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# About Laryngeal and Hypopharyngeal Cancer

## Overview and Types

If you have been diagnosed with laryngeal or hypopharyngeal cancer or are worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- [What Are Laryngeal and Hypopharyngeal Cancers?](#)

## Research and Statistics

See the latest estimates for new cases of laryngeal and hypopharyngeal cancers and deaths in the US and what research is currently being done.

- [Key Statistics for Laryngeal and Hypopharyngeal Cancers](#)
- [What's New in Laryngeal and Hypopharyngeal Cancers Research and Treatment?](#)

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# What Are Laryngeal and Hypopharyngeal Cancers?

Laryngeal and hypopharyngeal cancers start in the lower part of the throat. Cancer starts when cells in the body begin to grow out of control. Cells in nearly any part of the

body can become cancer, and can spread to other areas of the body. To learn more about how cancer starts and spreads, see [What Is Cancer?](#)<sup>1</sup>

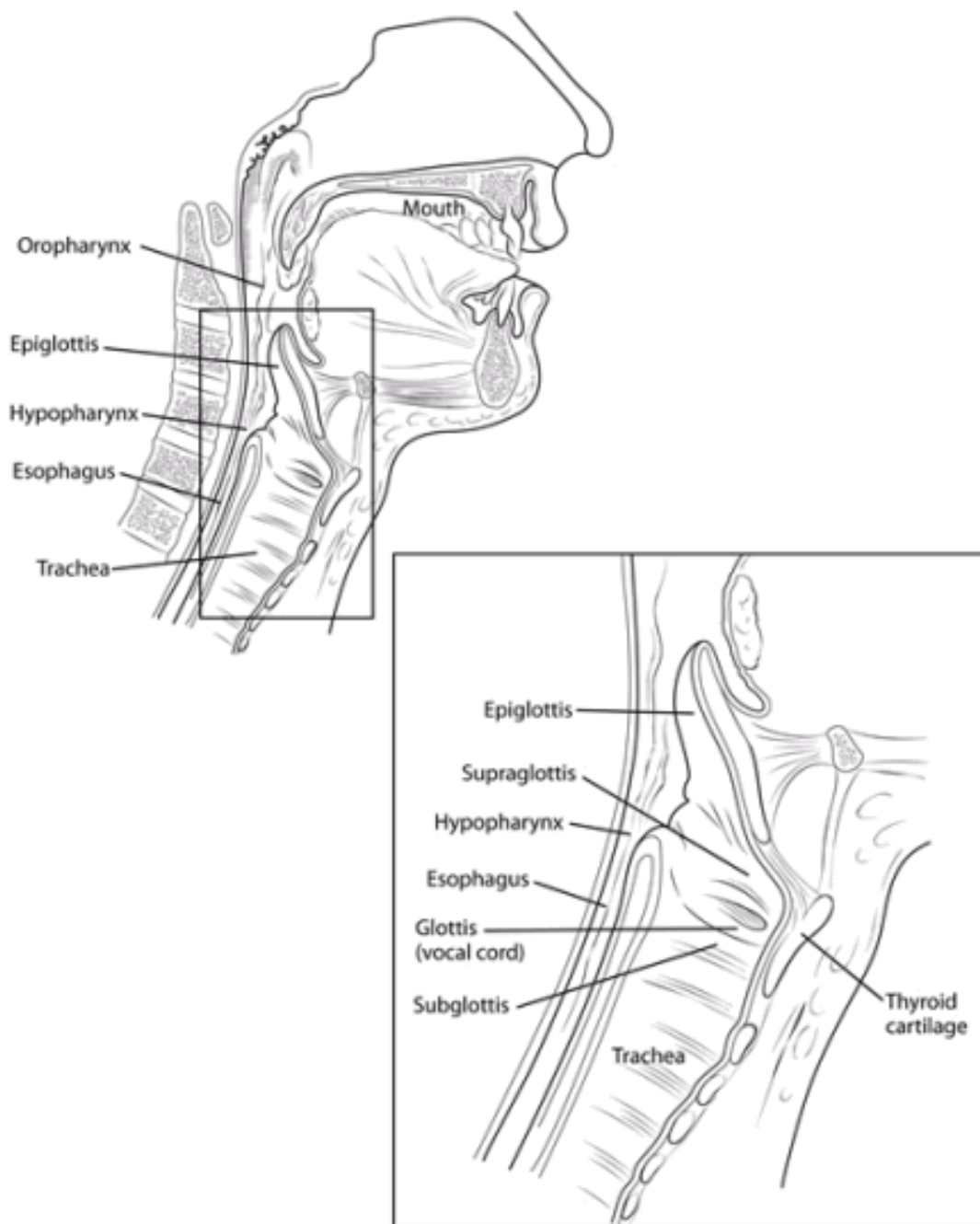
To understand these cancers, it helps to know a little about the larynx and hypopharynx.

