

BRAIN
BOTH SEXES

TABLE 3A. -- Characteristics of persons reported to the Danish Cancer Registry with an initial cancer of the brain or central nervous system, 1943-80+

Category	Male	Female	Total
No. with first primary cancer*	5,260	5,013	10,273
No. who developed a second primary cancer	95	193	288
Average age at diagnosis of first cancer, yr	45	47	46
Average yr of diagnosis of first cancer	1965	1965	1965
Person-yr of follow-up	22,365	30,246	52,611
Average follow-up, yr	4.3	6.0	5.3
Percent given radiotherapy for first cancer	31	25	28

+ ICD-7 code = 193.

* Number excludes all persons who survived less than 2 mo after the diagnosis of their first primary cancer or who developed a simultaneous cancer during this period. First primary cancers diagnosed only at autopsy or by death certificate are also excluded as are in situ cancers.

TABLE 3B. -- Microscopic confirmation among persons who developed second primary cancers after an initial cancer of the brain or central nervous system in Denmark, 1943-80

Microscopically confirmed	No.	Percent+
Both first and second cancers	241	83.4
Only the first cancer	22	7.6
Only the second cancer	22	7.6
Neither first nor second cancer	4	1.4
Total second primary cancers	289	100.0

+ Minor discrepancies between table entries, and row and column sums in this and subsequent tables are due to rounding.

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TABLE 3C. -- Observed (O) and expected (E) numbers of second primary cancers by years after diagnosis of an initial cancer of the brain or central nervous system among males and females in Denmark, 1943-80+

