National Comprehensive Cancer Network®

2026

NCCN Guidelines for Patients®

Cancer care recommendations from leading experts at the National Comprehensive Cancer Network® (NCCN®)

Mouth Cancer



Made possible by National Comprehensive Cancer Network® Foundation

Available online at NCCN.org/patientguidelines



NCCN Guidelines for Patients®

The essential guide for people facing cancer.

Based on care recommendations from leading cancer experts.

Explains high-quality cancer care provided at state-of-the-art cancer centers.

Reviewed and revised every year.

Did you know that top cancer centers across the United States work together to improve cancer care? This alliance of leading cancer centers is called the National Comprehensive Cancer Network® (NCCN®).

Because cancer care is always evolving, NCCN develops and frequently updates evidence-based cancer care recommendations used by health care providers worldwide. These recommendations are known as the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®).

The NCCN Guidelines for Patients plainly explain these expert recommendations, so you can talk with your care team about the best care for you.

These NCCN Guidelines for Patients are based on the NCCN Guidelines® for Head and Neck Cancers, Version 2.2026 — May 12, 2026.

View the NCCN Guidelines for Patients free online: NCCN.org/patientguidelines

Find an NCCN Cancer Center near you: NCCN.org/cancercenters

Learn how the NCCN Guidelines for Patients are developed: NCCN.org/patient-guidelines-process

Connect with us

@NCCNorg @NCCNVideo NCCN @NCCNorg

Supporters

National Comprehensive Cancer Network® Foundation

We translate complex cancer care into trusted guidance and fund the next generation of researchers shaping tomorrow's care.

NCCN Foundation gratefully acknowledges the following corporate supporters for helping to make available these NCCN Guidelines for Patients: AVEO Pharmaceuticals, Inc., and Coherus Oncology, Inc.

NCCN independently adapts, updates, and hosts the NCCN Guidelines for Patients. Our corporate supporters do not participate in the development of the NCCN Guidelines for Patients and are not responsible for the content and recommendations contained therein.



The way forward starts here.

National Comprehensive Cancer Network® Foundation

Give Now

Contents

4 Chapter 1
About mouth cancer

9 Chapter 2
Testing for mouth cancer

18 Chapter 3
Staging for mouth cancer

22 Chapter 4
Types of treatment

32 Chapter 5
Treating early-stage and locally advanced mouth cancers

37 Chapter 6
Treating very advanced mouth cancer

45 Chapter 7
Supportive care

51 Chapter 8
Other resources

55 Words to know

58 NCCN Contributors

59 NCCN Cancer Centers

61 Index

©2026 National Comprehensive Cancer Network, Inc. All rights reserved.

NCCN Guidelines for Patients and illustrations herein may not be reproduced in any form for any purpose without the express written permission of NCCN. No one, including doctors or patients, may use the NCCN Guidelines for Patients for any commercial purpose and may not claim, represent, or imply that the NCCN Guidelines for Patients that have been modified in any manner are derived from, based on, related to, or arise out of the NCCN Guidelines for Patients. The NCCN Guidelines are a work in progress that may be redefined as often as new significant data become available. NCCN makes no warranties of any kind whatsoever regarding its content, use, or application and disclaims any responsibility for its application or use in any way.

NCCN Foundation seeks to support the millions of patients and their families affected by a cancer diagnosis by funding and distributing NCCN Guidelines for Patients. NCCN Foundation is also committed to advancing cancer treatment by funding the nation's promising doctors at the center of innovation in cancer research. For more details and the full library of patient and caregiver resources, visit NCCN.org/patients.

National Comprehensive Cancer Network (NCCN) and NCCN Foundation
3025 Chemical Road, Suite 100, Plymouth Meeting, PA 19462 USA

1
About mouth cancer

5 What is mouth cancer?

6 What are the signs of mouth cancer and how is it diagnosed?

7 How is mouth cancer treated?

8 What is supportive care?

8 How can I get the best care?

Mouth cancer is a type of head and neck cancer. It's also called oral cancer or oral cavity cancer, but we'll call it mouth cancer in this guide. This guide describes the testing, staging, types of treatment, treatments given, and supportive care for mouth cancer. This chapter reviews the basics of mouth cancer.

What is mouth cancer?

Most mouth cancers start in the thin cells that line the inside of your mouth and lips called squamous cells. Cancer of these cells is known as squamous cell carcinoma.

Mouth cancer can start in these different parts of the mouth:

- Inner part of the lip (also called mucosal lip)
- Gums (also called gingiva)
- Front part of the tongue
- Inner cheek (also called buccal mucosa)
- Floor of the mouth (area underneath the tongue)
- Hard palate (the front, bony part of the roof of the mouth)
- Alveolar ridge (bony, raised area of the upper and lower jaw that holds the sockets of the teeth)
- Retromolar trigone (area behind the wisdom teeth)

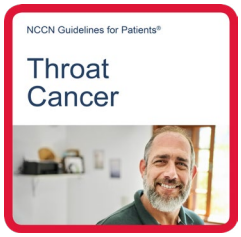
Diagnosis vs. prognosis

What's the difference between diagnosis and prognosis? These 2 words sound alike but they're very different.

Diagnosis: The identification of a disease or condition based on signs, symptoms, and test results. The diagnosis names what illness you have.

Prognosis: The likely course or outcome of a disease. The prognosis predicts how your disease will turn out.

Importantly, cancers in the back part of the tongue and in the soft, muscular roof of the mouth (soft palate) are considered throat cancer (also called oropharyngeal cancer). For more information, see *NCCN Guidelines for Patients: Throat Cancer* at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



Additionally, cancer that's on the spot where the skin and the lip meet on the outside of the mouth is called cutaneous (skin) squamous cell carcinoma of the vermillion lip. For more information, see *NCCN Guidelines for Patients: Squamous Cell Skin Cancer* at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



What are the signs of mouth cancer and how is it diagnosed?

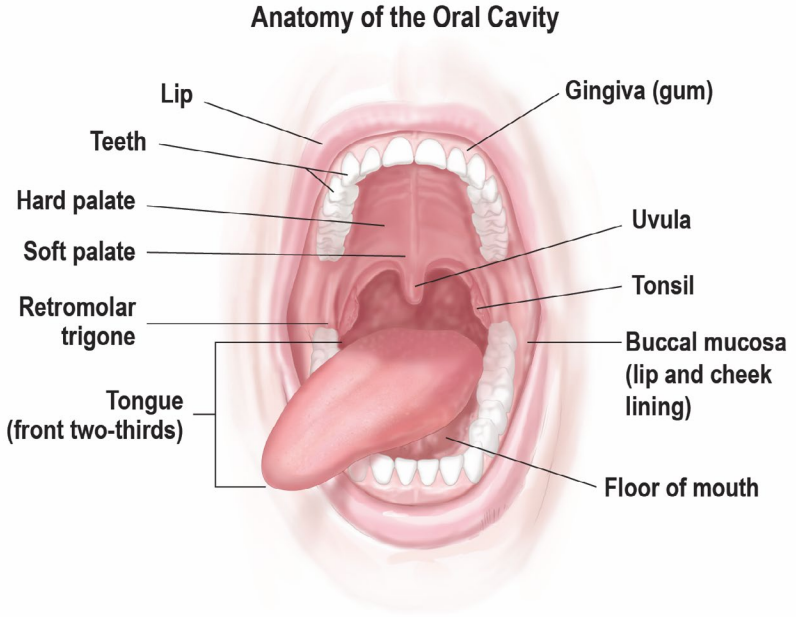
Signs of mouth cancer include:

- Red or white patches inside the mouth
- Sores in the mouth that don't heal
- Rough spots or lumps in the mouth
- Bleeding in the mouth
- Trouble chewing, swallowing, or talking (having a hoarse voice all the time, too)
- Pain in the mouth, toothache, or pain in the jaw that doesn't go away (having trouble opening the mouth or chewing is called trismus)
- Unexpected weight loss

Dentists often notice signs of mouth cancer during routine dental checkups and recommend that you see a medical doctor or oral surgeon. To diagnose mouth cancer and determine what treatments are best for you, a biopsy, imaging scans, and genetic testing are done. Other tests will also be done and are described in *Chapter 2: Testing for mouth cancer*.

Mouth cancer

Mouth, or oral cavity, cancer can develop in the inner lip (mucosal lip), inner cheek lining (buccal mucosa), front two-thirds of the tongue, upper and lower gums (gingiva), floor of the mouth under the tongue, bony roof of the mouth (hard palate), bony area of the upper and lower jaw that holds the sockets of the teeth (alveolar ridge), and the small area behind the wisdom teeth (retromolar trigone).



How is mouth cancer treated?

The treatment you receive depends on your overall health, the size and location of the tumor, and if the cancer has spread to nearby or distant areas. Staging is a method doctors use to describe how much cancer is in the body and where it is. Your care team may describe the cancer as being early stage, locally advanced, or advanced. To learn more about staging, see Chapter *3: Staging for mouth cancer*.

Treatment usually starts with surgery to remove the tumor and any lymph nodes that might have cancer. Some people may receive treatment with radiation therapy or systemic therapy (treatment that works throughout the body, such as chemotherapy or immunotherapy) before surgery. After surgery, you might get a combination of therapies, which can include radiation therapy, systemic therapy, or both. A clinical trial is also an option in some cases. Therapy given before surgery is called **neoadjuvant treatment** and therapy given after surgery is called **adjuvant treatment**.

If you can't have surgery, then radiation therapy, systemic therapy, systemic therapy given as part of a clinical trial, and supportive care are treatment options.

This guide will discuss how mouth cancer is diagnosed and treated in greater detail. It will also provide an overview of the types of tests and treatments that are given and what to expect.

Importantly, NCCN experts recommend that everyone diagnosed with mouth cancer see a head and neck surgical oncologist before starting treatment. They'll work with other experts to create a treatment plan with you based on the stage of mouth cancer you have and your test results.

Everyone with head and neck cancer should meet with a surgeon who's an expert in head and neck cancer before starting treatment.

"From someone who has been diagnosed twice with tongue cancer, it's important to have the right medical team to help you navigate care—you don't have to figure it out alone."

What is supportive care?

Supportive care is an important part of cancer care, and its goal is to improve your quality of life during and after cancer treatment. Supportive care can help manage the side effects of cancer treatment and can also help with other needs, such as paying for care and making treatment decisions. *Chapter 7: Supportive care* describes more about supportive care and what it can do for you.

How can I get the best care?

Advocate for yourself. You have an important role to play in your care. Many people feel more satisfied when they actively take part in planning their cancer care.

The NCCN Guidelines for Patients will help you play a larger role in your care. Discuss the recommendations in this guide with your care team. Ask questions about your options and share your goals and concerns.

Don't know what to ask? You're not alone. That's why we include suggested questions to ask at the end of chapters.

Keep reading to find the best care for you.

How this guide can help you

Making decisions about cancer care is stressful. There's a lot to learn, and you don't know what the future holds.

Use this guide to get the information and support you need.

Patients, doctors, and other health care professionals trust the NCCN Guidelines for Patients. This guide uses clear, everyday language to explain current cancer care recommendations made by respected experts in the field. Their recommendations are based on the latest research and practices at leading cancer centers.

Your health is unique to you, so your cancer care should be, too. As you read this guide, you'll learn which treatments are likely to provide the best results for you. And you'll be better prepared to talk with your care team.

2
Testing for mouth cancer

11 Medical history

12 Physical exams

13 Biopsy

13 Genetic testing

14 Imaging scans

15 Endoscopy procedure

15 Additional exams, tests, and screenings

16 Fertility (all genders)

17 Key points

17 Questions to ask

2 Testing for mouth cancer

Tests are needed to diagnose (confirm that you have) mouth cancer. They also help your care team learn as much as possible about the cancer. This chapter explains the tests you might get and what to expect.

To diagnose mouth cancer and determine what treatments are best for you, a biopsy, imaging scans, and genetic tests will be done. Other tests may be needed, too. The tests, procedures, and counseling you might receive are listed in **Guide 1**.

