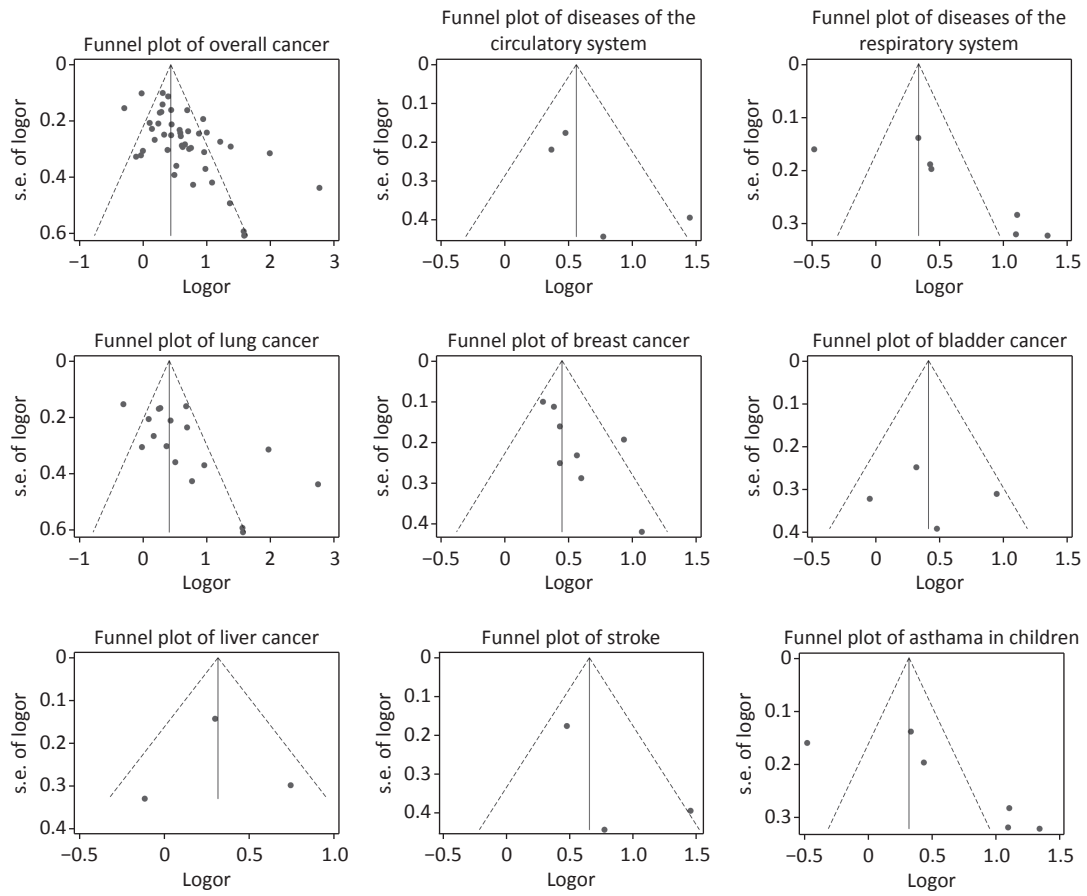


Supplementary Figure S1. The subgroup odds ratios for second-hand smoke exposure.



Supplementary Figure S2. The disease-specific funnel plots.

Supplementary Table S1. Basic characteristics of the included studies

Diseases	Trialname	Year	Study design	Participants (n)	Date of Investigation	Gender	Exposure sites	Language	NOS
Lung cancer	Yong Lin et al.	2010	Case-control	416	2006.12–2010.1	Female	Workplace, Household	Chinese	6
	Hailong Shi et al.	2005	Case-control	1,490	2000.6–2002.12	Female	Workplace	Chinese	6
	Lina Mu et al.	2021	Case-control	861	2005.3–2007.9	Both	Total	Chinese	6
	Longde Wang et al.	2002	Case-control	1,776	1994.1–1998.4	Both, Male, Female	Total	Chinese	7
	X.-R. Wang et al.	2009	Case-control	363	2002.7.1–2004.6.30	Female	Total	English	7
	T.H. Lam et al.	1987	Case-control	741	1983–1986	Female	Household	English	7
	Lap Ah Tse et al.	2009	Case-control	668	2004–2006	Male	Total, Household, Workplace	English	7
	Liu Q et al.	1993	Case-control	632	1983.6–1984.6	Female	Household	English	6
	Wen, W. et al.	2006	Cohort	72,829	1997.3–2000.5	Female	Total, Household, Workplace	English	9
	Yongbing Xiang et al.	2003	Case-control	828	1992.2–1993.12	Female	Workplace	Chinese	6
	Chunyan Lin et al.	1994	Case-control	244	1985–1990	Female	Household, Workplace	Chinese	6
	Dandan Guan et al.	2020	Case-control	1,284	2015.6–2018.12	Female	Total	Chinese	7
	Jifei Ma et al.	2021	Case-control	750	2015.1–2016.6	Both	Total	Chinese	6
	Haiyan Li et al.	2020	Case-control	296	2011.1–2019.6	Both	Total	Chinese	6
Breast cancer	Jun Li et al.	2020	Cohort	23,415	2008–2011	Both	Total	English	9
	Ping shi et al.	2010	Case-control	446	2005.1–2006.12	Female	Total	Chinese	6
	Xiaodan Yang et al.	2014	Case-control	604	2009.7.1–2012.10.11	Female	Total	Chinese	6
	Kajia Cao et al.	2001	Case-control	696	1992–1996	Female	Total	Chinese	6
	Meiling Qi et al.	2014	Case-control	849	2008.10–2010.2	Female	Total, Household, Workplace	English	7
	Mingbai Hu et al.	2013	Case-control	407	2009.1–2011.2	Female	Total	English	6
	Bin Li et al.	2015	Case-control	1,767	2007–2013	Female	Total, Household, Workplace	English	7
	Changming Gao et al.	2013	Case-control	1,351	2004.6–2007.12	Female	Total	English	9
	Xinying Lin et al.	2001	Case-control	372	None	Female	Total	Chinese	6

