

## Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Definitions of Glioma Histology Groups

<b>Histology group</b>	<b>CBTRUS histologies</b>	<b>ICD-O-3 topography codes</b>	<b>ICD-O-3 Histology codes</b>
Glioblastoma	Glioblastoma	C71, C72	9440/3, 9441/3, 9442/3
Non-glioblastoma astrocytomas	Pilocytic astrocytoma Diffuse astrocytoma Anaplastic astrocytoma Unique astrocytoma variants	C71, C72	9381/3, 9401/3, 9421/1, 9400/3, 9410/3, 9411/3, 9420/3, 9424/3
Oligodendroglial tumors	Oligodendroglioma Anaplastic oligodendroglioma Oligoastrocytic tumors	C71, C72	9382/3, 9450/3, 9451/3, 9460/3
Ependymoma	Ependymal tumors	C71, C72	9391/3, 9392/3, 9393/3
Other gliomas	Glioma malignant, NOS Other neuroepithelial tumors	C71, C72	9380/3, 9423/3, 9430/3, 9431/1, 9432/1

**eTable 2.** Availability of Treatment Information for SEER Cases, by Histology Group and Race

Group	Race/ethnicity	Total cases	Complete extent of resection information		p-value	Complete radiation information		p-value	Complete chemotherapy information		p-value
Glioblastoma (all cases)	Non-Hispanic white	24,670	14,383	58.3%	0.1066	18,438	74.7%	2.94x10 <sup>-b</sup>	15,010	60.8%	2.70x10 <sup>-11</sup>
	API	1,335	749	56.1%		999	74.8%		824	61.7%	
	Black	1,762	998	56.6%		1,281	72.7%		969	55.0%	
	Hispanic white	2,977	1,709	57.4%		2,095	70.4%		1,656	55.6%	
Non-glioblastoma astrocytoma	Non-Hispanic white	7,664	3,937	51.4%	0.0003	4,554	59.4%	0.0174	3,290	42.9%	1.66x10 <sup>-11</sup>
	API	543	232	42.7%		306	56.4%		235	43.3%	
	Black	678	344	50.7%		371	54.7%		212	31.3%	
	Hispanic white	1,272	683	53.7%		710	55.8%		450	35.4%	
Oligodendroglial tumors	Non-Hispanic white	4,660	2,933	62.9%	0.5473	2,252	48.3%	0.5440	1,972	42.3%	1.02x10 <sup>-5</sup>
	API	454	291	64.1%		232	51.1%		215	47.4%	
	Black	292	176	60.3%		148	50.7%		103	35.3%	
	Hispanic white	910	563	61.9%		437	48.0%		318	34.9%	

**eTable 3.** Median Age at Diagnosis, Total Cases, Average Annual Age-Adjusted Incidence Rates (AAAIR), 95% Confidence Intervals (95% CI), and Incidence Rate Ratios (Males:Females) for Selected Glioma Histologies in Adults (ages 18+) by Race, Hispanic Ethnicity, and Sex, 2000-2014

