TREATING HEAD AND NECK CANCER

Treatment for head and neck cancers depends on several factors, including the type of cancer, tumor size, stage, and tumor location. The patient’s general health is also considered. Effective treatment requires a team approach. The team includes a surgeon, a radiation oncologist and a medical oncologist. Surgery and/or radiation therapy are the best options for cancer found at an early stage of head and neck diseases may be combined to treat advanced tumors. Combination therapy including surgery, radiation therapy and/or chemotherapy may give the best results.

Head and neck cancer treatment options include:

Radiation Therapy
Radiation therapy is one of the best treatments for head and neck cancer. Radiation focuses directly on the cancer cells. Surrounding healthy tissue may also be affected. However, healthy cells heal from radiation injury faster than head and neck cancers, new technologies in radiation treatment preserve important organs. These new technologies result in equal cure rates with better swallowing and voice function when compared to surgery. In some cases, radiation will be combined with surgery, chemotherapy or both.

Surgery
Surgery is another important approach to treat head and neck cancer. Obtaining loosees and looking at the nose and mouth with a flexible camera help your doctors determine whether the tumor has spread. If surgery will be part of your treatment, your surgeon will aim to remove the tumor along with some surrounding healthy tissue. Depending on the tumor size and site, the surgeon may also remove lymph nodes in the neck. The lymph nodes are part of your normal immune system. Lymph nodes are also a path for some tumors to spread. Ask your doctors whether the lymph nodes in your neck need treatment.

In some cases, surgery is combined with radiation therapy. If radiation therapy is the main treatment, surgery may help if it is the surgery treatment, radiography may be helpful after surgery if more advanced disease is found. Your doctors will determine the best treatment for you.

Medical Therapy
Surgery and radiation therapy focus directly on treating the tumor. Medication is often recommended to improve cure rates. A medical oncologist will evaluate whether chemotherapy that might be helpful. There are two categories of systemic therapy (treatment that is injected into the blood stream):

- Chemotherapy can destroy cancer cells by different methods. Often, one or more types of chemotherapy medication are used to get to the outcome. The dose and schedule for treatment varies. In some cases, chemotherapy may be helpful before radiation treatment. This type of treatment is called induction chemotherapy.
- Targeted therapy involves focusing on an anti-cancer medication on certain molecules. Targeted therapy can be used with radiation therapy as well. Ask your medical oncologist whether these drugs may be helpful for you.

EXTERNAL BEAM RADIATION THERAPY
Radiation oncologists use various types of radiation to safely and effectively treat cancer. In most cases radiation is delivered in the form of high-energy x-rays. Treatments are usually scheduled daily, Monday through Friday, for five to seven weeks. In some cases, your radiation oncologist may schedule your radiation treatments twice a day.

Before beginning treatment, you will be scheduled for a planning session. Your radiation oncologist will review your medical history. This procedure, called pretreatment simulation, involves having a CT scan.

You need to stay in position during treatment. You may have a plastic mask over your head and shoulders. You can see and breathe through this form-fitting mask. It is made to comfortably minimize movement during treatment. Other devices may be used to reduce radiation to normal parts of your mouth and throat. You may also receive minor marks on your skin, like a tattoo. These marks help precisely position you for daily treatment. Sometimes, these marks can be made on the plastic mask. Then there are no permanent marks on your skin. Different techniques can be used to give radiation for head and neck cancer:

- Three-dimensional conformal radiation therapy (3-D CRT) combines multiple radiation treatment fields to deliver precise doses of radiation to the affected area.
- Intensity modulated radiation therapy (IMRT) is a specialized form of 3-D CRT that varies the intensity of each radiation beam. IMRT can better conserve the chance of having a dry mouth or other side effects.
- Intraoperative radiation treatment (IORT) is a form of 3-D CRT or IMRT that uses imaging to precisely deliver radiation treatment. Your radiation oncologist may take X-rays and/or a CT scan before each treatment. These images are used to precisely align you each day before the treatment starts. This can reduce radiation to your normal tissue.