Guide 1
Tests, procedures, and information used to diagnose mouth cancer and plan treatment

Medical history, and tobacco and alcohol use history
Physical exam, including a complete head and neck exam
Biopsy of the abnormal area and/or lymph nodes
Distress screening (also known as checking for distress)
Genetic testing (depending on your family history and what age you were when you were diagnosed with cancer)
As needed: • Mirror and fiberoptic exam (a mirror, light, and flexible cable with a telescope on it are used to examine your mouth and throat area) • Imaging scans, such as a CT, MRI, and/or PET/CT scan • Endoscopy procedure while you're under anesthesia (a scope is guided into your body to take pictures and videos of organs and other important areas) • Dental exam, including a panoramic x-ray (gives a full view of the mouth) or dental CT scan • Nutrition, speech, and swallowing evaluation and/or therapy • Pre-anesthesia exam • Counseling to help you quit smoking • Fertility counseling • Hepatitis screening (checking for hepatitis) • An immunohistochemistry lab test may be done on your biopsy sample to figure out what the levels of PD-L1 (a protein) are on cancer cells (certain treatments work well in people with higher levels of PD-L1)

Medical history

A complete report of your health is called a medical history. Your care team needs to have all your health information, so when you meet with them be ready to talk about your:

- Illnesses
- Allergies
- Surgeries
- Injuries
- Medical health conditions and emotional or mental health conditions
- Symptoms
- Medications and vitamin, nutritional, or herbal supplements (that you take now and have taken in the past)

Tobacco and alcohol use history

Using tobacco products (smoking, chewing, or vaping) and drinking alcohol can increase your risk of developing head and neck cancers, such as mouth cancer. Your care team will ask you about your history with tobacco and alcohol.

It's important to stop smoking and vaping, avoid tobacco, and limit alcohol use when you're diagnosed with cancer. **It's very important to stop using tobacco products and limit alcohol during treatment because these substances can interfere with treatment and increase the risk of side effects.** It can be challenging to stop smoking, but resources are available to help you. *NCCN Guidelines for Patients: Quitting Smoking* are available at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



If you smoke or vape, it's important to get help to quit

Smoking or vaping nicotine greatly increases your chances of having side effects. It can limit how well cancer treatment works, make it harder for your body to heal, and increase your chances of developing other cancers. If you smoke or vape, ask your care team about counseling and medicines that can help you quit.

Importantly, cannabis use may affect the amount of anesthesia you receive during surgery.

More information can be found in *NCCN Guidelines for Patients: Quitting Smoking* at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.

For online support, try these websites:

- SmokeFree.gov
- CDC.gov/tobacco

Family history

Your care team will also ask about the medical history of family members who are blood relatives. This information is called a family history. If a family member had cancer, it's important to know the specific type of cancer, where it started, if it was in multiple locations, and what age they were diagnosed with it. It's also helpful to find out if they had genetic testing done.

Physical exams

A regular physical exam and a complete exam of your head and neck will be done (usually at the same time). During the exam, your health care team will:

- Check your temperature, blood pressure, and pulse
- Measure your height and weight
- Listen to your lungs and heart
- Look in your eyes, ears, nose, throat, and mouth
- Feel for swollen lymph nodes in your neck
- Feel and apply pressure to parts of your body to see if organs are a normal size, are soft or hard, or cause pain when touched

In addition, since some parts of the mouth and throat aren't easy to see when you open your mouth, a mirror and fiberoptic exam can be done to see these areas more clearly. For the mirror part of the exam, a mirror and light are used to look at your mouth and throat. For the fiberoptic exam, a flexible tube with a telescope on it is guided through your nose to get detailed pictures of parts of the throat and the neck area. These exams are usually done in a doctor's office, and numbing medicine is given.

Dental exam

Mouth cancer and its treatment can affect your jaw, teeth, gums, and mouth overall, so a dental exam should be done. You'll see your dentist or a specialized dentist, such as a dental oncologist who focuses on people with cancer, for a dental exam.

The dentist will evaluate your teeth and dental status because bad teeth can cause big problems in the future. They'll also check for mouth sores, red or white patches, lumps, and anything out of the ordinary.

"Most oral cavity cancers are caught by a dentist or dental hygienist. If you feel something different around your neck, glands, tongue, or mouth area, please don't wait! Go see your dentist, an oral and maxillofacial surgeon, or an ear, nose, and throat (ENT) doctor."

Biopsy

Biopsies remove samples of tissues or cells from the body to see if cancer is in a certain spot. Different types of needle biopsies are used to diagnose mouth cancer and remove samples of an abnormal area or lymph node. An ultrasound or CT scan might be done beforehand or at the same time to learn more about the area and to help guide the biopsy.

After the sample is taken, it's sent to a lab where tests are done on it.

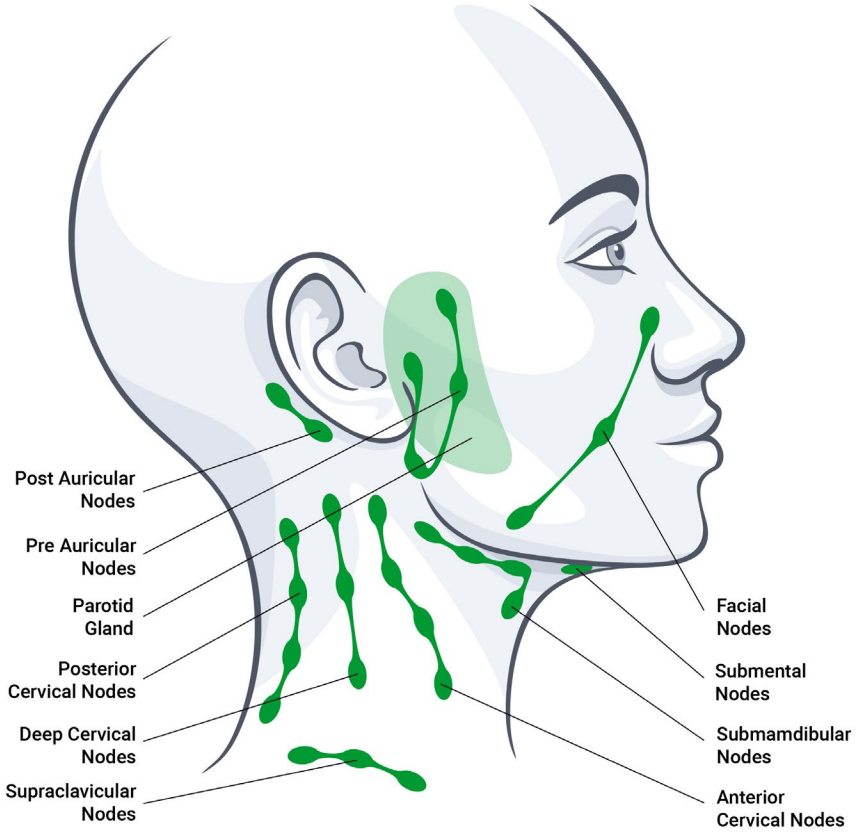
Genetic testing

Genetic testing examines a sample of your blood or saliva (spit) and looks for changes in your DNA. If you have a family history of cancer or are diagnosed with cancer at a younger age, you may have genetic testing done so your care team can learn more about the cancer. A genetic counselor or trained provider will go over the results with you.

Lymph nodes in the head and neck

There are about 300 lymph nodes in the head and neck area. If head and neck cancers spread, they usually spread to nearby lymph nodes. Lymph nodes in your neck are called cervical lymph nodes.

To describe where lymph nodes are, different areas of the neck are divided into different levels. For example, your care team may say "left level II (2) lymph node" when describing the upper jugular lymph nodes that are in the upper part of your neck.



Imaging scans

Imaging scans take pictures of the inside of your body to look for cancer. The images can also provide useful information on where the cancer is and how much of it there is. A **radiologist** (a doctor who's an expert at diagnosing diseases using imaging techniques) will review the images and send the results to your care team.

Some imaging scans you may have done are a computed tomography (CT or CAT) scan, magnetic resonance imaging (MRI) scan, positron emission tomography (PET) scan, and dental imaging.

Importantly, your medical providers will decide what imaging you need. Not everyone will need all these scans.

CT scan

A CT scan is more focused on the hard tissues of your body, like bone. It uses x-rays to take many images of your body from different angles. A computer then combines the pictures to make a 3D image. You may have a CT scan of your head, neck, and chest done to look for cancer. In most cases, you'll receive something called contrast before the scan is done.

Contrast (also called contrast dye) is a substance that's given to help make the pictures clearer. Contrast is injected into a vein or mixed with liquid to drink, and it leaves your body in urine. Tell your care team if you've had allergic reactions to contrast in the past or if your kidneys aren't working properly.

MRI scan

An MRI is more focused on the soft tissues of your body. It can be done with or without contrast and is used to look for cancer in your head and neck. An MRI scan uses radio waves

Imaging scans

To look for cancer and figure out where it's spread, you'll have imaging scans done. CT, MRI, and PET scans are imaging options for people with mouth cancer. During the scans, you'll lie face-up on a table that moves through a tunnel-like machine. You'll be able to hear and speak with a technician at all times.



and powerful magnets to take pictures of the inside of the body. It doesn't use x-rays, which means no radiation is delivered to your body during the test. Because of the very strong magnets used in the MRI machine, tell the person doing the scan if you have metal or a pacemaker in your body.

PET scan

You may also need a PET scan to look for cancer. When a PET scan is combined with a CT scan, it's called a PET/CT scan.

PET scans show whether the cells in your body are functioning normally or abnormally by highlighting cells that may be cancerous. Before you get a PET scan, a substance called a radiotracer is injected into your bloodstream. The radiotracer is detected during the scan and makes cancer cells appear brighter on the images. Afterward, the radiotracer leaves your body in urine. An FDG-PET scan uses a radiotracer called fluorodeoxyglucose (FDG) and is the type of PET scan you'll get.

It's important to know that an abnormal PET scan doesn't automatically mean you have cancer, since inflamed or infected cells may also appear bright on a PET scan. A biopsy is required to show you have cancer.

Dental imaging

To get pictures of the inside of your mouth and learn more about the area, a dental CT scan (also called a Cone Beam CT [CBCT] scan) or Panorex x-ray will be done. Both types of imaging show your teeth, jaw bones, sinuses, and nerves. No contrast is given. Sometimes the dentist may take small x-rays of individual teeth called periapical radiographs. These x-rays help the dentist to fully evaluate a specific tooth they find concerning.

Endoscopy procedure

An endoscopy is done to look at organs and other structures in your body up close. You'll be given anesthesia before the procedure, and then a doctor will guide a long, thin tube called an endoscope (scope) into your body. The scope has a camera that takes pictures or videos of the organs and body parts.

Additional exams, tests, and screenings

Other tests and exams your care team may recommend in certain cases include:

PD-L1 testing and combined positive score

PD-L1 is a protein that can be found (expressed) on the surface of cancer cells. It causes your immune system to ignore cancer instead of fighting it. Your care team will test your biopsy or tissue sample for PD-L1, and something called a combined positive score (CPS) is then calculated to measure how much PD-L1 is on the cells. PD-L1 can be on a lot of cancer cells, some cells, or no cells.

Importantly, the CPS helps determine what treatment you get. There are certain therapies that target PD-L1 and work well treating cancer in people whose cancer cells have PD-L1 on them.

Hepatitis virus screening

A blood test will show if you had hepatitis in the past or if you have it now. Hepatitis infections can become active again after certain cancer treatments are given since treatment can weaken the immune system. It's important to

be treated for hepatitis if you have it because it can affect the liver.

Nutrition, speech, and swallowing assessment

You might meet with a nutrition expert and/or speech therapist before starting treatment so they can figure out how you're currently speaking and swallowing.

Pre-anesthesia exam

General anesthesia keeps you from feeling pain and remembering what happened during surgery or other procedures. Before you receive anesthesia, a pre-anesthesia exam may be done. This can include a physical exam of your throat and airway, questions about your medical history, blood work, and more.

