Efficacy

Randomised controlled trials

Stratified analysis by 20° latitude, ordered by year study started

Pulmonary tuberculosis

See *Figure 121.*

All tuberculosis disease outcomes

See *Figure 122.*

Combined tuberculosis meningitis and/or miliary tuberculosis

See *Figure 123.*

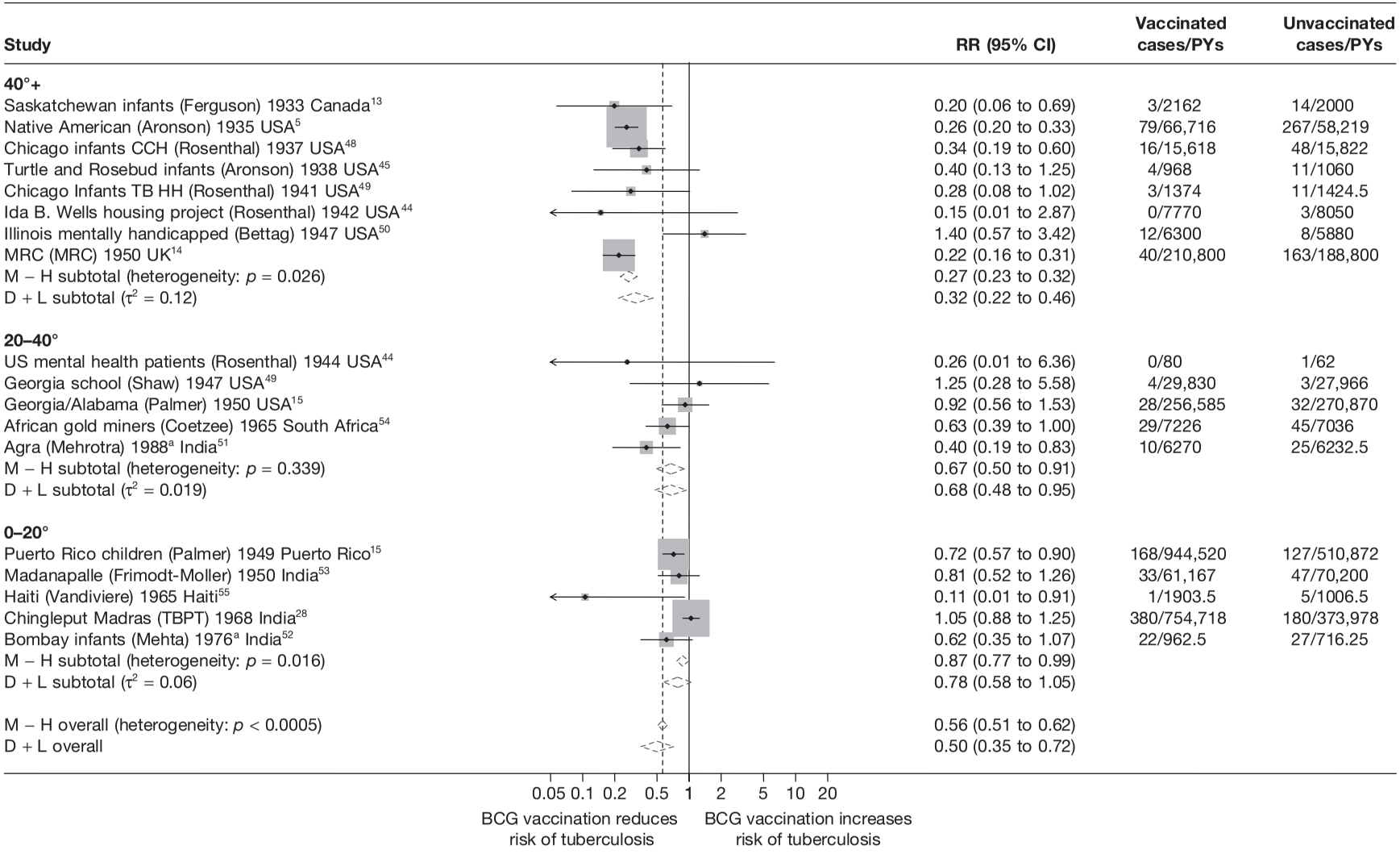

FIGURE 121 Rate ratios (with 95% CI) comparing the incidence of pulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. CCH, Cook County Hospital; D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households; TBPT, Tuberculosis Prevention Trial.

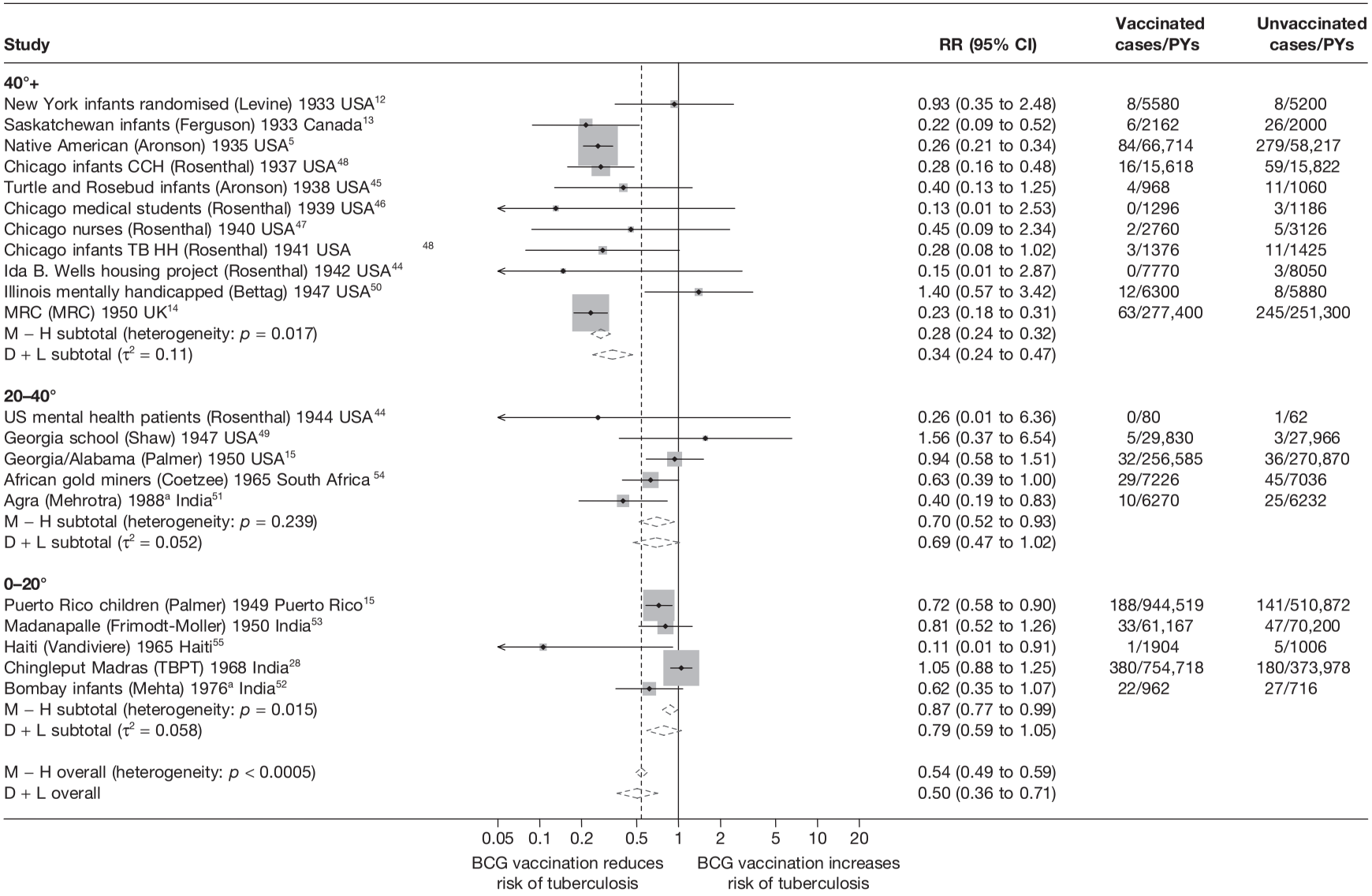

FIGURE 122 Rate ratios (with 95% CI) comparing the incidence of all tuberculosis disease outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. CCH, Cook County Hospital; D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households; TBPT, Tuberculosis Prevention Trial.

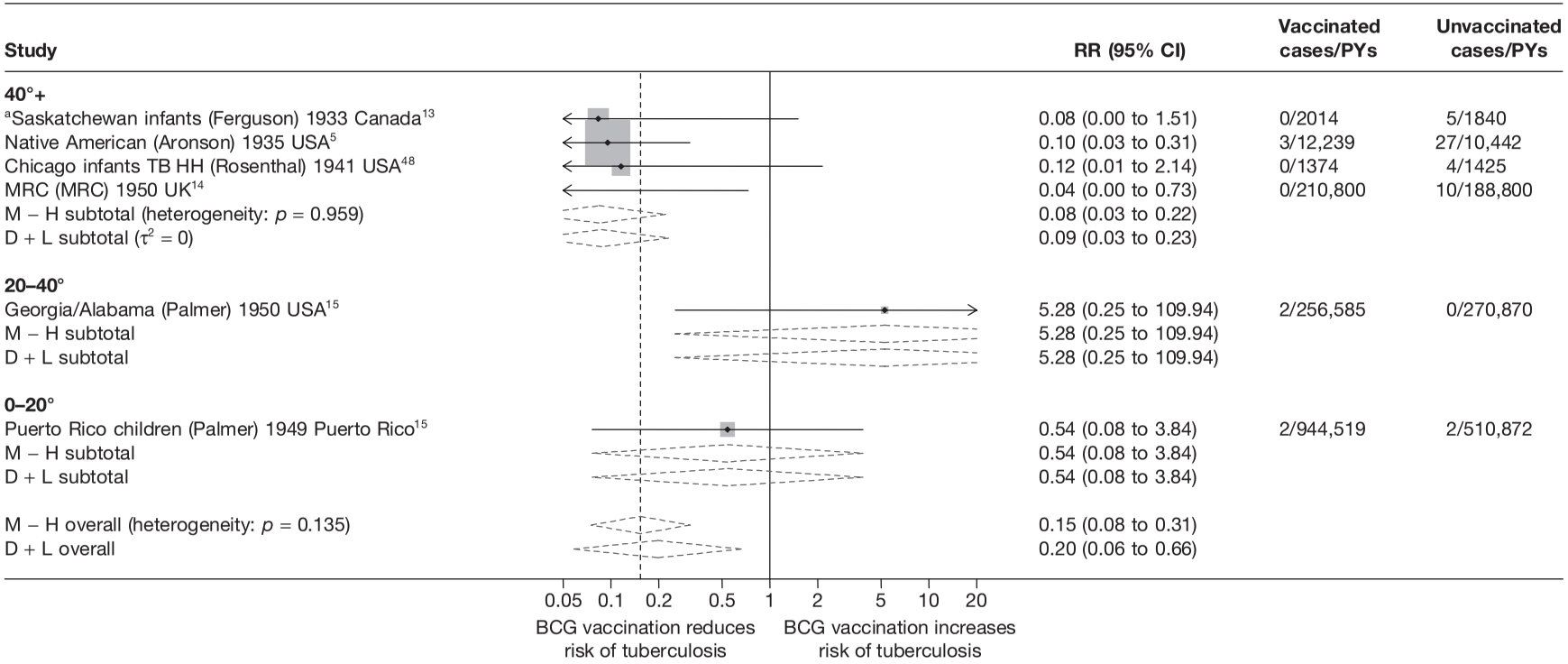

FIGURE 123 Rate ratios (with 95% CI) comparing the incidence of tuberculosis meningitis and/or miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (20° bands), ordered by year of study start. a, The outcome is miliary tuberculosis only. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

Meningitis tuberculosis

Unstratified analyses are ordered by year trial started

See *Figure 124.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 125.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 126.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 127.*

Stratified analysis by risk of diagnostic detection bias, ordered by year study started

See *Figure 128.*

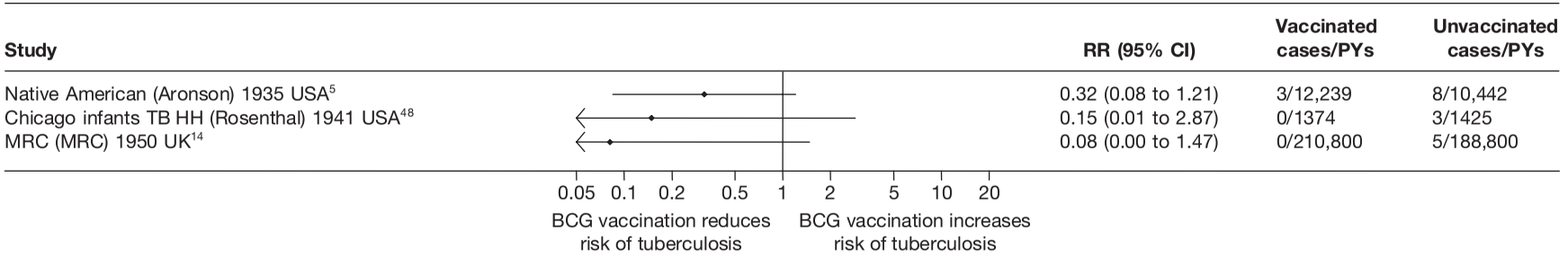

FIGURE 124 Rate ratios (with 95% CI) comparing the incidence of tuberculosis meningitis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs ordered by year of study start. TB HH, tuberculosis households.

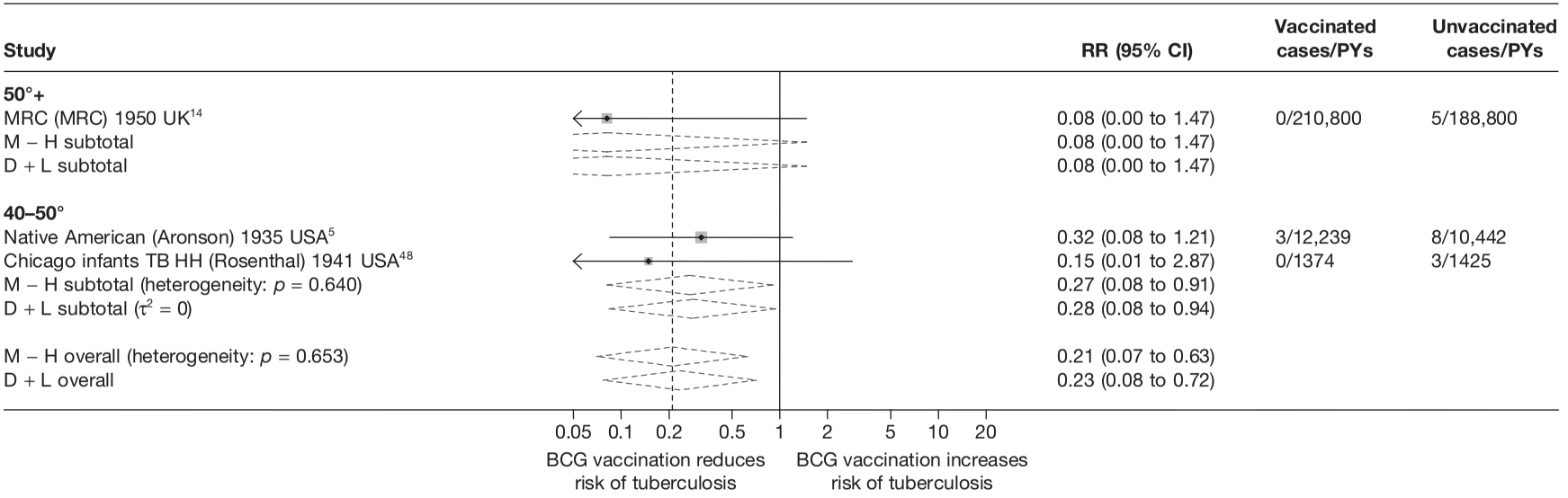

FIGURE 125 Rate ratios (with 95% CI) comparing the incidence of tuberculosis meningitis and/or miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

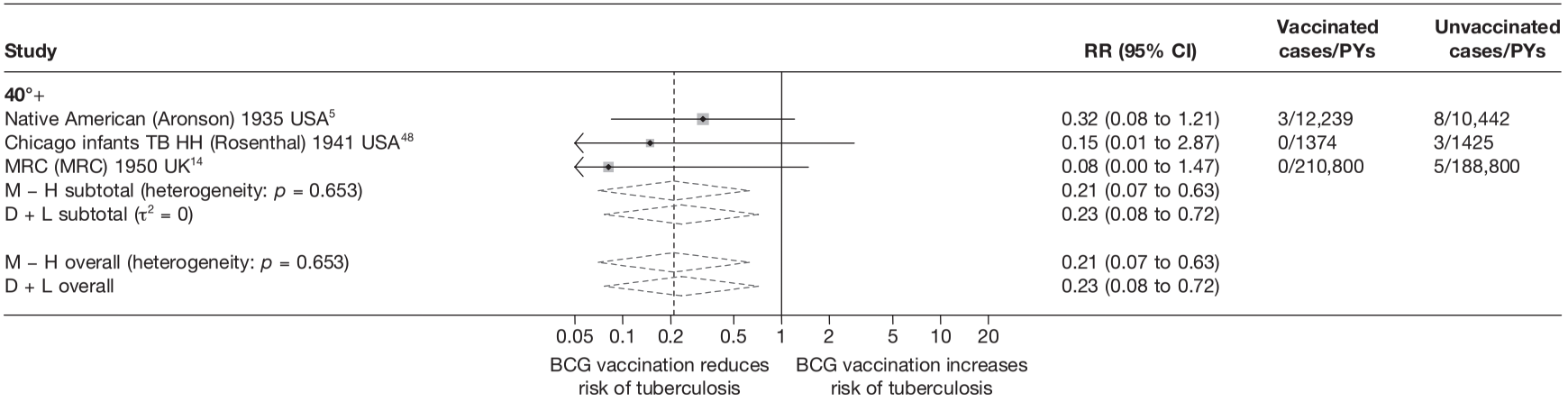

FIGURE 126 Rate ratios (with 95% CI) comparing the incidence of tuberculosis meningitis and/or miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RTCs, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

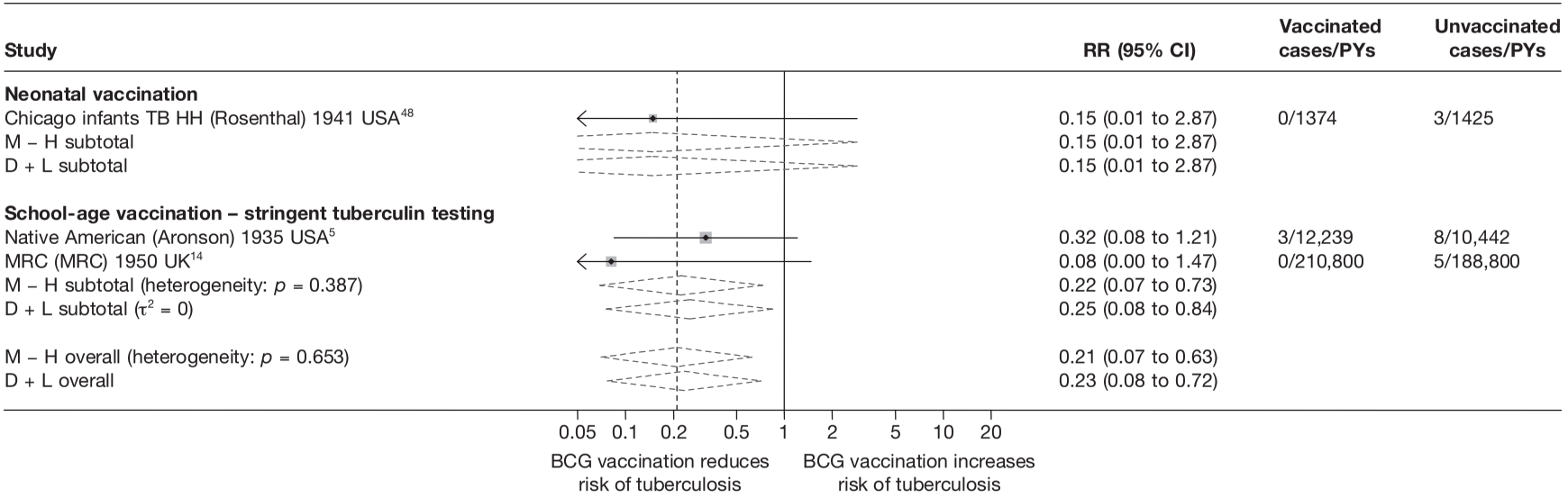

FIGURE 127 Rate ratios (with 95% CI) comparing the incidence of tuberculosis meningitis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

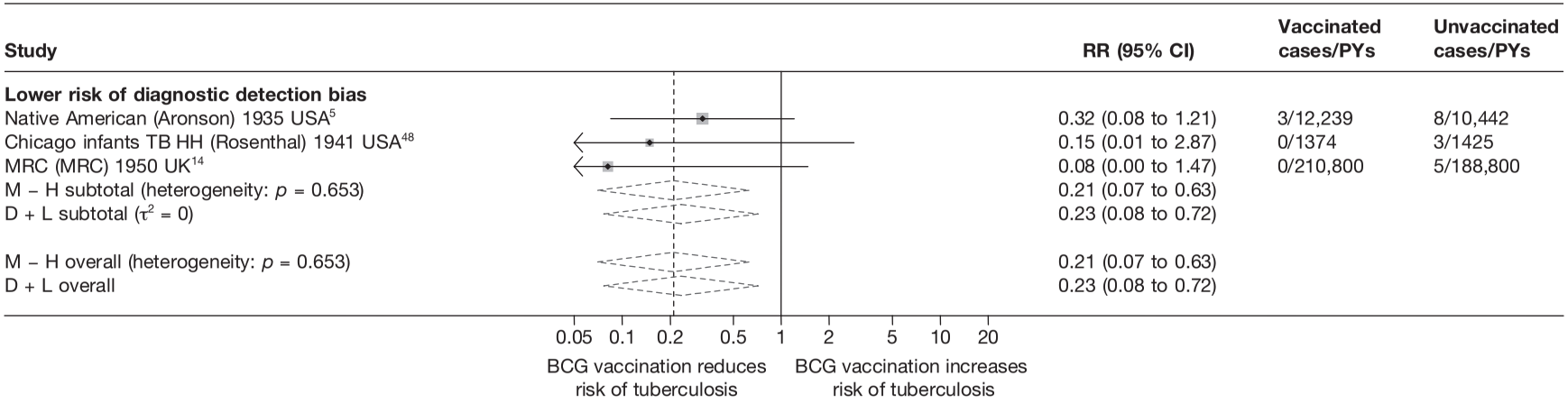

FIGURE 128 Rate ratios (with 95% CI) comparing the incidence of tuberculosis meningitis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by risk of diagnostic detection bias[a] and ordered by year of study start. a, Diagnostic detection bias occurs if the assessor of BCG outcome is not blinded to vaccination status. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

Miliary tuberculosis

Unstratified analyses are ordered by year trial started

See *Figure 129.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 130.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 131.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 132.*

Stratified analysis by risk of diagnostic detection bias, ordered by year study started

See *Figure 133.*

Stratified analysis by 20° latitude, ordered by year study started

Extrapulmonary tuberculosis

See *Figure 134.*

Tuberculosis mortality

See *Figure 135.*

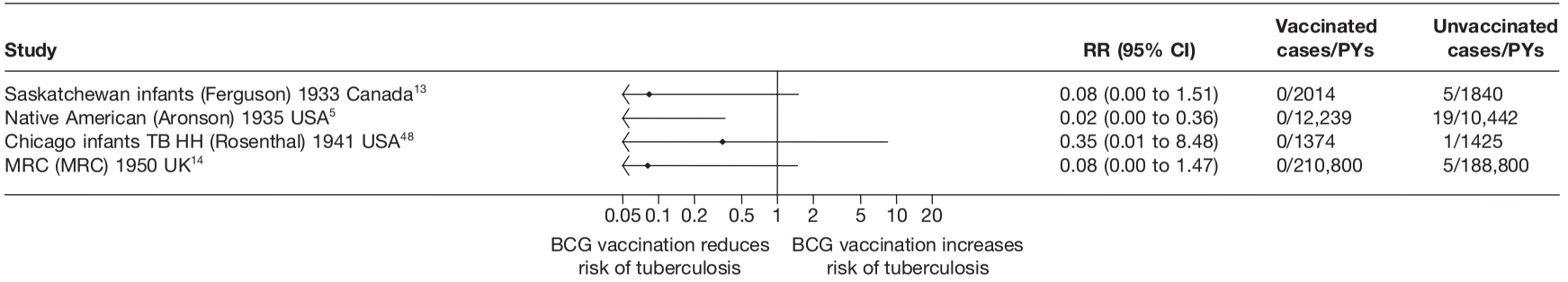

FIGURE 129 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, ordered by year of study start. TB HH, tuberculosis households.

