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Head and Neck Cancer - Diagnosis [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 06/2014

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 (see description below) 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. Imaging tests may be used to find out whether the cancer has spread. This list describes options for diagnosing this type 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

If a person has symptoms and signs [3] of head and neck cancer, the doctor will take a complete medical history, noting all symptoms and risk factors. In addition, the following tests may be used to diagnose head and neck cancer:

Physical examination/blood and urine tests. During a physical examination, the doctor feels for any lumps on the neck, lips, gums, and cheeks. Also, the doctor will inspect the nose, mouth, throat, and tongue for abnormalities, often using a light and a mirror for a clearer view. Blood and urine tests may be performed to help diagnose cancer. Testing for viral infections, including HPV (see the Risk Factors [4] section), may also be done.

Endoscopy [5]. This test allows the doctor to see inside the body with a thin, lighted, flexible tube called an endoscope. The person may be sedated as the tube is gently inserted through the nose into the throat and down the esophagus to examine the head and neck areas. Sedation is giving medication to become more relaxed, calm, or sleepy. The examination has different names depending on the area of the body that is examined, such as laryngoscopy to view the larynx, pharyngoscopy to view the pharynx, or nasopharyngoscopy to view the nasopharynx.

When these procedures are combined, they are sometimes referred to as a panendoscopy.

Biopsy [6]. 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 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. One common type of biopsy is called a fine needle aspiration. During this procedure, cells are withdrawn using a thin needle inserted directly into the tumor or lymph node. The cells are examined under a microscope for cancer cells, which is called a cytologic examination.

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 [7] section for more information.

X-ray/barium swallow. An x-ray is a way to create a picture of the structures inside of the body, using a small amount of radiation. A barium swallow may be required to identify abnormalities along the swallowing passage. During a barium swallow, a person swallows a liquid containing barium, and a series of x-rays are taken. Barium coats the lining of the esophagus, stomach, and intestines, so tumors or other abnormalities are easier to see on the x-ray. A special type of barium swallow called a modified barium swallow may be needed to evaluate specific swallowing difficulties. If there are signs of cancer, the doctor may recommend a computed tomography (CT) scan (see below).

Panorex. This is a rotating, or panoramic, x-ray of the upper and lower jawbones to detect cancer or to evaluate teeth before radiation therapy or chemotherapy.

Ultrasound [8]. An ultrasound uses sound waves to create a picture of the internal organs.

Computed tomography (CT or CAT) scan [9]. 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) [10]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body, especially images of soft tissue, such as the tonsils and 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.

Bone scan [11]. 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. This test may be done to see if cancer has spread to the bones.

Positron emission tomography (PET) scan [12]. 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 for this type of cancer. Use the menu on the side of your screen to select Stages, or you can select another section, to continue reading this guide.

Links:
[1] http://www.cancer.net/cancer-types/head-and-neck-cancer/diagnosis
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/node/18912
[4] http://www.cancer.net/node/18911
[5] http://www.cancer.net/node/24511
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