Diseases	Trialname	Year	Study design	Participants (n)	Date of Investigation	Gender	Exposure sites	Language	NOS	Continued
Bladder cancer	Wei Zhang et al.	2006	Case-control	1,215	1996-1999	Male, Female	Total, ousehold, Workplace	Chinese	9	
	Yuhua Zhou et al.	2014	Case-control	824	2005.9-2008.6	Both	Household	Chinese	7	
Liver cancer	Li Tao et al.	2010	Case-control	231	1996.7-1999.6	Both, Male, Female	Total	English	8	
	Jianxue Duan et al.	2018	Case-control	794	2010.1.1-2016.12.31	Both	Total	Chinese	6	
	Huabin Wu et al.	2012	Case-control	1,254	2003.1.1-2010.10.31	Both	Total	Chinese	6	
Acute lymphoblastic leukemia	Jun Li et al.	2020	Cohort	23,415	2008-2011	Both	Total	English	9	
	Yongjun Fang et al.	2010	Case-control	613	2006.6.1-	Children	Total	Chinese	6	
Cancer	Wen, W. et al.	2006	Cohort	72,829	1997.3-2000.5	Female	Total, ousehold, Workplace	English	9	
Cervical cancer	Jian Li et al.	2010	Case-control	312	2007.9-2010.6	Female	Total	Chinese	6	
	Rongxian Xu et al.	2014	Case-control	413	2007.11-2008.12	Female	Total	Chinese	6	
Colon cancer	Qinting Jiang et al.	2004	Case-control	396	1990.5-2002.5 1989-1990	Both	Workplace	Chinese	8	
	Jun Li et al.	2020	Cohort	23,415	2008-2011	Both	Total	English	9	
Endometrial cancer	Jing Gao et al.	2006	Case-control	2,082	1997.1-2002.12	Female	Total, Household, Workplace	Chinese	8	
Esophageal squamous cell carcinoma	Zemin Wang et al.	2006	Case-control	214	2002-2003	Both	Total	English	7	
Intracranial tumors	Min Wu et al.	2010	Case-control	537	2007.1-2008.7	Both	Household, Workplace	Chinese	6	
	Baochang He et al.	2016	Case-control	708	2010.9-2015.1	Female	Total	English	7	
Papillary thyroid ancer	Yan Zhou et al.	2016	Case-control	369	2103.4-2014.6	Both	Total	Chinese	6	
	Jun Li et al.	2020	Cohort	23,415	2008-2011	Both	Total	English	9	
Tongue cancer	Lingjun Yan et al.	2016	Case-control	876	2010.9-2015.1	Both	Total	Chinese	7	
Asthma in Children	Xiaojuan Liu et al.	2013	Case-control	218	2011.1-2012.12	Children	Total	Chinese	6	
	Fang Wang et al.	2013	Case-control	726	2010	Children	Total	Chinese	6	
	Mei Xiong et al.	2013	Case-control	552	None	Children	Total	Chinese	6	

