Appendix Table 1. Exposure metrics, exposure assessment methods, and spatial resolution eligible for inclusion.

Exposure metric	Exposure assessment method	Spatial resolution exposure method	Spatial resolution exposure assignment to participants	Spatial resolution exposure assignment for study identification	Traffic contribution to exposure and other considerations
All pollutants[a]	Dispersion / chemical transport models of traffic emissions or traffic-specific source tracking / apportionment	≤5 km	≤5 km	Residential address as exact address, neighborhood, census tract or block, or postal code (but not city or county)	Assumed by method
All pollutants[a]	Dispersion / chemical transport models of all sources	≤5 km	≤5 km	Residential address as exact address, neighborhood, census tract or block, or postal code (but not city or county)	Judgement needed (e.g., required area adjustment in epidemiological analysis if spatial extent of the study area was >10,000 km^2, determination of whether exposures met long-term criteria)
All pollutants[a]	Land use regression models that contain at least one traffic predictor (e.g., traffic intensity or road density) or broader surrogates of traffic (e.g., address density, household density, population density, impervious surface)	≤5 km	≤5 km	Residential address as exact address, neighborhood, census tract or block, or postal code (but not city or county)	Judgement needed (e.g., required area adjustment in epidemiological analysis if spatial extent of the study area was >10,000 km^2, determination of whether exposures met long-term criteria)
All pollutants[a] except PM_{10}, PM_{coarse}, and $PM_{2.5}$	Surface, satellite and personal monitoring	≤5 km; operationalized as up to 5 km between the	≤5 km	Residential address as exact address, neighborhood, census tract or block, or postal code (but not	Judgement needed (e.g., unclear monitor density, determination of whether exposures met long-term criteria)

		residence and the monitor, or up to 10 km between monitors, or at least one site per 50 km^2		city or county)	
PM_{10} PM_{coarse} $PM_{2.5}$	Surface, satellite and personal monitoring	Excluded	Excluded	Excluded	Excluded
Indirect traffic measures (Metrics based on distance or traffic density)	Objective	≤1,000 m from a highway or a major road	≤100 m	Residential address as exact address or detailed postal code (i.e., street segment)	Assumed by method

a The pollutants included were NO_2, NO_x, NO, CO, EC (including related metrics such as black carbon, black smoke, and PM absorbance), UFP, non-tailpipe PM trace metals (e.g., Cu, Fe and Zn), PAHs, benzene, PM_{10}, PM_{coarse} and $PM_{2.5}$.

Appendix Table 2. Search strategy for the outcome mortality.

PECOS		**PubMed search terms**
Population		adult[tiab] OR adults[tiab] OR child[tiab] OR children[tiab] OR pupils[tiab] OR preschooler[tiab] OR preschoolers[tiab] OR student[tiab] OR students[tiab] OR adolescent[tiab] OR adolescents[tiab] OR infant[tiab] OR infants[tiab] OR toddler[tiab] OR toddlers[tiab] OR newborn[tiab] OR baby[tiab] OR babies[tiab] OR person[tiab] OR persons[tiab] OR human[tiab] OR humans[tiab] OR people[tiab] OR man[tiab] OR men[tiab] OR woman[tiab] OR women[tiab] OR elderly[tiab] OR boy[tiab] OR boys[tiab] OR girl[tiab] OR girls[tiab] OR patients[tiab] OR population[tiab] OR populations[tiab] OR survivor[tiab] OR survivors[tiab] OR spouse[tiab] OR spouses[tiab] OR wife[tiab] OR husband[tiab] OR smoker[tiab] OR smokers[tiab] OR resident[tiab] OR residents[tiab] OR veteran[tiab] OR mother[tiab] OR mothers[tiab] OR father[tiab] OR fathers[tiab] OR “population based”[tiab] OR “cohort”[tiab] OR (("persons"[Mesh] OR "humans"[Mesh]) NOT (animals[Mesh] NOT humans[Mesh]))
Exposure	General terms to be combined with pollutants Different pollutants to be combined with OR	("Environmental Exposure"[Mesh] OR "Environmental Pollution"[Mesh] OR "Air Pollutants"[Mesh] OR "Air Pollution"[Mesh] OR "air pollution"[tiab] OR "air pollutants"[tiab] OR "polluted atmosphere"[tiab] OR "atmospheric pollution"[tiab] OR "polluted air"[tiab] OR "ambient air"[tiab] OR "Inhalation Exposure/adverse effects"[Mesh] OR "Motor Vehicles"[Mesh] OR "Vehicle Emissions"[Mesh] OR "traffic–related"[tiab]) OR ((traffic OR transport) AND air)
	NO_x	((("Nitrogen Oxides"[Mesh] OR "Nitrogen dioxide"[tiab] OR "NO2"[tiab] OR "NO(2)"[tiab] OR "NOx"[tiab] OR "NO(x)"[tiab] OR "Nitrogen oxide"[tiab] OR "nitrogen oxides"[tiab]))) OR "oxides of nitrogen"[tiab]
	CO	"Carbon Monoxide"[Mesh] OR "carbon monoxide"[tiab]
	Traffic PM	"Particulate Matter"[Mesh:NoExp] OR "Smog"[Mesh] OR “smog”[tiab] OR "Particle Size"[Mesh] OR "PM10"[tiab] OR PM2.5[tiab] OR PM10–2.5[tiab] OR PM2.5–10[tiab] OR PM1[tiab] OR “fine particulate”[tiab] OR "PM10"[tiab] OR "PM2.5"[tiab] OR "PM10–2.5"[tiab] OR "PM2.5–10"[tiab] OR "PM1"[tiab] OR "PM(10)"[tiab] OR "PM(2.5)"[tiab] OR "PM(10–2.5)"[tiab] OR "PM(2.5–10)"[tiab] OR "PM(1)"[tiab] OR

		"particulate matter"[tiab] OR "PMcoarse"[tiab] OR "PMcoarse"[tiab]
	Non–tailpipe emissions and metals	resuspended dust[tiab] OR re–suspended dust[tiab] OR road dust[tiab] OR brake dust[tiab] OR tire dust[tiab] OR tyre dust[Text Word] OR brake wear[tiab] OR tire wear[tiab] OR tyre wear[tiab] OR road wear[tiab] OR debris dust[tiab] OR fugitive dust[tiab] OR diffuse dust[tiab] OR wear dust[tiab] OR non–exhaust[tiab] OR source apportionment[tiab] OR windblown dust[tiab] OR non–tailpipe[tiab] OR mineral dust[tiab] (nickel[tiab] OR Ni[tiab] OR Copper[tiab] OR Cu[tiab] OR aluminium[tiab] OR aluminum[tiab] OR Al[tiab] OR zinc[tiab] OR Zn[tiab] OR barium[tiab] OR Ba[tiab] OR iron[tiab] OR Fe[tiab] OR copper[tiab] OR Cu[tiab] OR Antimon[tiab] OR Sb[tiab] OR Tinn[tiab] OR Sn[tiab] OR Zirconium[tiab] OR Zr[tiab] OR "trace metals"[tiab] AND ("Particulate Matter"[Mesh:NoExp] OR "Smog"[Mesh] OR “smog”[tiab] OR "Particle Size"[Mesh] OR "PM10"[tiab] OR PM2.5[tiab] OR PM10–2.5[tiab] OR PM2.5–10[tiab] OR PM1[tiab] OR “fine particulate”[tiab] OR "PM10"[tiab] OR "PM2.5"[tiab] OR "PM10–2.5"[tiab] OR "PM2.5–10"[tiab] OR "PM1"[tiab] OR "PM(10)"[tiab] OR "PM(2.5)"[tiab] OR "PM(10–2.5)"[tiab] OR "PM(2.5–10)"[tiab] OR "PM(1)"[tiab] OR "particulate matter"[tiab] OR "PMcoarse"[tiab] OR "PMcoarse"[tiab]))
	UFPs	“submicron“[tiab] OR “surface area“[tiab] OR “ultrafine“[tiab] OR “ultrafine particles“[tiab] OR “ultrafine particle“[tiab] OR “nano particle“[tiab] OR “nano particles“[tiab] OR “nanoparticles“[tiab] OR “nanoparticle“[tiab] OR PM0.1[tiab] OR “PM0.1“[tiab] OR “PM(0.1)“[tiab] OR PM0.25[tiab] OR “PM(0.25)“[tiab] OR “PM0.25“[tiab] OR “quasi–ultrafine“[tiab] OR “quasi ultrafine“[tiab] OR “PNC“[tiab] OR “accumulation mode“[tiab] OR “particle number“[tiab] OR "number of particles"[tiab] OR “aitken mode“[tiab]
	Soot/BC	"Soot"[Mesh] OR soot[tiab] OR "PM2.5 absorbance"[tiab] OR "PM2.5absorbance"[tiab] OR “PM2.5abs”[tiab] OR "black carbon"[tiab] OR "carbon black"[tiab] OR “organic carbon”[tiab] OR “elemental carbon”[tiab] OR “black smoke”[tiab]
	PAHs	"Polycyclic Aromatic Hydrocarbons"[Mesh:NoExp] OR “polycyclic aromatic hydrocarbons”[tiab] OR PAH[tiab] OR

		"PAH's"[tiab] OR PAHs[tiab] OR "benzo(a)pyrene"[tiab] OR benzopyrene[tiab]
	Benzene	"benzene"[Mesh] OR benzene[tiab] OR BTEX[tiab]
	Proxy measures for traffic	((((traffic[tiab]) NOT ("Accidents, Traffic"[Mesh] OR safety[tiab] OR accident[tiab] OR accidents[tiab] OR injur*[tiab] OR collision*[tiab] OR crash*[tiab])) OR "traffic intensity"[tiab] OR "traffic density"[tiab] OR "traffic load"[tiab] OR "traffic count"[tiab] OR "road length"[tiab] OR ((proximity[tiab] OR near[tiab] OR distance[tiab] OR nearest[tiab] OR next[tiab] OR close[tiab] OR closest[tiab]) AND (road*[tiab] OR highway*[tiab] OR freeway*[tiab] OR motorway*[tiab] OR interstate[tiab] OR expressway[tiab])))) OR ((vehicle[tiab] OR vehicles[tiab] OR vehicular[tiab] OR auto[tiab] OR automobile[tiab] OR bus[tiab] OR buses[tiab] OR car[tiab] OR truck[tiab] OR trucker[tiab] OR trucks[tiab] OR engine[tiab] OR transport[tiab] OR traffic[tiab]) AND (emissions[tiab] OR exhaust[tiab] OR fume*[tiab]))
Comparator	Measures of effect	“risk”[Mesh] OR “risk”[tiab] OR “risks”[tiab] OR “incidence”[Mesh] OR “incidence”[tiab] OR “incident”[tiab] OR "Prevalence"[Mesh] OR “prevalence”[tiab] OR “prevalent”[tiab] OR "Risk Factors"[Mesh] OR "risk factor"[tiab] OR "Odds Ratio"[Mesh] OR "odds"[tiab] OR “onset”[tiab] OR “associated”[tiab] OR “association”[tiab] OR “cause”[tiab] OR “causes”[tiab] OR “caused”[tiab] OR “develop”[tiab] OR “developed”[tiab] OR “prevent”[tiab] OR “prevents”[tiab] OR “prevented”[tiab] OR “increase”[tiab] OR “increased”[tiab] OR “increases”[tiab] OR “effect”[tiab] OR “effects”[tiab] OR “affect”[tiab] OR “affects”[tiab] OR “affected”[tiab] OR “protective”[tiab] OR “protect”[tiab] OR “protected”[tiab] OR “harm”[tiab] OR “harms”[tiab] OR “harmed”[tiab] OR “harmful”[tiab] OR “hazard”[tiab] OR “hazardous”[tiab] OR "Proportional Hazards Models"[Mesh] OR "proportional hazard"[tiab]
Outcome	Mortality	("Mortality"[Mesh] OR "mortality"[MeSH Subheading] OR "Cardiovascular Diseases/mortality"[Mesh] OR "Myocardial Ischemia/mortality"[Mesh] OR "Respiratory Tract Diseases/mortality"[Mesh] OR "Respiratory Tract Infections/mortality"[Mesh] OR "Respiration Disorders/mortality"[Mesh] OR "Lung Neoplasms/mortality"[Mesh] OR "Pulmonary Disease, Chronic Obstructive/mortality"[Mesh]) OR (("cause–specific"[tiab] OR "all–cause"[tiab] OR "non–accidental"[tiab] OR "natural"[tiab] OR "natural–cause"[tiab] OR "cardiovascular"[tiab] OR "respiratory"[tiab] OR "cardiorespiratory"[tiab] OR "cardio

