

## Cancers of the head and neck

### What are cancers of the head and neck?

The term cancers of the head and neck (head and neck carcinoma) groups together various types of cancer that occur in the head and neck area.

These include malignant tumours:

- Of the oral cavity (carcinomas of the oral cavity) i.e. tumours of the lips, tongue, floor of the mouth, roof of the mouth, salivary glands
- Of the pharynx (throat)
- Of the larynx (voice box)
- Of the nose
- Of the paranasal sinuses
- Of the external neck, particularly the thyroid

Although cancers of the head and neck pertain to the neck in terms of anatomy, patients with these cancers are looked after by surgeons, internal medical specialists and specialists in nuclear medicine working in the field of endocrinology.

#### Egypt- head and neck cancers

Thyroid, Other pharynx, Nasopharynx, Lip, oral cavity, Larynx

Year	Estimated number of new cancers (all ages)	Male	Female	Both sexes
2012		3365	2658	6023
	ages < 65	2195	1787	3982
	ages >= 65	1170	871	2041
2020		3973	3140	7113
	ages < 65	2523	1983	4506
	ages >= 65	1450	1157	2607
Demographic change		608	482	1090
	ages < 65	328	196	524
	ages >= 65	280	286	566

GLOBOCAN 2012 (IARC) - 24.1.2017

Population forecasts were extracted from the *United Nations, World Population prospects, the 2012 revision*.

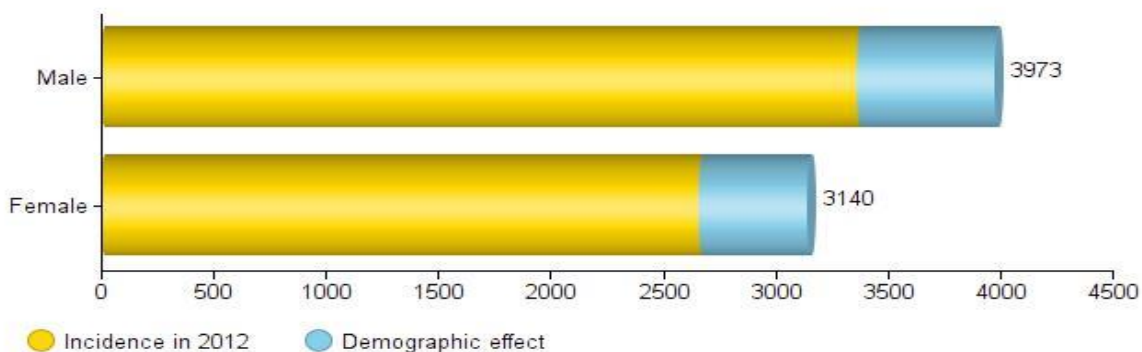
Numbers are computed using age-specific rates and corresponding populations for 10 age-groups.

International Agency for Research on Cancer

#### Egypt

Thyroid, Other pharynx, Nasopharynx, Lip, oral cavity, Larynx

Number of new cancers in 2020 (all ages)



## What are the causes and risks for the development of cancers of the head and neck?

Many causes and risks may be considered with respect to the development of cancers of the head and neck:

- Smoking
- Regular high consumption of alcohol
- Viral infections (human papilloma virus, HPV)
- Occupational contact with certain pollutants (asbestos, dyes and paints containing chromium and nickel, polycyclic aromatic hydrocarbons)

UV and radioactive radiation, poor oral hygiene, a severely weakened immune system (after organ or bone marrow transplant, for example) and chronic injuries to the mucous membranes have a comparatively low role in the development of these cancers.

### Smoking: the greatest risk factor for cancers of the head and neck

Four out of five patients with a malignant tumour of the oral cavity are smokers. Depending on the number of cigarettes smoked, smokers develop cancer of the mouth and throat up to six times more frequently than non-smokers. Alcohol reinforces the negative effects of smoking even more. A combination of smoking and regular consumption of fairly large amounts of alcohol is thus particularly hazardous.

### Viruses: the proportion of tumours caused by HPV is increasing

In many cases, cancers in the nose and throat region are linked to the human papilloma virus (HPV) in the same way as cervical cancer. Although this virus does not cause the cancer it is an important accompanying factor.

In rare cases, infections can lead to the development of laryngeal papillomatosis. This involves many small polyps developing in the region of the vocal folds, which are initially benign but may transform into malignant tumours.

### Precancerous lesions: leukoplakia

Malignant tumours in the head and neck region often develop from precancerous lesions. These include leukoplakia, also known as “idiopathic white patch”. In this disease, whitish areas that cannot be wiped off form in the mucous membranes, most commonly in the mouth, throat and larynx. They develop as a result of a pathological thickening of the outermost layer of the mucous membrane and tend to become malignant tumours. These precancerous lesions are easy for an ENT specialist to recognise.

