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Treating Nasopharyngeal Cancer

If you've been diagnosed with nasopharyngeal cancer (NPC), your treatment team will discuss your options with you. It's important to weigh the benefits of each treatment option against the possible risks and side effects.

How is nasopharyngeal cancer treated?

After nasopharyngeal cancer (NPC) is found and staged, your cancer care team will discuss treatment options with you. Depending on the stage of the cancer, your overall health, and other factors, your treatment options may include:

- [Surgery for Nasopharyngeal Cancer](#)
- [Radiation Therapy for Nasopharyngeal Cancer](#)
- [Chemotherapy for Nasopharyngeal Cancer](#)
- [Targeted Drug Therapy for Nasopharyngeal Cancer](#)
- [Immunotherapy for Nasopharyngeal Cancer](#)

Common treatment approaches

Depending on the stage of the cancer, you may get more than 1 of these treatments.
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- An **otolaryngologist** (also known as an ear, nose, and throat, or ENT doctor): a surgeon who treats certain diseases of the head and neck.
- A **radiation oncologist**: a doctor who treats cancer with radiation therapy.
- A **medical oncologist**: a doctor who treats cancer with medicines such as chemotherapy, immunotherapy, or targeted drug therapy.
- A **plastic surgeon**: a doctor who specializes in reconstructing or repairing parts of the body
- An **oral and maxillofacial surgeon**: a dental surgeon who treats diseases of the mouth, teeth, and jaws.

You might have many other specialists on your treatment team as well, including physician assistants, nurse practitioners, nurses, nutrition specialists, social workers, and other health professionals.

- [Health Professionals Who Are Part of a Cancer Care Team](#)

Making treatment decisions

It's important to discuss all treatment options, including treatment goals and possible related side effects, with your doctors to help make the decision that best fits your needs. You may feel that you need to make a decision quickly, but it's important to give yourself time to absorb the information you have learned. Ask your cancer care team questions.

If time permits, it is often a good idea to seek a second opinion. A **second opinion** can give you more information and help you feel more confident about the treatment plan you choose.

- [Questions to Ask About Nasopharyngeal Cancer](#)
- [Seeking a Second Opinion](#)

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the-art cancer treatment. In some cases they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials.

- [Clinical Trials](#)

Considering complementary, integrative, and alternative methods

You may hear about alternative or complementary methods to relieve symptoms or treat your cancer that your doctors haven't mentioned. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

Complementary

treatment, lodging, and more - to help you get through treatment. Call our Cancer Knowledge Hub at 1-800-227-2345 and speak with one of our caring, trained cancer helpline specialists. Or, if you prefer, you can use our chat feature on cancer.org to connect with one of our specialists.

Surgery for Nasopharyngeal Cancer

- [Quit smoking before nasopharyngeal cancer surgery](#)
- [Surgery to remove the tumor](#)
- [Surgery to remove lymph nodes](#)
- [Possible risks and side effects of surgery](#)
- [More information about Surgery](#)

Surgery to remove the main tumor is not usually the first treatment for people with nasopharyngeal cancer (NPC) because the nasopharynx is a hard place to operate on, it is close to other critical structures, and because other types of treatment often work well. Surgery is more often done to remove lymph nodes in the neck that haven't responded to other treatments.

Quit smoking before nasopharyngeal cancer surgery

If you smoke, you should quit. Smoking during cancer treatment is linked to poor wound healing, more side effects, and less benefit from treatment which can raise your risk of the cancer coming back (recurrence). Smoking after treatment can also increase the chance of getting another new cancer. **Quitting smoking for good (before treatment starts, if possible) is the best way to improve your chances of survival.** It is never too late to quit. For help, see [How To Quit Using Tobacco¹](#).

Surgery to remove the tumor

Since these cancers are not common in the US and are located near many critical structures in your head and neck, it's very important to go to a cancer center that has experience treating these cancers. This will help coordinate care between cancer specialists to make a complete treatment plan and might help people live longer.

