PATIENT & CAREGIVER EDUCATION

Radiation Therapy to the Brain

This information will help you prepare for radiation therapy to your brain, including what to expect before, during, and after your treatment. You will also learn about side effects and how to care for yourself during your treatment.

We suggest you read through this at least once before you start radiation therapy, and then use it as a reference in the days leading up to your radiation treatments so that you can do all you can to prepare. Bring it with you for your simulation appointment and all future appointments with your radiation oncologist so that you and your healthcare team can refer to it.

About Radiation Therapy to the Brain

Radiation therapy uses high-energy rays to treat cancer. It works by damaging the cancer cells and making it hard for them to reproduce. Your body then is naturally able to get rid of these damaged cancer cells. Radiation therapy also affects normal cells. However, your normal cells are able to repair themselves in a way that cancer cells cannot.

Radiation can be given to treat primary tumors in your brain or tumors that have spread to your brain from another part of your body (metastasized). Your doctor will decide whether you will receive partial or whole brain radiation. You will have either external beam radiation therapy or stereotactic radiosurgery depending on your treatment plan.

During external beam radiation, a treatment machine will aim beams of radiation directly to the tumor. The beam passes through your body and destroys cancer cells in its path. You will not see or feel the radiation.

Stereotactic radiosurgery can be used in some tumors and is even more precise. It targets a small area in your brain with high doses of radiation and delivers lower doses of radiation to the normal tissue around it. You are able to receive higher doses to the tumor at each treatment session, which shortens the overall
course of treatment.

Radiation therapy takes time to work. It takes days or weeks of treatment before cancer cells start to die, and they keep dying for weeks or months after radiation therapy.

Your Role on Your Radiation Therapy Team

You will have a team of healthcare providers working together to provide the right care for you. You are a part of that team, and your role includes:

- Arriving on time for all your radiation therapy sessions.
- Asking questions and talking about your concerns. We have included a list of possible questions at the end of this resource.
- Letting someone on your radiation therapy team know when you have side effects.
- Telling your doctor or nurse if you are in pain.
- Caring for yourself at home:
  - Quitting smoking, if you smoke. If you want to quit, call our Tobacco Treatment Program at 212-610-0507.
  - Following your radiation therapy team’s instructions to care of your skin.
  - Drinking liquids as instructed by your healthcare team.
  - Eating the foods suggested by your radiation therapy team.
  - Maintaining your weight.

Simulation

Before you begin your treatment, you will have a treatment planning procedure called a simulation. This is done to make sure that:

- Your treatment site is mapped.
- You get the right dose of radiation.
- The amount of radiation that gets to your nearby tissues is as small as possible.
During your simulation, you will have imaging performed and your skin will be marked with little tattoo dots. These marks identify the area that will be treated. These may or may not be used in your treatment plan. If you have concerns about tattoos as part of your treatment please discuss this with your doctor.

Your simulation will take 2 hours, but can be longer depending on the treatment your doctor has planned for you.

**Preparing for your simulation**

No special preparation is needed before your simulation. You can eat and drink as you normally would on the day of your procedure.

Depending on your treatment plan, you may need more detailed imaging, including magnetic resonance imaging (MRI) which will be used to help plan your treatment.

During your simulation, you will be lying in one position for a long time. If you think you will be uncomfortable lying still, you can take acetaminophen (Tylenol®) or your usual pain medication before your simulation. If you think you may get anxious during your procedure, speak with your doctor about whether medication may be helpful.

Wear comfortable clothes that are easy to take off because you may need to change into a hospital gown. Do not wear jewelry, powders, or lotions.

**Day of your simulation**

**What to expect**

A member of your radiation therapy team will check you in. You will be asked to state and spell your full name and birth date many times. This is for your safety and part of our standard identification process. Patients with the same or similar names may be having care on the same day as you.

You will be greeted by your radiation therapist. He or she will take a photograph of your face. This picture will be used to identify you throughout your treatment.

