

Brain Tumors By The Numbers

Today, nearly 700,000 people in the United States are living with a primary brain tumor, and approximately 78,000 more will be diagnosed in 2016. Brain tumors can be deadly, significantly impact quality of life, and change everything for a patient and their loved ones. They do not discriminate, inflicting men, women, and children of all races and ethnicities.



National
Brain Tumor
Society

Quick Facts

- **688,096** Americans are living with a brain tumor.
 - **550,042** tumors are benign
 - **138,054** tumors are malignant
- An estimated **77,670** will receive primary brain tumor diagnosed in 2016.
 - **52,880** will be benign
 - **24,790** will be malignant
- The average survival rate for all malignant brain tumor patients is only **34.4%**.
 - Male: **31.7%**
 - Female: **34.4%**
 - For the most common form of primary malignant brain tumors, glioblastoma multiforme, the five-year relative survival rate is only **5.1%**.
- An estimated **16,616** people will die from malignant brain tumors (brain cancer) in 2016.

Brain Tumors in Adults

- The most prevalent brain tumor types in adults:
 - Meningiomas, which make-up **36.4%** of all primary brain tumors.
 - Gliomas (such as glioblastoma, ependymomas, astrocytomas, and oligodendrogliomas), which make-up **80%** of malignant brain tumors.

Brain Tumors in Children

- More than **28,000** children (0-14 years of age) are estimated to be living with a brain tumor in the US.
- An estimated **4,630** new cases of childhood and adolescent (15-19 years of age) primary malignant and nonmalignant brain and CNS tumors are expected to be diagnosed in 2016.
- The average survival rate for all primary pediatric (0-19 years of age) malignant brain tumors is **73.6%**.
- Brain and CNS tumors are the most prevalent form of pediatric cancer in kids under 19.
- Brain tumors are the leading cause of cancer-related deaths in children under 14, and the second leading cause of cancer-related deaths in children and young adults under 20.
- It is estimated that, in 2009, a total of **47,631.5** years of potential life were lost due to brain tumors in children 0-19 years old.
- The most prevalent brain tumor types in children:
 - Pilocytic Astrocytoma
 - Malignant Glioma
 - Medulloblastoma
 - Neuronal and mixed neuronal-glioma tumors
 - Ependymoma

Additional Notes

- More than any other cancer, brain tumors can have lasting and life-altering physical, cognitive, and psychological impacts on a patient's life.
 - This means malignant brain tumors can often be described as equal parts neurological disease and deadly cancer.
- Even benign brain tumors can be deadly if they interfere with portions of the brain responsible for vital bodily functions.
- There are **more than 120 different types of brain tumors**, many with their own multitude of subtypes.
- Despite the amount of brain tumors, and their devastating prognosis, there have only been four (4) FDA approved drugs and one device to treat brain tumors in the past 30 years.
 - For many tumor types, surgery and radiation remain the standard of care.
 - There has never been a drug developed and approved specifically for malignant pediatric brain tumors.
 - The four approved drugs for brain tumors have provided only incremental improvements to patient survival, and mortality rates remain little changed over the past 30 years.
- Between 1998 and 2014, there were 78 investigational brain tumor drugs that entered the clinical trial evaluation process. 75 failed. That is a **25:1 failure ratio** in developing new brain tumor treatments over the past two decades.¹
- Brain tumors have the highest per-patient initial cost of care for any cancer group, with an annualized mean net costs of care in 2010 US dollars at well over \$100,000.²
- While, there is no official accounting of, and some significant disagreement regarding, the amount of cancer cases each year that metastasize to the brain. Estimates range on the low end from **approximately ~56,000 cases to ~500,000** on the high-end of cancer patients developing brain metastases annually.
 - Studies have cited that the percentage of cancer patients who will develop brain metastases is anywhere from **6-28%**.
 - What we do know is that approximately **80%** of cancers have been associated with the ability to metastasize to the brain.
 - » These include, melanoma (where nearly **50%** of cases will metastasize to the brain), lung, breast, renal, and colorectal.

Sources:

¹ "Researching Cancer: Setbacks and Stepping Stones," PhRMA, 2014.

² J Natl Cancer Inst. 2011 Jan 19; 103(2): 117-128.

About National Brain Tumor Society

National Brain Tumor Society is the largest nonprofit organization dedicated to the brain tumor community in the United States. We are fiercely committed to finding better treatments, and ultimately a cure, for people living with a brain tumor today and those who will be diagnosed tomorrow. This means aggressively driving strategic research and advocating for public policies, which meet the critical needs of this community. It's time to build on progress and transform tomorrow, today.