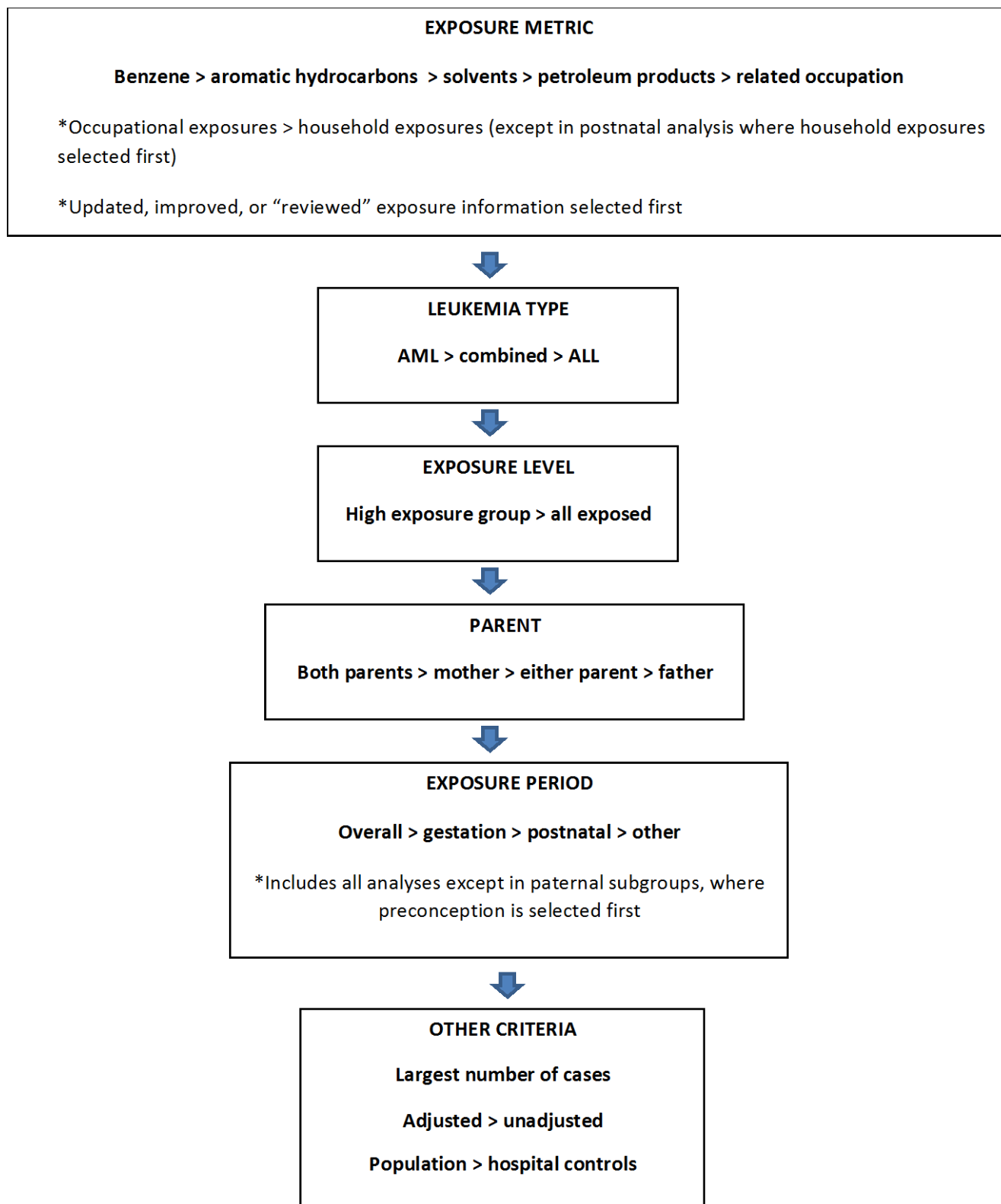
