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Supplemental Material

Scientific Considerations for Evaluating Cancer Bioassays Conducted by the Ramazzini Institute

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Supplemental Material, Table S1. RI Control Group Rates for Lymphoma/Leukemia

Chemical	Male Incidence	Male Rate	Female Incidence	Female Rate	Source
1988-1989 publications					
Vinyl chloride, Vinylidene chloride & Acrylonitrile			2/60	3.33	(Cotti et al. 1988; Maltoni et al. 1988a; Maltoni and Cotti 1988)
Vinyl chloride, Vinylidene chloride & Acrylonitrile	12/158	7.59	1/149	0.67	(Cotti et al. 1988; Maltoni et al. 1988a; Maltoni and Cotti 1988)
Styrene (inhal)	3/60	5.00	3/60	5.00	(Conti et al. 1988)
Styrene (gavage)	0/40	0.00	1/40	2.50	(Conti et al. 1988)
Styrene (ip)	3/40	7.50	0/40	0.00	(Conti et al. 1988)
Styrene (sc)	1/40	2.50	1/40	2.50	(Conti et al. 1988)
Styrene oxide (gavage)	2/40	5.00	1/40	2.50	(Conti et al. 1988)
p-Methylstyrene	2/30	6.67	2/30	6.67	(Conti et al. 1988)
p-Methylstyrene	4/60	6.67	14/60	23.33	(Conti et al. 1988)
Propylene(inhal)	2/120	1.67	4/120	3.33	(Ciliberti et al. 1988)
FC11 & FC12	9/150	6.00	8/150	5.33	(Maltoni et al. 1988d)
FC22	5/60	8.33	1/60	1.67	(Maltoni et al. 1988d)
Trichloroethylene (8 wk)	17/90	18.89	8/90	8.89	(Maltoni et al. 1988c)
Trichloroethylene (104 wk)	9/135	6.67	7/145	4.83	(Maltoni et al. 1988c)
Acrylonitrile (BT 203)	4/75	5.30	3/75	4.00	(Maltoni et al. 1988a)
Acrylonitrile (BT 201)	0/30	0.00	0/30	0.00	(Maltoni et al. 1988a)
Methylene chloride (olive oil)	3/50	6.00	1/50	2.00	(Maltoni et al. 1988b)
Methylene chloride (none)	2/20	10.00	0/26	0.00	(Maltoni et al. 1988b)
Zeolites (ip)	3/20	15.00	2/20	10.00	(Maltoni and Minardi 1988)
Benzene (BT 901)	0/30	0.00	1/30	3.33	(Maltoni et al. 1989)
Benzene (BT 902)	3/50	6.00	1/50	2.00	(Maltoni et al. 1989)
Formaldehyde	8/100	8.00	7/100	7.00	(Soffritti et al. 1989; Soffritti et al. 2002b)
Overall mean (95% CI) [a]		5.9 (4.1, 7.9)		4.5 (3.1, 6.1)	
1995-1999 publications					
MTBE	10/60	16.67	2/60	3.30	(Belpoggi et al. 1995; Belpoggi et al. 1997)
Chlorine	4/50	8.00	0/50	0.00	(Soffritti et al. 1997)
Toluene & Xylene	5/50	10.00	3/50	6.00	(Maltoni et al. 1997)
Toluene & Xylene	3/50	6.00	1/50	2.00	(Maltoni et al. 1997)
Tamoxifen	14/100	14.00	9/100	9.00	(Maltoni et al. 1997)
Tamoxifen			13/150	8.67	(Maltoni et al. 1997)
Tamoxifen			12/139	8.63	(Maltoni et al. 1997)
ETBE	3/60	5.00	3/60	5.00	(Belpoggi et al. 1999)
Overall mean (95% CI) [a]		10.5 (7.1, 14.4)		6.0 (3.8, 8.7)	
2002-2006 publications					
Methanol	28/100	28.00	13/100	13.00	(Soffritti et al. 2002a)
Ethanol breeders	35/110	31.82	17/110	15.45	(Soffritti et al. 2002a)
Ethanol offspring	8/49	16.33	39/277	14.08	(Soffritti et al. 2002a)
Acetaldehyde	6/50	12.00	2/50	4.00	(Soffritti et al. 2002b)
TAME& DIPE	17/100	17.00	7/100	7.00	(Belpoggi et al. 2002b)
Mancozeb	16/75	21.30	11/75	14.67	(Belpoggi et al. 2002a)
Vinyl acetate breeders	0/14	0.00	8/37	21.62	(Minardi et al. 2002)
Vinyl acetate offspring	13/107	12.15	11/99	11.11	(Minardi et al. 2002)
Aspartame	31/150	20.67	13/150	8.67	(Soffritti et al. 2005; Soffritti et al. 2006)
Coca-Cola breeders	51/235	13.19	11/55	20.00	(Belpoggi et al. 2006)
Coca-Cola offspring	62/291	21.31	39/277	14.08	(Belpoggi et al. 2006)
Overall mean (95% CI) [a]		20.0 (16.4, 23.8)		12.7 (10.4, 15.3)	

Source: Adapted from Roderick and Turnbull (2007)

[a] Overall mean estimates assume arc sin transformation of incidence is normally distributed across historical controls. The method of moments was applied to transformed rates to calculate the overall mean, SE, and confidence limits using 1.96 as the multiple of the SE (Hayes 2001). These estimates were then transformed back to rates.

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