



TREATMENT TYPES

Radiation therapy is the precise use of radiation to treat cancer safely and effectively. Cancer doctors called radiation oncologists use radiation to cure cancer, control cancer growth or relieve symptoms such as pain or bleeding.

Radiation works by damaging the ability of cancer cells to multiply. When these cells die, the body naturally eliminates them from your body. Healthy cells can also be affected by radiation, but they can repair themselves in ways cancer cells cannot.

Radiation is often used in combination with surgery and chemotherapy to treat esophageal and stomach cancers.

- Stomach cancer is treated primarily with surgery. The need for surgery varies based on the extent and the stage of the disease. Radiation and chemotherapy are often used either before or after surgery for stomach cancer, depending on the location and stage of your cancer.
- Esophageal cancer is also treated primarily with surgery. Radiation and chemotherapy are often given prior to surgery to improve cure. Sometimes, radiation and/or chemotherapy can be used alone without surgery for curative treatment.
- If cure is not possible, radiation may be used, with or without chemotherapy, to relieve pain or difficulty swallowing.

External beam radiation is the most common way to deliver radiation for esophageal and stomach cancers. The radiation is delivered non-invasively from the outside and usually comes from a machine called a linear accelerator.

- Before beginning treatment, you will be scheduled for a planning session, called a "simulation", to map out the area to be treated. The simulation involves having X-rays or a CT scan and landmarks placed on your skin (often tiny tattoos) to allow the radiation therapists to precisely position you each day.
- To minimize side effects, a small amount of radiation is usually given daily, five days a week, over five to six weeks. Daily radiation

treatments allow enough total radiation to kill the tumor while giving normal cells time to repair themselves each day in between treatments.

- Technical terms that may be mentioned include three-dimensional conformal radiation therapy (3-D CRT), intensity modulated radiation therapy (IMRT) or image guided radiation therapy (IGRT). Your radiation oncologist can provide more information about these different radiation techniques.

POSSIBLE SIDE EFFECTS

Side effects of radiation depend on the area being treated and are not the same for all patients. Talk with your doctor and treatment team about any new symptoms or side effects you may experience during treatment.

- Stomach radiation may cause nausea, more frequent bowel movements, diarrhea, or a sensation of bloating.
- Esophageal radiation can cause difficulty or pain with swallowing, nausea, or rarely, coughing and shortness of breath.
- Radiation to either site can cause fatigue, decreased appetite, skin irritation, including redness, tanning or dryness. Talk with your doctor or nurse about taking care of your skin during treatment.
- You may also receive chemotherapy in addition to radiation therapy. The side effects from the chemotherapy will depend on the specific medications. Ask your medical oncologist about the side effects specific to your chemotherapy.
- Treatment side effects can often be controlled with medications or changes in your diet. Tell your doctor or nurse if you experience any of them, so they can assist you with the symptoms you are experiencing.

CARING FOR YOURSELF DURING TREATMENT

It is important to take care of yourself as much as possible during radiation because normal organs surrounding your cancer will get some dose of radiation. The normal parts of your body need time and energy to heal. A balanced diet, moderate amount of physical activity and taking time to rest, are essential parts of your cancer treatment.

Follow your doctor's orders and, ask your nurse or doctor any questions that come up about treatment or symptoms. Make sure to tell your radiation oncologist about any vitamins or dietary supplements that you are taking to make sure they are safe to take during radiation.

During and after radiation, you will need to take special care of your skin. Avoid sun exposure, hot or cold packs, and lotions or ointments without checking with your doctor or nurse first. You should also be sure to clean the skin over the areas receiving radiation therapy with warm water and mild soap or as directed by your radiation care team.

Completing treatment and recovery can be challenging. Seek out help from support groups and friends ahead of time. If you have a support network in place before and during treatment, it will be easier to get through treatment. If you need additional support, let your doctor and nurse know. They may have resources available.



LEARNING ABOUT CLINICAL TRIALS

The field of radiation oncology is constantly exploring new ways to treat esophageal and stomach cancers through studies called clinical trials. The advances in the treatments that we use today are the direct result of previous patient participation in clinical trials. If you would like more information on how you might be able to help by participating in current clinical trials, please visit:

National Cancer Institute
www.cancer.gov/clinicaltrials

Radiation Therapy Answers
www.rtanswers.org

Radiation Therapy Oncology Group
www.rtog.org

ClinicalTrials.gov
www.clinicaltrials.gov

HELPFUL WEBSITES ON ESOPHAGEAL AND STOMACH CANCERS

Esophageal Cancer Awareness Association
www.ecaware.org

No Stomach for Cancer
www.nostomachforcancer.org

Cancer.Net
www.cancer.net

American Cancer Society
www.cancer.org

short term

possible side effects

long term

more likely

less likely

Fatigue

Skin irritation/
redness

Pain with
swallowing

Increased acid
reflux sensation

Nausea/
Vomiting

Cough

Shortness
of breath

Darkening
of skin

Difficulty
swallowing due
to esophageal
scarring

Shortness
of breath

Cough



Radiation Therapy for Cancers of the Upper Gastrointestinal Tract



ABOUT THE RADIATION ONCOLOGY TEAM

Radiation oncologists are the doctors who oversee the care of patients undergoing radiation treatment. Other members of the treatment team include radiation therapists, radiation oncology nurses, medical physicists, dosimetrists, social workers and nutritionists. For information on what each of these professionals does or to locate a radiation oncologist near you, visit www.rtanswers.org.

ABOUT ASTRO

The American Society for Radiation Oncology is the largest radiation oncology society in the world with 10,000 members who specialize in treating cancer with radiation therapies. ASTRO is dedicated to improving patient care through education, clinical practice, advancement of science and advocacy. Visit www.astro.org for more information.

According to the American Cancer Society, this year, approximately 17,290 Americans will be diagnosed with esophageal cancer. Another 26,240 men and women will be diagnosed with stomach cancer.

Risk factors vary for each site and may include age, gender, family history, diet, activity level, alcohol consumption and tobacco use. Talk to your doctor about understanding your risk factors.

Screening is not generally recommended for esophageal and stomach cancers. However, some individuals who have a history of Barrett's esophagus may be encouraged to be screened.

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*Larger bubbles show higher likelihood of occurrence. This list doesn't represent all of the possible side effects. Please talk to your doctors about your specific diagnosis.