Endoscopic surgery

For endoscopic surgery, doctors put flexible fiber-optic scopes and long, thin surgical

Surgery does have some advantages over other treatments such as [radiation therapy](#) – for example, doctors can look at the removed tumor (and nearby tissues) closely in the lab to make sure that no cancer has been left behind.

Surgery to remove lymph nodes

Cancers of the nasopharynx often spread to the [lymph nodes](#)² in the neck. These cancers often respond well to treatment with radiation therapy (and sometimes [chemotherapy](#)). But if some cancer remains after these treatments, an operation called a **neck dissection** may be needed to remove these lymph nodes. Lymph nodes in the neck might also be taken out to see if there are cancer cells in them.

There are several types of neck dissection surgery. The difference is in how much tissue is removed from the neck. Depending on the location of the tumor, lymph nodes may be removed from both sides of the neck.

- A **selective neck dissection**: No nerves, veins, or muscles are affected during this type of neck dissection and only lymph nodes in **selected** parts of the neck are removed. This type of surgery removes fewer normal structures to try to keep your shoulder and neck working normally.
- A **comprehensive neck dissection**: Some nerves, veins, and muscles might be removed, along with all of the lymph nodes in the neck.

Possible risks and side effects of surgery

The risks and side effects of any surgery depend on the extent of the operation and a person's general health before the surgery. If you are considering surgery, your doctor will discuss the likely side effects with you beforehand. Be sure you understand how surgery may affect how you look and how your body works.

All surgery carries some risk, including the possibility of [blood clots](#)³, bleeding, [infections](#)⁴, complications from anesthesia, and pneumonia. Most people will have some pain for a while after the operation, although this can usually be controlled with medicines. These risks are generally low but are higher with more complicated operations. Rarely, some people do not survive the surgery.

Possible risks and side effects of endoscopic surgery of the nasopharynx area include meningitis, fluid in the inner ear, numbness around the eye, watery eyes, or lockjaw.

Side effects of a neck dissection can include numbness of the ear, weakness when raising the arm above the head, and weakness of the lower lip due to nerve damage from surgery. Nerves heal slowly, so sometimes these side effects can improve over time, especially when physical therapists teach you exercises to improve neck and shoulder strength and movement.

If more extensive surgery is needed, the side effects may be permanent. After more extensive neck dissections, physical therapists can teach you exercises to improve neck and shoulder strength and movement.

More information about Surgery

For more general information about surgery as a treatment for cancer, see [Cancer Surgery](#)⁵.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)⁶.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/tobacco/guide-quitting-smoking.html
2. www.cancer.org/cancer/diagnosis-staging/lymph-nodes-and-cancer.html
3. www.cancer.org/cancer/managing-cancer/side-effects/low-blood-counts/blood-clots.html
4. www.cancer.org/cancer/managing-cancer/side-effects/infections.html
5. www.cancer.org/cancer/managing-cancer/treatment-types/surgery.html
6. www.cancer.org/cancer/managing-cancer/side-effects.html

References

Hui EP, Chan A, and Le Quynh-Thu. Treatment of recurrent and metastatic nasopharyngeal carcinoma. In: Shah S, ed. *UpToDate*. Waltham, Mass.: UpToDate, 2022. <https://www.uptodate.com>. Accessed May 5, 2022.

Leeman JE, Katabi N, Wong RJ, Lee NY and Romesser PB. Ch. 65 - Cancer of the Head and Neck. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa. Elsevier; 2020.

Mendenhall WM, Dziegielewski PT, and Pfister DG. Chapter 45- Cancer of the Head

Radiation Therapy for Nasopharyngeal Cancer

- As the **main treatment** for people who cannot have chemotherapy
- After **chemotherapy** in patients with NPC that has grown into nearby structures and/or has spread to lymph nodes in the neck. In patients whose tumors respond to chemotherapy, treatment with more chemotherapy plus radiation (chemoradiation) can help some people live longer.
- **To help with symptoms**, such as pain, bleeding, or trouble swallowing, in people with advanced cancer
- To treat cancer that has come back after treatment (**recurrence**)

Radiation therapy is usually given both to the main nasopharyngeal tumor and to nearby lymph nodes in the neck. Even if the lymph nodes are not large or abnormal on an imaging test or physical exam, radiation is still used, just in case a few cancer cells have spread there. If the lymph nodes are known to have cancer cells, higher radiation doses are used.

