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[Laryngeal and Hypopharyngeal Cancer - Diagnosis \[1\]](#)

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ON THIS PAGE: You will find a list of the common tests, procedures, and scans that doctors can use to find out what's wrong and identify the cause of the problem. To see other pages, use the menu on the side of your screen.

Doctors use many tests to diagnose cancer and find out if it has spread to another part of the body, called metastasis. Some tests may also determine which treatments may be the most effective. For most types of cancer, a biopsy is the only way to make a definitive diagnosis of cancer. If a biopsy is not possible, the doctor may suggest other tests that will help make a diagnosis.

This list describes options for diagnosing these types of cancer, and not all tests listed will be used for every person. Your doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of cancer suspected
- Signs and symptoms
- Previous test results

The following tests may be used to diagnose laryngeal or hypopharyngeal cancer:

- **Physical examination.** The doctor will feel for any lumps in the neck, lip, gums, and cheeks. The doctor will inspect the nose, mouth, throat, and tongue for abnormalities and often use a mirror for a clearer view of these structures. Although there is no specific blood test that detects laryngeal or hypopharyngeal cancer, several laboratory tests, including blood and urine tests, may be done to help determine the diagnosis and learn more about the disease.
- **Laryngoscopy.** A [laryngoscopy](#) [3] can be performed in three ways:
 - **Indirect laryngoscopy.** Before an indirect laryngoscopy, the doctor often sprays the throat with a local anesthetic to numb the area and prevent gagging. The doctor then uses a small, long-handled mirror to see the vocal folds.
 - **Fiber optic laryngoscopy.** During this procedure, the doctor inserts a lighted tube through the person's nose or mouth and down the throat to view the larynx and hypopharynx.
 - **Direct laryngoscopy.** This procedure is done in an operating room, and the person receives a sedative or general anesthetic to block the awareness of pain. The doctor then views the larynx and hypopharynx using an instrument called a laryngoscope. A sample of tissue for a biopsy (see below) is often taken during a direct laryngoscopy. Frequently, the doctor will recommend a triple endoscopy, a procedure done under general anesthesia to examine the ear, nose, and throat area, as well as the trachea and the bronchus, which are located next to the lung and the esophagus.
- **Videostroboscopy.** This fiber optic video technique is used so the doctor can see the larynx. It is performed in the same way as an indirect laryngoscopy (see above). It is used to view the vocal folds and can detect motion abnormalities and other changes in vibration that are often important for determining whether a tumor is cancerous. Videostroboscopy helps determine the location and size of a tumor, as well as how the tumor has affected the function of the larynx and hypopharynx.
- **Biopsy.** A [biopsy](#) [4] is the removal of a small amount of tissue for examination under a microscope. Other tests can suggest that cancer is present, but only a biopsy can make a definite diagnosis. The type of biopsy performed will depend on the location of the cancer. For instance, during a fine needle aspiration biopsy, cells are withdrawn using a thin needle inserted directly into the tumor. A pathologist then analyzes the sample(s). A

pathologist is a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease.

- **Molecular testing of the tumor.** Your doctor may recommend running laboratory tests on a tumor sample to identify specific genes, proteins, and other factors unique to the tumor. Results of these tests will help decide whether your treatment options include a type of treatment called targeted therapy (see the [Treatment Options](#) [5] section).

The following imaging tests may be used to determine the extent of the cancer:

- **X-ray/barium swallow.** An x-ray is a way to create a picture of the structures inside the body using a small amount of radiation. Sometimes, the patient will be asked to swallow barium, which coats the mouth and throat, to enhance the image on the x-ray. This is called a barium swallow. A barium swallow is used to identify abnormalities along the throat and esophagus. A special type of barium swallow, called a modified barium swallow, may be needed to evaluate difficulties with swallowing.

A dentist may take extensive x-rays of the teeth, mandible (jawbone), and maxilla (upper jaw), including a panorex, which is a panoramic view of the mouth. If there are signs of cancer, the doctor may recommend a computed tomography scan (see below).

- **Computed tomography (CT or CAT) scan.** A [CT scan](#) [6] creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. A CT scan can also be used to measure the tumor's size. Sometimes, a special dye called a contrast medium is given before the scan to provide better detail on the image. This dye can be injected into a patient's vein or given as a liquid to swallow.
- **Magnetic resonance imaging (MRI).** An [MRI](#) [7] uses magnetic fields, not x-rays, to produce detailed images of soft tissue, such as the tonsils and the base of the tongue. MRI can also be used to measure the tumor's size. A special dye called a contrast medium is given before the scan to create a clearer picture. This dye can be injected into a patient's vein or given as a liquid to swallow.
- **Ultrasound.** An [ultrasound](#) [8] uses sound waves to create a picture of the internal organs. This test can detect the spread of cancer to the liver or the cervical lymph nodes in the neck.
- **Bone scan.** A [bone scan](#) [9] uses a radioactive tracer to look at the inside of the bones.

The tracer is injected into a patient's vein. It collects in areas of the bone and is detected by a special camera. Healthy bone appears gray to the camera, and areas of injury, such as those caused by cancer, appear dark. For people with head and neck cancer, a bone scan is recommended if there are signs that the cancer has spread to the bone.

- **Integrated positron emission tomography (PET)-CT scan.** A PET scan is usually combined with a CT scan. However, you may hear your doctor refer to this procedure just as a PET scan. A [PET-CT scan](#) [10] creates pictures of organs and tissues in the body. First, a technician injects you with a small amount of a radioactive substance. Your organs and tissues pick it up. Areas that use more energy pick up more. Cancer cells pick up a lot, because they tend to use more energy than healthy cells. Then a scan shows where the substance is in your body.

A CT scan uses X-rays to create a three-dimensional picture of the inside of the body. It shows anything abnormal, including tumors. You might get dye first, so the pictures show more detail.

After diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is cancer, these results also help the doctor describe the cancer. This is called staging.

The [next section in this guide is Stages and Grades](#) [11]. It explains the system doctors use to describe the extent of the disease and how the cancer cells look under a microscope. Or, use the menu on the side of your screen to choose another section to continue reading this guide.

Links

[1] <http://www.cancer.net/cancer-types/laryngeal-and-hypopharyngeal-cancer/diagnosis>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/24511>

[4] <http://www.cancer.net/node/24406>

[5] <http://www.cancer.net/node/19003>

[6] <http://www.cancer.net/node/24486>

[7] <http://www.cancer.net/node/24578>

[8] <http://www.cancer.net/node/24714>

[9] <http://www.cancer.net/node/24410>

[10] <http://www.cancer.net/node/24648>

[11] <http://www.cancer.net/node/19002>