

Laryngeal and Hypopharyngeal Cancer Early Detection, Diagnosis, and Staging

Detection and Diagnosis

Finding cancer early often allows for more successful treatment options. Some early cancers may have signs and symptoms that can be noticed, but that's not always the case.

- Can Laryngeal and Hypopharyngeal Cancers Be Found Early?
- Signs and Symptoms of Laryngeal and Hypopharyngeal Cancers
- Tests for Laryngeal and Hypopharyngeal Cancers

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and likely response to treatment.

- Laryngeal Cancer Stages
- Hypopharyngeal Cancer Stages
- Survival Rates for Laryngeal and Hypopharyngeal Cancers

Questions to Ask About Laryngeal and Hypopharyngeal Cancer

Here are some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

Questions to Ask Your Doctor About Laryngeal or Hypopharyngeal Cancer

Can Laryngeal and Hypopharyngeal Cancers Be Found Early?

Screening is testing for cancer or pre-cancer in people who have no symptoms of the disease. Screening tests may find some types of cancer early, when treatment is most likely to be successful.

For now, there is no screening test to find laryngeal and hypopharyngeal cancers early. These cancers are often hard to find and diagnose without complex tests. Because these cancers are not common, and the tests need specialized doctors, neither the American Cancer Society nor any other group recommends routine screening for these cancers.

Sometimes though, laryngeal and hypopharyngeal cancers can be found early. They usually cause symptoms, such as voice changes, which are described in Signs and Symptoms of Laryngeal and Hypopharyngeal Cancers. Talk to your doctor if you have any of these symptoms. Many of the symptoms of laryngeal and hypopharyngeal cancers are often seen in less serious, benign (non-cancer) conditions, or in other cancers. It is important to see a doctor to find out what is causing your symptoms. The sooner the cause is found, the sooner it can be treated, if needed.

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Signs and Symptoms of Laryngeal and Hypopharyngeal Cancers

In most cases, laryngeal and hypopharyngeal cancers are found because of the symptoms they cause.

Hoarseness or voice changes

Laryngeal cancers that form on the vocal cords (glottis) often cause hoarseness or a change in the voice. This might lead to them being found at a very early stage. If you have voice changes (like hoarseness) that do not improve within 2 weeks see your health care provider right away. Pain and trouble breathing or swallowing might be symptoms of more advanced laryngeal cancer.

For cancers that don't start on the vocal cords, hoarseness occurs only after these cancers reach a later stage or have spread to the vocal cords. These cancers are sometimes not found until they have spread to the lymph nodes and you notice a growing mass in your neck.

Other signs and symptoms

Cancers that start in the area of the larynx **above** the vocal cords (supraglottis), the area **below** the vocal cords (subglottis), or the hypopharynx do not usually cause voice changes, and are therefore more often found at later stages.

Signs and symptoms of these cancers may include:

• A sore throat that does not go away

- Pain when swallowing
- Trouble swallowing
- Ear pain
- Trouble breathing
- Weight loss
- A lump or mass in the neck (because the cancer has spread to nearby lymph nodes)

Many of these symptoms are more likely to be caused by conditions other than laryngeal or hypopharyngeal cancer. Still, if you have any of these symptoms, it is very important to have them checked by a doctor so that the cause can be found and treated, if needed.

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neck/patient/adult/laryngeal-treatment-pdq on September 9, 2020.

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Tests for Laryngeal and Hypopharyngeal Cancers

Laryngeal and hypopharyngeal cancers are usually found because of signs or symptoms a person is having. If cancer is suspected, tests will be needed to confirm the diagnosis.

Medical history and physical exam

Your doctor will ask you about your symptoms, possible risk factors, your lifestyle and social habits, and other medical problems. A physical exam can help find signs of possible cancer or other diseases. Your doctor will pay very close attention to your head and neck, looking for abnormal areas in your mouth or throat, as well as any swollen lymph nodes in your neck.

Exams by a specialist

If your doctor suspects a cancer of the larynx or hypopharynx, you will be referred to an ear, nose, and throat (ENT) doctor, also called an **otolaryngologist.** This doctor will more completely examine your head and neck. This will include an inside look at the larynx and hypopharynx with an instrument, known as <u>laryngoscopy</u>¹, which can be done in 2 ways:

Indirect laryngoscopy

This is the simplest way to check your throat. The doctor uses a special small mirror and a light to look into your throat. The mirror is attached to a long handle, and it is placed against the roof of your mouth. The doctor shines the light into your mouth to see the image in the mirror. This exam can be done in 5 to 10 minutes in the doctor's office. The doctor may spray numbing medicine to the back of your throat to help make the exam easier.

Direct flexible laryngoscopy

To do this, the doctor puts a fiber-optic laryngoscope (a thin, flexible, lighted tube) that goes up in your nose and down to your throat to look at your larynx and nearby areas. It usually takes about 10 minutes for the procedure which can also be done in the doctor's office. The doctor applies numbing medicine to your nose to help the exam. Sometimes, the doctor may use special tool to get a small sample (biopsy) from your throat for testing.