Radiation to this part of your body can cause problems for your teeth and gums, so **it's important to see a dentist before starting treatment**. A dentist can make sure your mouth is healthy before treatment. They might recommend that certain bad teeth be removed before you start radiation because they can increase your chance of infection. The dentist will probably also recommend using some form of fluoride treatment after completing therapy. During and after treatment your dentist can help check for and treat any problems that might come up, such as infection or tooth and bone damage.

Quit smoking before nasopharyngeal cancer treatment

If you smoke, it is important to quit. Smoking during radiation treatment can cause more side effects and a poor response to radiation, which might raise your risk of the cancer coming back (recurrence). Smoking after treatment also increases the chance of getting a new cancer. **Quitting smoking for good (before treatment starts, if possible) is the best way to improve your chances for successful treatment.** It is never too late to quit. For help, see [How To Quit Using Tobacco](#)¹.

External beam radiation therapy (EBRT) for nasopharyngeal cancer

[External beam radiation therapy](#)² is the most common type of radiation used to treat **NPC**. This type of radiation uses x-rays that are aimed at the tumor from a large machine outside the body.

Before starting EBRT, a somewhat flexible but sturdy mesh head and neck mask might

be made to hold your head, neck, and shoulders in the exact same position for each treatment. Some people might feel a bit confined while this mask is on and might need to ask for medicine to help them relax during the treatment. Sometimes, the mask can be adjusted so that it is not too constricting. Discuss your options with your radiation oncologist. You might also be fitted for a bite block that you will hold in your mouth during treatment.

Radiation therapy is much like getting an x-ray, but the radiation dose is stronger and aimed more precisely at the cancer. The treatment doesn't hurt and the machine doesn't touch you. Each treatment lasts only a few minutes, but the setup time – getting you in place for treatment – often takes longer.

Different types of EBRT

There are advanced EBRT techniques that help doctors focus the radiation more precisely or use different types of radiation, like protons.

Intensity-modulated radiation therapy (IMRT) is most often used to treat NPC. It is a type of conformal therapy that uses a computer-driven machine that moves around the patient as it delivers radiation. Along with shaping the beams and aiming them at the tumor from several angles, the intensity (strength) of the beams can be adjusted to limit the dose reaching the nearby normal tissues and important structures. This may let the doctor give a higher dose to the tumor and helps reduce side effects.

Proton beam radiation therapy focuses proton beams on the cancer. Unlike x-rays, which go through the patient and release radiation both before and after they hit the tumor, protons only travel a certain distance, so the tissues behind the tumor may be exposed to less radiation. This is hoped to lessen side effects compared to other types of radiation, such as x-rays. However, that has not yet been shown to be the case in a clinical trial. Because of this, proton therapy is not widely available in the United States and might not be covered by many insurance companies at this time.

Common treatment schedule for EBRT

The standard EBRT schedule for nasopharyngeal cancers is usually daily fractions (doses) 5 days a week for about 6 to 7 weeks.

Brachytherapy (internal radiation)

[Brachytherapy](#)³ is another way to deliver radiation. Very thin metal rods or wires, which carry small pellets of radioactive materials, are placed in or very near the cancer. The

radiation travels a very short distance, so it destroys the cancer without causing much harm to nearby healthy tissues.

Brachytherapy is not often used as a first treatment for nasopharyngeal cancer. But it might be used if the cancer recurs (comes back) or does not go away completely with chemoradiation. Sometimes, internal and external beam radiation therapy are used together.

