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Table 1: Primary brain and other central nervous system (CNS) tumours by histology group and sex: total number of cases, total number of malignant cases, and percent of malignant cases for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Histology Codes (Major/specific)	Total					Male			Female		
	Total Cases	Percent of Brain Tumours	Malignant Cases	Malignant Percent	Median Age	Total Cases	Malignant Cases	Malignant Percent	Total Cases	Malignant Cases	Malignant Percent
Tumours of Neuroepithelial Tissue	10467	32.11	9736	93.02	57	6060	5644	93.14	4407	4092	92.85
pilocytic astrocytoma	371	1.14	371	100.00	14	186	186	100.00	185	185	100.00
diffuse astrocytoma	507	1.56	507	100.00	46	301	301	100.00	206	206	100.00
anaplastic astrocytoma	438	1.34	438	100.00	50	238	238	100.00	200	200	100.00
unique astrocytoma	98	0.30	69	70.41	30	61	42	68.85	37	27	72.97
glioblastoma	5691	17.46	5691	100.00	64	3371	3371	100.00	2320	2320	100.00
oligodendroglioma	416	1.28	416	100.00	44	246	246	100.00	170	170	100.00
anaplastic oligodendroglioma	340	1.04	340	100.00	52	198	198	100.00	142	142	100.00
choroid plexus tumours*	65	0.20	8	12.31	14	27	-	-	38	-	-
oligoastrocytic tumours	411	1.26	411	100.00	48	233	233	100.00	178	178	100.00
ependymal tumours	573	1.76	335	58.46	46	317	180	56.78	256	155	60.55
glioma malignant, NOS	726	2.23	726	100.00	44	386	386	100.00	340	340	100.00
neuronal and mixed neuronal-gial tumours	462	1.42	81	17.53	28	271	50	18.45	191	31	16.23
tumours of the pineal region	54	0.17	36	66.67	37	30	19	63.33	24	17	70.83
embryonal tumours*	310	0.95	303	97.74	9	192	-	-	118	-	-
other neuroepithelial tumours*	5	0.02	-	-	12	-	-	-	-	-	-
Tumours of Cranial and Spinal nerves	2522	7.74	23	0.91	52	1247	11	0.88	1275	12	0.94
Tumours of the Meninges*	8349	25.62	253	3.03	61	2600	-	-	5749	-	-
meningioma	7822	24.00	166	2.12	62	2340	72	3.08	5482	94	1.71
mesenchymal tumours	172	0.53	61	35.47	51	83	34	40.96	89	27	30.34
primary melanocytic lesions*	22	0.07	14	63.64	40	12	-	-	10	-	-
other neoplasms related to the meninges	333	1.02	12	3.60	51	165	7	4.24	168	5	2.98
Lymphomas & Hematopoietic Neoplasms*	662	2.03	-	-	66	370	370	100.00	292	-	-
lymphoma*	648	1.99	648	100.00	66	-	-	-	-	-	-
other hematopoietic neoplasms*	14	0.04	-	-	63	-	-	-	-	-	-
Germ Cell Tumours, Cysts & Heterotopias	165	0.51	104	63.03	18	119	85	71.43	46	19	41.30
Tumours of the Sellar Region	4044	12.41	18	0.45	55	2041	11	0.54	2003	7	0.35
Unclassified Tumours	6223	19.09	874	14.04	69	2650	406	15.32	3573	468	13.10
Not Classified by CBTRUS*	161	0.49	-	-	50	86	22	25.58	75	-	-
Total	32593	100.00	11705	35.91	60	15173	6670	43.96	17420	5035	28.90

Abbreviations: CBTRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specified, *=censored cells