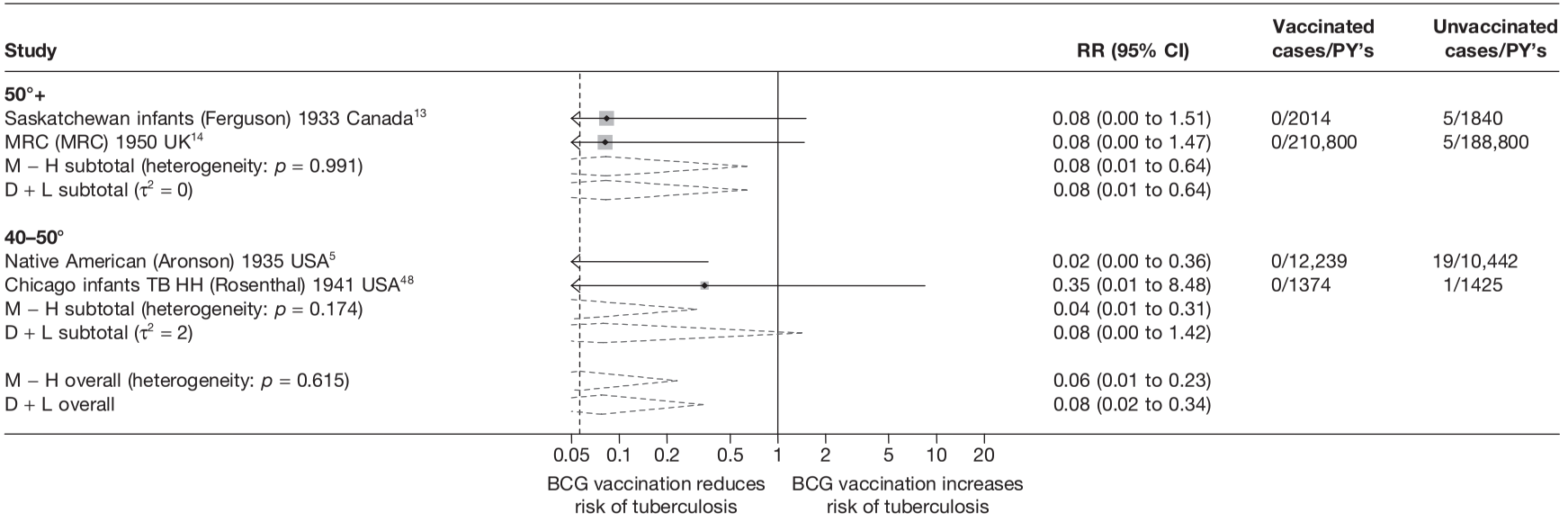

FIGURE 130 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (10° bands), ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

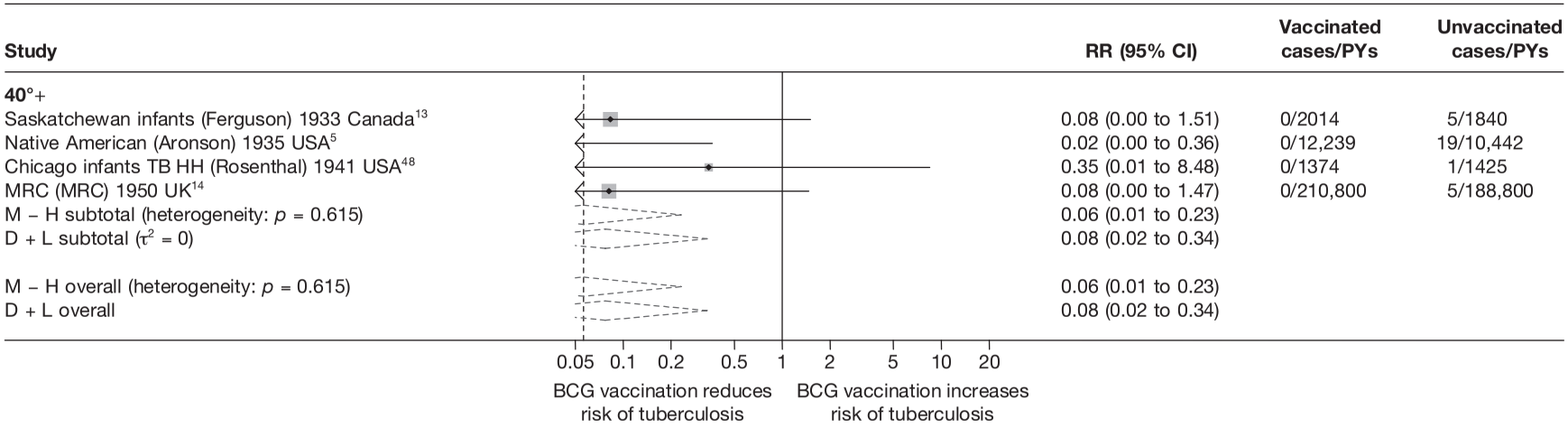

FIGURE 131 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

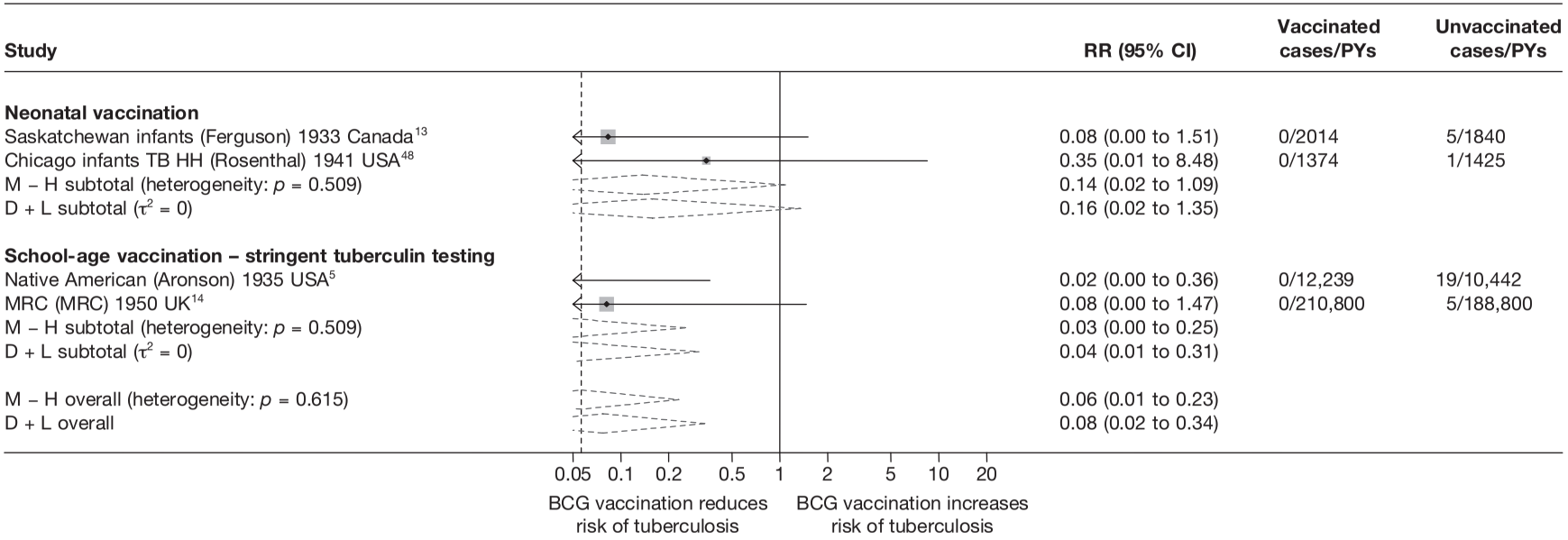

FIGURE 132 Rate ratios (with 95% CI) comparing the incidence miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

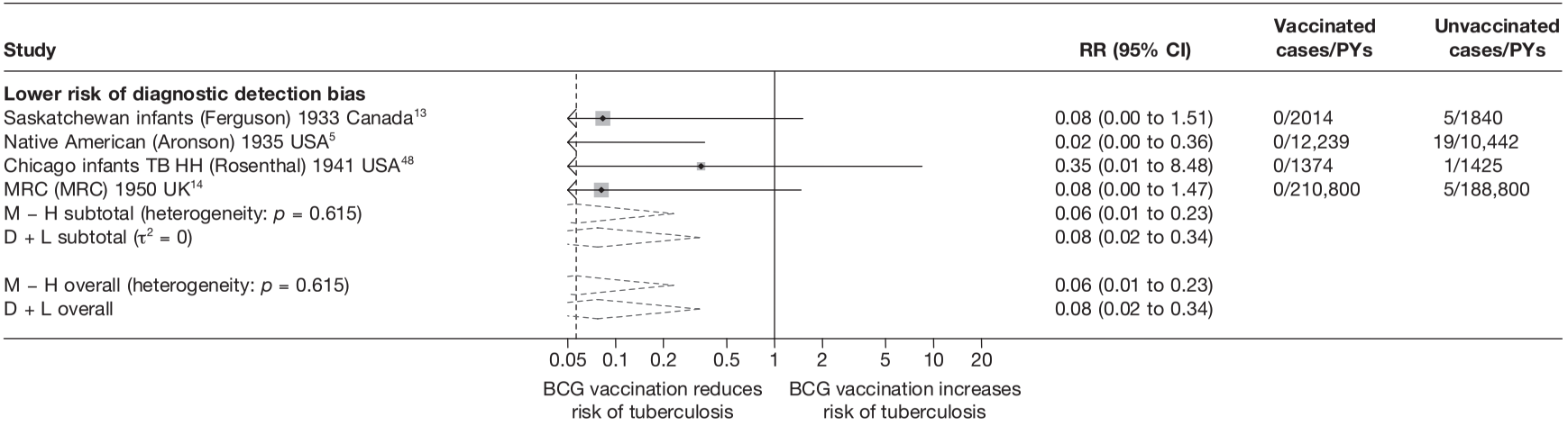

FIGURE 133 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by risk of diagnostic detection bias[a] and ordered by year of study start a, Diagnostic detection bias occurs if the assessor of BCG outcome is not blinded to vaccination status. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

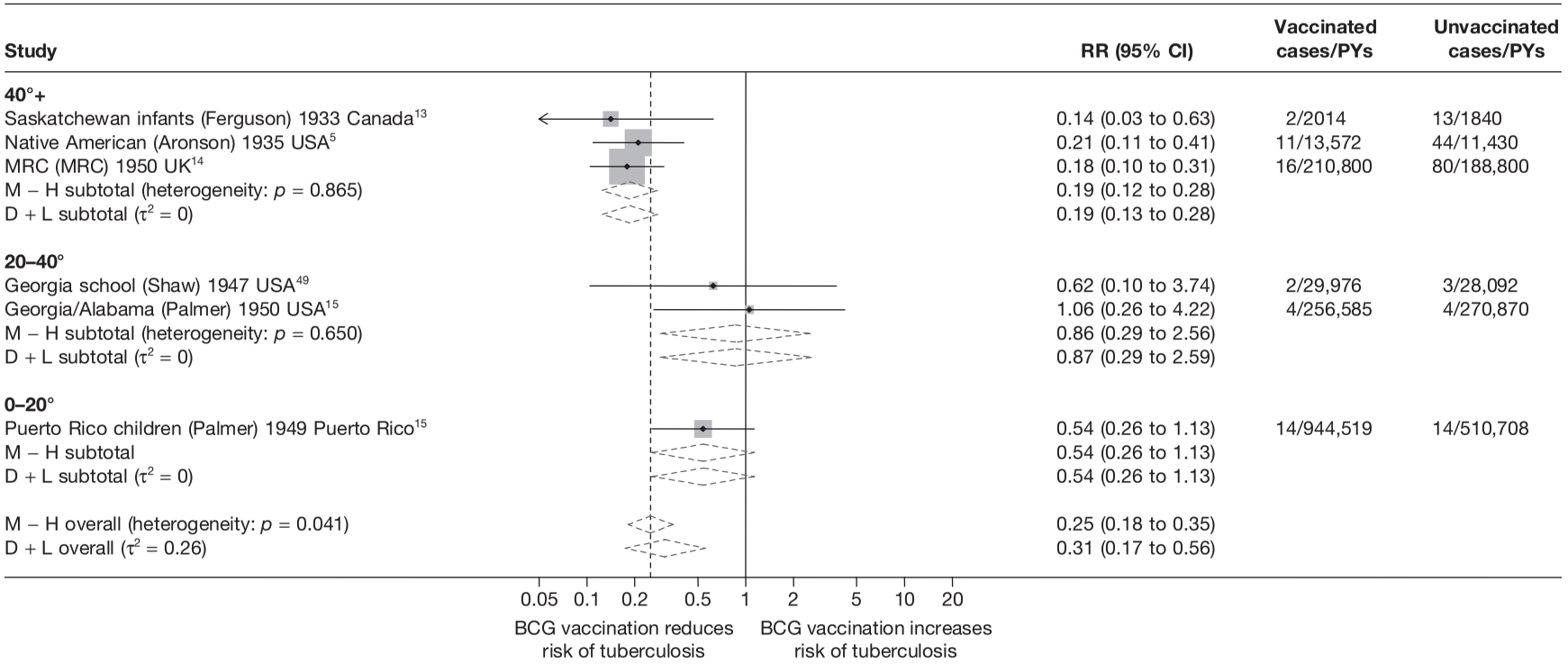

FIGURE 134 Rate ratios (with 95% CI) comparing the incidence of extrapulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*) in RCTs, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method.

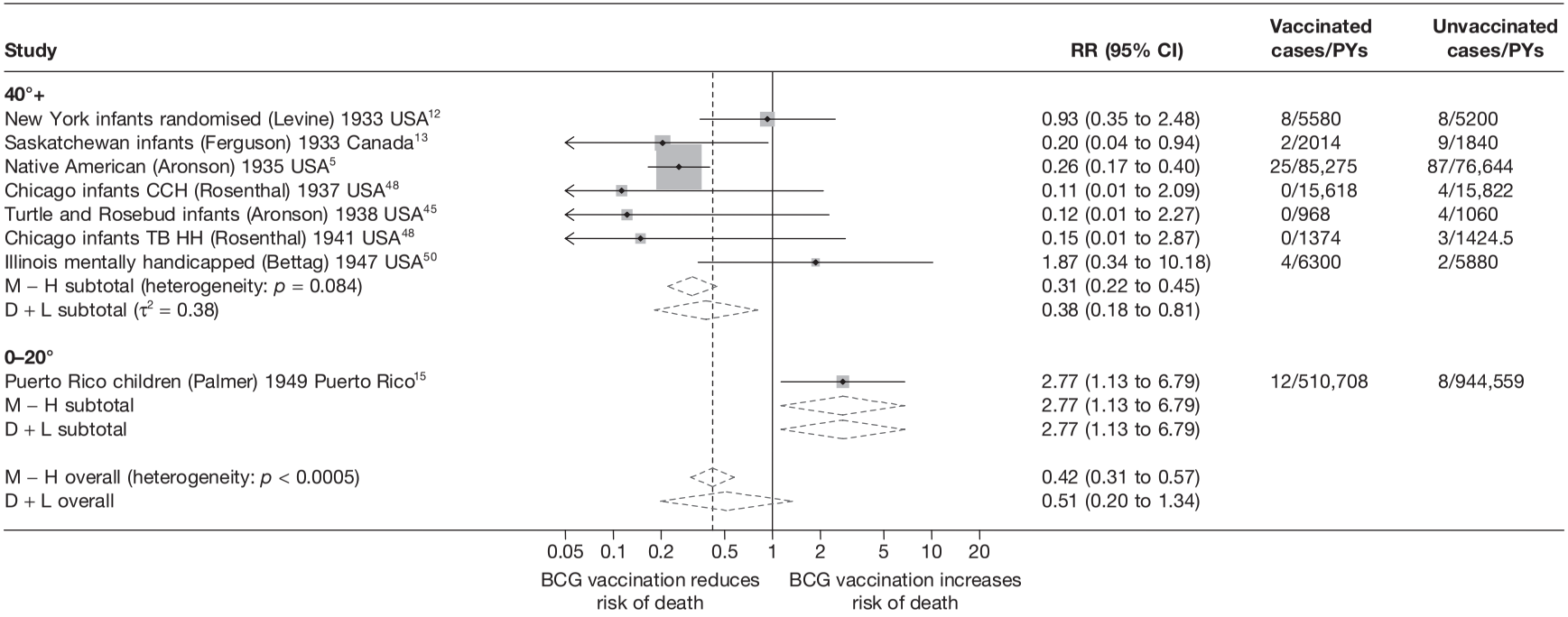

FIGURE 135 Rate ratios (with 95% CI) comparing the incidence of tuberculosis mortality among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 3*), in RCTs stratified by latitude of study location (20° bands), ordered by year of study start. CCH, Cook County Hospital; D+L, DerSimonian and Laird method; M–H, Mantel–Haenszel method; TB HH, tuberculosis households.

Observational studies

Pulmonary tuberculosis

Stratified analysis by 20° latitude, ordered by year study started

Case–control studies

See *Figure 136.*

Cohort studies

See *Figure 137.*

Case population studies

See *Figure 138.*

Cross-sectional studies

See *Figure 139.*

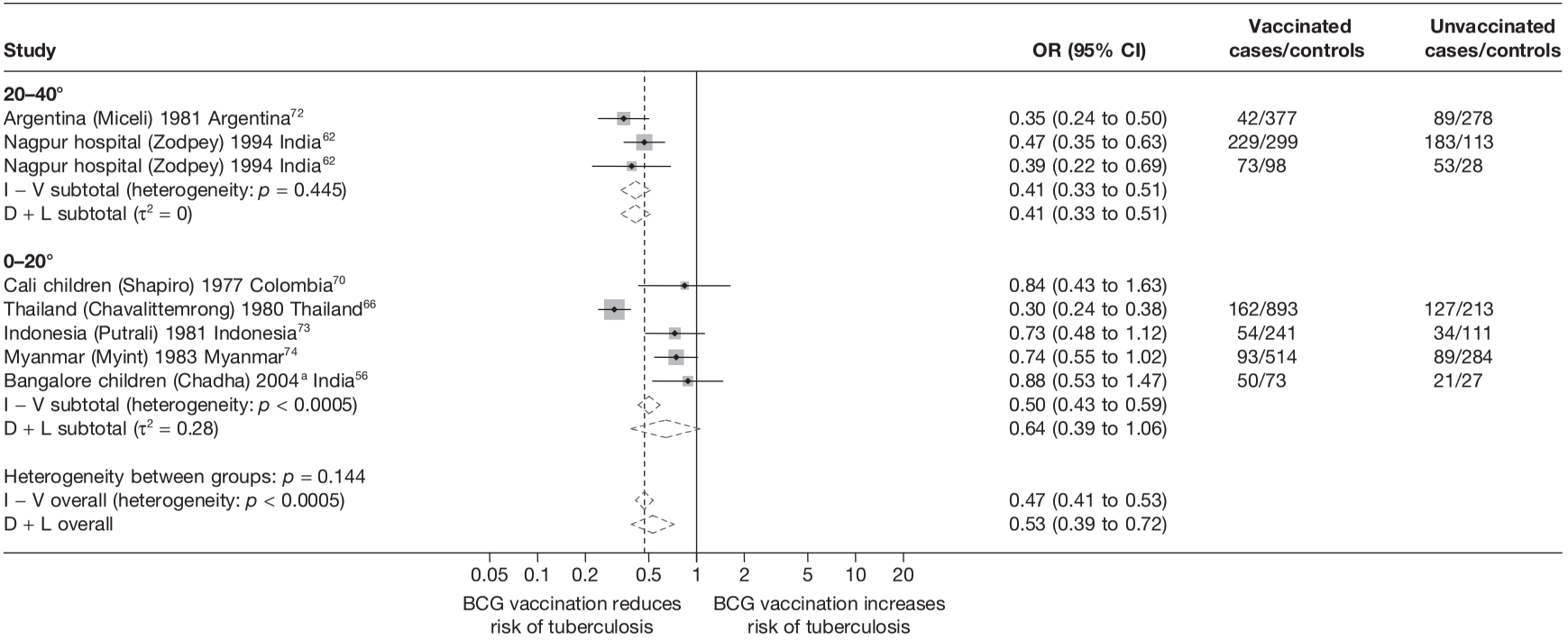

FIGURE 136 Odds ratios (with 95% CI) comparing the BCG vaccination status of pulmonary tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

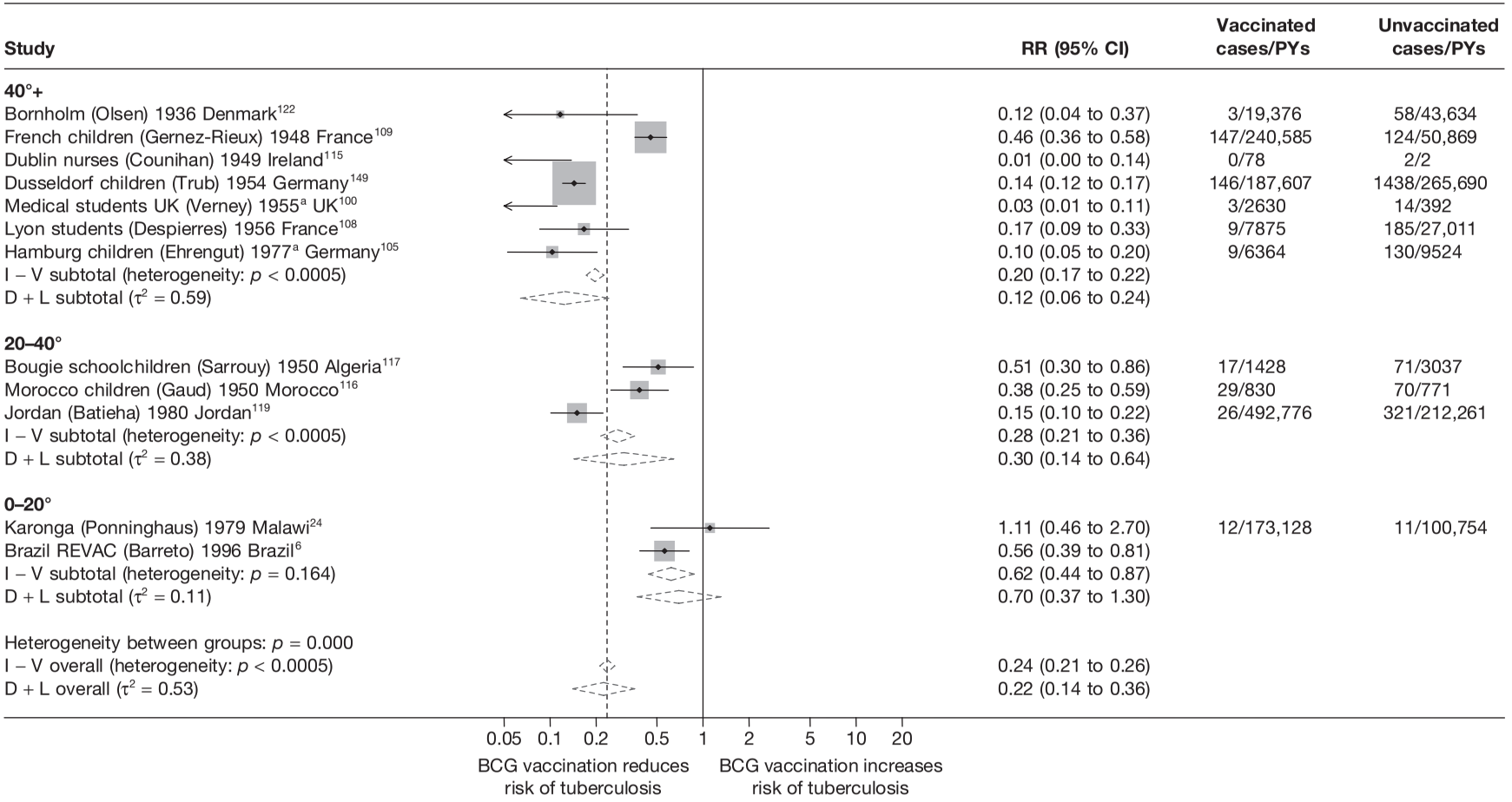

FIGURE 137 Rate ratios (with 95% CI) comparing the incidence of pulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