Direct rigid laryngoscopy

This is a complete exam of your throat. This exam is usually done in an operating room where you are given drugs through an intravenous (IV) line to put you in a deep sleep (under general anesthesia). The doctor uses a rigid laryngoscope to look for tumors in the larynx and hypopharynx. Other parts of the mouth, nose, and throat are examined as well. Your doctor will look at these areas through the scope(s) to find any tumors, see how large they are, and see how far they have spread to nearby areas. The doctor might also take out (biopsy) small tissue samples from any tumors or other changed areas using special tools during the procedure.

People with laryngeal or hypopharyngeal cancer also have a higher risk for other cancers in the head and neck area, so the nasopharynx (part of the throat behind the nose), mouth, tongue, and the neck are also carefully looked at and checked for any signs of cancer.

Panendoscopy

<u>Panendoscopy</u>² is a procedure that combines laryngoscopy, esophagoscopy, and bronchoscopy. This lets the doctor thoroughly examine the entire area around the larynx and hypopharynx, including the esophagus (swallowing tube) and trachea (windpipe). This exam is usually done in an operating room where you are given drugs through an intravenous (IV) line to put you in a deep sleep (under general anesthesia).

The doctor uses direct rigid laryngoscopy to look for tumors in the larynx and hypopharynx. The doctor may also use an <u>endoscope</u>³ to look into the esophagus or a <u>bronchoscope</u>⁴ to look into the trachea (windpipe). The doctor might also take out (biopsy) small tissue samples from any tumors or other changed areas using special tools during the procedure.

Types of biopsies

In a biopsy, the doctor removes a sample of tissue which is looked at closely in the lab. It's the only way to be sure that cancer is present. There are many different types of biopsies. See <u>Testing Biopsy and Cytology Specimens for Cancer⁵</u> to learn more.

Endoscopic biopsy

The larynx and hypopharynx are deep inside the neck, so taking out samples for a biopsy can be complicated. Biopsies of these areas are done in the operating room while you are under general anesthesia (a deep sleep). The surgeon uses special instruments through an endoscope to remove small pieces of tissue.

Fine needle aspiration (FNA) biopsy

This type of biopsy isn't used to remove samples in the larynx or hypopharynx, but it may be done to find the cause of an swollen <u>lymph node</u>⁶ in the neck. A thin, hollow needle is put through the skin into the mass (or lymph node) to get cells for a biopsy. The cells are then looked at closely in the lab. If the FNA shows cancer, the pathologist (the doctor examining the samples) can often tell what type of cancer it is. If the cancer cells look like they might have come from the larynx or hypopharynx, an endoscopic exam and biopsy of these areas will be needed.

If the FNA doesn't show cancer, it only means that cancer was not found in that lymph node. There could still be cancer in other places. If you're having symptoms that might be from a laryngeal or hypopharyngeal cancer, you could still need other tests to find the cause of the symptoms.

FNA biopsies might also be useful in some patients already known to have laryngeal or hypopharyngeal cancer. If the person has a lump in the neck, an FNA can show if the mass is from cancer spread. FNA might also be used in patients whose cancer has been treated by <u>surgery</u>⁷ and/or <u>radiation therapy</u>⁸, to help find out if a neck mass in the treated area is scar tissue or if it's a return (recurrence) of the cancer.

Lab tests of biopsy samples

Biopsy samples (from endoscopy or surgery) are sent to the lab where they are looked at closely. If cancer is found, other lab tests may also be done on the biopsy samples to help better classify the cancer.

Tests for certain proteins on tumor cells: If the cancer has spread (metastasized) or come back, doctors will probably look for certain proteins on the cancer cells. For example, cancer cells might be tested for the PD-L1 protein, which, if found, might

predict if the cancer is more likely to respond to treatment with certain <u>immunotherapy</u>⁹ drugs.

Imaging tests

Imaging tests use x-rays, magnetic fields, or radioactive substances to create pictures of the inside of your body. Imaging tests are not used to diagnose laryngeal or hypopharyngeal cancers, but they're done for a number of reasons after a cancer diagnosis, such as:

- To look at suspicious areas that might be cancer
- To learn how far cancer may have spread
- To help determine if <u>treatment¹⁰</u> is working
- To look for signs that the cancer has come back after treatment

Computed tomography (CT) scan

The <u>CT scan¹¹</u> (CAT scan) uses x-rays to make detailed cross-sectional images of your body. This test can help your doctor determine the size of the tumor, see if it's growing into nearby tissues, and find out if it has spread to lymph nodes in your neck. It might also be done to look for the spread of cancer to your lungs or other organs.

Magnetic resonance imaging (MRI) scan

Like CT scans,<u>MRI scans</u>¹² show detailed images of soft tissues in the body. But MRI scans use radio waves and strong magnets instead of x-rays. A contrast material called gadolinium may be injected into your vein before the scan to get clear pictures.

