Brain Tumors: Surgery



Surgery is a common treatment for many types of brain tumors. It's often the first treatment used. For some slow-growing tumors, it may be the only treatment needed. But for other brain tumors, surgery might be followed by other treatments, like radiation therapy or chemotherapy.

When may surgery be done?

Surgery may be done to:

- Try to remove all of the tumor, if safely possible
- Help relieve or prevent symptoms
- Take out a small piece of the tumor (biopsy) to find out what kind of tumor it is

Types of surgery

There are many types of brain tumor surgery. The type of surgery done depends on:

- What type of tumor it appears to be, based on imaging tests like MRI
- The size and location of the tumor
- Whether the tumor is causing pressure on vital parts of the brain
- Whether the neurosurgeon thinks the tumor can be removed fully
- Whether there are other tumors in the brain or the tumor is also present outside of the brain, such as in the lung

Your age, overall health, and preferences are also factored into the treatment choice.

In most cases, the neurosurgeon will need to remove a small piece of the skull (bone flap) to get to the brain tumor. This surgery is called a craniotomy. Before removing the bone flap, the neurosurgeon will most likely use a computer system to find the tumor. At the end of the surgery, the bone flap is usually put back and held in place with small titanium plates and screws. Sometimes the bone flap may not be put back in place. It will be safely stored until it can be placed at a later time.

You may be asleep through most of the surgery. You may need to be awake for part of the surgery if the surgeon needs to check the function of a part of the brain.

Brain tumors can be removed through surgery in several ways, such as:

- The surgeon may use special instruments to detach the tumor.
- If the tumor is very soft, the surgeon might use a vacuum device to remove it.
- A special tool can be used to liquefy the tumor, after which it can be vacuumed out.
- A laser may be used to kill cancer cells if a tumor is hard to reach with regular surgery.

The neurosurgeon will try to take out the whole tumor if possible. If the surgeon can't remove all of the tumor without harming the brain, they will take out as much as possible. This is called debulking surgery. Reducing the size of a tumor through surgery can help lower the pressure on the brain and relieve some symptoms. It also can make the tumor easier to treat with radiotherapy, chemotherapy, or other treatments.

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