What is Stereotactic Body Radiation Therapy?

Stereotactic body radiation therapy (SBRT) gives a large amount of radiation to a small area. This allows doctors to put radiation directly into your cancer without damaging healthy cells around it. SBRT is often used on patients with cancer of the brain, head, neck, or spine, or for those who are not candidates for traditional surgery because of tumor location or other factor. The radiation beam can be shaped to target a tumor of any size or shape from any angle. Doctors can also tailor it to deliver different amounts of radiation to one tumor.

SBRT is an outpatient procedure. This means you do not need to stay in the hospital.

What Are the Advantages of SBRT Over Conventional Radiation Therapy?

- With SBRT, the radiation treats small tumors so precisely that the effect is essentially the same as surgical removal.
- SBRT maps the precise location of the tumor as it moves during the normal breathing cycle. The radiation beam locks on a moving tumor while avoiding nearby tissues and organs.
- SBRT requires fewer treatments. With conventional radiation therapy, patients may receive 10 or more treatments over several weeks. With SBRT, only one to five treatments are needed.

SBRT Planning and Preparation

Before the SBRT treatment, you will have a planning session. During the planning session, you will wear only a hospital gown. You will be asked to remove jewelry, watches, keys, and other personal items, so you may wish to leave these items at home. The process can be lengthy, so it is a good idea to use the bathroom before the session begins.

In the CT scanner room, technicians will position you on the CT scanning table on top of a device called the body fix bag. The bag conforms to your shape, creating a mold that will hold you in the correct position for each treatment. A plastic sheet covers your body up to your neck and holds you snugly in place to help you hold still. If you are claustrophobic, tell a member of the health care team and they can give you a medicine to help you relax.

After this planning session, a staff member will help set up appointments for the SBRT treatments.

SBRT Procedure

There is no special preparation for an SBRT treatment. You may eat, drink, and bathe normally. During the treatment session you will wear only a hospital gown, just as you did during the planning session. You will again remove any jewelry.

Before your treatment, the technician will position you in the CT scanner room and check that you are in the correct position. While the mold holds you in place, the technicians will take you to the treatment room. Once you are in the treatment room, the technicians will leave to monitor you from a nearby room.

The treatment is painless. You may feel mild nausea if you receive radiation in the abdominal area. The process takes about 1½ hours. You can go home once the treatment is over.