Second primary cancer site	Yr after first primary cancer diagnosis														
	<1 yr			1-4 yr			5-9 yr			10+ yr			Total		
	No. starting interval	10,273		5,560			3,005			1,923			10,273		
Person-yr in interval	7,503		15,624			12,001			17,482			52,611			
	O	E	O/E	O	E	O/E	O	E	O/E	O	E	O/E	O	E	O/E
All second cancers	27	31.75	0.9	62	63.77	1.0	67	59.10	1.1	132	116.96	1.1	288	271.58	1.1
All excluding site of initial cancer	23	30.80	0.7	60	61.89	1.0	63	57.52	1.1	128	114.25	1.1	274	264.47	1.0
Buccal cavity, pharynx	1	0.78	1.3	1	1.44	0.7	2	1.25	1.6	0	2.33	0.0	4	5.79	0.7
Lip	0	0.34	0.0	1	0.59	1.7	2	0.50	4.0	0	0.86	0.0	3	2.29	1.3
Tongue	0	0.07	0.0	0	0.14	0.0	0	0.13	0.0	0	0.26	0.0	0	0.59	0.0
Salivary gland	1	0.11	9.1	0	0.22	0.0	0	0.19	0.0	0	0.31	0.0	1	0.84	1.2
Gum, other mouth	0	0.12	0.0	0	0.23	0.0	0	0.22	0.0	0	0.49	0.0	0	1.06	0.0
Pharynx	0	0.14	0.0	0	0.26	0.0	0	0.22	0.0	0	0.41	0.0	0	1.03	0.0
Digestive system	3	9.31	0.3*	8	18.10	0.4*	25	17.44	1.4	31	36.51	0.8	67	81.35	0.8
Esophagus	0	0.33	0.0	0	0.59	0.0	1	0.56	1.8	2	1.16	1.7	3	2.64	1.1
Stomach	0	2.42	0.0	2	4.48	0.4	5	4.20	1.2	7	8.04	0.9	14	19.14	0.7
Colon	1	2.52	0.4	3	5.12	0.6	7	5.06	1.4	8	11.30	0.7	19	23.98	0.8
Rectum	1	2.00	0.5	2	3.85	0.5	6	3.63	1.7	4	7.23	0.6	13	16.70	0.8
Liver, biliary	0	0.65	0.0	0	1.33	0.0	3	1.36	2.2	6	3.16	1.9	9	6.50	1.4
Pancreas	1	1.02	1.0	0	2.02	0.0	2	1.99	1.0	3	4.40	0.7	6	9.43	0.6
Respiratory system	4	4.43	0.9	5	8.00	0.6	4	7.34	0.5	13	14.52	0.9	26	34.30	0.8
Nasal cavities, sinuses	0	0.08	0.0	1	0.14	7.1	0	0.13	0.0	0	0.23	0.0	1	0.58	1.7
Larynx	0	0.31	0.0	1	0.55	1.8	0	0.48	0.0	0	0.90	0.0	1	2.24	0.4
Trachea, bronchus, lung	4	3.87	1.0	3	6.96	0.4	4	6.40	0.6	13	12.73	1.0	24	29.95	0.8
