

**Table 15: Primary (Malignant and Non-Malignant) Brain and Central Nervous System Tumor Incidence Rates<sup>a</sup> By Major Histology Groupings, Histology, Race and Hispanic Ethnicity<sup>b</sup>, Age-Adjusted to the 2000 U.S. Standard Population; CBTRUS Statistical Report: NPCR and SEER, 2004-2006**

| Histology   | Hispanics<br>(Of Any Race) |                      | White<br>Hispanics |                      | Non-Hispanics<br>(Of Any Race) |                      | White<br>Non-Hispanics |                      | Black<br>Non-Hispanics |                      |
|---|----------------------------|----------------------|--------------------|----------------------|--------------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|
|   | Adjusted<br>Rate           | 95% C.I.             | Adjusted<br>Rate   | 95% C.I.             | Adjusted<br>Rate               | 95% C.I.             | Adjusted<br>Rate       | 95% C.I.             | Adjusted<br>Rate       | 95% C.I.             |
| <b><u>Tumors of Neuroepithelial Tissue</u></b>      | <b>5.07</b>                | <b>(4.91-5.23)</b>   | <b>5.15</b>        | <b>(4.98-5.31)</b>   | <b>6.65</b>                    | <b>(6.59-6.70)</b>   | <b>7.23</b>            | <b>(7.16-7.30)</b>   | <b>3.65</b>            | <b>(3.53-3.78)</b>   |
| Pilocytic astrocytoma                               | 0.24                       | (0.21-0.27)          | 0.24               | (0.21-0.27)          | 0.35                           | (0.33-0.36)          | 0.38                   | (0.36-0.40)          | 0.22                   | (0.19-0.25)          |
| Protoplasmic & fibrillary astrocytoma               | 0.06                       | (0.04-0.07)          | 0.06               | (0.04-0.08)          | 0.11                           | (0.10-0.12)          | 0.12                   | (0.11-0.13)          | 0.04                   | (0.03-0.06)          |
| Anaplastic astrocytoma                              | 0.32                       | (0.28-0.36)          | 0.32               | (0.28-0.37)          | 0.42                           | (0.40-0.43)          | 0.46                   | (0.44-0.48)          | 0.19                   | (0.17-0.22)          |
| Unique astrocytoma variants                         | 0.08                       | (0.06-0.10)          | 0.08               | (0.06-0.10)          | 0.09                           | (0.09-0.10)          | 0.10                   | (0.09-0.11)          | 0.08                   | (0.06-0.09)          |
| Astrocytoma, NOS                                    | 0.36                       | (0.32-0.40)          | 0.36               | (0.32-0.41)          | 0.46                           | (0.44-0.47)          | 0.49                   | (0.47-0.51)          | 0.30                   | (0.26-0.34)          |
| Glioblastoma  | 2.42                       | (2.30-2.54)          | 2.46               | (2.34-2.59)          | 3.24                           | (3.20-3.28)          | 3.54                   | (3.49-3.58)          | 1.61                   | (1.52-1.70)          |
| Oligodendroglioma                                   | 0.21                       | (0.19-0.25)          | 0.22               | (0.19-0.25)          | 0.29                           | (0.27-0.30)          | 0.32                   | (0.31-0.34)          | 0.11                   | (0.09-0.14)          |
| Anaplastic oligodendroglioma                        | 0.10                       | (0.08-0.12)          | 0.10               | (0.08-0.13)          | 0.13                           | (0.12-0.14)          | 0.14                   | (0.13-0.15)          | 0.05                   | (0.03-0.06)          |
| Ependymoma/anaplastic ependymoma                    | 0.23                       | (0.20-0.26)          | 0.24               | (0.21-0.27)          | 0.26                           | (0.25-0.27)          | 0.28                   | (0.27-0.29)          | 0.16                   | (0.14-0.19)          |
| Ependymoma variants                                 | 0.07                       | (0.05-0.09)          | 0.07               | (0.06-0.09)          | 0.10                           | (0.09-0.11)          | 0.12                   | (0.11-0.12)          | 0.04                   | (0.03-0.05)          |