An MRI scan can be done to look for spread of the cancer in the neck and other areas of the body, too.

Chest x-ray

A chest $\underline{x-ray}^{13}$ might be done to see if the cancer has spread to the lungs, but more often a CT scan of the lungs is done since it tends to give more detailed pictures.

Positron emission tomography (PET) scan

For a <u>PET scan¹⁴</u>, a slightly radioactive form of sugar (known as *fluorodeoxyglucose* or

FDG) is injected into the blood and collects mainly in cancer cells.

A PET scan may be used to look for possible areas of cancer spread, especially if the main cancer is more advanced. This test can also be used to help tell if a suspicious area seen on another imaging test is cancer or not.

PET/CT scan: Often a PET scan is combined with a CT scan using a special machine that can do both at the same time. This lets the doctor compare areas of higher radioactivity on the PET scan with a more detailed picture on the CT scan.

Bone scan

For a <u>bone scan¹⁵</u>, a small amount of low-level radioactive material is injected into the blood and collects mainly in abnormal areas of bone. A bone scan can help show if a cancer has spread to the bones. But this test isn't needed very often because PET scans can usually show if cancer has spread to the bones.

Barium swallow

This test might be done if someone is having a problem with swallowing. For this test, you drink a chalky liquid called barium to coat the walls of the throat and esophagus (swallowing tube). A series of x-rays of the throat and esophagus is taken as you swallow to help show problems.

Other pre-treatment tests

Other tests may be done as part of a workup in people diagnosed with laryngeal or hypopharyngeal cancer. These tests are not used to diagnose the cancer, but they may be done to see if a person is healthy enough for certain treatments, like <u>surgery</u>¹⁶ or <u>chemotherapy</u>¹⁷.

Quit smoking: It is very important to quit smoking before any treatment for laryngeal and hypopharyngeal cancer. If you used to smoke cigarettes before being diagnosed, it is important to not start during treatment. Smoking during treatment can cause a poor response to radiation treatment, poor wound healing, poor tolerance to chemotherapy, and a higher chance of dying.

Blood tests: A complete blood count (CBC) measures the numbers of different types of blood cells. For example, it can show if you are anemic (have a low number of red blood cells), if you could have trouble with bleeding (due to a low number of blood platelets), or if you are at increased risk for infections (because of a low number of white blood

cells). This test is often done regularly during treatment, because many cancer drugs can decrease the blood cells made by the bone marrow.

Blood chemistry tests can help determine how well your liver or kidneys are working.

Pre-surgery (before surgery): If surgery is planned, you might also get an electrocardiogram (EKG) to make sure your heart is working well. Some people having surgery also may need tests of their lung function known as **pulmonary function tests** (PFTs).

Dental exam: Your cancer care team will also have you see your dentist before any radiation is given since it can damage the saliva (spit) glands and cause dry mouth. This can increase the chance of cavities, infection, and breakdown of the jawbone.

Hearing test: The most commonly used chemotherapy drug used in treating laryngeal and hypopharyngeal cancer, cisplatin, can affect your hearing. Side effects can range from ringing in the ears to hearing loss. Your care team will most likely have your hearing checked (with an audiogram) before starting treatment. Your doctor might also adjust your chemotherapy if your hearing is poor to start with.

Nutrition and speech tests: Often, you will have a nutritionist who will evaluate your nutrition status before, during, and after your treatment to try and keep your body weight and protein stores as normal as possible. You might also visit with a speech therapist who will test your ability to swallow and speak. They might give you exercises to do during treatment to help strengthen the muscles in the head and neck area so you can eat and talk normally after finishing all of your cancer treatment.

Hyperlinks

- 1. www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy.html
- 2. www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy.html
- 3. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy/upper-</u> <u>endoscopy.html</u>
- 4. <u>www.cancer.org/treatment/understanding-your-</u> <u>diagnosis/tests/endoscopy/bronchoscopy.html</u>
- 5. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/testing-biopsy-and-cytology-specimens-for-cancer.html</u>
- 6. <u>www.cancer.org/treatment/understanding-your-diagnosis/lymph-nodes-and-</u> <u>cancer.html</u>
- 7. www.cancer.org/cancer/laryngeal-and-hypopharyngeal-

cancer/treating/recurrence.html

- 8. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-</u> <u>cancer/treating/radiation.html</u>
- 9. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-</u> <u>cancer/treating/immunotherapy.html</u>
- 10. www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating.html
- 11. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/ct-scan-for-</u> <u>cancer.html</u>
- 12. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-</u> <u>cancer.html</u>
- 13. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/x-rays-and-other-radiographic-tests.html</u>
- 14. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine-</u> scans-for-cancer.html
- 15. <u>www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine-scans-for-cancer.html</u>
- 16. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-</u> <u>cancer/treating/recurrence.html</u>
- 17. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-</u> <u>cancer/treating/chemotherapy.html</u>

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Laryngeal Cancer Stages

After someone is diagnosed with laryngeal cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes how much cancer is in the body. It helps determine how serious the cancer is and how best to <u>treat</u>¹ it. Doctors also use a cancer's stage when talking about survival statistics.