Head and neck cancer surgery is complex, and it's further complicated by other health conditions, airway and swallowing issues, tobacco and alcohol use, and the location of the cancer. Being prepared and knowing what to expect after surgery will help prevent complications.

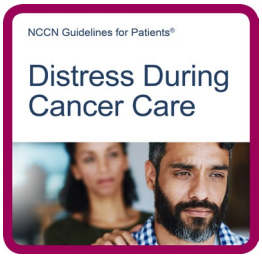
Fertility (all genders)

Some cancer treatments can affect your ability to conceive or have children, so your care team may discuss fertility preservation with you before your treatment starts. The most common fertility preservation options include sperm banking and egg freezing. Sperm banking is when sperm is frozen and stored until after cancer treatment. Similarly, eggs can be removed from ovaries and stored for later use.

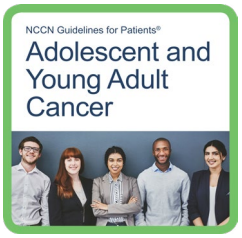
It's normal to feel worried

Depression, anxiety, fear, and distress are very common in people with cancer. These feelings can make it harder to deal with cancer and its treatment. Getting help when you're feeling worried is an important part of cancer care. Talk with your care team if you have any of these feelings. They can support you and give you resources to help.

Read more about cancer and distress in *NCCN Guidelines for Patients: Distress During Cancer Care,* available at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



More information on fertility preservation can be found in *NCCN Guidelines for Patients: Adolescent and Young Adult Cancer* at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



Key points

- Testing is done to diagnose (confirm that you have) mouth cancer and to learn more about the cancer.
- Your care team needs to have all your health information. They'll ask for your medical history, tobacco and alcohol use history, and family history. A physical exam and complete head and neck exam will also be done.
- A biopsy (removal of a sample of tissue or group of cells), genetic tests, and imaging scans are done to diagnose mouth cancer and determine what treatments are best for the type of mouth cancer you have.
- Imaging scans take pictures of the inside of your body and are used to learn more about the type, size, and location of tumors. Imaging scans that may be done include a CT scan, MRI scan, PET/CT scan, and dental imaging.
- Other tests, exams, and screenings that may be done include an endoscopy procedure; PD-L1 testing; hepatitis virus screening; a nutrition, speech, and swallowing assessment; and a pre-anesthesia exam.
- Smoking and/or heavy alcohol use affects how well treatment works and increases the toxicity of treatment. It's very important to stop smoking, vaping, and drinking alcohol. Your care team will give you resources that may be helpful when quitting.
- Treatment can affect fertility. Talk to your care team about your concerns and if you're planning a pregnancy now or in the future.

Questions to ask

- Does smoking cannabis/marijuana affect how well treatment works, like how smoking tobacco prevents treatment from working as well as it can?
- What resources are available to help me get to where the tests are done and to help me pay for the tests? Will my insurance pay for these tests?
- Can I get all my tests done at the same place? If not, how many locations will I have to go to for testing?
- Who will explain what the tests are and what my results are? How long will it take to get the results back after I have the tests done? Can you print all the results for me, so all my information is together and easily accessible?
- Who will talk with me about the next steps and when treatment will start? When can I start treatment?

3
Staging for mouth cancer

19 What is staging?

19 TNM staging system

20 Mouth cancer stages

21 Key points

21 Questions to ask

Cancer staging is used to describe how much cancer is in the body and where it is. For example, in general stage 1 cancer is in one area of the body and stage 4 cancer has spread to other parts of the body. Staging is used to help make treatment decisions and to determine prognosis. Cancer can be staged before surgery (clinical staging) and after surgery (pathologic staging). This chapter explains the stages of mouth cancer and the TNM staging system.

What is staging?

Staging tells your care team how much cancer is in your body and where it is. Staging is also used to make treatment decisions and to predict the likely outcome of the cancer (prognosis). The results of your tests and procedures are used to figure out the stage of the cancer.

TNM staging system

Your care team will use the American Joint Committee on Cancer (AJCC) TNM staging system to figure out the stage of the mouth cancer (**Guide 2**). This system uses the letters T (tumor), N (lymph node), and M (metastasis, also known as spread) to describe where the cancer is and how much of it there is.

Guide 2
The American Joint Committee on Cancer (AJCC) TNM staging system for mouth cancer

T = tumor	**T describes the size and location of the main tumor** • How large is the tumor? How deep has the tumor grown into the layers of tissue inside the mouth? Has the tumor grown into nearby areas? • The size of the main (primary) tumor and its depth of invasion (DOI) are measured in centimeters (cm) or millimeters (mm). DOI is how deep the tumor has grown into the layers of tissue (not how thick the tumor is).
N = lymph nodes	**N describes if the cancer has spread to nearby lymph nodes** • Has cancer spread to nearby lymph nodes in the head and neck? If so, how many (the head and neck have around 300 lymph nodes)? Where?
M = metastasis	**M describes if the cancer has spread (metastasized) to other areas** • If cancer metastasizes that means it has spread. Cancer can spread to the lymph nodes, but it can also spread to other parts of the body like the lungs or liver.

Based on your test results, a number is assigned to each letter (can be written like T1N0M0 or T1, N0, M0). The higher the number, the larger the tumor is or the more the cancer has spread.

Mouth cancer stages

The stages of mouth cancer are based on the TNM scores. Stages are numbered from 0 to 4 and can also be written in Roman numerals (stages I, II, III, and IV). Your care team may tell you the cancer stage using the TNM system, but they will probably just call it stage 1, stage 2, stage 3, or stage 4 cancer.

These are the general stages for mouth cancer:

- **Stage 0** – Cancer cells are only found in the lining of the mouth (this is called carcinoma in situ).
- **Stage 1 (early stage)** – The tumor is 2 centimeters (cm) or smaller with very little depth of invasion (5 millimeters or less). Cancer isn't in any lymph nodes.
- **Stage 2 (early stage)** – The tumor is larger, and/or the depth of invasion is increasing. Cancer isn't in any lymph nodes.
- **Stage 3 (locally advanced)** – The tumor is larger, and/or the depth of invasion is increasing. Cancer might be in a lymph node.

Head and neck tumors are measured in centimeters (cm): For comparison, an egg is 6 cm, a walnut is 4 cm, a grape is 3 cm, and a pea is 1 cm.



- **Stage 4A (locally advanced)** – The tumor is larger, and cancer may have spread to nearby areas, such as jaw bones, sinuses, or skin on the face. Cancer may be in the lymph nodes.
- **Stage 4B (very advanced)** – The tumor is any size, and cancer has spread to many lymph nodes, OR it has spread to certain places (such as the carotid artery and base of the skull) and may be in the lymph nodes.
- **Stage 4C (metastatic mouth cancer)** – Cancer has spread outside the head and neck to other parts of the body, such as the lungs.

Key points

- Cancer staging is used to describe how much cancer is in the body and where it is. Head and neck cancers, such as mouth cancer, can spread to nearby lymph nodes in the head and neck and to other areas of the body.
- A cancer stage is also used to help make treatment decisions and to predict the likely outcome of the disease (prognosis).
- The American Joint Committee on Cancer (AJCC) TNM staging system is a detailed way of describing the cancer. This system uses the letters T (T = tumor), N (N = lymph node), and M (M = metastasis, also known as spread) to describe where the cancer is and how much of it there is. A number is given to each letter (for example, people with T1 mouth cancer have a smaller tumor than people with T3 mouth cancer). The TNM staging information is used to figure out the stage of the cancer (stage 0, 1, 2, 3, or 4).
- Mouth cancer is usually described as being stage 0, 1, 2, 3, or 4 (stage 4 may be further described as 4A, 4B, or 4C).

Questions to ask

- What stage mouth cancer do I have?
- Is the cancer early stage, advanced, or metastatic?
- Is the cancer in any nearby lymph nodes or other areas, like the lungs?
- What does having this stage of cancer mean for me?



We want your feedback!

Our goal is to provide helpful and easy-to-understand information on cancer. Take our survey to let us know what we got right and what we could do better.
NCCN.org/patients/feedback

4
Types of treatment

23 Your care team

24 Surgery

26 Radiation therapy

27 What is systemic therapy?

28 Chemotherapy and chemoradiation

29 Targeted therapy

29 Immunotherapy

29 Clinical trials

31 Key points

31 Questions to ask

This chapter explains the different treatments you might get. These treatments include surgery, radiation therapy, systemic therapy (treatment that works throughout the body, such as chemotherapy), and clinical trials. Not everyone will receive the same treatment, but most people will receive radiation therapy.

NCCN experts recommend that everyone see a head and neck surgical oncologist before starting treatment. Your care team will create a treatment plan with you based on your test results and stage of mouth cancer.

Your care team

People with head and neck cancers, such as mouth cancer, should be treated at an experienced cancer center. Many health care professionals with different specialties (known as a multidisciplinary team) who have knowledge and experience with nasopharyngeal cancer will be on your care team. This team is united in the planning of your treatment. Ask who will coordinate your care and who you should contact with questions and concerns.

In addition to doctors and specialists, your care team will include **nurses** (who help give medications, manage side effects, and more), **oncology social workers** (who help with financial assistance and connecting you with resources), and **nutritionists/dieticians**

Your mouth cancer care team

- **Oncologists** are doctors who diagnose and treat cancer. There are different types of oncologists, such as dental, medical, radiation, and surgical oncologists.
- **Dentists** are trained to diagnose and treat oral health conditions. You'll need to see your regular dentist more often during treatment. Tell them as soon as you know about your mouth cancer diagnosis. Usually people see a specialized dentist, like a dental oncologist, before starting treatment.
- **Otolaryngologists (sometimes called ENT doctors)** diagnose and treat ear, nose, and throat (ENT) conditions. Some also do head and neck surgeries.
- **Oral and maxillofacial surgeons (OMFS)** are specialized dentists who perform operations to remove cancer in the mouth. They're trained to recognize and treat cancers and diseases in the face, jaw, and mouth.
- **Plastic or reconstruction surgeons** fix areas that were damaged during surgery.
- **Prosthodontists** are specialized dentists who create artificial replacements, or prosthetics, for damaged or missing teeth. They restore teeth and do mouth reconstruction, which can help with speech, chewing, swallowing, and appearance.
- **Speech pathologists** treat speech, voice, and swallowing problems. They may help you during and after treatment.

(who help with eating problems, create meal plans for you, and help manage tube feedings if they're needed).

Some members of your care team will be with you throughout cancer treatment, while others will be there for parts of it. Get to know your care team and help them get to know you.

Surgery

Surgery is an operation or procedure to remove cancer from the body. When preparing for surgery, be sure to get the opinion of an experienced head and neck surgical oncologist. You can ask for a referral to a hospital or cancer center that has experience treating mouth cancer.

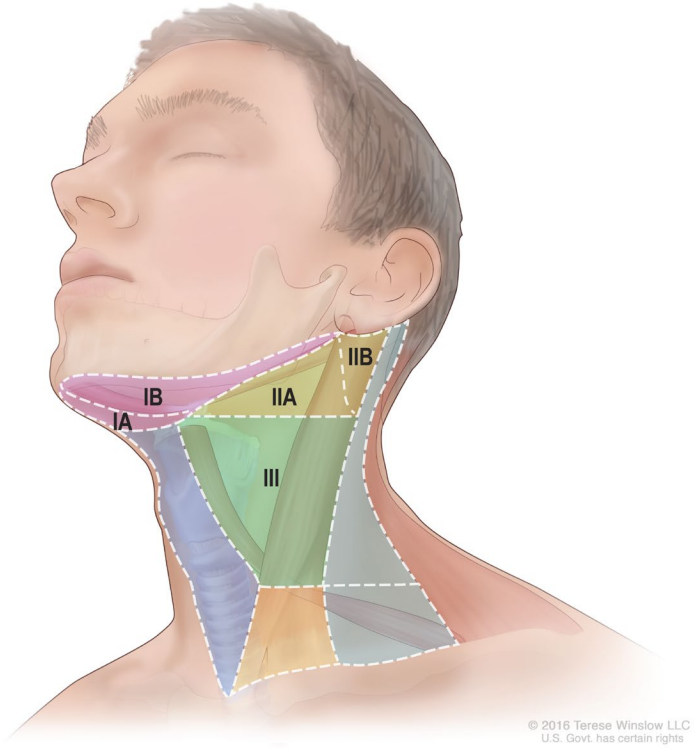
The techniques used during surgery are based on the safest and best way to remove the cancer. The specific circumstances, such as the size and location of the tumor, whether there's cancer in surrounding organs and tissue, and your unique anatomy, affect how the tumor is removed.