Table 2: Primary brain and other central nervous system (CNS) tumours by tumour site and sex: average number of cases per year, annual age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Topography Code		All			Male			Female		
		Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI
C710	Cerebrum	123.00	0.53	0.44-0.63	69.33	0.62	0.48-0.77	53.67	0.45	0.33-0.57
C711	Frontal lobe	579.67	2.51	2.30-2.71	313.83	2.82	2.51-3.13	265.83	2.21	1.95-2.48
C712	Temporal lobe	423.83	1.83	1.66-2.01	255.00	2.31	2.02-2.59	168.83	1.40	1.19-1.62
C713	Parietal lobe	240.50	1.04	0.91-1.17	140.50	1.28	1.06-1.49	100.00	0.83	0.66-0.99
C714	Occipital lobe	63.17	0.27	0.21-0.34	37.50	0.34	0.23-0.45	25.67	0.21	0.13-0.30
C715	Ventricle, NOS	47.00	0.20	0.14-0.26	23.83	0.21	0.12-0.29	23.17	0.20	0.12-0.28
C716	Cerebellum, NOS	149.33	0.64	0.54-0.75	79.67	0.70	0.54-0.85	69.67	0.59	0.45-0.73
C717	Brain stem	82.33	0.35	0.28-0.43	45.00	0.39	0.27-0.50	37.33	0.32	0.22-0.42
C718	Overlapping lesion of brain	228.33	0.99	0.86-1.11	127.17	1.17	0.96-1.37	101.17	0.83	0.66-0.99
C719	Brain, NOS	529.00	2.28	2.09-2.48	254.67	2.37	2.07-2.66	274.33	2.22	1.95-2.48
C720	Spinal cord	183.17	0.79	0.68-0.91	101.67	0.90	0.72-1.07	81.50	0.69	0.54-0.85
C721	Cauda equina	4.5	0.02	0.00-0.04	3	0.03	0.00-0.06	1.5	0.01	0.00-0.03
C722	Olfactory nerve*	-	<0.01	0.00-0.01	-	<0.01	0.00-0.01	-	<0.01	0.00-0.01
C723	Optic nerve	19.83	0.08	0.05-0.12	8.50	0.07	0.02-0.12	11.33	0.10	0.04-0.15
C724	Acoustic nerve	203.67	0.88	0.76-1.00	97.33	0.87	0.69-1.04	106.33	0.90	0.73-1.07
C725	Cranial nerve, NOS	108.83	0.47	0.38-0.56	52.00	0.47	0.34-0.60	56.83	0.47	0.35-0.60
C728	Overlapping lesion of brain and CNS	4.67	0.02	0.00-0.04	2.33	0.02	0.00-0.05	2.33	0.02	0.00-0.04
C729	Nervous system, NOS	24.83	0.11	0.07-0.15	13.33	0.12	0.06-0.19	11.50	0.10	0.04-0.15
C700	Cerebral meninges	1299.17	5.63	5.32-5.94	401.00	3.74	3.37-4.11	898.17	7.40	6.91-7.88
C701	Spinal Meninges	113.17	0.49	0.40-0.58	32.17	0.30	0.19-0.40	81.00	0.67	0.52-0.82
C709	Meninges, NOS	143.00	0.62	0.51-0.72	43.17	0.43	0.30-0.56	99.83	0.76	0.61-0.91
C751	Pituitary gland	773.67	3.34	3.11-3.58	378.00	3.43	3.08-3.78	395.67	3.33	3.00-3.66
C752	Craniopharyngeal duct	49.17	0.21	0.15-0.27	27.00	0.23	0.15-0.32	22.17	0.19	0.11-0.27
C753	Pineal gland	29.17	0.13	0.08-0.17	17.33	0.15	0.08-0.22	11.83	0.10	0.04-0.16
C300	Nasal cavity**	8.67	0.04	0.01-0.06	5.17	0.05	0.01-0.09	3.50	0.03	0.00-0.06

Abbreviations: NOS=not otherwise specified, *=censored cells, **= ICD-O-3 histology codes 9522-9523 only

Table 3: Primary brain and other central nervous system (CNS) tumours by histology group and sex: average number of cases per year, annual average age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Histology Code (Major/specific)	Total			Male			Female		
	Cases per Year	Rate	95%CI	Cases per Year	Rate	95%CI	Cases per Year	Rate	95%CI
Tumours of Neuroepithelial Tissue	1744.50	7.54	7.18-7.89	1010.00	9.02	8.46-9.57	734.50	6.17	5.72-6.62
pilocytic astrocytoma	61.83	0.26	0.20-0.33	31.00	0.26	0.17-0.35	30.83	0.27	0.17-0.36
diffuse astrocytoma	84.50	0.36	0.29-0.44	50.17	0.45	0.32-0.57	34.33	0.29	0.19-0.39
anaplastic astrocytoma	73.00	0.31	0.24-0.39	39.67	0.35	0.24-0.46	33.33	0.28	0.19-0.38
unique astrocytoma	16.33	0.07	0.04-0.10	10.17	0.09	0.03-0.14	6.17	0.05	0.01-0.09
glioblastoma	948.50	4.11	3.85-4.37	561.83	5.10	4.68-5.53	386.67	3.21	2.89-3.53
oligodendroglioma	69.33	0.30	0.23-0.37	41.00	0.36	0.25-0.46	28.33	0.24	0.15-0.33
anaplastic oligodendroglioma	56.67	0.25	0.18-0.31	33.00	0.29	0.19-0.39	23.67	0.20	0.12-0.28
choroid plexus tumours	10.83	0.05	0.02-0.07	4.50	0.04	0.00-0.07	6.33	0.06	0.01-0.10
oligoastrocytic tumours	68.50	0.30	0.23-0.37	38.83	0.34	0.23-0.45	29.67	0.25	0.16-0.34
ependymal tumours	95.50	0.41	0.33-0.49	52.83	0.46	0.34-0.58	42.67	0.37	0.26-0.48
glioma malignant, NOS	121.00	0.52	0.43-0.61	64.33	0.58	0.44-0.72	56.67	0.47	0.35-0.59
neuronal and mixed neuronal-glioma tumours	77.00	0.33	0.26-0.40	45.17	0.39	0.27-0.50	31.83	0.28	0.18-0.37
tumours of the pineal region*	9.00	0.04	0.01-0.06	-	0.04	0.01-0.08	-	0.03	0.00-0.07
embryonal tumours	51.67	0.22	0.16-0.28	32.00	0.27	0.18-0.36	19.67	0.17	0.10-0.25
other neuroepithelial tumours*	0.83	<0.01	0.00-0.01	-	<0.01	0.00-0.02	-	<0.01	0.00-0.01
Tumours of Cranial and Spinal Nerves	420.33	1.82	1.65-1.99	207.83	1.84	1.59-2.09	212.50	1.81	1.56-2.05
Tumours of the Meninges	1391.50	6.03	5.71-6.35	433.33	3.99	3.61-4.37	958.17	7.96	7.45-8.46
meningioma	1303.67	5.65	5.34-5.96	390.0	3.61	3.25-3.97	913.67	7.58	7.08-8.07
mesenchymal tumours	28.67	0.12	0.08-0.17	13.83	0.12	0.06-0.19	14.83	0.13	0.06-0.19
primary melanocytic lesions	3.67	0.02	0.00-0.03	2.00	0.02	0.00-0.04	1.67	0.01	0.00-0.04
other neoplasms related to the meninges	55.50	0.24	0.18-0.30	27.50	0.24	0.15-0.33	28.00	0.24	0.15-0.33
Lymphomas & Hematopoietic Neoplasms	110.33	0.48	0.39-0.57	61.67	0.56	0.42-0.70	48.67	0.40	0.29-0.51
lymphoma*	108.00	0.47	0.38-0.56	-	0.55	0.41-0.69	-	0.39	0.28-0.50
other hematopoietic neoplasms*	2.33	0.01	0.00-0.02	-	0.01	0.00-0.02	-	0.01	0.00-0.03
Germ Cell Tumours, Cysts & Heterotopias	27.50	0.12	0.07-0.16	19.83	0.17	0.09-0.24	7.67	0.07	0.02-0.11
Tumours of the Sellar Region	674.00	2.91	2.69-3.13	340.17	3.05	2.72-3.37	333.83	2.83	2.52-3.13
Unclassified Tumours	1037.17	4.47	4.20-4.75	441.67	4.25	3.85-4.65	595.50	4.70	4.32-5.08
Not Classified by CBTRUS	26.83	0.12	0.07-0.16	14.33	0.13	0.06-0.19	12.50	0.11	0.05-0.17
Total	5432.17	23.49	22.86-24.11	2528.83	22.99	22.09-23.89	2903.33	24.04	23.16-24.91