		respiratory"[tiab] OR "lung cancer"[tiab] OR "COPD"[tiab]) AND (mortality[tiab] OR death[tiab] OR "deadly"[tiab] OR died[tiab] OR fatal*[tiab] OR surviv*[tiab])) OR ("mortality"[tiab] OR "death"[tiab])
Study	Filters	NOT (((((("shortterm"[ti] OR "short–term"[ti] OR “time series”[ti] OR time–series[ti]) AND (("shortterm"[ti] OR "short–term"[ti] OR “time series”[ti] OR time–series[ti]) NOT ("longterm"[tiab] OR "long term"[tiab] OR "medium term"[tiab] OR "intermediate term"[tiab] OR “chronic”[tiab]))))) OR ("Clinical Trial"[Publication Type] OR "Treatment Outcome"[MeSH] OR "Cross–Over Studies"[Mesh] OR "case cross over"[tiab])) OR ("Air Pollutants, Occupational"[Mesh] OR "Accidents, Traffic"[Mesh] OR "Protective Devices"[Mesh])) OR (mouse[Title/Abstract] OR mice[Title/Abstract] OR rat[Title/Abstract] OR rats[Title/Abstract]) AND English[Language] AND ("1980/01/01"[Date[a] – Publication] : "3000"[Date[a] – Publication])
	LUDOK[b]	(Sterblichkeit[methods] AND 7L) OR (road[title] AND 7L) OR (traffic[title] AND 7L) OR (schwangerschaft[title] AND 7L) OR (geburt[methods] AND 7L) OR (arteriosklerose[methods] AND 7L) OR (diabetes[methods] AND 7L) OR (leukämie[methods] AND 7L) OR (4O AND 7L) OR (4I AND 7L)

[a] Pubmed was searched on Feb 12, 2019 (11,461 records identified) and updated on July 31, 2019 (657 additional records).

[b] Ludok was searched on October, 21 2019 (3,935 records). 7L is the code for long-term studies, 4O code for outcomes related to pregnancy and prenatal development, 4I outcomes related to outcomes regarding neurocognitive outcomes, 4B = lung function, 4E = acute respiratory outcomes, 4H = cardiovascular outcomes like stroke, blood pressure, 4F = chronic respiratory outcomes, [] indicates the field of searched in the database. the [methods]-field is where LUDOK saves the keywords.

Appendix Table 3. List of excluded mortality studies with reason (N = 119).

	Reference	**Exclusion rationale**
1.	Abbey, 1993, Chronic disease associated with long-term concentrations of nitrogen dioxide	No quantitative measure of association
2.	Abbey, 1995, Long-term ambient concentrations of particulates and oxidants and development of chronic disease in a cohort of nonsmoking California residents	PM monitoring or satellite data
3.	Abbey, 1999, Long-term inhalable particles and other air pollutants related to mortality in nonsmokers	Spatial scale
4.	Andersen, 2015, A study of the combined effects of physical activity and air pollution on mortality in elderly urban residents: The Danish Diet, Cancer, and Health cohort	No quantitative measure of association
5.	Bateson, 2004, Who is sensitive to the effects of particulate air pollution on mortality? A case-crossover analysis of effect modifiers	Study design
6.	Baxter, 2013, Examining the effects of air pollution composition on within region differences in $PM_{2.5}$ mortality risk estimates	Review, methodological, HIA, or similar paper (no primary data)
7.	Bentayeb, 2015, Association between long-term exposure to air pollution and mortality in France: A 25-year follow-up study	Nationwide/statewide study with no or insufficient area-specific adjustments
8.	Beverland, 2012, A comparison of short-term and long-term air pollution exposure associations with mortality in two cohorts in Scotland	Review, methodological, HIA, or similar paper (no primary data)
9.	Bidoli, 2016, Residential proximity to major roadways and lung cancer mortality. Italy, 1990-2010: An observational study	Study design
10.	Blount, 2017, Traffic-related air pollution and all-cause mortality during tuberculosis treatment in California	Very selective subgroup
11.	Burstyn, 2005, Polycyclic aromatic hydrocarbons and fatal ischemic heart disease	Occupational study
12.	Cakmak, 2016, Ozone exposure and cardiovascular-related mortality in the Canadian Census Health and Environment Cohort (CanCHEC) by spatial synoptic classification zone	PM monitoring or satellite data
13.	Cakmak, 2018, Associations between long-term pm and ozone exposure and mortality in the Canadian Census Health and Environment Cohort (CanCHEC), by spatial synoptic classification zone	Spatial scale
14.	Cao, 2011, Association between long-term exposure to outdoor air pollution and mortality in China: A cohort study	Spatial scale
15.	Cesaroni, 2012, Nitrogen dioxide levels estimated from land use regression models several years apart and association with mortality in a large cohort study	Review, methodological, HIA, or similar paper (no primary data)
16.	Chen, 2005, The association between fatal coronary heart disease and ambient particulate air pollution: Are females at greater risk?	Spatial scale
17.	Chen, 2016, Ambient fine particulate matter and mortality among survivors of myocardial infarction: Population-based cohort study	PM monitoring or satellite data

	Reference	Exclusion rationale
18.	Chen, 2019, Long-term exposure to air pollution and survival after ischemic stroke	Spatial scale
19.	Cohen, 2017, Long-term exposure to traffic-related air pollution and cancer among survivors of myocardial infarction: A 20-year follow-up study	Health outcome
20.	Crouse, 2015, Ambient $PM_{2.5}$, O_3, and NO_2 exposures and associations with mortality over 16 years of follow-up in the Canadian Census Health and Environment Cohort (CanCHEC)	Nationwide/statewide study with no or insufficient area-specific adjustments
21.	Crouse, 2016, A new method to jointly estimate the mortality risk of long-term exposure to fine particulate matter and its components	Review, methodological, HIA, or similar paper (no primary data)
22.	Crouse, 2019, Complex relationships between greenness, air pollution, and mortality in a population-based Canadian cohort.	PM monitoring or satellite data
23.	Dehbi, 2017, Air pollution and cardiovascular mortality with over 25 years follow-up: a combined analysis of two British cohorts	Nationwide/statewide study with no or insufficient area-specific adjustments
24.	Di, 2017, Air pollution and mortality in the Medicare population	Spatial scale
25.	Dockery, 1993, An association between air pollution and mortality in six US cities	No within-area or spatial contrast exploited
26.	Domínguez-Berjón, 2016, Lung cancer and urbanization level in a region of Southern Europe: Influence of socio-economic and environmental factors	Study design
27.	Dominici, 2005, Revised analyses of the National Morbidity, Mortality, and Air Pollution Study: Mortality among residents of 90 cities	Study design
28.	Dong, 2012, Long-term exposure to ambient air pollution and respiratory disease mortality in Shenyang, China: A 12-year population-based retrospective cohort study	No within-area or spatial contrast exploited
29.	Eckel, 2016, Air pollution affects lung cancer survival	Very selective subgroup
30.	Elliott, 2007, Long-term associations of outdoor air pollution with mortality in Great Britain	Study design
31.	Eum, 2019, Long-term NO exposures and cause-specific mortality in American older adults.	Spatial scale
32.	Filleul, 2005, Twenty five year mortality and air pollution: Results from the French PAARC survey	Nationwide/statewide study with no or insufficient area-specific adjustments
33.	Fischer, 2015, Air pollution and mortality in seven million adults: The Dutch Environmental Longitudinal Study (DUELS)	Nationwide/statewide study with no or insufficient area-specific adjustments
34.	Garcia, 2016, Association of long-term $PM_{2.5}$ exposure with mortality using different air pollution exposure models: impacts in rural and urban California	PM monitoring or satellite data
35.	Greven, 2011, An approach to the estimation of chronic air pollution effects using spatio-temporal information	Review, methodological, HIA, or similar paper (no primary data)
36.	Habermann, 2012, Motor vehicle traffic and cardiovascular mortality in male adults	Spatial scale

	Reference	Exclusion rationale
37.	Hales, 2012, Air pollution and mortality in New Zealand: Cohort study	Nationwide/statewide study with no or insufficient area-specific adjustments
38.	Halonen, 2015, Road traffic noise is associated with increased cardiovascular morbidity and mortality and all-cause mortality in London	No quantitative measure of association
39.	Halonen, 2016, Is long-term exposure to traffic pollution associated with mortality? A small-area study in London	Study design
40.	Hart, 2011, Long-term ambient multipollutant exposures and mortality	Nationwide/statewide study with no or insufficient area-specific adjustments
41.	Hart, 2015, The association of long-term exposure to $PM_{2.5}$ on all-cause mortality in the Nurses' Health Study and the impact of measurement-error correction	Nationwide/statewide study with no or insufficient area-specific adjustments
42.	Hartiala, 2016, Ambient air pollution is associated with the severity of coronary atherosclerosis and incident myocardial infarction in patients undergoing elective cardiac evaluation	Spatial scale
43.	Hayes, 2019, $PM_{2.5}$ air pollution and cause-specific cardiovascular disease mortality	Nationwide/statewide study with no or insufficient area-specific adjustments
44.	Héritier, 2018, A systematic analysis of mutual effects of transportation noise and air pollution exposure on myocardial infarction mortality: A nationwide cohort study in Switzerland	Nationwide/statewide study with no or insufficient area-specific adjustments
45.	Hoek, 2002, Association between mortality and indicators of traffic-related air pollution in the Netherlands: A cohort study	Pilot study; complete results in Beelen, 2008
46.	Iwai, 2005, Correlation between suspended particles in the environmental air and causes of disease among inhabitants: cross-sectional studies using the vital statistics and air pollution data in Japan	No within-area or spatial contrast exploited
47.	Jerrett, 2005, Spatial analysis of air pollution and mortality in Los Angeles	Spatial scale
48.	Jerrett, 2009, Long-term ozone exposure and mortality	No within-area or spatial contrast exploited
49.	Jerrett, 2013, Spatial analysis of air pollution and mortality in California	Nationwide/statewide study with no or insufficient area-specific adjustments
50.	Katanoda, 2011, An association between long-term exposure to ambient air pollution and mortality from lung cancer and respiratory diseases in Japan	No within-area or spatial contrast exploited
51.	Kim, 2017, Association between long-term exposure to particulate matter air pollution and mortality in a South Korean national cohort: comparison across different exposure assessment approaches	Nationwide/statewide study with no or insufficient area-specific adjustments
52.	Kim, 2017, Cardiovascular effects of long-term exposure to air pollution: A population-based study with 900,845 person-years of follow-up	Analytical error

