

Salivary gland cancer

Patient information

What is cancer?

The human body is made up of billions of cells. In healthy people, cells grow, divide and die. New cells constantly replace old ones in an orderly way. This process ensures each part of the body has the right number and kinds of cells for good health.

Cancer cells multiply far faster than healthy cells. Also, they do not function like normal cells. They do not serve any useful purpose in the body. In fact, they can sometimes produce toxic substances. Also, they displace normal, healthy cells and compete for the body's resources.

Cells become cancerous when their DNA is damaged. DNA contains the "instructions" cells need to divide and function properly. People can inherit damaged DNA. This is why certain families or groups are at higher risk than others for some cancers. More often, DNA is damaged by exposure to something in the environment, like the toxic chemicals in cigarette smoke.

As the number of cancer cells increases, they often form a mass or lump. This is called a growth or tumour. Eventually, if the cancer cells continue to multiply, they begin to spread through the body. They can invade and damage nearby organs. Also, they can spread to other parts of the body, and start new tumours there. This is called metastasis.

Cancer cells must be killed or removed before they spread (metastasize) through the body. Otherwise, they will damage – and eventually destroy – vital organs.

What are the salivary glands?

Salivary glands are the tiny glands around the mouth that produce saliva (spit). Saliva is needed to moisten

the mouth, keep the teeth and the mouth healthy and aid digestion.

The three major salivary glands are:

- the parotid gland, located within the cheeks, just in front of the ears
- the submandibular gland, located on either sides of the neck
- the sublingual gland, located below your tongue on either side

There are also between 600 and 1000 minor salivary glands located in the lining of the mouth and throat. These are too small to be seen.

What is salivary gland cancer?

Cancer of the salivary glands occurs when the cells of any salivary gland become cancerous. Although the parotid gland is most often affected, any salivary gland can become cancerous.

The type of cancer is named after the type of cell which forms the tumour. There are many different types of cells in the salivary glands. Any of these may become cancerous. As a result, there are many different types of salivary gland cancer.

Risk factors for salivary gland cancer

Risk factors are things that increase people's chances of developing a disease. Risk factors can be:

- inherited (for example, a damaged gene that makes cancer more likely)
- environmental (for example, living in an area with serious air pollution)
- linked to lifestyle choices (for example, cigarette smoking)

The more risk factors for a certain disease you have, the more likely you are to get that disease.

Risk factors for salivary gland cancer include:

- Previous radiotherapy of the head and/or neck
- Exposure to nickel compound/alloy, silica dust or kerosene
- Previous skin cancer
- Use of hair dye
- Eating vegetables preserved in salt

Symptoms of salivary gland cancer

This form of cancer may produce one or more of the following symptoms:

- Pain
- Loss of movement in face
- Lumps in your neck
- Painless mass in the palate, lip or inside of mouth.
- Nasal obstruction or congestion
- Vision changes.

Diagnosing salivary gland cancer

A firm diagnosis of cancer must be made before treatment starts. Often, this is done using a procedure called a biopsy. A small piece of tissue is taken from the suspected cancer site and examined under a microscope. This lets doctors be sure that cancer cells are really present.

If doctors suspect salivary gland cancer, they will probably use a small needle to take cells from the suspected tumour for examination. This is called a fine needle biopsy. In some cases, your doctors may need to remove the whole affected salivary gland to learn if the tumour is cancerous or not.

Doctors may also need to do other tests to see how far the cancer has spread. These might include tests such as CT (computed tomography), MRI (magnetic resonance imaging) or ultrasound scans. These tests allow doctors to take detailed pictures of structures inside the body and see exactly where the cancer is.

Stages of cancer

Doctors stage or classify cancers according to how large they are, and how far they have spread from their original locations. Staging systems for different cancers can be complex and detailed. As a general rule however, the higher the stage number, the larger the cancer is, and the more it has spread. For example, a stage one cancer is relatively small, and has not spread far from its original site. A stage four cancer, on the other hand, is quite large, and has spread far away from its original site.

- **Stage 1:** The tumour is smaller than 2 cm. It has not spread outside the salivary gland.
- **Stage 2:** The tumour is between 2 and 4 cm. It has not spread outside the salivary gland.
- **Stage 3:** The tumour is larger than 4 cm and/or it has spread into the tissues surrounding the salivary gland or into a single lymph node.
- **Stage 4:** The cancer has spread into the skin, bone or nerves. It may affect lymph nodes and may have spread to other sites in the body.

Treatments for salivary gland cancer: overview

Most cancers are treated with surgery, radiotherapy (radiation) or chemotherapy – or some combination of these three therapies. Since every patient, and every case is unique, there is no “ideal” course of treatment. Your doctor will prescribe the treatment, or combination of treatments, which is best for you. Your treatment will depend on the stage of your cancer, your level of health and your medical history.