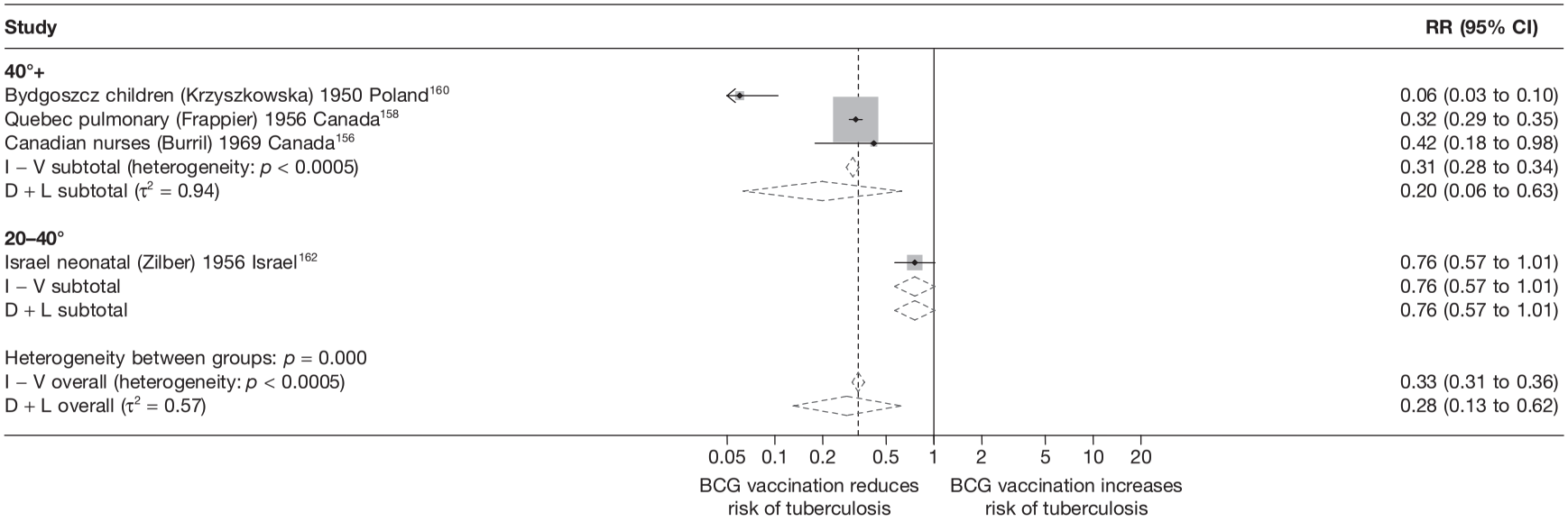

FIGURE 138 Rate ratios (with 95% CI) comparing the incidence of pulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 5*) in case population studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

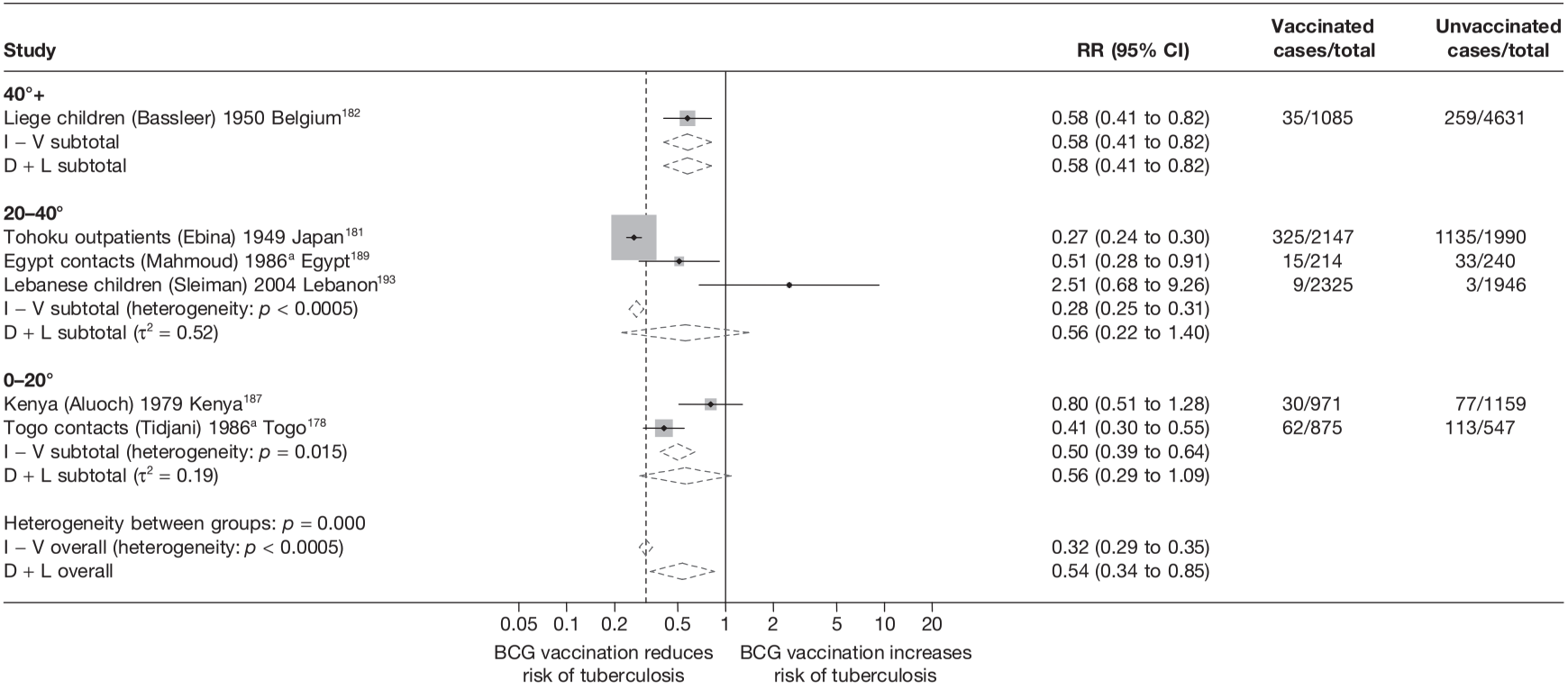

FIGURE 139 Risk ratios (with 95% CI) comparing the prevalence of pulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated in cross-sectional studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

All tuberculosis disease outcomes

Stratified analysis by 20° latitude, ordered by year study started

Case–control studies

See *Figure 140.*

Cohort studies

See *Figure 141.*

Case population studies

See *Figure 142.*

Cross-sectional studies

See *Figure 143.*

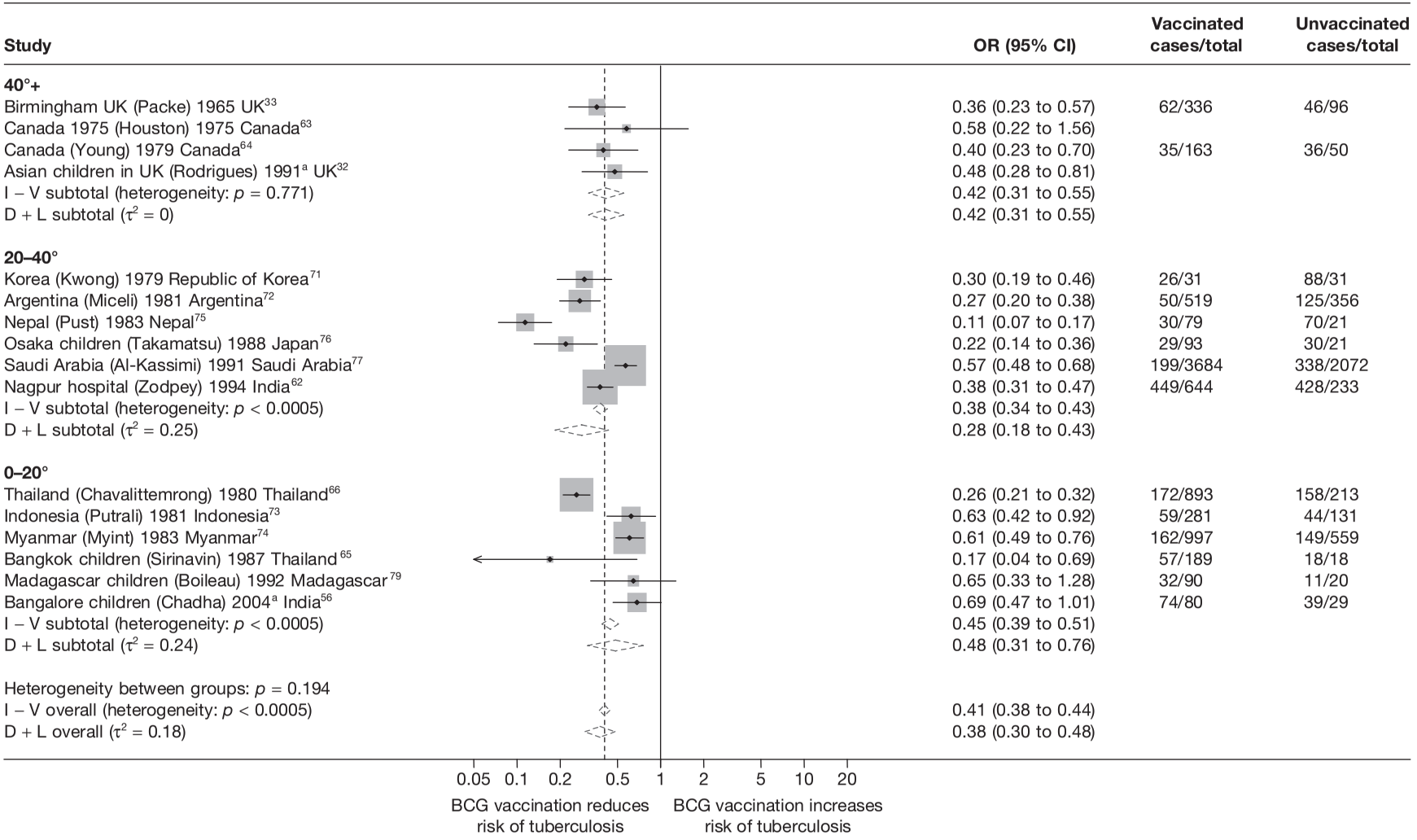

FIGURE 140 Odds ratios (with 95% CI) comparing the BCG vaccination status of all tuberculosis outcome cases and control subjects in case–control studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

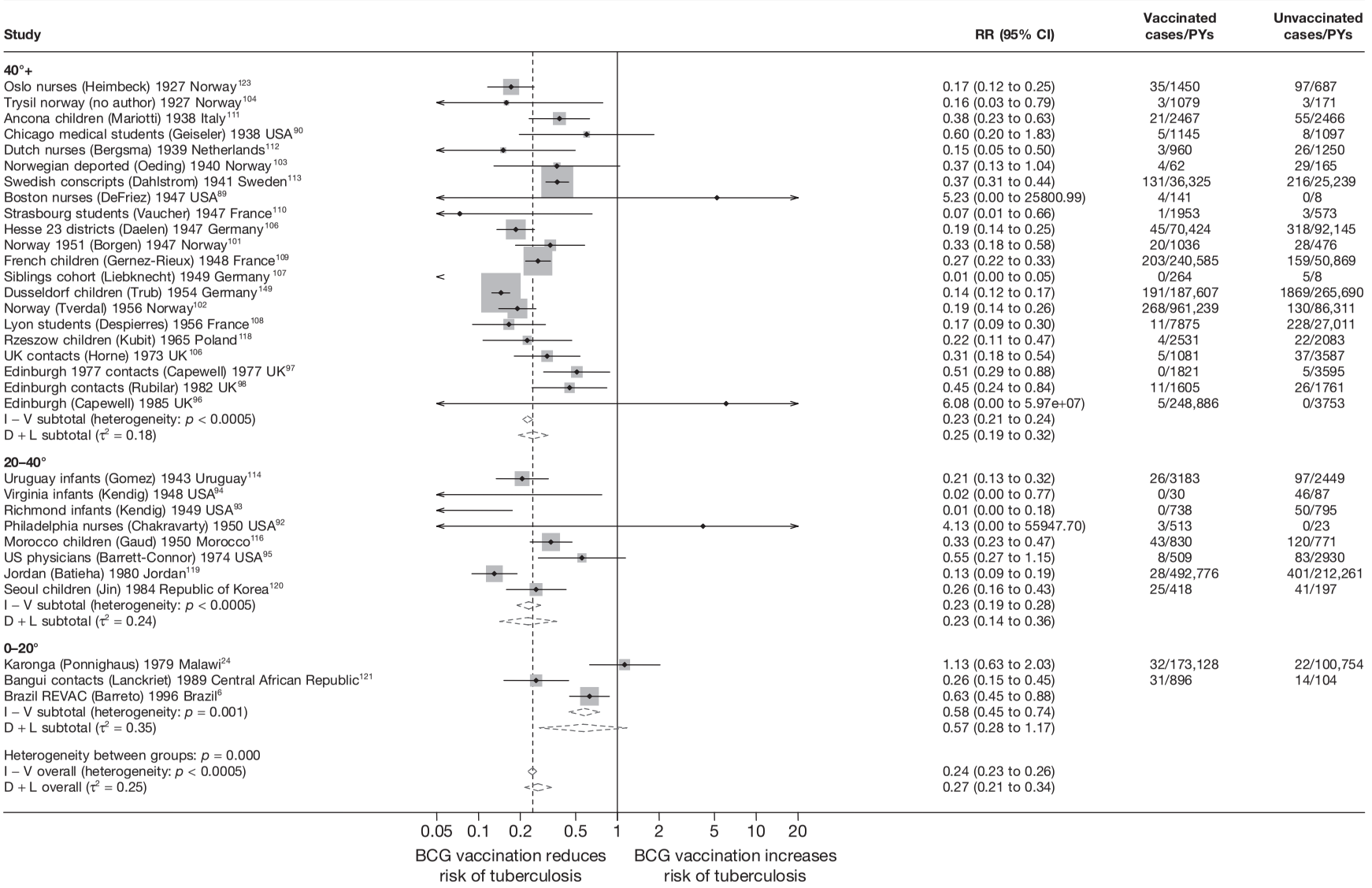

FIGURE 141 Rate ratios (with 95% CI) comparing the incidence of all tuberculosis disease outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

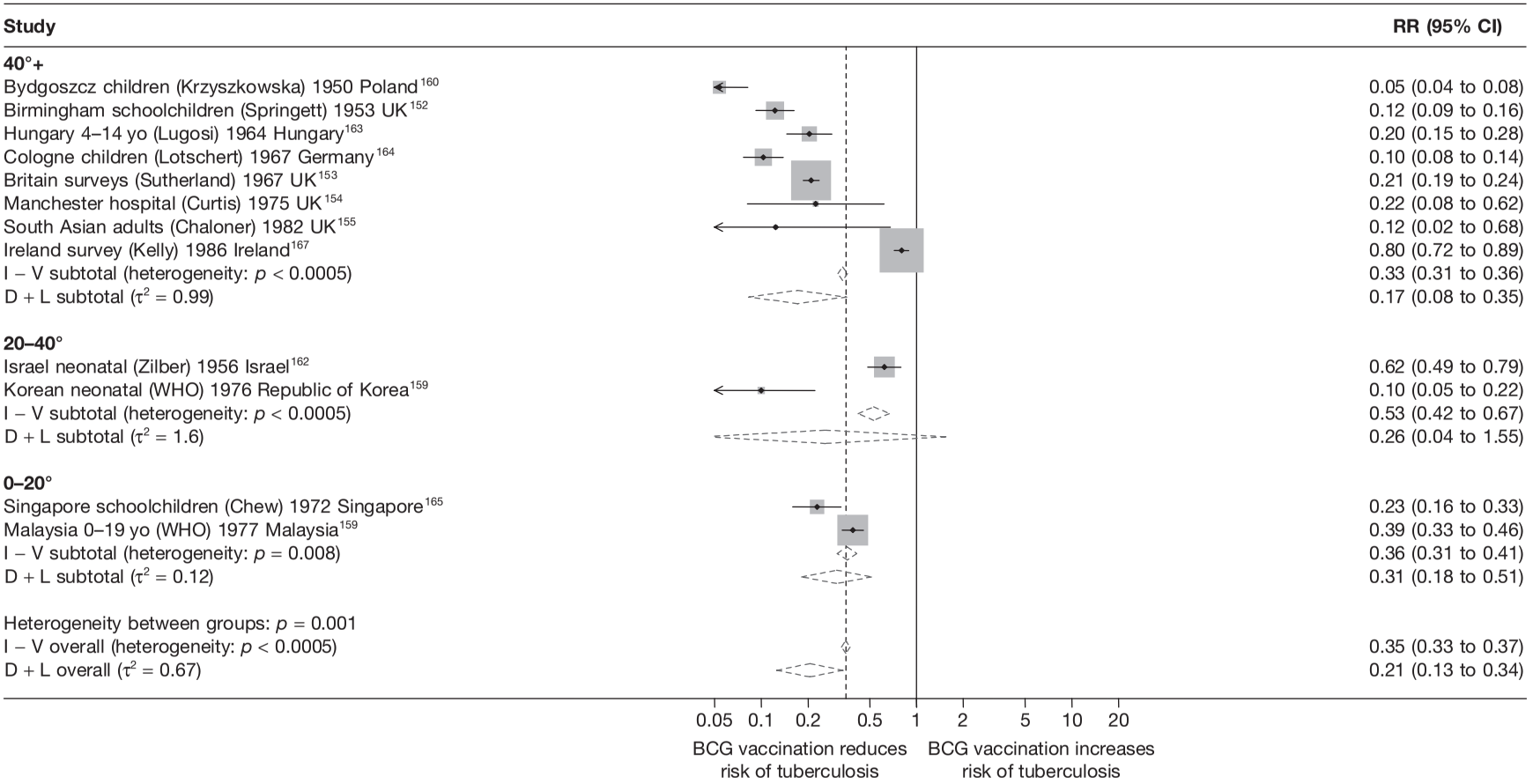

FIGURE 142 Rate ratios (with 95% CI) comparing the incidence of all tuberculosis disease outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 5*) in case population studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

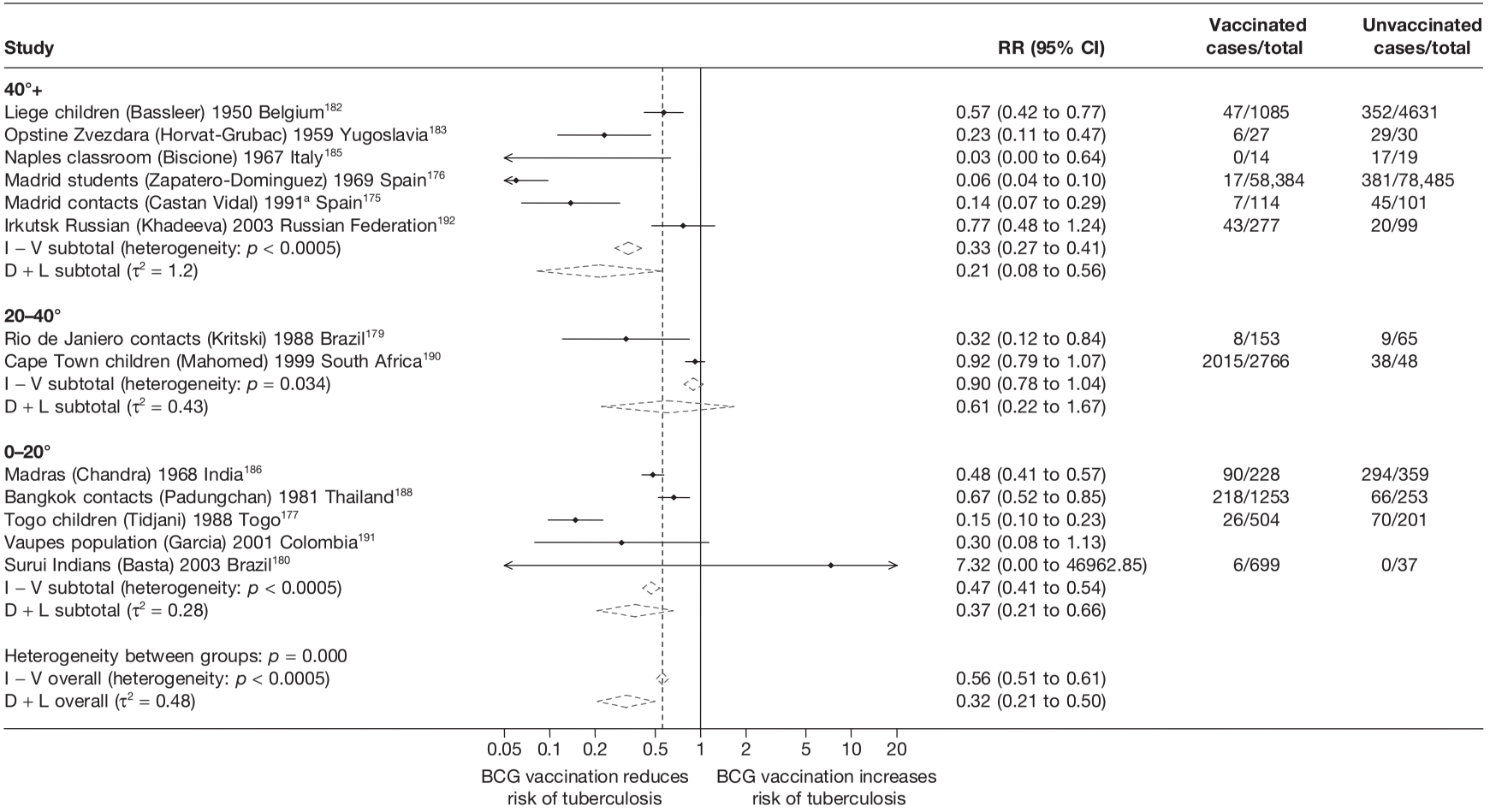

FIGURE 143 Risk ratios (with 95% CI) comparing the prevalence of all tuberculosis disease outcomes among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Combined tuberculosis meningitis and/or miliary tuberculosis