Your therapist will then explain the simulation to you. If you have not already signed a consent form, your radiation oncologist will review everything with you, and ask for your signature.
During your simulation

For your simulation, you may need to get undressed and change into a gown. You should keep your shoes on. If you wear a head covering, such as a wig, turban, or cap, you may have to remove it. Your therapists will help you lie down on a table and make every effort to ensure your comfort and privacy.

Although the table will have a sheet on it, it is hard and has no cushion. If you have not taken pain medication and think you may need it, tell your therapists before your simulation begins. Also, the room is usually cool. If you feel uncomfortable at any time, let your therapists know.

Throughout your simulation, you will feel the table move into different positions. The lights in the room will be turned on and off and you will see red laser lights on each wall. Your therapists use these laser lights as a guide when they position you on the table. **Do not look directly into the red beam because it may damage your eyes.**

Although your therapists will walk in and out of the room during your simulation, there will always be someone who can see and hear you. You will hear your therapists speaking to each other as they work, and they will explain to you what they are doing. Do not move once your simulation begins, because it may change your position. However, if you are uncomfortable or need help, tell your therapists.

To help pass the time, your therapists can play music for you. You may bring a CD of your own from home, if you wish.

Positioning

Your therapists will help you lie down on the table. You will be lying on your back during your simulation and each treatment. To help you stay in the correct position, you will wear a mask or chin strap. Your therapists will make this for you.
To make the mask, your therapist will place a warm, wet sheet of plastic mesh over your face while you are lying on the simulation table. He or she will then shape it to fit around your head (see Figure 1). You won’t have any trouble hearing or seeing while the mask is on.

Markings will be made on the mask. After the mask is made, your therapists will take several photographs of you in your simulation position. The photographs and markings will be used as guides to position you correctly for your treatments. This part of your simulation takes about 15 minutes.
Sometimes, a chin strap is made instead of a mask. It is a piece of cloth that is placed under your chin to hold your head in place (see Figure 2). It will be secured to the table on which you are lying. Like the mask, it ensures that you are in the correct position during your simulation and treatments.

If you are having stereotactic radiosurgery, a special mold will be made of your head and shoulders. Once it dries your therapist will make a mask by placing a warm sheet of mesh over your face that will have an opening (see Figure 3).
Skin markings (tattoos)
If you have a chin strap, your therapists will draw on your skin with a felt marker. You may need 2 permanent skin markings called tattoos, one on either side of your head, above your ears. The sensation of getting one feels like a pinprick. The tattoo marks are no bigger than the head of a pin. The felt markings can be washed off after your simulation. The tattoos are permanent and will not wash off. If you are concerned about receiving tattoos as part of your radiation treatment, talk with your doctor.

After the tattoos are made, your therapists will take several photographs of you in your simulation position. The photographs and tattoo marks will be used as guides to position you correctly each day of your treatment.

Imaging
While you are lying in your position, you will get scans of the area to be treated. These images will be done on an x-ray machine called a simulator or on a computed tomography (CT) scan machine (see Figure 3). These scans are used only to map your treatment. They are not used for diagnosis or to find tumors. If you need other imaging, your nurse will explain this to you.

Occasionally, your nurse may start an intravenous (IV) line so that contrast (dye) can be given to you before your scan. The contrast helps us get clear images of the area to be treated. If you are allergic to contrast, please tell your doctor or nurse.

It will take about 45 minutes to get your scan. During the scan, you will hear the machine turn on and off. Even if the noise seems loud, your therapists will be able to hear you if you speak with them.

After Your Simulation
At the end of your simulation, we will give you an appointment for your set-up procedure and treatment.

Scheduling your treatment
Radiation treatments may be given Monday through Friday. For some people, the treatment is given in just one day. For other people, the treatment is given over a number of weeks. Your schedule is based on what your doctor
recommends.