Abbreviations: CBTRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specified, *=censored

Table 4: Primary brain and other central nervous system (CNS) tumours by histology group and behavior: average number of cases per year, annual average age standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Histology Code (Major/specific)	Total			Malignant			Non Malignant		
	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI
Tumours of Neuroepithelial Tissue	1744.50	7.54	7.18-7.89	1622.67	7.01	6.67-7.35	121.83	0.52	0.43-0.62
pilocytic astrocytoma	61.83	0.26	0.20-0.33	61.83	0.26	0.20-0.33	0		
diffuse astrocytoma	84.50	0.36	0.29-0.44	84.50	0.36	0.29-0.44	0		
anaplastic astrocytoma	73.00	0.31	0.24-0.39	73.00	0.31	0.24-0.39	0		
unique astrocytoma	16.33	0.07	0.04-0.10	11.50	0.05	0.02-0.08	4.83	0.02	0.00-0.04
glioblastoma	948.50	4.11	3.85-4.37	948.50	4.11	3.85-4.37	0		
oligodendroglioma	69.33	0.30	0.23-0.37	69.33	0.30	0.23-0.37	0		
anaplastic oligodendroglioma	56.67	0.25	0.18-0.31	56.67	0.25	0.18-0.31	0		
choroid plexus tumours	10.83	0.05	0.02-0.07	1.33	0.01	0.00-0.02	9.50	0.04	0.01-0.07
oligoastrocytic tumours	68.50	0.30	0.23-0.37	68.50	0.30	0.23-0.37	0		
ependymal tumours	95.50	0.41	0.33-0.49	55.83	0.24	0.18-0.30	39.67	0.17	0.12-0.22
glioma malignant, NOS	121.00	0.52	0.43-0.61	121.00	0.52	0.43-0.61	0		
neuronal and mixed neuronal-glioma tumours	77.00	0.33	0.26-0.40	13.50	0.06	0.03-0.09	63.50	0.27	0.21-0.34
tumours of the pineal region*	9.00	0.04	0.01-0.06	-	0.03	0.01-0.05	-	0.01	0.00-0.03
embryonal tumours	51.67	0.22	0.16-0.28	50.50	0.22	0.16-0.27	1.17	0.01	0.00-0.01
other neuroepithelial tumours*	0.83	<0.01	0.00-0.01	-	<0.01	0.00-0.01	-	<0.01	0.00-0.00
Tumours of Cranial and Spinal Nerves	420.33	1.82	1.65-1.99	3.83	0.02	0.00-0.03	416.50	1.80	1.63-1.98
Tumours of the Meninges	1391.50	6.03	5.71-6.35	42.17	0.18	0.13-0.24	1349.33	5.85	5.54-6.16
meningioma	1303.67	5.65	5.34-5.96	27.67	0.12	0.08-0.16	1276.00	5.53	5.23-5.83
mesenchymal tumours	28.67	0.12	0.08-0.17	10.17	0.04	0.02-0.07	18.50	0.08	0.04-0.12
primary melanocytic lesions	3.67	0.02	0.00-0.03	2.33	0.01	0.00-0.02	1.33	0.01	0.00-0.02
other neoplasms related to the meninges	55.50	0.24	0.18-0.30	2.00	0.01	0.00-0.02	53.50	0.23	0.17-0.29
Lymphomas & Hematopoietic Neoplasms*	110.33	0.48	0.39-0.57	-	0.48	0.39-0.57	-	<0.01	0.00-0.00
lymphoma	108.00	0.47	0.38-0.56	108.00	0.47	0.38-0.56	0		
other hematopoietic neoplasms*	2.33	0.01	0.00-0.02	-	0.01	0.00-0.02	-	<0.01	0.00-0.00
Germ Cell Tumours, Cysts & Heterotopias	27.50	0.12	0.07-0.16	17.33	0.07	0.04-0.11	10.17	0.04	0.02-0.07
Tumours of the Sellar Region	674.00	2.91	2.69-3.13	3.00	0.01	0.00-0.03	671.00	2.90	2.68-3.12
Unclassified Tumours	1037.17	4.47	4.20-4.75	145.67	0.63	0.53-0.73	891.50	3.85	3.59-4.10
Not Classified by CBTRUS*	26.83	0.12	0.07-0.16	-	0.03	0.01-0.05	-	0.09	0.05-0.13
Total	5432.17	23.49	22.86-24.11	1950.83	8.43	8.05-8.80	3481.33	15.06	14.56-15.56