Continued

Diseases	Trialname	Year	Study design	Participants (n)	Date of investigation	Gender	Exposure sites	Language	NOS
DRS*	Tongzhang Zheng et al.	2002	Case-control	1,209	1999.1–2001.3	Children	Total	English	6
	Shixue Ma et al.	2006	Case-control	212	2002.1–2004.6	Children	Total	Chinese	6
	Maohong Luo et al.	2004	Case-control	262	1998–1999	Children	Total	Chinese	6
Small airway obstruction	Yusheng Chen et al.	2013	Case-control	648	2011.10.17–2011.11.1	Both	Total	English	7
	Xianjia Ning et al.	1993	Case-control	256	1990.10–1990.12	Female	Total	Chinese	7
	Yanong Shao et al.	1997	Case-control	210	1996.10–1997.3	Both	Total	Chinese	6
DCS*	Wen, W. et al.	2006	Cohort	72,829	1997.3–2000.5	Female	Total, Household, Workplace	English	9
	Wen, W. et al.	2006	Cohort	72,829	1997.3–2000.5	Female	Total, Household, Workplace	English	9
All cause mortality	Kim, C. et al.	2016	Cohort	65,226	1996–2000/2009	Female	Total	English	8
	Suping Wang et al.	1994	Case-control	126	1991.4.4–1992.4.3	Children	Total	Chinese	6
	Ke Li et al.	2018	Case-control	534	2013.1–2016.12	Children	Total	Chinese	6
Legionnaires' diseases (Children)	Birong Dong et al.	2001	Case-control	348	1996.3–1997.3	Both	Total	Chinese	6
	Leung, Chi C. et al.	2010	Cohort	15,486	2000.1–2003.12	Female	Total	English	8
Otitis media (Children)	Huang, C. et al.	2019	Cohort	28,177	2004–2008	Female	Total	English	9
Tuberculosis									
Type 2 diabetes mellitus									

Note. * DRS: Diseases of the Respiratory System; DCS: Diseases of the Circulatory System

Supplementary Table S2. The definition and types of characteristics of second-hand smoke exposure

	Undefined	
Definition of SHS	Definiton 1	Exposure to SHS at home /workplace ≥ 15 min/d, 1 d/week. Exposure to SHS ≥ 15 min/d. Exposure to SHS: once (5 min), twice (≥ 5 min but ≤ 1 min), more than twice (≥ 1 min). Lived or worked with smokers ≥ 1 h/d, ≥ 1 year.
	Definition 2	Exposure to SHS 1 time/wk, 1–2 d/week, 3–5 d/week, daily, or almost daily. Exposure to family members (especially husband) had ever smoked at home and/or the smoke of others in the workplace. Living with smoking husband in the same household for at least one year continuously. Living with 1 or more smokers in the same household. Exposure to parents.
Types of Characteristics of SHS	None	
	Type 1	Location, such as household and workplace.
	Type 2	Adulthood and childhood (before age 18 or after age 18). Adulthood only. Before age 18 years or after age 18 years. Menopausal status. Childhood and adulthood. Pregnant with the child, and after the birth of the child.

Supplementary Table S3. "Leave One Out" sensitivity test

Disease	Trialname	POR	LL	UL
Cancers	T.H. Lam et al.	1.52	1.42	1.62
	Liu Q et al.	1.53	1.44	1.63
	Chunyan Lin et al.	1.53	1.44	1.63
	Chunyan Lin et al.	1.53	1.43	1.63
	Xinying Lin et al.	1.51	1.42	1.61
	Kajia Cao et al.	1.53	1.43	1.63
	Longde Wang et al.	1.54	1.44	1.64
	Yongbing Xiang et al.	1.53	1.44	1.63
	Qinting Jiang et al.	1.53	1.43	1.63
	Hailong Shi et al.	1.58	1.48	1.69
	Zemin Wang et al.	1.53	1.43	1.63
	Wen W. et al.	1.53	1.44	1.63
	Jing Gao et al.	1.61	1.51	1.72
	Wen W. et al.	1.54	1.45	1.64
	Wei Zhang et al.	1.54	1.44	1.64
	Wei Zhang et al.	1.53	1.44	1.63
Lap Ah Tse et al.	1.54	1.45	1.65	
X.-R. Wang et al.	1.54	1.44	1.64	

