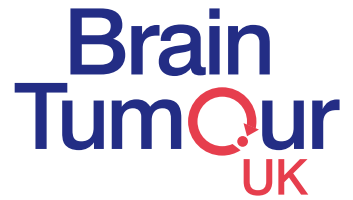


# Brain tumours: Key facts



This is a summary of brain tumour facts and cannot be used to diagnose or predict the outcome of an individual brain tumour.

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## About Brain Tumour UK

Brain Tumour UK is a caring charity that provides vital support to brain tumour patients and their loved ones. We campaign to raise awareness of brain tumours and we're funding vital research.

## Providing support

Brain Tumour UK has an extensive web site full of useful information for patients and carers. We provide personalised support: • by email; • through our busy social networks on Facebook, MySpace, Bebo and Twitter; • with a helpline and telephone chat groups; • and through a growing number of relaxed and friendly support groups.

## Raising awareness

Brain Tumour UK works closely with patients, their families, healthcare professionals, scientists and related organisations to raise awareness amongst key decision-makers, service providers and the wider public.

## Funding research

Brain Tumour UK, with the help of thousands of generous donors and fundraisers, funds scientific research to improve quality of life for brain tumour patients, identify better treatments and, ultimately, defeat the disease.

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## Essential facts

- In 2006, there were over 3,500 deaths attributed to primary brain and other central nervous system cancers in the UK.
- However, actual deaths are likely to be significantly higher than this. Other common cancers (e.g. breast, lung) spread to the brain, but the death is attributed to the primary source of the cancer rather than the secondary tumour in the brain.
- Primary malignant brain tumours are more common in men with nearly nine new cases per year per 100,000 males versus six per 100,000 women. But some benign brain tumours, such as meningiomas, are more common in women. In 2005 in England, for example, 799 benign meningiomas were reported in women compared to 284 in men.
- On average, patients with malignant brain tumours lose 20.1 years of their life expectancy. This is significantly more than the 13.6 years lost to leukaemia and 13.5 years lost to breast cancer. In fact, malignant brain tumours claim more years of life, on average, than any other kind of cancer.
- One third of child cancer deaths are caused by brain and other central nervous system tumours – more than any other kind of cancer.

## 1. How many brain tumours are there?

Official statistics have historically recorded only malignant brain tumours. And up to a third of those have been left of the official Cancer Registry. In March 2009, Brain Tumour UK conducted a detailed survey of brain tumour data from 2005 and scientific research into the true frequency of brain tumours.

Our conclusions, supported by leading brain tumour experts, are:

### UK

- Around 8,100 primary brain tumours are recorded each year in official statistics;
- But the actual number is likely to be 16,200 primary brain tumours.
- Of these, just over half will be malignant (cancerous).
- But even benign tumours can kill by virtue of their location or evolve into cancer.
- A further 32,000 people will have been affected by secondary brain tumours arising from elsewhere in the body. In some cases, secondary cancer in the brain will have been the actual cause of death.

### England

In 2005, around 41,200 people in England were affected by brain tumours. Only 6,866 were included in official statistics. Of affected patients, 13,732 will have had primary brain tumours whilst a further 27,464 had secondary cancer in the brain arising from cancer elsewhere in the body.

### Northern Ireland

In 2005, around 1,127 people in Northern Ireland were affected by brain tumours. Only 188 were included in official statistics. Of affected patients, 376 will have had primary brain tumours whilst a further 751 had secondary cancer in the brain arising from cancer elsewhere in the body.

### Scotland

In 2005, around 3,882 people in Scotland were affected by brain tumours. Only 647 were included in official statistics. Of affected patients, 1,294 will have had primary brain tumours whilst a further 2,588 had secondary cancer in the brain arising from cancer elsewhere in the body.

### Wales

In 2005, around 2,833 people in Wales were affected by brain tumours. Only 472 were included in official statistics. Of affected patients, 944 will have had primary brain tumours whilst a further 1,889 had secondary cancer in the brain arising from cancer elsewhere in the body.

## 2. How many kinds of brain tumours are there?

Brain tumours fall into two broad categories: **primary** and **secondary**.

**Primary tumours** originate in the brain.

**Secondary tumours** are called metastases. These are fragments of a cancer which started elsewhere in the body before migrating to the brain and regrowing there. Lung, skin (melanoma), breast, kidney (renal) and bowel (colorectal) cancers are those most likely to cause metastatic cancer in the brain.

## Kinds of primary brain tumour

### **Gliomas**

About 50% of all primary brain tumours arise from the supportive tissue in the brain and are collectively called Gliomas.

Gliomas can be separated further depending on their cell of origin:

- Astrocyte – astrocytoma
- Oligodendrocyte – oligodendroglioma
- Ependymal lining cell – ependymoma

### **Acoustic neuromas**

These tumours grow in the nerve that runs from the ears to the brain controlling hearing and balance. They are nearly always slow growing, do not spread and are thought of as benign brain tumours.

### **Craniopharyngiomas**

These are tumours that tend to grow near the base of the brain, just above the pituitary gland and are most often diagnosed in children, teenagers and young adults. They do not usually spread, but can cause problems with vision and altered hormone balance. Children with craniopharyngioma can have weight gain and growth problems.

### **Meningiomas**

About 1 in 4 brain tumours in adults is a meningioma. They are more common in older people and in women. These tumours grow in the tissues covering the brain and are usually benign.

### **Pituitary tumours**

About 10% of brain tumours are in the pituitary gland. They are more common in older people and are nearly always benign. Most pituitary tumours are tumours of gland tissue and are called adenomas. Pituitary tumours can often cause quite odd symptoms because the tumour cells make too much of one of the pituitary hormones.

### **Primitive neuroectodermal tumours (PNETs)**

Medulloblastoma is the commonest type of PNET. These grow in the hindbrain and are the most common brain tumour in children, but are also diagnosed in young adults. PNETs can be fast growing and can spread to other parts of the brain and to the spinal cord through the cerebrospinal fluid.

### **Spinal cord tumours**

Up to 20% central nervous system tumours are in the spine. The success of treatment depends on the type of spinal tumour. Meningiomas and neurofibromas are the commonest types seen in adults. They grow outside the spinal cord, but press on it. Astrocytomas and ependymomas, grow in the spinal cord tissue itself and are most often seen in children. Chordoma is a type of rare spinal cord tumour.