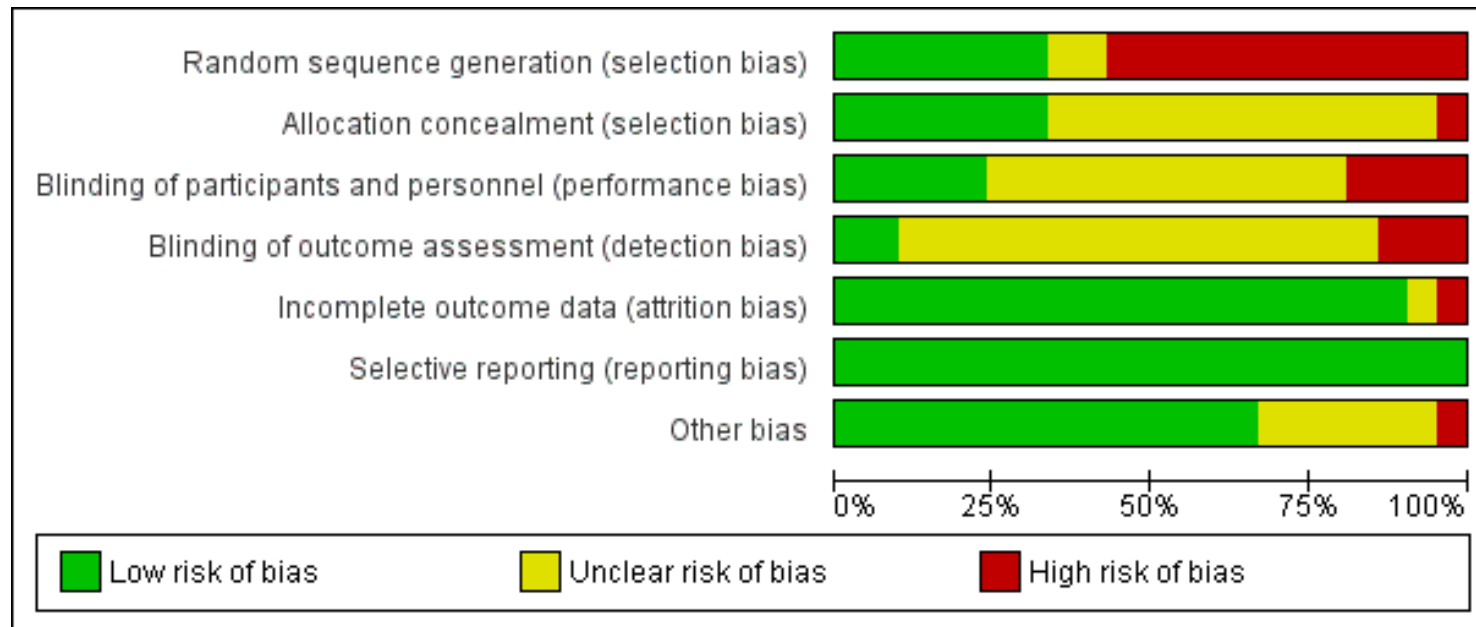
	cohort										
Ou et al	Retrospective cohort	1	0	1	1	2	1	1	0	7	Good
Riestenberg et al	Retrospective cohort	1	0	1	1	2	1	1	0	7	Good
deFilippi et al	Prospective cohort	1	0	1	1	2	0	1	1	7	Good
Phan et al	Prospective cohort	1	0	1	1	2	1	1	1	8	Good
Calza et al	Prospective cohort	0	0	1	1	0	0	1	1	4	Poor
Boetigger et al	Retrospective cohort	1	0	1	1	1	0	1	0	5	Fair
Brunet et al	Retrospective cohort	1	0	1	1	1	1	1	1	7	Good
Bedimo et al	Prospective cohort	1	1	1	1	2	1	1	0	8	Good

Supplementary Table S3. Mixed effect meta-regression analysis showing the association between patient characteristics and incidence of adverse events with statin treatment versus placebo/control

Patient Characteristics	RR	95% CI	<i>p</i> -value
Age (years)	1.19	0.98 – 1.46	0.081
BMI (kg/m ²)	1.01	0.99 – 1.02	0.066
Sex Female	1.36	1.00 – 1.85	0.049
Follow up (Months)	1.29	0.85 – 1.95	0.227
Triglycerides (mmol/L)	3.74	0.61 – 22.80	0.152
HDL-C (mmol/L)	2.0×10^{-5}	3.8×10^{-10} -1.06	0.051
HIV-RNA copies/mL	1.00	1.00 – 1.01	0.047
CD4 ⁺ T-cell (x10 ⁶ cells/L)	1.00	1.00 – 1.01	0.229