Chemoradiation

Chemoradiation is chemotherapy given at the same time as radiation. It can often work better than radiation alone, but it also tends to have more side effects. (You can find more on this in [Chemotherapy for Nasopharyngeal Cancer](#).)

Possible side effects of radiation therapy for nasopharyngeal cancer

If you are going to get radiation therapy, it's important to ask your doctor about the possible side effects so you know what to expect.

Common short-term side effects of external beam radiation to the head and neck can include:

- Skin changes in the area where the radiation is directed, with redness or blistering

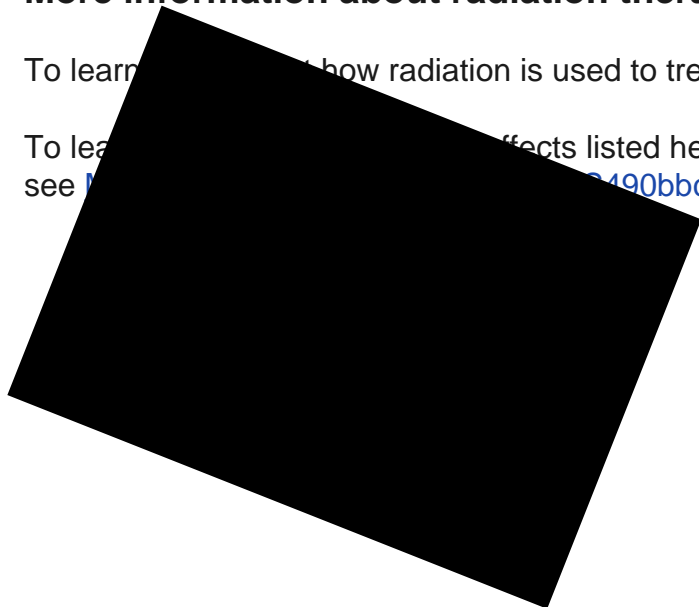
already have worse and hard to fix. Most doctors will suggest you get your teeth checked by a dentist before starting radiation therapy to the head or neck area. In some cases, the dentist may even advise removing some teeth before treatment to lessen the chance that you'll have problems later, such as an infection.

- **Dry mouth:** This is a major concern with radiation therapy for NPC. Damage to the salivary glands can cause dry mouth that doesn't go away and makes it hard to swallow food. Dry mouth can also lead to severe tooth decay. To help prevent dental problems, people treated with radiation to the head or neck area need to practice careful oral hygiene and see the dentist regularly. Dry mouth is less of a problem if IMRT is used.
- **Thyroid problems:** The thyroid gland is often damaged if the neck area is treated with EBRT. The damage doesn't cause problems that are noticed right away, so your doctor will watch your thyroid function with blood tests in the years after treatment. If your thyroid function goes down, pills to replace thyroid hormone may be needed.
- **Damage to the pituitary gland:** The pituitary gland controls many hormones in the body. Blood tests can be used to find abnormal hormone levels if the pituitary is damaged by radiation treatment. If the damage is serious enough, it might require taking certain hormones to replace the ones that are missing.
- **Damage to the carotid arteries:** These are major blood vessels in the neck that carry blood to the brain. They can sometimes become narrowed after radiation. This could raise a person's risk of stroke or other problems, but it usually takes several years to occur.

More information about radiation therapy

To learn more about how radiation is used to treat cancer, see [Radiation Therapy](#)⁴.

To learn more about the side effects listed here and how to manage them, see [Managing Side Effects](#)⁴.



- [beam-radiation-therapy.html](#)
3. www.cancer.org/cancer/managing-cancer/treatment-types/radiation/internal-radiation-therapy-brachytherapy.html
 4. www.cancer.org/cancer/managing-cancer/treatment-types/radiation.html
 5. www.cancer.org/cancer/managing-cancer/side-effects.html

References

Chao HL, Liu SC, Tsao CC, et al. Dose escalation via brachytherapy boost for nasopharyngeal carcinoma in the era of intensity-modulated radiation therapy and combined chemotherapy. *J Radiat Res*. 2017;58(5):654-660. doi:10.1093/jrr/rrx034.

