Cancer risk in 680 000 people exposed to computed tomography scans in childhood or adolescence: data linkage study of 11 million Australians

John D Mathews et al *BMJ* 2013;346:f2360

Web appendix

Web table A. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and absolute excess incidence rates (EIR) per 100,000 person-years among exposed persons by type of cancer, based on a 5 year lag period.

Web table B. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and absolute excess incidence rate (EIR) per 100,000 person-years among exposed persons by type of cancer, based on a 10 year lag period.

Web table C Number of cancers in exposed persons, and incidence rate ratios (IRR) exposed versus unexposed, for selected cancers by year of first CT scan and years since first exposure, based on a 1 year lag period.

Web table D. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and absolute excess incidence rates (EIR) per 100,000 person-years by type of cancer and sex, based on a 1 year lag period.

Web table E. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and excess incidence rates (EIR) per 100,000 person-years by type of cancer and socioeconomic status (SES), based on a 1 year lag period.

Web figure A. Incidence rate ratios (IRR), exposed versus unexposed, for cancers of all types and 95% confidence intervals(CI) by number of CT scans, based on 5 and 10 year lag periods.

Web figure B. Incidence rate ratios, exposed versus unexposed, for selected cancers by years since exposure and calendar period of first exposure, based on a 1 year lag period.

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Web figure D. Incidence rate ratios (IRR), exposed versus unexposed, and 95% confidence intervals (CI) by site of CT scan and type of cancer, based on a 5 year lag period.

Web figure E. Incidence rate ratios (IRR), exposed versus unexposed, for all cancers except brain cancer after brain CT and 95% confidence intervals (CI) based on a 1 year lag period, by number of CT scans

Web table A. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and absolute excess incidence rates (EIR) per 100,000 person-years among exposed persons by type of cancer, based on a 5 year lag period.

Cancer type (ICD-10 code) *	Number of cancers in exposed	IRR † (95% CI) ‡	Number of excess cancers in exposed †	EIR † (95% CI) ‡
Mouth and pharynx (C00-14)	64	0.97 (0.75 to 1.24)	-2.3	-0.06 (-0.45 to 0.34)
Digestive organs (C15-26)	121	1.22 (1.02 to 1.47)	21.7	0.55 (0.00 to 1.09)
Respiratory organs (C30-39)	36	1.22 (0.87 to 1.71)	6.5	0.16 (-0.13 to 0.46)
Bone (C40-41)	48	1.41 (1.05 to 1.90)	14.3	0.36 (0.02 to 0.70)
Melanoma (C43-44)	656	1.14 (1.05 to 1.23)	80.0	2.01 (0.75 to 3.28)
Soft tissue (C45-49)	69	1.52 (1.19 to 1.94)	23.3	0.59 (0.18 to 1.00)
Breast (C50)	142	1.00 (0.85 to 1.18)	0.2	0.00 (-0.58 to 0.59)
Female genital organs (C51-58)	152	1.24 (1.05 to 1.46)	29.8	0.75 (0.14 to 1.36)
Male genital organs (C60-63)	230	1.11 (0.97 to 1.27)	22.5	0.57 (-0.18 to 1.31)
Urinary tract (C64-C68)	38	1.24 (0.89 to 1.73)	7.8	0.20 (-0.11 to 0.50)
Brain (C69-72)	162	1.75 (1.49 to 2.06)	68.2	1.72 (1.09 to 2.35)
Brain after brain CT	123	2.03 (1.69 to 2.43)	61.7	2.35 (1.52 to 3.18)
Brain after other CT	39	1.20 (0.87 to 1.65)	6.6	0.49 (-0.42 to 1.39)
Thyroid (C73-75)	212	1.43 (1.24 to 1.65)	63.1	1.59 (0.87 to 2.31)
Ill-defined and unspecified (C76-80)	18	1.38 (0.85 to 2.23)	5.0	0.13 (-0.08 to 0.34)
All solid cancers (C00-80)	1,948	1.21 (1.16 to 1.27)	340.1	8.56 (6.38 to 10.74)
Hodgkin lymphoma (C81)	143	1.08 (0.91 to 1.28)	10.2	0.26 (-0.33 to 0.85)
Other lymphoma (C82-83)	76	1.03 (0.81 to 1.29)	1.7	0.04 (-0.39 to 0.47)
Other lymphoid tumours (C84-90)	47	1.67 (1.23 to 2.25)	18.9	0.48 (0.14 to 0.82)
Leukaemias and myelodysplasias (C91-96, D45-46, D47.1, D47.3)	151	1.25 (1.06 to 1.47)	30.7	0.77 (0.17 to 1.38)
All leukaemias (C91-96)	123	1.20 (1.00 to 1.44)	20.6	0.52 (-0.03 to 1.07)
Lymphoid leukaemia (C91)	49	1.20 (0.90 to 1.60)	8.3	0.21 (-0.14 to 0.55)
Myeloid and other leukaemias (C92-96)	74	1.19 (0.94 to 1.51)	12.4	0.31 (-0.11 to 0.74)
Myelodysplasias (D45-D46, D47.1, D47.3)	28	1.54 (1.05 to 2.28)	10.1	0.25 (-0.01 to 0.51)
All lymphoid and haematopoietic (C81-96, D45-46, D47.1, D47.3)	417	1.17 (1.06 to 1.29)	61.5	1.55 (0.54 to 2.56)
All cancers	2,365	1.21 (1.16 to 1.26)	401.6	10.11 (7.71 to 12.51)
All solid cancers, except brain cancer after brain CT	1,825	1.18 (1.13 to 1.24)	278.4	7.01 (4.83 to 9.19)
All cancers, except brain cancer after brain CT	2,242	1.18 (1.13 to 1.23)	339.9	8.56 (6.16 to 10.96)

* ICD codes most accurately reflect the cancer types in this and subsequent tables. The names used refer to the commonest cancer types in each rubric. For example, rubric C69-72 refers to eye and other CNS as well as brain; rubric C73-75 refers to thyroid and other endocrine. C97 is not included in this table, as it is not used for cancer incidence registrations.

