

On line Supplementary Tables

Table S1: Cut points for tertiles of cumulative incidents per person-year* used in RMR and RIR analyses

		All Incidents	All Fires	Structural Fires	Landscape Fires	Vehicle Fires
Full-time N=12,043	Tertile 1	>0 - 383	>0 - 220	>0 - 85	>0 - 40	>0 - 24
	Tertile 2	>383 - 1053	>220 - 576	>85 - 219	>40 - 143	>24 - 73
	Tertile 3	>1053	>576	>219	>143	>73
Part-time paid N=7,681	Tertile 1	>0 - 46	>0 - 31	>0 - 9	>0 - 11	>0 - 2.2
	Tertile 2	>46 - 210	>31 - 158	>9 - 45	>11 - 61	>2.2 - 14.7
	Tertile 3	>210	>158	>45	>61	>14.7

Table S2: Number of firefighters and person years accumulated in each tertile used in RMR and RIR analyses.

		All Incidents		All Fires		Structural Fires		Landscape Fires		Vehicle Fires	
		N*	pyrs	N*	pyrs	N*	pyrs	N*	pyrs	N*	pyrs
Full-time N=12,043	Tertile 1	7,380	44,140	7,593	43,977	7,653	44,046	6,955	44,178	7,372	44,092
	Tertile 2	6,611	46,213	6,753	46,351	7,142	46,234	6,253	46,130	6,443	46,181
	Tertile 3	5,020	46,028	4,720	46,053	4,404	46,101	4,611	46,074	4,448	46,109
		19,011	136,381	19,066	136,381	14,799	136,381	17,819	136,382	18,263	136,382
Part-time paid N=7,681	Tertile 1	4,957	19,418	4,836	19,279	4,881	19,016	4,708	19,185	4,678	19,520
	Tertile 2	4,203	21,371	4,097	21,516	4,214	21,608	3,998	21,614	4,030	21,257
	Tertile 3	2,584	21,434	2,538	21,429	2,620	21,599	2,531	21,424	2,574	21,446
		62,223	11,471	62,224	11,715	62,223	11,237	62,223	11,282	62,223	62,223

* cohort members move up tertiles during follow-up and can therefore contribute person years to more than one tertile

Table S3: Standardised cancer Incidence Ratios and 95% confidence intervals for full-time firefighters to 31/12/2010 by duration of employment compared to the Australian population

