

## Care of Adult Glioma Brain Tumor Patients

### Glioma

Glioma is a term to describe the tumor. Three types of glial cells can produce a tumor.

- Astrocytes (which produce astrocytomas)
- Oligodendrocytes (which produce oligodendrogliomas)
- Ependymal cells (which produce ependymomas)

Sometimes, the tumor is made up of both astrocytes and oligodendrocytes. These tumors are called mixed gliomas, or oligoastrocytomas.

### Causes

Although causes are being studied, the reason a person develops a brain tumor is not known.

### Tumor Grades

- Low-grade (benign, slow-growing, or non-cancerous)
- High-grade (malignant, fast-growing, or cancerous)

Slow-growing or “benign” tumors are still harmful because they push on the brain or destroy brain tissue and may return.

Brain tumors are graded based on:

- What we see under the microscope.
- Results of special tests called molecular markers.

A pathologist studies the cells of the tumor and how diseases affect the body. The pathologist uses a microscope to answer these questions:

- How normal or not normal the cells look (atypia)?
- How fast the cells are growing or dividing (mitosis)?
- Are there areas of dead tumor cells inside the tumor (necrosis)?
- Is the tumor invading normal tissue (infiltration)?
- Is the tumor creating a blood supply (vascularization)?

Based on the tumors’ traits, tumors are then divided into one of four grades.

- Grade 1 and Grade 2 are mostly benign or slow growing.
- Grade 3 and Grade 4 are malignant or cancerous.

Once the pathologist reviews the tumor, a part of the tumor is sent to a lab for testing. The testing is called “molecular markers.” It takes about three weeks to get these results back. Your doctor will share these results with you.

It often takes 3-5 days to get the first results. If you do not know the results when you leave the hospital, we will call within one week after discharge.

The pathologist can grade some tumors based on what they see under the microscope. For other tumors, they cannot give a grade until all the markers have returned. If your tumor can be graded by what the pathologist can see, we will call you within a week of discharge.

When the doctor's office calls with the pathology results, they will refer you to a booklet. The American Brain Tumor Association (ABTA) booklet "About Brain Tumors" will tell you more about your brain tumor.

We will give you this booklet before you go home. You can also visit their website: <http://www.abta.org>

If your tumor cannot be staged right away, we will give you the results at your first post-op visit.

## Location of Tumor and Affects

### Frontal Lobe

- Ability to move
- Intelligence
- Thinking
- How to reason
- Behavior
- Memory
- Personality

### Pituitary Gland

- Hormones
- Growth
- Fertility

### Parietal Lobe

- Intelligence
- How to reason
- Thinking
- Telling right from left
- Speaking
- Feeling
- Reading

### Occipital Lobe

- Vision

### Cerebellum

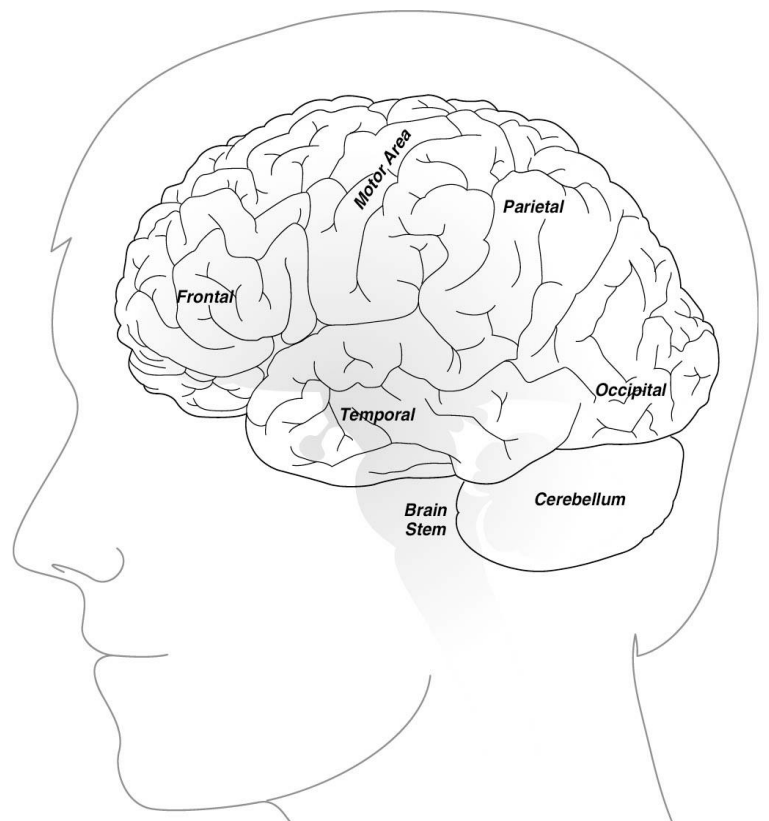
- Balance
- Coordination
- Fine muscle control (writing)