Histologic group	Race/ethnicity	Overall			Males		Females		Incidence Rate Ratio (Male:Females)
		Median Age at Diagnosis	Count	AAAIR (95%CI)	Count	AAAIR (95%CI)	Count	AAAIR (95%CI)	
Glioblastoma	All groups	63	150,631	4.23 (4.21-4.25)	86,364	5.31 (5.27-5.35)	64,267	3.33 (3.31-3.36)	1.59**
	Non-Hispanic white	64	128,976	4.71 (4.69-4.74)	74,128	5.87 (5.83-5.92)	54,848	3.72 (3.68-3.75)	1.58**
	Hispanic white	60	9,217	3.34 (3.26-3.41)	5,187	4.07 (3.95-4.20)	4,030	2.73 (2.65-2.82)	1.49**
	Black	59	8,290	2.24 (2.19-2.29)	4,634	2.89 (2.80-2.98)	3,656	1.76 (1.70-1.82)	1.64**
	AIAN	59	525	1.88 (1.71-2.06)	309	2.36 (2.07-2.68)	216	1.48 (1.28-1.70)	1.60**
	API	61	2,929	2.00 (1.92-2.07)	1,680	2.56 (2.43-2.69)	1,249	1.55 (1.46-1.64)	1.65**
Non-glioblastoma astrocytomas	All groups	48	46,002	1.35 (1.33-1.36)	25,439	1.56 (1.54-1.58)	20,563	1.16 (1.14-1.17)	1.35**
	Non-Hispanic white	50	37,351	1.55 (1.54-1.57)	20,801	1.79 (1.77-1.82)	16,550	1.33 (1.31-1.35)	1.35**
	Hispanic white	41	3,770	1.02 (0.99-1.06)	2,054	1.13 (1.07-1.18)	1,716	0.93 (0.88-0.97)	1.22**
	Black	44	3,026	0.74 (0.72-0.77)	1,569	0.84 (0.80-0.89)	1,457	0.66 (0.63-0.69)	1.28**
	AIAN	41	286	0.78 (0.68-0.88)	143	0.81 (0.67-0.98)	143	0.75 (0.63-0.89)	1.08
	API	41	1,289	0.76 (0.72-0.81)	694	0.89 (0.82-0.96)	595	0.66 (0.61-0.72)	1.35**
Oligodendroglial tumors	All groups	43	26,068	0.78 (0.77-0.79)	14,596	0.89 (0.88-0.90)	11,472	0.67 (0.66-0.68)	1.33**
	Non-Hispanic white	44	21,016	0.92 (0.91-0.93)	11,856	1.05 (1.04-1.07)	9,160	0.79 (0.78-0.81)	1.33**
	Hispanic white	41	2,341	0.59 (0.57-0.62)	1,262	0.64 (0.60-0.68)	1,079	0.55 (0.52-0.58)	1.17**
	Black	43	1,374	0.33 (0.31-0.35)	729	0.38 (0.35-0.41)	645	0.29 (0.27-0.32)	1.29**
	AIAN	36	155	0.38 (0.32-0.45)	88	0.44 (0.35-0.55)	67	0.33 (0.26-0.42)	1.33
	API	41	957	0.53 (0.50-0.57)	515	0.61 (0.56-0.67)	442	0.47 (0.42-0.51)	1.31**
Ependymoma	All groups	47	8,816	0.26 (0.25-0.26)	4,525	0.27 (0.26-0.28)	4,291	0.25 (0.24-0.25)	1.11**
	Non-Hispanic white	48	6,804	0.29 (0.28-0.29)	3,548	0.30 (0.29-0.31)	3,256	0.27 (0.26-0.28)	1.11**
	Hispanic white	41	896	0.23 (0.21-0.25)	450	0.24 (0.22-0.27)	446	0.22 (0.20-0.25)	1.08
	Black	44	683	0.16 (0.15-0.18)	317	0.16 (0.15-0.18)	366	0.16 (0.15-0.18)	1.02
	AIAN	38	50	0.13 (0.09-0.17)	24	0.13 (0.08-0.20)	26	0.13 (0.09-0.20)	0.96
	API	42	340	0.19 (0.17-0.22)	161	0.19 (0.16-0.23)	179	0.19 (0.17-0.23)	0.99
Other gliomas	All groups	56	13,291	0.39 (0.38-0.39)	6,809	0.43 (0.42-0.44)	6,482	0.35 (0.34-0.36)	1.24**
	Non-Hispanic white	59	10,433	0.42 (0.41-0.42)	5,343	0.46 (0.45-0.48)	5,090	0.37 (0.36-0.39)	1.24**
	Hispanic white	47	1,097	0.34 (0.32-0.36)	588	0.39 (0.36-0.43)	509	0.30 (0.27-0.33)	1.32**
	Black	50	1,193	0.31 (0.30-0.33)	581	0.36 (0.33-0.39)	612	0.29 (0.26-0.31)	1.25**
	AIAN	50	54	0.17 (0.13-0.23)	28	0.15 (0.10-0.23)	26	0.18 (0.11-0.26)	0.87
	API	49	432	0.28 (0.26-0.31)	222	0.31 (0.27-0.36)	210	0.26 (0.22-0.29)	1.23*

Abbreviations: 95% CI: 95% confidence interval; Average annual age-adjusted incidence rate; AIAN: American Indian/Alaska Native, API: Asian Pacific Islander

-- Counts and rates are not presented when fewer than 16 cases were reported for the specific category

\* Incidence rate ratio is significant different from 1 at p<0.05

\*\* Incidence rate ratio is significant different from 1 at p<0.005

**eTable 4.** Total Cases, Average Annual Age-Adjusted Incidence Rates (AAAIR), 95% Confidence Intervals (95% CI) for Selected Glioma Histologies in Adults (Ages 18+) by Race, Hispanic Ethnicity, and Age Groups, CBTRUS 2000-2014