	Reference	Exclusion rationale
53.	Knox, 1997, Hazard proximities of childhood cancers in Great Britain from 1953-80	Study design
54.	Li, 2018, All-cause mortality risk associated with long-term exposure to ambient PM in China: A cohort study.	PM monitoring or satellite data
55.	Liang, 2018, Satellite-based short- and long-term exposure to pm and adult mortality in urban Beijing, China	PM monitoring or satellite data
56.	Lim, 2018, Association between long-term exposure to ambient air pollution and diabetes mortality in the US	Nationwide/statewide study with no or insufficient area-specific adjustments
57.	Lim, 2019, Long-term exposure to ozone and cause-specific mortality risk in the US	Nationwide/statewide study with no or insufficient area-specific adjustments
58.	Lim, 2019, Mediterranean diet and the association between air pollution and cardiovascular disease mortality risk	Nationwide/statewide study with no or insufficient area-specific adjustments
59.	Lipfert, 2002, Temporal and spatial relations between age specific mortality and ambient air quality in the United States: regression results for counties, 1960-97	Study design
60.	Lipfert, 2006, $PM_{2.5}$ constituents and related air quality variables as predictors of survival in a cohort of US military veterans	Nationwide/statewide study with no or insufficient area-specific adjustments
61.	Lipfert, 2006, Traffic density as a surrogate measure of environmental exposures in studies of air pollution health effects: long-term mortality in a cohort of US veterans	Spatial scale
62.	Lipfert, 2008, Vehicular traffic effects on survival within the Washington university-EPRI veterans cohort: New estimates and sensitivity studies	Spatial scale
63.	Lipfert, 2009, Air pollution and survival within the Washington university-EPRI veterans cohort: Risks based on modeled estimates of ambient levels of hazardous and criteria air pollutants	Spatial scale
64.	Lipsett, 2011, Long-term exposure to air pollution and cardiorespiratory disease in the California Teachers Study cohort	Nationwide/statewide study with no or insufficient area-specific adjustments
65.	Liu, 2008, Ambient exposure to criteria air pollutants and female lung cancer in Taiwan	Spatial scale
66.	Loop, 2018, Fine particulate matter and incident coronary heart disease in the REGARDS cohort	Spatial scale
67.	Maheswaran, 2003, Stroke mortality associated with living near main roads in England and Wales: A geographical study	Study design
68.	Maheswaran, 2006, Outdoor NO_x and stroke mortality: adjusting for small area level smoking prevalence using a Bayesian approach	Study design
69.	Makar, 2017, Estimating the causal effect of low levels of fine particulate matter on death and hospitalization: are levels below the safety standards harmful?	Nationwide/statewide study with no or insufficient area-specific adjustments

	Reference	Exclusion rationale
70.	Malik, 2019, Association of long-term exposure to particulate matter and ozone with health status and mortality in patients after myocardial infarction.	Nationwide/statewide study with no or insufficient area-specific adjustments
71.	McDonnell, 2000, Relationships of mortality with the fine and coarse fractions of long-term ambient PM_{10} concentrations in nonsmokers	Spatial scale
72.	Miller, 2007, Long-term exposure to air pollution and incidence of cardiovascular events in women	PM monitoring or satellite data
73.	Nawrot, 2011, The impact of traffic air pollution on bronchiolitis obliterans syndrome and mortality after lung transplantation	Very selective subgroup
74.	Pinault, 2016, Risk estimates of mortality attributed to low concentrations of ambient fine particulate matter in the Canadian Community Health Survey cohort	PM monitoring or satellite data
75.	Pinault, 2017, Associations between fine particulate matter and mortality in the 2001 Canadian Census Health and Environment Cohort	PM monitoring or satellite data
76.	Pinault, 2018, Diabetes status and susceptibility to the effects of $PM_{2.5}$ exposure on cardiovascular mortality in a National Canadian Cohort	PM monitoring or satellite data
77.	Pope, 2002, Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution	No within-area or spatial contrast exploited
78.	Pope, 2009, Cardiovascular mortality and exposure to airborne fine particulate matter and cigarette smoke: Shape of the exposure-response relationship	PM monitoring or satellite data
79.	Pope, 2015, Relationships between fine particulate air pollution, cardiometabolic disorders, and cardiovascular mortality	Nationwide/statewide study with no or insufficient area-specific adjustments
80.	Pope, 2019, Mortality risk and fine particulate air pollution in a large, representative cohort of US adults	PM monitoring or satellite data
81.	Puett, 2009, Chronic fine and coarse particulate exposure, mortality, and coronary heart disease in the Nurses' Health Study	Nationwide/statewide study with no or insufficient area-specific adjustments
82.	Puett, 2011, Particulate matter exposures, mortality, and cardiovascular disease in the Health Professionals follow-up study	Nationwide/statewide study with no or insufficient area-specific adjustments
83.	Pun, 2017, Long-term $PM_{2.5}$ exposure and respiratory, cancer, and cardiovascular mortality in older US adults	PM monitoring or satellite data
84.	Ribeiro, 2018, Incidence and mortality risk for respiratory tract cancer in the city of São Paulo, Brazil: Bayesian analysis of the association with traffic density	Study design
85.	Ribeiro, 2019, Incidence and mortality for respiratory cancer and traffic-related air pollution in São Paulo, Brazil	Study design
86.	Rodrigues, 2017, Risk factors in cardiovascular disease mortality associated with high exposure to vehicular traffic	Study design

	Reference	Exclusion rationale
87.	Ruttens, 2017, An association of particulate air pollution and traffic exposure with mortality after lung transplantation in Europe	Very selective subgroup
88.	Samoli, 2003, Investigating the dose-response relation between air pollution and total mortality in the APHEA-2 multicity project	Study design
89.	Samoli, 2005, Estimating the exposure-response relationships between particulate matter and mortality within the APHEA multicity project	Study design
90.	Sanyal, 2018, Long-term effect of outdoor air pollution on mortality and morbidity: A 12-year follow-up study for metropolitan France.	Study design
91.	Schwartz, 2018, Estimating the effects of PM on life expectancy using causal modeling methods	Spatial scale
92.	Scoggins, 2004, Spatial analysis of annual air pollution exposure and mortality	Study design
93.	Silveira, 2018, Green spaces and mortality due to cardiovascular diseases in the city of Rio de Janeiro	Study design
94.	Son, 2011, Survival analysis of long-term exposure to different sizes of airborne particulate matter and risk of infant mortality using a birth cohort in Seoul, Korea	PM monitoring or satellite data
95.	Strak, 2017, Long-term exposure to particulate matter, NO_2 and the oxidative potential of particulates and diabetes prevalence in a large national health survey	Nationwide/statewide study with no or insufficient area-specific adjustments
96.	Sunyer, 2001, Particles, and not gases, are associated with the risk of death in patients with chronic obstructive pulmonary disease	Study design
97.	Theophanides, 2007, Mortality and pollution in several Greek cities	Study design
98.	Thurston, 2016, Ambient particulate matter air pollution exposure and mortality in the NIH-AARP Diet and Health Cohort	Spatial scale
99.	Thurston, 2016, Ischemic heart disease mortality and long-term exposure to source-related components of US fine particle air pollution	Spatial scale
100.	Tonne, 2008, Air pollution and mortality benefits of the London congestion charge: Spatial and socioeconomic inequalities	Review, methodological, HIA, or similar paper (no primary data)
101.	Tran, 2018, Impact of air pollution on cause-specific mortality in Korea: results from Bayesian model averaging and principal component regression approaches	No quantitative measure of association
102.	Turner, 2014, Interactions between cigarette smoking and fine particulate matter in the Risk of Lung Cancer Mortality in Cancer Prevention Study II	Nationwide/statewide study with no or insufficient area-specific adjustments
103.	Turner, 2016, Long-term ozone exposure and mortality in a large prospective study	Nationwide/statewide study with no or insufficient area-specific adjustments
104.	Turner, 2017, Interactions between cigarette smoking and ambient PM for cardiovascular mortality	Spatial scale

	Reference	Exclusion rationale
105.	Vandentorren, 2003, Long-term mortality among adults with or without asthma in the PAARC study	No relevant exposure metric
106.	Vanos, 2013, Synoptic weather typing applied to air pollution mortality among the elderly in 10 Canadian cities	Study design
107.	Villeneuve, 2015, Long-term exposure to fine particulate matter air pollution and mortality among Canadian women	Spatial scale
108.	Vineis, 2007, Lung cancers attributable to environmental tobacco smoke and air pollution in non-smokers in different European countries: A prospective study	Health outcome
109.	Wang, 2009, Long-term exposure to gaseous air pollutants and cardio-respiratory mortality in Brisbane, Australia	Study design
110.	Weichenthal, 2016, Oxidative burden of fine particulate air pollution and risk of cause-specific mortality in the Canadian Census Health and Environment Cohort (CanCHEC)	PM monitoring or satellite data
111.	Weichenthal, 2017, Impact of oxidant gases on the relationship between outdoor fine particulate air pollution and nonaccidental, cardiovascular, and respiratory mortality	Nationwide/statewide study with no or insufficient area-specific adjustments
112.	Wen, 2012, Air pollution shortens life expectancy and health expectancy for older adults: The case of China	No relevant exposure metric
113.	Wong, 2015, Satellite-based estimates of long-term exposure to fine particles and association with mortality in elderly Hong Kong residents	PM monitoring or satellite data
114.	Wong, 2016, Cancer mortality risks from long-term exposure to ambient fine particle	PM monitoring or satellite data
115.	Woodruff, 2006, Fine particulate matter ($PM_{2.5}$) air pollution and selected causes of postneonatal infant mortality in California	PM monitoring or satellite data
116.	Woodruff, 2008, Air pollution and postneonatal infant mortality in the United States, 1999-2002	Spatial scale
117.	Xu, 2013, Health effects of air pollution on length of respiratory cancer survival	PM monitoring or satellite data
118.	Zhang, 2011, Long-term exposure to ambient air pollution and mortality due to cardiovascular disease and cerebrovascular disease in Shenyang, China	Analytical error
119.	Zúñiga, 2016, Assessment of the possible association of air pollutants PM_{10}, O_3, NO_2 with an increase in cardiovascular, respiratory, and diabetes mortality in Panama City: A 2003 to 2013 data analysis	No within-area or spatial contrast exploited

Appendix Table 4. Evaluation of impact of extracted effect estimate for NO_2, $PM_{2.5}$, and EC[a.]

	Extracted effect estimate	**Authors-favored estimate**	**Fuly adjusted estimate**	**Reason for deviation or comment**	**Increment**
NO_2					
Beelen 2014	1.01 (0.99, 1.03)	Same	Same		10 μg/m^3
Beelen 2008	1.08 (1.00, 1.16)	Same	Same		30 μg/m^3
Carey 2013	1.02 (1.00, 1.04)	1.03 (1.00, 1.05)	1.03 (1.00, 1.05)	All adjusted for age, sex, smoking, BMI, income, but we prefered the estimate with an area correction (Table E7). Also RRs reported for different SES indicators corrections instead of income (no area level correction): Employment: 1.04 (1.01, 1.07) Education: 1.06 (1.03, 1.08) Those estimates are slighly larger than the one we extracted.	10.7 μg/m^3
Cesaroni 2013	1.03 (1.02, 1.03)	Same	Same		10 μg/m^3
Crouse 2015	1.05 (1.04, 1.07)	1.05 (1.03, 1.07)	1.05 (1.03, 1.07)	All adjusted for individual and contextual covariates with city as a radom effect, indirectly adjusting for smoking and BMI, but we prefered the models particioned into within-city contrast as oposed to the overall contrast.	5 ppb
Dirgawati 2019	1.06 (1.00, 1.13)	Same	Same	RR for average exposure period per protocol. Also RRs reported for baseline 1.06 (1.00, 1.13) and past-year exposure 1.07 (1.01, 1.13).	10 μg/m^3

