CONDITION

Cancer of the tongue

Learn about tongue cancer symptoms, risk factors, diagnosis, treatment, recovery, follow-up care, and when to seek urgent medical help.

WHAT IT IS
Cancer arising in tongue tissue

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Persistent tongue sore or lump, tongue pain or bleeding, difficulty swallowing, neck lump

WHAT CAUSES IT
Often unknown, sometimes HPV infection

HOW IT IS DIAGNOSED
Biopsy

MAIN TREATMENT
Surgery, radiation, systemic treatment

CAN IT BE CURED?
Sometimes - depends on stage and spread

IS IT AN EMERGENCY?
Sometimes - trouble breathing or uncontrolled bleeding

LONG-TERM OUTLOOK
Cancer can return or spread

Overview

Cancer of the tongue begins when abnormal cells grow without normal control in tongue tissue. Most tongue cancers are squamous cell carcinomas , meaning they start in the thin, flat cells that line the mouth and throat.

The tongue has two main regions. The front two-thirds, called the oral tongue , is part of the oral cavity. The back third, called the base of the tongue , is part of the oropharynx, which is the middle section of the throat. Cancers in these regions can have different causes, symptoms, staging systems, and treatment plans.

Tongue cancer matters because the tongue is essential for speaking, chewing, swallowing, and protecting the airway. Cancer may grow into nearby tissues or spread through lymph vessels to lymph nodes in the neck. Finding and treating it before it has spread generally allows more

treatment options.

A sore or lump on the tongue is not always cancer. Infections, dental irritation, mouth ulcers, and other conditions can cause similar symptoms. However, a persistent or unexplained change should be examined by a dentist, primary care clinician, or ear, nose, and throat specialist.

Symptoms

Symptoms depend on whether the cancer is in the oral tongue or the base of the tongue. A growth on the oral tongue may be easier to see. A tumor at the tongue base can remain hidden until it causes throat symptoms or an enlarged neck lymph node.

Possible symptoms include:

These symptoms have many possible causes. Arrange a prompt appointment if a mouth or throat change lasts about two weeks, becomes larger, or keeps returning. A neck lump also deserves medical evaluation, even if it is painless.

Seek urgent medical care if swelling or swallowing problems are getting worse quickly, or if pain prevents you from drinking enough fluids.

Call emergency services for trouble breathing, inability to swallow saliva, choking, or heavy bleeding that does not stop. These are emergency symptoms rather than routine follow-up concerns.

- A sore, ulcer, lump, thickened area, or red or white patch on the tongue
- Tongue pain, numbness, or unexplained bleeding
- A mouth sore that does not heal
- Trouble moving the tongue or opening the mouth fully
- Pain or difficulty when chewing or swallowing
- A feeling that food is sticking in the throat
- Persistent sore throat, hoarseness, or pain felt in one ear
- A lump or swelling in the neck
- Unexplained weight loss

Causes and risk factors

Cancer develops after changes in a cell's DNA disrupt the controls that normally limit cell growth. It is often not possible to identify one exact cause in an individual person.

Tobacco is a major risk factor for cancers of the oral tongue and other parts of the head and neck. This includes cigarettes, cigars, pipes, chewing tobacco, and snuff. Heavy or frequent alcohol use also raises risk. Tobacco and alcohol together have a greater effect than either exposure alone.

Infection with certain high-risk types of human papillomavirus , or HPV, is an important cause of many cancers at the base of the tongue and elsewhere in the oropharynx. HPV-related cancer can develop years after the original infection. HPV is less clearly linked to cancers of the front, oral part of the tongue.

Other factors associated with higher risk include:

People without known risk factors can still develop tongue cancer. Having one or more risk factors also does not mean that cancer will occur.

Stopping tobacco use can improve general health and may reduce the risk of a new head and neck cancer. Reducing alcohol use may also lower risk. HPV vaccination prevents new infections with HPV types that cause several cancers, although it does not treat an existing infection or cancer.

- Increasing age
- A previous head and neck cancer
- A weakened immune system
- Chewing betel quid or areca nut
- Long-term exposure to tobacco smoke

Diagnosis

Evaluation begins with a medical and dental history. The clinician will ask when symptoms started and about tobacco, alcohol, previous cancers, HPV exposure, medicines, and general health.

The examination may include the tongue, floor of the mouth, tonsils, throat, jaw, and neck. A specialist may pass a thin, flexible camera through the nose to see the tongue base, voice box, and throat. Numbing medicine can make this examination more comfortable.

A biopsy is required to confirm cancer. During a biopsy, a clinician removes cells or a small tissue sample so a pathologist can examine it under a microscope. A visible tongue lesion may

be sampled directly. A neck lump may be tested with a thin needle.

If cancer is found, additional tests determine its extent. These may include CT, MRI, or PET imaging. Imaging can show the size of the tumor, whether nearby structures are involved, and whether cancer appears to have reached lymph nodes or distant organs.