Female breast	1	3.99	0.3	11	9.18	1.2	4	8.47	0.5	17	16.54	1.0	33	38.17	0.9
Female genital tract	4	4.28	0.9	9	9.82	0.9	9	8.78	1.0	18	15.33	1.2	40	38.21	1.0
Cervix uteri	1	1.76	0.6	3	4.06	0.7	3	3.38	0.9	4	5.18	0.8	11	14.39	0.8
Corpus uteri	2	1.12	1.8	4	2.56	1.6	3	2.40	1.2	6	4.43	1.4	15	10.51	1.4
Uterus, NOS	0	0.06	0.0	0	0.13	0.0	0	0.12	0.0	0	0.22	0.0	0	0.53	0.0
Ovary, fallopian tubes	1	1.16	0.9	2	2.66	0.8	2	2.47	0.8	7	4.60	1.5	12	10.88	1.1
Prostate gland	0	1.31	0.0	1	2.26	0.4	0	2.23	0.0	6	4.74	1.3	7	10.54	0.7
Testis	0	0.22	0.0	1	0.44	2.3	1	0.31	3.2	1	0.53	1.9	3	1.50	2.0
Kidney, renal pelvis, ureter	4	0.94	4.3*	2	1.83	1.1	6	1.73	3.5*	14	3.54	4.0*	26	8.05	3.2*
Bladder, other urinary	3	1.63	1.8	3	3.01	1.0	3	2.85	1.1	6	5.98	1.0	15	13.47	1.1
Melanoma of the skin	0	0.51	0.0	3	1.08	2.8	2	0.94	2.1	6	1.88	3.2*	11	4.40	2.5*
Eye	0	0.11	0.0	0	0.22	0.0	0	0.19	0.0	0	0.35	0.0	0	0.88	0.0
Brain, central nervous system	4	0.95	4.2*	2	1.88	1.1	4	1.58	2.5	4	2.71	1.5	14	7.11	2.0*
Thyroid gland	1	0.16	6.3	3	0.34	8.8*	0	0.32	0.0	0	0.66	0.0	4	1.50	2.7
Bone	0	0.07	0.0	2	0.16	12.5*	1	0.13	7.7	1	0.21	4.8	4	0.58	6.9*
Connective tissue	0	0.14	0.0	2	0.27	7.4	0	0.22	0.0	3	0.39	7.7*	5	1.03	4.9*
Lymphatic, hematopoietic system	2	1.98	1.0	8	3.90	2.1	5	3.59	1.4	5	7.17	0.7	20	16.65	1.2
Non-Hodgkin's lymphoma	0	0.55	0.0	4	1.10	3.6	0	1.02	0.0	1	2.11	0.5	5	4.78	1.0
Hodgkin's disease	0	0.23	0.0	0	0.47	0.0	2	0.40	5.0	0	0.65	0.0	2	1.74	1.1
Multiple myeloma	2	0.33	6.1	0	0.65	0.0	0	0.64	0.0	0	1.34	0.0	2	2.96	0.7
Leukemias	0	0.84	0.0	4	1.64	2.4	3	1.50	2.0	4	3.01	1.3	11	7.00	1.6
Chronic lymphocytic	0	0.35	0.0	2	0.65	3.1	3	0.63	4.8	2	1.33	1.5	7	2.96	2.4
Acute nonlymphocytic	0	0.25	0.0	1	0.52	1.9	0	0.47	0.0	2	0.99	2.0	3	2.23	1.3

+ ICD-7 code = 193.

* P<.05.

