Supplemental Table 1. Description of Cohort and Case-Control Studies Selected for Meta-analyses								
Author (Year)	**Work Force**	**Person-Years**	**Exposed Cases**	**Study Location**	**Cancer Type**	**Study Description**	**Exposure Assessment**	**Calculated Risk**
TCE-Exposure Cohort Studies								
Axelson et al. (1994) [32]	1,670 (Total) 1,727 (TCE exposed)	23,516.50	6	Sweden	Kidney	Males in workforce biomonitored for TCE exposure from 115 facilities. Cancer incidence follow-up from 1958 through 1987.	Company urinary biomonitoring measurements (U-TCA).	SIR=1.16; 95% CI= 0.42-2.52
Anttila et al. (1995) [31]	8,974 (Total) 3,089 (TCE exposed)	71,800 (Total) 59,905 (TCE)	6	Finland	Kidney	Workforce biomonitored for TCE exposure. Cancer incidence follow-up from 1967 through 1992.	Government urinary biomonitoring measurements (U-TCA, B-Per, B-TC).	SIR=0.87; 95% CI= 0.32-1.89
Henschler et al. (1995) [34]	359 (Total) 169 (TCE exposed)	5,188 (Exposed) 6,100 (Unexposed)	5	Germany	Kidney	Male workers at a TCE-using cardboard manufacturing plant. Cancer incidence follow-up from 1956 through 1992.	Company work histories, walk-through surveys, interviews, company records. No actual assessment.	SIR=9.66; 95% CI= 3.14-22.55
Morgan et al. (1998) [36]	20,508 (Total) 4,733 (TCE exposed)	461,617 (Total) 105,852(TCE)	8	United States, Arizona	Kidney	Aerospace manufacturing workers assessed for TCE exposure. Cancer mortality follow-up from 1950 through 1993.	Company work histories. Long-term employees developed JEM.	SMR=1.32; 95% CI= 0.57-2.60
Ritz B. (1999) [37]	3,814 (Total) 2,971 (TCE exposed)	120,237	5	United States, Ohio	Kidney	Male uranium processing workers assessed for TCE and other chemical exposures. Cancer mortality follow-up from 1951 through 1989.	Company work histories. Long-term employees developed JEM.	SMR=0.65; 95% CI= 0.21-1.51
Hansen et al. (2001) [16]	803 (Total)	16,730	4	Denmark	Kidney	Workers from 275 companies assessed for TCE exposure. Cancer incidence follow-up from April 1968 through 1996.	Urinary biomonitoring (U-TCA) measurements, which served as individuals' estimates, or use of company air	Men: SIR=0.9; 95% CI= 0.2-2.6 Women SIR=2.4; 95% CI= 0.03-14.0 Combined: SIR=

							measurements.	1.1
Raaschou-Nielsen et al. (2003) [27]	40,049 (Total) 14,360 (TCE exposed subcohort)	339,486 (TCE)	53 (subcohort)	Denmark	Renal Cell Carcinoma	Blue collar workers from 347 TCE-using companies followed from April 1968 through 1997 for cancer incidence.	Pension funding records and government industrial hygiene data. Developed "company exposure matrix".	Subcohort SIR=1.4; 95% CI= 1.0-1.8
Boice et al. (2006) [26]	41,351 (Total) 1,111 (TCE exposed)	1,138,610 (Total) 39,687 (TCE)	7	United States, California	Kidney	Aircraft workers in a rocket engine testing facility assessed for TCE exposure. Cancer mortality follow-up from 1948 through 1999.	Company work histories, walk-through surveys, interviews. Developed JEM.	SMR=2.22; 95% CI= 0.89-4.57
Radican et al. (2008) [22]	14,457 (Total) 7,204 (TCE exposed)	NR	18	United States, Utah	Kidney	Aircraft maintenance workers assessed for TCE exposure. Cancer incidence follow-up from 1973 through 1990; cancer mortality follow-up from 1953-2000.	Company work histories, walk-through surveys, interviews, and industrial hygiene, other company records. Developed JEM.	HR=1.18; 95% CI= 0.47-2.94
Lipworth et al. (2011) [24]	77,943 (Total) 2,267 (routinely TCE exposed);	1,889,790 (Total) 76,009 (TCE)	8 (routinely)	United States, California	Kidney	Aircraft manufacturing workers assessed for TCE exposure. Cancer mortality follow-up from 1960 through 2008.	Company work histories, walk-through surveys, interviews, industrial hygiene records. Developed JEM.	Routinely TCE Exposed SMR=0.83; 95% CI= 0.36-1.64
Chlorinated Solvent-Exposure Cohort Studies								
Garabrant et al. (1988) [33]	14,067 (Total)	222,100	12	United States, California	Kidney	Workers in a TCE-using aircraft manufacturing plant followed for cancer mortality from 1958 through 1982.	Company work histories. No actual assessment.	SMR=0.93; 95% CI= 0.48-1.64

