

## Radiation Therapy to the Brain

### Types of Tumors Treated with Radiation

- Brain tumors, both benign and malignant.
- Metastatic brain lesion—these are cancers that start in another part of the body and spread to the brain.
- Vestibular schwannomas or acoustic neuromas.
- Meningiomas
- Pituitary tumors

### Radiation Treatment

You will receive 2 – 7 weeks of radiation treatments based on the type of tumor you have.

Your first treatment will take about 45 minutes. The therapists will position you on the treatment table and put marks on your facemask. You will then have an X-ray, CT scan, or MRI scan which will be checked by a doctor before your first treatment. You will not feel anything as you receive the treatment. The rest of your treatments will take about 15-30 minutes. If you receive pulsed reduced dose rate radiation, these treatments can take up to 60 minutes for each treatment. Your doctor will discuss your type of treatment and how long it will take.

You will see your doctor or nurse once a week to watch for side effects. If you have questions, please let the therapist know. They will arrange for you to meet with a doctor. During the last weeks of treatment you will discuss follow-up care.

### Side Effects

Most of the time there are few side effects. Some may appear shortly after starting treatment. Other side effects may take months or years to appear. This handout lists some of the most common side effects.

### Brain Swelling/Brain Edema

Patients may have brain swelling during treatment or weeks to months after treatment is over. If you have swelling, we will treat you with a steroid medicine. If you have brain swelling or are taking steroids, please ask your nurse or doctor for a handout (HFFY #6382). This handout will tell you more about the side effects of steroids.

Symptoms of **brain swelling** can vary based upon where the swelling is and the type of tumor or lesion you have. Some of the more common symptoms are listed below. If you have any of these, tell your doctor:

- 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 feeling (numbness or tingling)
- Clumsiness or coordination problems of a hand or leg
- Vision, hearing or speech changes or problems
- Balance or walking problems.
- Dizziness
- New onset of confusion
- New seizures or seizures that are getting worse

### Skin Irritation

Red, dry skin, like a sunburn, may occur. We will check your skin while you are having treatments. We can give you a cream and talk with you about ways to protect and maintain your skin. Pay special attention to the tops of the ears or areas where hair loss has occurred.

Keep your head covered when you go outside. Limit sun to the head as much as you can. We strongly suggest you use a sunscreen with an SPF of at least 50.

**Your skin needs to be clean and dry before each treatment.** You should apply moisturizers and creams 2 – 3 times per day, but only **after** the day's treatment. If your treatment is late in the day, you may apply moisturizer before your treatment if it will be fully absorbed by the time you have your treatment. We ask you not to apply creams for 4 hours before treatment.

### **Hair Loss**

Hair loss can occur to the whole scalp (if you receive whole brain radiation) or in patches. Often, hair loss starts around the 2nd week of treatment for whole brain radiation. Others will notice hair loss around the 4th or 5th week of treatment. Some people may not notice loss until the final week of treatment or the week after treatment ends.

For most people, hair will begin to re-grow about 3 months after radiation treatment. It may come back thinner or a different texture than before. In some cases, hair loss may be permanent. Use a mild shampoo and avoid daily washing, hot rollers, curling irons etc., if you can.

You may want to use scarves, turbans or caps during and after your treatment. You can schedule a visit at the Wig Salon to discuss options at **608-265-1700**.

### **Fatigue (Tiredness)**

Fatigue does not mean that your tumor is getting worse. It can be a side effect of treatment. Many find that they can keep up their normal routines with little problem. Others begin to feel more tired about week 3 of treatment and near the end of treatments and may need to rest. Taking rest breaks is very important. You will need to listen to your body and rest as needed. For most people, the fatigue begins to go away 2-6 weeks after treatment. Weight loss can make this worse. Many people find that rest and exercise can help with this symptom.

### **Taste Changes**

Sometimes radiation can change how foods taste. It will improve after radiation is finished. Sometimes, the taste changes are because you have thrush.

### **Thrush**

Look at your tongue and the inside of your mouth daily. It should be pink and smooth. If you notice any red or white patches on your tongue or have a “funny” or “strange” taste in your mouth, please let your doctor or nurse know. Sometimes a yeast infection (thrush) occurs. This will be treated with medicine.

### **Cognitive and Memory Changes**

People living with a brain tumor can have many kinds of mental changes. Sometimes, these changes are called “chemo brain,” yet they occur in people who have never had chemo.