Cancer Categories	> 3 months to 10 years			10 to 20 years			20+ years		
	O	E	SMR (95%CI)	O	E	SMR (95%CI)	O	E	SMR (95%CI)
All Malignancies	138	131.18	1.05 (0.88 - 1.24)	196	184.88	1.06 (0.92 - 1.22)	866	795.93	1.09 (1.02 - 1.16)
Lip, Oral Cavity & Pharynx	9	8.62	1.04 (0.48 - 1.98)	12	12.68	0.95 (0.49 - 1.65)	34	36.28	0.94 (0.65 - 1.31)
Lip	6	4.08	1.47 (0.54 - 3.20)	5	5.29	0.95 (0.31 - 2.21)	12	11.17	1.07 (0.56 - 1.88)
Digestive Organs	20	20.64	0.97 (0.59 - 1.50)	27	34.84	0.77 (0.51 - 1.13)	183	172.91	1.06 (0.91 - 1.22)
Oesophagus	0	1.35	-	3	2.34	1.28 (0.26 - 3.75)	9	11.98	0.75 (0.34 - 1.43)
Stomach	1	2.24	0.45 (0.01 - 2.49)	1	3.90	0.26 (0.01 - 1.43)	22	18.23	1.21 (0.76 - 1.83)
Colorectal	14	12.72	1.10 (0.60 - 1.85)	20	21.46	0.93 (0.57 - 1.44)	123	109.43	1.12 (0.93 - 1.34)
Colon	7	6.84	1.02 (0.41 - 2.11)	12	11.67	1.03 (0.53 - 1.80)	73	62.41	1.17 (0.92 - 1.47)
Rectum	6	4.37	1.37 (0.50 - 2.99)	7	7.25	0.97 (0.39 - 1.99)	42	34.45	1.22 (0.88 - 1.65)
Liver	1	1.66	0.60 (0.02 - 3.35)	0	2.63	-	7	10.90	0.64 (0.26 - 1.32)
Pancreas	3	1.72	1.75 (0.36 - 5.11)	2	2.98	0.67 (0.08 - 2.43)	17	15.71	1.08 (0.63 - 1.73)
Respiratory	9	8.59	1.05 (0.48 - 1.99)	15	15.82	0.95 (0.53 - 1.56)	75	97.80	0.77 (0.60 - 0.96)
Larynx	1	0.95	1.05 (0.03 - 5.85)	3	1.82	1.65 (0.34 - 4.81)	7	9.88	0.71 (0.28 - 1.46)
Lung	8	7.00	1.14 (0.49 - 2.25)	11	13.2	0.83 (0.42 - 1.49)	66	85.74	0.77 (0.60 - 0.98)
Melanoma	35	26.28	1.33 (0.93 - 1.85)	50	33.27	1.50 (1.12 - 1.98)	122	83.36	1.46 (1.22 - 1.75)
Mesothelioma	3	0.52	5.82 (1.20 - 17.00)	2	1.00	2.01 (0.24 - 7.25)	6	6.74	0.89 (0.33 - 1.94)
Male Reproductive	40	29.31	1.36 (0.98 - 1.86)	37	37.82	0.98 (0.69 - 1.35)	277	228.58	1.21 (1.07 - 1.36)