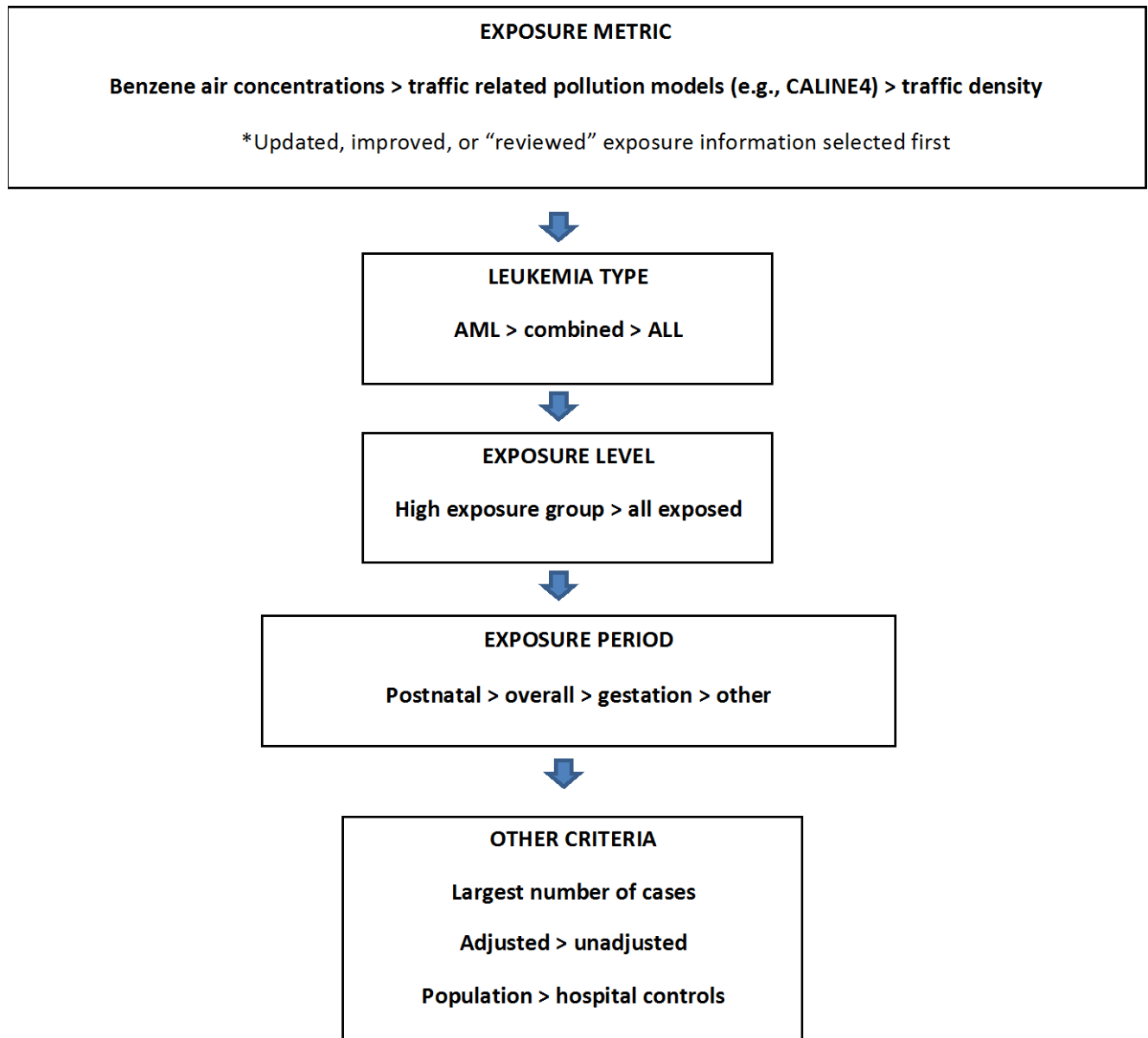