Stratified analysis by 20° latitude, ordered by year study started

Case–control studies

See *Figure 144.*

Cohort studies

See *Figure 145.*

Case population studies

See *Figure 146.*

Cross-sectional studies

See *Figure 147.*

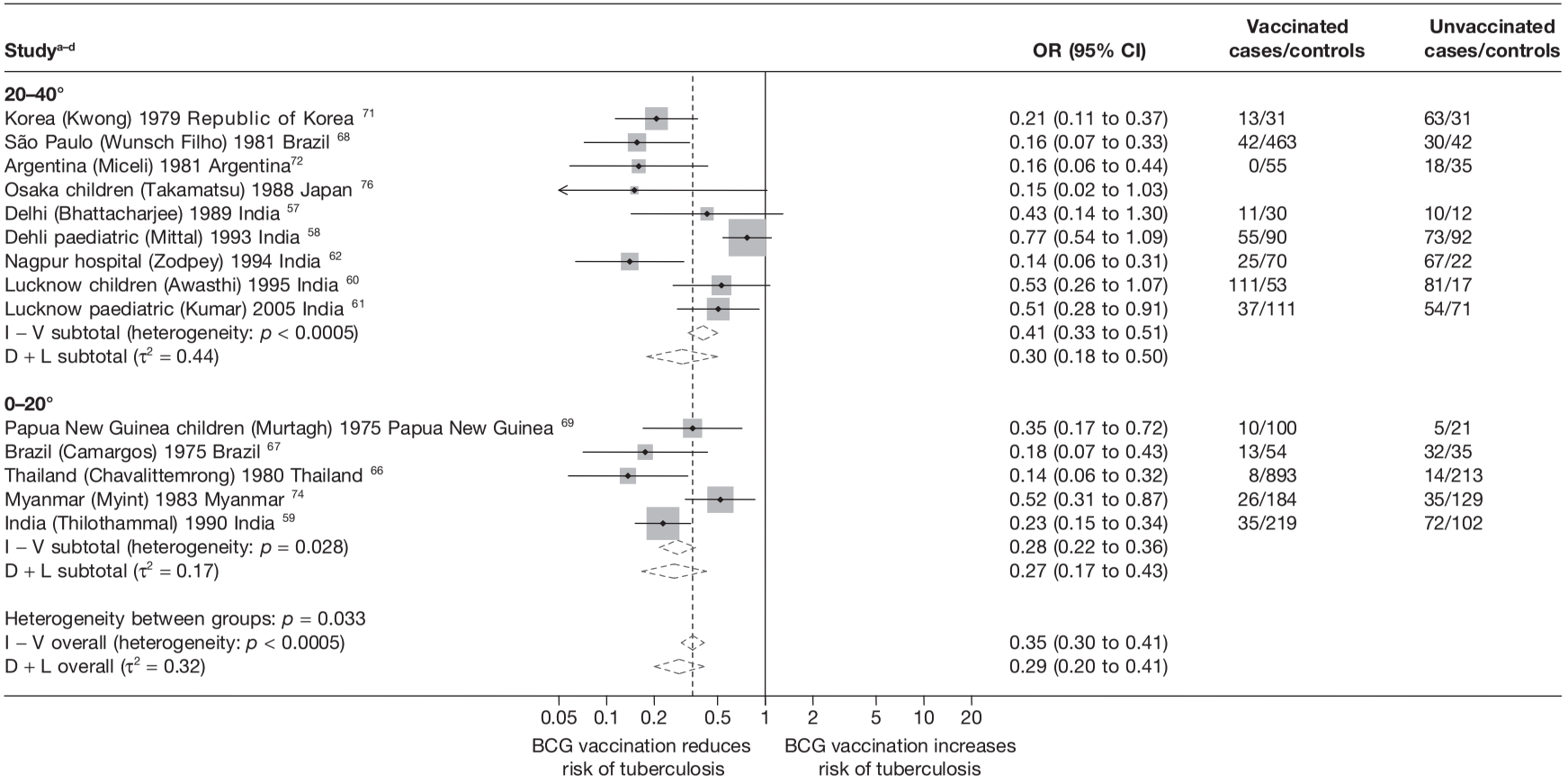

FIGURE 144 Odds ratios (with 95% CI) comparing the BCG vaccination status of meningeal and/or miliary tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available; b, Combined tuberculosis meningitis and miliary tuberculosis outcomes; c, Meningeal tuberculosis outcome only; d, Miliary tuberculosis outcome only. D+L, DerSimonian and Laird method; I–V, inverse variance method.

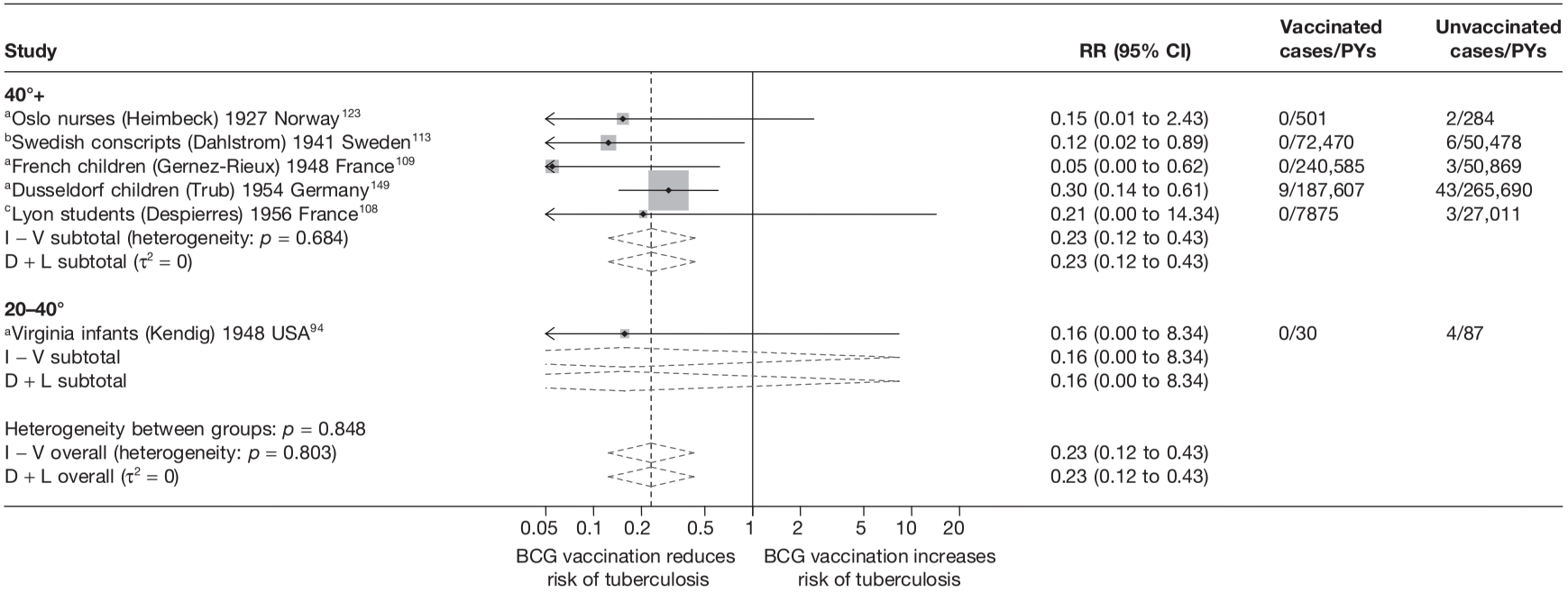

FIGURE 145 Rate ratios (with 95% CI) comparing the incidence of meningeal and/or miliary tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Meningeal tuberculosis outcome only; b, Combined tuberculosis meningitis and miliary tuberculosis outcomes; c, Miliary tuberculosis outcome only. D+L, DerSimonian and Laird method; I–V, inverse variance method.

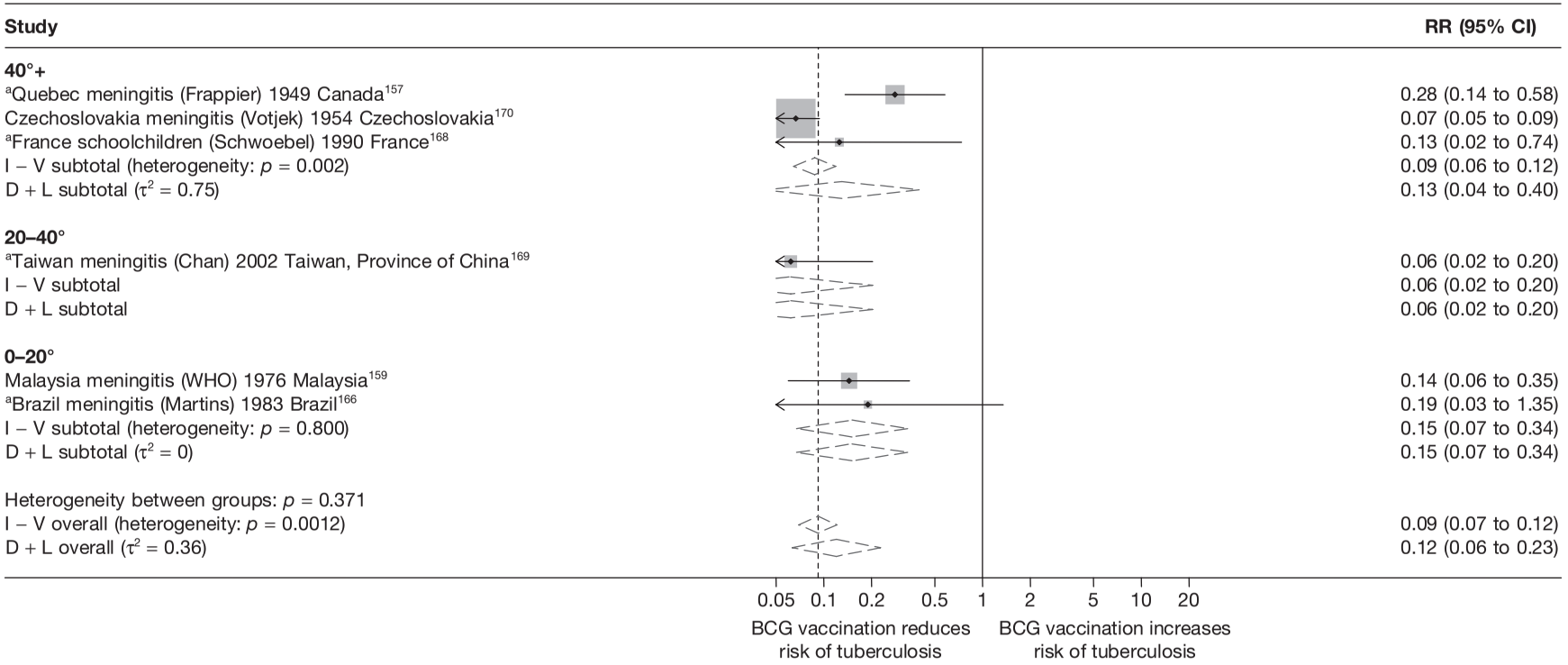

FIGURE 146 Rate ratios (with 95% CI) comparing the incidence of meningeal and/or miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 5*) in case population studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Meningeal tuberculosis outcome only. D+L, DerSimonian and Laird method; I–V, inverse variance method.

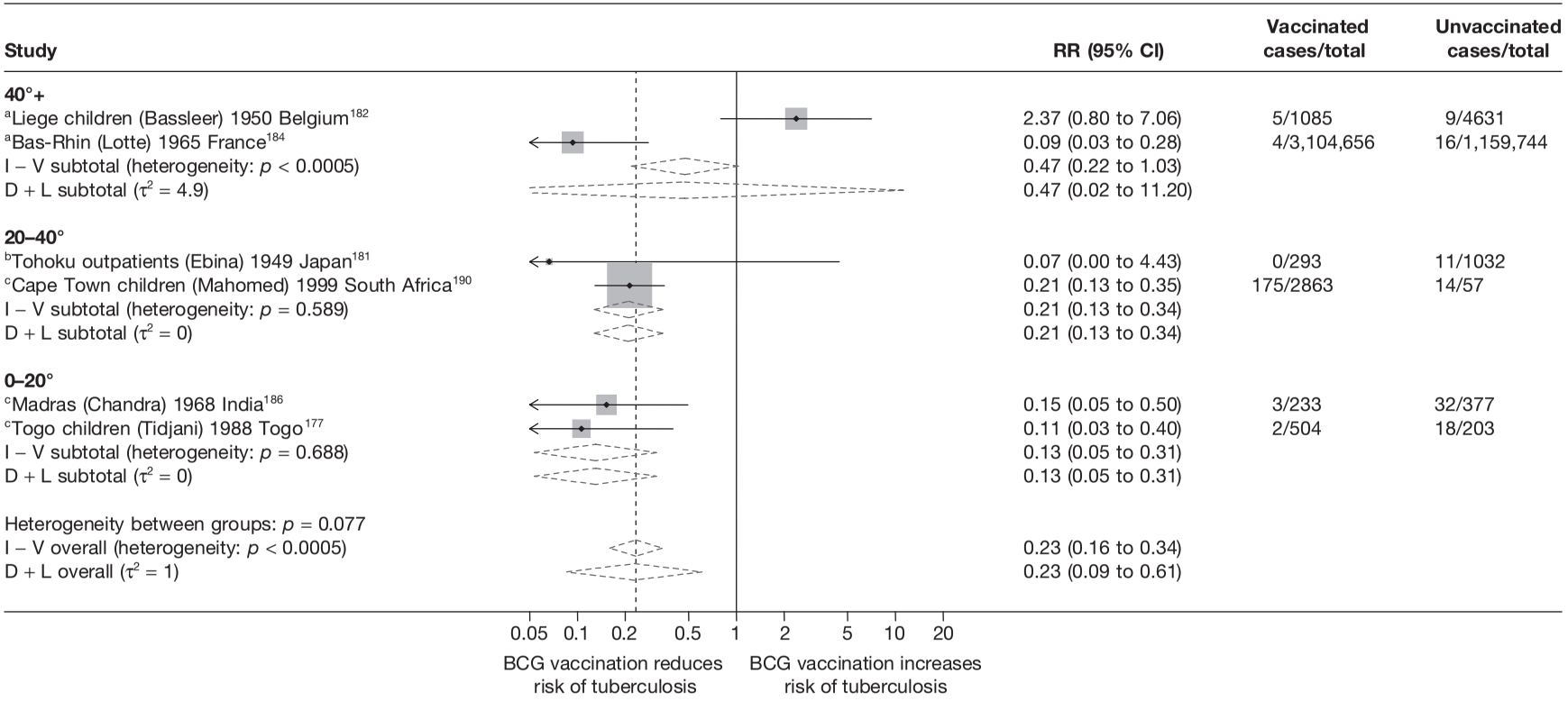

FIGURE 147 Risk ratios (with 95% CI) comparing the prevalence of meningeal and/or miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified of study location (20° bands), ordered by year of study start. a, Meningeal tuberculosis outcome only; b, Miliary tuberculosis outcome only; c, Combined tuberculosis meningitis and miliary tuberculosis outcomes. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Tuberculosis meningitis

Case–control studies

Unstratified analyses are ordered by year trial started

See *Figure 148.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 149.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 150.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 151.*

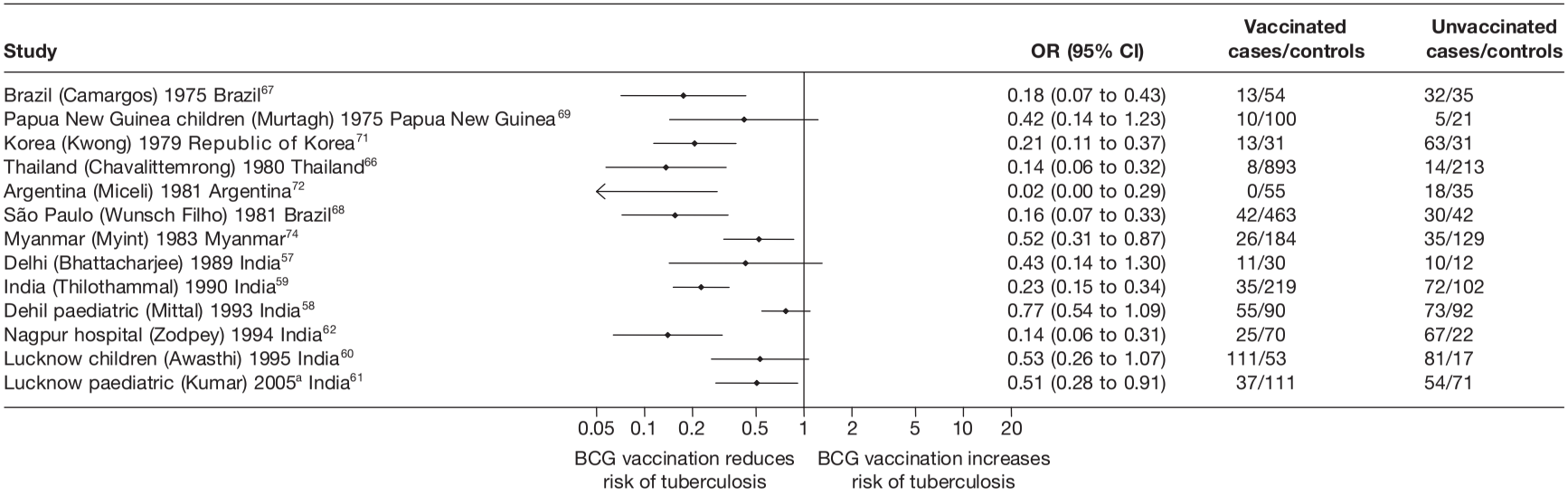

FIGURE 148 Odds ratios (with 95% CI) comparing the BCG vaccination status of meningeal tuberculosis cases and control subjects in case–control studies, ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

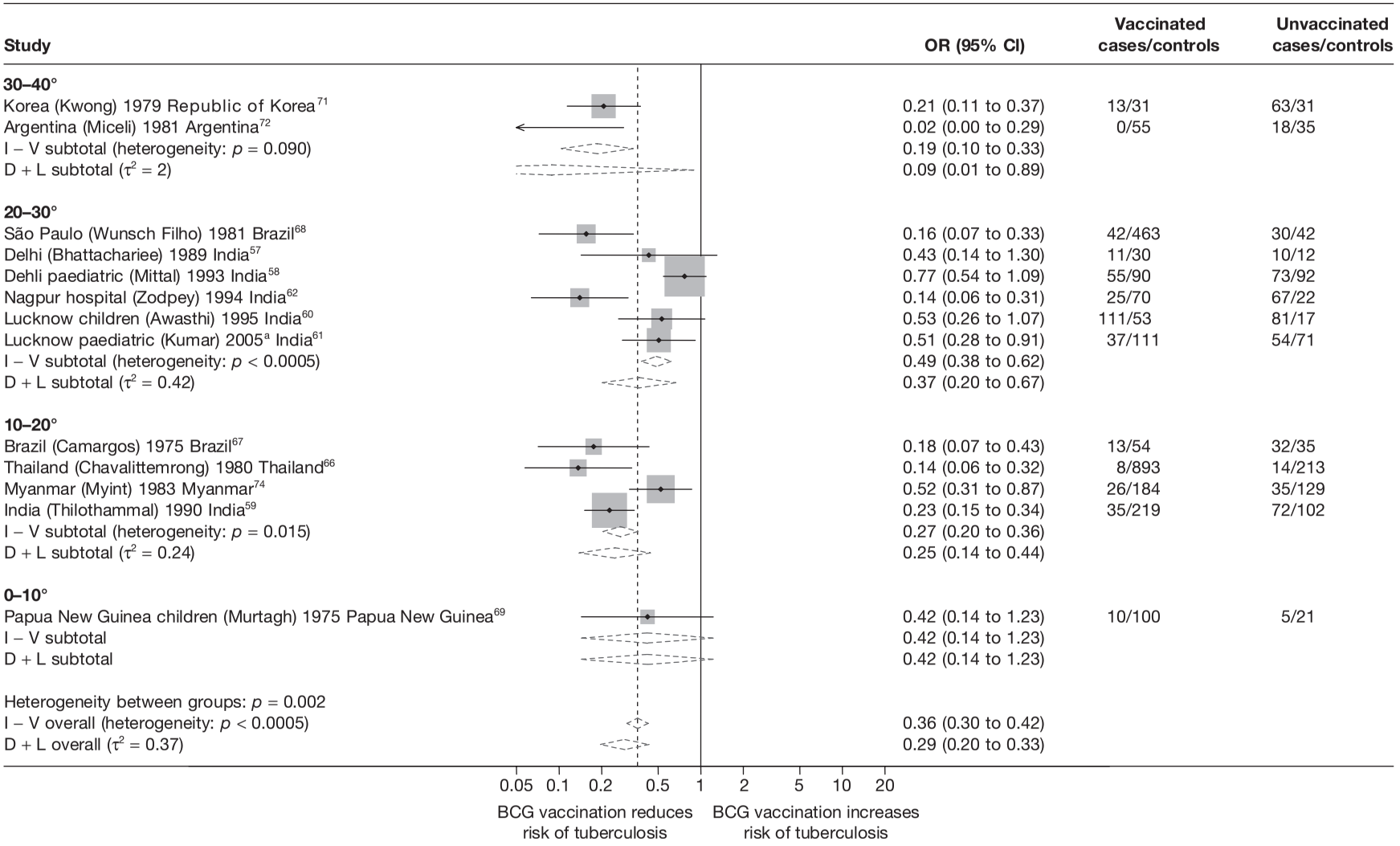

FIGURE 149 Odds ratios (with 95% CI) comparing the BCG vaccination status of meningeal tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (10° bands), ordered by year of study start. a. Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

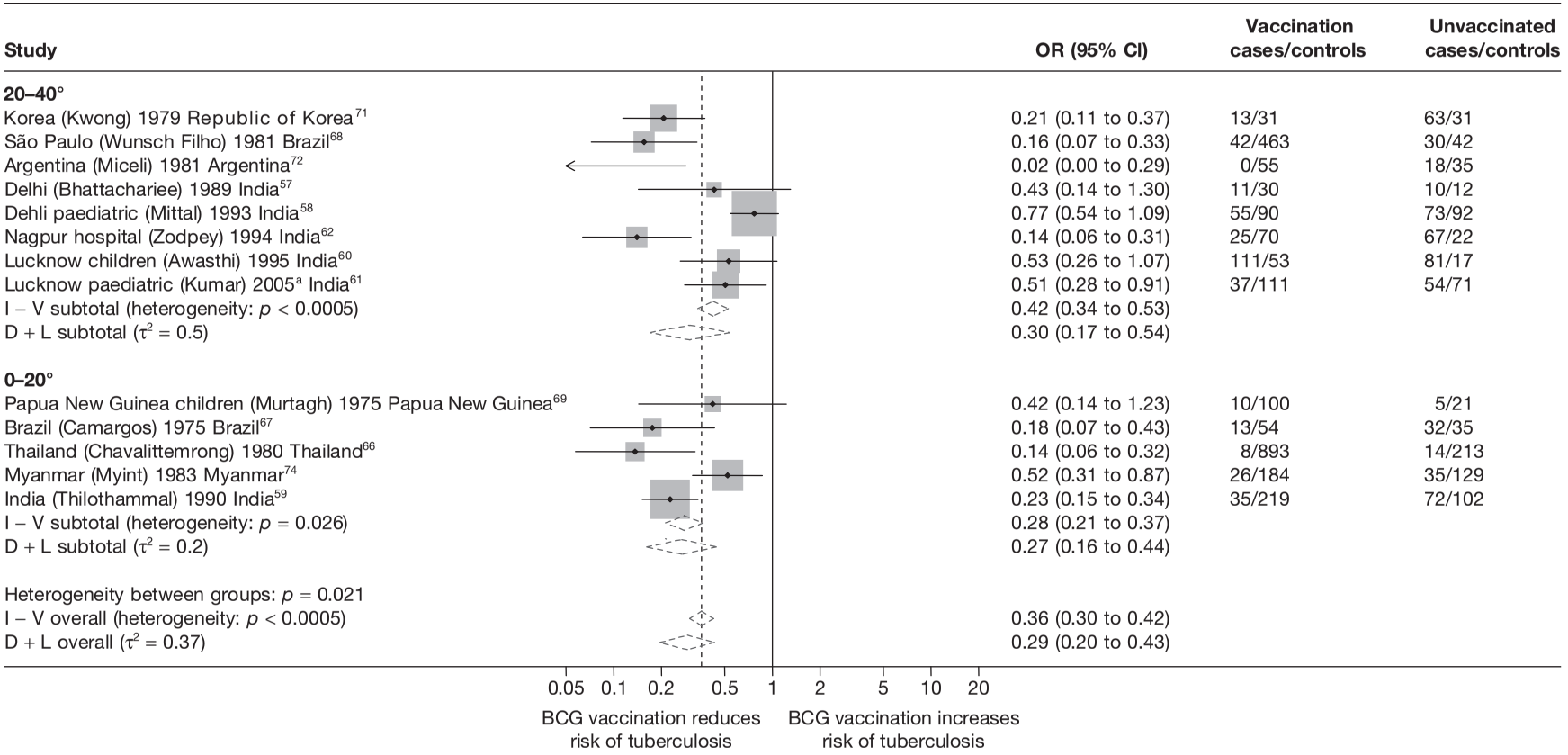

FIGURE 150 Odds ratios (with 95% CI) comparing the BCG vaccination status of meningeal tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