Your treatment may be given in several different schedules. It can be:

- A single treatment, usually given on the same day as your set-up or beam films
- 3 to 5 treatments: ________________________________________
- Daily treatment, given Monday through Friday, for about _____ weeks.

You must come in every day that you are scheduled for your treatment. Treatment may not be as effective if you skip or miss appointments. If for some reason you can’t come in for treatment, you must call your radiation oncologist’s office to let your team know. If you need to change your schedule for any reason, speak with your radiation therapist.

If you are receiving stereotactic radiosurgery, your radiation oncology team will tell you about the length of your appointment times and this will vary depending on how many sites are being treated.

**Treatment planning**

During the time between your simulation and start of treatment, your radiation oncologist will work with a team to plan your treatment. They will use your simulation images to plan the angles and shapes of your radiation beams. The details are carefully planned and checked. This takes 1 to 10 days.

**Vitamins and dietary supplements**

You may take a daily multivitamin during radiation therapy, if you wish. Do not take more than the recommended daily allowance of any vitamin. Do not take any other vitamins or any supplements without talking to your doctor. This includes both nutritional and herbal supplements.

**Set-up Procedure**

Before your first treatment, you will be scheduled for a set-up procedure. This procedure usually takes about 1 hour. If pain medication was helpful during simulation, you may want to take it before this procedure.

When you come for your set up procedure, you will be shown to the dressing
room and asked to change into a gown. Your therapists will bring you to the room where you will receive your treatment each day. They will position you on the table. You will lie on your back exactly as you did during your simulation.

Special x-rays called beam films will be taken to make sure that your position and the area being treated are correct. The beam films will be repeated throughout your treatment. They are not used to see how your tumor responds to the treatment.

Depending on your treatment plan, you may start treatment on the same day as your set up procedure or on the next business day.

**During Your Treatment**

After you check in at the reception desk, have a seat in the waiting room. When your radiation therapists are ready for you, they will tell you to change into a gown. You should keep your shoes on during the treatment.

Your radiation therapists will bring you into the treatment room and help you lie on the table (see Figure 4). You will be positioned exactly how you were lying
during your set-up procedure.

Once you are positioned correctly, your radiation therapists will leave the room, close the door, and begin your treatment. You will not see or feel the radiation, but you may hear the machine as it moves around you and is turned on and off. You will be in the treatment room for 15 to 90 minutes, depending on your treatment plan. Most of this time will be spent putting you in the correct position.

Although you will be alone during the treatment, your radiation therapists will see you on a monitor and hear you through an intercom at all times. Your radiation therapists will make sure that you are comfortable during the treatment. Breathe normally during the treatment, but do not move. However, if you are uncomfortable or need help, speak to your radiation therapists. They can turn off the machine and come in to see you at any time, if necessary.

**Neither you, nor your clothes will become radioactive during or after treatment. It is safe for you to be around other people.**

**Discharge instructions after stereotactic radiosurgery**

If you are having stereotactic radiosurgery, you will need to follow special instructions.

- You will need to have a care partner take you home after your treatment. Don’t drive for ____________.
- Your care partner will need to stay with you for the first 24 hours after your treatment.
- You can resume most of your activities the day after your treatment. Ask your doctor or nurse when you can resume vigorous exercise.

**Scheduled visits during treatment**

Your radiation oncologist and radiation nurse will see you for a scheduled visit during your treatment course to talk with you about any concerns, ask about any potential side effects you may be having, and answer your questions. This visit will be before or after your treatment on __________________. You should plan on being at your appointment about 1 extra hour on this day.
If you need to speak with your radiation oncologist or radiation nurse any time between your visits, call your radiation oncologist’s office or ask the support staff or your radiation therapists to contact them when you come in for treatment.

Side Effects

Some people may develop side effects from radiation therapy. Which side effects and how severe they are depend on many factors, such as the dose of radiation, the number of treatments, and your overall health. Side effects may be worse if you are also getting chemotherapy. Below are the most common side effects of radiation therapy to the brain. You may have all, some, or none of these.