For squamous cell cancer of the oropharynx, including the base of the tongue, tumor tissue is commonly tested for a protein called p16 . This acts as a marker for HPV-related disease and affects how oropharyngeal cancer is staged. It does not have the same staging role in oral tongue cancer.

Staging considers the primary tumor, lymph nodes, and distant spread. This is called the TNM system . The care team may also assess dental health, nutrition, speech, hearing, and swallowing before treatment. These baseline evaluations help anticipate treatment needs and support recovery.

Treatment and management

Treatment depends on the exact location, size, stage, HPV status when relevant, and the person's overall health and goals. Planning often involves a head and neck surgeon, radiation oncologist, medical oncologist, dentist, dietitian, speech-language pathologist, and other specialists.

Surgery is a common first treatment for removable cancers of the oral tongue. A partial glossectomy removes part of the tongue. Larger tumors may require more extensive removal and reconstruction using tissue from another part of the body. The surgeon may also remove lymph nodes from one or both sides of the neck, a procedure called a neck dissection.

Surgery can affect speech, chewing, and swallowing. Reconstructive surgery and rehabilitation can help preserve or restore these functions. The final pathology report shows the tumor's depth, margins, lymph-node involvement, and other features. These findings help determine whether more treatment is appropriate.

Radiation therapy uses high-energy beams to destroy cancer cells. It may be the main treatment for some tongue-base cancers or may be given after surgery when there is a higher risk of cancer returning. Radiation is carefully planned to limit exposure to the jaw, salivary glands, spinal cord, and other healthy tissues.

Chemotherapy may be given with radiation for certain higher-risk or more advanced cancers. Medicines such as cisplatin are used in some treatment plans, but the choice depends on health, hearing, kidney function, and other factors. Treatment is individualized by the oncology team.

For cancer that has returned or spread to distant organs, systemic treatment may include chemotherapy, targeted therapy, or immunotherapy. Immunotherapy helps the immune system recognize and attack cancer cells. Tumor testing, previous treatment, symptoms, and overall health guide these decisions.

Supportive care is part of treatment, not an afterthought. It may include:

Some people need a temporary feeding tube if swallowing becomes unsafe or nutrition cannot be maintained. This does not necessarily mean that oral eating will be permanently impossible.

Clinical trials may provide access to new treatments or new ways of combining established treatments. A care team can explain whether an appropriate trial is available and how it differs from standard care.

- Dental care before and after radiation
- Nutrition support and help maintaining weight
- Speech and swallowing therapy
- Pain and mouth-care management
- Help stopping tobacco or reducing alcohol use
- Emotional, social, and practical support

Complications

Tongue cancer itself may interfere with speaking, chewing, swallowing, taste, or airway protection. It can spread into nearby mouth or throat structures, lymph nodes in the neck, or, less commonly, distant organs.

Treatment complications vary. Surgery may cause pain, changes in appearance, reduced tongue movement, altered speech, or difficulty swallowing. Neck surgery can sometimes cause shoulder weakness, numbness, swelling, or stiffness.

Radiation may cause mouth sores, skin irritation, thick saliva, dry mouth, taste changes, fatigue, dental problems, jaw stiffness, and swallowing difficulty. Some effects improve after treatment, while dry mouth or changes in swallowing can last longer. Radiation to the jaw can rarely contribute to poor bone healing, which is one reason dental assessment is important.

Chemotherapy and other systemic treatments can cause nausea, fatigue, low blood counts, infections, nerve symptoms, kidney problems, or hearing changes, depending on the medicine used. Immunotherapy can sometimes cause the immune system to inflame healthy organs. The oncology team monitors for these effects and explains which symptoms require prompt

attention.

Difficulty swallowing can lead to weight loss, dehydration, or food and liquid entering the airway. A speech-language pathologist can test swallowing safety and teach strategies or exercises.

Follow up

Follow-up visits are important after treatment because tongue cancer can return, and people who have had one head and neck cancer may develop another. Visits usually include questions about symptoms and an examination of the mouth, throat, and neck. Imaging or other testing may be used when clinically appropriate.

Follow-up also addresses recovery. Tell the care team about persistent pain, new mouth sores, a neck lump, weight loss, worsening swallowing, voice changes, dental problems, shoulder stiffness, or emotional distress. These concerns can usually be discussed through routine or prompt outpatient contact unless they are severe or rapidly worsening.

People treated with neck radiation may need periodic thyroid blood tests because radiation can reduce thyroid function over time. Ongoing dental care is especially important after radiation involving the mouth or jaw. Before having a tooth removed from an irradiated area, ask the dentist and radiation team whether special planning is needed.

Rehabilitation may continue for months. Speech and swallowing exercises are most useful when performed as directed. Nutrition support, physical therapy, tobacco cessation services, and counseling can also remain helpful after cancer treatment ends.

Contact the care team promptly for a new neck lump, a persistent mouth or throat lesion, increasing pain, fever during active cancer treatment, or a sudden decline in eating and drinking. Seek emergency help for breathing difficulty, choking, inability to swallow saliva, severe dehydration with fainting or confusion, or uncontrolled bleeding.

Sources

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