Some of these changes are a result of injury by the tumor on normal tissue. This may be why you went to your doctor in the first place. Some changes are caused by the treatments to remove or destroy the tumor, such as surgery, chemo or radiation.

You may notice:

- Trouble concentrating or focusing on things
- Feeling “foggy”
- Problems multitasking
- Slower thinking speed or processing of information
- Memory problems
- Trouble completing tasks or following instructions
- Mood or behavior changes

### **When do these symptoms appear and how long will they last?**

Some of these changes appear during or shortly after treatment. Some changes get better over time. Some changes may be permanent.

Some changes may occur many months to years afterward.

Along with the tumor treatments, there can also be non-tumor causes, like medicines, dehydration, nutritional issues, aging, depression, stress and hormone imbalances. We will discuss these issues with you as they may occur.

### **How do I deal with these changes?**

Here are a few things to help you cope with these changes:

- Review your medicines.
- Keep notes and set alarms to remind you when important things are due.
- Use a daily calendar.
- Place sticky notes around the house with reminders or instructions.
- Play games such as Sudoku or puzzles that engage your memory.
- Get plenty of rest.
- Drink plenty of water.
- Seek expert help as stress and coping can make some problems worse.

- You can also find more information at:

- American Brain Tumor Association- [www.abta.org](http://www.abta.org)
- American Cancer Society - [www.cancer.org](http://www.cancer.org)
- Livestrong.org- [www.livestrong.org](http://www.livestrong.org)
- Cancer.net- [www.cancer.net](http://www.cancer.net)

### **Nausea and Nutrition**

Although rare, some patients may have nausea or vomiting during treatment. If you do, please let your doctor or nurse know. We can order medicines to help you. Nutrition is very important. Avoid alcohol and smoking.

We **do not** want you to lose weight. Eat at least 3 servings of protein and drink at least 6-8 glasses of water every day. Fatigue can decrease your appetite so you may want to eat 6 small meals a day rather than 3 large meals. Good eating and drinking habits will help lessen the side effects of treatment. If you have more questions about your diet please talk to your nurse. A dietician can help with any questions or concerns.

### **Hearing Problems**

Some people with tumors near the ear or those who get whole brain radiation may have hearing problems. These symptoms may be caused by earwax or excess skin shedding from the radiation. Hearing problems often go away after time.

### **Changes in Vision**

Radiation given for tumors near the eye or tumors that require whole brain radiation irritate the eye. This can cause tearing, redness, or dryness. These often go away or at least get better after several weeks. If the tumor is on or near the eye nerves, vision loss can occur and eye dryness may be permanent. In rare cases, some people can

get cataracts after radiation. Please discuss these issues with your doctor.

### **Other Concerns**

Having cancer can affect many areas of your life. The nurses and social workers can help you cope. Feel free to speak to them at any time.

### **Risks**

Your doctor will discuss the risks of this treatment with you. The risks vary from patient to patient and depend on many factors.

### **Who to Call**

If you have any questions or problems, please feel free to call the Radiotherapy Clinic at **608-263-8500**. If the clinic is closed, your call will transfer to the paging operator. Ask for the **radiotherapy** doctor on call. Leave your name and phone number with the area code. The doctor will call you back. **1-800-323-8942**

### **Cancer Resource Services**

**Cancer Connect** staff can answer your questions about local treatments and connect you with local resources and support services. **608-262-5223**

**Cancer Information Service** is a resource for local cancer care as well as cancer care around the country. **1-800-422-6237**

### **American Brain Tumor Association**

(ABTA) is a complete source of information about brain tumors, treatment options, clinical trials, and living with a brain tumor. They also have social work resources and services. **1-800-886-2282**

**Email:** [info@abta.org](mailto:info@abta.org)

**Website:** <http://abta.org>

### **National Brain Tumor Society (NBTS)**

offers information about benign and malignant brain tumors, treatment centers, treatment options, the latest clinical trials and a survivors' network. **1-800-934-2873**

**Email:** [info@braintumor.org](mailto:info@braintumor.org)

**Website:** [www.braintumor.org/](http://www.braintumor.org/)

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

**Group** is for all brain tumor survivors and their family or support persons. Meetings take place at UW Hospital on the third Thursday of the month. **1-608-265-1192**

**Website:**

<https://patient.uwhealth.org/education/neurosurgery-support-groups>

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 © 6/2023 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#4469