Supplemental Table S4. Mixed effect meta-regression analysis showing the association between patient characteristics and treatment discontinuation

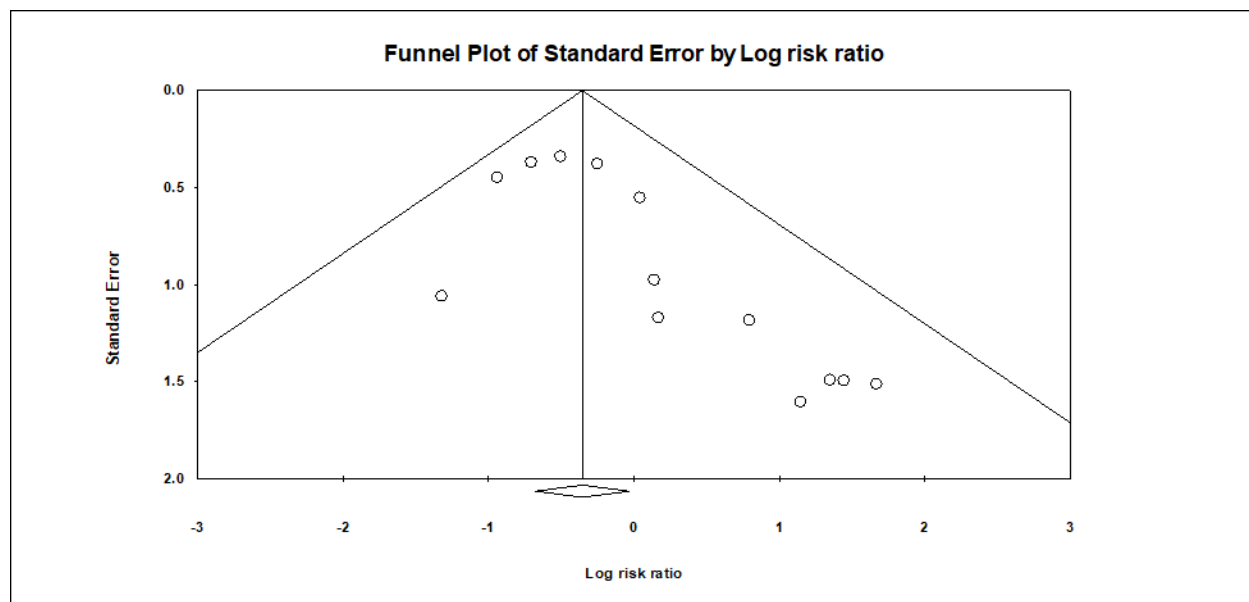
Patient Characteristics	RR	95% CI	<i>p</i>-value
Age (years)	1.07	0.89 – 1.27	0.482
BMI (kg/m²)	1.00	0.99 – 1.00	0.687
Sex Female	0.99	0.89 – 1.12	0.988
Follow up (Months)	0.98	0.91 – 1.04	0.490
HDL-C (mmol/L)	4.15	5x10 ⁻⁵ - 3.3x10 ⁵	0.805
HIV-RNA copies/mL	1.00	0.99 – 1.01	0.738
CD4⁺ T-cell (x10⁶ cells/L)	1.01	0.98 – 1.01	0.514



Supplementary Figure S1, a. Quality assessment of randomized controlled trials (risk of bias graph)

