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Laryngeal and Hypopharyngeal Cancer - Diagnosis [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 04/2014

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 cheek. 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 [3], may be done to help determine the diagnosis and learn more about the disease.

Laryngoscopy [4]**.** This test 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.
- Fiberoptic 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 fiberoptic 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 [5]**.** A biopsy 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. The sample removed during the biopsy is analyzed by a pathologist. 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 [6] 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 (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 [7]**.** A CT scan 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 pill to swallow.

Magnetic resonance imaging (MRI) [8]**.** An MRI 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 pill to swallow.

Ultrasound [9]**.** An ultrasound 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 located in the neck.

Bone scan [10]**.** A bone scan 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.

Positron emission tomography (PET) scan [11]**.** A PET scan is a way to create pictures of organs and tissues inside the body. A small amount of a radioactive sugar substance is injected into the patient?s body. This sugar substance is taken up by cells that use the most energy. Because cancer tends to use energy actively, it absorbs more of the radioactive substance. A scanner then detects this substance to produce images of the inside of the body.

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 helps explain the different stages and grades for these types of cancer. Use the menu on the side of your screen to select Stages and Grades, or you can select another section, to continue reading this guide.

Links:
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[3] http://www.cancer.net/node/24730
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