Selden and Ahlborg (1991) [38]	2,176 (Total) 1,865 (Air force)	21,463 (Total) 18,411 (Air force)	2	Sweden	Kidney	Men in the Armed Forces exposed to jet fuel were followed for cancer incidence from 1975 through 1983.	TCE used for metal degreasing. Member of the air force assumed exposed. No individual exposure data.	SIR=0.83; 95% CI= 0.10-2.99
Sinks et al. (1992) [39]	20,50 (Total)	36,744	6	United States, Georgia	Renal Cell Carcinoma	Workers from a TCE-using paperboard manufacturing and processing plant were followed for cancer incidence and mortality from 1957 through June 1988.	Company work histories, material safety data sheets, but no actual assessment.	SIR=3.7; 95% CI= 1.4-8.1
McLean et al. (2006) [35]	60,468 (Total)	1,347,782	54	International	Kidney	Workers in the pulp and paper industry across 11 countries were assessed for exposure to volatile organochlorines (indicator agents being TCE, perchloroethylene, dichloromethane, and trichloromethane). Cancer mortality follow-up varied by country (1943-1996).	Company work histories, detailed company questionnaires and air measurements. Developed "department exposure matrix".	SMR=0.77; 95% CI= 0.58-1.01
Sung et al. (2007) [40]	63,982 (Total)	1,403,824	15	Taiwan	Kidney & Urinary (excluding bladder)	Female workers in a TCE-using electronics plant were followed for cancer incidence from 1979 through 2001.	Insurance work histories, factory inspection records. No actual assessment.	SIR= 1.10; 95% CI= 0.62-1.82
TCE-Exposure Case-Control Studies								
Asal et al. (1988) [41]	315 cases; 313 hospital- and 336 population-based controls; 29 TCE exposed.	NA	19	United States, Oklahoma	Renal Cell Carcinoma	The association between predominant occupation/industry and cancer risk assessed via questionnaires.	Self-reported lifetime occupational histories. No assessment. TCE exposure assumed in metal degreasing/cleaning industry.	OR=1.7; 95% CI= 0.7-3.8

Harrington et al. (1989) [46]	54 cases; 54 population-based controls; 8 TCE exposed.	NA	3	United Kingdom	Renal Cell Carcinoma	The association between lifetime occupational histories and exposure to solvents and cancer risk assessed via questionnaires and interviews.	Self-reported job, industry, materials and key materials and processes. No assessment. Job of metal degreasing/ cleaning industry; TCE exposure assumed.	OR=1.0; 95% CI= 0.2-4.9
Siemiatycki (1991) [18]	177 cases; 3,014 mixed-based controls; 4 TCE exposed kidney cancers cases.	NA	4	Canada	Kidney	The association between exposure to life-time TCE exposure and cancer risk assessed via questionnaires and interviews.	Self-reported occupational histories with additional occupation-specific questionnaires. Expert review (subject-specific) for TCE.	OR=0.8; 95% CI= 0.4-2.0
Greenland et al. (1994) [45]	12 cases; 1,202 population-based controls.	NA	NR	United States, Massachusetts	Kidney	A nested case-control study where cancer risk assessed among male workers in a TCE-using transformer assembly plant.	Insurance pension records for work histories. Long-term workers developed JEM.	OR=0.99; 95% CI= 0.30-3.32
Vamvakas et al. (1998) [50]	58 cases; 84 hospital-based controls; 24 TCE exposed.	NA	19	Germany	Renal Cell Carcinoma	The association between life-time occupational TCE exposure and cancer risk assessed via questionnaires and interviews.	Self-reported occupational histories that included hazardous chemicals, insurance and worker compensation records (appears subject-specific).	OR=10.80; 95% CI= 3.36-34.75
Dosemeci et al. (1999) [44]	438 cases; 687 population-based controls; 55 TCE exposed cases.	NA	55	United States, Minnesota	Renal Cell Carcinoma	The association between occupational TCE exposure in the most recent and usual job and industry and cancer risk assessed via questionnaires and	Self-reported most recent and usual job and industry with activities, and dates, and duration in 13 industries and 7 jobs. Applied JEM.	OR=1.3; 95% CI= 0.9-1.9