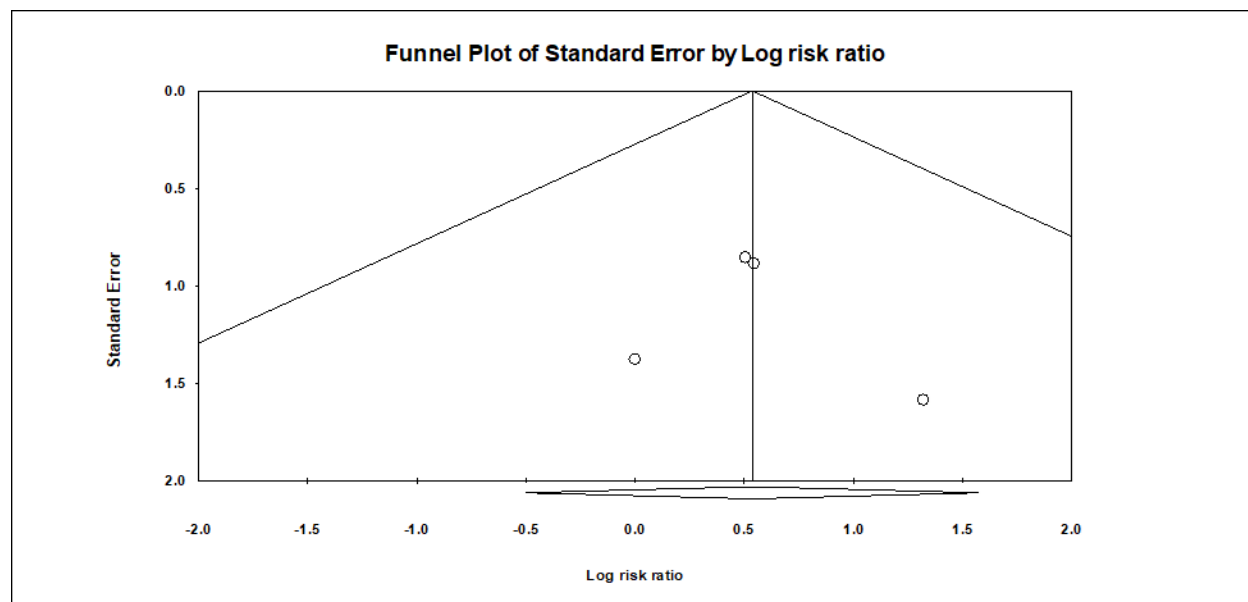
	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Aberg 2005	●	?	?	?	+	+	+
Baker 2012	+	+	+	?	+	+	?
Bonnet 2007	+	?	?	?	+	+	?
Calmy 2010	●	?	?	?	+	+	+
Calza 2003	+	?	?	?	+	+	?
Eckard 2014	●	?	●	?	+	+	+
Funderburg 2015	●	?	?	?	+	+	+
Grandi 2014	●	?	●	?	+	+	+
Hearps 2021	?	?	?	+	+	+	?
Hileman 2017	●	?	?	?	?	+	+
Lo 2015	+	+	+	●	+	+	+
Longenecker 2016	●	?	●	●	+	+	+
Maccallan 2008	●	●	?	?	●	+	+
Mallon 2006	●	+	?	?	+	+	+
Myole 2001	●	+	?	?	+	+	?
Nakanjako 2015	+	+	+	+	+	+	+
Nou 2016	●	?	?	●	+	+	+
Saeedi 2015	●	?	?	?	+	+	●
Stein 2004	?	?	●	?	+	+	?
Toribio 2017	+	+	+	?	+	+	+
Wongprikorn 2016	+	+	+	?	+	+	+

Supplementary Figure S1, b. Quality assessment of randomized controlled trials (risk of bias summary)



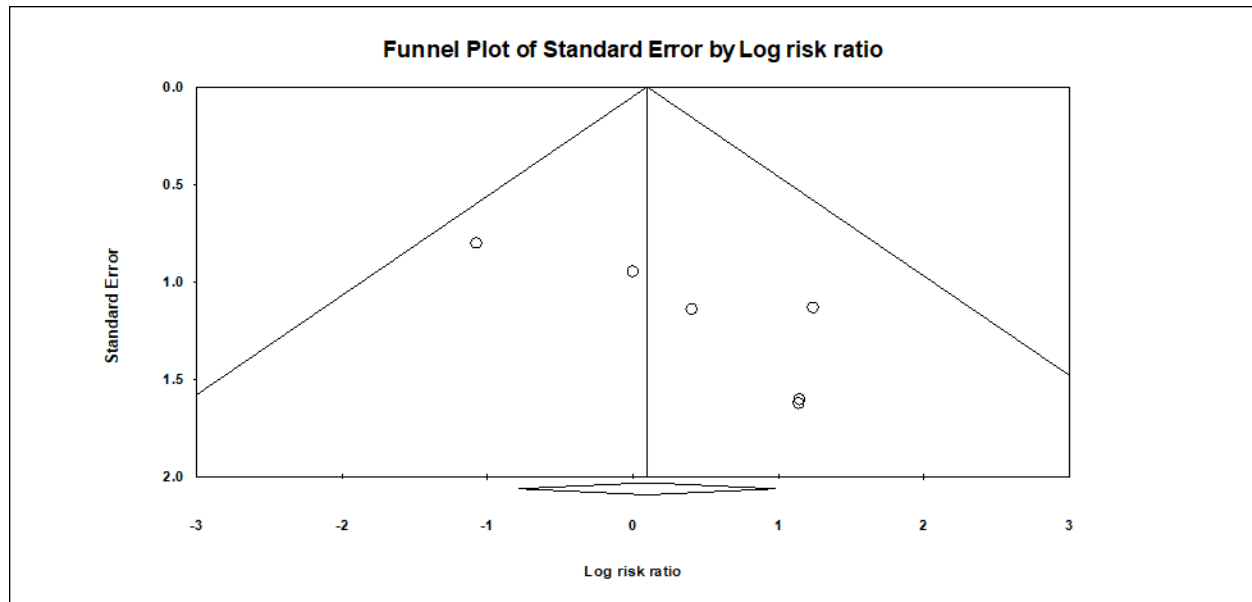
Beggs test ($p = 0.002$); Eggers regression concept test ($p = 0.003$)