Leeman JE, Katabi N, Wong, RJ, Lee NY, and Romesser PB. Chapter 65 - Cancer of the Head and Neck. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa: Elsevier; 2020.

Mendenhall WM, Dziegielewski PT, and Pfister DG. Chapter 45- Cancer of the Head and Neck. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

Murakami N, Cheng G, Yoshimoto S, Itami J. Image-guided interstitial brachytherapy boost for nasopharyngeal carcinoma: technical aspects. *J Contemp Brachytherapy*. 2020;12(3):294-302. doi:10.5114/jcb.2020.96874.

Nag S, Cano ER, Demanes DJ, Puthawala AA, Vikram B; American Brachytherapy Society. The American Brachytherapy Society recommendations for high-dose-rate brachytherapy for head-and-neck carcinoma. *Int J Radiat Oncol Biol Phys*. 2001;50(5):1190-1198. doi:10.1016/s0360-3016(01)01567-x.

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology. Head and Neck Cancers, Version 3.2021 – April 27, 2021. Accessed at www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf on May 20, 2021.

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Smoking Cessation. V.1.2021 – February 18, 2020. Accessed at https://www.nccn.org/professionals/physician_gls/pdf/smoking.pdf on May 20, 2021.

Wong KCW, Hui EP, Lo KW, et al. Nasopharyngeal carcinoma: an evolving

paradigm. *Nat Rev Clin Oncol*. 2021;18(11):679-695. doi:10.1038/s41571-021-00524-x.

Yan H, Mo Z, Xiang Z, et al. CT-guided ¹²⁵I brachytherapy for locally recurrent nasopharyngeal carcinoma. *J Cancer*. 2017;8(11):2104-2113. Published 2017 Jul 5. doi:10.7150/jca.19078.

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Chemotherapy for Nasopharyngeal Cancer

- [Quit smoking before nasopharyngeal cancer treatment](#)
- [How is chemotherapy used to treat nasopharyngeal cancers?](#)
- [Common chemo drugs used to treat NPC](#)
- [Chemoradiation](#)
- [Possible side effects of chemotherapy](#)
- [More information about chemotherapy](#)

Since these cancers are not common in the US and are located near many critical structures in your head and neck, it's very important to go to a cancer center that has experience treating these cancers. This will help coordinate care between cancer specialists to make a complete treatment plan and might help people live longer.

Quit smoking before nasopharyngeal cancer treatment

If you smoke, you should quit. Smoking during chemotherapy treatment can cause more side effects and can cause . It can give you a higher chance of getting an infection and is linked to worse outcomes. Smoking after treatment might also increase the risk of the cancer coming back and of getting another new cancer. **Quitting smoking (before treatment starts, if possible) is the best way to improve your chances of survival.** It is never too late to quit. For help, see [How To Quit Using Tobacco](#)¹.

How is chemotherapy used to treat nasopharyngeal cancers?

Chemotherapy (chemo) is the use of anti-cancer drugs to treat cancer. These drugs are

Cisplatin is the chemo drug used most often to treat NPC. It can be used alone or as part of chemoradiation (see below). Or it may be combined with another drug, **5-fluorouracil (5-FU)** or **gemcitabine**, to be given after chemoradiation or as induction chemotherapy. Sometimes, **carboplatin** might be used if cisplatin is not a good choice.

Some other drugs that might also be helpful in treating NPC with or without radiation include:

- Carboplatin (Paraplatin)
- Epirubicin (Ellence)
- Paclitaxel (Taxol)
- Docetaxel (Taxotere)
- Gemcitabine (Gemzar)
- Capecitabine (Xeloda)
- Methotrexate

A chemo drug may be used alone or combined with other drugs. Combining drugs can often shrink tumors better but tend to cause more side effects.

Chemoradiation

Chemoradiation is chemotherapy given at the same time as radiation. It has been shown to shrink nasopharyngeal tumors more than either treatment alone and is helpful for people whose cancers are locally advanced. But this combined approach can be hard to tolerate, especially for people in poor health.