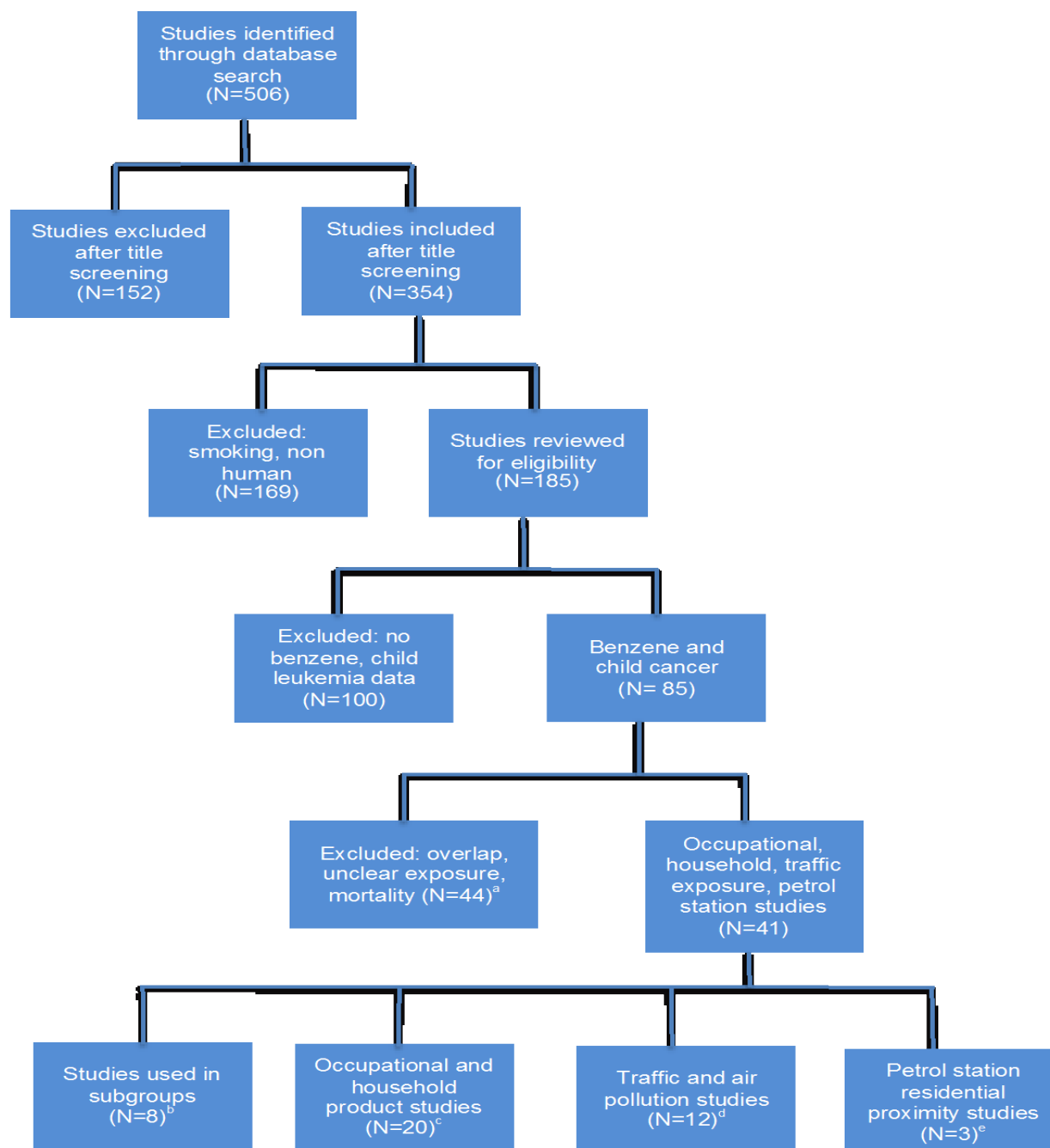
Web Figure 1. Order of selection of results from studies of occupational and household product exposures with overlapping populations in the meta-analysis of all studies combined, 1987-2013. AML, acute myeloid leukemia; ALL, acute lymphocytic leukemia. The symbol ">" indicates "selected before" and designates the order of selection