Supplementary Figure S2. Funnel plot of standard error versus log risk ratio for rate of discontinuation with statin treatment versus placebo/control



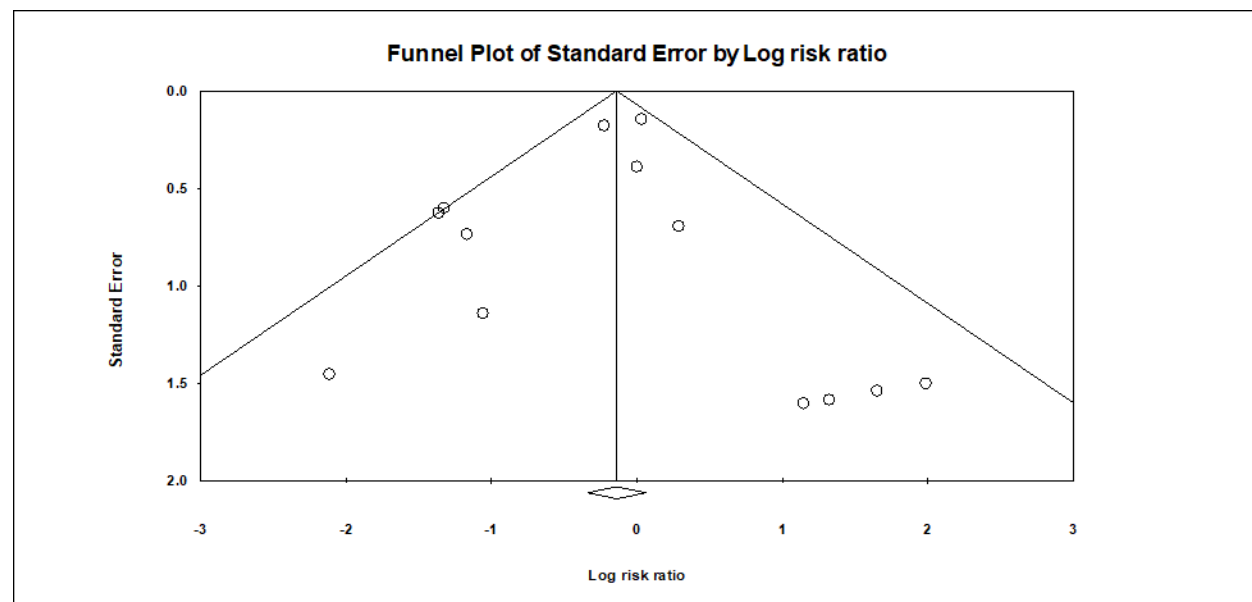
Beggs ($p = 0.734$); Eggers regression intercept test ($p = 0.745$)

Supplementary Figure S3. Funnel plot of standard error versus log risk ratio for all-cause mortality with statin treatment versus placebo/control



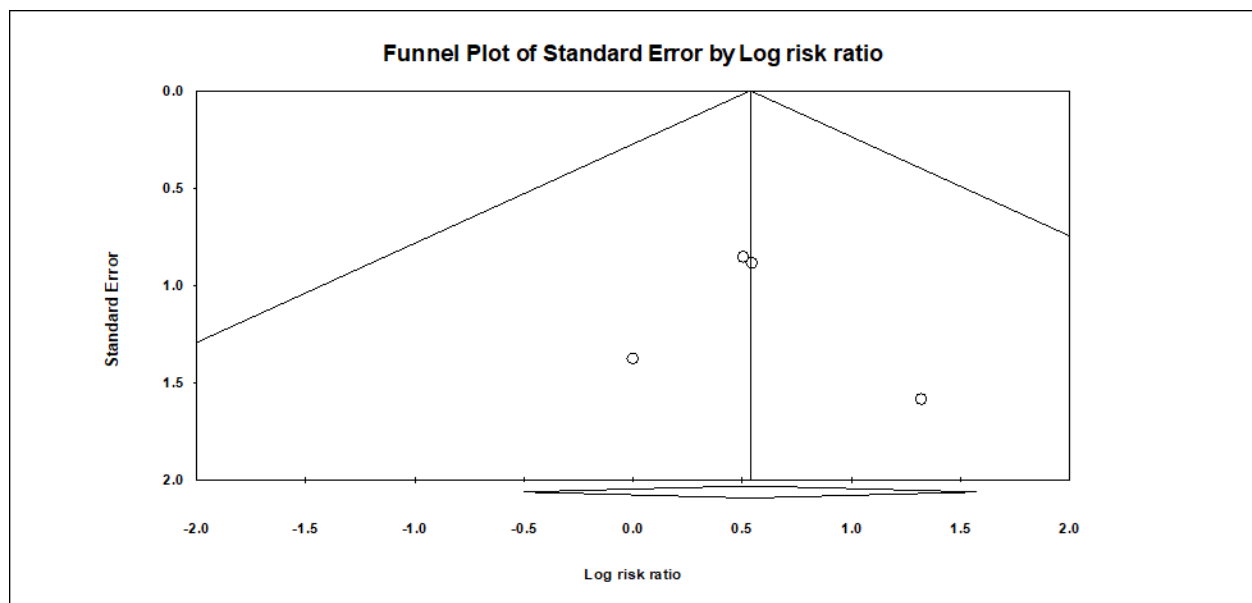
Beggs ($p = 0.259$); Eggers regression intercept test ($p = 0.039$)