When planning for surgery, ask how your breathing, swallowing, speaking, chewing, and appearance might be affected. Oftentimes lymph nodes need to be removed, nerves might need to be cut and sewn back together or removed, and tissue that may have been removed might need to be rebuilt or reconstructed. Facial reconstruction surgery is sometimes done after surgery, too.

Before or after surgery, you may get treatment, such as radiation therapy with or without

Neck lymph node groups or levels

There are different levels of neck lymph node groups (shown here). If mouth cancer spreads, it most commonly spreads to the lymph nodes at levels 1 (I), 2 (II), and 3 (III).



systemic therapy, to kill any remaining cancer cells. Treatment given after surgery is called adjuvant therapy and treatment given before surgery is called neoadjuvant therapy.

Removing cancer

During surgery, the tumor is removed **(resected)** along with a border of normal-looking tissue around its edge called the **surgical margin**. Even if the surgical margin looks normal, cancer cells can still be there. Sometimes surgeons can't safely remove the tumor with a cancer-free margin, though. A clear or negative margin is when no cancer cells are found in the tissue around the edge of the tumor. A positive margin means that cancer cells are found in normal-looking tissue around the tumor.

Additionally, sometimes the whole tumor can't be removed. It depends on the tumor's location, how deep it has grown, what structures are involved (such as nerves, arteries, and more), how close it is to vital organs, and how swallowing and speaking will be affected.

Removing lymph nodes

The head and neck contain about 300 lymph nodes that are connected with nearby tissue, muscles, nerves, and blood vessels. Mouth cancer can spread to these areas.

If you have earlier-stage mouth cancer, a procedure called a **sentinel lymph node biopsy** may be done. This procedure identifies and removes the lymph node(s) that cancer cells are the most likely to spread to from the main tumor. The lymph node(s) are then sent to the lab to be examined. If they're cancerous, then another procedure called a **neck dissection** will be done to remove lymph nodes in the neck. But if you have later-stage mouth cancer, your care team may skip the sentinel lymph node biopsy and perform the neck dissection.

The sentinel lymph node biopsy and neck dissection procedures are usually done while you're getting surgery to remove the tumor.

There are different kinds of neck dissections, and sometimes tissue, blood vessels (such as veins), nerves, and muscles may be removed in addition to lymph nodes. The type of neck dissection you get depends on where the tumor is located, how big it is, and where the cancer may have spread to. Some types of neck dissections include:

- **Selective neck dissection**, which removes the lymph nodes the cancer is most likely to spread to.
- **Radical neck dissection**, which removes the lymph nodes from the side of your neck that the cancer is affecting. Certain blood vessels, nerves, and muscles are also removed.
- **Ipsilateral neck dissection**, which removes lymph nodes on one side of your neck.
- **Bilateral neck dissection**, which removes lymph nodes on both sides of your neck.

Reconstruction after cancer removal

Some people have reconstructive surgery after the cancer is removed. A multidisciplinary care team is needed to perform high-quality reconstruction. Find out who will be on the reconstruction team. You may need to see a microvascular reconstructive surgeon for

some of these surgeries. They specialize in transferring tissues from a different part of your body to repair the surgical site.

Ask your surgeons if they're going to remove tissue from one part of your body to repair or reconstruct areas of your mouth or throat. Also, ask how long the surgery and recovery time is. You may stay in the hospital to make sure you recover safely. The more information you have, the better prepared you'll be.

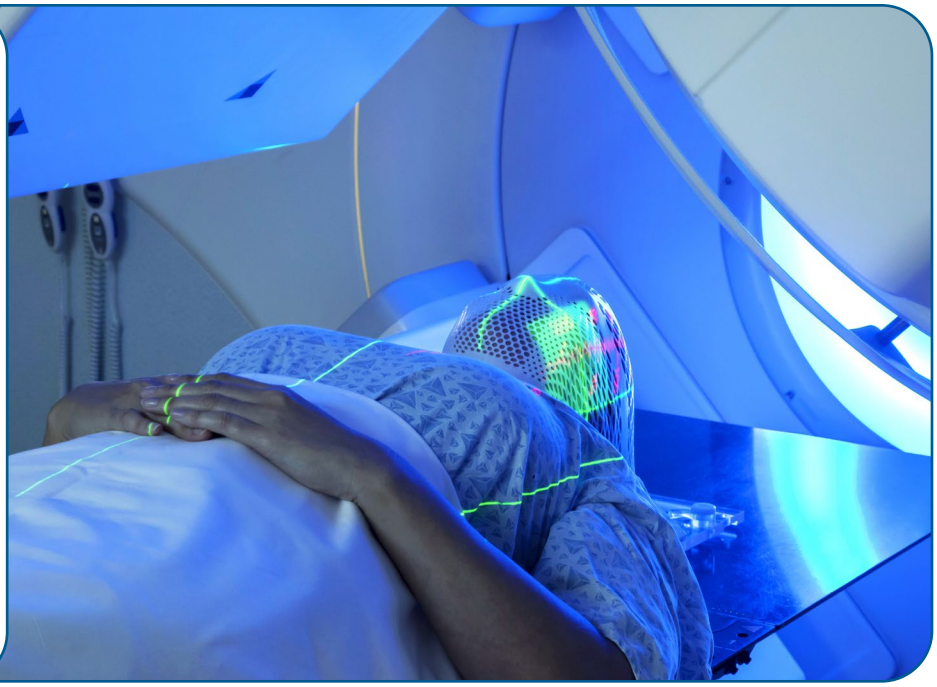
Radiation therapy

Radiation therapy uses high-energy x-rays, photons, electrons, protons, and other sources to kill cancer cells and shrink tumors. Usually a computerized treatment machine, which can shape the radiation beams to closely fit the location and size of the tumor, delivers the radiation therapy to the body. When radiation therapy is given like this, you'll typically get treatment over the course of 6 to 7 weeks on weekdays (Monday through Friday).

Your radiation oncologist will meet with you before treatment starts for a planning and simulation session. During the simulation session, a form-fitting device resembling a hockey goalie mask (called an **immobilization mask**) will be made for you to keep your head, and possibly your shoulders, still during treatment. If you're uncomfortable in tight spaces, please talk to your radiation oncologist about ways to help keep you comfortable and calm.

About once a week, your radiation oncologist will meet with you to check for side effects, such as a sunburn-like rash and mouth soreness (called **mucositis**), dry mouth (called **xerostomia**), thick saliva, and throat pain. Before starting radiation therapy, you'll also go to a specialized dentist or dental oncologist for an exam. Radiation therapy has

"I'm not claustrophobic, but the immobilization mask is tight. Getting radiation therapy only takes about 6 to 8 minutes on the table each day. Keeping my eyes closed and listening to some good music allowed me to withstand being immobilized."



many long-term and life-changing side effects that are best addressed ahead of time.

Types of radiation therapy

There are many different types of radiation therapy that can be used to treat mouth cancer. The types of radiation therapy include internal radiation therapy and external beam radiation therapy (EBRT). Internal radiation therapy is when radiation is placed inside the body (in wires, pellets, molds, or rods) either directly in the tumor or near it. EBRT is when radiation therapy is directed at the tumor and delivered to the outside of your body where it passes through the skin to reach the cancer (most radiation therapy given for mouth cancer is EBRT).

There are many kinds of EBRT, which include intensity-modulated radiation therapy (IMRT), proton beam therapy, stereotactic body radiotherapy (SBRT), and 3D-conformal radiation therapy (3D-CRT).

The different types of radiation therapy you might receive are described in **Guide 3**.

What is systemic therapy?

Systemic therapy is treatment that travels through the bloodstream to treat cancer cells all over the body. Chemotherapy, immunotherapy, and targeted therapy are all types of systemic therapy. Your treatment plan (also called a treatment **regimen**) will describe the specific dose, schedule, and length of time treatment(s) will be given.

All treatments listed in this guide are recommended and appropriate. When helpful, NCCN experts also assign a level of preference to their recommendations for systemic therapies. There are 3 levels of preference:

- **Preferred therapies** have the most evidence they may work better and be safer than other therapies.
- **Other recommended therapies** can provide effective results but may have less evidence, more side effects, or may not work quite as well as preferred therapies.
- **Therapies used in certain cases** work best for individuals with specific cancer features or health circumstances.

Later chapters describe some of the specific treatments that are recommended for mouth cancer. They will say whether the treatment is a preferred regimen.

“The effects of radiation therapy are cumulative, so while you may look and feel okay by the end of your cycle, the side effects will continue for weeks afterward. My skin was red and burned at the end of radiation, but it got much worse in the weeks after I was done. Same with the mouth ulcers.”

Chemotherapy and chemoradiation

Chemotherapy kills fast-growing cells throughout the body, including cancer cells and some normal cells. Sometimes, chemotherapies are used in combination with other systemic therapies. This is called multiagent or multidrug chemotherapy.

Chemotherapy can also be given at the same time as radiation therapy or very close to when radiation therapy is given (this is called chemoradiation or concurrent chemoradiation).

How often will I get chemotherapy?

Chemotherapy is given in cycles that include treatment days and rest days. This allows your body to recover before you start the

Guide 3
Types of radiation therapy that may be given for mouth cancer

Intensity-modulated radiation therapy (IMRT)	• Uses an advanced computer software program that plans and delivers a precise dose of radiation. • Can change the strength of the radiation beams, so nearby healthy tissue is protected, and the tumor can get higher doses of radiation. • A preferred way to give radiation therapy to people with mouth cancer.
Proton beam therapy (PBT)	• A technology that delivers radiation with charged particles to a well-defined treatment area (the tumor and a little bit of the surrounding area). • It can deliver the radiation dose while giving a lower dose to normal tissue. • May cause fewer side effects because the healthy surrounding tissue isn't exposed to as much radiation.
Stereotactic body radiotherapy (SBRT)	• A radiation technique that is highly accurate targeting tumors from many beam positions, with very high doses of precise radiation given. • Because higher doses of radiation are given, fewer treatment sessions are needed.
3D-conformal radiation therapy (3D-CRT)	• Uses a CT scan of your body to create the radiation treatment plan. • Beams of radiation are delivered to the treatment area and a little more space around it, matching the tumor's size and shape.
Brachytherapy	• A type of internal radiation therapy that temporarily or permanently implants radioactive material in or near tissue that needs to be treated. The radiation can be placed in wires, pellets, molds, or rods. • Allows for delivery of high doses of radiation to a well-defined area, while the dose to the surrounding organs is relatively low. • It may be used for people with tongue cancer in particular.

next treatment cycle. Cycles vary in length depending on which drugs are used, but a cycle is usually 14, 21, or 28 days. The number of treatment days per cycle and the total number of cycles you'll have varies based on which chemotherapy you receive.

Targeted therapy

Targeted therapy is a type of treatment that targets specific or unique features of cancer cells (such as certain genetic mutations). There are many different types of targeted therapy. Some targeted therapies are also considered immunotherapies since they attack the cancer cells while using the immune system.

Immunotherapy

Immunotherapy is a type of treatment that uses your immune system to find and kill cancer cells. It's given in certain cases to people with mouth cancer. Pembrolizumab (Keytruda) is an immunotherapy drug that may be given before and/or after surgery, or in combination with radiation therapy or chemotherapy. Nivolumab (Opdivo) is another immunotherapy drug that's sometimes used to treat mouth cancer.