Prostate	23	18.24	1.26 (0.80 - 1.89)	30	29.74	1.01 (0.68 - 1.44)	269	213.9	1.26 (1.11 - 1.42)
Testis	17	10.33	1.65 (0.96 - 2.63)	7	7.05	0.99 (0.40 - 2.05)	7	3.78	1.85 (0.74 - 3.81)
Urinary tract	2	6.33	0.32 (0.04 - 1.14)	12	10.55	1.14 (0.59 - 1.99)	45	47.55	0.95 (0.69 - 1.27)
Kidney	1	4.14	0.24 (0.01 - 1.35)	7	6.54	1.07 (0.43 - 2.21)	25	23.11	1.08 (0.70 - 1.60)
Bladder	1	1.93	0.52 (0.01 - 2.88)	4	3.52	1.14 (0.31 - 2.91)	18	21.54	0.84 (0.50 - 1.32)
Brain & Other CNS	3	4.22	0.71 (0.15 - 2.08)	4	4.94	0.81 (0.22 - 2.07)	10	12.51	0.80 (0.38 - 1.47)
Brain	3	4.00	0.75 (0.15 - 2.19)	4	4.69	0.85 (0.23 - 2.18)	9	12.06	0.75 (0.34 - 1.42)
Thyroid & Other Endocrine	3	2.94	1.02 (0.21 - 2.98)	6	3.21	1.87 (0.69 - 4.06)	4	5.74	0.70 (0.19 - 1.78)
Thyroid	3	2.70	1.11 (0.23 - 3.25)	6	2.95	2.03 (0.75 - 4.43)	4	5.27	0.76 (0.21 - 1.94)
Unknown Site	2	2.38	0.84 (0.10 - 3.04)	4	4.15	0.96 (0.26 - 2.47)	21	20.59	1.02 (0.63 - 1.56)
Lympho-haematopoetic	10	17.14	0.58 (0.28 - 1.07)	22	21.94	1.00 (0.63 - 1.52)	75	74.17	1.01 (0.80 - 1.27)
Hodgkin Disease	1	2.39	0.42 (0.01 - 2.33)	2	1.80	1.11 (0.13 - 4.02)	3	2.29	1.31 (0.27 - 3.82)

Cancer Categories	> 3 months to 10 years			10 to 20 years			20+ years		
	O	E	SMR (95%CI)	O	E	SMR (95%CI)	O	E	SMR (95%CI)
Non-Hodgkin Lymphoma	5	7.42	0.67 (0.22 - 1.57)	9	10.07	0.89 (0.41 - 1.70)	31	30.11	1.03 (0.70 - 1.46)
Myeloma	1	1.16	0.86 (0.02 - 4.79)	1	2.05	0.49 (0.01 - 2.72)	13	9.80	1.33 (0.71 - 2.27)
Leukaemia	3	4.42	0.68 (0.14 - 1.98)	8	5.60	1.43 (0.62 - 2.82)	17	20.24	0.84 (0.49 - 1.34)
MDS	0	0.32	-	0	0.45	-	4	3.60	1.11 (0.30 - 2.84)
All Other Cancers	2	4.21	0.47 (0.06 - 1.71)	5	4.66	1.07 (0.35 - 2.51)	14	9.70	1.44 (0.79 - 2.42)
Male Breast	0	0.20	-	0	0.34	-	5	1.45	3.44 (1.12 - 8.04)