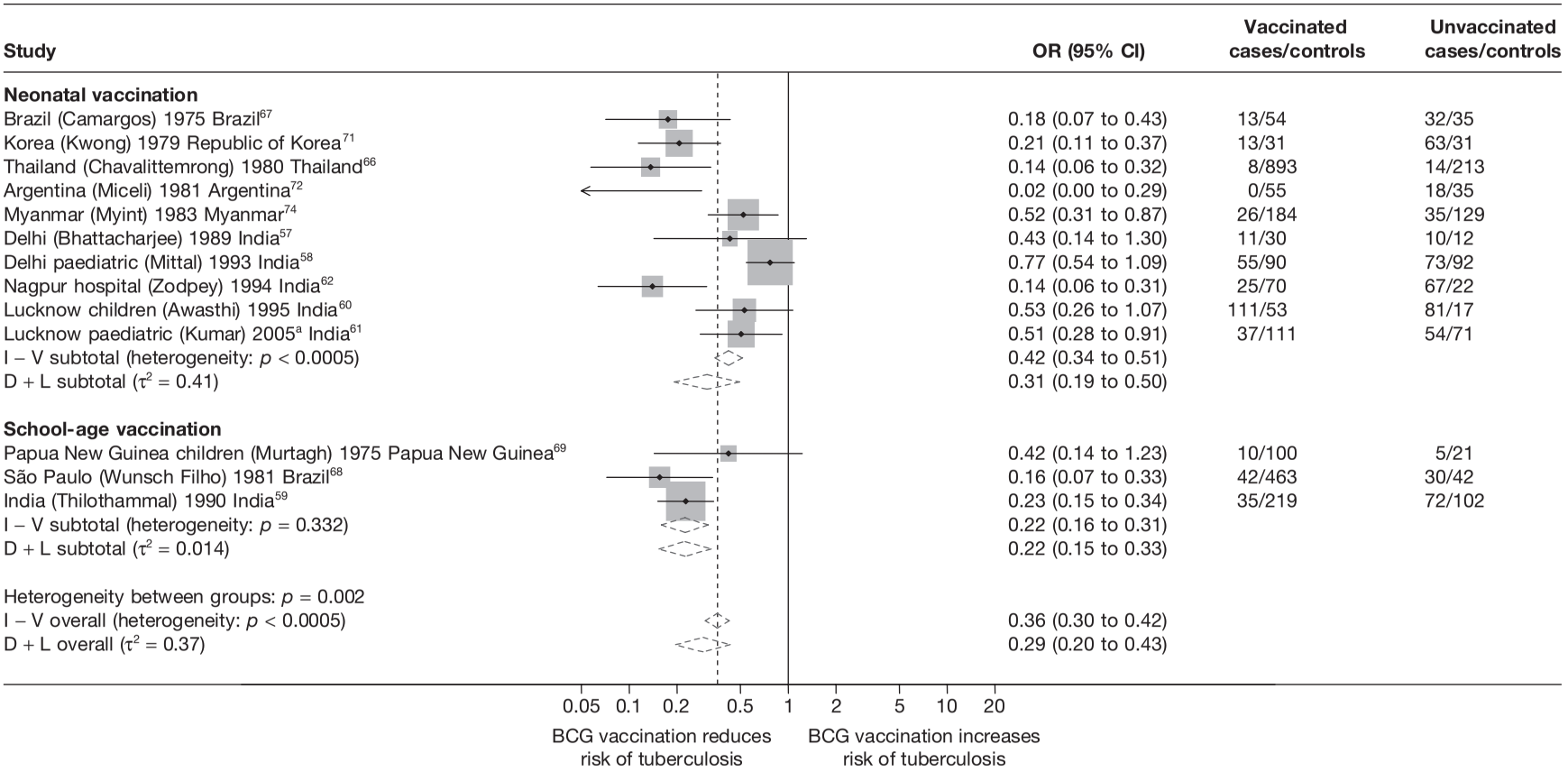

FIGURE 151 Odds ratios (with 95% CI) comparing the BCG vaccination status of meningeal tuberculosis cases and control subjects in case–control studies, stratified by age at vaccination, ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Cohort studies

Unstratified analyses are ordered by year trial started

See *Figure 152.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 153.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 154.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 155.*

Stratified analysis by cohort study design, ordered by year study started

See *Figure 156.*

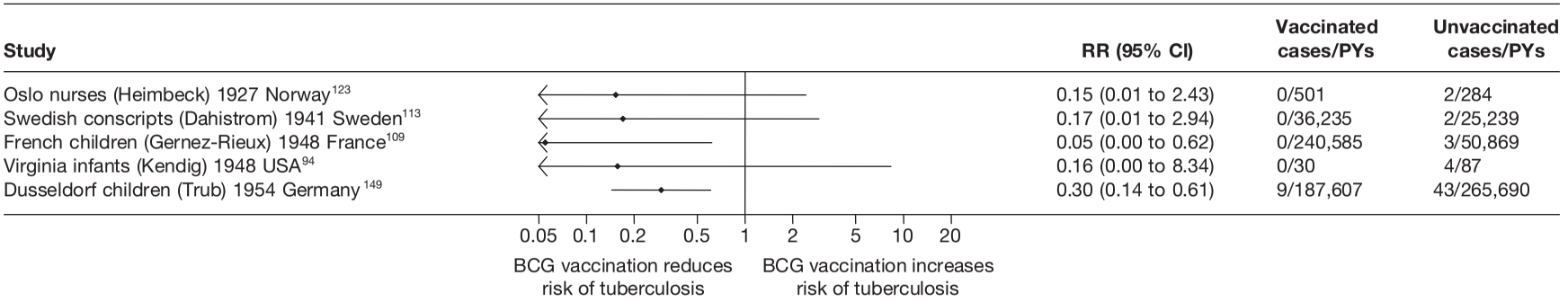

FIGURE 152 Rate ratios (with 95% CI) comparing the incidence of meningeal tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

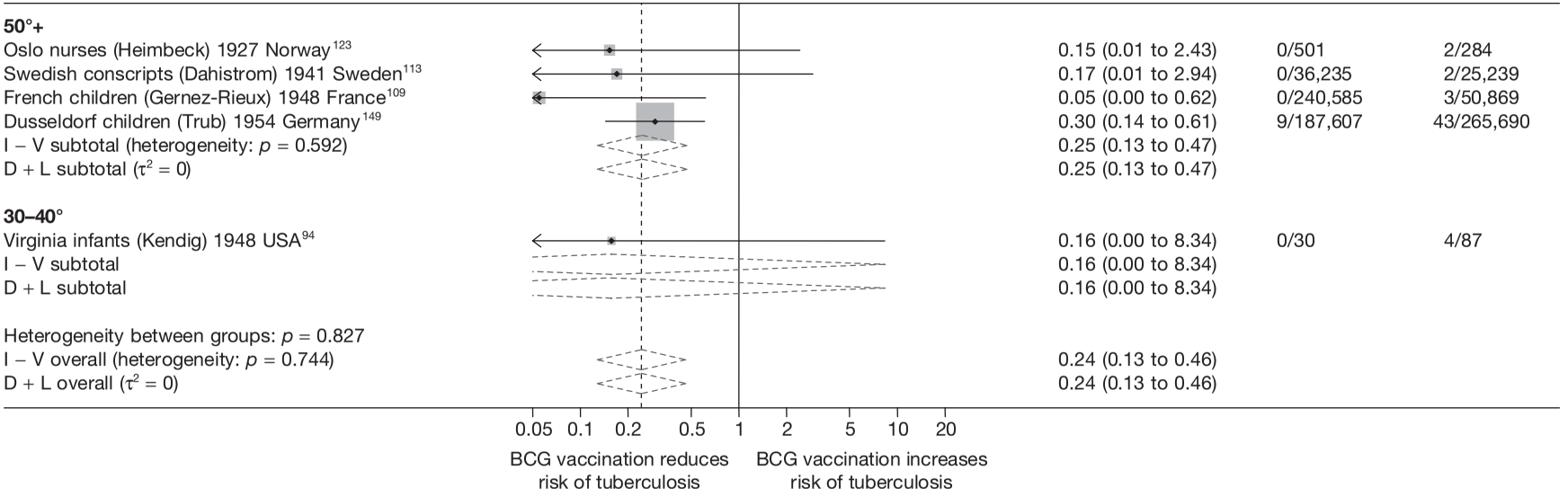

FIGURE 153 Rate ratios (with 95% CI) comparing the incidence of meningeal tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (10° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

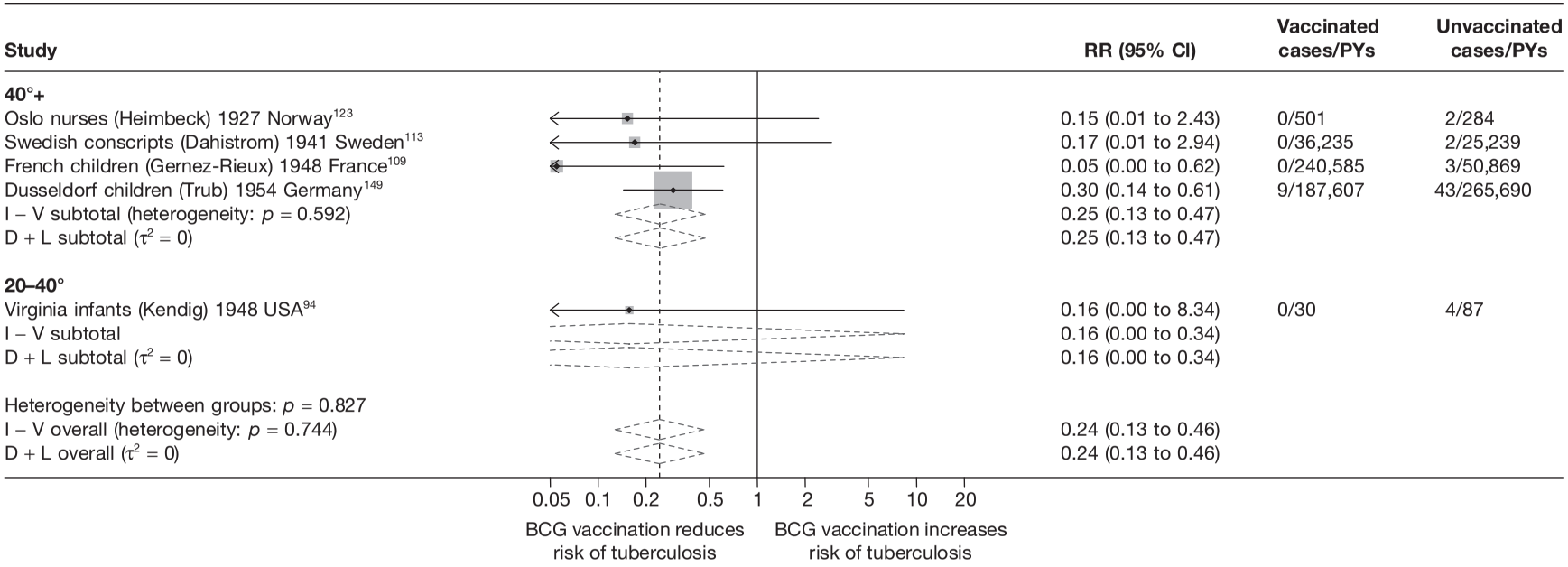

FIGURE 154 Rate ratios (with 95% CI) comparing the incidence of meningeal tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

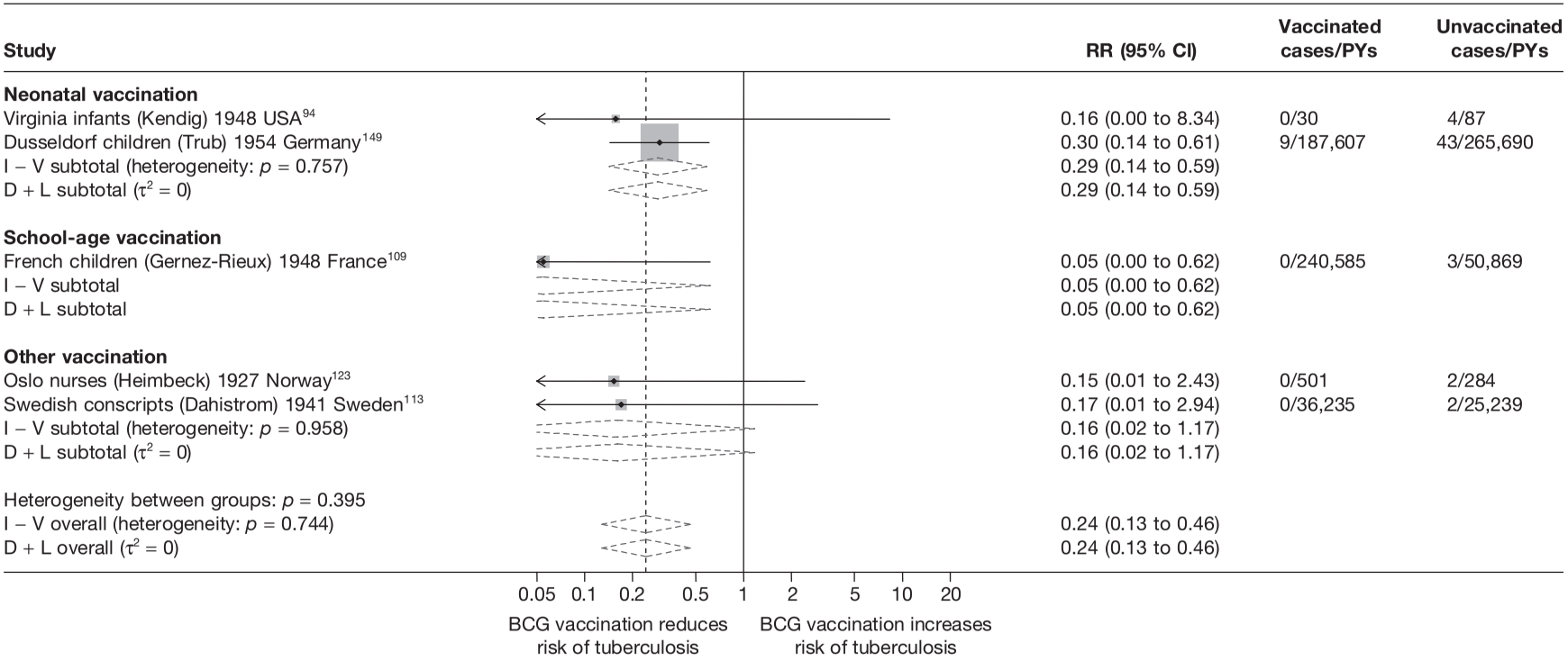

FIGURE 155 Rate ratios (with 95% CI) comparing the incidence of meningeal tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

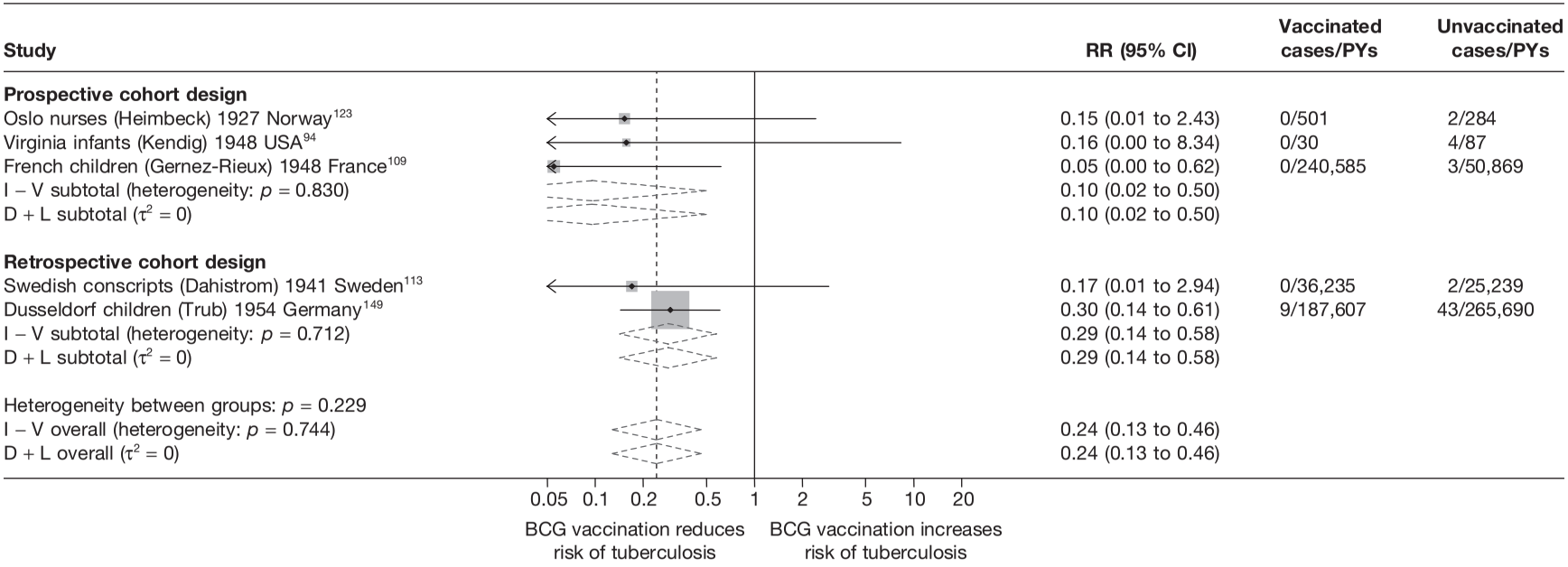

FIGURE 156 Rate ratios (with 95% CI) comparing the incidence of meningeal tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified cohort study design, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Cross-sectional studies

Unstratified analyses are ordered by year trial started

See *Figure 157*.

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 158*.

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 159*.

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 160*.

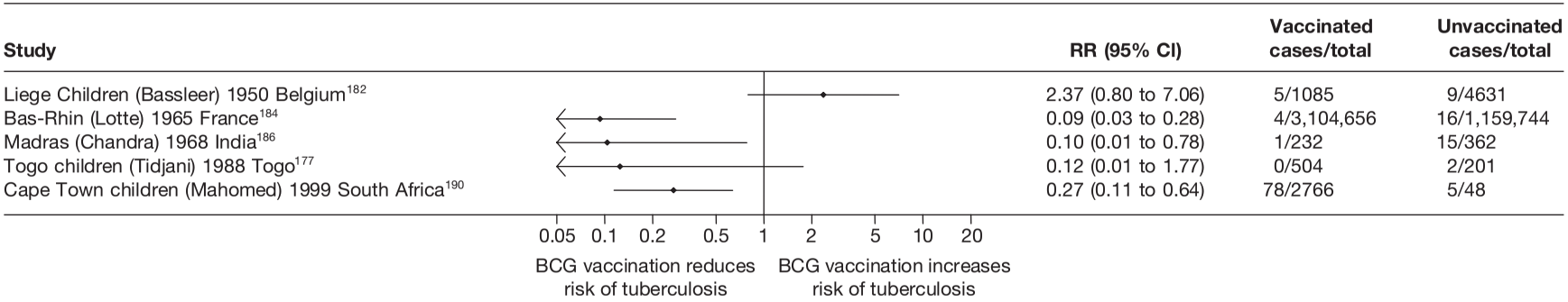

FIGURE 157 Risk ratios (with 95% CI) comparing the prevalence of meningeal tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

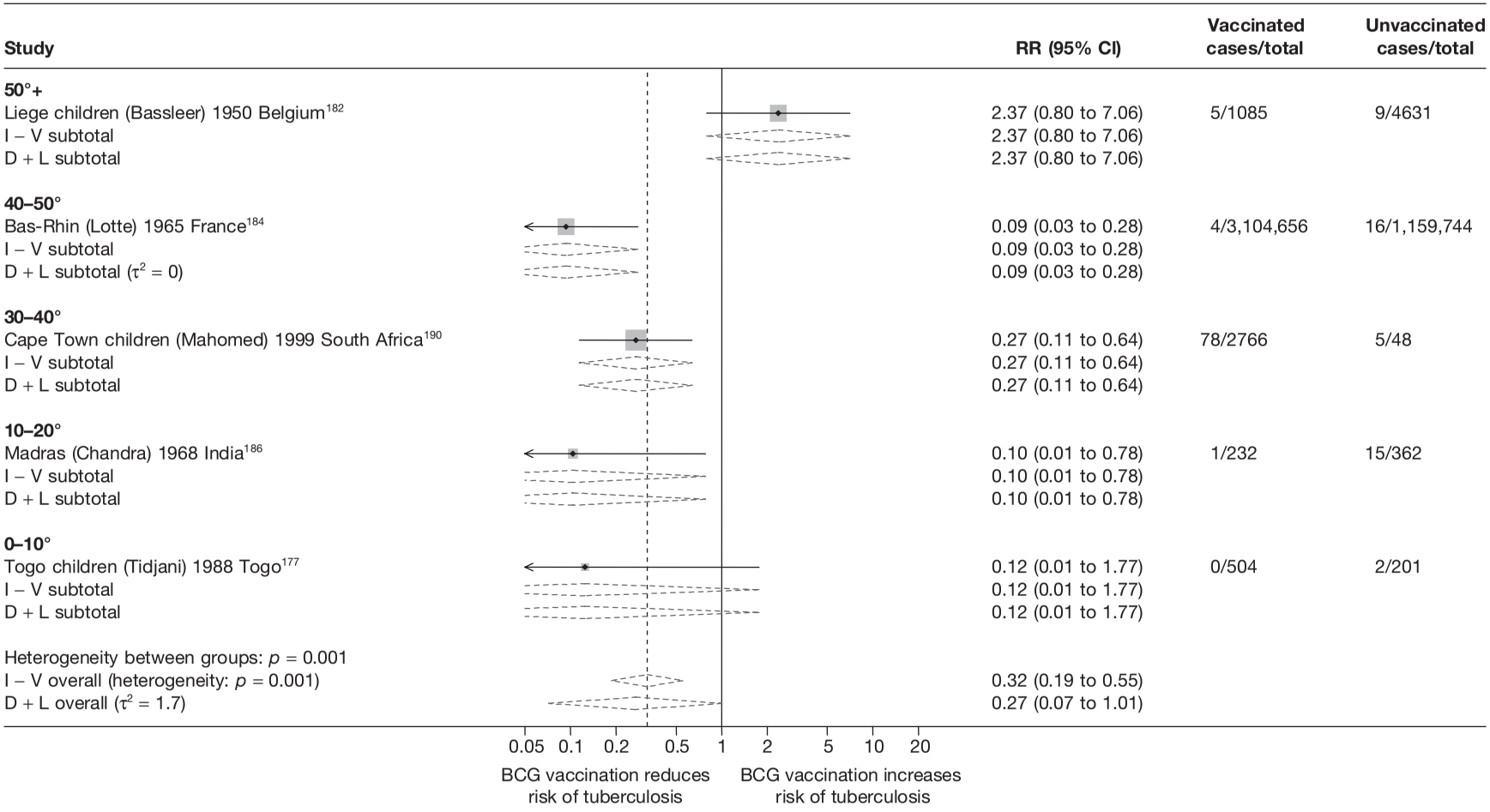

FIGURE 158 Risk ratios (with 95% CI) comparing the prevalence of meningeal tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by latitude of study location (10° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