Hanigan 2019	1.03 (0.98, 1.07)	Same	Same		5 µg/m³
Hvidtfeldt 2019	1.07 (1.04, 1.10)	Same	Same		10 µg/m³
Nieuwenhuijsen 2018	1.01 (1.00, 1.02)	Same	Same		5 µg/m³
Yang 2018	1.00 (0.97, 1.03)	Same	Same		25.6 µg/m³
Yorifuji 2013	1.12 (1.07, 1.18)	Same	Same		10 µg/m³
EC					
Beelen 2014	1.02 (0.97, 1.07)	Same	Same		1 $1x10^{-5}$/m
Beelen 2008	1.05 (1.00, 1.11)	Same	Same		10 µg/m³
Dirgawati 2019	1.12 (1.02, 1.22)	Same	Same	RR for average exposure period per protocol. Also RRs reported for baseline 1.12 (1.02, 1.23) and past-year exposure 1.14 (1.03, 1.24).	1 $1x10^{-5}$/m
Hansell 2016	1.02 (1.01, 1.04)	Same	Same	RR for 1971 baseline exposure, and for most recent outcome data (2002-2009). We picked the most recent years because we also extracted the PM_{10} estimate, which was only available for 2002-2009. Also RRs reported for other years: 1972-2009: 1.03 (1.02, 1.05) 1972-1981: 1.05 (1.02, 1.08) 1982-1991: 1.03 (1.01, 1.06) 1992-2001: 1.04 (1.02, 1.05) Those estimates are slighly larger than the one we extracted. Also effect estimates are reported for more recent exposures (1981 and 1991). Those were also larger than what we extracted.	10 µg/m³

Hvidtfeldt 2019	1.09 (1.04, 1.15)	Same	Same		1 µg/m^3
Nieuwenhuijsen 2018	1.02 (1.00, 1.05)	Same	Same		1 1x10^{-5}/m
Yang 2018	1.03 (1.00, 1.05)	Same	Same		9.6 µg/m^3
Badaloni 2017	1.03 (1.01, 1.05)	Same	Same		1.5 1x10^{-5}/m
Yap 2012, Renfrew/Paisley	1.08 (1.02, 1.15)	1.10 (1.04, 1.17)	1.08 (1.02, 1.15)	RRs from the most detailed exposure model (MultiBS). All estimates were corrected for marital status, body mass index, smoking, cholesterol, systolic blood pressure, and social class. We extracted th efully adjusted model, which was additionally adjusted for area-level deprivation category.	10 µg/m^3
Yap 2012. Collaborative cohorts	1.01 (0.95, 1.06)	1.01 (0.96, 1.05)	1.01 (0.95, 1.06)	RRs from the most detailed exposure model (MultiBS). All estimates were corrected for marital status, body mass index, smoking, cholesterol, systolic blood pressure, and social class. We extracted th efully adjusted model, which was additionally adjusted for area-level deprivation category.	10 µg/m^3
Ostro 2015	1.00 (0.97, 1.04)	Same	Same		0.8 µg/m^3
$PM_{2.5}$					
Badaloni 2017	1.03 (1.01, 1.05)	Same	Same		6.6 µg/m^3
Beelen 2014	1.07 (1.02, 1.13)	Same	Same		5 µg/m^3
Beelen 2008	1.06 (0.97, 1.16)	Same	Same		10 µg/m^3

Carey 2013	1.00 (0.98, 1.02)	1.02 (1.00, 1.05)	1.02 (1.00, 1.05)	All adjusted for age, sex, smoking, BMI, income, but we prefered the estimate with an area correction (Table E7). Also RRs reported for different SES indicators corrections instead of income (no area level correction): Employment: 1.04 (1.02, 1.07) Education: 1.04 (1.02, 1.06) Those estimates are larger than the one we extracted.	1.9 μg/m^3
Dirgawati 2019	1.07 (0.98, 1.16)	Same	Same	RR for average exposure period per protocol. Also RRs reported for baseline 1.06 (0.98, 1.15) and past-year exposure 1.06 (0.98, 1.16).	5 μg/m^3
Hanigan 2019	1.05 (0.98, 1.12)	Same	Same		1 μg/m^3
Hvidtfeldt 2019	1.13 (1.05, 1.21)	Same	Same		5 μg/m^3
Krewski 2009, LA	1.14 (1.03, 1.27)	Same	1.12 (1.003, 1.239)	We extracted the estimate corrected for 44 individual-level covariates. The fully adjusted model additionally corrected for 4 ecologic covariates (Table 23).	10 μg/m^3
Krewski 2009, NYC	0.98 (0.95, 1.02)	Same	0.98 (0.93, 1.03)	We extracted the estimate corrected for 44 individual-level covariates. The fully adjusted model additionally corrected for 7 ecologic covariates (Table 15).	1.5 μg/m^3
Nieuwenhuijsen 2018	1.03 (0.99, 1.06)	Same	Same		5 μg/m^3
Ostro 2015	1.01 (0.98, 1.05)	Same	Same		9.6 μg/m^3
Yang 2018	1.03 (1.01, 1.06)	Same	Same		5.5 μg/m^3

[a] It was not feasible to go back to all individual papers and extract multiple effect estimates from studies. We went back to all individual papers on NO_2, $PM_{2.5}$ and EC and assessed the robustness of the effect estimates. We noted that in virtually all cases the extracted effect estimate was the same as the fully adjusted effect estimate.

For NO_2 in two of the 11 studies the extracted effect estimate differed from the fully adjusted model because we required an additional area adjustment for traffic-specificity reasons. In one study, the extracted effect estimate was slightly lower (Carey et al. 2013) and the other study was the same than the authors-favoured estimate, albeit with a slightly different CI) (Crouse et al. 2015).

For EC, the only difference was in the Yap et al. 2012 study, where we extracted the slightly lower fully adjusted estimate rather than the authors-favored estimate. For $PM_{2.5}$, we extracted a null finding instead of the positive authors-favored estimate because we required an additional area adjustment for traffic-specificity reasons (Carey et al. 2013). Furthermore, we selected the slightly higher estimate for Krewski et al. 2009 in the LA population.

We also did not find evidence that authors reported the highest effect estimates in their abstract. Mostly they reported the fully adjusted ones. In some studies, multiple exposure periods were evaluated (e.g., Hansell et al. 2016, Dirgawati et al. 2019). In these instances the lowest effect estimate was actually extracted because they reflected the most recent outcome data, for which years also pollutant data was available (Hansell et al. 2016) or the average exposure (Dirgawati et al. 2019).

Appendix Table 5. Noise-adjusted analyses of non-accidental mortality.

Reference	Study Name	Pollutant	Increment	Single pollutant	Noise-adjusted
Hvidtfeldt 2019	DDCH	NO_2	10 μg/m^3	1.07 (1.04, 1.10)	1.05 (1.01, 1.09)
		BC	1 μg/m^3	1.09 (1.04, 1.15)	1.04 (0.98, 1.11)
		PM_{10}	10 μg/m^3	1.12 (1.03, 1.22)	1.03 (0.94, 1.14)
		$PM_{2.5}$	5 μg/m^3	1.13 (1.05, 1.21)	1.06 (0.98, 1.15)
Nieuwenhuijsen 2018	Barcelona Mega Cohort	NO_2	5 μg/m^3	1.01 (1.00, 1.02)	1.01 (1.00, 1.02)
		$PM_{2.5\ abs}$	1 1x10^{-5}/m	1.02 (1.00, 1.05)	1.03 (1.00, 1.06)
		$PM_{2.5}$	5 μg/m^3	1.03 (0.99, 1.06)	1.03 (0.99, 1.06)
Raaschou-Nielsen 2012	DDCH	NO_2	1 μg/m^3	1.08 (0.98, 1.18)	1.08 (0.98, 1.18)
		Density	1 vehicle-km/day	1.01 (0.99, 1.03)	1.01 (0.99, 1.03)
		Distance	<50 vs. >50 m	0.94 (0.85, 1.05)	0.94 (0.85, 1.05)
Tonne 2016[a]	London MI Cohort	NO_2	8 μg/m^3	1.04 (0.99, 1.10)	1.04 (0.97, 1.10)
		NO_x	19.2 μg/m^3	1.03 (0.98, 1.08)	1.02 (0.97, 1.08)
		traffic $PM_{2.5}$	0.3 μg/m^3	1.02 (0.98, 1.07)	1.02 (0.97, 1.06)
		nontailpipe $PM_{2.5}$	0.3 μg/m^3	1.04 (1.00, 1.09)	1.04 (0.99, 1.09)

[a] Indicates a patient population.

Appendix Tabe 6. Risk of bias assessment for studies included in meta-analysis: non-accidental mortality.

Reference[a]	Study Name	Pollutants in meta-analysis	Confounding	Selection Bias	Exposure Assessment	Outcome Measurement	Missing Data	Selective Reporting
Badaloni 2017	Rome Longitudinal	$PM_{2.5\ abs}$, PM_{10}, $PM_{2.5}$, Cu, Fe	High	Low	Mod	Low	Low	Low
Bauleo 2019	Civitavecchia Study	NO_x	High	Low	Mod	Low	Low	Low
Beelen 2008	NLCS-AIR	NO_2, BC, $PM_{2.5}$	Mod	Low	Mod	Low	Low	Low
Beelen 2014	ESCAPE	NO_2, NO_x, $PM_{2.5\ abs}$, PM_{10}, $PM_{2.5}$	Low	Low	Mod	Low	Low	Low
Beelen 2015	ESCAPE	Cu, Fe	Low	Low	Mod	Low	Low	Low
Carey 2013	English National Cohort	NO_2, PM_{10}, $PM_{2.5}$	Mod	Mod	Low	Low	Low	Low
Cesaroni 2013	Rome Longitudinal	NO_2	High	Low	Low	Low	Low	Low
Crouse 2015	1991 CanCHEC	NO_2	Mod	Low	Mod	Low	Low	Low
Dirgawati 2019	HIMS	NO_2, NO_x, $PM_{2.5\ abs}$, $PM_{2.5}$	Low	Low	Mod	Low	Low	Low
Hanigan 2019	45 and Up Study	NO_2, $PM_{2.5}$	Low	Low	Mod	Low	Low	Low
Hansell 2016	ONS-Longitudinal	BS, PM_{10}	High	Low	Low	Low	High	Low
Hvidtfeldt 2019	DDCH	NO_2, BC, PM_{10}, $PM_{2.5}$	Low	Low	Low	Low	Low	Low
Krewski 2009	ACS-CPS II LA	$PM_{2.5}$	Low	Low	Mod	Low	Low	Low
	ACS-CPS II NYC	$PM_{2.5}$	Low	Low	Mod	Low	Low	Low
Nafstad 2004	Oslo men's cohort	NO_x	Mod	Low	Low	Low	Low	Low
Nieuwenhuijsen 2018	Barcelona Mega Cohort	NO_2, $PM_{2.5\ abs}$, PM_{10}, $PM_{2.5}$	High	Low	Low	Low	Low	Low
Ostro 2015	California Teachers Study	EC, $PM_{2.5}$, Cu, Fe	Low	Low	Low	Low	Low	Low
Stockfelt 2015	PPS	NO_x	Low	Low	Low	Low	Low	Low
Yang 2018	Hong Kong Elderly	NO_2, BC, $PM_{2.5}$	Low	Mod	Mod	Low	Low	Low
Yap 2012	Renfrew/Paisley	BS	Low	Low	High	Low	Low	Low
	Collaborative cohorts	BS	Low	Low	High	Low	Low	Low
Yorifuji 2013	Shizuoka Elderly	NO_2	Low	High	Low	Low	High	Low

Mod = moderate. [a] References have the same risk of bias ratings for all pollutants within each study.

Appendix Table 7. Risk of bias ratings and rationales for studies included in meta-analysis: non-accidental mortality.

We refer to a seperate Excel spreadsheet.