† Compared with rates in unexposed persons after stratification for age, sex, and year of birth.

‡ 95% confidence interval.

Web table B. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and absolute excess incidence rate (EIR) per 100,000 person-years among exposed persons by type of cancer, based on a 10 year lag period.

Cancer type (ICD-10 code) *	Number of cancers in exposed	IRR † (95% CI) ‡	Number of excess cancers in exposed †	EIR † (95% CI) ‡
Mouth and pharynx (C00-14)	43	1.01 (0.75 to 1.37)	0.4	0.02 (-0.69 to 0.73)
Digestive organs (C15-26)	79	1.13 (0.90 to 1.42)	8.9	0.49 (-0.47 to 1.46)
Respiratory organs (C30-39)	23	1.22 (0.80 to 1.86)	4.0	0.22 (-0.30 to 0.74)
Bone (C40-41)	20	1.49 (0.95 to 2.34)	6.8	0.38 (-0.11 to 0.86)
Melanoma (C43-44)	414	1.19 (1.08 to 1.32)	67.0	3.70 (1.50 to 5.91)
Soft tissue (C45-49)	40	1.76 (1.27 to 2.42)	17.3	0.95 (0.27 to 1.64)
Breast (C50)	120	0.99 (0.82 to 1.18)	-1.9	-0.10 (-1.29 to 1.08)
Female genital organs (C51-58)	100	1.19 (0.97 to 1.46)	16.1	0.89 (-0.19 to 1.97)
Male genital organs (C60-63)	144	1.19 (1.01 to 1.41)	23.0	1.27 (-0.03 to 2.57)
Urinary tract (C64-C68)	27	1.23 (0.83 to 1.81)	5.1	0.28 (-0.28 to 0.84)
Brain (C69-72)	79	1.54 (1.23 to 1.93)	27.5	1.52 (0.56 to 2.49)
Brain after brain CT	61	1.74 (1.35 to 2.25)	26.0	2.06 (0.85 to 3.27)
Brain after other CT	18	1.10 (0.69 to 1.75)	1.6	0.28 (-1.24 to 1.80)
Thyroid (C73-75)	118	1.28 (1.06 to 1.54)	25.8	1.43 (0.25 to 2.60)
Ill-defined and unspecified (C76-80)	12	1.45 (0.81 to 2.59)	3.7	0.20 (-0.17 to 0.58)
All solid cancers (C00-80)	1,219	1.20 (1.13 to 1.27)	203.7	11.26 (7.48 to 15.04)
Hodgkin lymphoma (C81)	59	0.96 (0.74 to 1.25)	-2.8	-0.16 (-0.99 to 0.68)
Other lymphoma (C82-83)	36	0.85 (0.61 to 1.19)	-6.1	-0.34 (-0.99 to 0.31)
Other lymphoid tumours (C84-90)	25	1.50 (1.00 to 2.25)	8.2	0.45 (-0.09 to 1.00)
Leukaemias and myelodysplasias (C91-96, D45-46, D47.1, D47.3)	66	1.09 (0.85 to 1.40)	5.8	0.32 (-0.56 to 1.20)
All leukaemias (C91-96)	51	1.06 (0.80 to 1.41)	3.1	0.17 (-0.60 to 0.95)
Lymphoid leukaemia (C91)	10	0.62 (0.33 to 1.16)	-6.1	-0.34 (-0.68 to 0.00)
Myeloid and other leukaemias (C92-96)	41	1.29 (0.94 to 1.76)	9.3	0.51 (-0.18 to 1.21)
Myelodysplasias (D45-D46, D47.1, D47.3)	15	1.22 (0.72 to 2.05)	2.7	0.15 (-0.27 to 0.57)
All lymphoid and haematopoietic (C81-96, D45-46, D47.1, D47.3)	186	1.03 (0.89 to 1.19)	5.2	0.29 (-1.19 to 1.76)
All cancers	1,405	1.18 (1.11 to 1.24)	208.9	11.55 (7.49 to 15.61)
All solid cancers, except brain cancer after brain CT	1,158	1.18 (1.11 to 1.25)	177.7	9.82 (6.04 to 13.61)
All cancers, except brain cancer after brain CT	1,344	1.16 (1.10 to 1.22)	182.9	10.11 (6.05 to 14.17)

* ICD codes most accurately reflect the cancer types in this and subsequent tables. The names used refer to the commonest cancer types in each rubric. For example, rubric C69-72 refers to eye and other CNS as well as brain; rubric C73-75 refers to thyroid and other endocrine. C97 is not included in this table, as it is not used for cancer incidence registrations.

† Compared with rates in unexposed persons after stratification for age, sex, and year of birth.

‡ 95% confidence interval.

Web table C. Number of cancers in exposed persons, and incidence rate ratios (IRR) exposed versus unexposed, for selected cancers by year of first CT scan and years since first exposure, based on a 1 year lag period.