INTERNAL RADIATION THERAPY
Internal radiation therapy is also called brachytherapy. This treatment involves inserting radioactive material into the tumor and surrounding tissue. This can give a more focused dose of radiation. For head and neck cancers, brachytherapy is often used with external beam radiation therapy. It may also be used alone or after surgery. During brachytherapy, your radiation oncologist places tiny, hollow, plastic tubes into the tumor and surrounding tissue. These tubes are loaded with tiny radioactive seeds. These seeds remain in place for a short time to kill the cancer. The seeds and the tube are then removed. With low-dose rate brachytherapy, the seeds will be left in place for one to three days. High-dose rate brachytherapy uses a single radioactive seed that is usually administered in a few sessions over two or more days. The seed stops at various positions along the tubes for short intervals to deliver the radiation.

Carcinoma of the Hard Palate
Carcinoma of the Soft Palate
Carcinoma of the Oral Cavity
Carcinoma of the Floor of the Mouth
TARGETING CANCER CARE

Radiation Therapy for Head and Neck Cancers

This year, the American Cancer Society estimates that in the United States, approximately 3-5% of all cancers will be in the head and neck region. An estimated 65,630 people (48,200 men and 17,430 women) will develop head and neck cancer and 14,500 (10,760 men and 3,740 women) deaths will occur this year as a result of this cancer diagnosis.

LEARNING ABOUT CLINICAL TRIALS

The radiation oncology treatment team is always exploring new ways to improve treatments through studies called clinical trials. Today's treatments are a result of trials completed years ago, proving that radiation therapy safely and effectively kills cancer cells and is a safe long-term treatment. For more information on clinical trials, visit:

- National Cancer Institute
  www.cancer.gov/clinicaltrials
- Radiation Therapy Answers
  www.rtanswers.org
- Radiation Therapy Oncology Group
  www.rtog.org

ABOUT THE RADIATION ONCOLOGY TEAM

Radiation oncologists are doctors who specialize in the use of radiation therapy as a treatment for cancer. Other members of the treatment team include radiation therapists, radiation oncology nurses, medical physicists, dietitians, social workers and nutritionists. For information on what each does or to find 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 more than 10,000 members who specialize in treating patients 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.

**Possible side effects**

More likely

- Weight loss
- Dry mouth
- Decreased appetite
- Skin irritation
- Neck swelling
- Diffuse swelling
- Hair loss on face or back of head
- Pain with swallowing
- Thick mucus/secretions
- Swelling of the neck
- Temporary feeding tube
- Voice changes
- Difficulty opening mouth
- Shortness of breath
- Ear fullness
- homeowners
- Lung inflammation
- Voice changes
- Difficulty opening mouth
- Swelling of the neck
- Difficulty swallowing
- Voice changes
- Permanently feeding tube
- Hearing loss
- Arm nerve damage
- Spondylodiscitis
- Arm/leg fatigue
- Temporary feeding tube
- Voice changes
- Difficulty opening mouth
- Second cancers
- Weight loss
- Decreased thyroid function
- Tooth decay
- Ear fullness
- Lung inflammation
- Voice changes
- Difficulty opening mouth
- Second cancers
- Weight loss
- Decreased thyroid function
- Tooth decay

Less likely

- More likely
- Weight loss
- Dry mouth
- Fatigue
- Weight loss
- Decreased appetite
- Skin irritation
- Neck swelling
- Diffuse swelling
- Hair loss on face or back of head
- Pain with swallowing
- Thick mucus/secretions
- Swelling of the neck
- Temporary feeding tube
- Voice changes
- Difficulty opening mouth
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*Large bubbles: more likely of occurrence. Small bubbles: less likely of occurrence. This list doesn’t represent all of the possible side effects.

Please talk to your doctors about your specific diagnosis. For side effects for specific locations of the head and neck, visit rtanswers.org.