

Total Body Irradiation (TBI)

What is total body irradiation (TBI)?

TBI is a type of radiation therapy that helps to prepare you for hematopoietic stem cell transplant (HSCT). It uses high energy x-rays and works with chemotherapy to kill cancer cells. It affects how well your immune system works

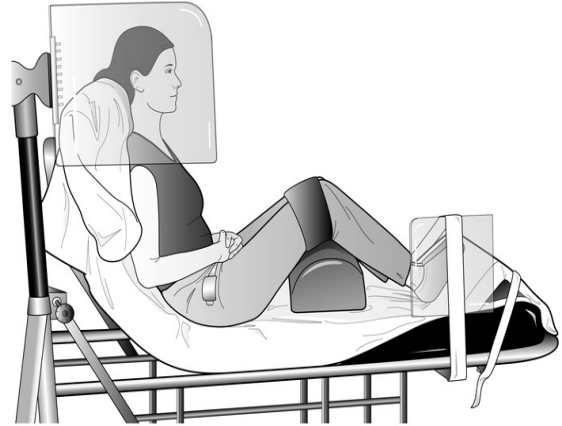
TBI is done in a series of 8 treatments over the course of 4 days. You can get treatments Monday through Friday. Most patients start treatment on a Monday or Tuesday. You get 2 treatments per day and they must be spaced at least 6 hours apart. This schedule helps reduce side effects. Each TBI treatment takes about 30 minutes.

Getting Ready for Treatment

- Remove all metal before you leave home. This includes jewelry. It also includes clothing that has metal, such as a bra or blue jeans.
- Leave eye glasses with a friend or family member.
- Contact lenses need to be removed.
- Use the restroom before coming to clinic.
- You can listen to music during the treatment. The staff has many types of music or you can bring your own.
- You may also watch a movie or video during your treatment. Let the Radiation Oncology staff know 2 days in advance. They can arrange this.

During the TBI Treatment

For TBI treatments, you will be seated on a cart as shown here.



You must be able to stay in this position during the treatment. The staff in Radiation Oncology will help you. You can use pillows, a cushion (bolster) and towels to support your body. Your arms are placed as shown. This placement helps to decrease the radiation dose to the lungs. A cushion (bolster) is placed under your knees. It is secured with a Velcro strap. Both sides of your body get exposed to the radiation. After one side of your body is treated, the cart is turned around and the other side is treated.

During the treatment you can breathe normally. Try to keep as still as you can. You will be alone in the room during the treatment but there is a closed-circuit TV and intercom. Let staff know if you need help. The treatment can be paused.

After each treatment, you may go home or to the hotel. There is **no** radiation in your body after the treatments.

Side Effects

Some side effects may start soon after your treatments. Tell your doctor or nurse in clinic if you have side effects that bother you such as:

- Nausea and vomiting.
- Mouth and throat sores.
- Pain.
- Diarrhea.
- Jaw pain.
- Swollen salivary glands.
- Dry mouth.
- Skin redness.
- Hair loss.
- Fatigue.
- Low blood counts.

Other side effects may occur 6 months to a few years after treatments:

- Cataracts.
- Decrease in growth.
- Hormone problems.
- Sterility.
- Lung, heart, and kidney problems.

These later side effects can develop slowly over time. Report any problems to your doctor. Your cancer doctors will watch for these problems when you are seen for follow-up visits.

Taking Care of Yourself During TBI

- Practice good oral care. Follow your mouth care routine. Ask your nurse about products to use or avoid. See HFFY #4494 Cancer Treatment Related Mucositis.
- Practice good skin care. Avoid products that may irritate your skin. Common skin irritants include lanolin, perfumes, and dyes. Also, products that have camphor, menthol, zinc, aluminum, and alcohol. Your pharmacist, doctor,

nurse, or radiation therapist can help you read product labels.

- Unscented lotions, creams, and ointments can be used during the week of your radiation treatments. **Do not use them at least 2 hours before your treatment.** Your skin should be clean and dry for your TBI treatments. See HFFY#4621 Skin Care for Radiotherapy Patients.
- Use a mild, fragrance-free soap when you shower or bathe. Dove[®], Ivory[®], Basis[®], Neutrogena[®], or Cetaphil[®] are good.
- Avoid extremes of hot and cold on treated skin. This can cause further damage to the skin. Do not use ice packs or heating pads.
- Use a good sunscreen (SPF 30 or higher) when outside. Your skin can burn more easily.

Controlling Nausea

You get medicines to take before each treatment and as needed. This helps reduce nausea and vomiting. This section tells you how to take each medicine.

Take these medicines 30-60 minutes before every treatment:

1. **Ondansetron (Zofran[®])**
12 mg tablets. This medicine has few side effects. Some patients have had headaches with it.
2. **Dexamethasone (Decadron[®])**
8 mg tablets. This is a steroid drug. When taken in small anti-nausea doses, the side effects are very few, if any. Take this medicine with food to prevent upset stomach.

Take these medicines if you have nausea at other times of the day:

1. **Prochlorperazine (Compazine®)** 10 mg tablets every 6 hours as needed. This is the best medicine to take if you have nausea during the day. Side effects are most often mild. They may include feeling drowsy and having a dry mouth. Some rare side effects are feeling restless or muscle rigidity. If these rare side effects occur, report them to your nurse, doctor, or pharmacist.
2. **Ondansetron (Zofran®)** 8 mg tablets once a day if needed for nausea. Take this medicine if you have nausea at night.

3. **Lorazepam (Ativan®)** 0.5 – 1 mg every 6 hours as needed. This medicine causes drowsiness. It is a good choice to take around bedtime if you have nausea. Side effects can include muscle relaxation, decreased anxiety, sedation, and poor coordination. You should not drive or work with machinery until you know how it affects you.

The staff is here to help you with any questions or concerns. Let us know if we can make these treatments easier for you in any way.