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# Brain Tumour Programme



# **Understanding Brain Tumours**



A brain tumour is an abnormal growth of cells in the brain. It can be malignant or benign. Malignant tumours are cancers. Benign tumours are relatively slow-growing.

There are over 150 types of brain tumours classified by the World Health Organisation. Brain tumours can differ in terms of the cells they originate from, how quickly they are likely to grow and spread, and the part of the brain they affect. Knowing your tumour's type can therefore help you understand your condition.

# **Types of Adult Brain Tumours**

Brain tumours can generally be divided into two categories: benign and malignant. While the former is more common, some "benign" brain tumuors can be aggressive due to their location and symptoms. Meningiomas are the most common benign brain tumours occurring more on the surface of the brain. Sometimes they can be found in the skull base, on the underside of the brain as well.

On the other hand, malignant brain tumours can be classified as primary or metastatic. Among primary brain cancers, glioblastoma multiforme (GBM) is the most common type and has the worst prognosis. Metastatic malignant brain tumours can metastasise from cancers in lung, breast, colon or other organs. There can be solitary or multiple lesions at the time of presentation. The primary tumour may be asymptomatic and can only be identified by investigations.

### **Symptoms**

The symptoms of brain tumours are extremely diverse, depending on the location, volume and growth rate of the tumour. For example, brain tumour in the right frontal lobe can affect the patient's mood and personality, leading to headache and seizures; brain tumour at the left temporal lobe may cause speech problem, memory loss, or even auditory hallucination or delusion; if a brain tumour is in the parietal lobe, the patient may suffer from hemiplegia.

There are twelve pairs of cranial nerves in the human brain, each of which is responsible for different senses. If the brain tumour affects the first pair of cranial nerves, the sense of smell will be affected; if the second pair is damaged, the patient will have visual problem. A former patient was unaware of weakened sense of smell. She did not seek medical attention until losing weight due to loss of appetite. She was finally diagnosed with brain tumour.

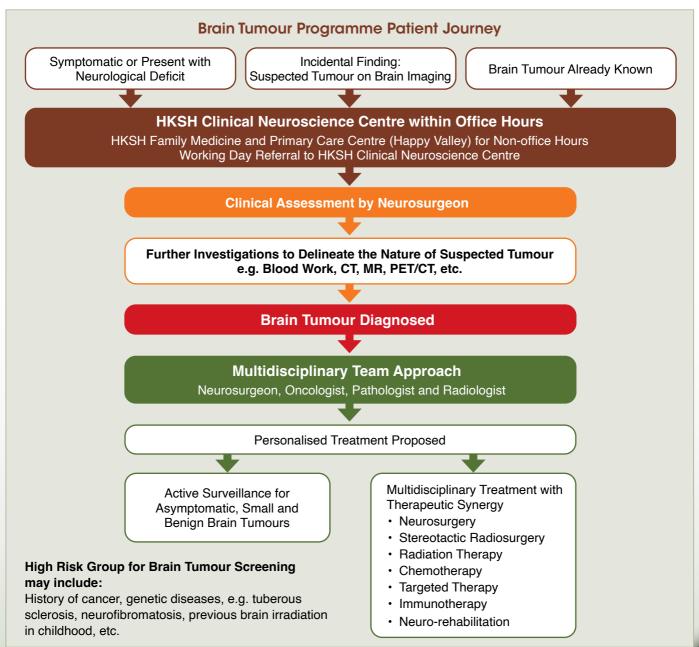


## **Diagnosis**

Since symptoms from brain tumour can be very diversified, doctors need to be highly vigilant. Doctors will arrange for patients to undergo MRI scans or computed tomography scans for more detailed work-up. For some small brain tumours, such as pituitary tumours or acoustic neuromas, a routine MRI scan may not be enough. Doctors may need to order MRI scans of specific areas with appropriate protocols to obtain necessary detailed information.

## Interdisciplinary Personalised Treatment - HKSH Brain Tumour Programme

Although there are various international guidelines and clinical formulations available for many types of brain tumours, being able to tailor make a personalised plan for the patient is the key to treatment success.



The treatment plan of the brain tumour is determined by the tumour type and patient-specific factors. In simple terms:

- For benign asymtomatic tumours that are small in size, clinical observation and regular MRI examinations are recommended;
- If there is a malignant tumour or a benign tumour with symptoms, it is suggested for the team to conduct multidisciplinary meeting. Tissues may be extracted for pathological and molecular analysis to guide treatment, or surgical operation may be required for gross total excision, or to remove the largest extent of tumour under safe conditions to relieve symptoms;
- Adjunct therapy such as stereotactic radiosurgery, chemotherapy, radiotherapy, targeted therapy or immunotherapy can be arranged accordingly.

Our team values patient engagement and empowerment during treatment and recovery. Doctors would put together a personalised plan of care that is tailored made to the best outcome.

#### References

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