The earliest stage of laryngeal cancer is stage 0, also known as **carcinoma in situ**(CIS). The other main stages range from I (1) through IV (4). Some stages are split further, using capital letters (A, B, etc.). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. And within a stage, an earlier letter means a lower stage. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

How is the stage determined?

The staging system most often used for laryngeal cancer is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

- The extent of the main **tumor (T):** Where is the tumor? How far has it grown into the larynx and nearby structures? Has it affected vocal cord movement?
- The spread to nearby lymph **nodes (N):** Has the cancer spread to nearby lymph nodes in the neck? If so, how many are affected, are they on the same side (left or right) as where the cancer started, and how large are they?
- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to distant parts of the body, such as ? (The most common sites of spread are the lungs, liver, or bones.)

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once the T, N, and M categories of the cancer have been determined, this information is combined in a process called **stage grouping** to assign an overall stage. For more information, see <u>Cancer Staging</u>².

The system described below is the most recent AJCC system, effective January 2018.

Laryngeal cancer is typically given a **clinical stage** based on the results of any exams, biopsies, and imaging tests that might have been done (as described in Tests for Laryngeal and Hypopharyngeal Cancers. If surgery has been done, the **pathologic stage** (also called the surgical stage) can be determined.

The stages of laryngeal cancer are slightly different, based on <u>which part of the</u> <u>larynx</u>³the cancer starts in:

- The supraglottis (the area above the vocal cords)
- The glottis (the area that includes the vocal cords)
- The subglottis (the area below the vocal cords)

The system described below is the most recent AJCC system, effective January 2018.

Laryngeal cancer staging can be complex, so ask your doctor to explain it to you in a way you understand.

Explore the 3D, interactive color model of the larynx to see more.

Stages of supraglottic laryngeal cancer

AJCC stage Stage	Stage description*	
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	grouping	(3 cm = about 1.1 inches; 6 cm = about 2.3 inches)
0	Tis N0 M0	The tumor is only in the top layer of cells lining the inside of the larynx and has not grown any deeper (Tis).
		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
1	T1 N0 M0	The tumor has grown deeper, but it is only in one part of the supraglottis, and the vocal cords move normally (T1).
		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
11	T2 N0 M0	The tumor has grown deeper, and it has grown into more than one part of the supraglottis (or glottis), and the vocal cords move normally (T2).
		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
	T3 N0 M0	The tumor is still only in the larynx, but it has caused a vocal cord to stop moving, OR the tumor is growing into nearby areas such as the postcricoid area, paraglottic space, pre-epiglottic (in front of the epiglottis) tissues, or the inner part of the thyroid cartilage (firm tissue that separates the thyroid gland from the front of the larynx) (T3).
		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
111	OR	
	T1 to T3 N1 M0	The tumor might or might not have grown into structures just outside the larynx, and it might or might not have affected a vocal cord (T1 to T3). The cancer has spread to a single lymph node on the same side of the neck as the tumor, which is no larger than 3 cm across (N1).
		The cancer has not spread to distant parts of the body (M0).
IVA	T4a N0 or N1 M0	The tumor has grown through the thyroid cartilage and/or is growing into tissues beyond the larynx (such as the thyroid gland, trachea, esophagus, tongue muscles, or neck muscles). This is also known as moderately advanced local disease

		(T4a).
		The cancer has not spread to nearby lymph nodes (N0), or it has spread to a single lymph node on the same side of the neck as the tumor, which is no larger than 3 cm across (N1). The cancer has not spread to distant parts of the body (M0).
	OR	
		The tumor might or might not have grown into structures outside the larynx (as far as moderately advanced disease), and it might or might not have affected a vocal cord (T1 to T4a). The cancer is N2:
	T1-T4a N2	 It has spread to a single lymph node on the same side of the neck as the tumor, which is larger than 3 cm but no larger than 6 cm across, OR
	мо	 It has spread to more than one lymph node on the same side of the neck as the tumor, none of which is larger than 6 cm across, OR
		 It has spread to at least one lymph node on the other side of the neck, none of which is larger than 6 cm across.
		The cancer has not spread to distant parts of the body (M0).
	T4b Any	The tumor is growing into the area in front of the spine in the neck (the prevertebral space), surrounds a carotid artery, or is growing down into the space between the lungs. This is also known as very advanced local disease (T4b).
		The cancer might or might not have spread to nearby lymph nodes (any N). It has not spread to distant parts of the body (M0).
IVB	OR	
	Any T N3	The tumor might or might not have grown into structures outside the larynx, and it might or might not have affected a vocal cord (any T).
	IVIU	The cancer has spread to at least one lymph node that is larger than 6 cm across, OR it has spread to a lymph node and then grown outside of the lymph node (N3). It has not spread to

		distant parts of the body (M0).
IVC	Any T Any N M1	The tumor might or might not have grown into structures outside the larynx, and it might or might not have affected a vocal cord (any T). The cancer might or might not have spread to nearby lymph nodes (any N). The cancer has spread to distant parts of the body (M1).