Histologic group	Race/ ethnicity	18-34		35-44		45-54		55-64		65-74		75+	
		Count	AAAIR (95%CI)	Count	AAAIR (95%CI)	Count	AAAIR (95%CI)	Count	AAAIR (95%CI)	Count	AAAIR (95%CI)	Count	AAAIR (95%CI)
Glioblastoma	All groups	4,052	0.39 (0.38-0.40)	7,915	1.23 (1.21-1.26)	23,563	3.63 (3.59-3.68)	39,578	8.07 (7.99-8.15)	40,072	12.98 (12.86-13.11)	35,451	13.24 (13.10-13.38)
	Non-Hispanic white	2,825	0.45 (0.44-0.47)	6,049	1.43 (1.40-1.47)	19,401	4.17 (4.11-4.23)	33,821	9.04 (8.94-9.13)	35,008	14.32 (14.17-14.47)	31,872	14.30 (14.14-14.46)
	Hispanic white	544	0.30 (0.27-0.32)	860	0.96 (0.90-1.03)	1,749	2.71 (2.58-2.84)	2,351	6.20 (5.95-6.46)	2,140	10.31 (9.88-10.76)	1,573	10.98 (10.45-11.54)
	Black	398	0.26 (0.24-0.29)	624	0.73 (0.68-0.79)	1,707	2.15 (2.05-2.26)	2,342	4.46 (4.28-4.64)	1,942	6.62 (6.32-6.92)	1,277	6.11 (5.78-6.46)
	AIAN	35	0.24 (0.17-0.33)	49	0.61 (0.45-0.81)	96	1.37 (1.11-1.67)	139	3.16 (2.65-3.73)	122	5.75 (4.76-6.88)	84	6.67 (5.31-8.26)
	API	208	0.31 (0.27-0.36)	278	0.74 (0.66-0.83)	478	1.52 (1.39-1.66)	726	3.38 (3.14-3.64)	681	5.66 (5.24-6.10)	558	6.88 (6.32-7.47)
Non-glioblastoma astrocytomas	All groups	11,088	1.06 (1.04-1.08)	7,401	1.16 (1.13-1.19)	7,800	1.22 (1.19-1.25)	7,672	1.56 (1.53-1.60)	6,680	2.16 (2.11-2.21)	5,361	2.01 (1.96-2.07)
	Non-Hispanic white	8,288	1.32 (1.29-1.35)	5,684	1.37 (1.34-1.41)	6,305	1.38 (1.35-1.42)	6,517	1.74 (1.70-1.79)	5,784	2.36 (2.30-2.42)	4,773	2.16 (2.09-2.22)
	Hispanic white	1,265	0.69 (0.65-0.73)	768	0.84 (0.78-0.90)	641	0.98 (0.91-1.06)	479	1.26 (1.15-1.37)	382	1.84 (1.66-2.03)	235	1.63 (1.43-1.86)
	Black	924	0.60 (0.56-0.64)	559	0.66 (0.60-0.71)	560	0.71 (0.65-0.77)	429	0.82 (0.74-0.90)	344	1.17 (1.05-1.31)	210	1.00 (0.87-1.15)
	AIAN	95	0.61 (0.49-0.74)	58	0.73 (0.55-0.94)	47	0.66 (0.48-0.88)	47	1.06 (0.78-1.41)	25	1.10 (0.70-1.63)	--	--
	API	426	0.64 (0.58-0.70)	268	0.70 (0.62-0.79)	200	0.64 (0.56-0.74)	164	0.76 (0.65-0.88)	114	0.95 (0.78-1.14)	117	1.45 (1.20-1.74)
Oligodendroglial tumors	All groups	6,704	0.64 (0.63-0.66)	6,606	1.04 (1.01-1.06)	5,716	0.90 (0.87-0.92)	3,965	0.81 (0.78-0.84)	2,007	0.64 (0.61-0.67)	1,070	0.41 (0.38-0.43)
	Non-Hispanic white	5,230	0.84 (0.81-0.86)	5,156	1.24 (1.21-1.28)	4,617	1.02 (0.99-1.05)	3,360	0.90 (0.87-0.93)	1,721	0.70 (0.66-0.73)	932	0.43 (0.40-0.45)
	Hispanic white	694	0.38 (0.35-0.41)	685	0.75 (0.69-0.81)	515	0.79 (0.72-0.86)	268	0.70 (0.62-0.79)	111	0.53 (0.43-0.64)	68	0.47 (0.36-0.59)
	Black	347	0.23 (0.21-0.26)	378	0.45 (0.40-0.49)	302	0.38 (0.34-0.43)	198	0.37 (0.32-0.43)	109	0.36 (0.30-0.44)	40	0.19 (0.14-0.26)
	AIAN	69	0.47 (0.36-0.59)	35	0.43 (0.30-0.60)	27	0.38 (0.25-0.56)	18	0.39 (0.23-0.62)	--	--	--	--
	API	295	0.43 (0.39-0.49)	279	0.74 (0.65-0.83)	206	0.66 (0.57-0.76)	102	0.48 (0.39-0.58)	49	0.40 (0.30-0.53)	26	0.32 (0.21-0.47)
Ependymoma	All groups	1,982	0.19 (0.18-0.20)	1,696	0.27 (0.25-0.28)	2,061	0.32 (0.31-0.34)	1,605	0.33 (0.31-0.34)	975	0.31 (0.29-0.33)	497	0.19 (0.17-0.21)
	Non-Hispanic white	1,367	0.22 (0.21-0.23)	1,236	0.30 (0.28-0.31)	1,605	0.35 (0.33-0.37)	1,333	0.36 (0.34-0.38)	821	0.33 (0.31-0.36)	442	0.20 (0.18-0.22)
	Hispanic white	300	0.16 (0.15-0.18)	203	0.22 (0.19-0.26)	190	0.29 (0.25-0.34)	104	0.27 (0.22-0.33)	78	0.38 (0.30-0.47)	21	0.15 (0.09-0.22)
	Black	178	0.12 (0.10-0.13)	158	0.19 (0.16-0.22)	172	0.22 (0.19-0.25)	110	0.21 (0.17-0.25)	49	0.17 (0.12-0.22)	16	0.08 (0.04-0.12)
	AIAN	20	0.13 (0.08-0.21)	--	--	--	--	--	--	--	--	--	--
	API	104	0.15 (0.13-0.19)	78	0.21 (0.16-0.26)	71	0.23 (0.18-0.29)	50	0.23 (0.17-0.31)	21	0.17 (0.11-0.26)	16	0.19 (0.11-0.31)
Other gliomas	All groups	2,468	0.24 (0.23-0.24)	1,567	0.25 (0.23-0.26)	1,879	0.29 (0.28-0.31)	1,829	0.37 (0.36-0.39)	1,907	0.62 (0.59-0.65)	3,641	1.32 (1.28-1.37)
	Non-Hispanic white	1,728	0.27 (0.26-0.29)	1,112	0.27 (0.25-0.28)	1,412	0.31 (0.29-0.32)	1,435	0.38 (0.36-0.40)	1,561	0.64 (0.61-0.68)	3,185	1.38 (1.33-1.43)
	Hispanic white	317	0.17 (0.16-0.19)	168	0.18 (0.16-0.21)	174	0.27 (0.23-0.31)	148	0.39 (0.33-0.46)	118	0.57 (0.47-0.69)	172	1.23 (1.05-1.43)
	Black	286	0.19 (0.16-0.21)	187	0.22 (0.19-0.25)	201	0.25 (0.22-0.29)	171	0.32 (0.28-0.38)	148	0.51 (0.43-0.60)	200	0.95 (0.83-1.09)
	AIAN	--	--	--	--	--	--	--	--	--	--	--	--
	API	99	0.15 (0.12-0.18)	74	0.20 (0.16-0.25)	72	0.23 (0.18-0.30)	52	0.24 (0.18-0.32)	63	0.54 (0.41-0.69)	72	0.91 (0.71-1.14)