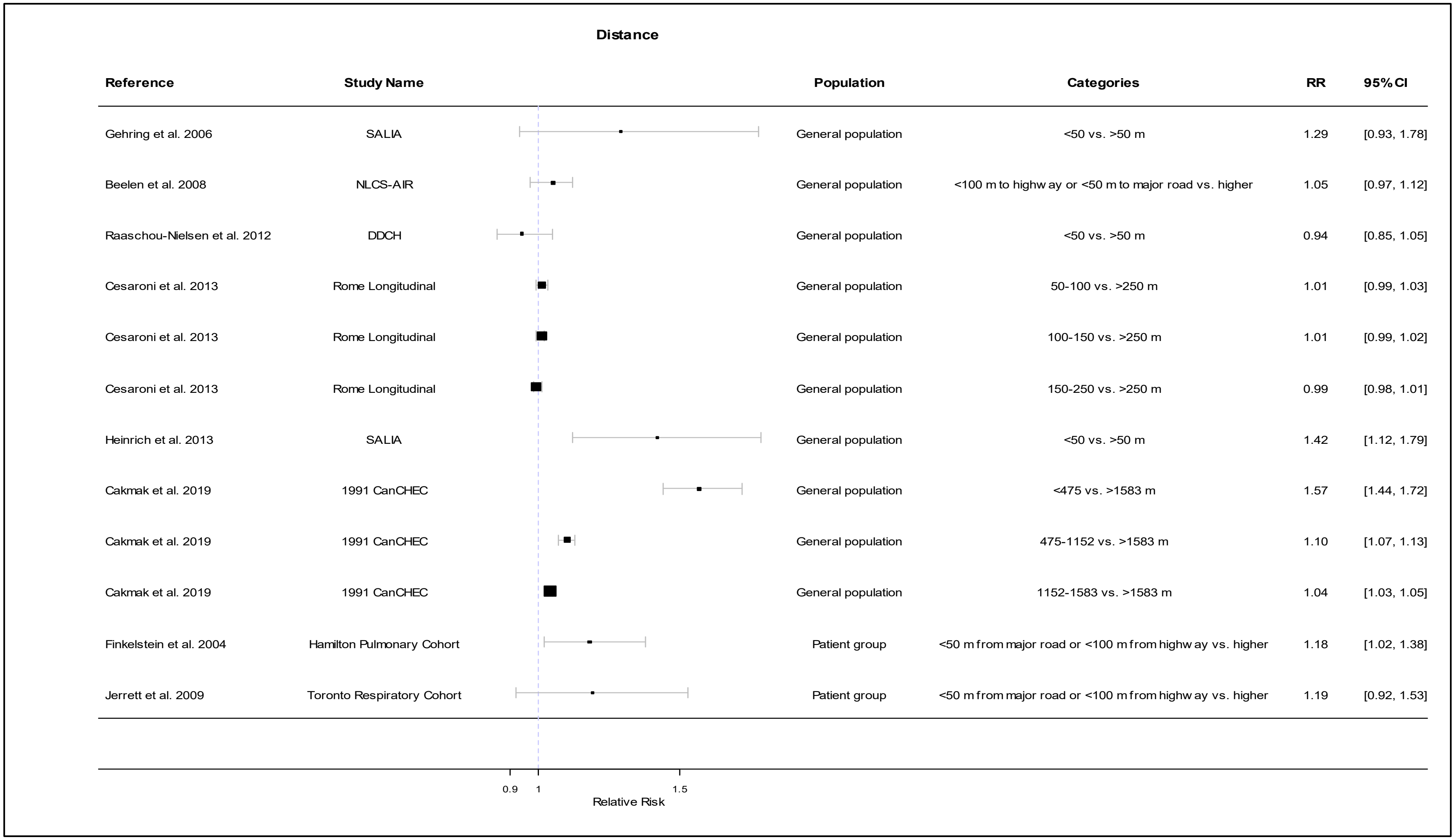
Appendix Table 8. Exposure–response assessment used for upgrading confidence for non-accidental mortality[a]

Reference	**Study Name**	**Pollutants in meta-analysis**	**Non-accidental mortality**
Badaloni 2017	Rome Longitudinal	$PM_{2.5\ abs}$, PM_{10}, $PM_{2.5}$, Cu, Fe	NA
Bauleo 2019	Civitavecchia Study	NO_x	NA
Beelen 2008	NLCS-AIR	NO_2, BC, $PM_{2.5}$	NA
Beelen 2014	ESCAPE	PM_{10}, $PM_{2.5}$, NO_x	+
	ESCAPE	PM_{coarse}, $PM_{2.5\ abs}$, NO_2	0
Beelen 2015	ESCAPE	Cu, Fe	0
Carey 2013	English National Cohort	NO_2, PM_{10}, $PM_{2.5}$	NA
Cesaroni 2013	Rome Longitudinal	NO_2	+
Crouse 2015	1991 CanCHEC	NO_2	+
Dirgawati 2019	HIMS	NO_2, NO_x, $PM_{2.5\ abs}$, $PM_{2.5}$	+
Hanigan 2019	45 and Up Study	NO_2, $PM_{2.5}$	0
Hansell 2016	ONS-Longitudinal	BS	+
	ONS-Longitudinal	PM_{10}	NA
Hvidtfeldt 2019	DDCH	NO_2, BC, PM_{10}, $PM_{2.5}$	+
Krewski 2009	ACS-CPS II LA	$PM_{2.5}$	NA
	ACS-CPS II NYC	$PM_{2.5}$	NA
Nafstad 2004	Oslo men's cohort	NO_x	+
Nieuwenhuijsen 2018	Barcelona Mega Cohort	NO_2, $PM_{2.5\ abs}$, PM_{10}, $PM_{2.5}$	NA
Ostro 2015	California Teachers Study	EC, $PM_{2.5}$, Cu, Fe	NA
Stockfelt 2015	PPS	NO_x	+
Yang 2018	Hong Kong Elderly	BC, $PM_{2.5}$	NA
		NO_2	0
Yap 2012	Renfrew/Paisley	BS	NA
	Collaborative cohorts	BS	
Yorifuji 2013	Shizuoka Elderly	NO_2	NA

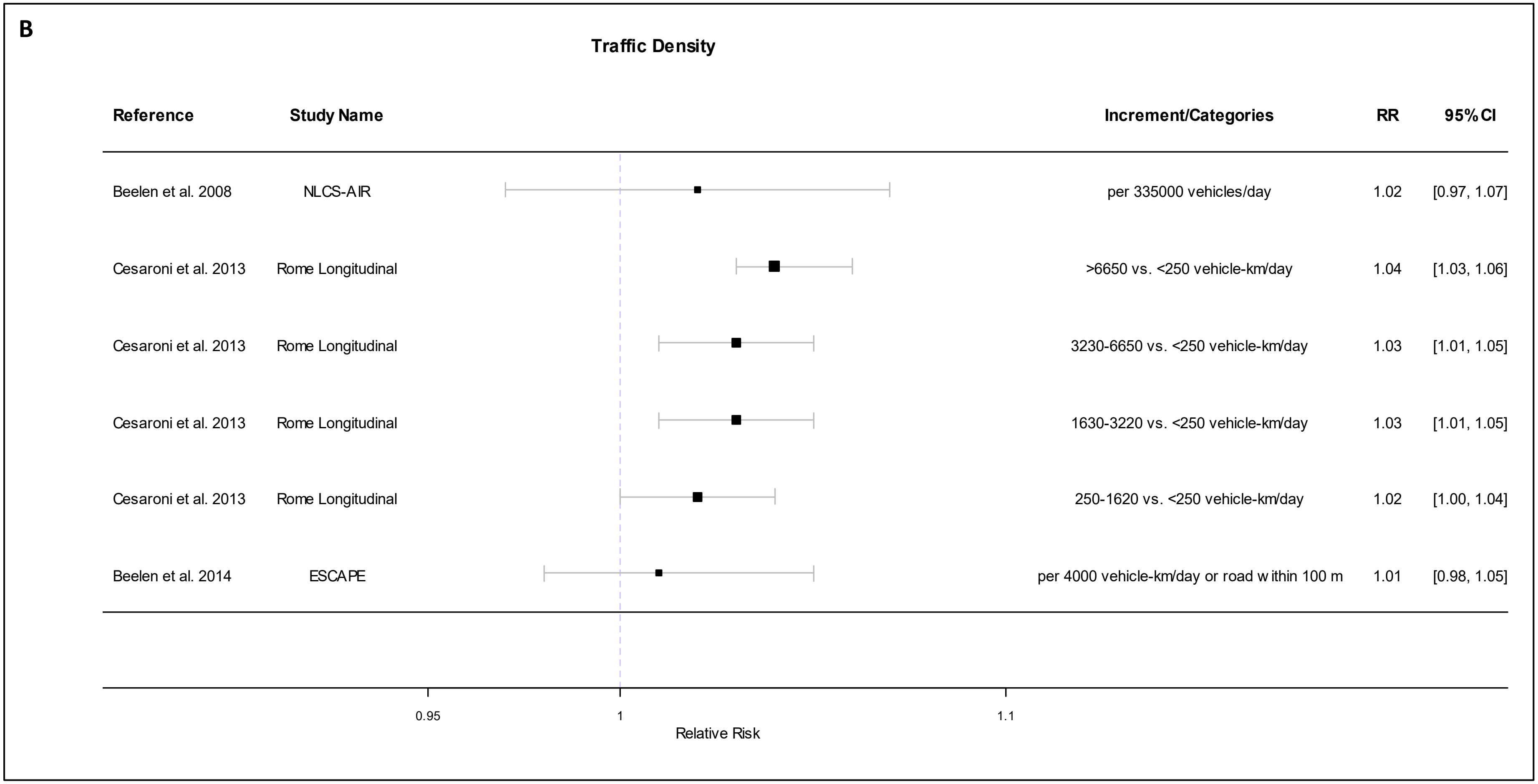
+ indicates evidence of a monotonic exposure–response function; 0 absence of evidence; NA: not available.

[a] The Panel first assessed evidence from nonparametric spline functions, supplemented with a statistical test of deviation from linearity when available. If splines were not presented, the Panel assessed categorial exposure analyses and required a convincing trend, preferably supported by a trend test to support a judgment of a plausible exposure–response function. Finally, the Panel accepted a statement of no deviation from a linear function in the text obtained with an appropriate nonparametric procedure. To avoid upgrading null findings, the Panel only considered *no deviation from linear* as support if the linear association was at least borderline significant.

Appendix Figure 1. Association of distance to major roads (A) and traffic density (B) with non-accidental mortality.

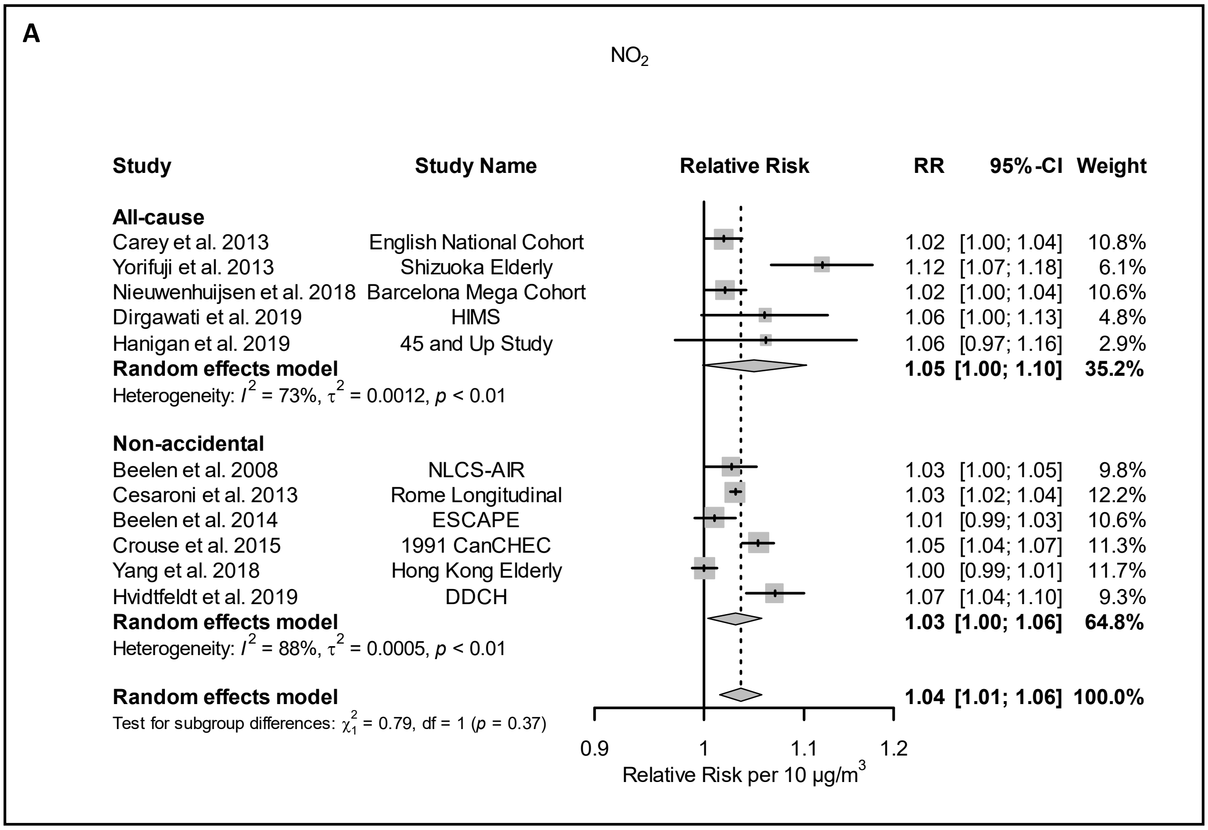


Appendix Figure 1. Continued.