BRAIN
MALES

TABLE 3D. -- Observed (O) and expected (E) numbers of second primary cancers by years after diagnosis of an initial cancer of the brain or central nervous system among males in Denmark, 1943-80+

Second primary cancer site	Yr after first primary cancer diagnosis														
	<1 yr			1-4 yr			5-9 yr			10+ yr			Total		
	O	E	O/E	O	E	O/E	O	E	O/E	O	E	O/E	O	E	O/E
No. starting interval	5,260			2,617			1,285			770			5,260		
Person-yr in interval	3,720			6,948			4,962			6,735			22,365		
All second cancers	13	14.76	0.9	22	24.95	0.9	23	22.04	1.0	37	41.17	0.9	95	102.92	0.9
All excluding site of initial cancer	10	14.28	0.7	21	24.13	0.9	22	21.41	1.0	35	40.16	0.9	88	99.98	0.9
Buccal cavity, pharynx	0	0.57	0.0	1	0.96	1.0	2	0.79	2.5	0	1.35	0.0	3	3.67	0.8
Lip	0	0.31	0.0	1	0.52	1.9	2	0.43	4.6	0	0.71	0.0	3	1.98	1.5
Tongue	0	0.04	0.0	0	0.07	0.0	0	0.06	0.0	0	0.10	0.0	0	0.26	0.0
Salivary gland	0	0.05	0.0	0	0.09	0.0	0	0.07	0.0	0	0.11	0.0	0	0.33	0.0
Gum, other mouth	0	0.07	0.0	0	0.12	0.0	0	0.10	0.0	0	0.19	0.0	0	0.48	0.0
Pharynx	0	0.10	0.0	0	0.16	0.0	0	0.13	0.0	0	0.23	0.0	0	0.62	0.0
Digestive system	1	4.86	0.2	4	8.10	0.5	9	7.18	1.3	11	13.11	0.8	25	33.24	0.8
Esophagus	0	0.22	0.0	0	0.36	0.0	0	0.32	0.0	1	0.56	1.8	1	1.46	0.7
Stomach	0	1.44	0.0	2	2.37	0.8	3	2.04	1.5	1	3.41	0.3	6	9.26	0.6
Colon	0	1.08	0.0	2	1.82	1.1	2	1.66	1.2	4	3.24	1.2	8	7.79	1.0
Rectum	1	1.12	0.9	0	1.87	0.0	2	1.65	1.2	1	2.99	0.3	4	7.62	0.5
Liver, biliary	0	0.27	0.0	0	0.46	0.0	2	0.43	4.6	2	0.86	2.3	4	2.03	2.0
Pancreas	0	0.55	0.0	0	0.93	0.0	0	0.85	0.0	1	1.64	0.6	1	3.97	0.3
Respiratory system	3	3.56	0.8	4	5.96	0.7	3	5.33	0.6	5	10.03	0.5	15	24.88	0.6*
Nasal cavities, sinuses	0	0.05	0.0	1	0.08	12.2	0	0.07	0.0	0	0.12	0.0	1	0.32	3.1
Larynx	0	0.27	0.0	0	0.45	0.0	0	0.39	0.0	0	0.71	0.0	0	1.82	0.0
Trachea, bronchus, lung	3	3.12	1.0	3	5.21	0.6	3	4.67	0.6	5	8.83	0.6	14	21.82	0.6
Prostate gland	0	1.31	0.0	1	2.26	0.4	0	2.23	0.0	6	4.74	1.3	7	10.54	0.7
Testis	0	0.22	0.0	1	0.44	2.3	1	0.31	3.2	1	0.53	1.9	3	1.50	2.0
Kidney, renal pelvis, ureter	2	0.53	3.8	0	0.88	0.0	2	0.78	2.6	4	1.46	2.7	8	3.64	2.2
Bladder, other urinary	3	1.23	2.4	2	2.09	1.0	2	1.90	1.1	3	3.73	0.8	10	8.95	1.1
Melanoma of the skin	0	0.20	0.0	0	0.36	0.0	0	0.29	0.0	0	0.54	0.0	0	1.39	0.0
Eye	0	0.06	0.0	0	0.10	0.0	0	0.08	0.0	0	0.14	0.0	0	0.38	0.0
Brain, central nervous system	3	0.48	6.3*	1	0.82	1.2	1	0.63	1.6	2	1.01	2.0	7	2.94	2.4
Thyroid gland	0	0.05	0.0	0	0.09	0.0	0	0.07	0.0	0	0.13	0.0	0	0.35	0.0
Bone	0	0.04	0.0	1	0.08	12.5	0	0.06	0.0	0	0.09	0.0	1	0.28	3.6
Connective tissue	0	0.07	0.0	1	0.12	8.2	0	0.09	0.0	1	0.15	6.8	2	0.44	4.6
Lymphatic, hematopoietic system	1	1.12	0.9	5	1.92	2.6	3	1.63	1.8	2	2.93	0.7	11	7.60	1.4
Non-Hodgkin's lymphoma	0	0.30	0.0	2	0.52	3.8	0	0.45	0.0	0	0.81	0.0	2	2.08	1.0
Hodgkin's disease	0	0.14	0.0	0	0.26	0.0	0	0.20	0.0	0	0.31	0.0	0	0.90	0.0
Multiple myeloma	1	0.18	5.6	0	0.30	0.0	0	0.27	0.0	0	0.51	0.0	1	1.25	0.8
Leukemias	0	0.48	0.0	3	0.82	3.6	3	0.70	4.3	2	1.28	1.6	8	3.29	2.4*
Chronic lymphocytic	0	0.22	0.0	1	0.37	2.7	3	0.33	9.0*	1	0.62	1.6	5	1.55	3.2*
Acute nonlymphocytic	0	0.13	0.0	1	0.24	4.2	0	0.20	0.0	1	0.38	2.6	2	0.95	2.1

