Care of Adult Glioma Brain Tumor Patients

This handout is about brain tumors. Your American Brain Tumor Association (ABTA) Booklet will give you more details.

Please bring the booklet with you to your first post-surgery clinic visits.

What is a glioma?
Glioma is a general 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 can also be called oligoastrocytomas.

How are tumors graded?
- Low-grade (benign, slow-growing or non-cancerous)
- High-grade (malignant, fast-growing or cancerous)

These terms are misleading. Slow-growing or “benign” tumors are dangerous because they push on the brain or destroy brain tissue and may return.

Brain tumors are graded based on two criteria: what is seen under the microscope and the results of special tests called molecular markers.

A pathologist is a scientist who studies the cells of the tumor and how diseases affect the body. Under the microscope the pathologist looks at:
- 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 special lab for testing. The testing is called “molecular markers.” It takes about three weeks to get these results back. The results will be shared with you once the results have been sent to your doctor.
Where is my tumor and how will it affect me?

**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
- Sensation
- Reading

**Occipital Lobe**
- Vision

**Cerebellum**
- Balance
- Coordination
- Fine muscle control (writing)

**Temporal Lobe**
- Hearing
- Speaking
- Reading words and to know what they mean
- Smell
- Memory
- Emotions

**Brain Stem**
- Breathing
- Blood pressure
- Heartbeat
- How to swallow food, drink
**What is the cause of a glioma?**
Although causes are being studied, the reason a person develops a brain tumor is not known. But if you’ve received radiation to your brain in the past, you have a higher risk of a brain tumor growing.

**Can I expect my symptoms to resolve?**
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.

**When will I know the pathology of my tumor?**
Pathology of a tumor consists of the type of tumor and grade of the tumor.

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

When the doctor’s office calls with the pathology results, they will refer you to a booklet. The booklet is called the American Brain Tumor Association (ABTA) booklet “About Brain Tumors.” This booklet has more information about your brain tumor.

You will be given this booklet before you are sent home. You can also visit their website for additional support and resources: [http://www.abta.org](http://www.abta.org)

**What type of treatment will I have after surgery?**
There are three main treatment options for brain tumors:
- Surgery
- Radiation
- Chemotherapy

**Treatment or combination of treatments depends on**
- Type of tumor
- “Grade” of the tumor
- Tumor location
- How much could be removed
- Molecular marker results

When you are discharged home you will have three appointments set up.
- Follow up with Neurosurgeon/Nurse Practitioner.
- Consult with Radiation Oncologist
- Consult with Neuro-Oncologist

**Please bring your ABTA Booklet with you to these appointments.**

1. **Follow up with Neurosurgeon/Nurse Practitioner**- this will be your first post-operative check. Your incision will be inspected and most likely the sutures will be removed at this time. This occurs about 2 weeks after surgery.
2. Consult with Radiation Oncology-
You may or may not need this appointment. The appointment will depend on the pathology results. When the neurosurgery office calls you with the pathology results, they will tell you if this appointment is needed.

We find it’s easier to make these appointments right away and cancel them if they are not needed. By doing this we do not delay the treatment process if your tumor type requires radiation. This appointment will also occur about 2 weeks after surgery. It may seem like seeing the doctor “right away” is best. But your body needs time to heal. Studies have shown that starting the radiation too soon after surgery can be damaging.

If you will 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, the radiation oncologist will schedule you for a planning CT (CAT scan).

At this scan, they will be making a special mask for you to wear. The mask will hold you in place for the treatment. Often you will also need to do another MRI scan prior to starting radiation. The radiation oncologist will make this decision. If you will receive radiation, you will be given another handout that explains it in greater detail.

3. Consult with Neuro-Oncologist- This visit will be scheduled on the same day as the radiation oncologist visit (about 2 weeks after surgery). If the results of your molecular tests are not back, this visit will be changed to a later date. Not all gliomas need chemotherapy.

The molecular markers test results will be reviewed by the neuro-oncologist. The neuro-oncologist will discuss chemotherapy options and side effects with you.

If you are eligible for a clinical trial, this will also be discussed with you at this visit.
What to expect when I go home

Please refer to HFFY 4452: Going Home after your Craniotomy.
Please follow the instructions in your discharge packet for incision care.

When to Call the Doctor

Signs of Incision infection
- Increased redness or swelling along or around incision
- Drainage from incision
- Increase in pain
- Fever greater than 100.5°F
- Neck stiffness

Signs of brain swelling or brain edema
- Increasing or severe headaches that are not relieved by Tylenol®
- Headaches that occur daily or several times a day, even if relieved by Tylenol®
- Headaches with nausea and vomiting
- Nausea or vomiting
- Any change in strength or sensation (numbness or tingling)
- Clumsiness or coordination problems of your hand or leg
- Vision, hearing or speech changes or problems
- Balance or walking problems or dizziness
- Personality or behavioral changes
- If you become confused and you have not been before
- New seizures or seizures that are getting worse

After I leave the hospital, whom do I call if I have questions?

Once you leave the hospital, you can contact the Neurosurgery Clinic if you have any questions. The questions can be about your incision, if you have any signs of infection or have any other questions.

Neurosurgery Clinic: 608-263-7502
Where can I go for more information or support?

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
http://www.ninds.nih.gov/index.htm

Madison Area Brain Tumor Support Group
The goal of this support group is to share common experiences in an effort to provide support and education. These meetings are meant to be informal. They are also confidential. Meetings are not meant to endorse or suggest certain treatments, institutions, or protocols.

Meetings are held monthly (third Tuesday of the month).

Brain tumor survivors, their families or support persons are all welcome to come.

For the meeting time and place, contact:
Letty Geanon, NP: (608) 263-5227
Lori Hayes, CNS: (608) 265-1192

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 © 7/2016 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6268