For more information about the side effects of immunotherapy, see *NCCN Guidelines for Patients: Immunotherapy Side Effects: Immune Checkpoint Inhibitors*. This guideline is available at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



Clinical trials

A clinical trial is a type of medical research study. After being developed and tested in a lab, potential new ways of fighting cancer need to be studied in people.

If found to be safe and effective in a clinical trial, a drug, device, or treatment approach may be approved by the U.S. FDA.

Everyone with cancer should carefully consider all of the treatment options available for their cancer type, including standard treatments and clinical trials. Talk to your doctor about whether a clinical trial may make sense for you.

Phases

Most cancer clinical trials focus on treatment and are done in phases.

- **Phase 1** trials study the safety and side effects of an investigational drug or treatment approach.
- **Phase 2** trials study how well the drug or approach works against a specific type of cancer.
- **Phase 3** trials test the drug or approach against a standard treatment. If the results are good, it may be approved by the FDA.
- **Phase 4** trials study the safety and benefit of an FDA-approved treatment.

Who can enroll?

It depends on the clinical trial's rules, called eligibility criteria. The rules may be about age, cancer type and stage, treatment history, or general health. They ensure that participants are alike in specific ways and that the trial is as safe as possible for the participants.

Informed consent

Clinical trials are managed by a research team. This group of experts will review the study with you in detail, including its purpose and the risks and benefits of joining. All of this information is also provided in an informed consent form. Read the form carefully and ask questions before signing it. Take time to discuss it with people you trust. Keep in mind that you can leave and seek treatment outside of the clinical trial at any time.

Will I get a placebo?

Placebos (inactive versions of real medicines) are almost never used alone in cancer clinical trials. It is common to receive either a placebo with a standard treatment, or a new drug with a standard treatment. You will be informed, verbally and in writing, if a placebo is part of a clinical trial before you enroll.

Are clinical trials free?

There is no fee to enroll in a clinical trial. The study sponsor pays for research-related costs, including the study drug. But you may need to pay for other services, like transportation or childcare, due to extra appointments. During the trial, you will continue to receive standard cancer care. This care is often covered by insurance.



Finding a clinical trial

In the United States

NCCN Cancer Centers
NCCN.org/cancercenters

The National Cancer Institute (NCI)
cancer.gov/about-cancer/treatment/clinical-trials/search

Worldwide

The U.S. National Library of Medicine (NLM)
clinicaltrials.gov

Need help finding a clinical trial?

NCI's Cancer Information Service (CIS)
1.800.4.CANCER (1.800.422.6237)
cancer.gov/contact

Key points

- Common treatments for mouth cancer include surgery, radiation therapy, systemic therapy (treatment that works throughout the whole body), chemoradiation (chemotherapy given in combination with radiation therapy), and clinical trials (medical research studies testing new ways of fighting cancer).
- Types of systemic therapy include chemotherapy, immunotherapy (treatment that uses your immune system to find and kill cancer cells), and targeted therapy (treatment that targets specific or unique features of cancer cells).
- NCCN experts recommend that everyone see a head and neck surgical oncologist before starting treatment.
- Your care team will include many different health care providers, such as oncologists; dentists; otolaryngologists, who are sometimes called ear, nose, and throat (ENT) doctors; oral and maxillofacial surgeons; plastic or reconstruction surgeons; specialized dentists; speech pathologists; oncology social workers; nurses; mental health care providers; and nutritionists.
- Surgery can remove mouth cancers in different ways depending on the circumstances, such as the size and location of the tumor. When planning for surgery, ask how your breathing, swallowing, speaking, chewing, and appearance might be affected. Some people have lymph nodes removed in addition to the tumor, and more than one surgery may be needed.
- Radiation therapy uses high-energy x-rays, photons, electrons, protons, and other sources to kill cancer cells and shrink tumors. Before starting radiation therapy, you'll see a specialized dentist or dental oncologist for an exam.
- Different types of radiation therapy include external beam radiation therapy (EBRT) and internal radiation therapy (such as brachytherapy). There are many kinds of EBRT, including intensity-modulated radiation therapy (IMRT), proton beam therapy, stereotactic body radiotherapy (SBRT), and 3D-conformal radiation therapy (3D-CRT).

Questions to ask

- How long will treatment be given for? If I'm having surgery, will I get other treatments before and after surgery?
- What type of radiation therapy is best for me and why? Can you explain the pros and cons of the different types of radiation therapy?
- Is a clinical trial an option for me?
- What's your experience treating head and neck cancer, and mouth cancer in particular? Have you treated people with a tumor like the one I have?
- Who will check in with me and talk with me about the treatment plan as time goes on and I start treatment? Is there a number I can call when I have questions?

5

Treating early-stage and locally advanced mouth cancers

33 Early-stage mouth cancer treatments

34 Locally advanced mouth cancer treatments

35 Follow-up care

36 Key points

36 Questions to ask

Surgery is the preferred treatment for early-stage and locally advanced mouth cancer. After you receive your first treatment, you'll either start the follow-up part of care or receive other treatments.

To figure out what treatment is best for you, your care team will consider the stage of the cancer, location of the tumor, tumor depth, and if any lymph nodes are cancerous. Other factors, such as your overall health, will also be taken into account during decision-making.

Early-stage mouth cancer treatments

Early-stage (stage 1 or 2) mouth cancer is when:

- Cancer isn't found in any lymph nodes
- The tumor is 4 centimeters (cm) or less and has a depth of invasion of 1 cm or less (for comparison, 4 cm is the size of a walnut and 1 cm is the size of a pea)

The first treatment options for early-stage mouth cancer are:

- Surgery (preferred)
- Radiation therapy

In addition to removing the tumor during surgery, a lymph node biopsy might be done (during a sentinel lymph node biopsy procedure) or lymph nodes might be removed (during a neck dissection procedure).

Imaging scans will be done after you've received your first treatment to see how the cancer responded to treatment.

After radiation therapy or surgery, if there are no cancerous lymph nodes left, no cancer in the area where the tumor was located, and your care team doesn't see any other aggressive features, then you'll move onto the follow-up part of care (described later in this chapter).

If you had surgery and cancer is found afterward, then you might get more treatment with:

- Radiation therapy plus systemic therapy (cisplatin is preferred, but docetaxel can be given if you can't have cisplatin)
- Radiation therapy alone
- More surgery, if possible

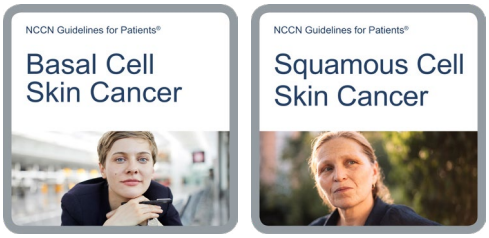
It's recommended that people who receive radiation therapy or chemotherapy with radiation after surgery receive their radiation therapy within 6 weeks after surgery. If it's determined that you need radiation therapy, it's also very important to see the dental oncologist as soon as possible. Having radiation therapy within the NCCN recommended timeframe often depends on recommendations from the dental oncologist.

If you had radiation therapy and cancer is found afterward, then you may get:

- Surgery
- Treatment for recurrent or persistent mouth cancer (described in the next chapter on page 41)

If there are tumors in the mouth area that are considered skin cancer

Simple lip lesions (abnormal areas of tissue on the outside part of the lips) that are stage T1 or T2 (see *Chapter 3: Staging for mouth cancer* to learn more) are treated as non-melanoma skin cancers. They're usually treated with surgery followed by radiation therapy. More information on the treatment of non-melanoma skin cancers can be found in *NCCN Guidelines for Patients: Basal Cell Skin Cancer* and *NCCN Guidelines for Patients: Squamous Cell Skin Cancer* at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



Locally advanced mouth cancer treatments

Locally advanced (stage 3 or 4a) mouth cancer is when:

- Cancer may have spread to nearby structures
- Cancer spread to 1 or more lymph nodes, but hasn't spread to lymph nodes outside the neck or areas farther away in the body

Treatment options for locally advanced mouth cancer are shown in **Guide 4**.

Guide 4
Treatments for locally advanced mouth cancer

First treatment options:

- Surgery (preferred) (the immunotherapy drug Pembrolizumab may be given before surgery for certain people who have cancer cells with the PD-L1 protein)
- Clinical trial
- If you aren't getting surgery, you'll receive treatment for very advanced head and neck cancer, which is described in *Chapter 6: Treating very advanced mouth cancer*

Second treatment options:

- If you received Pembrolizumab (Keytruda) before surgery, you'll get radiation therapy plus Pembrolizumab (with or without cisplatin) followed by Pembrolizumab
- Radiation therapy
- Radiation therapy plus systemic therapy (Cisplatin is preferred, but Docetaxel may be given if you can't have Cisplatin)
- More surgery (if there's still evidence of cancer in the area where surgery was)

After second treatments:

- Start the follow-up part of care
- Receive treatment for recurrent or persistent cancer (see page 41 in *Chapter 6: Treating very advanced mouth cancer*)

Follow-up care

After treatment ends, you'll enter the follow-up part of care. General follow-up includes regular doctor visits to check for late side effects and signs that cancer has returned (called recurrence). It's important to contact your doctor right away if you notice any changes in your head or neck. The recommended follow-up care you'll receive is described in **Guide 5**.

Guide 5
Follow-up care for mouth cancer

Medical history and physical exam, including a complete head and neck exam and mirror and fiberoptic exam:

- Every 1 to 3 months for the first year
- Every 2 to 6 months for the second year
- Every 4 to 8 months for years 3 through 5
- Once every year after 5 years has passed

Imaging scans

Dental exam of areas that received radiation therapy

Ultrasound of the neck if it was treated with radiation therapy

A survivorship care plan will be created within 1 year of completing treatment. During survivorship, you'll see a head and neck oncologist and your primary care doctor to check on your health (your primary care doctor will also give you any necessary vaccines).

Blood tests to look at thyroid-stimulating hormone (TSH) levels every 6 to 12 months, if needed

Supportive care (given as needed):

- Speech, hearing, and swallowing evaluation and rehabilitation
- Nutrition evaluation and rehabilitation
- Ongoing screening for distress and depression
- Help to quit smoking and reduce alcohol consumption
- Swelling (also called lymphedema) evaluation and rehabilitation

Key points

- Early-stage mouth cancer is stage 1 or 2. This means cancer isn't found in any lymph nodes, the tumor is 4 centimeters (cm) or less, and the tumor has a depth of invasion of 1 cm or less (4 cm is the size of a walnut; 1 cm is the size of a pea).
- Surgery is the preferred treatment for early-stage mouth cancer, and if you aren't getting surgery, you may get radiation therapy.
- Locally advanced mouth cancer is stage 3 or 4a. This means that cancer may have spread to nearby structures and has spread to 1 or more lymph nodes. However, cancer hasn't spread to lymph nodes outside the neck area or areas farther away in the body.
- Surgery is the preferred treatment for locally advanced mouth cancer, and a clinical trial is another option. Certain people can receive immunotherapy before surgery, too. If you aren't getting surgery, you'll receive treatment for very advanced head and neck cancer, which is described in the next chapter.
- The type of surgery you get depends on the location of the tumor, depth of invasion, and imaging test results. In addition to removing the tumor, lymph nodes might be removed or a lymph node biopsy might be done.
- Other treatments can be given after surgery for early-stage and locally advanced mouth cancer. These treatments include systemic therapy with radiation therapy, radiation therapy alone, or more surgery.
- After treatment ends, you'll enter the follow-up part of care. General follow-up includes regular and frequent doctor visits to check for late side effects and signs that cancer has returned.

Questions to ask

- What will be removed during surgery? Will surgery affect how I speak or swallow?
- How long will I stay in the hospital after surgery?
- How will treatment affect my ability to taste, smell, chew, breathe, talk, or swallow?
- Will I have reconstruction surgery after surgery to remove the tumor? Will I have a scar and where will it be located?
- Will I go to different places for surgery and radiation therapy?