Abbreviations: b95% CI: 95% confidence interval; AAAIR: Average annual age-adjusted incidence rate; AIAN: American Indian/Alaska Native, API: Asian Pacific Islander  
 -- Counts and rates are not presented when fewer than 16 cases were reported for the specific category

**eTable 5.** One- and Five-Year Relative Survival Rates and 95% Confidence Intervals (95% CI) for Selected Glioma Histologies in Adults (Ages 18+) by Race, Ethnicity, and Age at Diagnosis, SEER 18 Registries, 2000-2014

Histologic group	Race/ethnicity	18-34			35-44			45-54			55-64			65-74			75+		
		N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)
Glioblastoma	All groups	1,012	76.4 (73.6-79.0)	26.1 (23.0-29.2)	2,028	68.0 (65.8-70.0)	15.2 (13.5-17.0)	5,795	58.0 (56.7-59.3)	7.4 (6.6-8.2)	8,968	46.5 (45.5-47.6)	4.4 (3.9-5.0)	7,868	29.7 (28.6-30.7)	2.3 (1.9-2.8)	5,209	14.0 (13.0-15.0)	1.0 (0.7-1.4)
	Non-Hispanic white	623	78.6 (75.1-81.7)	27.0 (23.1-31.0)	1,428	68.3 (65.8-70.7)	14.5 (12.5-16.6)	4,429	58.5 (57.0-60.0)	6.7 (5.9-7.6)	7,266	47.0 (45.8-48.2)	4.1 (3.6-4.7)	6,434	29.6 (28.4-30.7)	2.2 (1.8-2.7)	4,455	13.8 (12.8-14.9)	0.9 (0.6-1.4)
	Hispanic white	192	72.6 (65.2-78.6)	23.4 (16.6-30.9)	312	69.6 (63.9-74.5)	19.3 (14.5-24.7)	651	53.6 (49.5-57.6)	9.4 (6.9-12.4)	760	44.5 (40.8-48.2)	5.6 (3.7-7.9)	680	26.8 (23.3-30.3)	2.5 (1.3-4.4)	377	12.7 (9.3-16.5)	0.8 (0.2-2.5)
	Black	82	69.8 (58.4-78.7)	25.7 (15.7-36.8)	152	65.1 (56.8-72.2)	14.9 (8.9-22.2)	416	54.1 (49.0-58.8)	8.9 (6.0-12.6)	538	40.6 (36.2-44.9)	4.8 (2.9-7.5)	384	28.6 (24.0-33.4)	0.9 (0.1-4.3)	186	13.7 (9.0-19.3)	1.1 (0.1-5.0)
	API	100	77.8 (68.0-85.0)	23.1 (13.9-33.6)	115	63.2 (53.3-71.6)	12.0 (5.8-20.7)	257	64.0 (57.6-69.7)	12.4 (8.1-17.7)	352	52.3 (46.7-57.7)	7.3 (4.2-11.5)	332	39.4 (33.8-44.9)	4.5 (2.0-8.7)	175	20.8 (14.8-27.5)	2.6 (0.7-7.0)
Non-glioblastoma astrocytomas	All groups	2,798	95.0 (94.1-95.8)	73.6 (71.6-75.4)	1,862	90.0 (88.5-91.3)	62.9 (60.4-65.3)	1,856	77.3 (75.2-79.2)	41.4 (38.8-43.9)	1,661	57.2 (54.7-59.6)	20.7 (18.5-23.0)	1,216	40.7 (37.8-43.5)	12.5 (10.3-14.8)	866	24.1 (21.1-27.2)	4.5 (2.8-6.8)
	Non-Hispanic white	1,927	96.2 (95.2-97.0)	74.7 (72.4-76.8)	1,289	90.4 (88.6-91.9)	64.4 (61.5-67.3)	1,405	77.9 (75.6-80.1)	41.6 (38.7-44.5)	1,322	58.3 (55.5-61.0)	20.9 (18.4-23.4)	981	40.3 (37.1-43.5)	12.5 (10.1-15.1)	724	22.8 (19.7-26.1)	3.1 (1.6-5.4)
	Hispanic white	444	92.2 (89.1-94.5)	70.8 (65.5-75.5)	271	90.1 (85.7-93.2)	61.4 (54.2-67.7)	218	71.8 (65.0-77.5)	42.0 (34.3-49.5)	167	57.3 (49.1-64.7)	28.2 (20.5-36.4)	113	43.3 (33.7-52.5)	17.2 (9.8-26.4)	--	--	--
	Black	228	91.0 (86.2-94.1)	71.4 (64.2-77.4)	140	86.8 (79.8-91.6)	61.9 (52.2-70.1)	122	69.8 (60.5-77.3)	32.3 (23.4-41.5)	88	43.4 (32.6-53.6)	--	64	38.3 (26.1-50.4)	--	--	--	--
	API	149	94.2 (88.7-97.1)	70.1 (60.3-77.9)	131	89.5 (82.6-93.8)	49.0 (38.5-58.8)	94	87.6 (78.6-93.0)	45.9 (33.3-57.5)	71	54.4 (41.7-65.4)	----	--	--	--	46	40.2 (24.7-55.2)	9.0 (1.7-24.1)