A preferred schedule is to give a dose of cisplatin every 3 weeks (for a total of 2 to 3 doses) during radiation. For people who cannot tolerate cisplatin, carboplatin might be used with radiation instead.

Possible side effects of chemotherapy

Chemo drugs attack cells that are dividing quickly, which is why they work against cancer cells. But other cells in the body such as those in the bone marrow, the lining of the mouth and intestines, and the hair follicles also divide quickly. This can lead to certain side effects.

The side effects of chemo depend on the type and dose of drugs given and how long they are taken. Common short-term side effects can include:

- Hair loss
- Mouth sores
- Loss of appetite
- Nausea and vomiting
- Diarrhea
- Fever
- Rash

Chemo can also affect the blood-producing cells of the bone marrow, which can lead to:

- Increased chance of infections (from low white blood cell counts)
- Easy bruising or bleeding (from low blood platelet counts)
- Fatigue (from low red blood cell counts)

Along with the risks above, some side effects are seen more often with certain chemo drugs. For example, 5-FU often causes [diarrhea](#)³. This might need to be treated with drugs like loperamide. Cisplatin, docetaxel, and paclitaxel can cause nerve damage (called [neuropathy](#)⁴). This can lead to numbness and tingling in the hands and feet or hearing loss. This often improves once treatment is stopped, but for some people it can

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Hyperlinks

1. www.cancer.org/cancer/risk-prevention/tobacco/guide-quitting-smoking.html
2. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/tubes-lines-ports-catheters.html
3. www.cancer.org/cancer/managing-cancer/side-effects/stool-or-urine-changes/diarrhea.html
4. www.cancer.org/cancer/managing-cancer/side-effects/pain/peripheral-neuropathy.html
5. www.cancer.org/cancer/managing-cancer/treatment-types/chemotherapy.html
6. www.cancer.org/cancer/managing-cancer/side-effects.html

References

Chen YP, Tang LL, Yang Q, et al. Induction Chemotherapy plus Concurrent Chemoradiotherapy in Endemic Nasopharyngeal Carcinoma: Individual Patient Data Pooled Analysis of Four Randomized Trials. *Clin Cancer Res*. 2018;24(8):1824-1833.

Leeman JE, Katabi N, Wong RJ, Lee NY and Romesser PB. Ch. 65 - Cancer of the Head and Neck. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa. Elsevier; 2020.

Mendenhall WM, Dziegielewski PT, and Pfister DG. Chapter 45- Cancer of the Head and Neck. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

National Cancer Institute. Drugs Approved for Head and Neck Cancer. May 16, 2019. Accessed at www.cancer.gov/about-cancer/treatment/drugs/head-neck on September 29, 2020.

National Cancer Institute. Nasopharyngeal Cancer Treatment (Adult) (PDQ®)—Patient Version. March 1, 2018. Accessed at www.cancer.gov/types/head-and-neck/patient/adult/nasopharyngeal-treatment-pdq on April 23, 2018.

National Comprehensive Cancer Network, Clinical Practice Guidelines in Oncology (NCCN Guidelines®), Head and Neck Cancers, Version 1.2018 -- February 15, 2018. Accessed at www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf on April 23, 2018.

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology. Head and Neck Cancers, Version 3.2021 – April 27, 2021. Accessed at www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf on May 20, 2021.

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Smoking Cessation. V.1.2021 – February 18, 2020. Accessed at https://www.nccn.org/professionals/physician_gls/pdf/smoking.pdf on May 20, 2021.

Petkar I, Bhide S, Newbold K, Harrington K, Nutting C. Practice patterns for the radical treatment of nasopharyngeal cancer by head and neck oncologists in the United Kingdom. *Br J Radiol*. 2018 Feb 13:20170590.

Wong KCW, Hui EP, Lo KW, et al. Nasopharyngeal carcinoma: an evolving paradigm. *Nat Rev Clin Oncol*. 2021;18(11):679-695. doi:10.1038/s41571-021-00524-x.