Swelling in your brain

Radiation therapy to the brain may cause brain swelling. If you had neurological symptoms before you began radiation therapy, they could return, or you could have new symptoms. These symptoms may include:

- A worsening of your original symptoms
- Seizures
- A headache that does not go away after taking acetaminophen (Tylenol®)
- Nausea and vomiting
- Changes in vision, such as double vision
- Unsteadiness when walking
- Change in mental status

If you have any new or worsening symptoms, call your doctor or nurse immediately. They will want to evaluate you. Medication(s) can be prescribed if needed. These may include:

- Steroids, such as dexamethasone (Decadron®). Steroids reduce brain swelling from the tumor itself or from the effects of radiation therapy.
  - Take steroids only as directed by your doctor. You dose may be changed as needed during your treatment. When your doctor decides it is safe, you will be given a schedule to gradually reduce the dose of the
medication. **Do not stop taking dexamethasone unless instructed by your doctor.**

- Steroids can cause stomach pain, so always take them with food. You may be given another medication to reduce the risk of stomach irritation.
- Steroids can increase the risk of certain lung infections. You may be given an antibiotic called sulfamethoxazole and trimethoprim (Bactrim®) to reduce this risk.
- Steroids may mask signs of infection, such as fever.
- Steroids can increase your blood sugar. If you have diabetes, please tell your radiation therapy team and the doctor who prescribes your medications for diabetes.

- Medications to control seizures, such as levetiracetam (Keppra®), phenytoin (Dilantin®), carbamazepine (Tegretol®), phenobarbital (Luminal®), or valproic acid (Depakene®).
  - If you are taking any of these antiseizure medications, you may need to have blood tests to make sure you are receiving the right dose.
  - Speak with your doctor about whether or not it is safe for you to drive while taking these medications.

**Hair loss**

Two to 3 weeks after your radiation therapy begins, you will probably lose some of the hair on your scalp. Ask your doctor or nurse what to expect. Your hair will usually grow back 3 to 6 months after your treatment is completed.

The color and texture of your hair may be different after your radiation therapy. You can cover your scalp with a scarf, turban, wig, or toupee if it makes you feel more comfortable.

If you want to wear a wig or hairpiece, try to get one before your hair falls out because it will be easier to match your hair color and style. Your health insurance may cover the cost of your wig or hairpiece. For your wig or hairpiece to be covered by insurance, your doctor must write a prescription with a diagnosis code indicating that your hair loss is due to treatment for cancer. Check with your insurance company to see if they cover the costs of wigs or hairpieces and how much they will pay.
Hair care

- Gently wash your hair with a mild shampoo when needed.
- Use a soft-bristle brush on your hair.
- Do not dye your hair or use hair products.

Skin reactions

During radiation therapy, your skin and hair in the area being treated may change. This may include your forehead, ears, and back of your neck. This is normal. Ask your nurse to point out the areas of your skin and scalp that will be affected.

After 2 or 3 weeks, your skin may become pink or tanned. It may even become bright red or very dark later on. It may also feel dry and itchy and look flaky. These symptoms will gradually decrease about 3 or 4 weeks after you finish your treatments.

You may also notice a rash, especially in any area where you have had previous sun exposure. Although this may be a side effect of treatment, a rash could also be a sign of infection. If you develop a rash at any time during your treatment, tell your doctor or nurse.

Below are guidelines to help you care for your skin during treatment. Follow these guidelines until your skin gets better. These guidelines refer only to the skin in the area being treated with radiation therapy.

Keep your skin clean

- Bathe or shower daily using warm water and a mild unscented soap, such as Dove®, Basis®, or Cetaphil®. Rinse your skin well and pat it dry with a soft towel.
- When washing your hair, be gentle with your skin and scalp. Do not use a washcloth, a scrubbing cloth, or brush.
- Do not use alcohol or alcohol pads on your skin in the area being treated.