- * The following additional categories are not listed on the table above:
 - TX: Main tumor cannot be assessed due to lack of information.
 - NX: Regional lymph nodes cannot be assessed due to lack of information.

Stages of glottic laryngeal cancer

		Ctopp description*
	Stage	Stage description
AJCC stage	grouping	(3 cm = about 1.1 inches; 6 cm = about 2.3 inches)
		The tumor is only in the top layer of cells lining the inside of the
		larynx and has not grown any deeper (Tis).
0	Tis N0 M0	
-		The cancer has not spread to nearby lymph nodes (N0) or to
		distant parts of the body (MO)
		The tumor has grown deeper, but it is only in the vocal cords.
		and they move normally (T1)
	т1 N0 M0	
•		The capcer has not spread to pearby lymph podes (NO) or to
		distant parts of the hady (MO)
		distant parts of the body (MU).
		The tumor has grown into the supraglottis or subglottis and/or
		the vocal cords do not move normally $(T2)$
н	T2 N0 M0	
		The capcer has not spread to pearby lymph podes (NO) or to
		distant parts of the body (M0)
1		

	T3 N0 M0	The tumor is still only in the larynx, but it has caused a vocal cord to stop moving, OR the tumor is growing into the paraglottic space, OR the tumor is growing into the inner part of the thyroid cartilage (firm tissue that separates the thyroid gland from the front of the larynx) (T3). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).	
111	OR		
	T1 to T3 N1 M0	The tumor might or might not have grown into structures just outside the larynx, and it might or might not have affected a vocal cord (T1 to T3). The cancer has spread to a single lymph node on the same side of the neck as the tumor, which is no larger than 3 centimeters (cm) across (N1). The cancer has not spread to distant parts of the body (M0).	
	T4a N0 or N1 M0	The tumor has grown through the thyroid cartilage and/or is growing into tissues beyond the larynx (such as the thyroid gland, trachea, cricoid cartilage, esophagus, tongue muscles, or neck muscles). This is also known as moderately advanced local disease (T4a). The cancer has not spread to nearby lymph nodes (N0), or it has spread to a single lymph node on the same side of the neck as the tumor, which is no larger than 3 cm across (N1). The cancer has not spread to distant parts of the body (M0).	
	OR		
IVA	T1-T4a N2 M0	 The tumor might or might not have grown into structures outside the larynx (as far as moderately advanced disease), and it might or might not have affected a vocal cord (T1 to T4a). The cancer is N2: It has spread to a single lymph node on the same side of the neck as the tumor, which is larger than 3 cm but no larger than 6 cm across, OR It has spread to more than one lymph node on the same side of the neck as the tumor, none of which is larger than 6 cm across, OR 	

		 It has spread to at least one lymph node on the other side of the neck, none of which is larger than 6 cm across. 		
		The cancer has not spread to distant parts of the body (M0).		
	T4b Any N M0	The tumor is growing into the area in front of the spine in the neck (the prevertebral space), surrounds a carotid artery, or is growing down into the space between the lungs. This is also known as very advanced local disease (T4b). The cancer might or might not have spread to nearby lymph nodes (any N). It has not spread to distant parts of the body (M0).		
	OR			
IVB	Δργ Τ Ν2	The tumor might or might not have grown into structures outside the larynx, and it might or might not have affected a vocal cord (any T).		
	MO	The cancer has spread to at least one lymph node that is larger than 6 cm across, OR it has spread to a lymph node and then grown outside of the lymph node (N3). It has not spread to distant parts of the body (M0).		
IVC	Any T	The tumor might or might not have grown into structures outside the larynx, and it might or might not have affected a vocal cord (any T).		
	Any N M1	The cancer might or might not have spread to nearby lymph nodes (any N). The cancer has spread to distant parts of the body (M1).		

* The following additional categories are not listed on the table above:

- TX: Main tumor cannot be assessed due to lack of information.
- NX: Regional lymph nodes cannot be assessed due to lack of information.