6

Treating very advanced mouth cancer

38 How treatment is chosen for very advanced mouth cancer

39 Treatments for stage 4b and unresectable (surgery isn't an option) mouth cancer

41 Treatments for recurrent or persistent mouth cancer (cancer that hasn't spread outside the head and neck)

42 Treatments for metastatic mouth cancer and recurrent or persistent mouth cancer (cancer that has spread outside the head and neck)

44 Key points

44 Questions to ask

Depending on the type of very advanced mouth cancer you have, treatment is based on if the cancer can be removed with surgery, if you've received radiation therapy, and on your general level of fitness and ability to perform daily self-care tasks (this is called performance status). This chapter explains what types of mouth cancer are considered very advanced and how they're treated.

Very advanced mouth cancer can be cancer that:

- Is still present after treatment (**persistent**)
- Came back after it went away (**recurrent**)
- Spread to areas outside the head and neck (**metastatic**)
- Can't be removed with surgery (**unresectable**)

Cancer that is stage 4b or 4c is considered very advanced.

Importantly, treatments like systemic therapy and systemic therapy with radiation therapy may cause an unresectable tumor to become resectable. This means that, in some cases, surgery might be possible after you receive your first treatment. It's also important to know that NCCN recommends that people who are getting radiation therapy or chemotherapy with radiation after surgery receive their radiation therapy within 6 weeks after surgery.

Your care team will tell you if the mouth cancer is resectable or unresectable.

Resectable

Resectable cancer **can be removed** by surgery.

Unresectable

Unresectable cancer **can't be removed** by surgery. Sometimes, it's not safe to remove the tumor because it's too close to vital organs or structures. You also may not want surgery or may have other health conditions that prevent surgery.

How treatment is chosen for very advanced mouth cancer

The treatment you receive for very advanced mouth cancer can depend on whether you're able to receive surgery, whether you've had radiation therapy already, and what your general level of fitness and ability to perform daily self-care tasks is (this is called performance status). Although your care team considers performance status when making

treatment recommendations, they might not mention the term performance status when talking with you.

These are the performance status (sometimes written as PS) rankings or scores your health care team will use to help pick a treatment for you:

- **Performance status 0:** You're fully active and able to do the same activities you've always done.
- **Performance status 1:** You can do self-care tasks and lighter or easier work.
- **Performance status 2:** You can do self-care tasks and spend most of the time when you're awake out of bed, but you aren't able to do any work.
- **Performance status 3:** You need help with some self-care tasks and spend most of the time when you're awake sitting or in bed.
- **Performance status 4:** You need help with all self-care tasks and are in a chair or bed when you're awake.

Treatments for stage 4b and unresectable (surgery isn't an option) mouth cancer

If you can't receive surgery or have just been diagnosed with stage 4b mouth cancer, then a clinical trial is the preferred treatment option. If a clinical trial is available and is the right fit, it's recommended that you get treatment as part of the trial (to learn more about clinical trials see page 29 in *Chapter 4: Types of treatment*).

If you aren't getting therapy in a clinical trial, then the treatment options are picked based on performance status.

First treatments

If your performance status is **0 or 1**, the first treatment options are:

- Systemic therapy given with radiation therapy
- Systemic therapy given before radiation therapy or before systemic therapy plus radiation therapy

If your performance status is **2**, the first treatment options are:

- Systemic therapy given with radiation therapy (preferred)
- Radiation therapy given alone

If your performance status is **3 or 4**, the first treatment options are:

- Systemic therapy with one drug only (for people with a performance status of 3)
- Palliative radiation therapy (radiation therapy that's given to reduce the symptoms of cancer and pain)
- Supportive care

The systemic therapies that may be given are listed in **Guide 6**.

After the first treatment

After you receive your first treatment, your care team will check to see how the cancer responded to it. Your care team will check on you regularly and do imaging scans to see how the cancer responded to treatment. If the cancer went away, you'll start the follow-up part of care (described on page 35 in *Chapter 5: Treating early-stage and locally advanced mouth cancers*). If the cancer didn't go away, then you'll receive surgery if possible or treatment for recurrent or persistent mouth cancer (described in the next section).

"When I was undergoing treatment, I found that first-hand accounts of people with similar cancers were very helpful to hear. I'm a firm believer in the power of words and shared stories to help people heal."

Guide 6
Systemic therapies given with radiation therapy or before radiation therapy

	Systemic therapies that are given with radiation therapy (also known as concurrent therapy or therapies given at the same time)	Systemic therapies that are given before radiation therapy or before systemic therapy plus radiation therapy (also known as induction therapy)
Preferred therapies	• High-Dose Cisplatin • Carboplatin/Infusional Fluorouracil	• Cisplatin/Docetaxel/Infusional Fluorouracil
Other recommended therapies	• Weekly Cisplatin	• Cisplatin/Infusional Fluorouracil/Paclitaxel • Pembrolizumab followed by Pembrolizumab plus radiation therapy (with or without Cisplatin) followed by Pembrolizumab again (for certain people)
Therapies used in certain cases	• Docetaxel (if you can't have Cisplatin)	

Treatments for recurrent or persistent mouth cancer (cancer that hasn't spread outside the head and neck)

Cancer that came back after it went away (recurrent cancer) and cancer that hasn't gone away after treatment (persistent cancer) are treated the same way.

Recurrent or persistent mouth cancer treatment options are based on if:

- You had radiation therapy before
- The tumor can or can't be removed with surgery (resectable or unresectable)
- The cancer has spread to other areas (metastasized)

Treatments given if you haven't had radiation therapy yet

If you haven't received radiation therapy yet and the cancer is **unresectable**, then you'll receive the treatments explained in the "Treatments for stage 4b and unresectable mouth cancer" section on page 39.

If you haven't received radiation therapy yet and the cancer is **resectable**, then you'll either get:

- Systemic therapy given with radiation therapy (systemic therapies are listed in **Guide 6** on page 40).
- Surgery. Then, you'll either enter the follow-up part of care or receive more treatment with radiation therapy alone or systemic therapy plus radiation therapy. (Cisplatin is preferred, but docetaxel can be given if you can't have cisplatin.)

Treatments given if you have had radiation therapy already

If you've had radiation therapy before and the cancer is **unresectable**, then you'll either get:

- Treatment in a clinical trial (preferred)
- More radiation therapy if possible with or without systemic therapy (the systemic therapy would be cisplatin)
- The systemic therapy treatments described in the next section, "Treatments for metastatic mouth cancer and recurrent or persistent mouth cancer," on page 42
- Supportive care

If you've had radiation therapy before and the cancer is **resectable**, then you'll either get:

- Treatment in a clinical trial (preferred)
- Surgery with or without radiation therapy or systemic therapy with radiation therapy (cisplatin is preferred, but docetaxel can be given if you can't have cisplatin)

Treatments for metastatic mouth cancer and recurrent or persistent mouth cancer (cancer that has spread outside the head and neck)

Metastatic disease is cancer that's spread to distant areas of the body. **A clinical trial is the preferred treatment for metastatic cancer.** Depending on your overall health and ability to perform daily activities (performance status), treatment options may also include:

- Systemic therapy with either 1 drug or a combination of drugs
- Palliative (helping to relieve symptoms) surgery or palliative radiation therapy (given to relieve pain, discomfort, swallowing difficulties, and side effects caused by cancer)
- Supportive care
- Surgery, radiation therapy, or systemic therapy with radiation therapy (for certain people)

The systemic therapies you could receive are listed in **Guide 7**.

"I had to attempt to re-learn simple things like talking, eating, and breathing. I wanted to rush it. I wanted to be able to eat and talk and do the things I normally would do. My advice is be patient and try to accept things might not be the same as they were before treatment."

Guide 7
Systemic therapy options for recurrent, unresectable, or metastatic mouth cancer

Preferred therapies

- Carboplatin/Infusional Fluorouracil plus Pembrolizumab
- Cisplatin/Infusional Fluorouracil plus Pembrolizumab
- Pembrolizumab (for certain people)
- Nivolumab or Pembrolizumab can also be given after the treatments listed above if you didn't get them yet, but only if cancer grows/spreads during or after treatment with Cisplatin or Carboplatin

Other recommended therapies

Combined drugs:

- Carboplatin/Infusional Fluorouracil plus Cetuximab
- Cisplatin/Infusional Fluorouracil plus Cetuximab
- Cisplatin plus Cetuximab
- Cisplatin or Carboplatin/Docetaxel or Paclitaxel
- Cisplatin/Infusional Fluorouracil
- Cisplatin or Carboplatin/Docetaxel plus Cetuximab
- Cisplatin or Carboplatin/Paclitaxel plus Cetuximab
- Cisplatin/Docetaxel plus Pembrolizumab
- Carboplatin/Docetaxel plus Pembrolizumab
- Cisplatin/Paclitaxel plus Pembrolizumab
- Carboplatin/Paclitaxel plus Pembrolizumab

Drugs given alone:

- Capecitabine
- Carboplatin
- Cetuximab
- Cisplatin
- Docetaxel
- Infusional Fluorouracil
- Methotrexate
- Paclitaxel

Therapies used in certain cases

- Paclitaxel plus Cetuximab
- Cetuximab plus Nivolumab (for certain people)
- Cetuximab plus Pembrolizumab (for certain people)
- Pembrolizumab (for certain people)

Key points

- Very advanced mouth cancer is cancer that's stage 4b or 4c. This includes cancer that's recurrent (came back after it went away), metastatic (spread to areas outside the head and neck), persistent (still there after treatment), or unresectable (can't be removed with surgery).
- Resectable cancer can be removed with surgery, and unresectable cancer cannot be. Cancer may be unresectable for a few reasons: It might not be safe to remove the tumor because it's too close to vital organs or structures, you might not want surgery, or you may have other health conditions that prevent surgery.
- Treatments like systemic therapy and systemic therapy with radiation therapy may cause an unresectable tumor to become resectable.
- The treatment you receive depends on what type of very advanced mouth cancer you have, your general level of fitness, ability to perform daily self-care tasks (called performance status), and whether you're able to receive surgery. Other factors may be considered, too.
- Treatments can include clinical trials, systemic therapy, systemic therapy plus radiation therapy, radiation therapy, surgery, and supportive care.
- Clinical trials are recommended for many people with very advanced mouth cancer. Please ask your care team about this option. Clinical trials may not be available at your current cancer center, so ask if any are available near you.

Questions to ask

- What treatments do you recommend and why? How can I prepare for treatment?
- How will treatment affect my ability to taste, smell, chew, breathe, speak, or swallow?
- What should I do if I notice changes in my health?
- What are the side effects of my treatments? How are these side effects treated, and who should I call on weekends and nights if I have side effects or other issues? Will my care team be able to communicate with the emergency department or urgent care team?
- Will I be able to get surgery? If so, what will that look like since the cancer is advanced? What precautions do we need to take?

7
Supportive care

46 What is supportive care?

46 Treating common side effects

47 Additional help for speech and swallowing, wound and pain management, and dental care

49 Nutritional support

49 Help to stop smoking and drinking alcohol

49 Key points

50 Questions to ask

Supportive care is given to improve your quality of life. It helps manage the symptoms of mouth cancer and the side effects of treatment. Supportive care can also help with other needs, such as paying for care, getting transportation to care, and more. This chapter talks about the possible side effects of mouth cancer treatments and how they're treated.

What is supportive care?

Supportive care is an important part of cancer care. The goal is to improve your quality of life during and after cancer treatment. Supportive care is for everyone with cancer and their families, not just for those at the end of life. It's also known as palliative care.

Supportive care includes a wide range of services. It prevents or manages the symptoms of cancer and the side effects of cancer treatment, like pain and cancer-related fatigue. It also addresses the mental, social, emotional, and spiritual concerns faced by people with cancer.