Moisturize your skin often
- Your nurse may suggest that you start using a moisturizer on the first day of your treatment. If you are not likely to develop a skin reaction, you don’t need to use a moisturizer unless your skin becomes dry or itchy. You can use over-the-counter moisturizers. When choosing a moisturizer pick one that does not have any fragrances or lanolin. There are a number of products that are good to use, and your nurse may suggest one of these to you. Use only one at a time unless your nurse tells you to use more.

- If you are using a moisturizer, apply it 2 times a day.
  - If your radiation treatment is in the morning, apply the moisturizer:
    - After your treatment.
    - Before you go to bed.
  - If your radiation treatment is in the afternoon, apply the moisturizer:
    - In the morning, at least 4 hours before your treatment.
    - Before you go to bed.
  - On the weekends and days that you don’t have treatment, apply the moisturizer:
    - In the morning.
    - Before you go to bed.

**Avoid irritating your skin in the area being treated**

- Don’t wear tight caps or turbans that will rub against your skin.
- Use only the moisturizers, creams, or lotions that you have discussed with your doctor or nurse.
- Don’t use makeup, perfumes, powders, or aftershave in the area being treated.
- Don’t put tape on your treated skin.
- If your skin or scalp is itchy, don’t scratch it. Apply moisturizer. Ask your nurse for recommendations on how to relieve the itching.
- Don’t shave in the area that is being treated. If you must shave, use only an electric razor. Stop if your skin becomes irritated.
• Don’t let your treated skin come into contact with extreme hot or cold temperatures. This includes hot tubs, water bottles, heating pads, and ice packs.

• If you have no skin reactions during your treatment, you can swim in a chlorinated pool. However, be sure to rinse off the chlorine right after getting out of the pool.

• Avoid tanning or burning your skin during treatment and for the rest of your life. If you are going to be in the sun, use a PABA-free sunblock with an SPF of 30 or higher. Also, wear loose-fitting clothing that covers you as much as possible.

**Fatigue**

Fatigue is a feeling of being tired or weak, not wanting to do things, not being able to concentrate, or feeling slowed down. You may develop fatigue after 2 to 3 weeks of treatment, and it can range from mild to severe. Fatigue may last 6 weeks to 12 months after your treatment ends.

There are a lot of reasons why you may develop fatigue during treatment, including:

• The effects of radiation on your body.

• Traveling to and from treatment.

• Not having enough restful sleep at night.

• Not eating enough protein and calories.

• Having pain or other symptoms.

• Feeling anxious or depressed.

• Certain medications.

You may find that your fatigue is worse at certain times of the day. Below are suggestions to help you manage your fatigue.

**Ways to manage fatigue**

• If you are working and are feeling well, continue to do so. However, working less may help increase your energy.
• Plan your daily activities. Pick those things that are necessary and most important to you and do them when you have the most energy. For example, you may go to work but not do housework, or watch your children’s sports event but not go out to dinner.

• Plan time to rest or take short naps (10 to 15 minutes) during the day, especially when you feel more tired. If you do nap, try to sleep for less than 1 hour at a time.

• Try to sleep at least 8 hours every night. This may be more sleep than you needed before you started radiation therapy. You may also find it helpful to go to sleep earlier at night and get up later in the morning. One way to sleep better at night is to be active during the day. For example, if you are able to exercise, you could go for a walk, do yoga, or ride a bike. Another way to sleep better at night is to relax before going to bed. You might read a book, work on a jigsaw puzzle, listen to music, or do calming hobbies.

• Ask family and friends to help you with things like shopping, cooking, and cleaning. Check with your insurance company to see if they cover home care services.

• Some people have more energy when they exercise. Ask your doctor if you can do light exercise, such as walking, stretching, or yoga.

• Eat foods that are high in protein and calories. Ask your nurse for the resource *Eating Well During and After Your Cancer Treatment*.