Abbreviations: CBTRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specified, *=censored cells,

Table 5: Primary brain and other central nervous system (CNS) Tumours for children, adolescents/young adults (AYA) and adults by histology group: annual average age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) from four Canadian provinces 2010-2015 (AB, BC, MB, ON)

Histology Code (Major/specific)	Children (0-14)			AYA (15-39)			Adults (40+)		
	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI
Tumours of Neuroepithelial Tissue	153.17	3.96	3.34-4.59	290.67	3.68	3.25-4.10	1300.67	11.31	10.70-11.93
pilocytic astrocytoma	33.50	0.87	0.57-1.16	19.50	0.25	0.14-0.36	8.83	0.08	0.03-0.13
diffuse astrocytoma	8.67	0.22	0.08-0.37	24.00	0.30	0.18-0.42	51.83	0.45	0.33-0.57
anaplastic astrocytoma	2.17	0.06	0.00-0.13	22.83	0.29	0.17-0.41	48.00	0.42	0.30-0.54
unique astrocytoma	3.33	0.09	0.00-0.18	6.67	0.08	0.02-0.15	6.33	0.05	0.01-0.10
glioblastoma	7.33	0.19	0.05-0.33	47.33	0.60	0.43-0.77	893.83	7.77	7.26-8.28
oligodendroglioma*	-	0.01	0.00-0.04	-	0.35	0.22-0.48	41.33	0.36	0.25-0.47
anaplastic oligodendroglioma*	-	<0.01	0.00-0.03	12.83	0.16	0.07-0.25	43.67	0.38	0.27-0.49
choroid plexus tumours*	5.33	0.14	0.02-0.26	-	0.03	0.00-0.06	-	0.03	0.00-0.06
oligoastrocytic tumours*	-	0.01	0.00-0.04	-	0.29	0.17-0.41	45.00	0.39	0.28-0.51
ependymal tumours	14.33	0.37	0.18-0.56	26.17	0.33	0.20-0.46	55.00	0.48	0.35-0.61
glioma malignant, NOS	26.33	0.68	0.42-0.94	25.50	0.32	0.20-0.45	69.17	0.60	0.46-0.74
neuronal and mixed neuronal-glioma tumours	15.17	0.39	0.19-0.59	38.33	0.49	0.33-0.64	23.50	0.21	0.12-0.29
tumours of the pineal region	2.33	0.06	0.00-0.14	2.33	0.03	0.00-0.07	4.33	0.04	0.00-0.07
embryonal tumours	33.33	0.86	0.57-1.16	12.00	0.15	0.07-0.24	6.33	0.06	0.01-0.10
other neuroepithelial tumours*	-	0.01	0.00-0.05	-	<0.01	0.00-0.01	-	<0.01	0.00-0.01
Tumours of Cranial and Spinal Nerves	9.17	0.24	0.08-0.39	86.00	1.08	0.86-1.31	325.17	2.83	2.53-3.14
Tumours of the Meninges	6.17	0.16	0.03-0.29	112.83	1.42	1.16-1.69	1272.50	11.06	10.46-11.67
meningioma	2.67	0.07	0.00-0.15	91.17	1.15	0.91-1.39	1209.83	10.52	9.92-11.11
mesenchymal tumours	2.00	0.05	0.00-0.12	3.50	0.04	0.00-0.09	23.17	0.20	0.12-0.28
primary melanocytic lesions*	-	0.02	0.00-0.07	-	0.01	0.00-0.03	2.00	0.02	0.00-0.04
other neoplasms related to the meninges*	-	0.02	0.00-0.06	-	0.22	0.12-0.32	37.50	0.33	0.22-0.43
Lymphomas & Hematopoietic Neoplasms	1.00	0.03	0.00-0.08	6.83	0.09	0.02-0.15	102.50	0.89	0.72-1.06
lymphoma*	-	0.02	0.00-0.07	-	0.08	0.02-0.15	-	0.87	0.70-1.04
other hematopoietic neoplasms*	-	<0.01	0.00-0.03	-	<0.01	0.00-0.01	-	0.02	0.00-0.04
Germ Cell Tumours, Cysts & Heterotopias	9.83	0.25	0.10-0.41	14.17	0.18	0.09-0.28	3.50	0.03	0.00-0.06
Tumours of the Sellar Region	10.00	0.26	0.10-0.42	152.17	1.92	1.61-2.22	511.83	4.46	4.07-4.84
Unclassified Tumours	26.50	0.69	0.43-0.95	113.33	1.43	1.17-1.70	897.33	7.77	7.26-8.28
Not Classified by CBTRUS	4.33	0.11	0.01-0.22	7.00	0.09	0.02-0.15	15.50	0.14	0.07-0.20
Total	220.17	5.70	4.95-6.46	783.00	9.89	9.20-10.58	4429.00	38.49	37.35-39.62