+ ICD-7 code = 193.

* P<.05.

BRAIN
FEMALES

TABLE 3E. -- Observed (O) and expected (E) numbers of second primary cancers by years after diagnosis of an initial cancer of the brain or central nervous system among females in Denmark, 1943-80+

Second primary cancer site	Yr after first primary cancer diagnosis												Total		
	<1 yr			1-4 yr			5-9 yr			10+ yr			O	E	
No. starting interval	5,013			2,943			1,720			1,153			5,013		
Person-yr in interval	3,784			8,676			7,039			10,747			30,246		
	O	E	O/E	O	E	O/E	O	E	O/E	O	E	O/E	O	E	O/E
All second cancers	14	16.99	0.8	40	38.82	1.0	44	37.06	1.2	95	75.79	1.3*	193	168.66	1.1
All excluding site of initial cancer	13	16.52	0.8	39	37.76	1.0	41	36.11	1.1	93	74.09	1.3*	186	164.49	1.1
Buccal cavity, pharynx	1	0.21	4.8	0	0.48	0.0	0	0.46	0.0	0	0.98	0.0	1	2.12	0.5
Lip	0	0.03	0.0	0	0.07	0.0	0	0.07	0.0	0	0.15	0.0	0	0.31	0.0
Tongue	0	0.03	0.0	0	0.07	0.0	0	0.07	0.0	0	0.16	0.0	0	0.33	0.0
Salivary gland	1	0.06	17.3	0	0.13	0.0	0	0.12	0.0	0	0.20	0.0	1	0.51	2.0
Gum, other mouth	0	0.05	0.0	0	0.11	0.0	0	0.12	0.0	0	0.30	0.0	0	0.58	0.0
Pharynx	0	0.04	0.0	0	0.10	0.0	0	0.09	0.0	0	0.18	0.0	0	0.41	0.0
Digestive system	2	4.45	0.4	4	10.00	0.4	16	10.26	1.6	20	23.40	0.9	42	48.11	0.9
Esophagus	0	0.11	0.0	0	0.23	0.0	1	0.24	4.1	1	0.60	1.7	2	1.18	1.7
Stomach	0	0.98	0.0	0	2.11	0.0	2	2.16	0.9	6	4.63	1.3	8	9.88	0.8
Colon	1	1.44	0.7	1	3.30	0.3	5	3.40	1.5	4	8.06	0.5	11	16.19	0.7
Rectum	0	0.88	0.0	2	1.98	1.0	4	1.98	2.0	3	4.24	0.7	9	9.08	1.0
Liver, biliary	0	0.38	0.0	0	0.87	0.0	1	0.93	1.1	4	2.30	1.7	5	4.47	1.1
Pancreas	1	0.47	2.1	0	1.09	0.0	2	1.14	1.8	2	2.76	0.7	5	5.46	0.9
Respiratory system	1	0.87	1.1	1	2.04	0.5	1	2.01	0.5	8	4.49	1.8	11	9.42	1.2
Nasal cavities, sinuses	0	0.03	0.0	0	0.06	0.0	0	0.06	0.0	0	0.11	0.0	0	0.26	0.0
Larynx	0	0.04	0.0	1	0.10	10.3	0	0.09	0.0	0	0.19	0.0	1	0.42	2.4
Trachea, bronchus, lung	1	0.75	1.3	0	1.75	0.0	1	1.73	0.6	8	3.90	2.1	10	8.13	1.2
Female breast	1	3.99	0.3	11	9.18	1.2	4	8.47	0.5	17	16.54	1.0	33	38.17	0.9
Female genital tract	4	4.28	0.9	9	9.82	0.9	9	8.78	1.0	18	15.33	1.2	40	38.21	1.0
Cervix uteri	1	1.76	0.6	3	4.06	0.7	3	3.38	0.9	4	5.18	0.8	11	14.39	0.8
Corpus uteri	2	1.12	1.8	4	2.56	1.6	3	2.40	1.2	6	4.43	1.4	15	10.51	1.4
Uterus, NOS	0	0.06	0.0	0	0.13	0.0	0	0.12	0.0	0	0.22	0.0	0	0.53	0.0
Ovary, fallopian tubes	1	1.16	0.9	2	2.66	0.8	2	2.47	0.8	7	4.60	1.5	12	10.88	1.1
Kidney, renal pelvis, ureter	2	0.41	4.8	2	0.95	2.1	4	0.95	4.2*	10	2.08	4.8*	18	4.41	4.1*
Bladder, other urinary	0	0.40	0.0	1	0.92	1.1	1	0.95	1.0	3	2.25	1.3	5	4.52	1.1
Melanoma of the skin	0	0.31	0.0	3	0.72	4.2	2	0.65	3.1	6	1.34	4.5*	11	3.01	3.7*
Eye	0	0.05	0.0	0	0.12	0.0	0	0.11	0.0	0	0.21	0.0	0	0.50	0.0
Brain, central nervous system	1	0.47	2.1	1	1.06	0.9	3	0.95	3.2	2	1.70	1.2	7	4.17	1.7
Thyroid gland	1	0.11	9.1	3	0.25	11.9*	0	0.25	0.0	0	0.53	0.0	4	1.15	3.5
Bone	0	0.03	0.0	1	0.08	12.7	1	0.07	14.1	1	0.12	8.3	3	0.30	9.8*
Connective tissue	0	0.07	0.0	1	0.15	6.7	0	0.13	0.0	2	0.24	8.4	3	0.59	5.1*
Lymphatic, hematopoietic system	1	0.86	1.2	3	1.98	1.5	2	1.96	1.0	3	4.24	0.7	9	9.05	1.0
Non-Hodgkin's lymphoma	0	0.25	0.0	2	0.58	3.5	0	0.57	0.0	1	1.30	0.8	3	2.70	1.1
Hodgkin's disease	0	0.09	0.0	0	0.21	0.0	2	0.20	10.2*	0	0.34	0.0	2	0.84	2.4
Multiple myeloma	1	0.15	6.5	0	0.35	0.0	0	0.37	0.0	0	0.83	0.0	1	1.71	0.6
Leukemias	0	0.36	0.0	1	0.82	1.2	0	0.80	0.0	2	1.73	1.2	3	3.71	0.8
Chronic lymphocytic	0	0.13	0.0	1	0.28	3.5	0	0.30	0.0	1	0.71	1.4	2	1.41	1.4
Acute nonlymphocytic	0	0.12	0.0	0	0.28	0.0	0	0.27	0.0	1	0.61	1.6	1	1.28	0.8

+ ICD-7 code = 193.

* P<.05.