Supplementary Figure S4. Funnel plot of standard error versus log risk ratio for CK elevation with statin treatment versus placebo/control



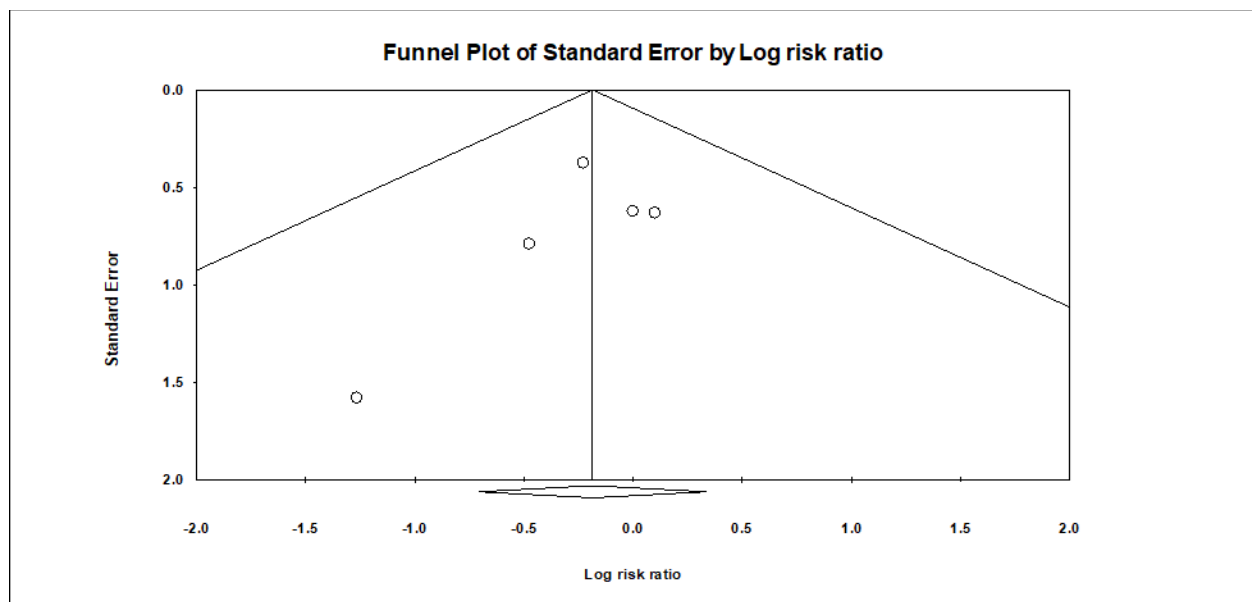
Beggs test ($p = 0.427$); Eggers regression intercept test ($p = 0.657$)

Supplementary Figure S5. Funnel plot of standard error versus log risk ratio for incidence of adverse events with statin treatment versus placebo/control