Treatments for salivary gland cancer: surgery

Often, tumours must be surgically removed. How serious the surgery is, and how much tissue is removed depends on the stage of the cancer, what internal structures are affected and other factors such as your general level of health. Surgery is usually very effective. However, it is often followed by other forms of therapy, to try and ensure all cancer cells have been eliminated.

Surgery is most often used to treat salivary gland cancer. The following surgical procedures may be done to treat people with salivary gland cancer:

- ***Neck dissection:*** if the cancer has spread into the lymph nodes of the neck, the surgeon may do a neck dissection to remove the lymph nodes. He or she may also remove muscle, soft tissues, blood vessels and nerves from the affected area. This may cause ear numbness, weakness of the lower lip and difficulty in raising your arm.
- ***Parotid gland surgery:*** if the cancer is located in the parotid gland, the surgeon may need to remove the facial nerve in addition to the tumour. The facial nerve controls the muscles of facial expression. If it is cut, your face will be paralysed on the side of the cancer. Occasionally, the muscle of the cheek or part of the jaw may have to be removed as well.
- ***Submandibular or sublingual gland surgery:*** if the cancer is located in the submandibular or sublingual gland, the surgeon may need to remove nerves that control tongue movement, sensation and taste.

Sometimes after surgery, severed nerves grow back and connect to the sweat glands of the face. This causes flushing or sweating when you chew. This condition is called Frey's Syndrome. It can be treated with medication or surgery.

Treatments for salivary gland cancer: radiotherapy

In radiotherapy, doctors use tightly focused beams of radiation to kill cancer cells, while sparing as many healthy cells as possible. Radiotherapy is not at all painful. However, because the beams of radiation also kill healthy cells near the tumour, radiotherapy may cause side effects after treatment.

In salivary gland cancer, radiotherapy is used:

- In patients with stage three or four tumours
- When the tumour is hard for surgeons to reach
- When cancerous tissues may be left after surgery.

The most common side effect are:

1. Temporary sore throat or hoarseness
2. Difficulty swallowing
3. Bone pain
4. Partial or complete loss of taste.
5. Skin problems: skin may appear red, sunburned or feel irritated. This will go away after treatment ends.
6. Fatigue: many patients will feel extremely tired as a result of treatment.
7. Loss of appetite: radiotherapy, other cancer treatments or stress can result in loss of appetite. However, it is very important to eat well during cancer treatments.
8. Loss of hair: radiotherapy sometimes causes hair loss. Ask your doctor if he/she thinks this will happen in your case.

Treatments for salivary gland cancer: chemotherapy

Chemotherapy is rarely used to treat salivary gland cancer. It is used when:

- The tumour can not be removed surgically
- The tumour recurs

- The cancer has spread to other areas of the body

In chemotherapy, anticancer drugs are injected or taken by mouth. These drugs are specially designed to seek out and kill cancer cells. However, they can also damage normal cells. This causes side effects such as:

- nausea
- vomiting
- loss of appetite
- hair loss
- sores in the mouth

Anticancer drugs often affect the bone marrow, where blood cells are made. This decreases the number of cells in your blood and can cause side effects such as:

- increased risk of infection
- bruising
- bleeding due to minor cuts
- shortness of breath
- tiredness
- weakness

Most of these side effects will disappear at the end of treatment.

Where can I get more information?

Don't hesitate to ask your doctor or any member of your healthcare team about your disorder or its treatment. It's important that you learn as much as you can about your condition. That way, you will know what to expect, and how you can help yourself stay as healthy as possible. Because your doctor knows the details of your case, he or she is the best person to answer your questions.

If you would like to read more about salivary gland cancer, here are some useful websites with reliable information:

Canadian Cancer Society: **www.cancer.ca**

National Cancer Institute: **www.cancer.gov**

American Cancer Society: **www.cancer.org**

The American Head and Neck Society:
www.headandneckcancer.org

Head and Neck Cancer: **www.hncancer.com**

Cancer Care: **www.cancercare.org**

A Word from Your Doctor **Dr. Ricky Payne**

Dear Patient,

As a healthcare professional, your well-being is very important to me. It is for this very reason that we are offering you this document to better inform you about the cancer you are battling.

If after having read this document you still have questions, please do not hesitate to ask them during your next appointment, or contact me at (514) 934-1934, ext. 34971.

Together we will beat cancer!



Special thanks

We would like to acknowledge the time and efforts of Dr. Mélanie Duval who volunteered to write this document to better inform our patients.

Thank you Dr. Mélanie Duval



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