						interviews.		
Pesch et al. (2000) [17]	935 cases; 4,298 population-based controls; 172 TCE exposed cases.	NA	172	Germany	Renal Cell Carcinoma	The association between cancer risk and exposure to chlorinated solvent assessed via questionnaires and interviews.	Self-report occupational histories with supplemental questions on tasks with exposures of interest, the exposure and frequency. Applied a job and task exposure matrix.	Calculated Men and Women Combined OR=1.2
Bruning et al. (2003) [42]	134 cases; 401 hospital-based controls; 63 TCE exposed.	NA	25	Germany	Renal Cell Carcinoma	The association between life-time occupational TCE exposure and cancer risk assessed via questionnaires and interviews.	Self-reported occupational histories, supplemental info on tasks and frequency and duration to TCE. Applied JEM.	OR=2.47; 95% CI= 1.36-4.49
Charbotel et al. (2006) [43]	86 cases; 316 mixed-based controls; 147 TCE exposed.	NA	37	France	Renal Cell Carcinoma	The association between occupational TCE exposure and cancer risk assessed via questionnaires and interviews.	Self-reported occupational histories. For one task, task-specific JEM.	OR=1.64; 95% CI= 0.95-2.84
Moore et al. (2010) [11]	1,097 cases; 1,476 hospital-based controls; 88 TCE exposed.	NA	48	Central & Eastern Europe	Renal Cell Carcinoma	The association between occupational TCE exposure and cancer risk assessed via questionnaires and interviews.	Self-reported occupational histories with specialized questionnaires. Expert review (subject-specific).	OR=1.63; 95% CI= 1.04-2.54
Chlorinated Solvent-Exposure Case-Control Studies								

Partanen et al. (1991) [47]	338 cases, 338 population-based controls; 22 TCE exposed cases.	NA	22	Finland	Renal Cell Carcinoma	The association between various occupations and cancer risk assessed via questionnaires and interviews.	Self-reported occupational histories. No assessment. TCE exposure assumed for iron and metal ware workers.	OR=1.87; 95% CI= 0.94-3.76
Poole et al. (1993) [48]	102 cases; 431 population-based controls; 74 TCE exposed.	NA	12	United States	Renal Cell Carcinoma	The association between cancer risk and exposure chlorinated solvent exposure assessed among male refinery workers from five petroleum companies.	Company work histories, walk-through surveys by long-term workers.	OR=0.69; 95% CI= 0.321.50
Schlehofer et al. (1995) [49]	227 cases; 286 population-based controls; 39 TCE exposed.	NA	27	Germany	Renal Cell Carcinoma	The association between cancer risk and exposure to chlorinated solvent exposure assessed via questionnaires and interviews.	Self-reported occupational histories. Developed JEM.	OR=2.52; 95% CI= 1.23-5.16

Abbreviations: B-Per- blood perchloroethylene; B-TC- blood 1,1,1-trichloroethane; FINJEM- Finnish National job exposure matrix; HR- hazard ratio; JEM- job exposure matrix; NA- not applicable; NR- not reported; OR- odds ratio; SMR- standard mortality ratio; SIR- standard incidence ratio; RR- risk ratio; TCE- trichloroethylene; U-TCA-urinary trichloroacetic acid.