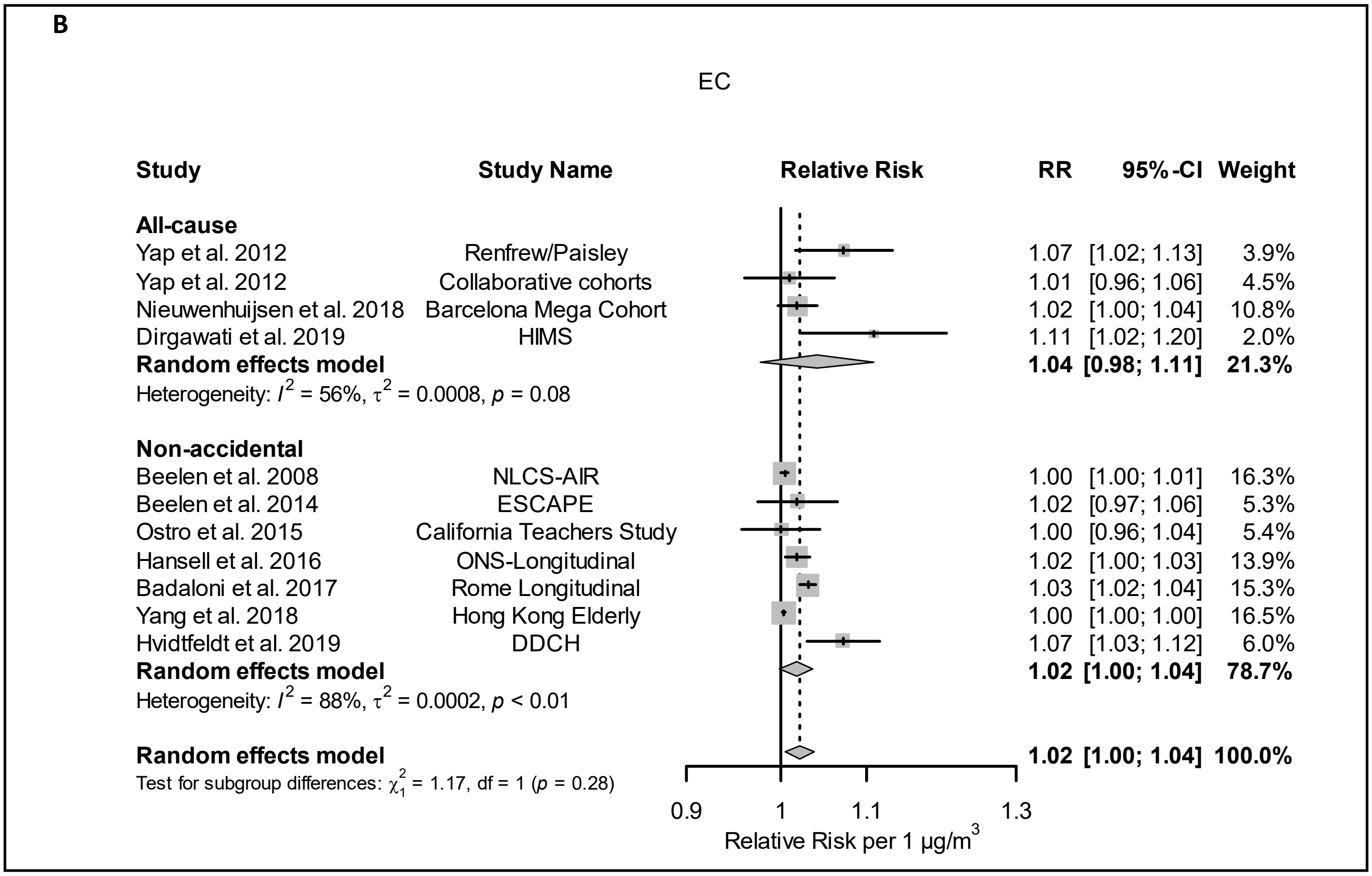


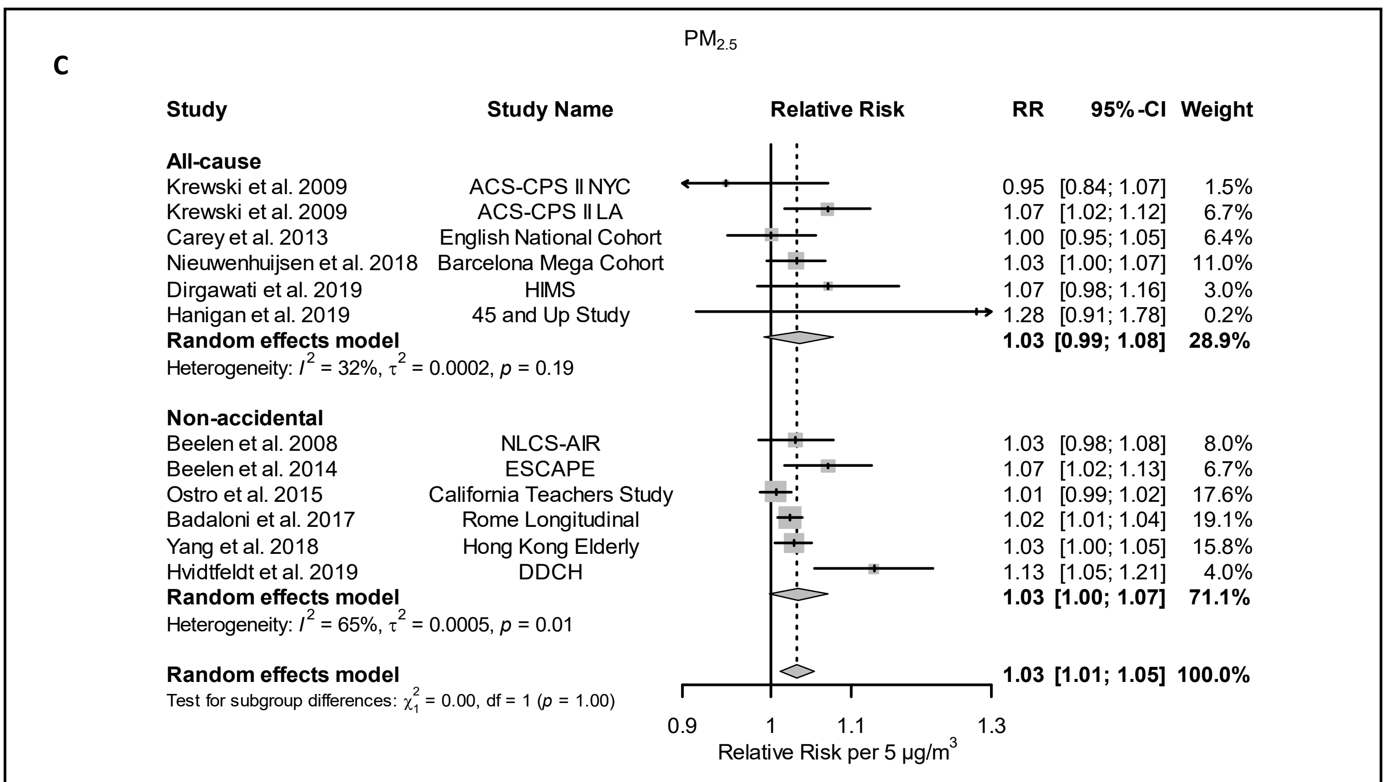
Medina-Ramón et al. 2008, Raaschou-Nielsen et al. (2012) (density) and Wilker et al. (2013) (distance) are not displayed in the plot because the estimates were log-transformed. The traffic density studies were all general population studies.

Appendix Figure 2. Association between NO_2 (A), EC (B), and $PM_{2.5}$ (C) and mortality: meta-analysis by outcome definition (all-cause versus non-accidental).

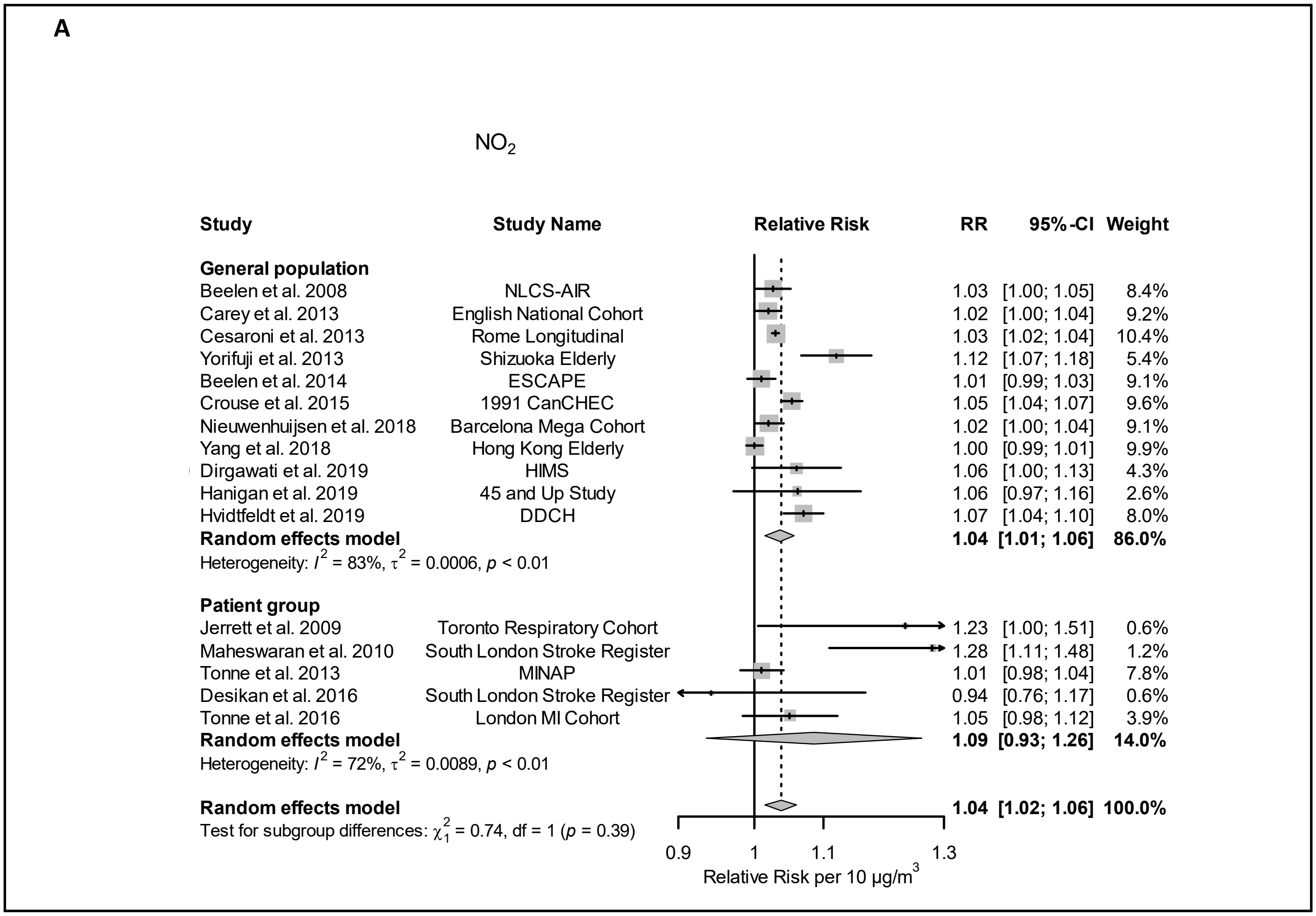


Appendix Figure 2. Continued.