| Mixed glioma  | 0.16                       | (0.13-0.18)          | 0.16               | (0.14-0.19)          | 0.20                           | (0.19-0.21)          | 0.22                   | (0.21-0.23)          | 0.09                   | (0.07-0.11)          |
| Glioma malignant, NOS                               | 0.35                       | (0.31-0.39)          | 0.35               | (0.31-0.40)          | 0.44                           | (0.42-0.45)          | 0.46                   | (0.45-0.48)          | 0.31                   | (0.28-0.35)          |
| Choroid plexus                                      | 0.05                       | (0.04-0.07)          | 0.05               | (0.04-0.07)          | 0.04                           | (0.04-0.05)          | 0.04                   | (0.04-0.05)          | 0.03                   | (0.02-0.04)          |
| Neuroepithelial                                     | -                          | -                    | -                  | -                    | 0.02                           | (0.02-0.03)          | 0.02                   | (0.02-0.03)          | -                      | -                    |
| Non-malignant and malignant neuronal/glia           | 0.20                       | (0.17-0.23)          | 0.20               | (0.17-0.22)          | 0.29                           | (0.28-0.30)          | 0.31                   | (0.29-0.32)          | 0.22                   | (0.19-0.25)          |
| Pineal parenchymal                                  | 0.03                       | (0.02-0.04)          | 0.03               | (0.02-0.04)          | 0.04                           | (0.03-0.04)          | 0.03                   | (0.03-0.04)          | 0.05                   | (0.04-0.07)          |
| Embryonal/primitive/medulloblastoma                 | 0.20                       | (0.18-0.22)          | 0.20               | (0.18-0.22)          | 0.19                           | (0.18-0.20)          | 0.21                   | (0.20-0.22)          | 0.14                   | (0.12-0.17)          |
| <b><u>Tumors of Cranial and Spinal Nerves</u></b>   | <b>1.23</b>                | <b>(1.15-1.31)</b>   | <b>1.20</b>        | <b>(1.12-1.28)</b>   | <b>1.67</b>                    | <b>(1.64-1.69)</b>   | <b>1.78</b>            | <b>(1.74-1.81)</b>   | <b>0.65</b>            | <b>(0.60-0.70)</b>   |
| Nerve sheath, non-malignant and malignant           | 1.23                       | (1.15-1.31)          | 1.20               | (1.12-1.28)          | 1.67                           | (1.64-1.69)          | 1.78                   | (1.74-1.81)          | 0.65                   | (0.60-0.70)          |
| <b><u>Tumors of Meninges</u></b>                    | <b>6.63</b>                | <b>(6.43-6.83)</b>   | <b>6.53</b>        | <b>(6.33-6.74)</b>   | <b>6.53</b>                    | <b>(6.47-6.59)</b>   | <b>6.38</b>            | <b>(6.32-6.45)</b>   | <b>7.29</b>            | <b>(7.10-7.48)</b>   |
| Meningioma  | 6.39                       | (6.19-6.60)          | 6.30               | (6.09-6.50)          | 6.30                           | (6.24-6.35)          | 6.14                   | (6.08-6.20)          | 7.11                   | (6.92-7.30)          |
| Other mesenchymal, non-malignant and malignant      | 0.08                       | (0.06-0.10)          | 0.08               | (0.06-0.10)          | 0.08                           | (0.07-0.08)          | 0.08                   | (0.07-0.09)          | 0.06                   | (0.05-0.08)          |
| Hemangioblastoma                                    | 0.16                       | (0.13-0.19)          | 0.16               | (0.13-0.19)          | 0.16                           | (0.15-0.17)          | 0.17                   | (0.16-0.18)          | 0.12                   | (0.10-0.14)          |
| <b><u>Lymphomas and Hematopoietic Neoplasms</u></b> | <b>0.52</b>                | <b>(0.46-0.57)</b>   | <b>0.52</b>        | <b>(0.46-0.57)</b>   | <b>0.45</b>                    | <b>(0.43-0.46)</b>   | <b>0.44</b>            | <b>(0.42-0.45)</b>   | <b>0.43</b>            | <b>(0.39-0.47)</b>   |
| Lymphoma  | 0.52                       | (0.46-0.57)          | 0.52               | (0.46-0.57)          | 0.45                           | (0.43-0.46)          | 0.44                   | (0.42-0.45)          | 0.43                   | (0.39-0.47)          |