Yoshida EJ, Luu M, David JM, et al. Facility Volume and Survival in Nasopharyngeal Carcinoma. *Int J Radiat Oncol Biol Phys*. 2018;100(2):408-417. doi:10.1016/j.ijrobp.2017.09.038.

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Targeted Drug Therapy for Nasopharyngeal Cancer

- [Targeting cancer cells with EGFR changes](#)
- [Possible side effects of targeted drug therapy](#)
- [More information about targeted therapy](#)

Targeted drug therapy is the use of medicines that target or are directed at proteins on cancer cells that help them grow, spread, and live longer. Targeted drug therapy can be used to treat nasopharyngeal cancers by destroying cancer cells or slowing their growth. Many of these drugs can be taken as pills and their side effects are different from [chemotherapy](#) (sometimes less severe) .

Some targeted drugs, for example, monoclonal antibodies, work in more than one way to control cancer cells and may also be considered [immunotherapy](#) because they boost

the immune system.

Targeting cancer cells with EGFR changes

Epidermal growth factor receptor (EGFR) is a protein that helps cancer cells grow. One drug that targets EGFR can be used to treat some nasopharyngeal cancers.

Cetuximab for nasopharyngeal cancers

Cetuximab (Erbix) is a monoclonal antibody (a man-made version of an immune system protein). It targets EGFR which is a protein found on the surface of certain cancer cells that helps them grow and divide. Nasopharyngeal cancer (NPC) cells sometimes have higher than normal amounts of EGFR. By blocking EGFR, cetuximab can help slow or stop cancer cell growth.

The exact role of cetuximab in treating NPC is still being studied. It might be used along with chemo in cases where the cancer has spread, come back, or continued to grow after initial treatment with chemo.

Cetuximab is given by IV infusion, either once a week or every other week.

Possible side effects of targeted drug therapy

Common side effects include:

- Skin problems, such as an itchy, acne-like rash on the face and chest, which can lead to infections
- Headache
- Tiredness and weakness
- Fever
- Diarrhea
- Nausea and vomiting
- Weight loss

A rare but serious side effect of cetuximab is an allergic reaction during the first infusion, which could cause breathing problems and low blood pressure. You will be given medicine before treatment to help prevent this.

More information about targeted therapy

To learn more about how targeted drugs are used to treat cancer, see [Targeted Cancer Therapy](#)¹.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)².

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types/targeted-therapy.html
2. www.cancer.org/cancer/managing-cancer/side-effects.html

References

Immunotherapy for Nasopharyngeal Cancer

Immunotherapy uses medicines to boost a person's own immune system to find and destroy cancer cells more successfully.

Immunotherapy typically works on specific proteins in the immune system to increase the immune response. They have different, often less frequent, side effects from chemotherapy.

Possible side effects of PD-1 inhibitors

Side effects of these drugs can include fatigue, cough, fever, nausea, diarrhea, cough, skin rash, loss of appetite, constipation, muscle and joint pain, and itching.

Other, more serious side effects that occur less often include:

- **Infusion reactions:** Some people might have an infusion reaction while getting one of these drugs. This is like an allergic reaction, and can include fever, chills, flushing of the face, rash, itchy skin, feeling dizzy, wheezing, and trouble breathing. It's important to tell your doctor or nurse right away if you have any of these symptoms while getting these drugs.
- **Autoimmune reactions:** These drugs remove one of the safeguards on the body's immune system. Sometimes the immune system starts attacking other parts of the body, which can cause serious or even life-threatening problems in the lungs, intestines, liver, hormone-making glands, kidneys, skin, or other organs.

It's very important to report any new side effects during or after treatment with any of these drugs to your health care team right away. If you have any serious side effects, you might need to stop treatment and take high doses of steroids to suppress your immune system.