Table S4: Standardised cancer Incidence Ratios and 95% confidence intervals for part-time firefighters to 31/12/2010 by duration of employment compared to the Australian population

Cancer Categories	> 3 months to 10 years			10 to 20 years			20+ years		
	O	E	SIR (95%CI)	O	E	SIR (95%CI)	O	E	SIR (95%CI)
All Malignancies	144	134.86	1.07 (0.90 - 1.26)	114	99.40	1.15 (0.95 - 1.38)	223	202.45	1.10 (0.96 - 1.26)
Lip, Oral Cavity & Pharynx	11	9.21	1.19 (0.60 - 2.14)	6	5.93	1.01 (0.37 - 2.20)	4	8.29	0.48 (0.13 - 1.24)
Lip	8	4.06	1.97 (0.85 - 3.88)	2	2.06	0.97 (0.12 - 3.50)	1	2.46	0.41 (0.01 - 2.26)
Digestive Organs	25	22.29	1.12 (0.73 - 1.66)	17	19.78	0.86 (0.50 - 1.38)	43	43.26	0.99 (0.72 - 1.34)
Oesophagus	1	1.49	0.67 (0.02 - 3.73)	1	1.40	0.72 (0.02 - 3.99)	3	2.98	1.01 (0.21 - 2.94)
Stomach	3	2.35	1.28 (0.26 - 3.73)	3	2.01	1.49 (0.31 - 4.36)	3	4.33	0.69 (0.14 - 2.02)
Colorectal	16	13.62	1.17 (0.67 - 1.91)	11	12.27	0.90 (0.45 - 1.60)	30	27.64	1.09 (0.73 - 1.55)
Colon	8	7.17	1.12 (0.48 - 2.20)	4	6.56	0.61 (0.17 - 1.56)	15	15.77	0.95 (0.53 - 1.57)
Rectum	5	4.82	1.04 (0.34 - 2.42)	6	4.22	1.42 (0.52 - 3.09)	10	8.70	1.15 (0.55 - 2.11)
Liver	1	1.92	0.52 (0.01 - 2.91)	1	1.53	0.65 (0.02 - 3.64)	2	2.75	0.73 (0.09 - 2.63)
Pancreas	3	1.86	1.61 (0.33 - 4.71)	0	1.75	-	4	3.92	1.02 (0.28 - 2.61)
Respiratory	5	8.79	0.57 (0.18 - 1.33)	2	9.08	0.22 (0.03 - 0.80)	10	23.68	0.42 (0.20 - 0.78)
Larynx	0	1.00	-	0	1.06	-	1	2.34	0.43 (0.01 - 2.38)
Lung	4	7.13	0.56 (0.15 - 1.44)	2	7.66	0.26 (0.03 - 0.94)	9	20.84	0.43 (0.20 - 0.82)
Melanoma	36	26.85	1.34 (0.94 - 1.86)	15	14.86	1.01 (0.56 - 1.66)	36	20.23	1.78 (1.25 - 2.46)
Mesothelioma	1	0.50	2.00 (0.05 - 11.12)	1	0.62	1.62 (0.04 - 9.04)	2	1.78	1.12 (0.14 - 4.05)
Male Reproductive	32	28.80	1.11 (0.76 - 1.57)	47	25.42	1.85 (1.36 - 2.46)	86	64.11	1.34 (1.07 - 1.66)
Prostate	26	18.34	1.42 (0.93 - 2.08)	41	22.32	1.84 (1.32 - 2.49)	85	60.09	1.41 (1.13 - 1.75)
Testis	6	9.84	0.61 (0.22 - 1.33)	5	2.16	2.32 (0.75 - 5.41)	0	0.70	-
Urinary tract	4	6.86	0.58 (0.16 - 1.49)	9	5.62	1.60 (0.73 - 3.04)	12	11.48	1.05 (0.54 - 1.83)
Kidney	3	4.78	0.63 (0.13 - 1.83)	8	3.51	2.28 (0.98 - 4.49)	8	5.76	1.39 (0.60 - 2.73)
Bladder	1	1.81	0.55 (0.01 - 3.07)	1	1.85	0.54 (0.01 - 3.02)	3	5.02	0.60 (0.12 - 1.75)
Brain & Other CNS	4	4.24	0.94 (0.26 - 2.41)	3	2.19	1.37 (0.28 - 4.00)	6	2.97	2.02 (0.74 - 4.40)
Brain	3	4.02	0.75 (0.15 - 2.18)	3	2.10	1.43 (0.29 - 4.18)	6	2.87	2.09 (0.77 - 4.55)
Thyroid & Other Endocrine	2	3.25	0.62 (0.07 - 2.22)	2	1.39	1.44 (0.17 - 5.20)	3	1.34	2.24 (0.46 - 6.54)
Thyroid	2	3.00	0.67 (0.08 - 2.41)	2	1.29	1.56 (0.19 - 5.62)	3	1.23	2.44 (0.50 - 7.14)
Unknown Site	2	2.45	0.82 (0.10 - 2.95)	3	2.10	1.43 (0.29 - 4.17)	1	4.73	0.21 (0.01 - 1.18)
Lympho-haematopoetic	18	17.93	1.00 (0.60 - 1.59)	7	10.63	0.66 (0.26 - 1.36)	18	18.32	0.98 (0.58 - 1.55)
Hodgkin Disease	3	2.35	1.28 (0.26 - 3.73)	1	0.63	1.59 (0.04 - 8.84)	0	0.49	-