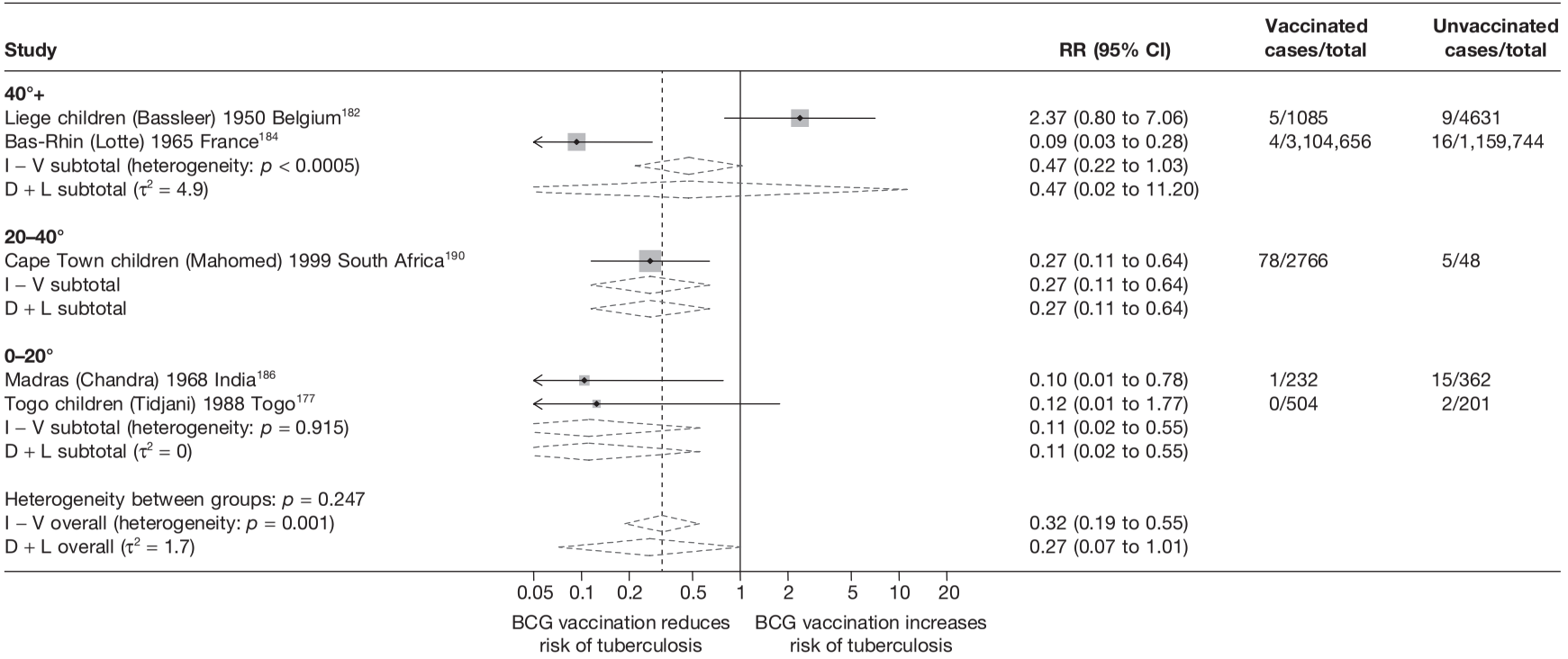

FIGURE 159 Risk ratios (with 95% CI) comparing the prevalence of meningeal tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

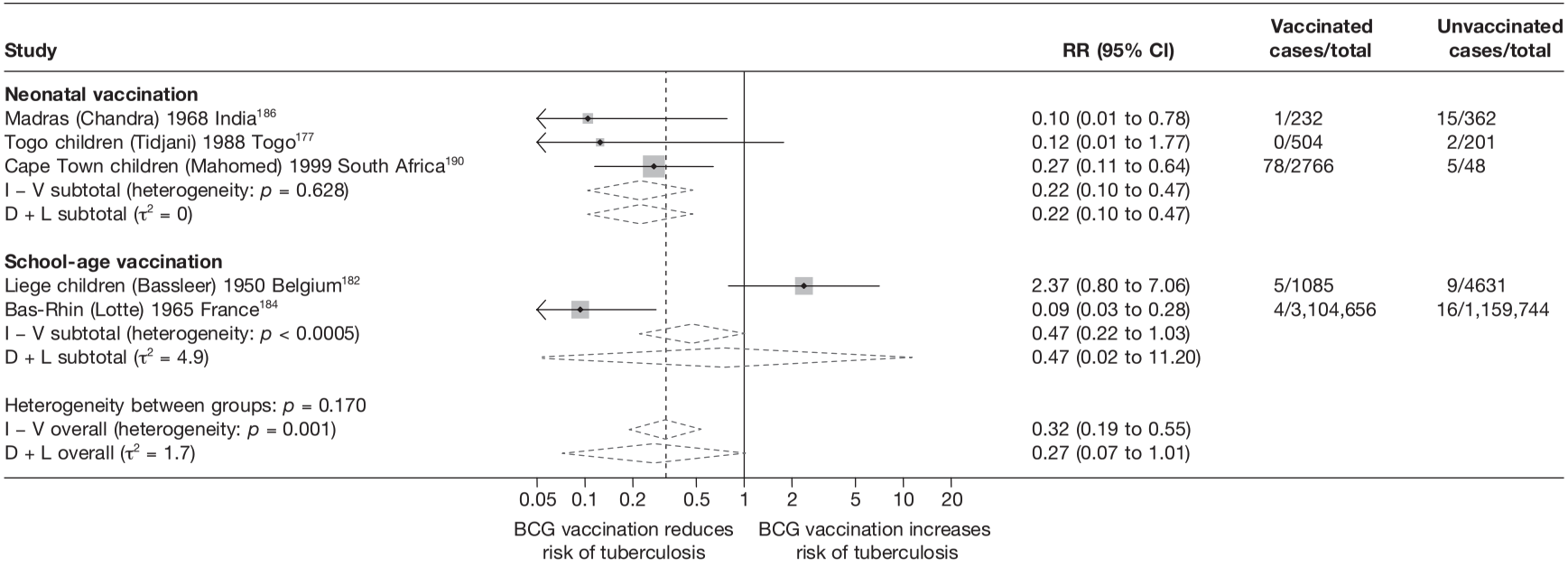

FIGURE 160 Risk ratios (with 95% CI) comparing the prevalence of meningeal tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Miliary tuberculosis

Case–control studies

Unstratified analyses are ordered by year trial started

See *Figure 161.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 162.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 163.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 164.*

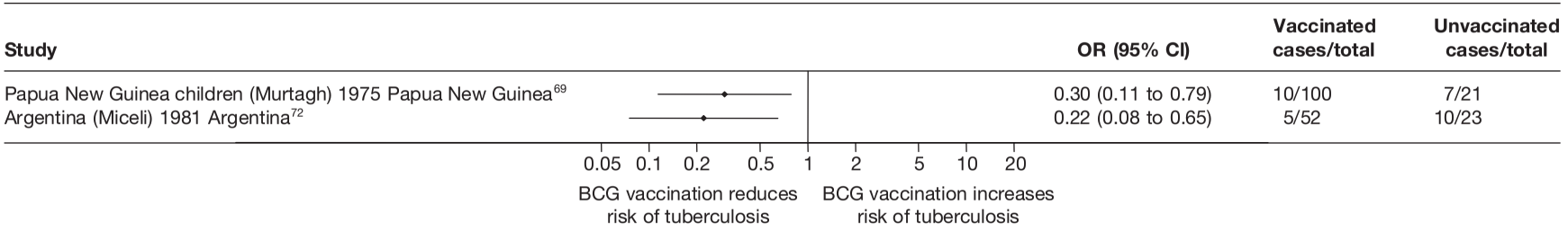

FIGURE 161 Odds ratios (with 95% CI) comparing the BCG vaccination status of miliary tuberculosis cases and control subjects in case–control studies, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

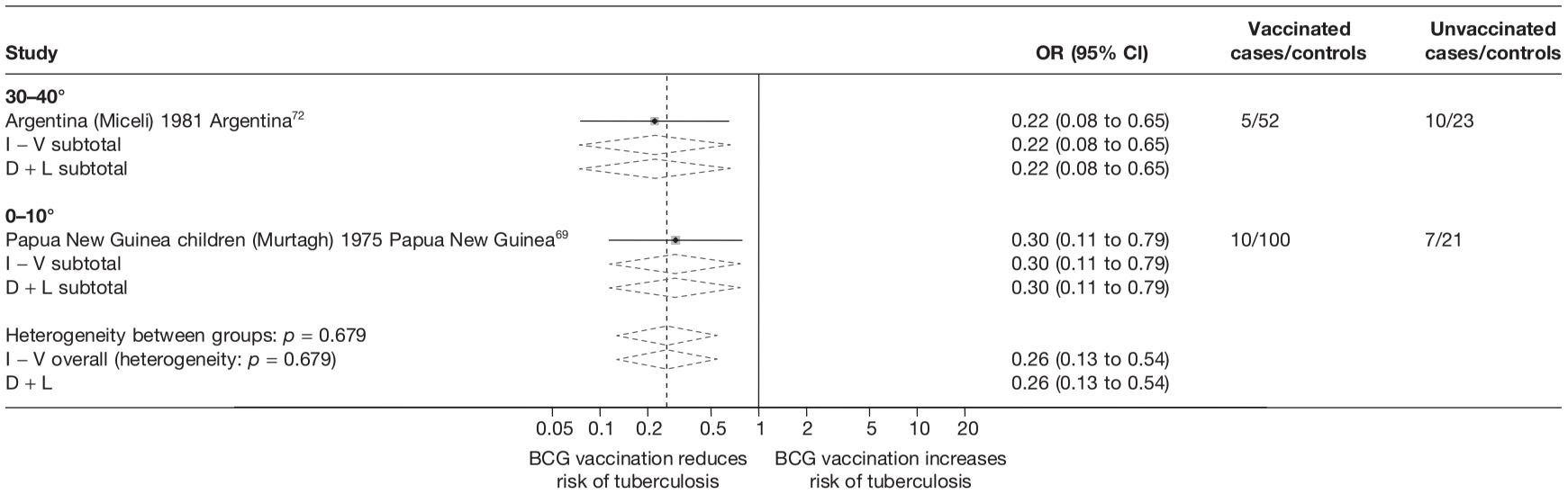

FIGURE 162 Odds ratios (with 95% CI) comparing the BCG vaccination status of miliary tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (10° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

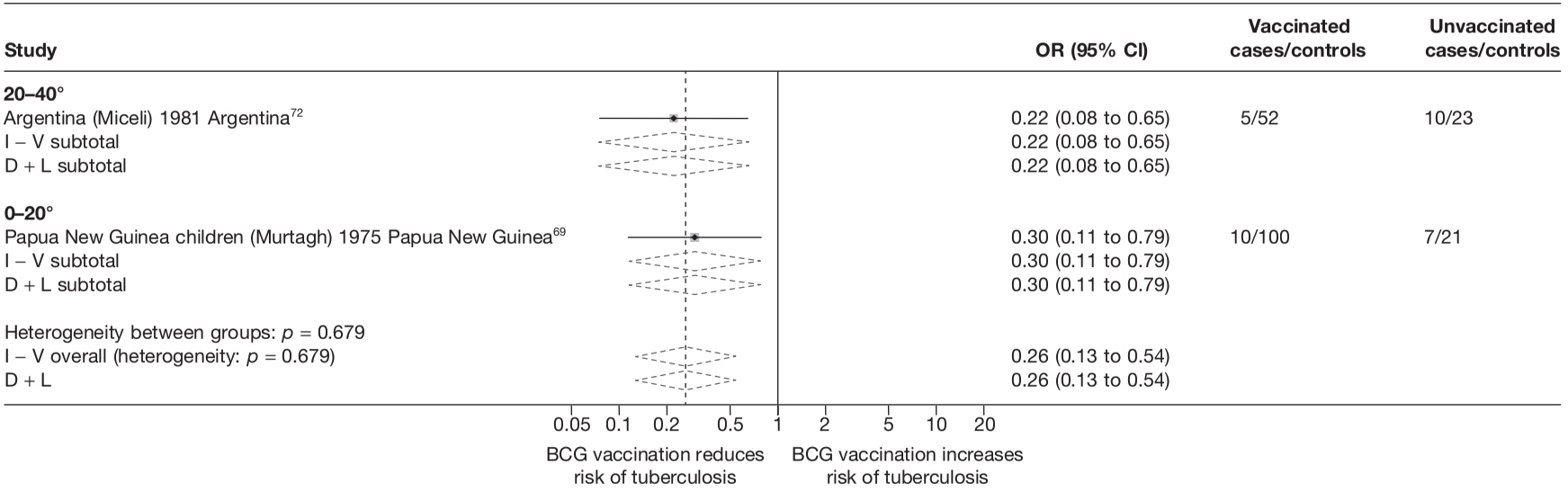

FIGURE 163 Odds ratios (with 95% CI) comparing the BCG vaccination status of miliary tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

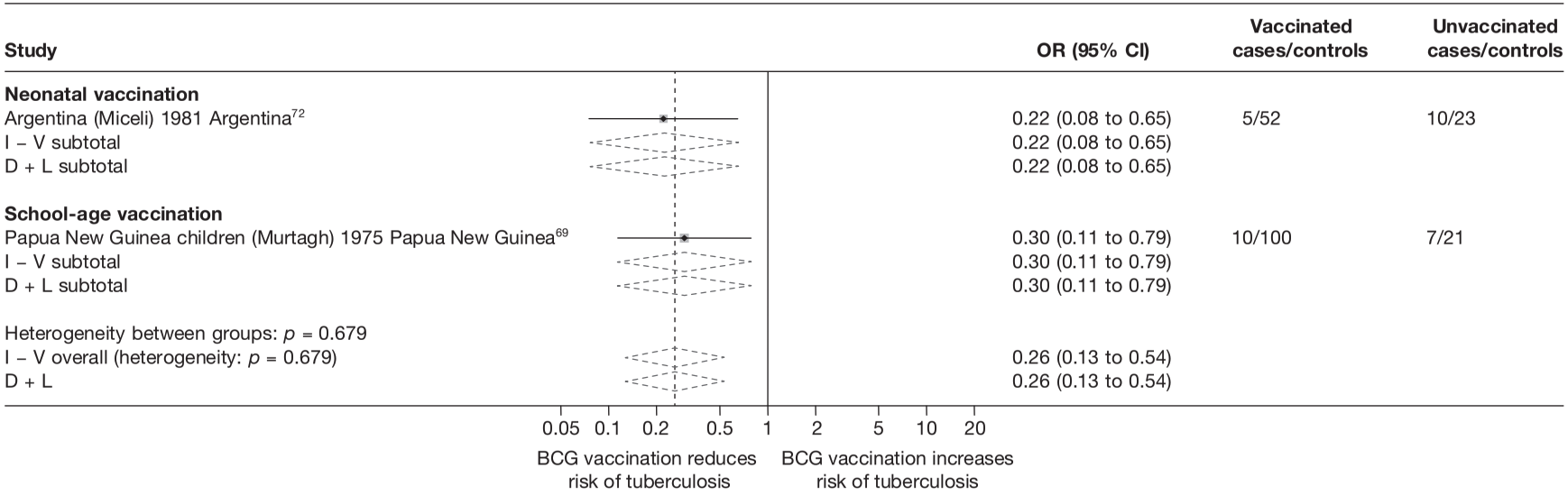

FIGURE 164 Odds ratios (with 95% CI) comparing the BCG vaccination status of miliary tuberculosis cases and control subjects in case–control studies, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Cohort studies

Unstratified analyses are ordered by year trial started

See *Figure 165.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 166.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 167.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 168.*

Stratified analysis by cohort study design, ordered by year study started

See *Figure 169.*

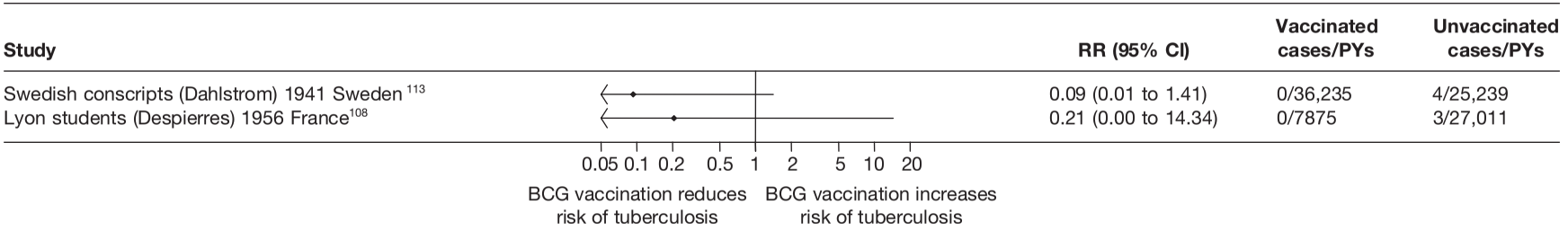

FIGURE 165 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

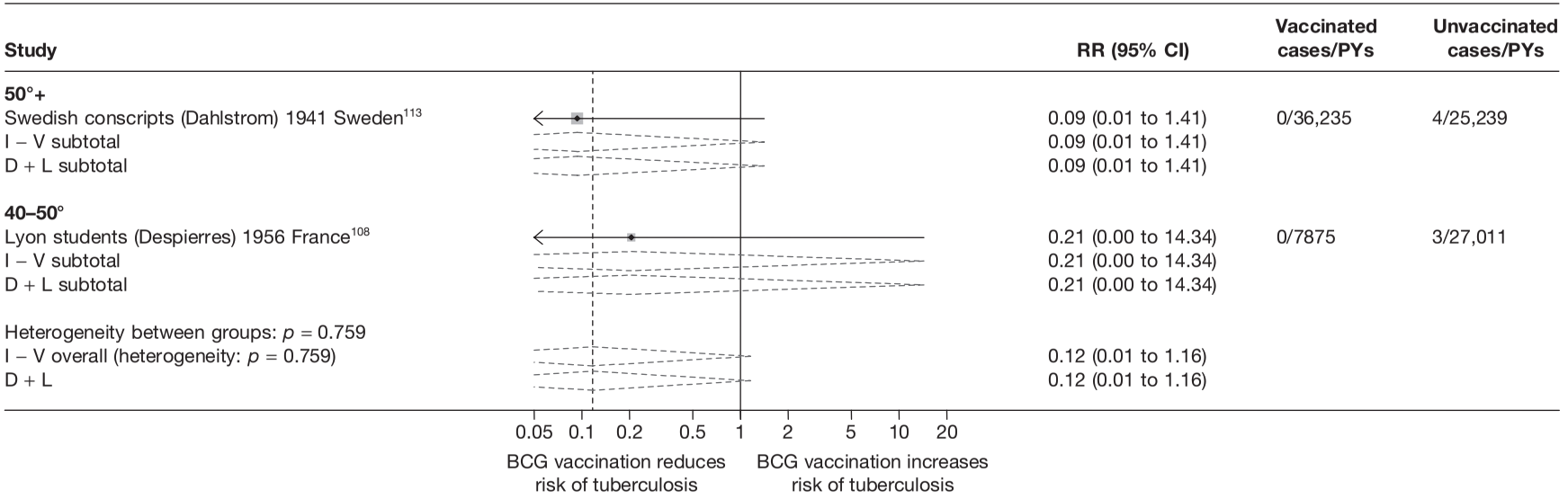

FIGURE 166 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (10° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

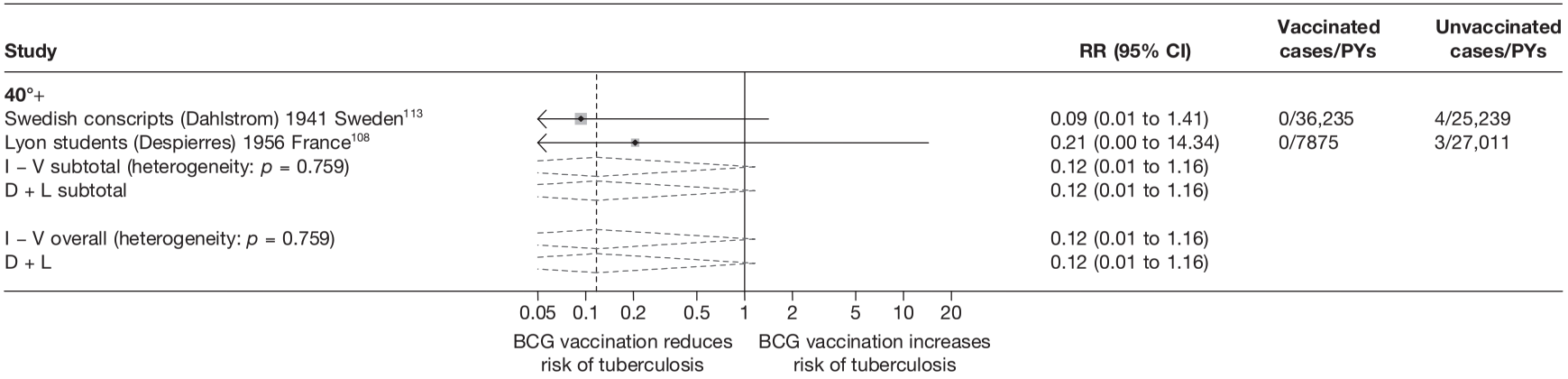

FIGURE 167 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

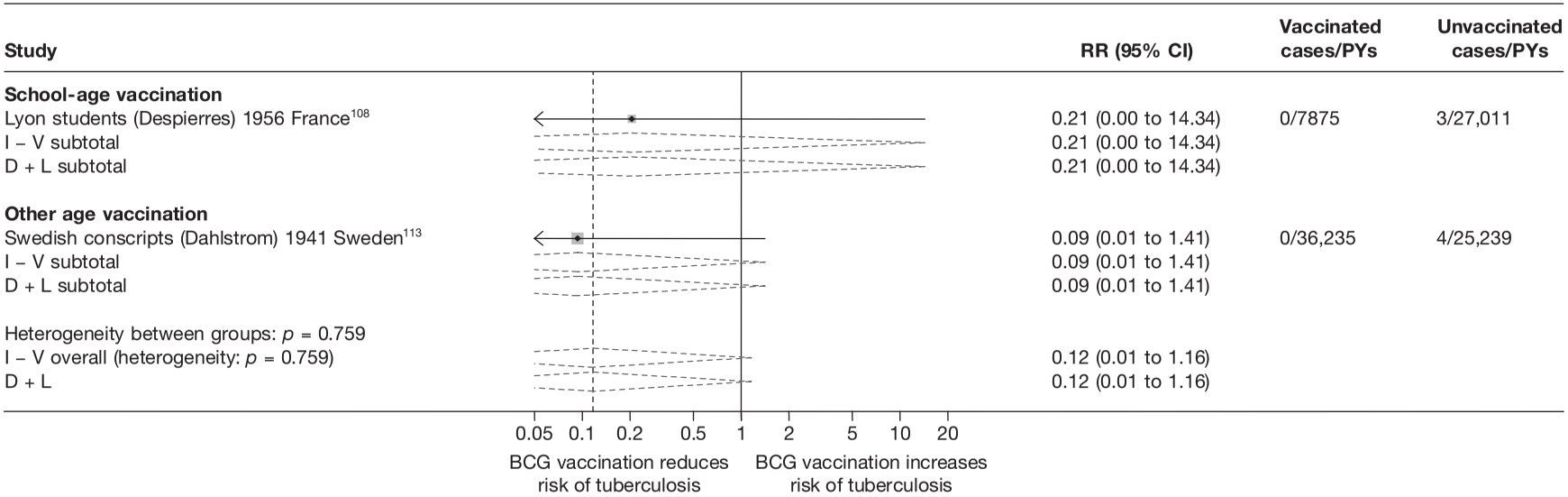

FIGURE 168 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

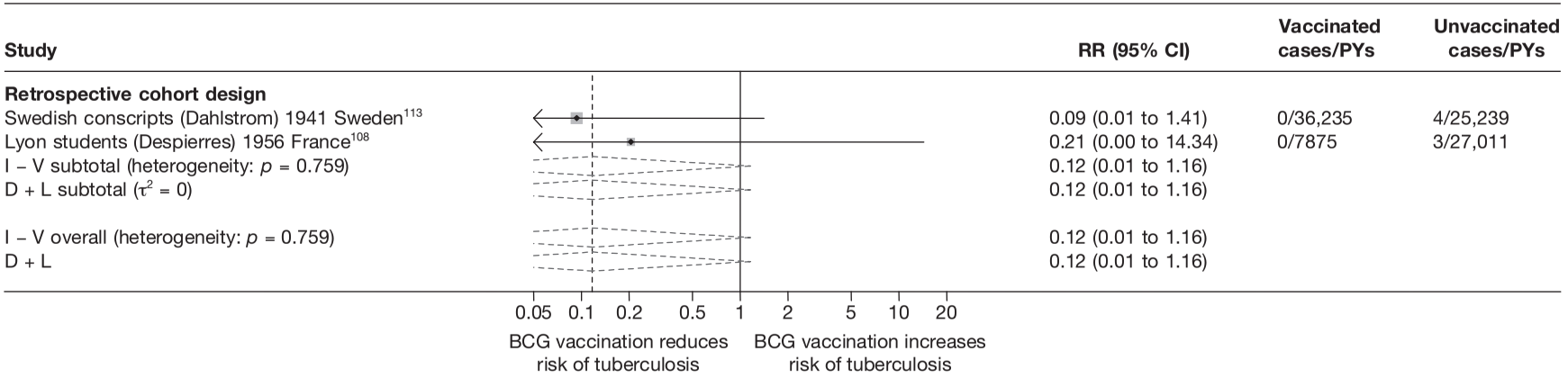

FIGURE 169 Rate ratios (with 95% CI) comparing the incidence of miliary tuberculosis outcomes among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified cohort study design, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Cross-sectional studies