Cancer type	Years since first exposure	Year of first CT scan			
		1985-89	1990-94	1995-99	2000-05
Brain cancer after brain CT	1-4 years	32* 5.58 (3.95 to 7.89) †	19 2.95 (1.88 to 4.62)	19 2.68 (1.71 to 4.20)	17 2.22 (1.38 to 3.57)
	5-9 years	34 4.60 (3.29 to 6.44)	12 1.44 (0.82 to 2.54)	15 1.76 (1.06 to 2.91)	1 0.61 (0.09 to 4.35)
	10-14 years	14 1.58 (0.93 to 2.67)	19 2.00 (1.28 to 3.14)	3 1.74 (0.56 to 5.40)	- -
	15+ years	21 1.70 (1.11 to 2.60)	4 2.01 (0.75 to 5.35)	- -	- -
	All years since first exposure	101 2.94 (2.42 to 3.57)	54 2.06 (1.58 to 2.69)	37 2.13 (1.54 to 2.94)	18 1.94 (1.22 to 3.07)
	2p for trend in IRR with year of first CT scan after accounting for years since first exposure: <0.001				
All solid cancers, except brain cancer after brain CT	1-4 years	68 1.31 (1.04 to 1.67)	101 1.21 (1.00 to 1.48)	146 1.30 (1.11 to 1.53)	157 1.24 (1.06 to 1.46)
	5-9 years	144 1.16 (0.99 to 1.37)	229 1.27 (1.11 to 1.44)	239 1.09 (0.96 to 1.24)	55 1.29 (0.99 to 1.68)
	10-14 years	245 1.16 (1.02 to 1.32)	308 1.11 (1.00 to 1.25)	68 1.17 (0.92 to 1.48)	- -
	15+ years	452 1.24 (1.13 to 1.37)	85 1.25 (1.01 to 1.54)	- -	- -
	All years since first exposure	909 1.21 (1.14 to 1.29)	723 1.19 (1.10 to 1.28)	453 1.16 (1.06 to 1.27)	212 1.26 (1.10 to 1.44)
	2p for trend in IRR with year of first CT scan after accounting for years since first exposure: 0.68				
Leukaemias and myelodysplasias	1-4 years	13 1.14 (0.66 to 1.96)	16 0.97 (0.59 to 1.58)	35 1.52 (1.09 to 2.12)	31 1.12 (0.79 to 1.59)
	5-9 years	10 0.82 (0.44 to 1.52)	34 1.83 (1.31 to 2.56)	33 1.38 (0.98 to 1.94)	8 1.40 (0.70 to 2.79)
	10-14 years	12 0.87 (0.49 to 1.53)	20 1.10 (0.71 to 1.71)	7 1.57 (0.75 to 3.29)	- -
	15+ years	24 1.28 (0.86 to 1.91)	3 0.77 (0.25 to 2.39)	- -	- -
	All years since first exposure	59 1.05 (0.81 to 1.35)	73 1.28 (1.02 to 1.61)	75 1.46 (1.16 to 1.83)	39 1.17 (0.85 to 1.60)
	2p for trend in IRR with year of first CT scan after accounting for years since first exposure: 0.33				
Other lymphoid and haematopoietic cancers	1-4 years	16 1.27 (0.78 to 2.07)	29 1.41 (0.98 to 2.03)	33 1.07 (0.76 to 1.50)	53 1.29 (0.99 to 1.69)
	5-9 years	21 0.96 (0.63 to 1.47)	48 1.41 (1.06 to 1.87)	58 1.21 (0.94 to 1.57)	19 1.72 (1.10 to 2.70)
	10-14 years	26 0.94 (0.64 to 1.38)	39 0.99 (0.72 to 1.36)	11 1.17 (0.65 to 2.10)	- -
	15+ years	35 0.97 (0.70 to 1.36)	9 1.24 (0.64 to 2.38)	- -	- -
	All years since first exposure	98 1.00 (0.82 to 1.22)	125 1.23 (1.04 to 1.47)	102 1.16 (0.95 to 1.41)	72 1.38 (1.10 to 1.74)
	2p for trend in IRR with year of first CT scan after accounting for years since first exposure: 0.31				

Web table C. (continued)

All cancers, except brain cancer after brain CT	1-4 years	97 1.28 (1.05 to 1.56)	146 1.21 (1.03 to 1.43)	214 1.29 (1.13 to 1.47)	241 1.24 (1.09 to 1.40)
	5-9 years	175 1.11 (0.96 to 1.29)	311 1.33 (1.19 to 1.49)	330 1.13 (1.02 to 1.26)	82 1.38 (1.11 to 1.72)
	10-14 years	283 1.12 (1.00 to 1.26)	367 1.10 (0.99 to 1.22)	86 1.19 (0.96 to 1.47)	- -
	15+ years	511 1.22 (1.12 to 1.33)	97 1.22 (1.00 to 1.49)	- -	- -
	All years since first exposure	1066 1.18 (1.11 to 1.25)	921 1.20 (1.13 to 1.28)	630 1.19 (1.10 to 1.29)	323 1.27 (1.14 to 1.42)
	2p for trend in IRR with year of first CT scan after accounting for years since first exposure: 0.71				
All Cancers	1-4 years	129 1.58 (1.33 to 1.88)	165 1.30 (1.12 to 1.52)	233 1.35 (1.18 to 1.53)	258 1.27 (1.13 to 1.44)
	5-9 years	209 1.26 (1.10 to 1.45)	323 1.34 (1.20 to 1.49)	345 1.15 (1.04 to 1.28)	83 1.36 (1.10 to 1.69)
	10-14 years	297 1.14 (1.01 to 1.27)	386 1.12 (1.02 to 1.24)	89 1.20 (0.98 to 1.48)	- -
	15+ years	532 1.24 (1.14 to 1.35)	101 1.24 (1.02 to 1.51)	- -	- -
	All years since first exposure	1167 1.24 (1.17 to 1.32)	975 1.23 (1.15 to 1.31)	667 1.22 (1.13 to 1.32)	341 1.29 (1.16 to 1.44)
	2p for trend in IRR with year of first CT scan after accounting for years since first exposure: 0.18				

* Observed number of cancers in exposed persons.

† Incidence rate ratio (IRR) exposed versus unexposed calculated after stratification for age, sex, and year of birth (95% confidence interval).

Web table D. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and absolute excess incidence rates (EIR) per 100,000 person-years by type of cancer and sex, based on a 1 year lag period.