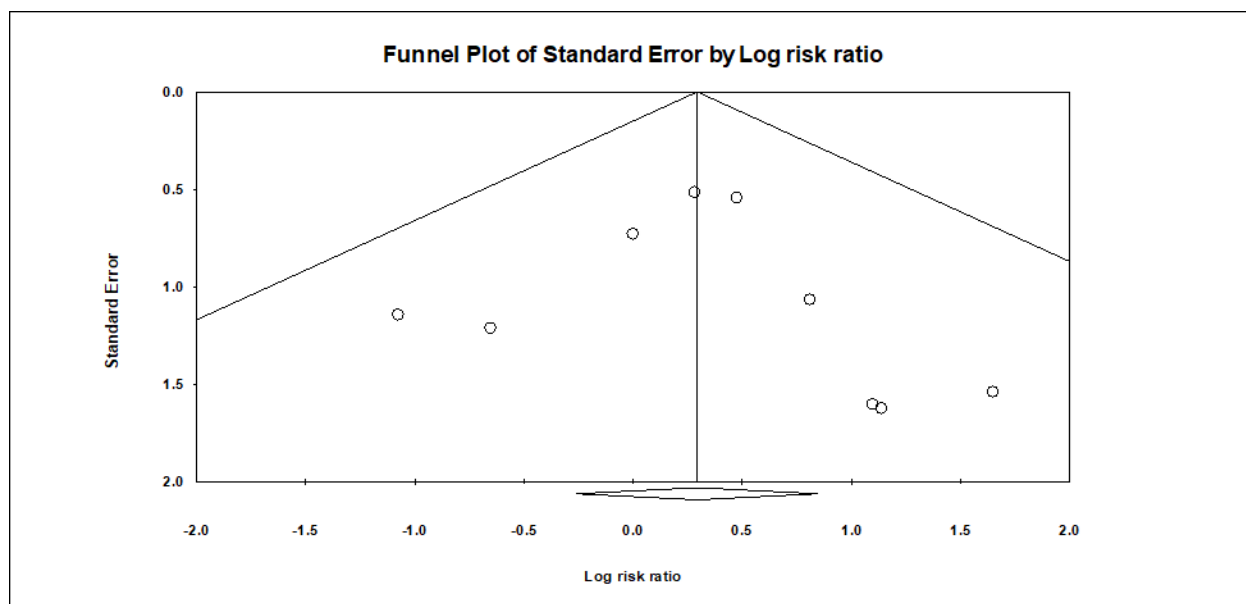
Beggs ($p = 0.734$); Eggers regression intercept test ($p = 0.745$)

Supplementary Figure S6. Funnel plot of standard error versus log risk ratio for elevation of liver enzymes with statin treatment versus placebo/control



Beggs test ($p = 0.462$); Eggers regression intercept test ($p = 0.397$)

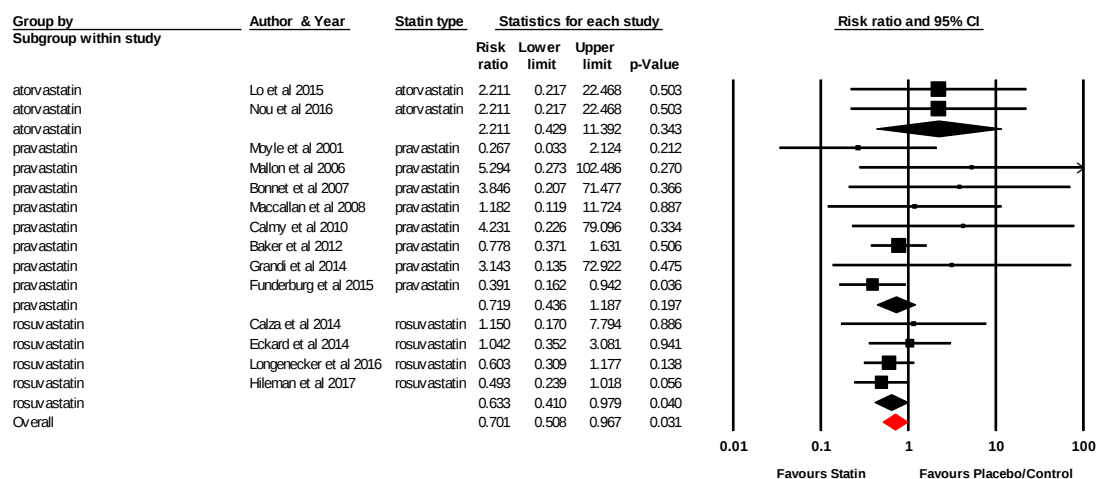
Supplementary Figure S7. Funnel plot of standard error versus log risk ratio for incidence of gastrointestinal (GI) adverse effects with statin treatment versus placebo/control



Beggs test ($p = 0.251$); Eggers regression intercept test ($p = 0.729$)

Supplementary Figure S8. Funnel plot of standard error versus log risk ratio for incidence of myalgia with statin treatment versus placebo/control