Abbreviations: CBTRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specified, *=censored cells

Table 6: Primary brain and other central nervous system (CNS) tumours by histology group and age at diagnosis (years): annual average age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) from four Canadian provinces 2010-2015 (AB, BC, MB, ON)

Histology Code (Major/specific)	0 to 19 Years		20 to 34 Years		35 to 44 Years		45 to 54 Years		55 to 64 Years		65+ Years	
	Rate	95% CI	Rate	95% CI	Rate	95% CI	Rate	95% CI	Rate	95% CI	Rate	95% CI
Tumours of Neuroepithelial Tissue	3.72	3.20-4.24	3.48	2.96-4.01	4.94	4.17-5.72	6.99	6.12-7.86	12.63	11.34-13.92	17.88	16.45-19.31
pilocytic astrocytoma	0.78	0.54-1.01	0.19	0.07-0.32	0.14	0.01-0.27	0.09	0.00-0.19	0.07	0.00-0.17	0.03	0.00-0.09
diffuse astrocytoma*	0.21	0.08-0.33	0.33	0.17-0.49	0.35	0.15-0.56	0.30	0.12-0.48	0.53	0.26-0.79	0.60	0.34-0.86
anaplastic astrocytoma	0.07	0.00-0.14	0.28	0.13-0.43	0.35	0.15-0.56	0.36	0.16-0.55	0.46	0.21-0.70	0.54	0.29-0.79
unique astrocytoma	0.10	0.02-0.19	0.09	0.01-0.17	0.03	0.00-0.09	0.02	0.00-0.07	0.07	0.00-0.17	0.07	0.00-0.17
glioblastoma*	0.21	0.09-0.33	0.52	0.32-0.73	1.51	1.09-1.94	3.86	3.21-4.50	8.83	7.75-9.90	13.95	12.69-15.22
oligodendroglioma	0.04	0.00-0.09	0.33	0.17-0.49	0.61	0.34-0.89	0.41	0.20-0.62	0.40	0.17-0.63	0.16	0.03-0.30
anaplastic oligodendroglioma	0.01	0.00-0.04	0.13	0.03-0.24	0.39	0.17-0.61	0.37	0.17-0.57	0.46	0.21-0.70	0.31	0.12-0.50
choroid plexus tumours	0.11	0.02-0.20	0.02	0.00-0.07	0.03	0.00-0.08	0.04	0.00-0.11	0.03	0.00-0.09	0.01	0.00-0.06
oligoastrocytic tumours	0.01	0.00-0.04	0.32	0.16-0.48	0.46	0.22-0.69	0.41	0.20-0.63	0.44	0.20-0.69	0.30	0.12-0.49
ependymal tumours	0.37	0.21-0.53	0.33	0.17-0.49	0.36	0.15-0.57	0.48	0.25-0.70	0.57	0.30-0.84	0.43	0.21-0.65
glioma malignant, NOS	0.57	0.37-0.77	0.28	0.13-0.43	0.39	0.17-0.61	0.34	0.15-0.53	0.39	0.17-0.62	1.21	0.84-1.58
neuronal and mixed neuronal-glial tumours	0.50	0.31-0.69	0.46	0.27-0.65	0.24	0.07-0.41	0.22	0.07-0.37	0.23	0.05-0.40	0.18	0.04-0.33
tumours of the pineal region	0.05	0.00-0.10	0.04	0.00-0.09	0.02	0.00-0.06	0.04	0.00-0.10	0.07	0.00-0.16	0.02	0.00-0.08
embryonal tumours	0.68	0.46-0.90	0.15	0.04-0.26	0.07	0.00-0.16	0.04	0.00-0.11	0.07	0.00-0.17	0.05	0.00-0.13
other neuroepithelial tumours*	0.01	0.00-0.03	<0.01	0.00-0.02	<0.01	0.00-0.00	<0.01	0.00-0.00	0.01	0.00-0.03	<0.01	0.00-0.00
Tumours of Cranial and Spinal Nerves	0.29	0.14-0.43	1.02	0.74-1.31	1.95	1.47-2.44	2.71	2.16-3.25	3.43	2.76-4.10	2.86	2.29-3.43
Tumours of the Meninges	0.25	0.12-0.39	1.23	0.92-1.55	4.03	3.34-4.73	7.27	6.38-8.16	10.89	9.70-12.08	18.25	16.80-19.70
meningioma	0.14	0.04-0.24	0.95	0.68-1.22	3.60	2.94-4.26	6.73	5.88-7.58	10.33	9.17-11.49	17.69	16.27-19.12
mesenchymal tumours	0.05	0.00-0.11	0.05	0.00-0.12	0.13	0.00-0.25	0.23	0.07-0.39	0.16	0.02-0.31	0.19	0.04-0.34
primary melanocytic lesions	0.02	0.00-0.05	0.01	0.00-0.05	0.02	0.00-0.06	0.01	0.00-0.05	0.03	0.00-0.09	0.01	0.00-0.04
other neoplasms related to the meninges	0.05	0.00-0.11	0.22	0.09-0.35	0.29	0.10-0.48	0.29	0.12-0.47	0.37	0.15-0.59	0.35	0.15-0.56
Lymphomas & Hematopoietic Neoplasms	0.03	0.00-0.07	0.06	0.00-0.13	0.18	0.03-0.33	0.35	0.16-0.54	0.96	0.61-1.32	1.78	1.33-2.23
lymphoma	0.02	0.00-0.07	0.06	0.00-0.13	0.18	0.03-0.33	0.34	0.15-0.53	0.94	0.59-1.30	1.75	1.30-2.20
other hematopoietic neoplasms	<0.01	0.00-0.02	<0.01	0.00-0.00	0.01	0.00-0.03	0.01	0.00-0.05	0.02	0.00-0.06	0.03	0.00-0.09
Germ Cell Tumours, Cysts & Heterotopias	0.30	0.15-0.45	0.14	0.04-0.25	0.05	0.00-0.13	0.01	0.00-0.05	0.06	0.00-0.14	0.02	0.00-0.07
Tumours of the Sellar Region	0.45	0.27-0.63	1.98	1.58-2.38	2.96	2.37-3.56	3.66	3.03-4.29	4.64	3.86-5.42	5.76	4.95-6.57
Unclassified Tumours	0.79	0.55-1.03	1.36	1.03-1.68	2.12	1.61-2.62	3.10	2.53-3.68	4.87	4.07-5.67	18.12	16.68-19.56
Not Classified by CBRUS	0.10	0.01-0.18	0.08	0.00-0.15	0.14	0.01-0.27	0.15	0.03-0.28	0.14	0.00-0.27	0.12	0.00-0.24