Type of cancer	Number of cancers and IRR		2p for difference	Number of excess cancers and EIR		2p for difference
	Females	Males		Females	Males	
Brain cancer	124 [*] 2.15 (1.78 to 2.59) [†]	159 2.11 (1.78 to 2.49)	0.99	64·6 [‡] 2.09 (1.38 to 2.79) [§]	82·8 2.44 (1.71 to 3.17)	0.49
after brain CT	103 2.70 (2.21 to 3.31)	107 2.23 (1.83 to 2.71)		64.1 3.21 (2.21 to 4.20)	58.6 2.74 (1.80 to 3.69)	
after other CT	21 1.02 (0.66 to 1.58)	52 1.87 (1.41 to 2.48)	0.02	0.5 0.04 (-0.80 to 0.86)	24.1 1.93 (0.80 to 3.00)	0.003
All solid cancers except brain cancer	1,247 1·23 (1.16 to 1.31)	977 1.14 (1.07 to 1.22)	0.07	234·8 7.59 (5.35 to 9.82)	121·0 3.57 (1.76 to 5.37)	0.006
Leukaemias and myelodysplasias	94 1.15 (0.93 to 1.42)	152 1.29 (1.09 to 1.52)	0.33	12.2 0.39 (-0.22 to 1.01)	35.6 1.05 (0.34 to 1.76)	0.17
Other lymphoid and haematopoietic	171 1.17 (1.00 to 1.37)	226 1.17 (1.02 to 1.34)	0.96	25.2 0.81 (-0.01 to 1.64)	32.2 0.95 (0.08 to 1.82)	0.82
All cancers	1,636 1.26 (1.20 to 1.33)	1,514 1.22 (1.16 to 1.29)	0.36	336.8 10.88 (8.32 to 13.44)	271.6 8.01 (5.76 to 10.26)	0.10

[*] Observed number of cancers in exposed persons.

[†] Incidence rate ratio (IRR) exposed versus unexposed (95% confidence interval).

[‡] Excess number of cancers in exposed compared with unexposed.

[§] Excess incidence rate per 100,000 person-years in exposed (95% confidence interval).

Incidence rate ratios, excess numbers of cancers, and excess incidence rates calculated after stratification for age, sex, and year of birth

Web table E. Number of cancers in exposed persons, incidence rate ratios (IRR) exposed versus unexposed, number of excess cancers in exposed persons, and excess incidence rates (EIR) per 100,000 person-years by type of cancer and socioeconomic status (SES), based on a 1 year lag period.

Type of cancer	Number of cancers and IRR			2p for trend	Number of excess cancers and EIR			2p for trend
	Pooled SES categories				Pooled SES categories			
	1, 2	3, 4, 5	6, 7		1, 2	3, 4, 5	6, 7	
Brain cancer	71 [*] 2.17 (1.69 to 2.78) [†]	128 2.15 (1.79 to 2.59)	84 2.05 (1.63 to 2.57)	0.65	37·9 [‡] 2.24 (1.27 to 3.22) [§]	67·4 2.36 (1.58 to 3·13)	41·9 2.16 (1.23 to 3.09)	0.90
after brain CT	51 2.31 (1.73 to 3.07)	93 2.37 (1.92 to 2.94)	66 2.63 (2.04 to 3.38)	0.49	28.7 2.55 (1.31 to 3.80)	53.3 2.88 (1.86 to 3.90)	40.4 3.49 (2.12 to 4.87)	0.32
after other CT	20 1.85 (1.18 to 2.89)	35 1.68 (1.19 to 2.35)	18 1.09 (0.68 to 1.75)	0.10	9.2 1.63 (0.70 to 3.18)	14.0 1.39 (0.24 to 2.54)	1.5 0.19 (-0.90 to 1.25)	0.08
All solid cancers except brain cancer	593 1.22 (1.13 to 1.33)	960 1.15 (1.08 to 1.23)	671 1.25 (1.15 to 1.35)	0.68	108.6 6.43 (3.60 to 9.26)	123.5 4.32 (2.20 to 6.44)	133.5 6.88 (4.27 to 9.50)	0.76
Leukaemias and myelodysplasias	78 1.46 (1.15 to 1.84)	93 1.04 (0.84 to 1.29)	75 1.35 (1.06 to 1.71)	0.59	24.8 1.47 (0.45 to 2.50)	4.6 0.16 (-0.50 to 0.82)	19.2 0.99 (0.11 to 1.86)	0.65
Other lymphoid and haematopoietic cancers	105 1.28 (1.05 to 1.57)	169 1.16 (0.99 to 1.36)	123 1.11 (0.92 to 1.33)	0.26	23.2 1.38 (0.19 to 2.57)	23.0 0.80 (-0.09 to 1.70)	11.5 0.59 (-0.53 to 1.71)	0.35
All cancers	847 1.30 (1.21 to 1.39)	1,350 1.20 (1.13 to 1.26)	953 1.28 (1.20 to 1.37)	0.78	194.5 11.52 (8.14 to 14.90)	218.4 7.64 (5.12 to 10.16)	206.1 10.62 (7.50 to 13.74)	0.78

[*] Observed number of cancers in exposed persons.

[†] Incidence rate ratio (IRR) exposed versus unexposed (95% confidence interval).

[‡] Excess number of cancers in exposed persons compared with unexposed persons.