Oligodendroglioma tumors	All groups	1,708	97.4 (96.5-98.1)	80.8 (78.5-82.8)	1,664	97.1 (96.1-97.8)	79.8 (77.5-81.9)	1,493	92.1 (90.5-93.4)	72.5 (69.9-75.0)	922	81.9 (79.1-84.3)	53.2 (49.4-56.8)	425	68.1 (63.2-72.5)	33.7 (28.4-39.1)	184	44.3 (36.5-51.8)	24.2 (16.8-32.5)
	Non-Hispanic white	1,187	98.3 (97.3-98.9)	81.9 (79.2-84.2)	1,172	97.2 (96.0-98.0)	81.0 (78.3-83.4)	1,089	92.7 (90.9-94.1)	73.2 (70.1-76.1)	722	81.2 (78.1-84.0)	52.1 (47.8-56.2)	334	68.0 (62.4-72.9)	32.7 (26.7-38.7)	143	43.1 (34.3-51.6)	23.4 (15.3-32.5)
	Hispanic white	268	95.7 (92.3-97.6)	80.0 (73.7-84.9)	265	96.5 (93.2-98.2)	77.8 (71.2-83.1)	207	91.6 (86.6-94.8)	77.8 (70.4-83.6)	98	80.6 (70.5-87.5)	60.1 (47.8-70.3)	--	--	--	--	--	--
	Black	80	94.9 (86.7-98.1)	74.4 (61.4-83.6)	72	98.7 (89.5-99.8)	77.3 (63.8-86.3)	71	85.7 (74.4-92.2)	61.9 (47.1-73.6)	--	--	--	--	--	--	--	--	--
	API	136	94.0 (88.2-97.0)	76.1 (66.8-83.1)	137	95.5 (90.2-98.0)	74.0 (63.8-81.7)	104	91.2 (83.5-95.4)	60.7 (49.4-70.2)	--	--	--	--	--	--	--	--	--
Ependymoma	All groups	508	96.4 (94.3-97.7)	89.4 (86.0-92.0)	416	98.1 (96.1-99.1)	92.6 (89.0-95.1)	511	95.3 (92.9-96.9)	89.3 (85.6-92.1)	360	92.7 (89.2-95.1)	87.5 (82.4-91.2)	166	89.7 (83.2-93.7)	83.0 (74.5-88.9)	71	67.5 (54.0-77.9)	48.6 (31.5-63.7)
	Non-Hispanic white	303	96.0 (92.9-97.7)	90.8 (86.5-93.8)	266	98.6 (95.9-99.5)	92.1 (87.4-95.2)	366	95.6 (92.7-97.3)	89.5 (85.1-92.6)	274	92.6 (88.4-95.3)	87.5 (81.7-91.5)	124	93.2 (85.9-96.7)	86.1 (75.6-92.3)	62	67.3 (52.6-78.3)	50.2 (31.2-66.5)
	Hispanic white	112	97.1 (91.1-99.1)	85.6 (76.1-91.6)	78	96.1 (87.9-98.8)	92.8 (82.2-97.2)	65	95.5 (85.6-98.7)	92.5 (79.5-97.4)	--	--	--	--	--	--	--	--	--
	Black	50	93.7 (81.7-98.0)	86.3 (70.9-93.9)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	API	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other gliomas	All groups	268	92.5 (88.5-95.2)	76.5 (70.0-81.7)	178	87.4 (81.4-91.6)	61.0 (52.6-68.3)	244	74.0 (67.9-79.2)	44.2 (37.4-50.9)	218	56.8 (49.7-63.4)	25.1 (18.6-32.1)	183	42.2 (34.6-49.5)	11.5 (6.5-17.9)	156	21.1 (14.6-28.3)	--
	Non-Hispanic white	175	95.8 (91.4-98.0)	81.1 (73.3-86.8)	117	88.9 (81.5-93.5)	67.5 (57.4-75.6)	179	73.3 (65.9-79.2)	44.5 (36.6-52.1)	155	55.1 (46.7-62.7)	20.5 (13.7-28.3)	146	44.7 (36.1-52.9)	13.0 (7.5-20.2)	125	21.8 (14.5-30.1)	--
	Hispanic white	50	84.1 (69.2-92.2)	64.8 (47.4-77.7)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Black	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	API	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Abbreviations: 95% CI: 95% confidence interval; API: Asian Pacific Islander

-- Rates are not presented for categories with 50 or less cases and were suppressed for rates where less than 16 cases were surviving within a category.