### What role does lifestyle play in cancers of the head and neck?

Smoking tobacco, drinking alcohol and oral hygiene all play a fundamental role with respect to cancer in the head and neck region. The use of tobacco and alcohol, generally for many decades, also means that many patients are suffering from other diseases in the field of internal medicine in addition to the cancer. These include coronary heart disease, chronic bronchitis and cirrhosis of the liver.

### How are cancers of the head and neck diagnosed?

Cancers in the area of the oral cavity often manifest as painful, or sometimes painless, changes in the mucous membrane:

- swellings
- discolorations
- ulcers that persistent for some time

In addition, depending on their location and size, they may restrict the mobility of the tongue and cause swellings and problems swallowing. Cancers of the throat also frequently cause problems swallowing. Salivary gland cancers often cause a painful swelling.

**The following symptoms are indications of cancer of the larynx:**

- chronic hoarseness
- persistent “scratchiness” in the throat with a constant urge to clear the throat
- chronic cough
- problems swallowing
- pain in the throat radiating out to the ears
- feeling as though there is something in the throat and breathing difficulties

The patients affected very often do not consult a doctor until a late stage because if the tumours are in an unfavourable position in the throat they will only cause symptoms at a very late stage.

**The specialist has the following options available for diagnostic purposes:**

- the use of mirrors
- endoscopy
- ultrasound (sonography)
- Computed tomography (CT) and magnetic resonance imaging tomography (MRI)
- Positron emission tomography (PET)

**Reflection with mirrors**

The doctor can use small mirrors to examine parts of the nasal cavity and ear, deeper areas of the throat and the larynx.

**Endoscopy**

The doctor can only make a definite diagnosis of cancer of the head and neck by means of an endoscopy (imaging procedure) of the upper respiratory and digestive tracts under anaesthetic. Tissue samples (biopsies) are taken from suspect areas and then examined under a microscope.

**Ultrasound examination (sonography)**

If the tumour has already spread, the doctor can use ultrasound scans to detect enlarged lymph nodes. Cells can be sampled from suspect lymph nodes using a thin needle (fine needle biopsy) and examined under a microscope.

**Computed tomography (CT) and magnetic resonance imaging tomography (MRI)**

The spread of the cancer can be precisely determined using computed tomography and magnetic resonance imaging tomography. Any secondary cancers (metastasis) in other organs, such as the lungs, can also be detected.

**Positron emission tomography (PET)**

This procedure can be used to display tumours and metastasis. For the examination, the patient is given some sugar that has been loaded with a radioactively labelled substance. The sugar is broken down in the body and leaves a trace as a result of the radioactive substance. The special imaging technique used in a PET scan reveals this trace. Since malignant tumours have greater metabolic activity than healthy tissue, they can be seen distinctively in the PET image. Positron emission tomography is not one of the standard procedures used in the diagnosis of cancers of the head and neck.

**How are cancers of the head and neck treated?**

The following are the main criteria when planning an individual treatment regimen:

- The type, size and spread of the cancer
- The patient's state of health

In the majority of cases, cancers of the head and neck are treated with surgery in combination with radiotherapy and possibly with chemotherapy. The surgeons remove the tumour, completely if possible, leaving a safety margin. If any of the lymph nodes of the neck are suspect, these are also removed. The patient is given follow-up radiotherapy after the operation to increase the success of the treatment.

If the cancer is inoperable, radiotherapy is the primary treatment used, in combination with chemotherapy or antibody therapy. If distant metastasis is present at the time of diagnosis, patients are usually treated with chemotherapy alone. When using radiochemotherapy, doctors combine radiotherapy and chemotherapy.

In chemotherapy, "cell poisons" (known as cytostatic agents) are used to block cell growth. As cancer cells divide particularly fast, they respond more sensitively to cytostatic agents than healthy cells.

### **Additional information: cancers of the head and neck – classification of tumour type and tumour stage**

Cancers of the head and neck first spread (metastasise) into the lymph nodes located close by and only at a very late stage into more distant organs, such as the lungs or bones, via the bloodstream

The tumours are classified on the basis of international criteria. A general distinction is made between Stages I/II (locally limited) and III/IV (advanced). This is of fundamental significance for prognosis and treatment.

Therapy success also depends on the location of the tumour. Cancers of the larynx have the best prognosis, followed by cancers of the floor of the mouth. The worst prognosis is for tumours of the pharynx (throat) since these are often not diagnosed until they are at an advanced stage.

The status of the lymph nodes at the time of diagnosis is one of the most important factors for prognosis. Distant metastasis is rare and, when it occurs, it primarily affects the lungs, and more rarely the bones and skin.