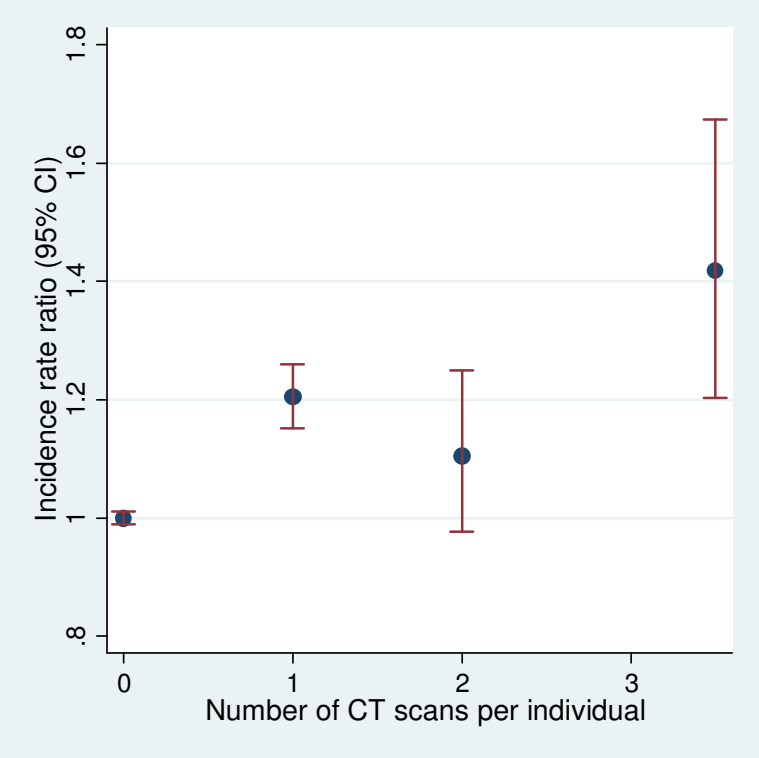
[§] Excess incidence rate per 100,000 person-years in exposed persons (95% confidence interval).

Incidence rate ratios, excess numbers of cancers, and excess incidence rates calculated after stratification for age, sex, and year of birth.

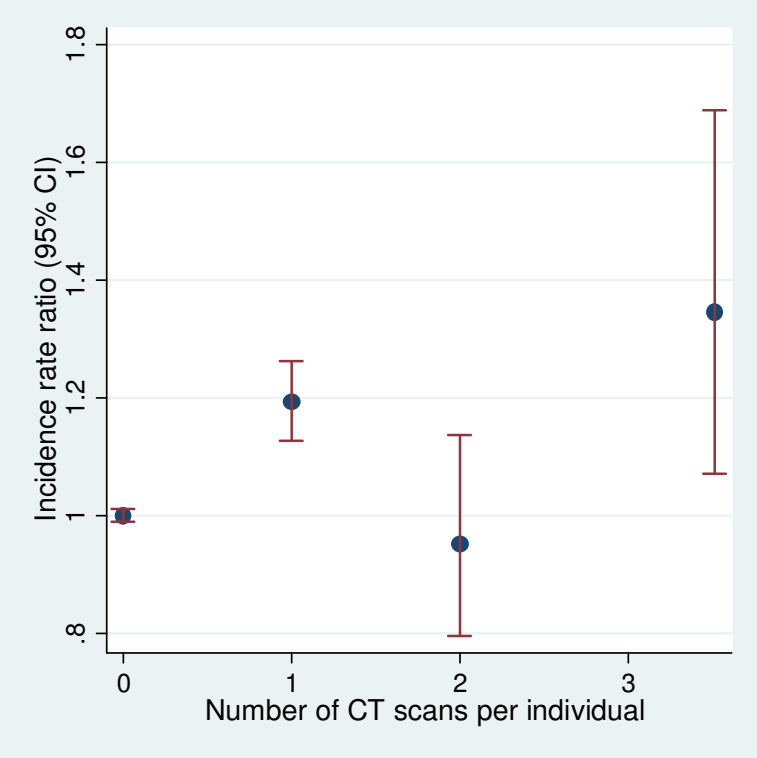
The few individuals with unknown SES (see Table 1) are excluded from the Table.

Web figure A. Incidence rate ratios (IRR), exposed versus unexposed, for cancers of all types and 95% confidence intervals(CI) by number of CT scans, based on 5 and 10 year lag periods.