**eTable 6.** Hazard Ratios, P Values, Median Survival and 95% Confidence Intervals for Individuals That Received Resection by Race and Ethnicity, Adjusted by Age at Diagnosis and Extent of Resection (Subtotal vs Gross Total), 2000-2014

Group	Race/ethnicity	N	Deaths	Median survival in years (95% CI)	Race Hazard ratio (95% CI)	Race p-value	GTR Hazard ratio	GTR p-value	Age Hazard ratio (95% CI)	Age p-value
Glioblastoma (all cases)	Non-Hispanic white	9,637	8,711	0.92 (0.83-0.92)	1	Ref	0.71 (0.68-0.74)	<2x10 <sup>-16</sup>	1.03 (1.03-1.04)	<2x10 <sup>-16</sup>
	API	504	416	1.00 (1.00-1.17)	0.81 (0.73-0.89)	2.4x10 <sup>-5</sup>				
	Black	614	518	0.92 (0.83-1.00)	0.97 (0.89-1.06)	0.57				
	Hispanic white	1168	931	0.92 (0.83-1.00)	0.92 (0.86-0.99)	0.02				
Glioblastoma (received radiation and chemotherapy)	Non-Hispanic white	5,534	4,920	1.17 (1.17-1.25)	1	Ref	0.74 (0.70-0.78)	<2x10 <sup>-16</sup>	1.03 (1.03-1.03)	<2x10 <sup>-16</sup>
	API	281	229	1.50 (1.33-1.67)	0.77 (0.68-0.88)	1.4x10 <sup>-4</sup>				
	Black	312	255	1.42 (1.25-1.50)	0.84 (0.74-0.95)	0.008				
	Hispanic white	589	467	1.33 (1.25-1.42)	0.89 (0.80-0.98)	0.013				
Non-glioblastoma astrocytoma	Non-Hispanic white	2,384	1,172	8.25 (7.33-10.17)	1	Ref	0.60 (0.54-0.67)	<2x10 <sup>-16</sup>	1.05 (1.05-1.05)	<2x10 <sup>-16</sup>
	API	139	63	7.00 (4.92-**)	1.03 (0.80-1.34)	0.780				
	Black	194	95	6.00 (5.17-9.17)	1.18 (0.95-1.46)	0.120				
	Hispanic white	450	188	7.83 (6.25-11.00)	1.00 (0.86-1.17)	0.990				
Oligodendroglial tumors	Non-Hispanic white	2,029	807	13.25 (11.50-**)	1	Ref	0.72 (0.64-0.82)	2.6x10 <sup>-7</sup>	1.03 (1.03-1.04)	<2x10 <sup>-16</sup>
	API	207	78	13.00 (9.67-**)	1.10 (0.87-1.39)	0.410				
	Black	126	53	9.92 (8.08-**)	1.21 (0.91-1.59)	0.190				
	Hispanic white	408	119	**	0.85 (0.70-1.03)	0.110				

\*\* not able to be calculated

Abbreviations: 95% CI: 95% confidence interval; API: Asian Pacific Islander; GTR: Gross total resection

**eTable 7.** One- and Five-Year Relative Survival Rates and 95% Confidence Intervals (95% CI) for Selected Glioma Histologies in Adults (Ages 18+) by Race, Ethnicity, and Treatment Groups, SEER 18 Registries, 2005-2014