				Continued
Disease	Trialname	POR	LL	UL
	Jian Li et al.	1.53	1.43	1.63
	Yong Lin et al.	1.53	1.43	1.63
	Yong Lin et al.	1.52	1.43	1.62
	Yongjun Fang et al.	1.52	1.42	1.61
	Li Tao et al.	1.53	1.44	1.64
	Min Wu et al.	1.53	1.43	1.63
	Ping shi et al.	1.53	1.43	1.63
	Min Wu et al.	1.53	1.43	1.63
	Huabin Wu et al.	1.54	1.45	1.65
	Mingbai Hu et al.	1.53	1.44	1.63
	Changming Gao et al.	1.54	1.44	1.64
	Rongxian Xu et al.	1.51	1.42	1.61
	Xiaodan Yang et al.	1.53	1.43	1.63
	Meiling Qi et al.	1.53	1.44	1.63
	Yuhua Zhou et al.	1.52	1.43	1.62
	Bin Li et al.	1.55	1.45	1.66
	Yan Zhou et al.	1.53	1.43	1.63
	Baochang He et al.	1.52	1.43	1.62
	Lingjun Yan et al.	1.52	1.42	1.62
	Jianxue Duan et al.	1.53	1.43	1.63
	Jun Li et al.	1.53	1.43	1.63
	Jun Li et al.	1.54	1.44	1.64
	Jun Li et al.	1.54	1.45	1.64
	Haiyan Li et al.	1.51	1.42	1.61
	Dandan Guan et al.	1.53	1.43	1.63
	Jun Li et al.	1.54	1.44	1.64
	Lina Mu et al.	1.54	1.45	1.64
	Jifei Ma et al.	1.51	1.41	1.61
	Combined	1.53	1.44	1.63
DCS				
	Xianjia Ning et al.	1.59	1.23	2.05
	Yanong Shao et al.	1.90	1.35	2.68
	Wen W. et al.	1.92	1.43	2.58
	Wen W. et al.	1.72	1.33	2.21
	Combined	1.75	1.37	2.23
DRS				
	Tongzhang Zheng et al.	1.40	1.18	1.68
	Maohong Luo et al.	1.34	1.15	1.56
	Shixue Ma et al.	1.32	1.14	1.54
	Fang Wang et al.	1.77	1.49	2.09
	Xiaojuan Liu et al.	1.32	1.14	1.54

				Continued
Disease	Trialname	POR	LL	UL
Lung cancer	Mei Xiong et al.	1.38	1.18	1.62
	Yusheng Chen et al.	1.38	1.17	1.62
	Combined	1.40	1.21	1.63
	T.H. Lam et al.	1.46	1.29	1.65
	Liu Q et al.	1.51	1.35	1.70
	Chunyan Lin et al.	1.50	1.34	1.69
	Chunyan Lin et al.	1.52	1.35	1.71
	Longde Wang et al.	1.54	1.37	1.73
	Yongbing Xiang et al.	1.52	1.34	1.71
	Hailong Shi et al.	1.71	1.51	1.94
	Wen W. et al.	1.51	1.34	1.69
	X.-R. Wang et al.	1.54	1.37	1.74
	Lap Ah Tse et al. 1.56 1.38	1.56	1.38	1.76
	Yong Lin et al.	1.50	1.33	1.68
	Yong Lin et al.	1.49	1.32	1.68
	Jun Li et al.	1.55	1.37	1.75
	Haiyan Li et al.	1.45	1.30	1.63
	Dandan Guan et al.	1.50	1.34	1.69
	Lina Mu et al.	1.55	1.37	1.76
	Jifei Ma et al.	1.44	1.28	1.61
Combined	1.52	1.35	1.70	
Breast cancer				
Kajia Cao et al.	1.55	1.38	1.74	
Xinying Lin et al.	1.49	1.32	1.68	
Ping shi et al.	1.55	1.38	1.75	
Mingbai Hu et al.	1.57	1.39	1.76	
Changming Gao et al.	1.60	1.40	1.83	
Meiling Qi et al.	1.57	1.39	1.78	
Xiaodan Yang et al.	1.56	1.38	1.75	
Bin Li et al.	1.69	1.47	1.94	
Combined	1.57	1.40	1.76	
Bladder cancer				
Wei Zhang et al.	1.73	1.23	2.44	
Wei Zhang et al.	1.50	1.08	2.08	
Li Tao et al.	1.61	1.10	2.35	
Yuhua Zhou et al.	1.28	0.91	1.81	
Combined	1.52	1.12	2.05	

				Continued
Disease	Trialname	POR	LL	UL
Liver cancer	Huabin Wu et al.	1.43	0.93	2.20
	Jianxue Duan et al.	1.26	0.98	1.63
	Jun Li et al.	1.46	1.14	1.88
	Combined	1.37	1.08	1.73
Stroke	Xianjia Ning et al.	1.67	1.22	2.30
	Yanong Shao et al.	3.15	1.77	5.60
	Wen, W. et al.	1.89	1.38	2.58
	Combined	1.92	1.43	2.58
Asthma in Children	Tongzhang Zheng et al.	1.37	1.12	1.67
	Maohong Luo et al.	1.31	1.11	1.54
	Shixue Ma et al.	1.28	1.09	1.52
	Mei Xiong et al.	1.35	1.13	1.61
	Xiaojuan Liu et al.	1.28	1.08	1.52
	Fang Wang et al.	1.83	1.52	2.21
	Combined	1.38	1.17	1.62

Note. *POR*: pooled odds ratio; *OR*: odds ratio; *LL*: 95% lower limit; *UL*: 95% upper limit.