a) 5 year lag

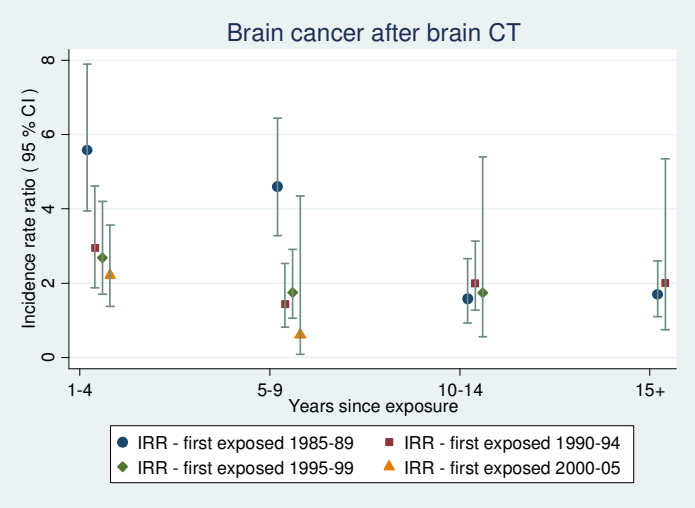


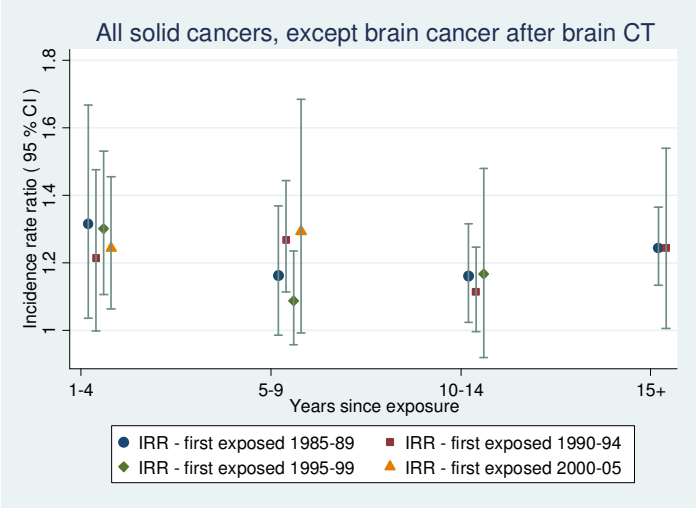
b) 10 year lag

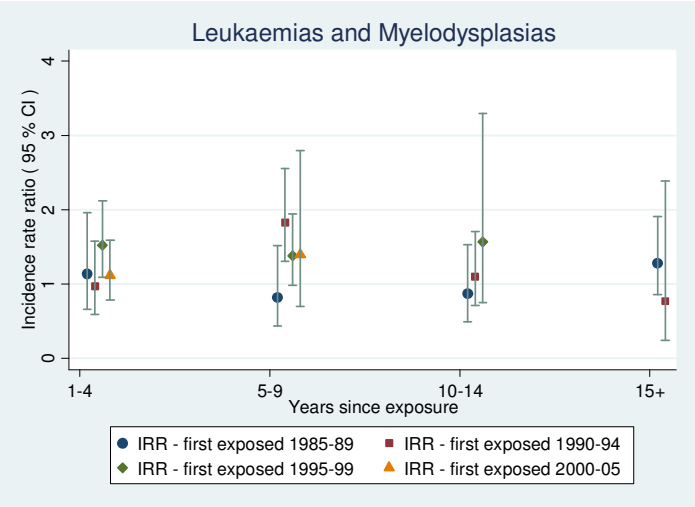


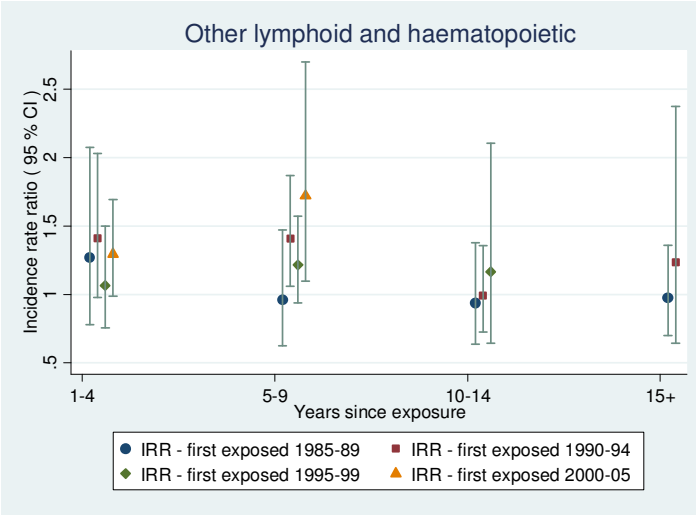
Based on a 5 year lag, the incidence rate increased by 0.13 (95% CI 0.10 to 0.16) for each additional CT scan, calculated after stratification for age, sex, and year of birth (χ^2 for trend: 65.3, 2p <0.0001). If unexposed persons are excluded, the trend is no longer significant (χ^2 for trend: 0.26, 2p = 0.62).
Based on a 10 year lag, the incidence rate increased by an average factor of 0.10 (95% CI 0.06 to 0.15) for every additional CT scan calculated after stratification for age, sex, and year of birth (χ^2 for trend: 24.7, p<0.0001). If unexposed persons are excluded, the trend is no longer significant (χ^2 for trend: 0.46, 2p = 0.50).
For both 5 and 10 year lags, the average number of scans among individuals exposed to 3+ scans was 3.5.

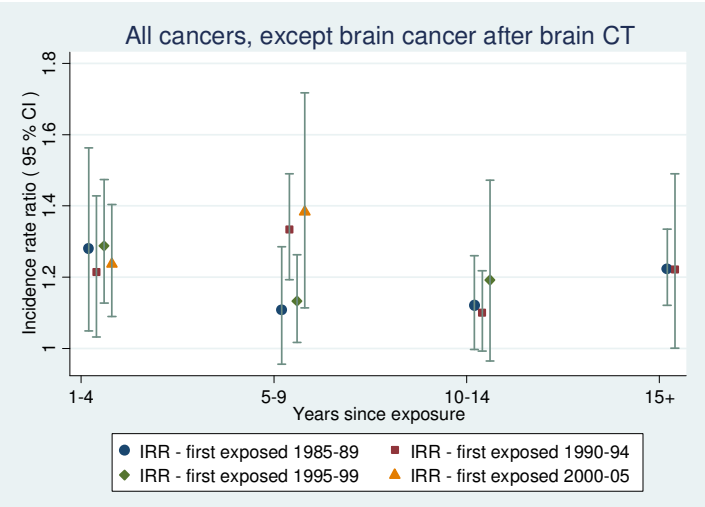
Web figure B. Incidence rate ratios, exposed versus unexposed, for selected cancers by years since exposure and calendar period of first exposure, based on a 1 year lag period.