## What is the larynx?

The *larynx* is the voice box. It's one of the organs that helps us speak. It contains the vocal cords. It's in the neck, above the opening of the trachea (windpipe). There, it helps keep food and fluids from entering the trachea. The larynx is divided into 3 parts:

- The **supraglottis** is just above the vocal cords. It contains the epiglottis, which is a flap that closes off the larynx when you swallow. This sends food down the esophagus (the tube that connects to the stomach) and keeps food and fluids from going into your lungs.
- The **glottis** contains the vocal cords.
- The **subglottis** is below the vocal cords.

Cancer that starts in the larynx (laryngeal cancer) is treated based on which section it starts in.



Your larynx and vocal cords have several functions:

- The larynx produces sound for speaking. The vocal cords move and come together

to change the sound and pitch of your voice.

- The larynx protects your airway when you swallow. The epiglottis and vocal cords close tightly when you swallow to keep food and fluids from entering your lungs.
- The vocal cords open naturally when you breathe so that air can get in and out of your lungs.

## What is the hypopharynx?

The hypopharynx is the part of the throat (pharynx) that lies beside and behind your larynx. The hypopharynx is the entrance into the esophagus (the tube that connects the throat to the stomach). When you swallow foods and liquids, they pass through your mouth and throat, through the hypopharynx and esophagus, and then into your stomach. The hypopharynx is made so that it helps make sure that food goes around the larynx and into the esophagus.

## Cancers of the larynx and hypopharynx

Cancers that start in the larynx are called *laryngeal cancers*. Cancers that start in the hypopharynx are called *hypopharyngeal cancers*. Both types of cancers are covered here because these 2 structures are so close to each other.

### Squamous cell carcinomas

**Almost all cancers in the larynx or hypopharynx develop from thin, flat cells called *squamous cells***, which are in the epithelium, the innermost layer lining these 2 structures. Cancer that starts in this layer of cells is called *squamous cell carcinoma* or *squamous cell cancer*.

Most squamous cell cancers of the larynx and hypopharynx start as a pre-cancer called *dysplasia*. When seen under a microscope, these cells look abnormal but not quite like cancer cells. Most of the time, dysplasia doesn't turn into cancer. It often goes away without any treatment, especially if the underlying cause (like smoking) is stopped. (See [Risk Factors for Laryngeal and Hypopharyngeal Cancers<sup>2</sup>](#)) Most pre-cancers of the larynx and hypopharynx do not cause problems unless they're on the vocal cord(s).

Sometimes dysplasia will progress to carcinoma in situ or CIS. **CIS is the earliest form of cancer.** In CIS, the cancer cells are only seen in the epithelium lining the larynx or hypopharynx. They haven't grown into deeper layers or spread to other parts of the body. Most of these early cancers can be cured, but if CIS isn't treated, it can develop

into an invasive squamous cell cancer that will destroy nearby tissues and spread to other parts of the body.

## Other cancers

Other rare types of cancer can also start in the larynx or hypopharynx.

**Minor [salivary gland cancers](#)**<sup>3</sup>: Some parts of the larynx and hypopharynx have tiny glands called *minor salivary glands* beneath their lining layer. These glands make mucus and saliva to lubricate and moisten the area. Cancer rarely develops in the cells of these glands.

**[Sarcomas](#)**<sup>4</sup>: The shape of the larynx and hypopharynx depends on a framework of connective tissues and cartilage. Cancers like *chondrosarcomas* or *synovial sarcomas* can develop from connective tissues of the larynx or hypopharynx, but this is extremely rare.

**[Melanomas](#)**<sup>5</sup>: These cancers usually start in the skin, but in rare cases they can start on inner (mucosal) surfaces of the body, such as in the larynx or hypopharynx.

## Hyperlinks

1. [www.cancer.org/cancer/cancer-basics/what-is-cancer.html](http://www.cancer.org/cancer/cancer-basics/what-is-cancer.html)
2. [www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/causes-risks-prevention/risk-factors.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/causes-risks-prevention/risk-factors.html)
3. [www.cancer.org/cancer/salivary-gland-cancer.html](http://www.cancer.org/cancer/salivary-gland-cancer.html)
4. [www.cancer.org/cancer/soft-tissue-sarcoma.html](http://www.cancer.org/cancer/soft-tissue-sarcoma.html)
5. [www.cancer.org/cancer/melanoma-skin-cancer.html](http://www.cancer.org/cancer/melanoma-skin-cancer.html)

## References

See all references for Laryngeal and Hypopharyngeal Cancer ([www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/references.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/references.html))

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# Key Statistics for Laryngeal and Hypopharyngeal Cancers

The American Cancer Society's most recent estimates for laryngeal cancer in the United States for 2019 are:

- About 12,410 new cases of laryngeal cancer (9,860 in men and 2,550 in women)
- About 3,760 people (3,010 men and 750 women) will die from laryngeal cancer

About 60% of laryngeal cancers start in the glottis (the area containing the vocal cords themselves), while about 35% develop in the supraglottic area (above the vocal cords). The rest develop in either the subglottis (below the vocal cords) or overlap more than one area so that it is hard to tell where they started.

The rate of new cases of laryngeal cancer is falling by about 2% to 3% a year, most likely because fewer people are smoking.