Web Figure 2. Order of selection of results from studies of traffic density or traffic pollution models with overlapping populations in the meta-analysis of all studies combined, 1999-2014. AML, acute myeloid leukemia; ALL, acute lymphocytic leukemia; CALINE4, California LINE Dispersion Model version 4. The symbol ">" indicates "selected before" and designates the order of selection



Web Figure 3. Literature search process flow chart, 1974-2014



^a Studies excluded for the following reasons: broad or unclear exposure metric, leukemia mortality, no relative risk estimate or confidence interval, population with other potential risk factor, exposure assessed after cancer diagnosis, or overlapping population (listed in Web Table 1)

^b These studies had populations that overlapped with other studies included in the meta-analysis of all studies combined but were used in some subgroup analyses (Web Table 2)

^c These studies are included in the meta-analysis of all occupational and household product exposure studies combined (Table 1)

^d These studies are included in the meta-analysis of all traffic density and traffic-related pollution studies combined (Table 2)

^e These studies are shown in Table 2. Two of these studies overlap with studies in the traffic density or traffic-related air pollution meta-analysis

Web Table 1. Studies Excluded From the Meta-analysis, 1974-2013^a

Author, Year (Reference)	Reason for Exclusion
Alderton <i>et al.</i> , 2006 (1)	Population with other potential risk factor (Down syndrome children)
Bailey <i>et al.</i> , 2011 (2)	Broad or unclear exposure (paint)
Dickinson <i>et al.</i> , 2003 (3)	Broad or unclear exposure (proximity to railways)
Fabia and Thuy, 1974 (4)	Mortality
Feychting <i>et al.</i> , 1998 (5)	Population with other potential risk factor (residence within 300m of power lines)
Ghosh <i>et al.</i> , 2013 (6)	Overlap with Heck <i>et al.</i> , 2014 (7)
Gold <i>et al.</i> , 1982 (8)	Broad or unclear exposure (driver, mechanic, railroad worker combined)
Hakulinen <i>et al.</i> , 1976 (9)	Broad or unclear exposure (hydrocarbon-related occupations)
Hearey <i>et al.</i> , 1980 (10)	Broad or unclear exposure (proximity to petrochemical facilities)
Heminiki <i>et al.</i> , 1981 (11)	Broad or unclear exposure (machine repair)
Hicks <i>et al.</i> , 1984 (12)	Broad or unclear exposure (aircraft mechanic)
Hurtig <i>et al.</i> , 2004 (13)	Broad or unclear exposure (proximity to oil fields)
Kaatsch <i>et al.</i> , 1998 (14)	No RR or CI
Knox, 2000 (15)	Broad or unclear exposure (proximity to incinerators, landfill)
Knox, 2005 (16)	Mortality; broad or unclear exposure (oil combustion)
Knox, 2005 (17)	Mortality; no RR or CI (outward/inward migration ratios)
Knox, 2006 (18)	No RR or CI (birth/death ratios)
Knox and Gilman, 1997 (19)	Mortality; broad or unclear exposure (proximity to benzene refining)
Knox <i>et al.</i> , 1994 (20)	Broad or unclear exposure (proximity to oil refineries)
Kwa and Fine, 1980 (21)	Mortality
Lagorio <i>et al.</i> , 2013 (22)	Personal benzene exposure measured after diagnosis
Lyons <i>et al.</i> , 1995 (23)	Broad or unclear exposure (proximity to a petrochemical plant)
McKinney <i>et al.</i> , 1987 (24)	Broad or unclear exposure (painters, miners...)
Nordlinder and Jarvholm, 1997 (25)	No RR or CI
Olsen <i>et al.</i> , 1991 (26)	Broad or unclear exposure (e.g. machine repair); no RR or CI
Pan <i>et al.</i> , 1994 (27)	Broad or unclear exposure (proximity to petrochemical facilities)
Raaschou-Nielsen <i>et al.</i> , 2002 (28)	Overlap with Raaschou-Nielsen <i>et al.</i> , 2001
Reynolds <i>et al.</i> , 2001 (29)	Overlap with Heck <i>et al.</i> , 2014 (7)
Reynolds <i>et al.</i> , 2003 (30)	Broad or unclear exposures (hazardous air pollutant scores)
Reynolds <i>et al.</i> , 2004 (31)	Overlap with Heck <i>et al.</i> , 2014 (7)
Sanders <i>et al.</i> , 1981 (32)	Mortality; broad or unclear exposure (hydrocarbon-related occupations)
Sans <i>et al.</i> , 1995 (33)	Broad or unclear exposure (distance to a petrochemical plant)
Schuz <i>et al.</i> , 2000 (34)	Population with other potential risk factor (one group lived within 15km of a nuclear power plant)
Shaw <i>et al.</i> , 1984 (35)	No RR or CI
Sung <i>et al.</i> , 2008 (36)	Broad or unclear exposure (electronics workers)
Van Duijn <i>et al.</i> , 1994 (37)	Broad or unclear exposure (hydrocarbon-related occupations)
Van Steensel-Moll <i>et al.</i> , 1985 (38)	Broad or unclear exposure (mechanic, machinist, gas station, miner combined)
Vianna <i>et al.</i> , 1984 (39)	No RR or CI
Weng <i>et al.</i> , 2008 (40)	Mortality; broad or unclear exposure (employed in petrochemical industry)
Weng <i>et al.</i> , 2008 (41)	Mortality
Weng <i>et al.</i> , 2009 (42)	Mortality
Wilkinson <i>et al.</i> , 1999 (43)	Broad or unclear exposure (proximity to oil refineries)
Yu <i>et al.</i> , 2006 (44)	Broad or unclear exposure (proximity to petrochemical plants)
Zack <i>et al.</i> , 1980 (45)	Broad or unclear exposure (hydrocarbon-related occupations)