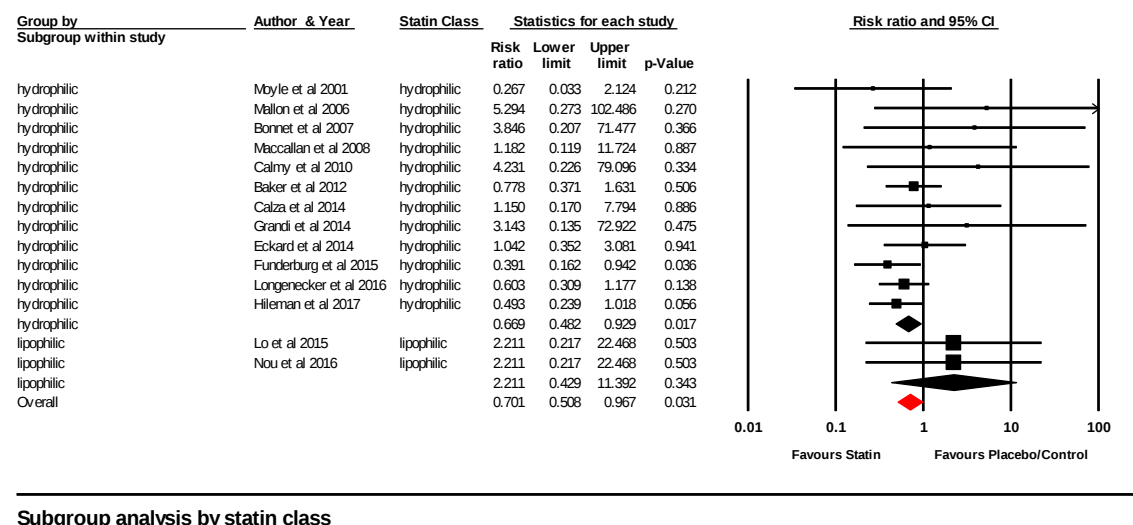
Effects of statins on discontinuation of treatment in HIV patients on HAART



Subgroup analysis by statin type

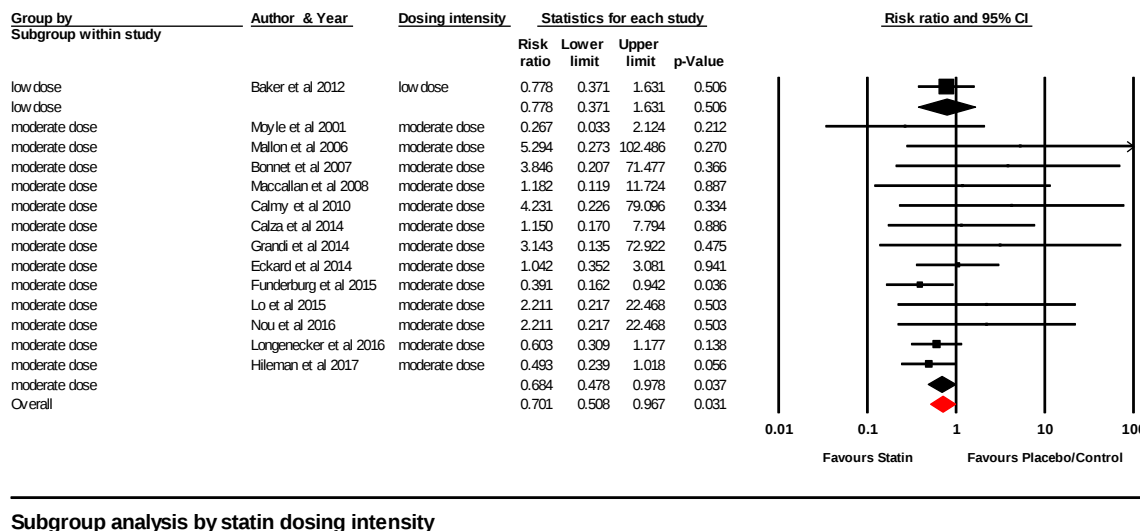
Supplementary Figure S9. Forest plot of effect of statin type versus placebo/control on risk of treatment discontinuation in HIV-infected patients on HAART

Effects of statins on discontinuation of treatment in HIV patients on HAART



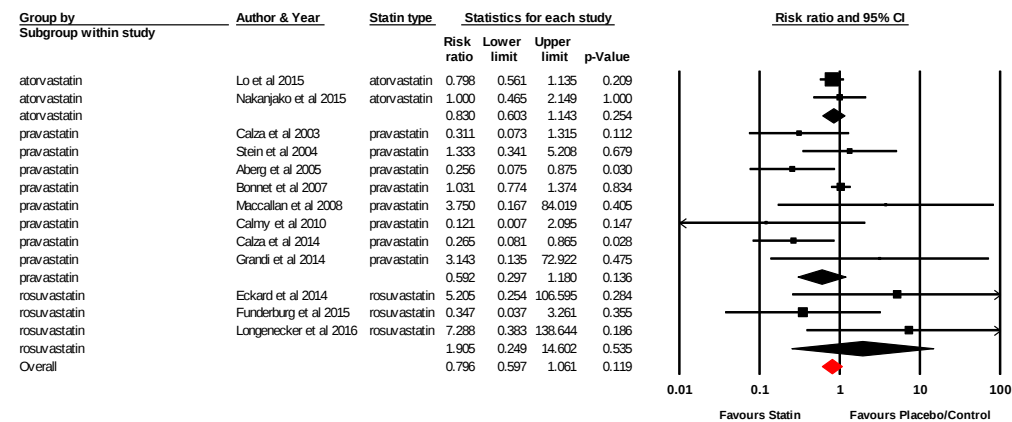
Supplementary Figure S10. Forest plot of effect of statin class versus placebo/control on risk of treatment discontinuation in HIV-infected patients on HAART