About 3,000 cancers will start in the hypopharynx.

Survival statistics for these cancers are discussed in [Survival rates for laryngeal and hypopharyngeal cancers by stage](#)<sup>1</sup>.

Visit the [American Cancer Society's Cancer Statistics Center](#)<sup>2</sup> for more key statistics.

## Hyperlinks

1. [www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/detection-diagnosis-staging/survival-rates.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/detection-diagnosis-staging/survival-rates.html)
2. <https://cancerstatisticscenter.cancer.org/>

## References

American Cancer Society. *Facts & Figures 2019*. American Cancer Society. Atlanta, Ga. 2019.

See all references for Laryngeal and Hypopharyngeal Cancer ([www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/references.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/references.html))

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# What's New in Laryngeal and Hypopharyngeal Cancers Research and Treatment?

Research into the [causes](#)<sup>1</sup>, [prevention](#)<sup>2</sup>, and [treatment](#)<sup>3</sup> of [laryngeal and hypopharyngeal cancers](#) is now being done at many medical centers, university hospitals, and other institutions around the world.

## Gene changes in laryngeal and hypopharyngeal cancers

A great deal of research is being done to learn how changes in certain [genes](#)<sup>4</sup> cause cells in the larynx or hypopharynx to become cancer. As doctors learn more about these gene changes, it could help them better identify which cancers are going to be harder to treat or are more likely to come back after treatment.

Researchers hope this information might also lead to better tests for early detection and to new [targeted treatments](#)<sup>5</sup>.

## Treatment

In the coming years, promising new forms of treatment may work better and cause fewer long-term changes in how a person eats and speaks.

## Surgery

Doctors continue to refine [surgery](#)<sup>6</sup> techniques to try to limit the amount of normal tissue that's removed along with the tumor. This may help limit [side effects](#)<sup>7</sup> after treatment.

One surgery technique now being studied is *transoral robotic surgery (TORS)*. In this approach, the surgeon operates by precisely moving robotic arms holding long surgical tools that are passed down the throat. TORS uses smaller incisions (cuts), so it might lessen the side effects and long-term changes from surgery. Doctors are also looking at

using chemo before TORS to help shrink tumors and maybe save more healthy tissue.

*Transoral videolaryngoscopic surgery* or TOVS is another surgery method that might prove to be helpful in removing small tumors and saving healthy tissue. In TOVS, the surgery is done using a scope that's put in through the mouth. The doctor looks into the scope to see inside and uses long, thin tools to take out the tumor.

## Chemotherapy and chemoradiotherapy

New [chemotherapy](#)<sup>8</sup> drugs and new combinations of drugs are being tested.

[Clinical trials](#)<sup>9</sup> are also studying ways to best combine chemotherapy with [radiation](#)<sup>10</sup> therapy. For example, studies are comparing outcomes when chemotherapy is given before, during, and/or after radiation therapy.

## Targeted therapy

Newer [targeted therapy](#)<sup>11</sup> drugs attack specific substances in or around cancer cells that help them grow. These drugs work differently from standard chemo drugs because they target cancer cells with less damage to normal cells. They may work in some cases when chemo drugs don't, and they often have less severe side effects. Many targeted therapies are used to treat many kinds of cancer. Studies are looking at whether they might help treat laryngeal and hypopharyngeal cancers, too.

**EGFR inhibitors:** Squamous cell cancers of the larynx and hypopharynx (and other head and neck cancers) often have abnormally high levels of epidermal growth factor receptor (EGFR). EGFR helps the cancer cells grow out of control. Drugs that block EGFR and slow cell growth are under study for use in head and neck cancers. Some of these drugs include nimotuzumab, pembrolizumab (Keytruda<sup>®</sup>), nivolumab (Opdivo<sup>®</sup>), and ipilimumab (Yervoy<sup>®</sup>).

These drugs seem to work best when combined with other treatments, like radiation and chemotherapy.

## Preserving function and quality of life

Doctors are looking at how transplant and tissue grafting might be used to help rebuild the throat area after surgery. This could help improve overall quality of life and limit changes in how people speak and eat.

Researchers are also looking at better ways to support patients with parenteral nutrition



so they can better tolerate treatment. (Parenteral nutrition is put into a vein, right into the blood, so the body can get the nutrients it needs when a person can't swallow food.)

## Hyperlinks

1. [www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/causes-risks-prevention/what-causes.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/causes-risks-prevention/what-causes.html)
2. [www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/causes-risks-prevention/prevention.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/causes-risks-prevention/prevention.html)
3. [www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating.html)
4. [www.cancer.org/cancer/cancer-causes/genetics/genes-and-cancer.html](http://www.cancer.org/cancer/cancer-causes/genetics/genes-and-cancer.html)
5. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html)
6. [www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating/recurrence.html](http://www.cancer.org/cancer/laryngeal-and-hypopharyngeal-cancer/treating/recurrence.html)
7. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html)
8. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html)
9. [www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html](http://www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html)
10. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html)
11. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html)

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