Unstratified analyses are ordered by year trial started

See *Figure 170.*

Stratified analysis by 10° latitude, ordered by year study started

See *Figure 171.*

Stratified analysis by 20° latitude, ordered by year study started

See *Figure 172.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 173.*

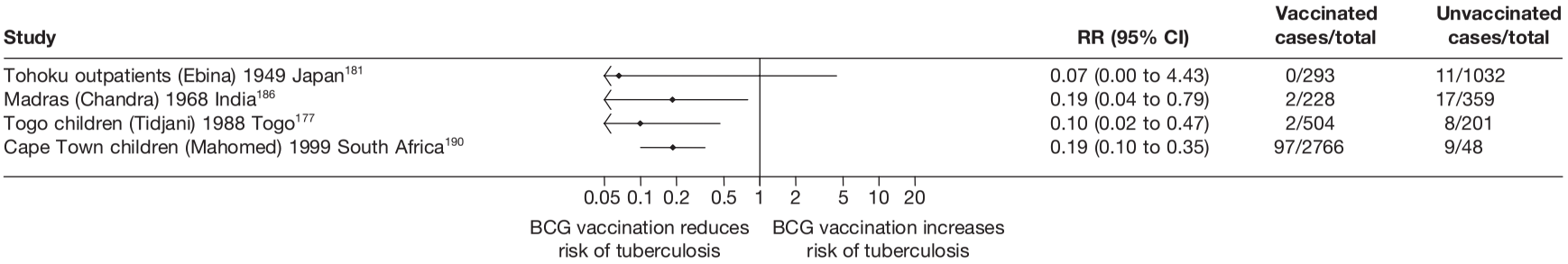

FIGURE 170 Risk ratios (with 95% CI) comparing the prevalence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

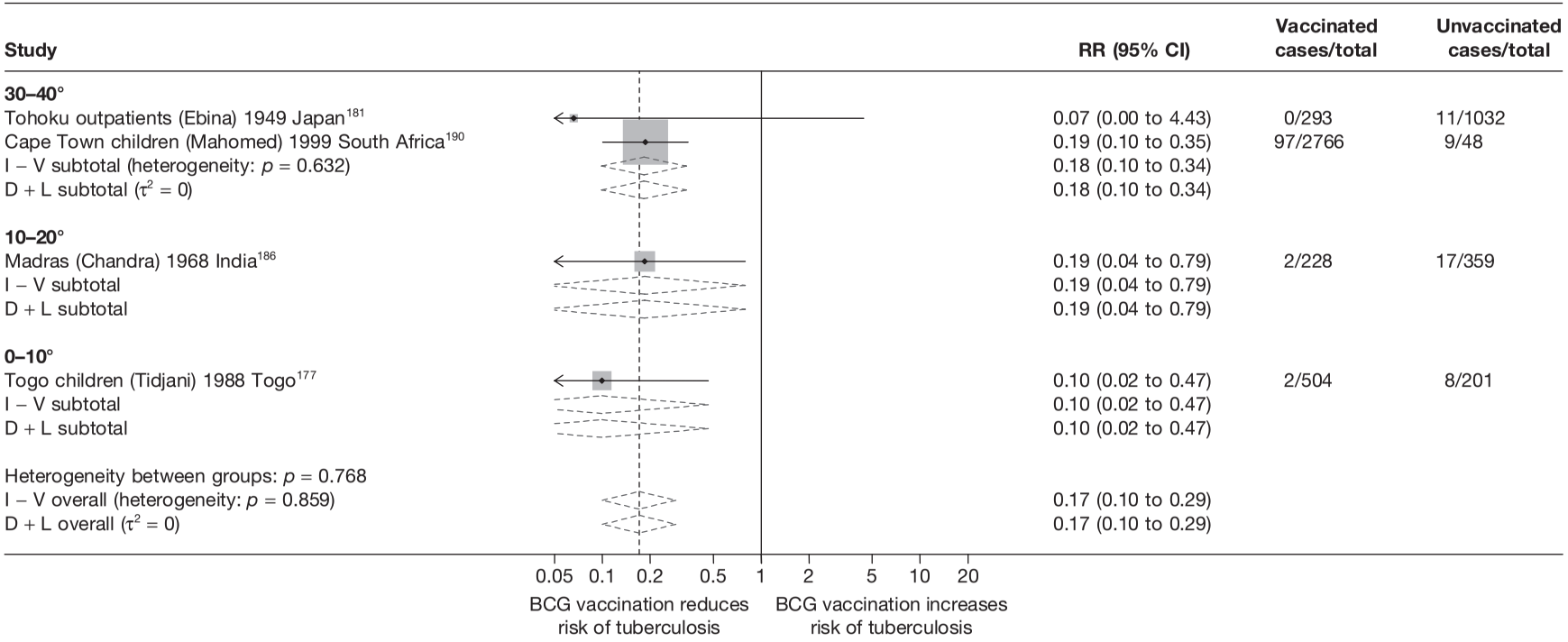

FIGURE 171 Risk ratios (with 95% CI) comparing the prevalence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by latitude of study location (10° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

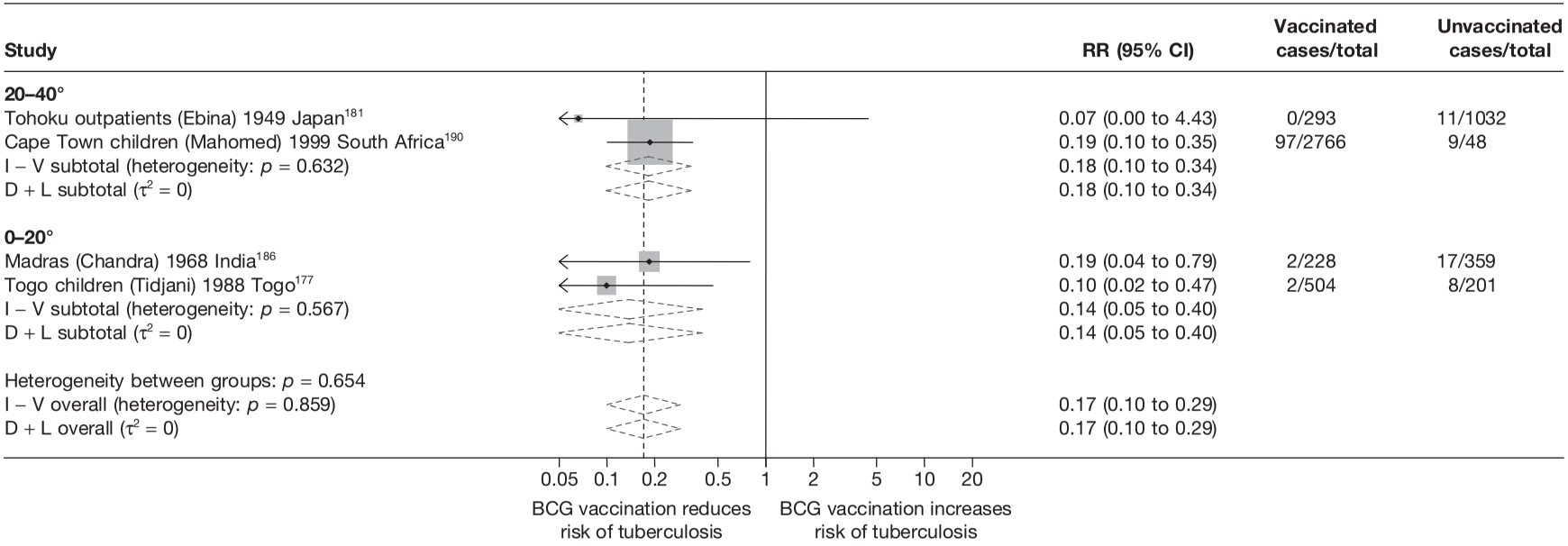

FIGURE 172 Risk ratios (with 95% CI) comparing the prevalence of miliary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

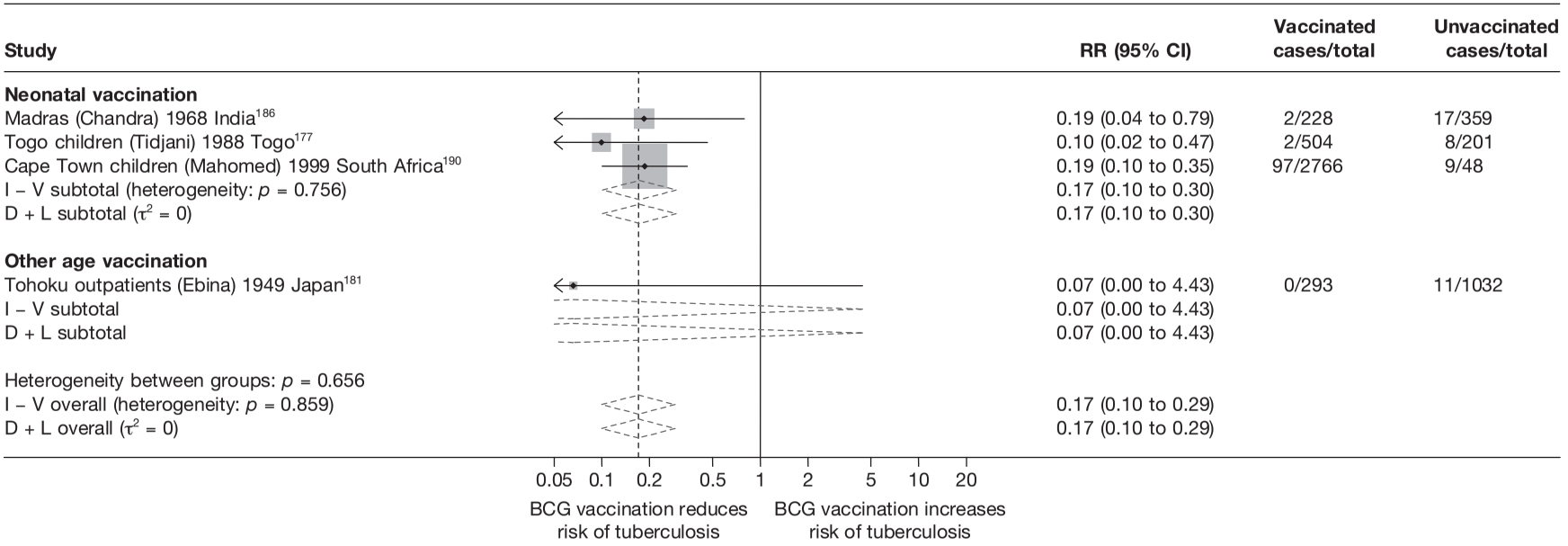

FIGURE 173 Risk ratios (with 95% CI) comparing the prevalence of meningeal tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies, stratified by latitude age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Extrapulmonary tuberculosis

Stratified analysis by 20° latitude, ordered by year study started

Case–control studies

See *Figure 174.*

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 175.*

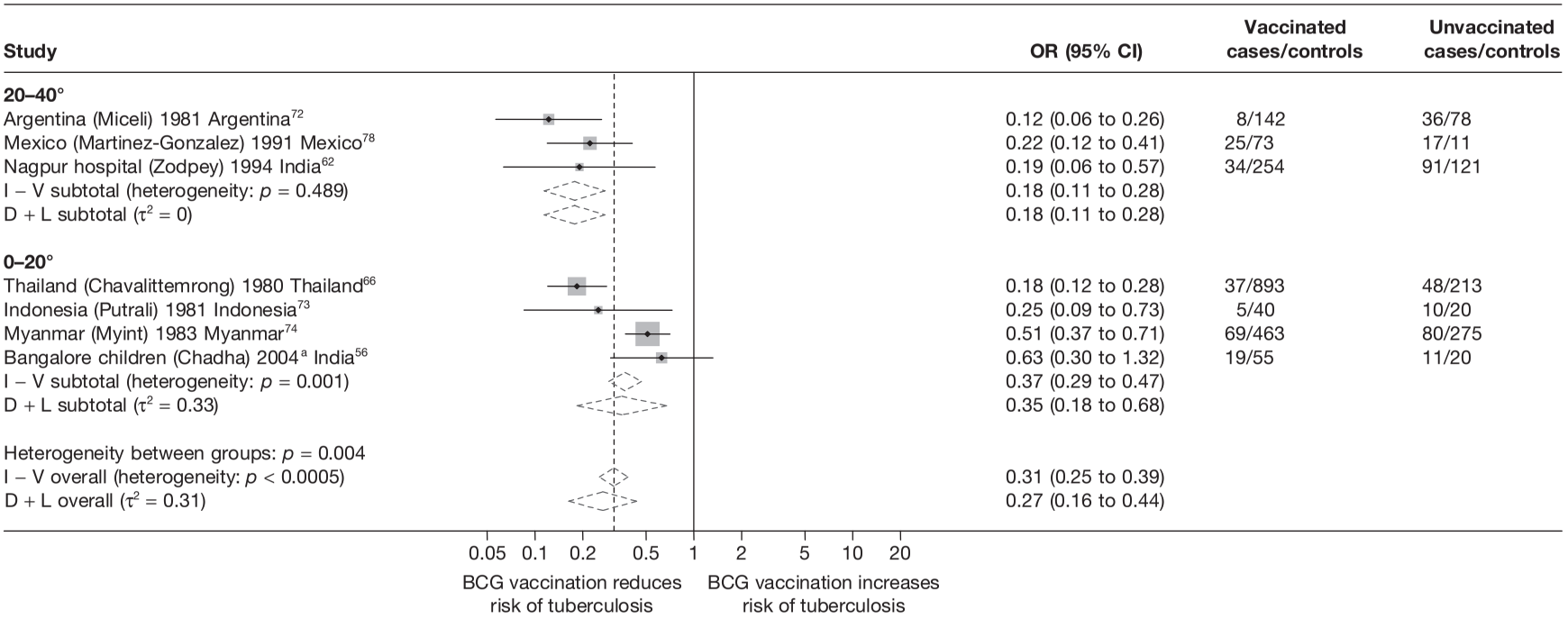

FIGURE 174 Odds ratios (with 95% CI) comparing the BCG vaccination status of extrapulmonary tuberculosis cases and control subjects in case–control studies, stratified by latitude of study location (20° bands), ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

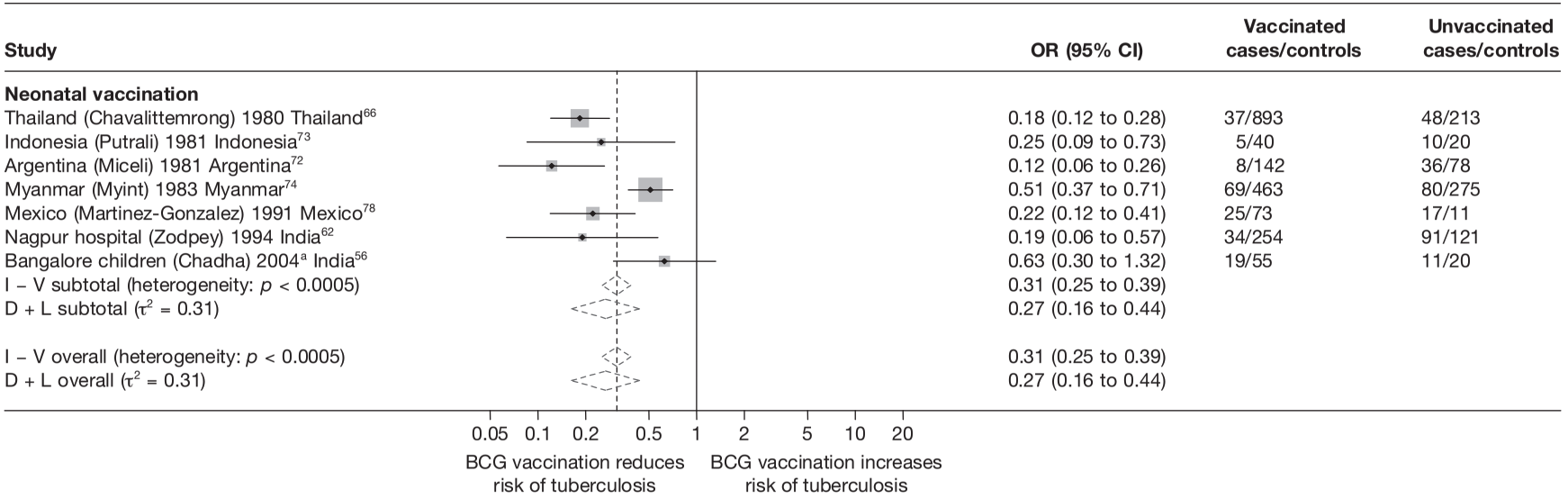

FIGURE 175 Odds ratios (with 95% CI) comparing the BCG vaccination status of extrapulmonary tuberculosis cases and control subjects in case–control studies, stratified by age at vaccination, ordered by year of study start. a, Date of study publication was used if study start date was not available. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Stratified analysis by 20° latitude, ordered by year study started

Cohort studies

See *Figure 176*.

Case population studies

See *Figure 177*.

Cross-sectional studies

See *Figure 178*.

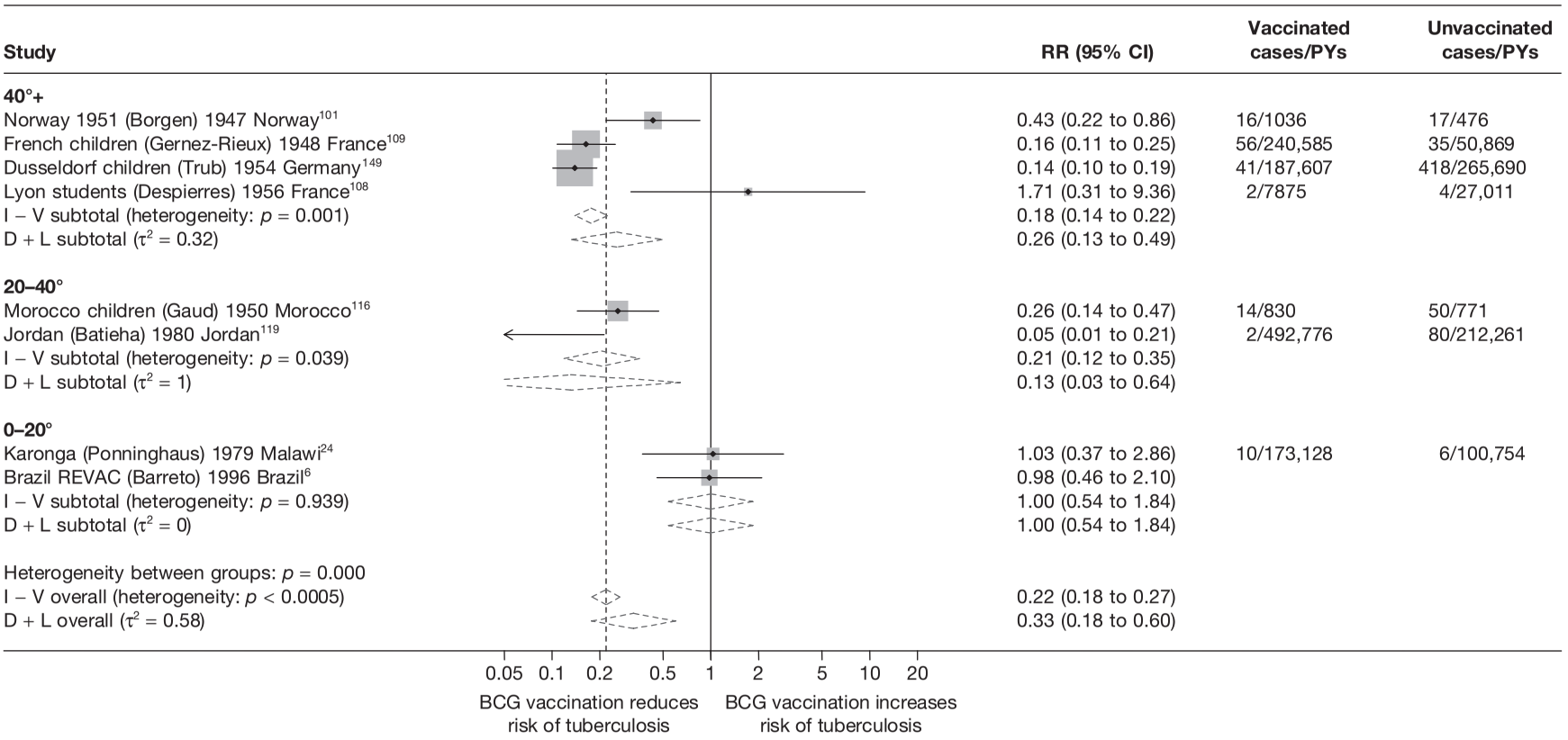

FIGURE 176 Rate ratios (with 95% CI) comparing the incidence of extrapulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