Stages of subglottic laryngeal cancer

AJCC stageSt	age Stage des	scription*

	grouping	(3 cm = about 1.1 inches; 6 cm = about 2.3 inches)
0	Tis N0 M0	The tumor is only in the top layer of cells lining the inside of the larynx and has not grown any deeper (Tis). The cancer has not spread to nearby lymph nodes (N0) or to
		distant parts of the body (M0).
I	T1 N0 M0	(T1).
		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
		The tumor has grown into the vocal cords, which might or might not move normally (T2).
11		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
	T3 N0 M0	The tumor is still only in the larynx, but it has caused a vocal cord to stop moving, OR the tumor is growing into the paraglottic space, OR the tumor is growing into the inner part of the thyroid cartilage (firm tissue that separates the thyroid gland from the front of the larynx) (T3).
		The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
	OR	
	T1 to T3 N1 M0	The tumor might or might not have grown into structures just outside the larynx, and it might or might not have affected a vocal cord (T1 to T3).
		The cancer has spread to a single lymph node on the same side of the neck as the tumor, which is no larger than 3 cm across (N1). The cancer has not spread to distant parts of the body (M0).
IVA	T4a N0 or N1 M0	The tumor is growing through the cricoid or thyroid cartilage and/or is growing into structures beyond the larynx (such as the thyroid gland, trachea, esophagus, tongue muscles, or neck muscles). This is also known as moderately advanced local disease (T4a).

	MO	The cancer has spread to at least one lymph node that is larger than 6 cm across, OR it has spread to a lymph node and then grown outside of the lymph node (N3). It has not spread to distant parts of the body (M0).
		The tumor might or might not have grown into structures outside the larynx, and it might or might not have affected a vocal cord (any T).
IVB	OR	
	N MO	The cancer might or might not have spread to nearby lymph nodes (any N). It has not spread to distant parts of the body (M0).
	T4b Any	The tumor is growing into the area in front of the spine in the neck (the prevertebral space), surrounds a carotid artery, or is growing down into the space between the lungs. This is also known as very advanced local disease (T4b).
		The cancer has not spread to distant parts of the body (M0).
		6 cm across, ORIt has spread to at least one lymph node on the other side of the neck, none of which is larger than 6 cm across.
	T1-T4a N2 M0	 the neck as the tumor, which is larger than 3 cm but no larger than 6 cm across, OR It has spread to more than one lymph node on the same side of the neck as the tumor. none of which is larger than
		The tumor might or might not have grown into structures outside the larynx (as far as moderately advanced disease), and it might or might not have affected a vocal cord (T1 to T4a). The cancer is N2: • It has spread to a single lymph node on the same side of
	OR	
		neck as the tumor, which is no larger than 3 cm across (N1). The cancer has not spread to distant parts of the body (M0).
		The cancer has not spread to nearby lymph nodes (N0), or it has spread to a single lymph node on the same side of the

IVC	Any T Any N M1	The tumor might or might not have grown into structures outside the larynx, and it might or might not have affected a vocal cord (any T). The cancer might or might not have spread to nearby lymph nodes (any N). The cancer has spread to distant parts of the body (M1).
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* The following additional categories are not listed on the table above:

- TX: Main tumor cannot be assessed due to lack of information.
- NX: Regional lymph nodes cannot be assessed due to lack of information.

Hyperlinks

- 1. www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating.html
- 2. www.cancer.org/treatment/understanding-your-diagnosis/staging.html
- 3. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/about/what-is-</u> <u>laryngealand-hypopharyngeal.html</u>

References

American Joint Committee on Cancer. Oropharynx (p16-) and Hypopharynx. In: *AJCC Cancer Staging Manual.* 8th ed. New York, NY: Springer; 2017: 123-135.

Last Revised: January 21, 2021

Hypopharyngeal Cancer Stages

After someone is diagnosed with hypopharyngeal cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes how much cancer is in the body. It helps determine how serious the cancer is and how best to <u>treat</u>¹ it. Doctors also use a cancer's stage when talking about survival statistics.

The earliest stage of hypopharyngeal cancer is stage 0, also known as carcinoma in situ (CIS). The other main stages range from I (1) through IV (4). Some stages also use capital letters (A, B, etc.). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

How is the stage determined?

The staging system most often used for hypopharyngeal cancer is the American Joint Committee on Cancer (AJCC) TNM system, which is based on 3 key pieces of information:

- The size (extent) of the main **tumor (T):** How big is the tumor? How far has it grown into the hypopharynx and nearby structures?
- The spread to nearby lymph **nodes (N):** Has the cancer spread to nearby lymph nodes in the neck? If so, how many are affected, are they on the same side (left or right) where the cancer started, and how large are they?
- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to distant parts of the body, such as ? (The most common sites of spread are the lungs, liver, or bones.)

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once the T, N, and M categories of the cancer have been determined, this information is combined in a process called stage grouping to assign an overall stage. For more information, see <u>Cancer Staging</u>².

The system described below is the most recent AJCC system, effective January 2018.

Hypopharyngeal cancer typically is given a **clinical stage** based on the results of any exams, biopsies, and imaging tests that might have been done (as described in Tests for Laryngeal and Hypopharyngeal Cancers). If surgery has been done, the **pathologic stage** (also called the **surgical stage**) can be determined.

The system described below is the most recent AJCC system, effective January 2018.

Hypopharyngeal cancer staging can be complex, so ask your doctor to explain it to you in a way you understand.

Explore the 3D, interactive color model of the hypopharynx to see more.