Abbreviations: CBRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specified

Table 7. Primary brain and other central nervous system (CNS) tumours: common histologies by age group with annual average age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Age Group (Years)	Most Common Histology			Second Most Common Histology			Third Most Common Histology		
	Histology	Rate	95% CI	Histology	Rate	95% CI	Histology	Rate	95% CI
0 to 4	embryonal tumours	1.20	0.60-1.80	unclassified tumours	0.90	0.38-1.42	pilocytic astrocytoma	0.77	0.29-1.25
5 to 9	pilocytic astrocytoma	0.97	0.43-1.51	embryonal tumours	0.90	0.38-1.42	glioma malignant, NOS	0.86	0.35-1.37
10 to 14	pilocytic astrocytoma	0.87	0.36-1.37	unclassified tumours	0.69	0.24-1.14	embryonal tumours	0.50	0.11-0.88
15 to 19	unclassified tumours	1.06	0.53-1.58	tumours of the sellar region	0.93	0.44-1.42	neuronal and mixed neuronal-glial tumours	0.78	0.33-1.22
20 to 34	tumours of the sellar region	1.98	1.58-2.38	unclassified tumours	1.36	1.03-1.68	tumours of cranial and spinal nerves	1.02	0.74-1.31
35 to 44	meningioma	3.60	2.94-4.26	tumours of the sellar region	2.96	2.37-3.56	unclassified tumours	2.12	1.61-2.62
45 to 54	meningioma	5.90	4.77-7.04	glioblastoma	3.86	3.21-4.50	tumours of the sellar region	3.66	3.03-4.29
55 to 64	meningioma	9.77	8.23-11.30	glioblastoma	8.83	7.75-9.90	unclassified tumours	4.87	4.07-5.67
65+	unclassified tumours	18.12	16.68-19.56	meningioma	17.69	16.26-19.11	glioblastoma	13.97	12.70-15.23