More information about immunotherapy

To learn more about how drugs that work on the immune system are used to treat cancer, see [Cancer Immunotherapy](#)³.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)⁴.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types/targeted-therapy.html
2. www.cancer.org/cancer/managing-cancer/treatment-types/immunotherapy/immune-checkpoint-inhibitors.html
3. www.cancer.org/cancer/managing-cancer/treatment-types/immunotherapy.html
4. www.cancer.org/cancer/managing-cancer/side-effects.html

References

Hui EP, Chan A, and Le Quynh-Thu. Treatment of recurrent and metastatic nasopharyngeal carcinoma. In: Shah S, ed. *UpToDate*. Waltham, Mass.: UpToDate, 2021. <https://www.uptodate.com>. Accessed June 2, 2021.

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology. Head and Neck Cancers, Version 3.2021 – April 27, 2021. Accessed at www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf on June 2, 2021.

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Treatment Options by Stage of Nasopharyngeal Cancer

Stages 0 and I (1)

The usual treatment for these early-stage cancers is [radiation therapy](#) aimed at the tumor.

In these stages the cancer probably has not yet spread, but the nearby lymph nodes in the neck are treated with radiation therapy as well. This is preventive (prophylactic) radiation. It's done because some patients may have cancer cells in these lymph nodes that can't be found by imaging or other methods. Although there are too few cancer cells in the lymph nodes to cause them to be enlarged, these cells could continue to grow and spread if not destroyed by radiation therapy.

Stage II (2)

Most people with stage II (2) NPC get chemoradiation ([chemotherapy](#) given along with [radiation therapy](#)) to the nasopharynx and neck lymph nodes. The chemo drug most often used is cisplatin. Chemoradiation is usually followed by more chemo. Most studies have found that chemoradiation helps people live longer than just radiation therapy alone. But adding chemo can lead to more side effects, which can affect quality of life. It's important to understand what the side effects are likely to be before starting this treatment.

If cancer is still in the lymph nodes after any of the above treatments, [surgery](#) to remove the main tumor (if possible) and the lymph nodes may be done.

Stage III (3)

People with stage III NPC are usually treated with:

- Chemotherapy first (sometimes called induction chemo) followed by chemoradiation to the nasopharynx and neck lymph nodes OR
- Chemoradiation to the nasopharynx and neck lymph nodes sometimes followed by chemotherapy alone OR
- Chemoradiation to the nasopharynx and neck lymph nodes

New drug treatments and new surgical procedures being tested in [clinical trials](#)⁴ may help some people with recurrent NPC, as well as improve knowledge that can help others with NPC in the future.

If the cancer can't be cured, further treatments may be aimed at slowing its growth or relieving symptoms caused by the cancer. For example, if the cancer has spread to the spine, radiation may be given to the area to relieve pain and reduce the chances of further problems. Even if a cure is not possible, it's important to remember that there are many [options to relieve symptoms](#)⁵ of advanced cancer.

Hyperlinks

1. www.cancer.org/cancer/types/nasopharyngeal-cancer/detection-diagnosis-staging/staging.html
2. www.cancer.org/cancer/types/nasopharyngeal-cancer/detection-diagnosis-staging/talking-with-doctor.html
3. www.cancer.org/cancer/risk-prevention/tobacco/guide-quitting-smoking.html
4. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
5. www.cancer.org/cancer/managing-cancer/palliative-care.html

References

Hui EP, Chan A, and Le Quynh-Thu. Treatment of recurrent and metastatic nasopharyngeal carcinoma. In: Shah S, ed. *UpToDate*. Waltham, Mass.: UpToDate, 2022. <https://www.uptodate.com>. Accessed May 6, 2022.

Leeman JE, Katabi N, Wong RJ, Lee NY and Romesser PB. Ch. 65 - Cancer of the Head and Neck. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa. Elsevier; 2020.

Mendenhall WM, Dziegielewski PT, and Pfister DG. Chapter 45- Cancer of the Head and Neck. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology. Head and Neck Cancers, Version 2.2022 – April 26, 2022. Accessed at www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf on May 6, 2022.
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