### Brain Stem

- Breathing
- Blood pressure
- Heartbeat
- How to swallow food, drink

### Temporal Lobe

- Hearing
- Speaking
- Reading words and knowing what they mean
- Smell
- Memory
- Emotions



### **Will Symptoms Get Better**

Symptoms may improve over time. At your follow up visit, ask your doctor if your symptoms will “get better” and how long it will take.

### **Treatment After Surgery**

There are three main treatment options for brain tumors.

- Surgery
- Radiation
- Chemotherapy (chemo)

Treatment depends on:

- Type of tumor
- “Grade” of the tumor
- Tumor location
- How much could be removed
- Molecular marker results

When you go home you will have three follow up visits scheduled. **Please bring your ABTA Booklet with you to these visits.**

- Follow up with neurosurgeon or nurse practitioner.
- Consult with radiation oncologist.
- Consult with neuro-oncologist.

**Follow up with neurosurgeon or nurse practitioner** will be your first post-op check. We will inspect your incision and most likely take out the sutures. This will be about 2 weeks after surgery.

**Consult with radiation oncology** will depend on the pathology results. When we call you with the pathology results, we will tell you if you need this visit.

It is easier to schedule these visits right away and cancel them if you don’t need them. This prevents a delay in treatment if your tumor type requires radiation. This visit is also about 2 weeks after surgery.

You may think that seeing the doctor “right away” is best, but your body needs time to heal. Starting the radiation too soon after surgery can be harmful.

If you need radiation, the radiation oncologist will discuss this with you. They will discuss the treatment, side effects and next steps. At the end of this visit, they will schedule you for a planning CT (CAT scan). At this scan, they will be making a mask for you to wear during treatment. The mask will hold you in place for the treatment. Often, you will also need to have another MRI scan. If you receive radiation, we will give you another handout that explains it in greater detail.

**Consult with neuro-oncologist** will be scheduled on the same day as the radiation oncologist visit. If the results of your molecular tests are not back, this visit will be changed to a later date. Not all gliomas need chemo. The neuro-oncologist will discuss chemo options and side effects with you. They will also tell you if clinical trials are an option for you.

## **Support Information**

### **American Brain Tumor Association**

8550 W Bryn Mawr Ave Suite 550

Chicago, IL 60631

**1-800-886-2282** (patient line)

**773-577-8750**

<http://www.abta.org>

### **National Brain Tumor Society**

Boston Office

55 Chapel Street, Suite 200

Newton MA 02458

Phone: **617-924-9997**

<http://www.braintumor.org>

### **National Institute of Neurological Disorders and Stroke**

NIH Neurological Institute

P.O. Box 5801

Bethesda, MD 20824

800-352-9424

<https://www.ninds.nih.gov/>

### **Madison Area Brain Tumor Support Group**

The goal of this support group is to share common experiences to provide support and education. These meetings are meant to be informal. They are also confidential.

Meetings are held monthly (third Thursday of the month). Brain tumor survivors, their families or support persons are all welcome to come.

### **For the meeting time and place, contact:**

Lori Hayes at [hayes@humonc.wisc.edu](mailto:hayes@humonc.wisc.edu)

Or (608) 265-1192

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 9/2023 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6268