Supportive care provides help with additional needs, such as:

- Making treatment decisions
- Coordinating your care
- Paying for care
- Planning for advance care and end of life

Read more about the types of support you may receive in *NCCN Guidelines for Patients: Palliative Care*, available at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



Treating common side effects

All cancer treatments can cause unwanted health issues or side effects. Side effects depend on many factors, such as the particular treatments you get. Some side effects may be harmful to your health while others are just unpleasant. Your care team can help you manage side effects, and it's important to tell them if you have any new or worsening symptoms.

Supportive care can help relieve symptoms and pain caused by cancer.

Some possible side effects of mouth cancer treatment are described next.

Dry mouth

Dry mouth (medically called xerostomia) is very common in people with mouth cancer. It can last for weeks, years, or may be permanent. This is because radiation therapy to the mouth can damage your salivary glands, causing your body to make less spit (saliva) than before. As a result, your mouth can become dry.

Drinking plenty of water; using special mouth rinses; and avoiding beverages with caffeine, alcohol, or sugar may help. Your care team may recommend that you avoid sugar-based candies or gum because they can lead to dental problems. Products, such as lozenges and chewing gum, that contain the sugar substitute xylitol are safe to use.

Swelling (lymphedema)

Lymphedema is when the lymphatic system isn't able to drain fluid properly, so it builds up and causes swelling. Damage or blockages in the lymphatic system can cause this to happen. Cancers that block lymph vessels can also cause lymphedema.

Swelling usually develops slowly over time. It may develop during treatment, or it may start years after treatment. If you have lymphedema, you may be referred to a physical therapist or an occupational therapist. The swelling can be reduced by exercise, massage, and compression devices.

Hearing and balance issues (audiology)

Hearing loss can be mild or serious. Your care team will work with you to assess your hearing status and manage any hearing loss. They may recommend that you see an audiologist, who is an expert at diagnosing, treating, and managing problems with hearing or balance.

Skin reactions (sometimes called radiation burn)

The skin reaction many people call radiation burn (also known as radiation dermatitis) is a very common side effect. It's when the skin changes color and/or is dry, itchy, peeling, blistering, or swollen after radiation therapy.

Your care team will help you find the best treatment for this type of skin reaction. It's important not to apply ointments, lotions, or creams before you speak with your radiation oncology team.

Distress and depression

Depression, anxiety, and sleeping issues are common after a cancer diagnosis or during treatment. Talk to your care team and the people you feel most comfortable with about how you're feeling. There are services, people, and medicines that can help you.

Additional help for speech and swallowing, wound and pain management, and dental care

Speech and swallowing therapy

Mouth cancer and its treatment, including surgery, can affect talking and swallowing. If treatment might affect or has already affected speech and/or swallowing, your care team may do a formal speech and swallowing evaluation. They'll examine your oral health, dental health, and nutrition. You'll also receive dietary counseling when treatment starts.

Throughout treatment, your care team will check on you to help with side effects, and some people may even see speech-language pathologists.

To help with throat movement, you may be given range-of-motion and strengthening exercises. Certain people might receive vitamin E, the drug pentoxifylline (used to improve blood flow), and/or custom mouth devices.

Additionally, depending on the size and location of the tumor and the reconstruction surgery that's done, some people may need a tracheostomy. A tracheostomy is a temporary or permanent opening a surgeon makes through your neck into your windpipe (trachea) that lets air in so you can breathe better. Different specialists, such as your head and neck surgeon and a speech language pathologist, can help during and after this process. Tracheostomy tubes may be needed before or after surgery.

Wound and pain management

Your care team will help you manage any wounds, especially open wounds, caused by mouth cancer or its treatment. It's important to keep the wound area clean. Ask your care team how to care for the wounds so they don't get infected. There are certain mouth rinses that you can use and different types of dressings that can be used to wrap the wound.

Additionally, tell your care team about any pain or discomfort you experience. You might meet with a palliative care specialist or pain specialist to manage pain. Some people benefit from palliative radiation therapy, which is radiation therapy that's given to help relieve cancer symptoms. Certain medicines can also help.

Dental care

Seeing a dentist throughout treatment for mouth cancer is very important, and specialized dentists are a crucial part of your care team. A maxillofacial prosthodontist is a dental specialist who designs, fabricates, and fits prosthetic devices to restore facial and oral structures that were lost or damaged due to cancer surgery, trauma, birth defects, or disease. These prosthetic devices include artificial palates, jaws, eyes, ears, or noses. Maxillofacial prosthodontists work as part of your multidisciplinary team of oncologists and surgeons to help you regain function (chewing, speaking, swallowing) and appearance after you've gotten reconstructive surgery.

Supportive care resources

More information on supportive care is available at NCCN.org/patientguidelines and on the NCCN Patient Guides for Cancer app.



Nutritional support

The side effects from mouth cancer or its treatment, and the stress of having cancer, might cause you to feel sick to your stomach (nauseated) or not hungry. Many people with mouth cancer experience weight loss. You may have a sore mouth or difficulty swallowing.

It's common for care teams to suggest you see a registered dietitian for nutrition counseling before starting treatment. A dietician can help make sure you're getting the nutrients you need. In certain cases, some people who have had serious weight loss, ongoing dehydration, or pain eating will get a feeding tube. If you need a feeding tube, a dietitian will help you manage feedings through the tube. These tubes can be placed through the nose into your stomach, or they may be directly inserted into your stomach.

Help to stop smoking and drinking alcohol

Smoking and drinking alcohol increases the risk of developing oral cancers, can interfere with treatment, and affect your health. Your care team will support you and provide you with resources to help with quitting. It's important to know that smoking impacts your body's response to cancer medicine, can damage cells in your body, and can make the side effects of treatment worse.

Key points

- Supportive care is given to improve your quality of life. It helps manage the symptoms of mouth cancer and the side effects of treatment.
- Supportive care also helps with other needs, such as paying for care, getting transportation to care, and more.
- All cancer treatments can cause unwanted health issues or side effects. Side effects depend on many factors, such as the particular treatments you get.
- Common side effects of mouth cancer and its treatment include dry mouth (xerostomia), swelling (lymphedema), hearing and balance issues (audiology), skin reactions (sometimes called radiation burn), and distress and depression.
- You'll get additional help for speech, swallowing, wound care, dental needs, and prosthetics.
- Your care team will also provide nutritional support and help you stop smoking and drinking alcohol if needed.

Questions to ask

- What are the side effects of my treatment and/or the surgery I'm getting? How are they treated and what can I expect?
- How can I best prepare for treatment and surgery?
- What should I do if I notice changes in my condition? Is there a number I can call to reach my doctors?
- What should I do if I notice side effects on weekends and other non-office hours?
- Will my care team be able to communicate with the emergency department or urgent care team if I need to get care there?



Take our survey and help make the NCCN Guidelines for Patients better for everyone!

NCCN.org/patients/comments

"

You'll get through this! It may take a long time to heal, so be patient and do one day at a time. There are many resources and survivors that are available, just reach out when you're ready. I wasn't a 'group' person, but I found the conversations, either as a group or as 'one-on-one' extremely beneficial."

8
Other resources

52 What else to know

52 What else to do

52 Where to get help

53 Questions to ask

Want to learn more? Here's how you can get additional help.

What else to know

This guide helps you know your options so you can make informed decisions and improve your cancer care. But it's not the only resource that you have.

Ask for as much information and help as you need. Many people are interested in learning more about:

- What surgery is like and how it will affect how they breathe, swallow, and talk
- What immobilization masks are like and how long they'll have to wear one when receiving radiation therapy
- How long treatment will take and how eating and talking will be affected during treatment
- What the chance is that the cancer could spread to lymph nodes in the head and neck or other parts of the body
- Finding an oncologist who specializes in treating mouth cancer and finding other specialized doctors, such as oral surgeons and otolaryngologists (sometimes called ENT or ear, nose, and throat doctors)

What else to do

Your health care center can help you with next steps. It often has on-site resources to help meet your needs and find answers to your questions. Health care centers can also inform you of resources in your community.

In addition to help from your providers, the resources listed in the next section provide support for many people like yourself.

Where to get help

Look through the list below and visit the provided websites to learn more about these organizations.

Bag It
bagitcancer.org

Bone Marrow & Cancer Foundation
bonemarrow.org

CanCare
cancare.org

Cancer*Care*
cancercare.org

Cancer Hope Network
cancerhopenetwork.org

GRACE
cancergrace.org

Head and Neck Cancer Alliance
headandneck.org

HPV Cancers Alliance
hpvca.org

Imerman Angels
imermanangels.org

Oral Cancer Foundation
oralcancerfoundation.org

Support for People with Oral and Head and Neck Cancers
spohnc.org

THANC Foundation
thancfoundation.org

Triage Cancer
triagecancer.org

Questions to ask

- Who can I talk to about help with housing, food, and other needs?
- How can I connect with others and build a support system?
- How can I reach my doctors after hours or on weekends?
- Can you help me learn more about clinical trials and which ones are available?
- Can I get a second opinion? How do I do that?



Let us know what you think!

Please take a moment to complete an online survey about the NCCN Guidelines for Patients.
NCCN.org/patients/response



Words to know

adjuvant treatment
More treatment that's given after the main treatment (such as surgery) to reduce the risk of cancer coming back.

alveolar ridge
The bony, raised area of the upper and lower jaw that holds the sockets of the teeth.

biopsy
A procedure that removes fluid or tissue samples from the body to be tested for a disease.

buccal mucosa
The inner part of the cheeks.

chemotherapy
Treatment that kills cancer cells throughout the body.

clinical trial
A type of research that studies investigational tests or treatments in people.

computed tomography (CT) scan
An imaging scan that uses x-rays to take many images of your body from different angles.

contrast
A substance put into your body to make the pictures clearer during imaging scans.

dentist
A doctor who specializes in caring for teeth, gums, and tissue in the mouth.

diagnosis
The identification of an illness or disease based on tests.

endoscopy
A procedure that's done while you're under anesthesia where your doctor guides a long, thin tube called an endoscope (scope) into your body to take pictures or videos of the organs and body parts.

external beam radiation therapy (EBRT)
When radiation therapy is directed at the tumor and delivered to the outside of your body where it passes through the skin to reach the cancer. Most radiation therapy given for mouth cancer is EBRT, and there are many kinds of EBRT which include intensity-modulated radiation therapy (IMRT), proton beam therapy, stereotactic body radiotherapy (SBRT), and 3D-conformal radiation therapy (3D-CRT).

follow-up care
The part of care that happens after treatment has ended where you go to regular doctor visits to check for late side effects and signs that cancer has returned.

hard palate
The front, bony part of the roof of the mouth.

imaging scans
Tests that make pictures (images) of the insides of the body.

immobilization mask
A form-fitting device resembling a hockey goalie mask that's made for you to keep your head, and possibly your shoulders, still during treatment.

immune system
The body's natural defense against infection and disease.

immunotherapy
A type of treatment that uses the immune system to fight cancer.

internal radiation therapy
When radiation is placed inside the body either directly in the tumor or near it (such as in pellets or rods). Brachytherapy is a type of internal radiation therapy.

lymph node
A small, bean-shaped, disease-fighting structure in the immune system. There are hundreds of lymph nodes in the body.

lymphedema
A condition where the lymphatic system isn't able to drain fluid properly, so it builds up and causes swelling.

magnetic resonance imaging (MRI) scan
An imaging scan that uses radio waves and powerful magnets to take pictures of the insides of the body.

metastasis
The spread of cancer cells from the first tumor to another part of the body.

mutation
An abnormal change in a cell's DNA.

neck dissection
A procedure that removes lymph nodes in the neck that's usually done during surgery to remove the cancer.

oncologist
A doctor who's an expert in diagnosing and treating cancer.

oral cavity
Another name for the mouth. The mouth includes the inner lip, gums, inner cheeks, front two thirds of the tongue, floor of the mouth under the tongue, bony roof of the mouth, small area behind the wisdom teeth, and alveolar ridge.

otolaryngologist
Doctors who diagnose and treat ear, nose, and throat (ENT) conditions. Some also do head and neck surgeries.