| <b><u>Germ Cell Tumors and Cysts</u></b>            | <b>0.09</b>                | <b>(0.07-0.11)</b>   | <b>0.09</b>        | <b>(0.08-0.11)</b>   | <b>0.08</b>                    | <b>(0.07-0.08)</b>   | <b>0.08</b>            | <b>(0.07-0.09)</b>   | <b>0.06</b>            | <b>(0.04-0.07)</b>   |
| Germ cell tumors, cysts and heterotopias            | 0.09                       | (0.07-0.11)          | 0.09               | (0.08-0.11)          | 0.08                           | (0.07-0.08)          | 0.08                   | (0.07-0.09)          | 0.06                   | (0.04-0.07)          |
| <b><u>Tumors of Sellar Region</u></b>               | <b>3.05</b>                | <b>(2.93-3.18)</b>   | <b>3.02</b>        | <b>(2.89-3.15)</b>   | <b>2.48</b>                    | <b>(2.44-2.52)</b>   | <b>2.21</b>            | <b>(2.17-2.25)</b>   | <b>4.16</b>            | <b>(4.02-4.30)</b>   |
| Pituitary   | 2.91                       | (2.80-3.04)          | 2.88               | (2.76-3.01)          | 2.34                           | (2.31-2.38)          | 2.08                   | (2.04-2.12)          | 3.96                   | (3.83-4.10)          |
| Craniopharyngioma                                   | 0.14                       | (0.12-0.17)          | 0.14               | (0.11-0.16)          | 0.14                           | (0.13-0.15)          | 0.13                   | (0.12-0.14)          | 0.20                   | (0.17-0.23)          |
| <b><u>Local Extensions from Regional Tumors</u></b> | <b>0.03</b>                | <b>(0.02-0.04)</b>   | <b>0.03</b>        | <b>(0.02-0.05)</b>   | <b>0.02</b>                    | <b>(0.01-0.02)</b>   | <b>0.02</b>            | <b>(0.01-0.02)</b>   | -                      | -                    |
| Chordoma/chondrosarcoma                             | 0.03                       | (0.02-0.04)          | 0.03               | (0.02-0.05)          | 0.02                           | (0.01-0.02)          | 0.02                   | (0.01-0.02)          | -                      | -                    |
| <b><u>Unclassified Tumors</u></b>                   | <b>1.12</b>                | <b>(1.04-1.20)</b>   | <b>1.12</b>        | <b>(1.04-1.21)</b>   | <b>1.02</b>                    | <b>(0.99-1.04)</b>   | <b>1.00</b>            | <b>(0.98-1.03)</b>   | <b>1.12</b>            | <b>(1.05-1.19)</b>   |
| Hemangioma  | 0.12                       | (0.10-0.15)          | 0.13               | (0.10-0.15)          | 0.14                           | (0.13-0.15)          | 0.15                   | (0.14-0.16)          | 0.10                   | (0.08-0.13)          |
| Neoplasm, unspecified                               | 0.99                       | (0.91-1.07)          | 0.99               | (0.91-1.07)          | 0.87                           | (0.85-0.89)          | 0.85                   | (0.82-0.87)          | 1.01                   | (0.94-1.08)          |
| All other   | -                          | -                    | -                  | -                    | 0.01                           | (0.01-0.01)          | 0.01                   | (0.01-0.01)          | -                      | -                    |
| <b>TOTAL<sup>c</sup></b>                            | <b>17.73</b>               | <b>(17.42-18.04)</b> | <b>17.65</b>       | <b>(17.33-17.98)</b> | <b>18.88</b>                   | <b>(18.78-18.98)</b> | <b>19.13</b>           | <b>(19.02-19.24)</b> | <b>17.36</b>           | <b>(17.08-17.64)</b> |

<sup>a</sup>Rates are per 100,000 person years

<sup>b</sup>Hispanic ethnicity is not mutually exclusive of race; Classified using the North American Association of Central Cancer Registries Hispanic Identification Algorithm, version 2 (NHIA v2).

<sup>c</sup>Refers to all brain tumors including histologies not presented in this table.

-Counts are not presented when fewer than 16 cases were reported for the specific histology category. The suppressed cases are included in the counts for totals.

Abbreviations: CBTRUS, Central Brain Tumor Registry of the United States; NPCR, CDC's National Program of Cancer Registries; SEER, NCI's Surveillance, Epidemiology and End Results program; CI, confidence interval; NOS, not otherwise specified.