Abbreviations: CI, confidence interval; RR, relative risk estimate

^aDue to space limitations this table does not include studies excluded for the following reasons: smoking studies, unpublished studies (government reports, abstracts), studies involving leukemia cases ages >19 years old

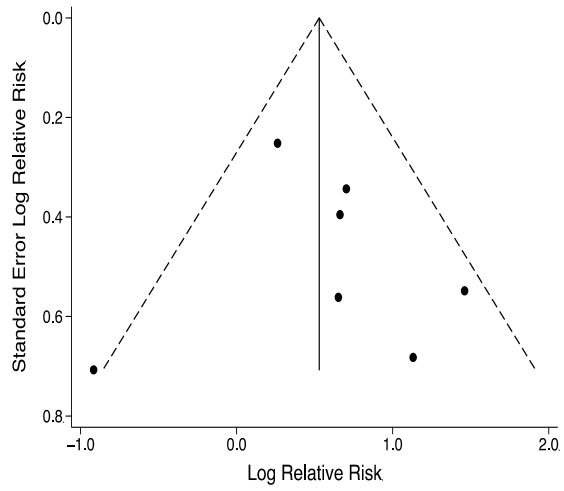
Web Table 2. Studies With Overlapping Populations Used in Subgroup Analyses, 1989-2014

Overlapping Study	Study Selected for Main Analyses ^a	Reason for Selection of the Study Used in the Main Analysis	Subgroup in Which the Overlapping Study was Used
Occupational and household product use:			
Bailey <i>et al.</i> , 2011 (46)	Reid <i>et al.</i> , 2011 (47)	More direct exposure metric: occupational benzene exposure	Paternal preconception
Freedman <i>et al.</i> , 2001 (48)	Shu <i>et al.</i> , 1999 (49)	More direct exposure metric: occupational benzene exposure	Home product use
Keegan <i>et al.</i> , 2012 (50)	McKinney <i>et al.</i> , 2008 (51)	Maternal exposure	Paternal solvent exposure
McKinney <i>et al.</i> , 2003 (52)	McKinney <i>et al.</i> , 2008 (51)	Gestational exposure, refined exposure assessment	Maternal and paternal periconception; Paternal
Traffic density and traffic pollution models:			
Heck <i>et al.</i> , 2013 (53)	Heck <i>et al.</i> , 2014 (7)	More direct exposure metric (air benzene concentrations)	Traffic density
Reynolds <i>et al.</i> , 2002 (54)	Heck <i>et al.</i> , 2014 (7)	More direct exposure metric (air benzene concentrations)	Postnatal; Diagnosis; Traffic density
Savitz and Feingold, 1989 (55)	Pearson <i>et al.</i> , 2000 (56)	More detailed modeling of traffic density	ALL; Socioeconomic status adjusted
Von Behren <i>et al.</i> , 2008 (57)	Heck <i>et al.</i> , 2014 (7)	More direct exposure metric (air benzene concentrations)	Postnatal; Diagnosis

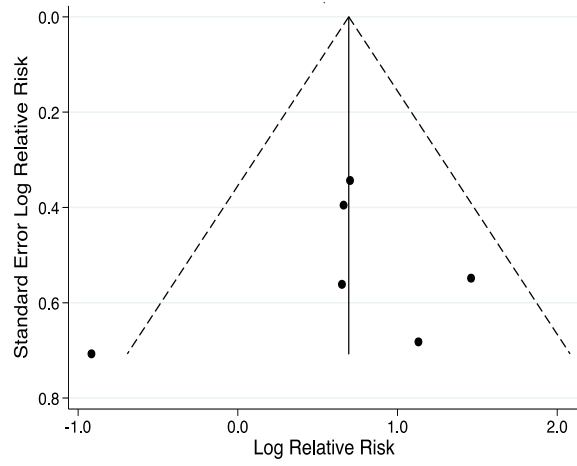
^a The study selected for the meta-analysis of all occupational or household product use studies combined or the meta-analysis of all traffic-related pollution studies combined

Web Figure 4. Funnel plots of studies included in the meta-analyses of studies involving traffic-related pollution models with (A) and without (B) the largest study of Badaloni *et al.*, 2013 (58), 2001-2014

A.



B.



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