Histologic group	Race/ethnicity	Received Any Radiation (Diagnosis years 2005-2014)			Received Both Radiation & Chemotherapy (Diagnosis years 2005-2014)		
		N	1- year survival	5- year survival	N	1- year survival	5- year survival
			% (95% CI)	% (95% CI)		% (95% CI)	% (95% CI)
Glioblastoma	All groups	16,302	54.4 (53.6-55.2)	6.8 (6.3-7.4)	14,314	58.2 (57.3-59.0)	7.2 (6.7-7.8)
	Non-Hispanic white	12,937	53.6 (52.7-54.5)	6.2 (5.7-6.8)	11,460	57.2 (56.2-58.1)	6.6 (6.0-7.2)
	Hispanic white	1,564	55.9 (53.2-58.5)	9.6 (7.8-11.6)	1,311	60.4 (57.4-63.1)	9.5 (7.6-11.8)
	Black	940	55.5 (52.1-58.7)	8.6 (6.4-11.2)	793	60.9 (57.2-64.3)	9.9 (7.4-13.0)
	API	753	63.1 (59.3-66.6)	9.3 (6.6-12.5)	658	67.1 (63.1-70.7)	10.1 (7.2-13.6)
Non-glioblastoma astrocytomas	All groups	4,005	75.2 (73.7-76.6)	36.0 (34.1-37.8)	2,953	76.0 (74.4-77.6)	33.7 (31.6-35.8)
	Non-Hispanic white	3,022	73.7 (72.0-75.3)	34.8 (32.8-36.9)	2,285	74.6 (72.7-76.4)	32.3 (30.0-34.7)
	Hispanic white	476	81.2 (77.1-84.6)	43.3 (37.6-48.8)	326	82.9 (78.0-86.8)	40.9 (34.1-47.7)
	Black	238	74.8 (68.4-80.1)	34.8 (27.5-42.3)	147	73.7 (65.1-80.5)	33.9 (24.8-43.3)
	API	225	82.1 (75.9-86.9)	39.5 (31.3-47.6)	163	82.4 (74.9-87.8)	40.9 (30.8-50.7)
Oligodendroglial tumors	All groups	1,974	90.3 (88.8-91.6)	61.8 (59.1-64.3)	1,372	89.4 (87.6-91.0)	58.5 (55.3-61.6)
	Non-Hispanic white	1,426	89.3 (87.5-90.9)	60.9 (57.8-63.9)	1,022	88.5 (86.2-90.4)	58.2 (54.5-61.8)
	Hispanic white	295	94.1 (90.3-96.4)	68.7 (61.6-74.7)	171	94.1 (88.9-96.9)	62.9 (53.1-71.2)
	Black	94	88.9 (79.5-94.1)	55.0 (42.0-66.2)	57	89.1 (76.3-95.2)	52.6 (36.0-66.8)
	API	141	94.0 (88.1-97.0)	59.9 (48.9-69.3)	109	92.2 (84.7-96.1)	56.6 (43.8-67.5)
Ependymoma	All groups	445	95.0 (92.2-96.8)	81.3 (76.3-85.4)	--	--	--
	Non-Hispanic white	295	95.3 (91.8-97.3)	81.3 (74.9-86.2)	--	--	--
	Hispanic white	76	91.7 (82.0-96.3)	85.5 (73.2-92.4)	--	--	--
	Black	--	--	--	--	--	--
	API	--	--	--	--	--	--
Other gliomas	All groups	375	66.0 (60.6-70.8)	24.9 (19.8-30.3)	255	68.7 (62.2-74.3)	21.2 (15.3-27.7)
	Non-Hispanic white	277	62.9 (56.6-68.6)	23.9 (18.1-30.2)	190	67.0 (59.4-73.5)	21.9 (15.1-29.6)
	Hispanic white	--	--	--	--	--	--
	Black	--	--	--	--	--	--
	API	--	--	--	--	--	--

Abbreviations: API: Asian Pacific Islander

-- Rates are not presented for categories with 50 or less cases and were suppressed for rates where less than 16 cases were surviving within a category.



**eTable 8.** One- and Five-Year Relative Survival Rates and 95% Confidence Intervals (95% CI) for Selected Glioma Histologies in Adults (Ages 18-64) by Race, Ethnicity, and Insurance Status, SEER 18 Registries, 2007-2014

Histologic group	Race/ethnicity	Uninsured			Any Medicaid			Insured		
		N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)	N	1- year survival % (95% CI)	5- year survival % (95% CI)
Glioblastoma	All groups	619	51.7 (47.5-55.8)	6.4 (3.6-10.4)	1,376	45.9 (43.1-48.6)	8.6 (6.7-10.8)	6,926	61.6 (60.4-62.8)	7.9 (7.0-8.8)
	Non-Hispanic white	372	48.5 (43.1-53.7)	5.4 (2.3-10.4)	770	43.7 (40.0-47.4)	7.0 (4.7-9.8)	5,603	61.2 (59.8-62.5)	7.4 (6.5-8.4)
	Hispanic white	123	58.1 (48.1-66.9)	9.1 (2.5-21.1)	319	50.0 (43.8-55.7)	9.2 (5.2-14.7)	572	60.9 (56.5-65.0)	11.2 (7.9-15.0)
	Black	74	55.8 (43.1-66.6)	9.7 (3.2-20.6)	175	44.6 (36.7-52.2)	10.6 (5.6-17.4)	375	59.5 (54.1-64.4)	9.4 (5.9-13.9)
	API	--	--	--	81	55.1 (43.1-65.5)	18.0 (8.8-29.9)	338	71.2 (65.7-75.9)	8.7 (4.8-13.9)
Non-glioblastoma astrocytomas	All groups	315	81.1 (76.1-85.2)	57.0 (49.7-63.6)	687	82.4 (79.2-85.2)	53.0 (48.0-57.7)	2,839	86.6 (85.2-87.9)	55.8 (53.4-58.1)
	Non-Hispanic white	168	79.8 (72.6-85.3)	54.6 (44.8-63.4)	347	84.9 (80.4-88.4)	55.9 (48.9-62.4)	2,221	85.9 (84.3-87.3)	54.8 (52.2-57.4)
	Hispanic white	77	87.5 (77.1-93.4)	67.4 (50.7-79.5)	182	81.0 (73.8-86.5)	47.8 (37.9-57.0)	276	87.2 (82.3-90.8)	64.8 (57.2-71.3)
	Black	--	--	--	91	78.7 (68.0-86.1)	50.0 (36.5-62.1)	121	92.2 (85.0-96.0)	45.9 (34.2-56.8)
	API	--	--	--	--	--	--	186	89.9 (84.1-93.6)	58.6 (48.9-67.1)
Oligodendroglial tumors	All groups	217	92.5 (87.7-95.5)	76.8 (68.3-83.4)	421	92.2 (88.9-94.5)	73.5 (67.5-78.6)	1,953	95.1 (93.9-96.0)	79.1 (76.6-81.3)
	Non-Hispanic white	120	95.9 (89.8-98.4)	78.2 (66.5-86.3)	218	91.4 (86.5-94.6)	71.5 (63.1-78.3)	1,466	95.2 (93.9-96.2)	78.6 (75.8-81.2)
	Hispanic white	62	90.3 (77.6-96.0)	71.7 (52.5-84.2)	135	91.7 (84.8-95.6)	78.8 (68.5-86.1)	226	95.2 (91.3-97.3)	82.8 (75.3-88.2)
	Black	--	--	--	--	--	--	82	93.9 (85.0-97.6)	77.3 (64.6-86.0)
	API	--	--	--	--	--	--	151	93.9 (88.4-96.8)	77.8 (67.3-85.3)

