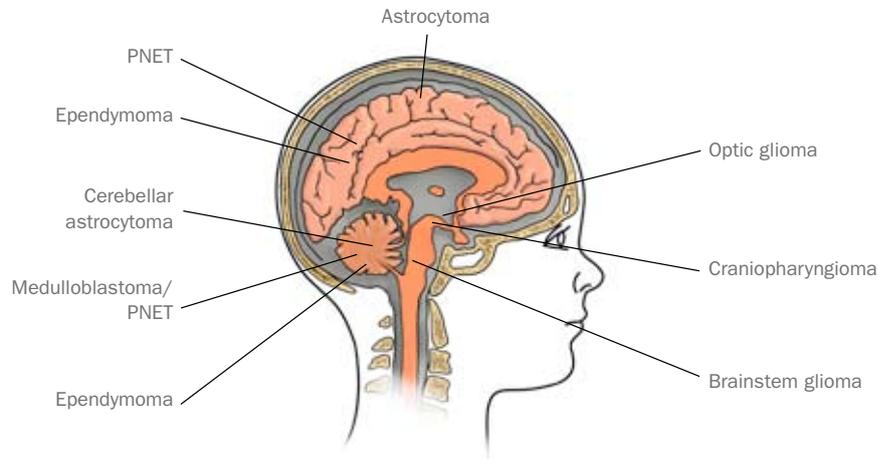


Tumours in the brain and spinal cord are the most common solid tumours in children and account for 25 per cent of all childhood malignancies. Around half of these tumours are found in the cerebellum and the brainstem.



The most common forms of brain tumour are astrocytoma, medulloblastoma, brainstem glioma and ependymoma. Brain tumours can vary in how aggressively they grow, running the whole gamut from benign to malignant.

SYMPTOMS

Symptoms vary according to the location of the tumour and the age of the child. Headaches, vomiting and drowsiness are the classic symptoms, but more diffuse symptoms are also common. Schoolchildren may suffer from drowsiness, a decline in academic performance, personality changes and recurring headaches. Younger children may have symptoms such as irritation, difficulty eating and retarded development. The tumour is normally diagnosed using a CT scan.

TREATMENT

Unlike most other solid tumours in children, brain tumours are normally removed surgically without prior chemotherapy. The treatment received by the child after the operation depends on the diagnosis, the location of the tumour, how much of the tumour has been removed and the age of the child. Many tumours require additional treatment in the form of radiotherapy. Children under the age of three are not normally given radiotherapy but receive chemotherapy

instead. Chemotherapy may also be given as a complement to radiotherapy. The combination of a tumour in the brain, brain surgery and radiotherapy means that surviving children often suffer from late complications in the form of endocrine (hormonal) disturbances, primarily growth problems, motor problems and learning difficulties, and being easily exhausted.

PROGNOSIS

Overall, long-term survival is around 70 per cent, but this varies widely between the different types of tumour. A low-grade astrocytoma has a good prognosis. A medulloblastoma, with a five-year survival rate of around 60 per cent, is the tumour most likely to spread within the central nervous system. Brainstem tumours are often inoperable and very difficult to treat. Even a benign tumour can cause major problems for the individual depending on its location.

The treatment of brain tumours has improved over the past decade. Tumours previously considered inoperable can now increasingly be operated on successfully. Radiotherapy techniques have advanced, as has the scope for precision dose planning. Today's chemotherapy regimes are more effective and, like surgery and radiotherapy, undergoing constant development and improvement.

Factual accuracy verified by specialist Birgitta Lannering from the Queen Silvia Children's Hospital in Gothenburg