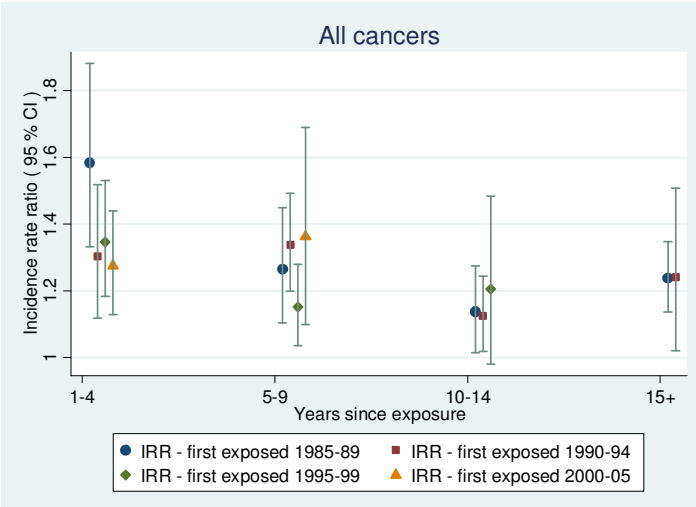






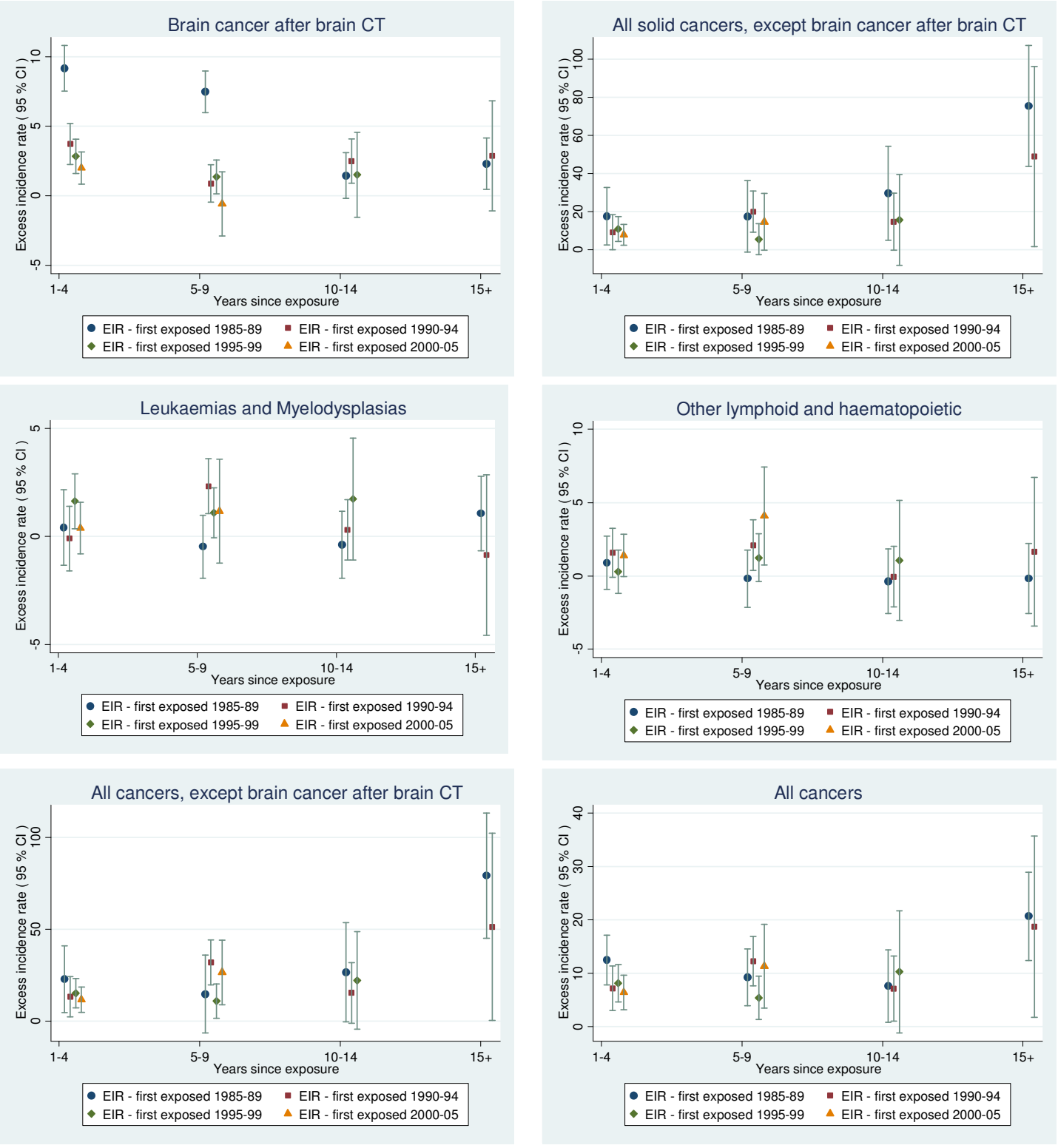






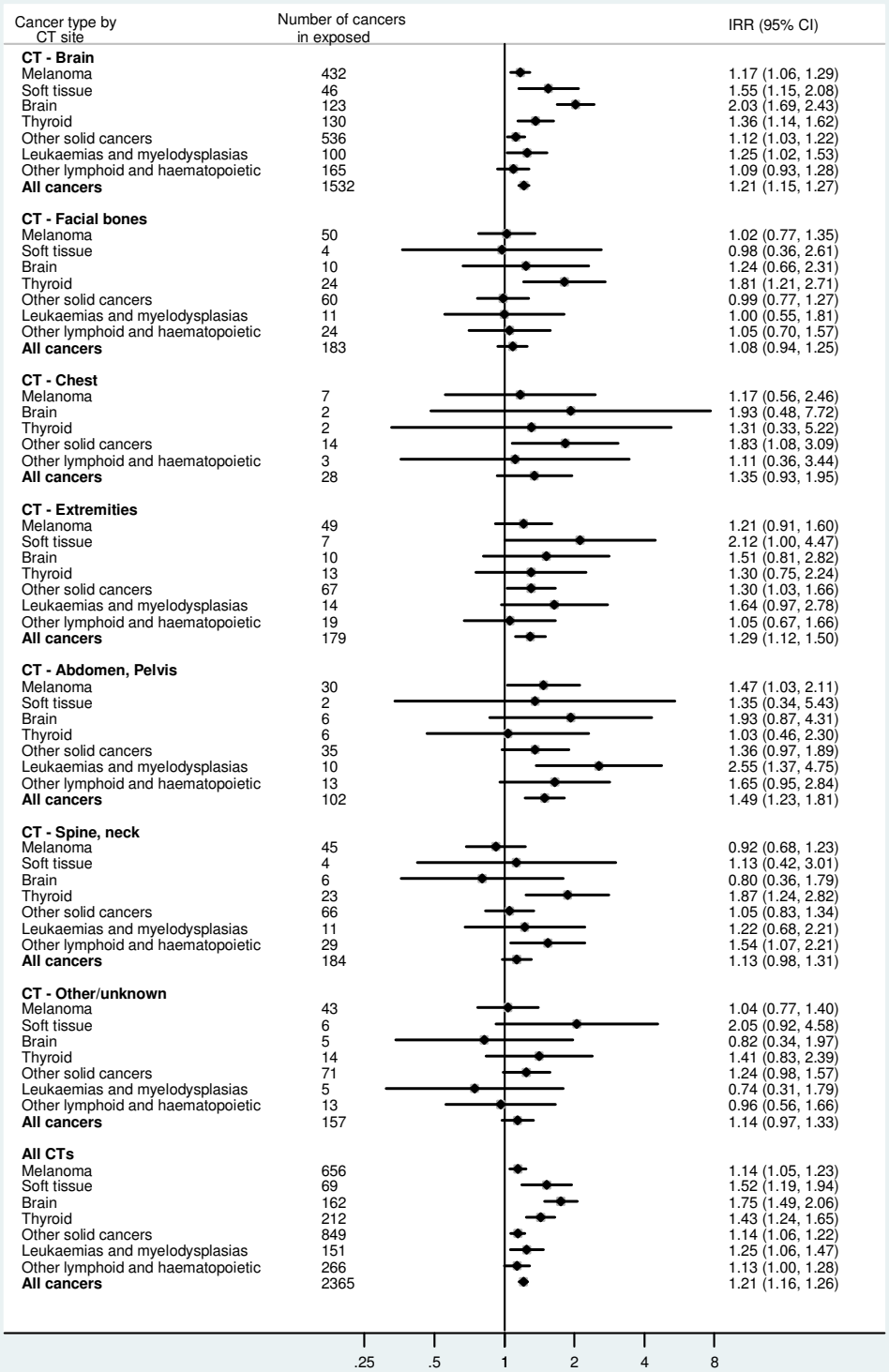
Incidence rate ratios, exposed versus unexposed, calculated after stratification for age, sex, and year of birth

Web figure C. Absolute excess incidence rates per 100,000 person-years in exposed persons, for selected cancers by years since exposure and calendar period of first exposure, based on a 1 year lag period.



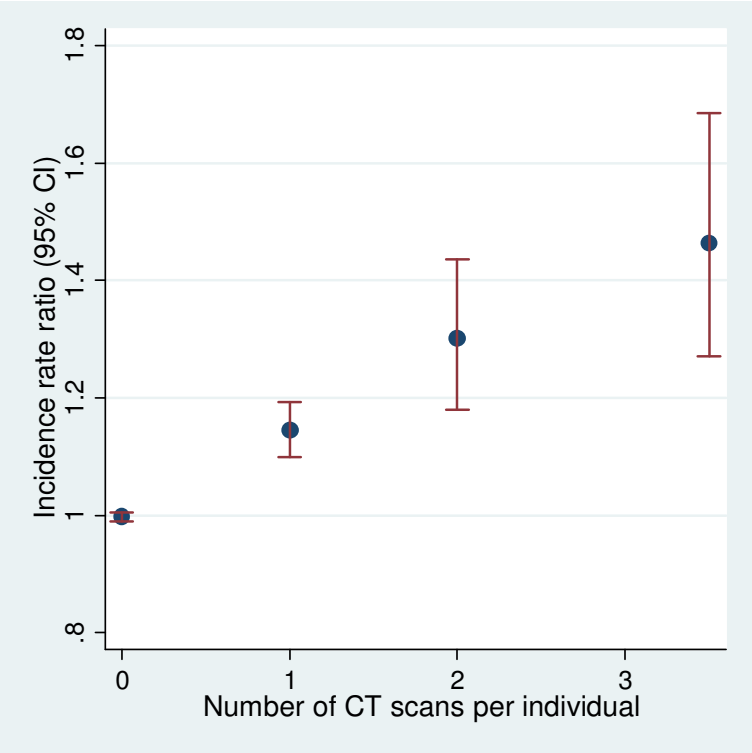
Absolute excess incidence rates compared with rates in unexposed persons, after stratification for age, sex, and year of birth.

Web figure D. Incidence rate ratios (IRR), exposed versus unexposed, and 95% confidence intervals (CI) by site of CT scan and type of cancer, based on a 5 year lag period.



Incidence rate ratios versus unexposed calculated after stratification for age, sex, and year of birth. Heterogeneity between cancer types — all sites of CT scan exposure: χ^2 = 33.5 on 6 df, p<0.001; brain scans: χ^2 = 36.5 on 6 df, p<0.001. Heterogeneity between sites of CT scan exposure — all cancers: χ^2 = 9.04 on 6 df, p=0.156; brain cancer: χ^2 = 12.48 on 6 df, p=0.052; leukaemias: χ^2 = 7.24 on 5 df, p=0.211.

Web figure E. Incidence rate ratios (IRR), exposed versus unexposed, for all cancers except brain cancer after brain CT and 95% confidence intervals (CI) based on a 1 year lag period, by number of CT scans.



The incidence rate ratio increased by 0.14 (95% CI 0.11 to 0.17) for each additional CT scan, calculated after stratification for age, sex, and year of birth (χ2 for trend: 94.7 , p<0.0001). If unexposed persons are excluded the trend remains significant (χ^2 for trend: 7.90 p =0.005).
The average number of scans among individuals exposed to 3+ scans was 3.5.