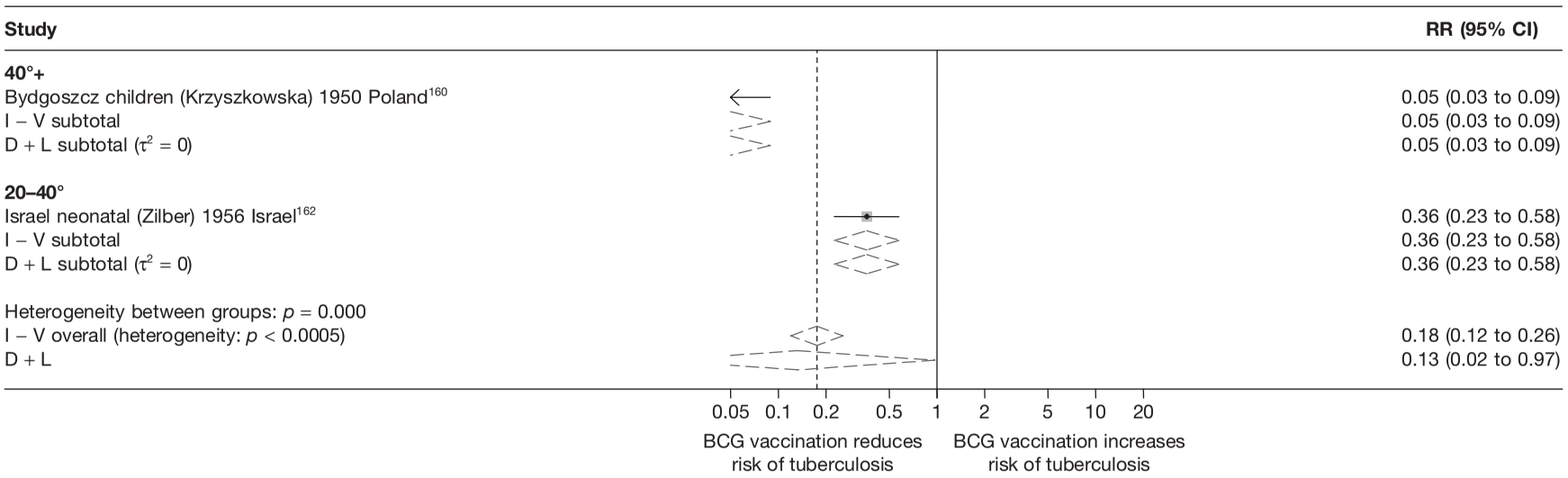

FIGURE 177 Rate ratios (with 95% CI) comparing the incidence of extrapulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated individuals for the longest duration of follow-up (see *Table 5*) in case population studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

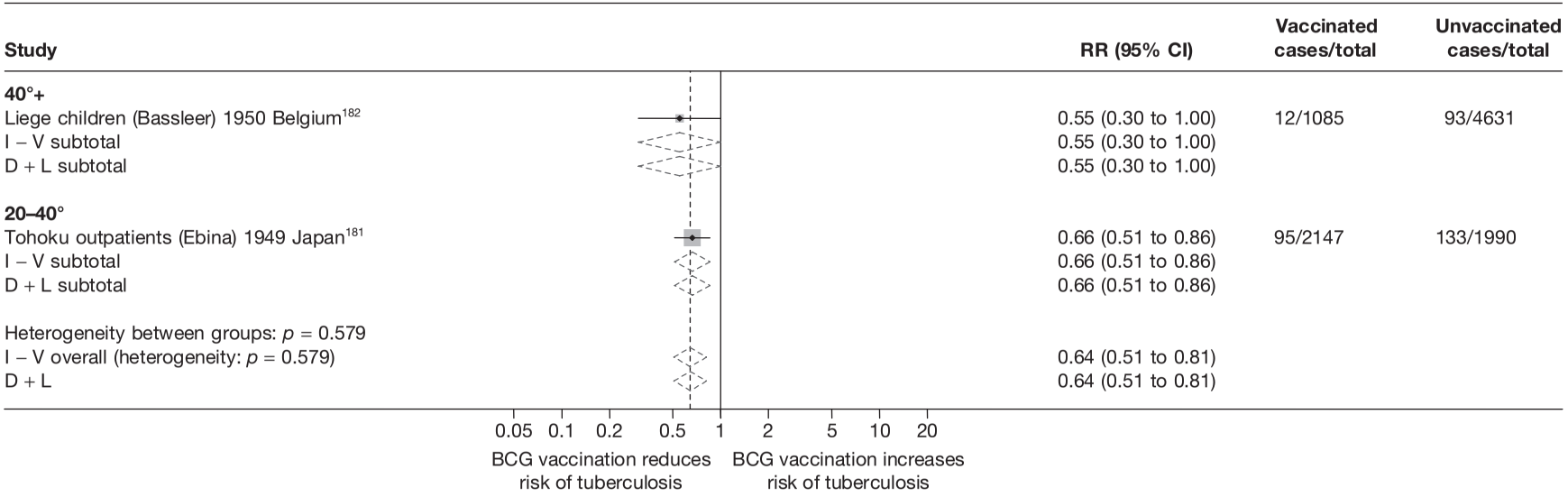

FIGURE 178 Risk ratios (with 95% CI) comparing the prevalence of extrapulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated in cross-sectional studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Stratified analysis by age at vaccination, ordered by year study started

See *Figure 179*.

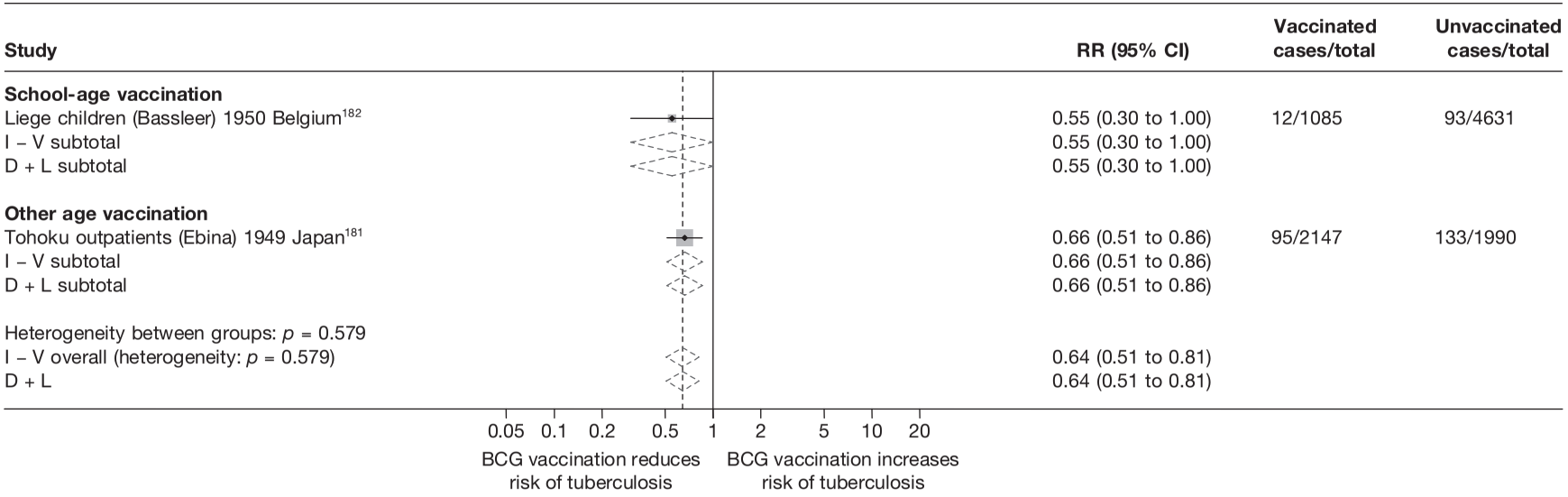

FIGURE 179 Risk ratios (with 95% CI) comparing the prevalence of extrapulmonary tuberculosis among BCG vaccinated individuals with that in unvaccinated in cross-sectional studies, stratified by age at vaccination, ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

Tuberculosis mortality

Stratified analysis by 20° latitude, ordered by year study started

Cohort studies

See *Figure 180.*

Cross-sectional studies

See *Figure 181.*

Results by gender and age for all outcomes

See *Table 33.*

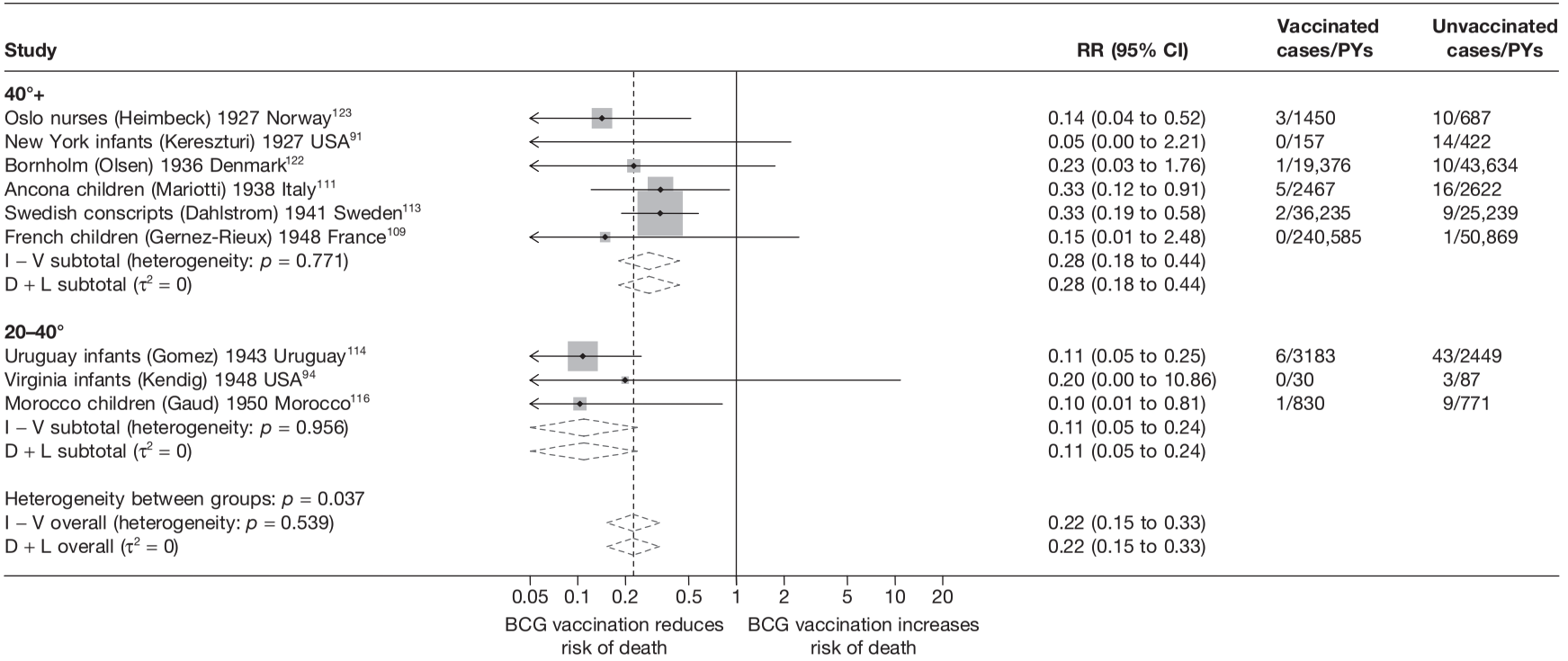

FIGURE 180 Rate ratios (with 95% CI) comparing the incidence of tuberculosis mortality among BCG vaccinated individuals to that in unvaccinated individuals for the longest duration of follow-up (see *Table 4*) in cohort studies, stratified by latitude of study location (20° bands), ordered by year of study start. D+L, DerSimonian and Laird method; I–V, inverse variance method.

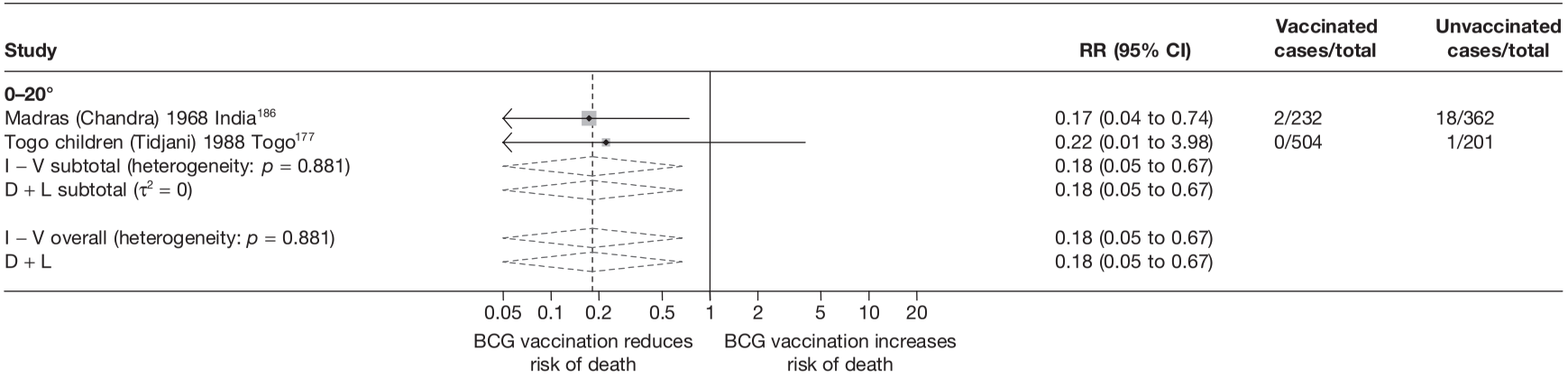

FIGURE 181 Risk ratios (with 95% CI) comparing the prevalence of tuberculosis mortality among BCG vaccinated individuals with that in unvaccinated individuals, in cross-sectional studies ordered by year of study start, by latitude of study location (20° bands). D+L, DerSimonian and Laird method; I–V, inverse variance method.

TABLE 33 Incidence rates for BCG and unvaccinated groups, rate ratios and ratio of rate ratios (RRR) of vaccinated compared with unvaccinated by gender for RCTs

Study	Tuberculosis outcome	Gender	Vaccinated cases/ unvaccinated cases	BCG vaccinated PYs/unvaccinated PYs	Follow-up period	BCG vaccination incidence rate (95% CI) (per 100,000)	Unvaccinated incidence rate (95% CI) (per 100,000)	Rate ratio (95% CI)	RRRs for females vs. males (95% CI)
Chingleput[28]	Pulmonary tuberculosis	Male			15	74	70	1.06	0.92
		Female				37	38	0.97	
Madanapalle[53]		Male	2/8	11,324/12,700	13	17.7 (4.4 to 70.6)	63.0 (31.5 to 126.0)	0.28 (0.06 to 1.32)	0.43 (0.03 to 5.69)
		Female	1/9	11,924/12,946		8.4 (1.2 to 59.5)	69.5 (36.2 to 133.6)	0.12 (0.02 to 0.95)	
Native American[5]	All tuberculosis outcomes	Male	23/31	24,731/23,664	50	93.0 (61.8 to 140.0)	131.0 (92.1 to 186.3)	0.71 (0.41 to 1.22)	0.43 (0.19 to 0.98)
		Female	13/35	29,545/24,138		44.0 (25.5 to 75.8)	145.0 (104.1 to 202.0)	0.30 (0.16 to 0.57)	
Puerto Rico[15]		Male	80/78	453,678/243,250	20	17.6 (14.2 to 22.0)	32.1 (25.7 to 40.0)	0.55 (0.40 to 0.75)	1.67 (1.07 to 2.59)
		Female	106/63	490,881/267,458		21.6 (17.9 to 26.1)	23.6 (18.4 to 30.2)	0.92 (0.67 to 1.25)	

Case–control studies

TABLE 34 Odds ratios comparing the BCG vaccination status in cases and control subjects and ratios of ORs by gender, in case–control studies

Study	Tuberculosis outcome	Duration (years)	Gender	OR (95% CI)	Ratio of ORs for females vs. males 95% (CI)
Indonesia[73]	All tuberculosis morbidity outcomes	0–5	Female	0.60 (0.34 to 1.11)	
		0–5	Male	0.64 (0.39 to 1.11)	0.93 (0.42 to 2.05)
Myanmar[74]		0–1	Female	0.71 (0.30 to 1.83)	
		0–1	Male	0.30 (0.13 to 0.79)	
		1–2	Female	0.33 (0.18 to 0.64)	
		1–2	Male	1.00 (0.55 to 1.89)	
		2–3	Female	0.39 (0.20 to 0.79)	
		2–3	Male	0.65 (0.35 to 1.25)	
		3–4	Female	0.67 (0.30 to 1.64)	
		3–4	Male	1.24 (0.59 to 2.76)	
		4–5	Female	0.82 (0.41 to 1.71)	
		4–5	Male	0.63 (0.34 to 1.24)	0.70 (0.45 to 1.10)
Argentina[72]		0–0.5	Female	0.24 (0.03 to 2.47)	
		0–0.5	Male	1.92 (0.12 to 52.84)	
		0.5–1	Female	0.62 (0.18 to 2.63)	
		0.5–1	Male	0.56 (0.20 to 1.76)	
		1–2	Female	0.29 (0.11 to 0.85)	
		1–2	Male	0.37 (0.17 to 0.90)	
		2–3	Female	0.14 (0.03 to 0.70)	
		2–3	Male	0.37 (0.15 to 0.98)	
		3–4	Female	0.03 (0.00 to 0.61)	
		3–4	Male	0.28 (0.10 to 0.91)	
		4–5	Female	0.21 (0.06 to 0.85)	
		4–5	Male	0.11 (0.03 to 0.50)	
		5–6	Female	0.36 (0.12 to 1.25)	
		5–6	Male	0.13 (0.03 to 0.63)	0.84 (0.42 to 1.67)
Asian Children in UK[32]		0–12	Female	0.58 (0.25 to 10.99)	
		0–12	Male	0.41 (0.20 to 0.86)	1.41 (0.19 to 10.74)
Canada[63]		0–18	Female	0.19 (0.10 to 0.41)	
		0–18	Male	0.43 (0.24 to 0.85)	0.44 (0.17 to 1.13)
Nagpur Hospital[62]	Pulmonary tuberculosis	0–12	Female	0.42 (0.21 to 0.82)	
		0–12	Male	0.34 (0.12 to 0.92)	
		0–37	Female	0.56 (0.37 to 0.85)	
		0–37	Male	0.39 (0.25 to 0.61)	1.36 (0.79 to 2.33)
Nagpur Hospital[62]	Tuberculosis meningitis	0–12	Female	0.17 (0.06 to 0.50)	
		0–12	Male	0.10 (0.03 to 0.33)	1.70 (0.34 to 8.42)
Nagpur Hospital[62]	Extrapulmonary tuberculosis	0–30	Female	0.21 (0.13 to 0.33)	
		0–30	Male	0.16 (0.09 to 0.29)	1.31 (0.62 to 2.77)

Cohort studies

TABLE 35 Risk ratios comparing the incidence of tuberculosis in BCG vaccinated individuals compared with that in unvaccinated and RRRs by gender, in cohort studies

Study	Potential follow-up period (years)	Gender	Cases in vaccinated/ unvaccinated group	Estimated PYs BCG vaccinated group/ estimated PYs unvaccinated group	RR (95% CI)	RRRs for females vs. males 95% (CI)
Seoul contacts[120] (all tuberculosis outcomes)	0–1	Female	12/9	124/28	0.30 (0.13 to 0.71)	0.80 (0.40 to 1.82)
	0–1	Male	7/17	97/36	0.15 (0.06 to 0.36)	
	1–2	Female	5/7	86/24	0.20 (0.06 to 0.63)	
	1–2	Male	4/5	84/31	0.30 (0.08 to 1.12)	
	2–3	Female	3/10	77/48	0.19 (0.05 to 0.69)	
	2–3	Male	5/5	78/47	0.60 (0.17 to 2.07)	
	3–4	Female	3/5	70/56	0.48 (0.11 to 2.01)	
	3–4	Male	2/14	75/48	0.09 (0.02 to 0.40)	
	4–5	Female	2/4	61/41	0.34 (0.06 to 1.86)	
	4–5	Male	3/4	54/58	0.81 (0.18 to 3.62)	

Cross-sectional studies

TABLE 36 Risk ratios comparing the prevalence of tuberculosis in BCG vaccinated individuals compared with that in unvaccinated and ratios of RRs by gender, in cross-sectional studies

Study	Tuberculosis outcome	Age at outcome (years)	Gender	Cases in vaccinated group/cases in unvaccinated group	Total BCG vaccinated/ total unvaccinated	RR (95% CI)	RRRs for females vs. males 95% (CI)
Bangkok Contacts[188]	All tuberculosis disease	0–1	Male	16/5	190/30	0.51 (0.20 to 1.28)	1.54 (0.87 to 2.74)
		0–1	Female	13/2	158/24	0.99 (0.24 to 4.11)	
		1–2	Male	19/13	145/33	0.33 (0.18 to 0.60)	
		1–2	Female	32/5	148/20	0.86 (0.38 to 1.96)	
		2–3	Male	22/6	143/24	0.62 (0.28 to 1.36)	
		2–3	Female	22/4	134/30	1.23 (0.46 to 3.31)	
		3–4	Male	14/6	113/35	0.72 (0.30 to 1.74)	
		2–4	Female	10/9	104/25	0.27 (0.12 to 0.59)	
		4–5	Male	3/8	68/20	0.11 (0.03 to 0.38)	
		4–5	Female	7/2	50/12	0.84 (0.20 to 3.54)	
Togo Contacts[177]	Pulmonary	0–1	Male	4/5	52/31	0.48 (0.14 to 1.64)	1.25 (0.69 to 2.28)
		0–1	Female	3/4	50/27	0.41 (0.10 to 1.68)	
		1–2	Male	4/5	52/31	0.48 (0.14 to 1.64)	
		1–2	Female	4/6	51/49	0.64 (0.19 to 2.13)	
		2–3	Male	1/11	75/37	0.04 (0.01 to 0.33)	
		2–3	Female	7/10	68/45	0.46 (0.19 to 1.13)	
		3–4	Male	1/9	84/38	0.05 (0.01 to 0.38)	
		2–4	Female	1/7	71/40	0.08 (0.01 to 0.63)	
		4–5	Male	5/10	75/42	0.28 (0.10 to 0.76)	
		4–5	Female	5/11	87/56	0.29 (0.11 to 0.80)	
		>5	Male	12/17	90/68	0.53 (0.27 to 1.04)	
		>5	Female	15/18	120/83	0.58 (0.31 to 1.08)	

TABLE 37 Risk ratios comparing the incidence of tuberculosis in BCG vaccinated individuals compared with that in unvaccinated and ratios of RRs by age at vaccination, in RCTs

Study	Age group (years)	Vaccinated cases	Unvaccinated cases	BCG vaccinated PYs	Unvaccinated PYs	BCG vaccination incidence rate (95% CI) (per 100,000)	Unvaccinated incidence rate (95% CI) (per 100,000)	Rate ratio (95% CI)
Chingleput (Madras)[28]	0–4	33	22	220,268	110,280	15.0 (10.7 to 21.1)	19.9 (13.1 to 30.3)	0.75 (0.44 to 1.29)
	5–9	58	38	217,637	108,973	26.6 (20.6 to 34.5)	34.9 (25.4 to 47.9)	0.76 (0.51 to 1.15)
	10–14	80	42	123,820	61,560	64.6 (51.9 to 80.4)	68.2 (50.4 to 92.3)	0.95 (0.65 to 1.38)
	15–24	94	34	81,798	38,960	114.9 (93.9 to 140.7)	87.3 (62.4 to 122.1)	1.32 (0.89 to 1.95)
	25–34	52	20	54,140	26,115	96.0 (73.2 to 126)	76.6 (49.4 to 118.7)	1.25 (0.75 to 2.10)
	>35	63	24	57,055	28,090	110.4 (86.3 to 141.3)	85.4 (57.3 to 127.5)	1.29 (0.81 to 2.07)
Madanapalle[53]	0–4	7	4	22,743	26,449	30.8 (14.7 to 64.6)	15.1 (5.7 to 40.3)	2.04 (0.60 to 6.95)
	5–14	10	13	20,249	21,830	49.4 (26.6 to 91.8)	59.6 (34.6 to 102.6)	0.83 (0.36 to 1.89)
	15–24	5	7	7566	8078	66.1 (27.5 to 158.8)	86.7 (41.3 to 181.8)	0.76 (0.24 to 2.40)
	25–34	6	11	5424	7075	110.6 (49.7 to 246.2)	155.5 (86.1 to 280.7)	0.71 (0.26 to 1.92)
	≥35	5	12	5183	6776	96.5 (40.2 to 231.8)	177.0 (100.6 to 311.8)	0.54 (0.19 to 1.55)