Abbreviations: NOS=not otherwise specified

Table 8: Primary brain and other central nervous system (CNS) tumours in children and adolescents (aged 0-19 years) by histology group and sex: average number of cases per year, annual average age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Histology Code (Major/specific)	Total (0 to 19 Years)			Males (0-19 Years)			Females (0-19 Years)		
	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI
Tumours of Neuroepithelial Tissue	199.17	3.72	3.20-4.24	107.50	3.91	3.17-4.65	91.67	3.51	2.79-4.23
pilocytic astrocytoma	41.67	0.78	0.54-1.01	20.00	0.73	0.41-1.04	21.67	0.83	0.48-1.18
diffuse astrocytoma	11.00	0.21	0.08-0.33	5.00	0.18	0.02-0.34	6.00	0.23	0.05-0.41
anaplastic astrocytoma	3.67	0.07	0.00-0.14	2.00	0.07	0.00-0.17	1.67	0.06	0.00-0.16
unique astrocytoma	5.50	0.10	0.02-0.19	3.50	0.13	0.00-0.26	2.00	0.08	0.00-0.19
glioblastoma	11.17	0.21	0.09-0.33	5.67	0.21	0.04-0.38	5.50	0.21	0.03-0.39
Oligodendroglioma*	2.00	0.04	0.00-0.09	-	0.05	0.00-0.13	-	0.03	0.00-0.09
anaplastic oligodendroglioma*	-	0.01	0.00-0.04	-	0.02	0.00-0.08	0		
choroid plexus tumours	6.00	0.11	0.02-0.20	3.17	0.12	0.00-0.24	2.83	0.11	0.00-0.24
oligoastrocytic tumours*	-	0.01	0.00-0.04	-	0.02	0.00-0.07	-	0.01	0.00-0.04
ependymal tumours	19.67	0.37	0.21-0.53	11.17	0.41	0.17-0.65	8.50	0.33	0.11-0.55
glioma malignant, NOS	30.83	0.57	0.37-0.77	15.00	0.55	0.27-0.82	15.83	0.60	0.30-0.90
neuronal and mixed neuronal-glia tumours	26.67	0.50	0.31-0.69	15.83	0.58	0.29-0.86	10.83	0.42	0.17-0.67
tumours of the pineal region	2.50	0.05	0.00-0.10	1.00	0.04	0.00-0.11	1.50	0.06	0.00-0.15
embryonal tumours	36.67	0.68	0.46-0.90	22.17	0.80	0.47-1.14	14.50	0.55	0.27-0.84
other neuroepithelial tumours*	-	0.01	0.00-0.03	-	0.02	0.00-0.07	0		
Tumours of Cranial and Spinal Nerves	15.33	0.29	0.14-0.43	8.67	0.32	0.11-0.53	6.67	0.26	0.06-0.45
Tumours of the Meninges	13.33	0.25	0.12-0.39	6.17	0.23	0.05-0.40	7.17	0.28	0.08-0.49
meningioma	7.33	0.14	0.04-0.24	4.00	0.15	0.00-0.29	3.33	0.13	0.00-0.27
mesenchymal tumours	2.67	0.05	0.00-0.11	1.00	0.04	0.00-0.11	1.67	0.06	0.00-0.16
primary melanocytic lesions*	0.83	0.02	0.00-0.05	-	0.02	0.00-0.07	-	0.01	0.00-0.06
other neoplasms related to the meninges	2.50	0.05	0.00-0.11	-	0.02	0.00-0.08	-	0.07	0.00-0.18
Lymphomas & Hematopoietic Neoplasms*	1.50	0.03	0.00-0.07	-	0.03	0.00-0.10	-	0.03	0.00-0.09
lymphoma*	1.33	0.02	0.00-0.07	-	0.03	0.00-0.10	-	0.02	0.00-0.07
other hematopoietic neoplasms*	-	<0.01	0.00-0.02	0			-	0.01	0.00-0.04
Germ Cell Tumours, Cysts & Heterotopias	16.00	0.30	0.15-0.45	12.67	0.46	0.21-0.72	3.33	0.13	0.00-0.26
Tumours of the Sellar Region	23.83	0.45	0.27-0.63	10.33	0.38	0.15-0.61	13.50	0.53	0.25-0.81
Unclassified Tumours	42.17	0.79	0.55-1.03	19.83	0.73	0.41-1.04	22.33	0.87	0.51-1.23
Not Classified by CBTRUS	5.17	0.10	0.01-0.18	2.67	0.10	0.00-0.21	2.50	0.10	0.00-0.21

Abbreviations: CBTRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specific, *=censored cells

Table 9: Primary brain and other central nervous system (CNS) tumours in children and adolescents (aged 0-19 years) by histology group and age at diagnosis: average number of cases per year, annual average age-standardized incidence rates per 100,000 per year and 95% Confidence Intervals (CI) for 2010-2015 from four Canadian provinces (AB, BC, MB, ON)