Cancer Categories	> 3 months to 10 years			10 to 20 years			20+ years		
	O	E	SIR (95%CI)	O	E	SIR (95%CI)	O	E	SIR (95%CI)
Non-Hodgkin Lymphoma	6	7.72	0.78 (0.29 - 1.69)	3	4.72	0.64 (0.13 - 1.86)	10	7.36	1.36 (0.65 - 2.50)
Myeloma	1	1.29	0.78 (0.02 - 4.33)	0	1.17	-	2	2.46	0.81 (0.10 - 2.94)
Leukaemia	7	4.61	1.52 (0.61 - 3.13)	3	2.75	1.09 (0.22 - 3.18)	5	4.96	1.01 (0.33 - 2.35)
MDS	0	0.33	-	0	0.29	-	0	0.98	-
All Other Cancers	4	3.69	1.08 (0.30 - 2.78)	2	1.77	1.13 (0.14 - 4.07)	2	2.27	0.88 (0.11 - 3.19)
Male Breast	1	0.21	4.68 (0.12 - 26.06)	0	0.18	-	0	0.36	-

Table S5: Standardised cancer Incidence Ratios and 95% confidence intervals for full-time firefighters to 31/12/2010 by era compared to the Australian population

Cancer Categories	Pre-1970			1970 - 1994			Post 1995		
	O	E	SIR (95%CI)	O	E	SIR (95%CI)	O	E	SIR (95%CI)
All Malignancies	56	529.16	1.07 (0.98 - 1.16)	545	506.09	1.08 (0.99 - 1.17)	97	85.79	1.13 (0.92 - 1.38)
Lip, Oral Cavity & Lip	27	21.25	1.27 (0.84 - 1.85)	24	31.32	0.77 (0.49 - 1.14)	4	5.55	0.72 (0.20 - 1.84)
	8	6.77	1.18 (0.51 - 2.33)	13	11.52	1.13 (0.60 - 1.93)	2	2.45	0.82 (0.10 - 2.95)
Digestive Organs	12	118.85	1.09 (0.91 - 1.29)	88	97.28	0.90 (0.73 - 1.11)	13	13.95	0.93 (0.50 - 1.59)
Oesophagus	8	7.99	1.00 (0.43 - 1.97)	4	6.86	0.58 (0.16 - 1.49)	0	0.94	-
Stomach	17	13.08	1.30 (0.76 - 2.08)	6	10.05	0.60 (0.22 - 1.30)	1	1.41	0.71 (0.02 - 3.96)
Colorectal	82	76.27	1.08 (0.86 - 1.33)	67	59.80	1.12 (0.87 - 1.42)	8	8.59	0.93 (0.40 - 1.84)
Colon	51	45.03	1.13 (0.84 - 1.49)	38	31.93	1.19 (0.84 - 1.63)	3	4.52	0.66 (0.14 - 1.94)
Rectum	26	22.68	1.15 (0.75 - 1.68)	25	20.68	1.21 (0.78 - 1.78)	4	3.07	1.30 (0.36 - 3.34)
Liver	6	6.35	0.95 (0.35 - 2.06)	1	7.81	0.13 (0.00 - 0.71)	1	1.19	0.84 (0.02 - 4.70)
Pancreas	12	10.81	1.11 (0.57 - 1.94)	7	8.58	0.82 (0.33 - 1.68)	3	1.17	2.57 (0.53 - 7.51)
Respiratory	61	73.75	0.83 (0.63 - 1.06)	34	43.80	0.78 (0.54 - 1.08)	5	5.40	0.93 (0.30 - 2.16)
Larynx	5	6.99	0.72 (0.23 - 1.67)	5	5.16	0.97 (0.31 - 2.26)	1	0.58	1.71 (0.04 - 9.53)
Lung	54	65.42	0.83 (0.62 - 1.08)	28	36.74	0.76 (0.51 - 1.10)	4	4.41	0.91 (0.25 - 2.32)
Melanoma	75	47.58	1.58 (1.24 - 1.98)	108	80.23	1.35 (1.10 - 1.63)	26	16.50	1.58 (1.03 - 2.31)
Mesothelioma	3	5.12	0.59 (0.12 - 1.71)	6	2.88	2.08 (0.76 - 4.53)	2	0.30	6.65 (0.81 - 24.02)
Male Reproductive	17	151.45	1.12 (0.96 - 1.30)	161	126.53	1.27 (1.08 - 1.48)	26	20.17	1.29 (0.84 - 1.89)
Prostate	16	141.63	1.19 (1.02 - 1.39)	141	109.14	1.29 (1.09 - 1.52)	15	13.16	1.14 (0.64 - 1.88)
Testis	0	1.16	-	20	13.70	1.46 (0.89 - 2.25)	11	6.61	1.66 (0.83 - 2.98)
Urinary tract	30	32.62	0.92 (0.62 - 1.31)	28	27.99	1.00 (0.66 - 1.45)	1	4.30	0.23 (0.01 - 1.30)
Kidney	17	13.51	1.26 (0.73 - 2.01)	15	17.52	0.86 (0.48 - 1.41)	1	3.06	0.33 (0.01 - 1.82)
Bladder	11	16.88	0.65 (0.33 - 1.17)	12	9.19	1.31 (0.67 - 2.28)	0	1.07	-
Brain & Other CNS	6	7.30	0.82 (0.30 - 1.79)	8	11.90	0.67 (0.29 - 1.32)	3	2.68	1.12 (0.23 - 3.27)
Brain	5	7.06	0.71 (0.23 - 1.65)	8	11.35	0.70 (0.30 - 1.39)	3	2.55	1.18 (0.24 - 3.44)
Thyroid & Other	2	2.55	0.78 (0.09 - 2.83)	7	7.32	0.96 (0.38 - 1.97)	4	2.17	1.85 (0.50 - 4.72)
Thyroid	2	2.29	0.87 (0.11 - 3.15)	7	6.74	1.04 (0.42 - 2.14)	4	2.01	1.99 (0.54 - 5.08)
Unknown Site	12	15.31	0.78 (0.40 - 1.37)	14	10.57	1.33 (0.72 - 2.22)	1	1.41	0.71 (0.02 - 3.94)
Lympho-haematopoietic	41	47.56	0.86 (0.62 - 1.17)	58	55.46	1.05 (0.79 - 1.35)	10	11.23	0.89 (0.43 - 1.64)
Hodgkin Disease	1	1.16	0.86 (0.02 - 4.81)	5	3.93	1.27 (0.41 - 2.97)	0	1.47	-