PD-L1
A protein that can be found (expressed) on the surface of cancer cells that causes your immune system to ignore cancer instead of fighting it. There are certain therapies that target PD-L1 and work well treating cancer in people whose cancer cells have PD-L1 on them.

performance status
A rating of a person's general level of fitness and ability to perform daily self-care tasks.

positron emission tomography (PET) scan
An imaging scan that shows whether the cells in your body are functioning normally or abnormally by highlighting cells that may be cancerous.

primary tumor
The first mass of cancer cells in the body.

prognosis
The likely course and outcome of a disease.

progression
The growth or spread of cancer after being tested or treated.

prosthodontist
A specialized dentist who creates artificial replacements, or prosthetics, for damaged or missing teeth. They restore teeth and do mouth reconstruction, which can help with speech, chewing, swallowing, and appearance.

radiation therapy
Treatment that uses high-energy rays (radiation) to kill cancer cells.

reconstruction surgeon
A doctor who fixes areas that were damaged during surgery.

recurrence
The return of cancer after a cancer-free period.

resectable
Cancer that can be removed with surgery.

retromolar trigone
The area behind the wisdom teeth.

sentinel lymph node biopsy
A procedure that identifies and removes the lymph node(s) that cancer cells are the most likely to spread to from the main tumor. This is usually done during surgery to remove the cancer.

side effect
An unhealthy or unpleasant physical or emotional response to treatment.

speech pathologist
A health care provider who treats speech, voice, and swallowing problems. They may help you during and/or after treatment.

staging
Rating and describing how much cancer is in the body and where it is.

supportive care
Health care given to help improve your quality of life that addresses the symptoms of cancer; side effects of cancer treatment; and mental, social, spiritual, and emotional concerns.

surgery
An operation to remove or repair a part of the body.

surgical margin
The normal-looking tissue around the edge of a tumor that's removed during surgery.

systemic therapy
Treatment that works throughout the body. Chemotherapy, targeted therapy, and immunotherapy are types of systemic therapy.

targeted therapy
A type of treatment that targets specific or unique features of cancer cells.

TNM staging system (also called The American Joint Committee on Cancer [AJCC] TNM staging system)
A system used to figure out the stage of mouth cancer. It uses the letters T (tumor), N (lymph node), and M (metastasis) to describe where the cancer is and how much of it there is.

tumor
An abnormal mass of tissue.

unresectable
Cancer that can't be completely removed by surgery.

NCCN Contributors

This patient guide is based on the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Head and Neck Cancers, Version 2.2026. It was adapted, reviewed, and published with help from the following people:

Dorothy A. Shead, MS
Assistant Vice President
Patient Information

Megan Hollasch
Medical Writer

Lisa Diehl
Production Layout Artist

The NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Head and Neck Cancers, Version 2.2026, were developed by the following NCCN Panel Members:

David G. Pfister, MD/Chair
Memorial Sloan Kettering Cancer Center

*Sharon Spencer, MD/Vice-Chair
O'Neal Comprehensive Cancer Center at UAB

Douglas Adkins, MD
Siteman Cancer Center at Barnes-Jewish Hospital and WashU Medicine

*Andrew C. Birkeland, MD
UC Davis Comprehensive Cancer Center

David M. Brizel, MD
Duke Cancer Institute

Paul M. Busse, MD, PhD
Mass General Cancer Center

Molly Cassidy, JD, EdD
Patient Advocate

Jimmy J. Caudell, MD, PhD
Moffitt Cancer Center

Anthony J. Cmelak, MD
Vanderbilt-Ingram Cancer Center

A. Dimitrios Colevas, MD
Stanford Cancer Institute

Greg Durm, MD, MS
Indiana University Melvin and Bren Simon Comprehensive Cancer Center

Carole Fakhry, MD, MPH
Johns Hopkins Kimmel Cancer Center

Renata Ferrarotto, MD
The University of Texas MD Anderson Cancer Center

Thomas J. Galloway, MD
Fox Chase Cancer Center

Jessica L. Geiger, MD
Case Comprehensive Cancer Center/ University Hospitals Seidman Cancer Center and Cleveland Clinic Taussig Cancer Institute

Christine Glastonbury, MBBS
UCSF Helen Diller Family Comprehensive Cancer Center

Wesley L. Hicks, Jr., MD
Roswell Park Comprehensive Cancer Center

Ying J. Hitchcock, MD
Huntsman Cancer Institute at the University of Utah

Antonio Jimeno, MD, PhD
University of Colorado Cancer Center

Aditya Juloori, MD
The UChicago Medicine Comprehensive Cancer Center

*Michael Kase, DMD
O'Neal Comprehensive Cancer Center at UAB

Alexander Ladenheim, MD
Yale Cancer Center/Smilow Cancer Hospital

Debra Leizman, MD
Case Comprehensive Cancer Center/ University Hospitals Seidman Cancer Center and Cleveland Clinic Taussig Cancer Institute

Ellie Maghami, MD
City of Hope National Medical Center

Loren K. Mell, MD
UC San Diego Moores Cancer Center

Bharat B. Mittal, MD
Robert H. Lurie Comprehensive Cancer Center of Northwestern University

Harlan A. Pinto, MD
Stanford Cancer Institute

*Katharine Price, MD
Mayo Clinic Comprehensive Cancer Center

James W. Rocco, MD, PhD
The Ohio State University Comprehensive Cancer Center - James Cancer Hospital and Solove Research Institute

Cristina P. Rodriguez, MD
Fred Hutchinson Cancer Center

Dipti Sajed, MD, PhD
UCLA Jonsson Comprehensive Cancer Center

David Schwartz, MD
The University of Tennessee Health Science Center

Jatin P. Shah, MD, PhD
Memorial Sloan Kettering Cancer Center

David Sher, MD, MPH
UT Southwestern Simmons Comprehensive Cancer Center

Gregory Weinstein, MD
Abramson Cancer Center at the University of Pennsylvania

*Francis Worden, MD
University of Michigan Rogel Cancer Center

Justine Yang Bruce, MD
University of Wisconsin Carbone Cancer Center

Sue S. Yom, MD, PhD
UCSF Helen Diller Family Comprehensive Cancer Center

Weining Zhen, MD
Fred & Pamela Buffett Cancer Center

NCCN

Susan Darlow, PhD
Senior Manager, Guidelines Digitization

Sarah Montgomery
Guidelines Layout Specialist

* Reviewed this patient guide. For disclosures, visit NCCN.org/disclosures.

NCCN Cancer Centers

For contact information, visit NCCN.org/cancercenters.

Abramson Cancer Center
at the University of Pennsylvania
Philadelphia, Pennsylvania

Case Comprehensive Cancer Center/
University Hospitals Seidman Cancer Center and
Cleveland Clinic Taussig Cancer Institute
Cleveland, Ohio

City of Hope National Medical Center
Duarte, California

Dana-Farber Cancer Institute
Boston, Massachusetts

Duke Cancer Institute
Durham, North Carolina

Fox Chase Cancer Center
Philadelphia, Pennsylvania

Fred & Pamela Buffett Cancer Center
Omaha, Nebraska

Fred Hutchinson Cancer Center
Seattle, Washington

Huntsman Cancer Institute at the University of Utah
Salt Lake City, Utah

Indiana University Melvin and Bren Simon
Comprehensive Cancer Center
Indianapolis, Indiana

Johns Hopkins Kimmel Cancer Center
Baltimore, Maryland

Mass General Brigham Cancer Institute
Boston, Massachusetts

Mayo Clinic Comprehensive Cancer Center
Phoenix/Scottsdale, Arizona
Jacksonville, Florida
Rochester, Minnesota

Memorial Sloan Kettering Cancer Center
New York, New York

Moffitt Cancer Center
Tampa, Florida

O'Neal Comprehensive Cancer Center at UAB
Birmingham, Alabama

Robert H. Lurie Comprehensive Cancer Center
of Northwestern University
Chicago, Illinois

Roswell Park Comprehensive Cancer Center
Buffalo, New York

Siteman Cancer Center at Barnes-Jewish Hospital
and WashU Medicine
St. Louis, Missouri

St. Jude Children's Research Hospital/
The University of Tennessee Health Science Center
Memphis, Tennessee

Stanford Cancer Institute
Stanford, California

The Ohio State University Comprehensive Cancer Center -
James Cancer Hospital and Solove Research Institute
Columbus, Ohio

The UChicago Medicine Comprehensive Cancer Center
Chicago, Illinois

The University of Texas MD Anderson Cancer Center
Houston, Texas

UC Davis Comprehensive Cancer Center
Sacramento, California

UC San Diego Moores Cancer Center
La Jolla, California

UCLA Jonsson Comprehensive Cancer Center
Los Angeles, California

UCSF Helen Diller Family Comprehensive Cancer Center
San Francisco, California

University of Colorado Cancer Center
Aurora, Colorado

University of Michigan Rogel Cancer Center
Ann Arbor, Michigan

University of Wisconsin Carbone Cancer Center
Madison, Wisconsin

UT Southwestern Simmons
Comprehensive Cancer Center
Dallas, Texas

Vanderbilt-Ingram Cancer Center
Nashville, Tennessee

Yale Cancer Center/Smilow Cancer Hospital
New Haven, Connecticut

Notes

Index

anesthesia 10–11, 15–16

biopsy 6, 10, 13, 15

  lymph node biopsy 25, 33

chemotherapy 7, 23, 27, 28–29, 33, 38

clinical trial 7, 23, 29–30, 34, 39, 41–42

contrast 14–15

CT scan 10, 13, 14–15, 28

dental 6, 10, 12, 14–15, 23, 26, 33, 35, 47–48

dentist 6, 12, 15, 23, 26, 48

diagnose 5–7, 10–13, 23, 39

dry mouth 26, 46

endoscopy 10, 15

external beam radiation therapy (EBRT) 27

fertility 10, 16

follow-up care 35

head and neck 5, 7, 10–14, 16, 19–21, 23–25, 34–35, 38, 41–42, 48, 52–53

hepatitis 10, 15–16

immobilization mask 26, 52

immunotherapy 7, 27, 29, 34

internal radiation therapy 27–28

lymphedema 35, 47

lymph node 7, 10, 12–13, 19–21, 24–25, 33–34, 52

metastatic 21, 38, 41–43

MRI scan 10, 14

mutation 29

neck dissection 25, 33

nutrition 10–11, 16, 35, 47, 49

oncologist 7, 12, 23–24, 26, 33, 35, 48, 52

oral and maxillofacial surgeons (OMFS) 23

oral cavity (also known as the mouth) 5, 6

otolaryngologist 23, 52

PD-L1 10, 15, 34

performance status 38–39, 42

persistent cancer 33–34, 38, 40–42

PET scan 10, 14–15

prognosis 5, 19

prosthodontist 23, 48

radiation therapy 7, 23–24, 26–28, 29, 33–35, 38–42, 46–48, 52

recurrent cancer 33–34, 38, 40–43

resectable 38, 41

side effects 8, 11, 23, 26–29, 35, 42, 46–47, 49

smoking 10–11, 35, 49

speaking 16, 24–25, 48

speech pathologist 23

supportive care 7, 8, 35, 39, 41–42, 46, 48

surgery 7, 11, 16, 19, 23, 24–26, 29, 33–34, 38–42, 47–48, 52

  reconstruction surgery 24, 48

surgical margin 25

swallowing 6, 10, 16, 23–25, 35, 42, 47–49, 52

systemic therapy 7, 23, 25, 27, 33–34, 38–43

targeted therapy 27, 29

TNM staging system 19

tumor 7, 19–21, 24–28, 33–34, 38, 41, 48

ultrasound 13, 35

unresectable 38–39, 41, 43



NCCN Guidelines for Patients®

Cancer care recommendations from leading experts at the
National Comprehensive Cancer Network® (NCCN®)

Mouth Cancer



The way forward starts here.

Give Now

National Comprehensive Cancer Network® Foundation

National Comprehensive Cancer Network®

3025 Chemical Road, Suite 100
Plymouth Meeting, PA 19462
215.690.0300

NCCN.org/patients – For Patients | NCCN.org – For Clinicians

PAT-N-1999-1226