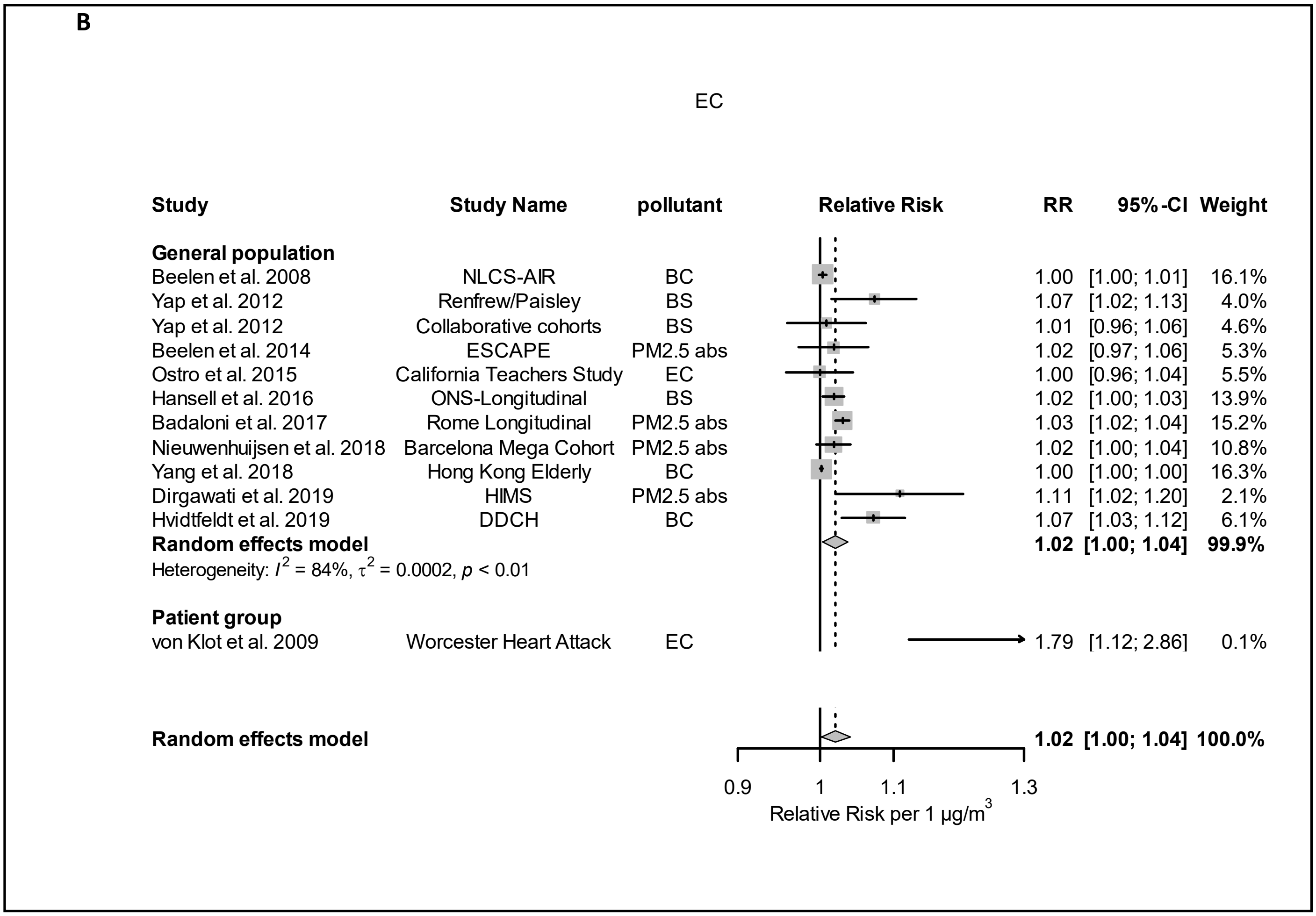




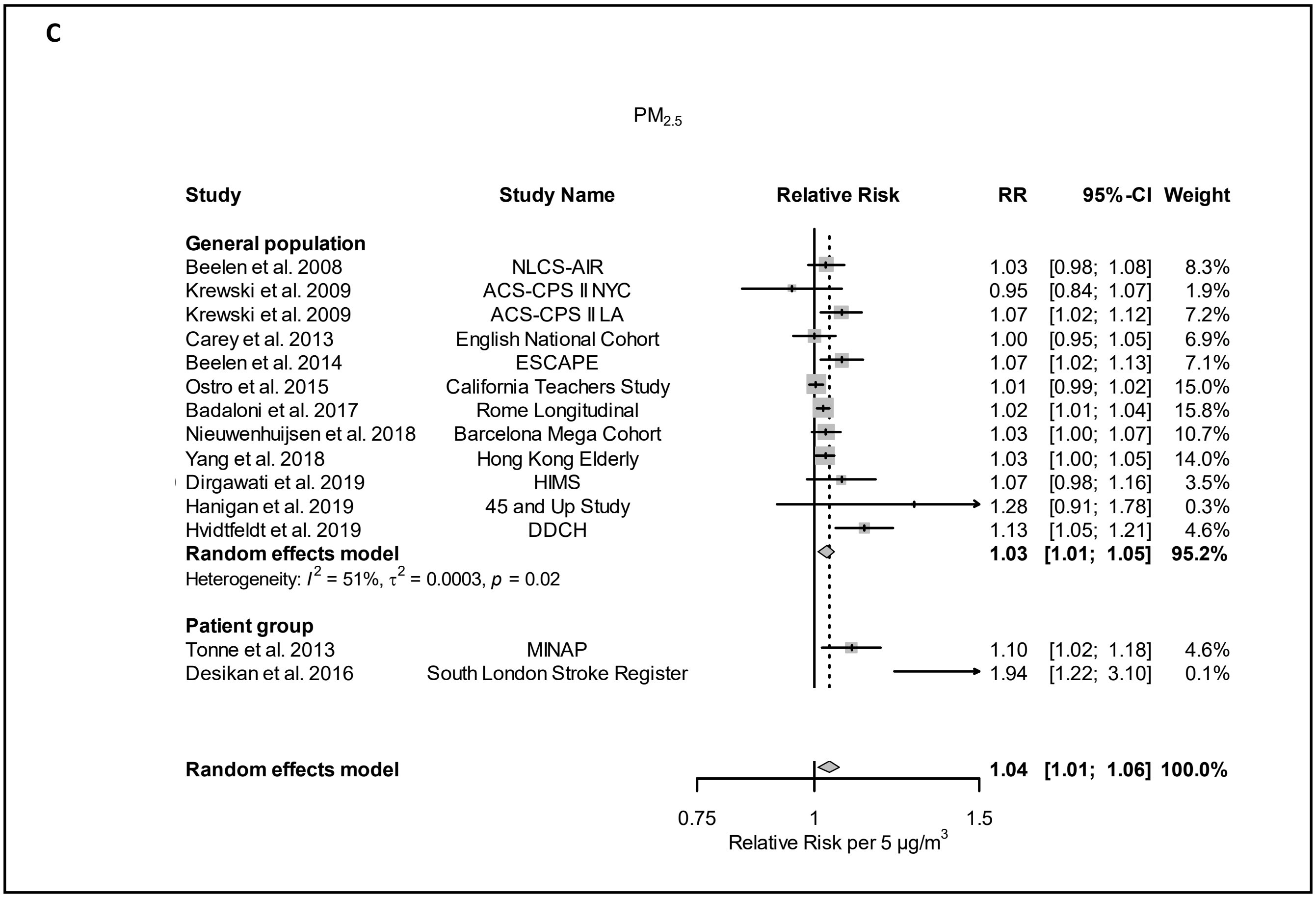
Appendix Figure 3. Association between NO_2 (A), EC (B), and $PM_{2.5}$ (C) and non-accidental mortality: meta-analysis in general population and patient groups.



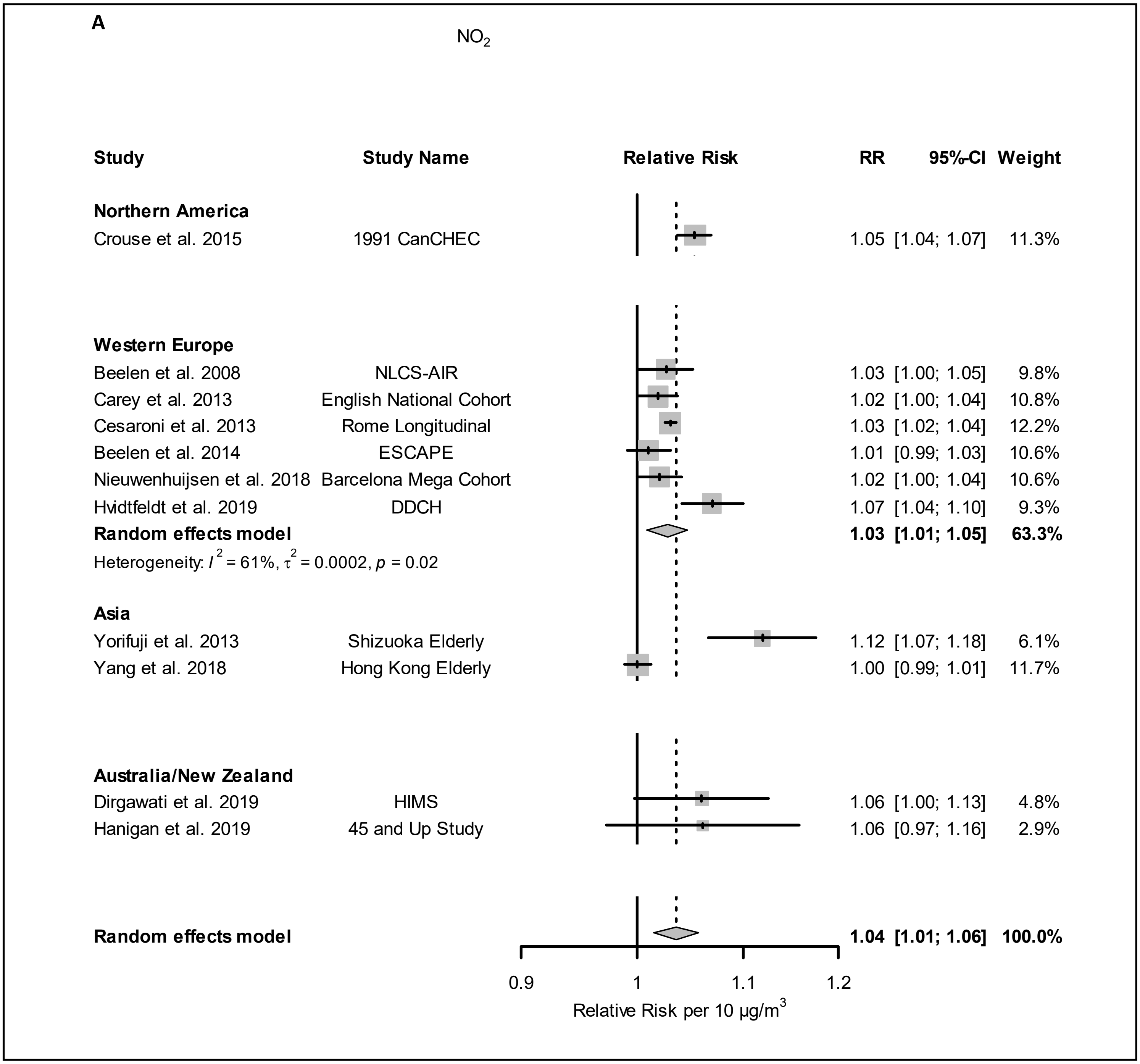
Appendix Figure 3. Continued.