Cancer Categories	Pre-1970			1970 - 1994			Post 1995		
	O	E	SIR (95%CI)	O	E	SIR (95%CI)	O	E	SIR (95%CI)
Non-Hodgkin Lymphoma	15	18.30	0.82 (0.46 - 1.35)	25	25.00	1.00 (0.65 - 1.48)	7	4.73	1.48 (0.59 - 3.05)
Myeloma	9	6.53	1.38 (0.63 - 2.62)	5	5.80	0.86 (0.28 - 2.01)	1	0.78	1.27 (0.03 - 7.10)
Leukaemia	10	13.42	0.75 (0.36 - 1.37)	16	14.18	1.13 (0.64 - 1.83)	2	2.91	0.69 (0.08 - 2.48)
MDS	3	2.77	1.08 (0.22 - 3.16)	1	1.37	0.73 (0.02 - 4.06)	0	0.26	-
All Other Cancers	10	5.81	1.72 (0.83 - 3.17)	9	10.81	0.83 (0.38 - 1.58)	2	2.14	0.93 (0.11 - 3.38)
Male Breast	3	0.96	3.13 (0.64 - 9.14)	2	0.92	2.18 (0.26 - 7.89)	0	0.13	-

Table S6: Standardised cancer Incidence Ratios and 95% confidence intervals for part-time firefighters to 31/12/2010 by era compared to the Australian population

Cancer Categories	Pre-1970			1970 - 1994			Post 1995		
	O	E	SIR (95%CI)	O	E	SIR (95%CI)	O	E	SIR (95%CI)
All Malignancies	104	88.06	1.18 (0.96 - 1.43)	286	260.31	1.10 (0.98 - 1.23)	95	90.46	1.05 (0.85 - 1.28)
Lip, Oral Cavity & Pharynx	2	3.14	0.64 (0.08 - 2.30)	12	14.31	0.84 (0.43 - 1.47)	7	6.13	1.14 (0.46 - 2.35)
Lip	0	0.96	-	7	5.00	1.40 (0.56 - 2.88)	4	2.69	1.49 (0.41 - 3.81)
Digestive Organs	17	19.40	0.88 (0.51 - 1.40)	56	51.74	1.08 (0.82 - 1.41)	12	14.53	0.83 (0.43 - 1.44)
Oesophagus	2	1.29	1.55 (0.19 - 5.59)	3	3.63	0.83 (0.17 - 2.42)	0	0.97	-
Stomach	2	2.00	1.00 (0.12 - 3.62)	5	5.24	0.95 (0.31 - 2.23)	2	1.49	1.34 (0.16 - 4.85)
Colorectal	9	12.55	0.72 (0.33 - 1.36)	39	32.34	1.21 (0.86 - 1.65)	9	8.85	1.02 (0.47 - 1.93)
Colon	5	7.39	0.68 (0.22 - 1.58)	17	17.61	0.97 (0.56 - 1.55)	5	4.61	1.08 (0.35 - 2.53)
Rectum	2	3.74	0.53 (0.06 - 1.93)	16	10.89	1.47 (0.84 - 2.39)	3	3.18	0.94 (0.19 - 2.75)
Liver	0	1.12	-	4	3.80	1.05 (0.29 - 2.69)	0	1.31	-
Pancreas	3	1.75	1.71 (0.35 - 5.00)	4	4.60	0.87 (0.24 - 2.23)	0	1.21	-
Respiratory	1	11.39	0.09 (0.00 - 0.49)	15	24.82	0.60 (0.34 - 1.00)	1	5.46	0.18 (0.00 - 1.02)
Larynx	0	1.03	-	1	2.78	0.36 (0.01 - 2.00)	0	0.61	-
Lung	1	10.16	0.10 (0.00 - 0.55)	13	21.17	0.61 (0.33 - 1.05)	1	4.40	0.23 (0.01 - 1.27)
Melanoma	18	7.74	2.32 (1.38 - 3.67)	45	36.49	1.23 (0.90 - 1.65)	26	18.15	1.43 (0.94 - 2.10)
Mesothelioma	1	0.87	1.14 (0.03 - 6.37)	2	1.75	1.15 (0.14 - 4.14)	1	0.29	3.49 (0.09 - 19.46)
Male Reproductive	37	27.90	1.33 (0.93 - 1.83)	101	71.12	1.42 (1.16 - 1.73)	29	19.76	1.47 (0.98 - 2.11)
Prostate	37	25.91	1.43 (1.01 - 1.97)	95	63.14	1.50 (1.22 - 1.84)	21	11.96	1.76 (1.09 - 2.68)
Testis	0	0.13	-	4	5.37	0.74 (0.20 - 1.91)	8	7.36	1.09 (0.47 - 2.14)
Urinary tract	7	5.10	1.37 (0.55 - 2.83)	16	14.44	1.11 (0.63 - 1.80)	2	4.53	0.44 (0.05 - 1.60)
Kidney	4	2.27	1.77 (0.48 - 4.52)	13	8.59	1.51 (0.81 - 2.59)	2	3.28	0.61 (0.07 - 2.21)
Bladder	2	2.48	0.81 (0.10 - 2.91)	3	5.13	0.58 (0.12 - 1.71)	0	1.09	-
Brain & Other CNS	5	1.14	4.40 (1.43 - 10.26)	6	5.40	1.11 (0.41 - 2.42)	2	2.94	0.68 (0.08 - 2.46)
Brain	5	1.10	4.54 (1.47 - 10.59)	6	5.17	1.16 (0.43 - 2.53)	1	2.79	0.36 (0.01 - 2.00)
Thyroid & Other Endocrine	3	0.43	7.02 (1.45 - 20.51)	4	3.22	1.24 (0.34 - 3.18)	0	2.38	-
Thyroid	3	0.39	7.78 (1.60 - 22.74)	4	2.97	1.35 (0.37 - 3.45)	0	2.21	-
Unknown Site	1	2.25	0.44 (0.01 - 2.48)	4	5.55	0.72 (0.20 - 1.84)	1	1.51	0.66 (0.02 - 3.68)
Lympho-haematopoietic	11	7.80	1.41 (0.70 - 2.52)	21	27.00	0.78 (0.48 - 1.19)	11	12.36	0.89 (0.44 - 1.59)