• Other symptoms, such as pain, nausea, diarrhea, difficulty sleeping, or feeling depressed or anxious, can increase your fatigue. Ask your doctor or nurse for help with any other symptoms you may have.

**Sexual health**

You may have concerns about the effects of cancer and your treatment on your sexuality. You are not radioactive. You cannot pass radiation to anyone else, so it is safe to be in close contact with other people.

You may be sexually active during radiation treatment unless your radiation oncologist gives you other instructions. However, if you or your partner are able to have children, you must use birth control (contraception) to prevent pregnancy during your treatment.
An excellent resource is the booklet *Sexuality and Cancer*. There is a version for men and a version for women. You can get a copy of this booklet from the American Cancer Society by calling 800-227-2345.

Memorial Sloan Kettering (MSK) has a Sexual Health Program to help people address the impact of their disease and treatment on sexual health. You can meet with a specialist before, during, or after your treatment.

- Female Sexual Medicine and Women’s Health Program: call 646-888-5076 for an appointment.
- Male Sexual and Reproductive Medicine Program: call 646-888-6024 for an appointment.

**Emotional health**

The diagnosis and treatment of cancer can be a very stressful and overwhelming event.

You may feel:

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All these kinds of feelings are expected, if you or someone you love has a serious illness. You may also worry about telling your employer that you have cancer or about paying your medical bills. You may worry about how your family relationships may change, about the effect of cancer treatment in your body, or if you will continue to be sexually attractive. You may worry that the cancer will come back. We are here to support you.

**Ways to cope with your feelings**

- Talk with others. When people try to protect each other by hiding their feelings, they can feel very alone. Talking can help the people around you know what you’re thinking. It might help to talk about your feelings with someone you trust. You may choose your spouse or partner, a close friend,
family member, chaplain, nurse, social worker, or psychologist. You may also find it helpful to talk to someone who is going through radiation therapy, or a cancer survivor or caregiver who has been through a similar treatment. Through our Patient-to-Patient Support Program, you have a chance to speak with former patients and caregivers. To learn more about this service, please call 212-639-5007.

- Join a support group. Meeting other people with cancer will give you a chance to talk about your feelings and listening to other people who have same concerns. You will learn how others cope with their cancer and treatment. Your doctor, nurse, or social worker can tell you about the support groups you might be interested in.

- Try relaxation and meditation. You might try thinking of yourself in a favorite place while breathing slowly while paying attention to each breath or listening to a soothing music or sound. For some people, praying is another way of meditation. These kinds of activities can help you feel relaxed and calm.

- Exercise. Many people find that light activity like walking, biking, yoga, or water aerobics helps them feel better. Talk with your doctor or nurse about types of exercise you can do.

We all have our own way of dealing with difficult situations. Generally, we use whatever has worked for us in the past. However, sometimes this is not enough. We encourage you to speak with your doctor, nurse, or social worker about your concerns.

### After Your Treatment

Please be sure to keep your follow-up appointments with your radiation oncologist. He or she will evaluate your response to treatment. You may have blood tests, x-rays, and scans during these visits. Before coming, write down your questions and concerns. Bring this and a list of all your medications with you. You can also call your doctor or nurse at any time after your treatment is completed, or in between follow-up visits, if you have any questions or concerns.

### Resources

Many of the resources listed in this guide can be found on the Internet. If you
don’t have a computer or if you don’t know how to use the Internet, check with your local public library or community center.

**Counseling Center**
646-888-0200
Many people find counseling helpful. We provide counseling for individuals, couples, families, and groups, as well as medications to help if you feel anxious or depressed.

**Integrative Medicine Service**
646-888-0800
Offers many services to complement traditional medical care, including music therapy, mind/body therapies, dance and movement therapy, yoga, and touch therapy.