Stages of hypopharyngeal cancer

		Stage description*
AJCC Stage	Stage grouping	2 cm = about 4/5 inch; 4 cm = 1.5 inches; 6 cm = about 2.3 inches
0	Tis N0 M0	The tumor is only in the top layer of cells lining the inside of the hypopharynx and has not grown any deeper (Tis). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
1	T1 N0 M0	The tumor has grown deeper, but it is only in one part of the hypopharynx, and it is no more than 2 centimeters (cm) across (T1). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
11	T2 N0 M0	The tumor has grown into more than one part of the hypopharynx, OR it has grown into a nearby area, OR it is larger than 2 cm but no larger than 4 cm across and has not affected the vocal cords (T2). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
	T3 N0 M0	The tumor is larger than 4 cm across, OR the tumor is affecting the movement of the vocal cords, OR the tumor has grown into the esophagus (T3). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
ш	OR	
	T1 to T3 N1 M0	The tumor can be any size and might or might not have grown into structures outside the hypopharynx, and it might or might not have affected a vocal cord (T1 to T3).

		The cancer has spread to a single lymph node on the same side of the neck as the tumor, which is no larger than 3 cm across (N1). The cancer has not spread to distant parts of the body (M0).
	T4a N0 or N1 M0	The tumor has grown into the thyroid or cricoid cartilage, the hyoid bone, the thyroid gland, or nearby areas of muscle or fat. This is also known as moderately advanced local disease (T4a). The cancer has not spread to nearby lymph nodes (N0), or it has spread to a single lymph node on the same side of the
		neck as the tumor, which is no larger than 3 cm across (N1). The cancer has not spread to distant parts of the body (M0).
	UK	
IVA	T1-T4a N2 M0	 The tumor can be any size and might or might not have grown into structures outside the hypopharynx (as far as moderately advanced disease), and it might or might not have affected a vocal cord (T1 to T4a). The cancer is N2: It has spread to a single lymph node on the same side of the neck as the tumor, which is larger than 3 cm but no larger than 6 cm across, OR It has spread to at least one lymph node on the other side of the neck, none of which is larger than 6 cm across.
IVB	T4b Any N M0	The tumor is growing into the area in front of the spine in the neck, surrounds a carotid artery, or is growing down into the space between the lungs. This is also known as very advanced local disease (T4b). The cancer might or might not have spread to nearby lymph nodes (any N). It has not spread to distant parts of the body (M0).
	OR	

	Any T N3 M0	The tumor can be any size and might or might not have grown into structures outside the hypopharynx, and it might or might not have affected a vocal cord (any T).		
		The cancer has spread to at least one lymph node that is larger than 6 cm across, OR it has spread to a lymph node and then grown outside of the lymph node (N3). It has not spread to distant parts of the body (M0).		
IVC	Any T Any N M1	The tumor can be any size and might or might not have grown into structures outside the hypopharynx, and it might or might not have affected a vocal cord (any T). The cancer might or might not have spread to nearby lymph nodes (any N). The cancer has spread to distant parts of the		
		body (M1).		

*The following additional categories are not listed on the table above:

- TX: Main tumor cannot be assessed due to lack of information.
- NX: Regional lymph nodes cannot be assessed due to lack of information.

Hyperlinks

- 1. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating.html</u>
- 2. <u>www.cancer.org/treatment/understanding-your-diagnosis/staging.html</u>

References

American Joint Committee on Cancer. Oropharynx (p16-) and Hypopharynx. In: *AJCC Cancer Staging Manual.* 8th ed. New York, NY: Springer; 2017: 123-135.

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Survival Rates for Laryngeal and Hypopharyngeal Cancers

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Your doctor is familiar with your situation; ask how these numbers may apply to you.

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of laryngeal or hypopharyngeal cancer is 80%, it means that people who have that cancer are, on average, about 80% as likely as people who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the SEER* database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for laryngeal and hypopharyngeal cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers using AJCC TNM stages (stage 1, stage 2, stage 3, etc.) for laryngeal or hypopharyngeal cancer. Instead, it groups cancers into localized, regional, and distant stages:

- Localized: There is no sign that the cancer has spread outside of the larynx or hypopharynx.
- **Regional:** The cancer has spread outside the larynx or hypopharynx to nearby structures or lymph nodes.
- Distant: The cancer has spread to distant parts of the body, such as the lungs.

5-year relative survival rates for laryngeal and hypopharyngeal cancers

These numbers are based on people diagnosed with cancers of the larynx or hypopharynx between 2011 and 2017. For laryngeal cancers, survival rates differ based on which part of the larynx the cancer started in (supraglottis, glottis, or subglottis).