Cancer Categories	Pre-1970			1970 - 1994			Post 1995		
	O	E	SIR (95%CI)	O	E	SIR (95%CI)	O	E	SIR (95%CI)
Hodgkin Disease	0	0.16	-	3	1.59	1.89 (0.39 - 5.53)	1	1.77	0.57 (0.01 - 3.15)
Non-Hodgkin Lymphoma	5	2.98	1.68 (0.54 - 3.91)	11	11.74	0.94 (0.47 - 1.68)	3	5.21	0.58 (0.12 - 1.68)
Myeloma	2	1.07	1.86 (0.23 - 6.73)	0	3.04	-	1	0.83	1.21 (0.03 - 6.74)
Leukaemia	4	2.15	1.86 (0.51 - 4.75)	6	7.06	0.85 (0.31 - 1.85)	5	3.18	1.57 (0.51 - 3.66)
MDS	0	0.49	-	0	0.86	-	0	0.24	-
All Other Cancers	1	0.90	1.12 (0.03 - 6.21)	4	4.48	0.89 (0.24 - 2.29)	3	2.41	1.24 (0.26 - 3.64)
Male Breast	0	0.16	-	1	0.47	2.14 (0.05 - 11.92)	0	0.14	-

Table S7: Relative cancer Incident Ratios and 95% confidence intervals for part-time firefighters to 31/12/2010 by number of incidents and incident types in tertiles (adjusted for age and calendar period)