Effects of statins on discontinuation of treatment in HIV patients on HAART



Supplementary Figure S11. Forest plot of effect of statin dosing intensity versus placebo/control on risk of treatment discontinuation in HIV-infected patients on HAART

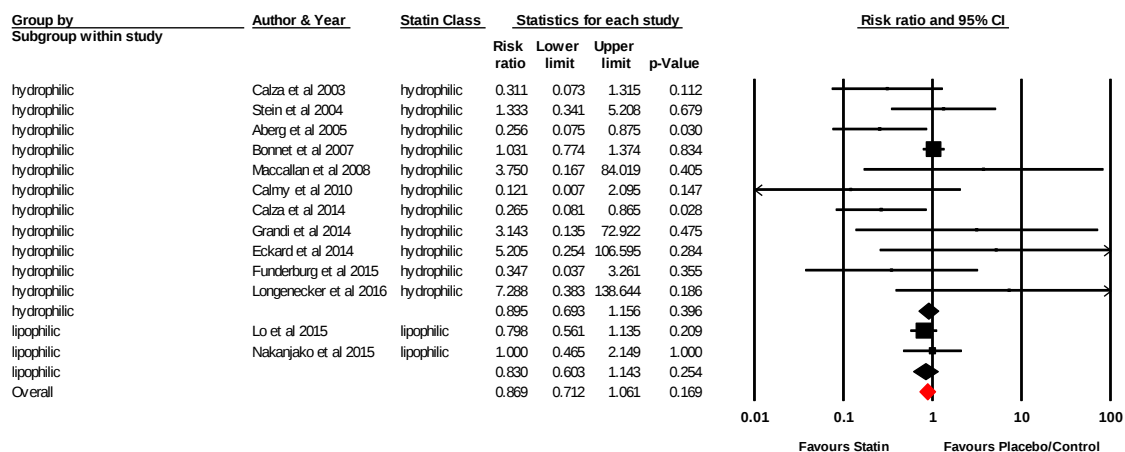
Effects of statins on incidence of adverse effects in HIV patients on HAART



Subgroup analysis by statin type

Supplementary Figure S12. Forest plot of effect of statin type versus placebo/control on risk of adverse effects in HIV-infected patients on HAART

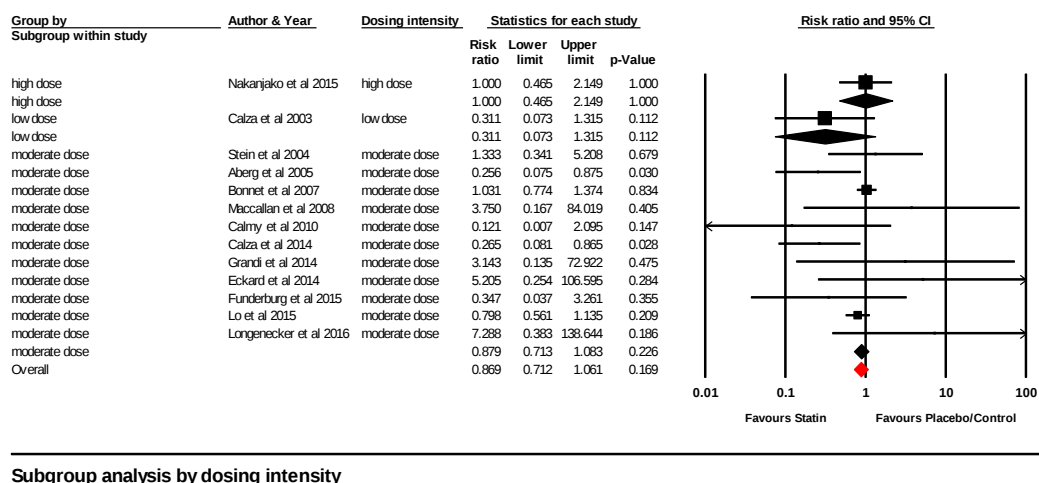
Effects of statins on incidence of adverse effects in HIV patients on HAART



Subgroup analysis by statin class

Supplementary Figure S13. Forest plot of effect of statin class versus placebo/control on risk of adverse effects in HIV-infected patients on HAART

Effects of statins on incidence of adverse effects in HIV patients on HAART



Supplementary Figure S14. Forest plot of effect of statin dosing intensity versus placebo/control on risk of adverse effects in HIV-infected patients on HAART