Supraglottis (part of the larynx above the vocal cords)

SEER stage	5-year relative survival rate
Localized	62%
Regional	47%
Distant	30%
All SEER stages combined	46%

Glottis (part of the larynx including the vocal cords)

SEER stage	5-year relative survival rate
Localized	83%
Regional	50%
Distant	44%
All SEER stages combined	77%

Subglottis (part of the larynx below the vocal cords)

SEER stage	5-year relative survival rate
Localized	59%
Regional	42%
Distant	41%*
All SEER stages combined	49%

Hypopharynx

SEER stage	5-year relative survival rate
Localized	54%
Regional	38%
Distant	25%
All SEER stages combined	35%

Understanding the numbers

- These numbers apply only to the stage of the cancer when it is first diagnosed. They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- These numbers don't take everything into account. Survival rates are grouped based on how far the cancer has spread. But other factors, such as your age and overall health, and how well the cancer responds to treatment, can also affect your outlook.
- People now being diagnosed with laryngeal or hypopharyngeal cancer may have a better outlook than these numbers show. Treatments improve over time, and these numbers are based on people who were diagnosed and treated at least five years earlier.

*SEER = Surveillance, Epidemiology, and End Results

References

SEER*Explorer: An interactive website for SEER cancer statistics [Internet]. Surveillance Research Program, National Cancer Institute. [Cited 2021 September 27]. Available from https://seer.cancer.gov/explorer/.

Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER Research Data, 18 Registries, Nov 2020 Sub (2000-2018) - Linked To County Attributes - Time Dependent (1990-2018) Income/Rurality, 1969-2019 Counties, National Cancer Institute, DCCPS, Surveillance Research Program, released April 2021, based on the November 2020 submission.

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Questions to Ask Your Doctor About Laryngeal or Hypopharyngeal Cancer

It is important to have honest, open discussions with your cancer care team. They want to answer all of your questions, so that you can make informed treatment decisions. For instance, consider these questions:

When you're told you have laryngeal or hypopharyngeal cancer

- Where is my cancer located?
- Has my cancer spread beyond where it started?
- What is my cancer's stage (extent) , and what does that mean?
- Will I need other tests before we can decide on treatment?
- Will I need to see other doctors or health care professionals?
- If I'm concerned about the costs and insurance coverage for my diagnosis and treatment, who can help me?

When deciding on a treatment plan

- Do you have a lot of experience treating this type of cancer?
- What are my treatment options¹?
- If surgery is part of my treatment, will I need a laryngectomy? If so, what type? Will my voice be affected?
- What do you recommend and why?
- What is the goal of the treatment?
- What are the chances that I can be cured of this cancer with these treatment options?
- How quickly do I need to decide on treatment²?
- What should I do to be ready for treatment?
- How long will treatment last? What will it be like? Where will it be done?
- What risks or side effects are there to the treatments you suggest? Are there things

I can do to reduce the side effects?

- How will this treatment affect my voice? If my larynx is removed, what are the options for restoring my voice?
- Should I get a second opinion? How do I do that? Can you recommend someone?
- How will treatment affect my daily activities? Can I still work fulltime?
- What would my options be if the treatment doesn't work or if the cancer comes back (recurs) after treatment?
- What if I have transportation problems getting to and from treatment?
- Are you aware of any clinical trials I might be eligible for?

During treatment

Once treatment begins, you'll need to know what to expect and what to look for. Not all of these questions may apply to you, but asking the ones that do may be helpful.

- How will I know if the treatment is working?
- Is there anything I can do to help manage side effects³?
- What symptoms or side effects should I tell you about right away?
- How can I reach you on nights, holidays, or weekends?
- Do I need to change what I eat during treatment?
- Are there limits on what I can do or what I can eat?
- Can I exercise during treatment? If so, what kind should I do, and how often?
- Can you suggest a mental health professional I can see if I start to feel overwhelmed, depressed, or distressed?
- What if I need social support during treatment because my family lives far away?

After treatment

- Do I need a special diet after treatment?
- Do I need to see a specialist to check my speech and swallow functions?
- Are there any limits on what I can do?
- What symptoms should I watch for?
- What kind of exercise should I do now?
- How often will I need to have follow-up exams and imaging tests?
- When should my next endoscopy be done?
- Will I need blood tests?

- How will we know if the cancer has come back? What should I watch for?
- What will my options be if the cancer comes back?
- What type of <u>follow-up</u>⁴ will I need after treatment?

Along with these sample questions, be sure to write down some of your own. For instance, you might want more information about recovery times so that you can plan your work or activity schedule.

Keep in mind that doctors aren't the only ones who can give you information. Other health care professionals, such as nurses and social workers, can answer some of your questions. To find out more about speaking with your health care team, see <u>The Doctor-Patient Relationship</u>⁵.

Hyperlinks

- 1. www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating.html
- 2. <u>www.cancer.org/treatment/treatments-and-side-effects/planning-managing.html</u>
- 3. <u>www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html</u>
- 4. <u>www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/after-</u> <u>treatment/follow-up.html</u>
- 5. <u>www.cancer.org/treatment/treatments-and-side-effects/choosing-your-treatment-team/the-doctor-patient-relationship.html</u>

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