Internal Radiotherapy: Brachytherapy

In the United States, roughly 1.4 million new cases of cancer will be diagnosed in 2007. Some of those patients will be treated with radioactive sources that are placed inside their body to target and destroy cancerous cells. This process is called internal radiotherapy or brachytherapy. There are several types of brachytherapy.

Pictured: Brachytherapy Seeds

- Some treatments involve implanting and removing a source all within the same day.
- Some treatments involved implanting a source for removal at a later date.
- Some treatments involve implanting radioactive seeds permanently in the body. As time goes by, the radioactive material decays, leaving just the casing.

It is common to hear about men and women who have had brachytherapy procedures setting off radiation detection alarms at airports. This is because, depending on the type of treatment a patient receives and the type of radioactive material used, the implanted source may emit enough radiation outside of your body to trigger an alarm.

During treatment in the hospital, don't be surprised if you are isolated from other patients or if hospital personnel take extra precautions around you. If you are sent home with these sources, it is a good idea to discuss with your doctor the best ways to limit the radiation exposure of the people around you. This may include not using public transportation and temporarily limiting physical contact with people. There may be a need to take special precautions around children and pregnant women.

Who is protecting you

Food and Drug Administration (FDA)
The FDA regulates prescription drugs and the manufacture of radiation emitting medical diagnostic equipment. Because radiotherapy consists of administering a medicine and a radioactive substance, the Nuclear Regulatory Commission, the FDA and states work together to ensure the safety of radiotherapy.

Nuclear Regulatory Commission (NRC)
Because radiotherapy consists of administering a medicine and a radioactive substance, the NRC, FDA and states work together to ensure the safety of radiotherapy. The NRC ensures the safety of radioactive sources administered to patients. States that develop their own radiation safety standards are called Agreement States and must meet or exceed the NRC's minimum standards for radiation safety.

The States
Agreement states, in cooperation with the FDA and NRC, regulate nuclear materials used in medical procedures. Individual states are responsible for regulating the practices of medicine and pharmacy within their borders.

What you can do to protect yourself

Talk to a doctor about the risks associated with using internal radiotherapy. If you are receiving treatment, follow all instructions given to you by your physician or the radiation safety officer at the facility. Patients who are pregnant, might be pregnant, or are breast feeding should notify their doctors before undergoing treatment.

Part of your responsibility after receiving internal radiotherapy is to protect others from the radiation that will temporarily emit from your body. This may include not using public transportation and temporarily limiting physical contact with people. There may be a need to take special precautions around children and pregnant women.

Resources

You can explore this radiation source further through the resources at the following URL:
http://www.epa.gov/radtown/bracytherapy.html#resources

We link to these resources to maintain up-to-date information.