Cancer Categories	Groups	O	All Incidents	O	All Fire Incidents	O	Structural Fires	O	Landscape Fires	O	Vehicle Fires
All Malignancies	Tertile 1	39	Ref	39	Ref	40	Ref	38	Ref	50	Ref
	Tertile 2	47	0.82 (0.53 - 1.26)	46	0.80 (0.52 - 1.24)	39	0.72 (0.46 - 1.12)	46	0.88 (0.57 - 1.36)	40	0.71 (0.47 - 1.08)
	Tertile 3	75	0.64 (0.42 - 0.98)	76	0.69 (0.46 - 1.04)	82	0.70 (0.46 - 1.05)	77	0.79 (0.52 - 1.18)	71	0.62 (0.42 - 0.90)
	Trend test		P = 0.04		P = 0.08		P = 0.11		P = 0.24		P = 0.01
Lip, Oral Cavity & Pharynx	Tertile 1	3	Ref	3	Ref	3	Ref	3	Ref	3	Ref
	Tertile 2	2	0.71 (0.12 - 4.30)	2	0.70 (0.12 - 4.26)	1	0.35 (0.04 - 3.37)	0	-	0	-
	Tertile 3	1	0.40 (0.04 - 4.15)	1	0.39 (0.04 - 4.07)	2	0.84 (0.13 - 5.55)	3	1.29 (0.24 - 6.93)	3	1.29 (0.24 - 6.83)
	Trend test		P = 0.43		P = 0.42		P = 0.77		0.83		P = 0.83
Digestive Organs	Tertile 1	7	Ref	5	Ref	6	Ref	4	Ref	7	Ref
	Tertile 2	4	0.42 (0.12 - 1.44)	5	0.73 (0.21 - 2.53)	4	0.50 (0.14 - 1.77)	7	1.26 (0.37 - 4.32)	4	0.47 (0.14 - 1.60)
	Tertile 3	16	1.17 (0.47 - 2.89)	17	1.78 (0.65 - 4.89)	17	1.44 (0.56 - 3.71)	16	2.11 (0.69 - 6.38)	16	1.33 (0.54 - 3.26)
	Trend test		P = 0.48		P = 0.14		P = 0.25		P = 0.13		P = 0.35
Colorectal	Tertile 1	4	Ref	3	Ref	4	Ref	2	Ref	4	Ref
	Tertile 2	3	0.57 (0.13 - 2.58)	3	0.76 (0.15 - 3.77)	3	0.58 (0.13 - 2.60)	5	1.87 (0.36 - 9.66)	3	0.63 (0.14 - 2.81)
	Tertile 3	12	1.65 (0.52 - 5.25)	13	2.44 (0.68 - 8.78)	12	1.62 (0.51 - 5.17)	12	3.38 (0.74 - 15.41)	12	1.84 (0.58 - 5.80)
	Trend test		P = 0.24		P = 0.08		P = 0.26		P = 0.08		P = 0.18
Melanoma	Tertile 1	9	Ref	9	Ref	10	Ref	10	Ref	9	Ref
	Tertile 2	7	0.64 (0.23 - 1.73)	9	0.80 (0.31 - 2.03)	7	0.58 (0.22 - 1.53)	7	0.58 (0.22 - 1.53)	9	0.93 (0.37 - 2.34)
	Tertile 3	14	0.90 (0.35 - 2.26)	12	0.75 (0.29 - 1.92)	13	0.71 (0.28 - 1.77)	13	0.76 (0.31 - 1.85)	12	0.85 (0.34 - 2.11)
	Trend test		P = 0.89		P = 0.55		P = 0.49		P = 0.59		P = 0.72
Male Reproductive	Tertile 1	10	Ref	14	Ref	12	Ref	13	Ref	19	Ref
	Tertile 2	25	1.51 (0.72 - 3.18)	21	0.90 (0.46 - 1.79)	20	1.12 (0.55 - 2.31)	22	1.11 (0.56 - 2.21)	21	0.95 (0.51 - 1.78)
	Tertile 3	33	0.83 (0.40 - 1.73)	33	0.61 (0.32 - 1.18)	36	0.75 (0.38 - 1.48)	33	0.75 (0.39 - 1.45)	28	0.50 (0.28 - 0.91)
	Trend test		P = 0.24		P = 0.10		P = 0.26		P = 0.26		P = 0.01
Prostate	Tertile 1	7	Ref	11	Ref	9	Ref	10	Ref	16	Ref
	Tertile 2	24	2.30 (0.99 - 5.36)	20	1.21 (0.58 - 2.54)	19	1.54 (0.70 - 3.42)	21	1.41 (0.66 - 3.00)	20	1.08 (0.56 - 2.09)
	Tertile 3	31	1.37 (0.60 - 3.14)	31	0.90 (0.44 - 1.80)	34	1.17 (0.56 - 2.48)	31	1.05 (0.51 - 2.16)	26	0.66 (0.35 - 1.23)
	Trend test		P = 0.97		P = 0.55		P = 0.95		P = 0.83		P = 0.13
Lympho-haematopoetic	Tertile 1	5	Ref	3	Ref	4	Ref	4	Ref	8	Ref
	Tertile 2	5	0.76 (0.22 - 2.65)	6	1.52 (0.38 - 6.11)	4	0.78 (0.19 - 3.12)	5	0.93 (0.25 - 3.49)	1	0.10 (0.01 - 0.83)
	Tertile 3	4	0.44 (0.11 - 1.66)	5	0.94 (0.22 - 4.04)	6	0.82 (0.23 - 3.01)	5	0.70 (0.18 - 2.68)	5	0.38 (0.12 - 1.18)
	Trend test		P = 0.22		P = 0.83		P = 0.80		P = 0.59		P = 0.09