**Look Good Feel Better Program**
800-227-2345
Learn techniques to help you feel better about your appearance by taking a workshop or visiting the program online at [www.lookgoodfeelbetter.org](http://www.lookgoodfeelbetter.org).

**Nutrition Services**
212-639-7071
Our Nutrition Service offers nutritional counseling with one of our certified dietitians. Your dietitian will review your current eating habits and give advice on what to eat during and after treatment.

**Patient-to-Patient Support Program**
212-639-5007
You may find it comforting to speak with a cancer survivor or caregiver who has been through a similar treatment. Through our Patient-to-Patient Support Program, we are able to offer you a chance to speak with former patients and caregivers.

**Sexual Health Program**
Cancer and cancer treatments can have an impact on your sexual health. MSK’s Sexual Health Program can help you take action and address sexual health issues before, during, or after your treatment.

- Our Male Sexual and Reproductive Medicine Program helps male patients
who are dealing with cancer-related sexual health challenges, including erectile dysfunction. For more information, or to make an appointment, please call 646-888-6024.

- Our Female Sexual Medicine and Women’s Health Program helps female patients who are dealing with cancer-related sexual health challenges, including premature menopause and fertility issues. For more information, or to make an appointment, please call 646-888-5076.

**Tobacco Treatment Program**
212-610-0507
The Tobacco Treatment Program at MSK can help you stop using tobacco, whether or not you are a patient at MSK. We use a wide range of approaches to help you quit including medications and behavioral techniques. We are located at 641 Lexington Avenue between East 54<sup>th</sup> and East 55<sup>th</sup> Streets on the 7<sup>th</sup> floor.

**External resources**

**American Brain Tumor Association**
www.abta.org
Organization that funds brain tumor research and provides information and education on all tumor types and all age groups.

**American Cancer Society**
www.cancer.org
800-227-2345
Provides information and support to people with cancer and their caregivers. It supports research, provides printed materials, and conducts educational programs.

**American Society for Therapeutic Radiology and Oncology**
www.rtanswers.org
800-962-7876
Group of radiation oncology professionals that specializes in treating patients with radiation therapy. Provides detailed information on treating cancer with radiation and contact information for radiation oncologists in your area.

**CancerCare**
www.cancercare.org
800-813-HOPE
National nonprofit organization that helps people with cancer and their caregivers through counseling, education, information, referrals, and direct financial assistance.

**Cancer Support Community**  
[www.cancersupportcommunity.org](http://www.cancersupportcommunity.org)  
Provides support and education to people affected by cancer.

**National Brain Tumor Society**  
[www.braintumor.org](http://www.braintumor.org)  
Organization that researches new treatments and provides important and helpful information and resources.

**National Cancer Institute’s Cancer Information Service**  
[www.cancer.gov](http://www.cancer.gov)  
800-4-CANCER (422-6237)  
Provides education and support to people with cancer and their families. Publications are available online and in print.

**Contact Information**

If you have any questions or concerns, talk with a member of your healthcare team. You can reach them Monday through Friday from 9:00 AM to 5:00 PM at the numbers listed below.

Radiation oncologist: ____________________ Number ________________

Radiation nurse: _______________________ Number ________________

After 5:00 PM, during the weekend, and on holidays, call ____________ and ask for the radiation oncologist on call.

**Questions To Ask Your Doctor or Nurse**

We recommend that you write the questions to ask during your visit with your doctor or nurse. Write down the answers during your appointment so that you can review them again later.

**Examples of questions to ask**
What kind of radiation therapy will I get?

How many treatments will I get?

What side effects should I expect during radiation therapy?

Will these side effects go away after radiation therapy is finished?

What kind of late side effects should I expect after radiation treatment?

If you have any questions or concerns, talk with a member of your healthcare team. You can reach them Monday through Friday from 9:00 AM to 5:00 PM at _________________. After 5:00 PM, during the weekend, and on holidays, please call_____________________. If there’s no number listed, or you’re not sure, call 212-639-2000.

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