

Ready to start planning your care? Call us at [646-926-0945](tel:646-926-0945) to make an appointment.

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Memorial Sloan Kettering  
Cancer Center

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sometimes called chemoradiation.

In some cases, chemoradiation is the primary therapy, and surgery is used only if the tumor does not have a complete response to the chemoradiation. In other cases, chemoradiation just shrinks the tumor before surgery.

Radiation therapy can also be used to relieve pain. For example, it can shrink a tumor so you can swallow better, or it can eliminate spots where the cancer has spread in other parts of the body.

## Types of Radiation Therapy

Memorial Sloan Kettering's radiation team uses state-of-the-art technologies for radiation therapy, including intensity-modulated radiation therapy (IMRT) and image-guided radiation therapy (IGRT).

### Intensity-Modulated Radiation Therapy

IMRT targets tumors more accurately than conventional radiation therapy. Using computers and 3-D images from CT scans, our doctors focus small radiation beams on and around the tumor. It's a highly targeted treatment, so surrounding organs aren't affected.

### Image-Guided Radiation Therapy

IGRT molds radiation beams to the contours of your tumor. Our doctors use CT, ultrasound, or other guidance systems during each treatment to deliver more-precise doses. It helps make sure that the natural movement of the esophagus doesn't affect treatment.

### Brachytherapy

Instead of using machines to deliver radiation from outside your body into the esophagus, brachytherapy delivers radiation from the inside of your esophagus. After you're put under anesthesia, the doctor puts a radioactive source, sometimes called radioactive "seeds," into the esophagus. This is usually recommended for patients who have had external radiation therapy and can't have surgery.

### Radiation Therapy for Pain

We may use radiation to shrink a tumor if it is blocking the esophagus. Radiation therapy is also used sometimes after a patient gets a stent (a device that is implanted to keep the esophagus open).

## Respiratory Gating

When using IMRT or IGRT, we use respiratory gating to improve accuracy. The esophagus moves as you breathe, and respiratory gating lets us analyze your breathing cycle and release radiation only at certain times. Our doctors work closely together to plan the radiation dosage.

## Radiation Safety

Ensuring your safety during radiation therapy is very important at Memorial Sloan Kettering.

We have many safety procedures to manage our radiation therapy program. Several different experts check the radiation dosage many times. Medical physicists also examine the machines frequently to make sure they're working at their best.

Our doctors also participate in research aimed at reducing radiation toxicity, particularly to the heart and lungs.

[Kole TP, Aghayere O, Kwah J, Yorke ED, Goodman KA. Comparison of heart and coronary artery doses associated with intensity-modulated radiotherapy versus three-dimensional conformal radiotherapy for distal esophageal cancer. Int J Radiat Oncol Biol Phys. 2012 Jan 25. \[Epub ahead of print\]](#)

## Request an Appointment

Call [800-525-2225](tel:800-525-2225)

We're available 24 hours a day, 7 days a week

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