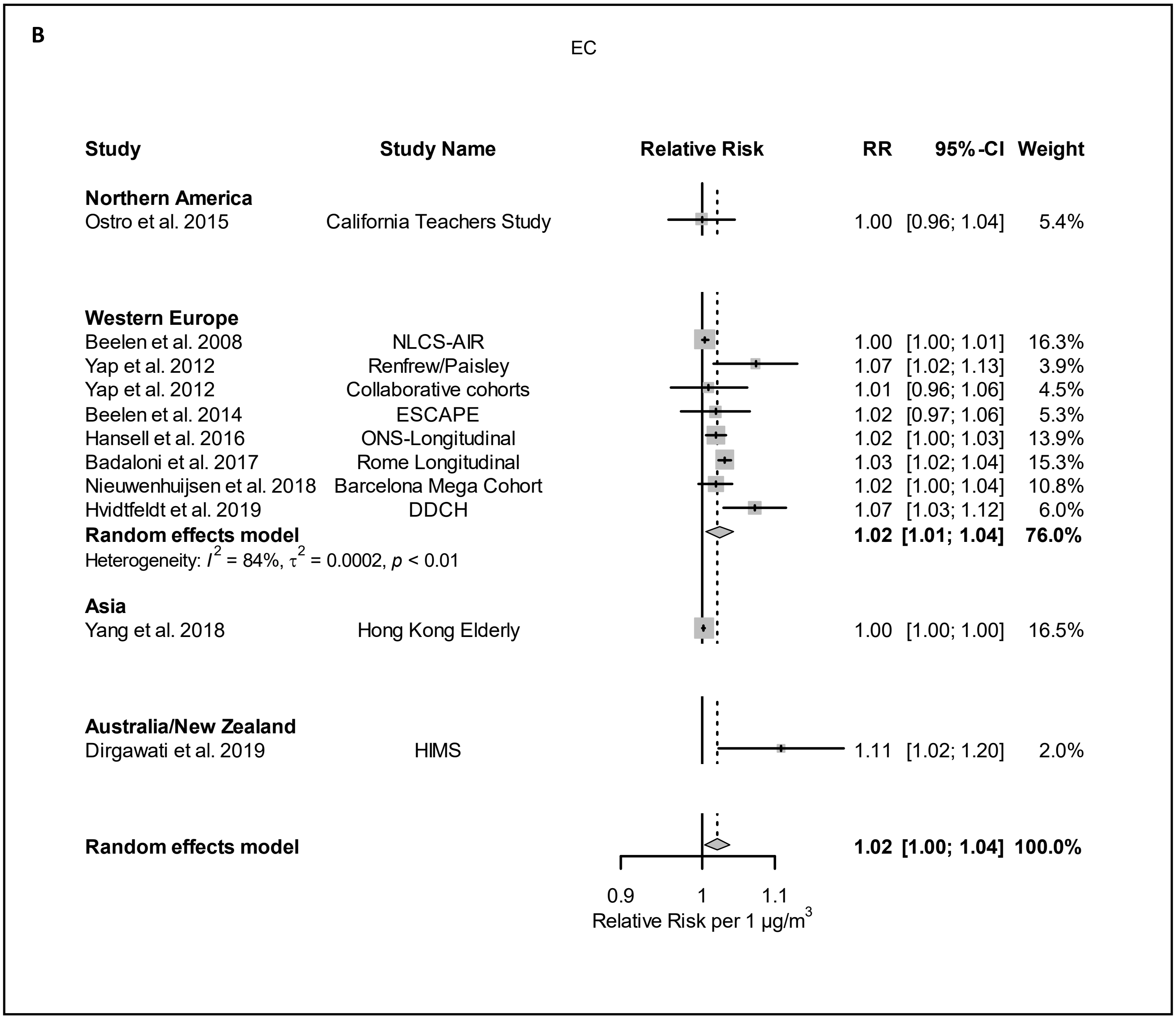
Appendix Figure 3. Continued



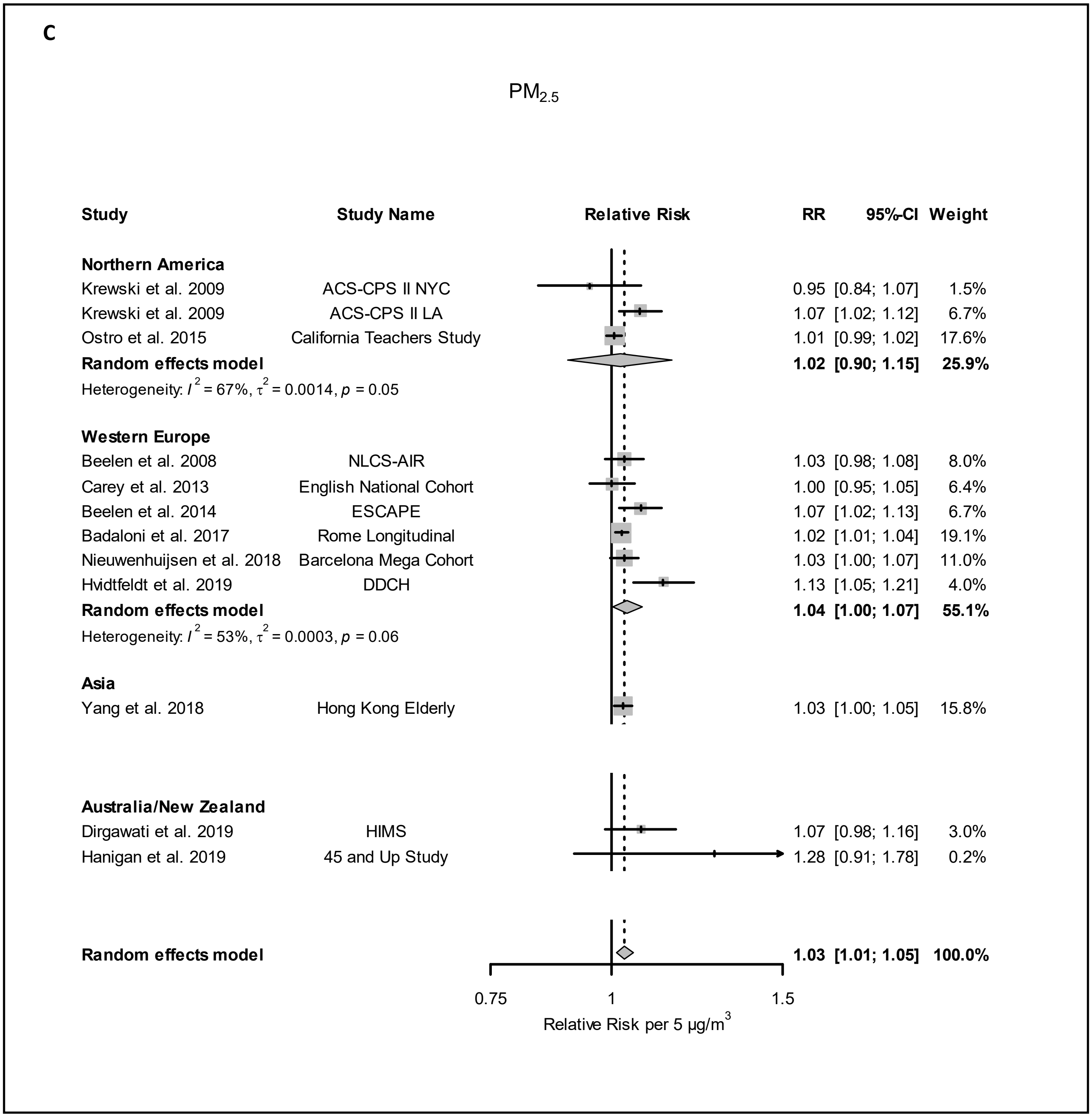
Appendix Figure 4. Association between NO_2 (A), EC (B), and $PM_{2.5}$ (C) and non-accidental mortality: meta-analysis by region.



Appendix Figure 4. Continued.

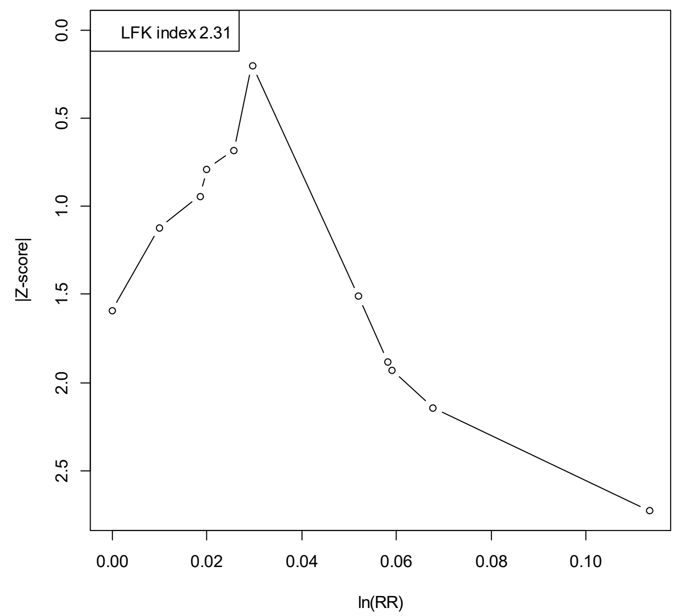


Appendix Figure 4. Continued.

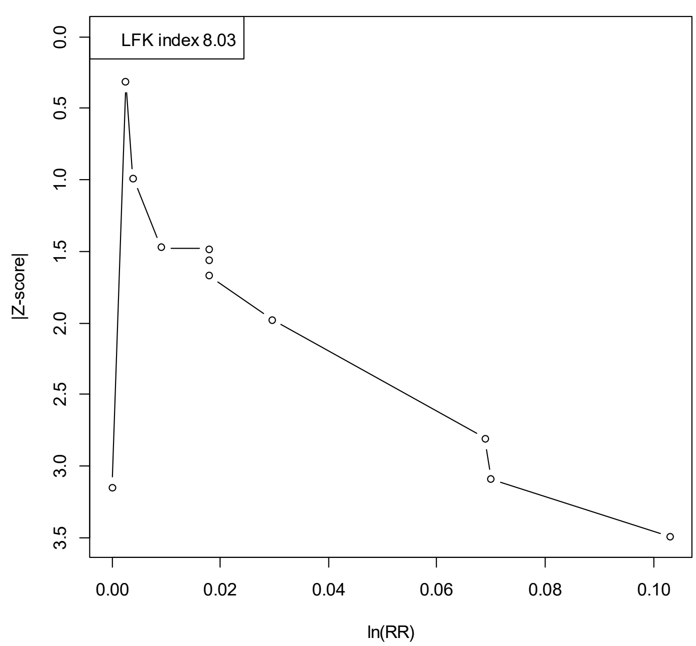


Appendix Figure 5. Doi plots and LFK indices for NO_2 (A), EC (B), and $PM_{2.5}$ (C) and non-accidental mortality.

A



B



Appendix Figure 5. Continued.

C