Abbreviations: 95% CI: 95% confidence interval; API: Asian Pacific Islander

**eTable 9.** Annual Percent Change (APC) and 95% Confidence Intervals by Glioma Histology and Race/Ethnicity, CBTRUS 2000-2014

Histologic group	Race/ethnicity	Trend 1		Trend 2	
		Years	APC (95% CI)	Years	APC (95% CI)
Glioblastoma	All groups	2000-2005	1.0 (0.1, 1.9) **	2005-2014	-0.1 (-0.5, 0.2)
	Non-Hispanic white	2000-2005	1.3 (0.4, 2.1) **	2005-2014	0.0 (-0.3, 0.4)
	Hispanic white	2000-2014	-0.4 (-1.0, 0.1)		
	Black	2000-2014	1.0 (0.4, 1.6) **		
	API	2000-2014	1.0 (0.0, 2.1)		
Non-glioblastoma astrocytomas	All groups	2000-2014	-1.4 (-1.6, -1.2) **		
	Non-Hispanic white	2000-2014	-1.0 (-1.3, -0.7) **		
	Hispanic white	2000-2014	-2.2 (-3.2, -1.1) **		
	Black	2000-2014	-1.2 (-1.9, -0.5) **		
	API	2000-2014	-0.4 (-2.0, 1.3)		
Oligodendroglial tumors	All groups	2000-2014	-2.0 (-2.4, -1.5) **		
	Non-Hispanic white	2000-2014	-1.6 (-2.2, -1.0) **		
	Hispanic white	2000-2014	-2.8 (-3.9, -1.7) **		
	Black	2000-2014	-1.3 (-2.5, -0.2) **		
	API	2000-2014	-1.9 (-3.7, -0.1) **		
<i>Oligodendroglioma</i>	All groups	2000-2014	-3.0 (-3.6, -2.4) **		
	Non-Hispanic white	2000-2014	-2.6 (-3.3, -1.9) **		
	Hispanic white	2000-2010	-2.8 (-4.3, -1.2) **	2010-2014	-10.1 (-16.2, -3.6) **
	Black	2000-2014	-1.3 (-4.0, 1.4)		
	API	2000-2014	-3.2 (-5.7, -0.6) **		
<i>Anaplastic Oligodendroglioma</i>	All groups	2000-2009	-5.5 (-6.4, -4.6) **	2009-2014	1.1 (-1.9, 4.3)
	Non-Hispanic white	2000-2009	-5.1 (-6.1, -4.1) **	2009-2014	1.0 (-2.2, 4.2)
	Hispanic white	2000-2014	-2.3 (-4.7, 0.2)		
	Black	--	--		
	API	--	--		
<i>Oligoastrocytic tumors</i>	All groups	2000-2009	3.7 (1.0, 6.4) **	2009-2014	-5.2 (-11.1, 1.0)
	Non-Hispanic white	2000-2011	3.0 (1.4, 4.5) **	2011-2014	-10.8 (-20.1, -0.4) **
	Hispanic white	2000-2006	8.0 (-1.6, 18.5)	2006-2014	-5.5 (-10.0, -0.8) **
	Black	--	--		
	API	--	--		
Ependymoma	All groups	2000-2009	2.8 (1.2, 4.4) **	2009-2014	-4.6 (-8.2, -0.9) **
	Non-Hispanic white	2000-2005	5.4 (1.4, 9.7) **	2005-2014	-1.4 (-2.9, 0.1)
	Hispanic white	2000-2014	-0.4 (-2.1, 1.3)		
	Black	2000-2009	7.0 (1.7, 12.5) **	2009-2014	-7.6 (-16.4, 2.0)
	API	--	--		

Abbreviations: 95% CI: 95% confidence interval; APC: Annual percentage change; API: Asian Pacific Islander

\*\* APC is statistically significant at the  $p < 0.05$  level

-- Not displayed due to low number of annual cases (<16 per year)

**eFigure.** Average Annual Age-Adjusted Incidence Rates and 95% Confidence Intervals for Selected Glioma Histologies by Race, Ethnicity, and Age at Diagnosis, 2000-2014