Histology Code (Major/specific)	0 to 4 Years			5 to 9 Years			10 to 14 Years			15 to 19 Years		
	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI	Cases per Year	Rate	95% CI
Tumours of Neuroepithelial Tissue	56.00	4.38	3.23-5.53	53.83	4.22	3.09-5.35	43.33	3.31	2.33-4.30	46.00	3.10	2.21-4.00
pilocytic astrocytoma	9.83	0.77	0.29-1.25	12.33	0.97	0.43-1.51	11.33	0.87	0.36-1.37	8.17	0.55	0.17-0.93
diffuse astrocytoma	3.00	0.23	0.00-0.50	2.50	0.20	0.00-0.44	3.17	0.24	0.00-0.51	2.33	0.16	0.00-0.36
anaplastic astrocytoma*	-	-	-	1.33	0.10	0.00-0.28	-	-	-	1.50	0.10	0.00-0.26
unique astrocytoma*	-	-	-	-	-	-	1.5	0.11	0.00-0.30	2.17	0.15	0.00-0.34
glioblastoma	2.33	0.18	0.00-0.42	2.33	0.18	0.00-0.42	2.67	0.20	0.00-0.45	3.83	0.26	0.00-0.52
oligodendroglioma*	0	-	-	-	-	-	0	-	-	-	-	-
anaplastic oligodendroglioma*	0	-	-	0	-	-	-	-	-	-	-	-
choroid plexus tumours*	3.33	0.26	0.00-0.54	1.00	0.08	0.00-0.23	-	-	-	-	-	-
oligoastrocytic tumours*	-	-	-	-	-	-	-	-	-	-	-	-
ependymal tumours	7.33	0.57	0.16-0.99	4.50	0.35	0.03-0.68	2.50	0.19	0.00-0.43	5.33	0.36	0.05-0.66
glioma malignant, NOS	8.83	0.69	0.24-1.15	11.00	0.86	0.35-1.37	6.50	0.50	0.11-0.88	4.50	0.30	0.02-0.58
neuronal and mixed neuronal-glia tumours	4.00	0.31	0.01-0.62	4.67	0.37	0.03-0.70	6.50	0.50	0.11-0.88	11.50	0.78	0.33-1.22
tumours of the pineal region*	0.83	0.07	0.00-0.21	-	-	-	0.83	0.06	0.00-0.20	-	-	-
embryonal tumours	15.33	1.20	0.60-1.80	11.50	0.90	0.38-1.42	6.50	0.50	0.11-0.88	3.33	0.22	0.00-0.47
other neuroepithelial tumours*	0	-	-	-	-	-	-	-	-	0	-	-
Tumours of Cranial and Spinal Nerves	2.67	0.21	0.00-0.46	3.50	0.27	0.00-0.56	3.00	0.23	0.00-0.49	6.17	0.42	0.09-0.74
Tumours of the Meninges	2.33	0.18	0.00-0.42	1.50	0.12	0.00-0.31	2.33	0.18	0.00-0.41	7.17	0.48	0.13-0.84
meningioma*	-	-	-	-	-	-	1.00	0.08	0.00-0.23	4.67	0.31	0.03-0.60
mesenchymal tumours*	0.83	0.07	0.00-0.21	-	-	-	-	-	-	-	-	-
primary melanocytic lesions*	-	-	-	-	-	-	-	-	-	-	-	-
other neoplasms related to the meninges*	-	-	-	-	-	-	-	-	-	-	-	-
Lymphomas & Hematopoietic Neoplasms*	0	-	-	-	-	-	-	-	-	-	-	-
lymphoma*	0	-	-	-	-	-	-	-	-	-	-	-
other hematopoietic neoplasms*	0	-	-	0	-	-	-	-	-	0	-	-
Germ Cell Tumours, Cysts & Heterotopias	2.00	0.16	0.00-0.37	3.00	0.24	0.00-0.50	4.83	0.37	0.04-0.70	6.17	0.42	0.09-0.74
Tumours of the Sellar Region	1.17	0.09	0.00-0.26	2.83	0.22	0.00-0.48	6.00	0.46	0.09-0.83	13.83	0.93	0.44-1.42
Unclassified Tumours	11.50	0.90	0.38-1.42	6.00	0.47	0.09-0.85	9.00	0.69	0.24-1.14	15.67	1.06	0.53-1.58
Not Classified by CBTRUS	1.33	0.10	0.00-0.28	1.33	0.10	0.00-0.28	1.67	0.13	0.00-0.32	0.83	0.06	0.00-0.18

Abbreviations: CBTRUS= Central Brain Tumor Registry of the United States, NOS=not otherwise specified *=censored cells

Table 10: Estimated number of newly diagnosed primary brain and other central nervous system (CNS) tumours in 2021 for all cases, by sex and in children*

Histology Code (Major/specific)	Total	Male	Female	Children (0-14 Years)
Tumours of Neuroepithelial Tissue	3122	1813	1314	257
pilocytic astrocytoma	99	49	50	56
diffuse astrocytoma	145	87	59	14
anaplastic astrocytoma	126	69	58	4
glioblastoma	1785	1057	731	12
oligodendroglioma	113	67	46	1
anaplastic oligodendroglioma	96	56	41	0
choroid plexus tumours	18	8	10	9
oligoastrocytic tumours	116	66	50	1
ependymal tumours	160	89	71	24
glioma malignant,NOS	213	114	100	44
neuronal and mixed neuronal-gliial tumours	123	73	50	25
embryonal tumours	85	53	32	56
Tumours of Cranial and Spinal Nerves	723	360	363	15
Tumours of the Meninges	2542	806	1731	10
Lymphomas & Hematopoietic Neoplasms	210	116	94	2
Germ cell tumours, Cysts & Heterotopias	43	30	13	16
Tumours of the Sellar Region	1173	609	565	17
Unclassified Tumours	1939	836	1102	44
Not Classified by CBTRUS	44	24	21	7
Total	9797	4594	5203	368

Abbreviation: CBTRUS= Central Brain Tumor Registry of the United States

*Based on Canadian population data (CANSIM) population projections and CBTR annual average age-standardized incidence rates (2010-15)

<https://www150.statcan.gc.ca/n1/pub/91-520-x/2010001/t364-eng.htm>

Table 11: Annual Age standardized incidence rates per 100,000 per year in the “Unclassified Category”: Overall and by sex, age at diagnosis and behavior (Brain Tumour Registry of Canada [BTRC] 2010-2015 and Central Brain Tumor Registry of the United States [CBTRUS] 2011-2015) *

Category	Unclassified	
	BTRC	CBTRUS
1) Overall	4.47	1.23
2) Sex		
• Male	4.25	1.22
• Female	4.70	1.26
3) Age Group at Diagnosis		
• Children	0.69	0.33
• Young adult	1.43	0.64
• Adult	7.77	NR
4) Behavior		
• Malignant	0.63	NR
• Non-malignant	3.85	NR

*CBTRUS, October 2018 report

Abbreviations: NR= not reported by CBTRUS

Ostrom, Q. T., Gittleman, H., Truitt, G., Boscia, A., Kruchko, C., & Barnholtz-Sloan, J. S. (2018). CBTRUS statistical report: primary brain and other central nervous system tumors diagnosed in the United States in 2011–2015. *Neuro-oncology*, 20(suppl_4), iv1-iv86.