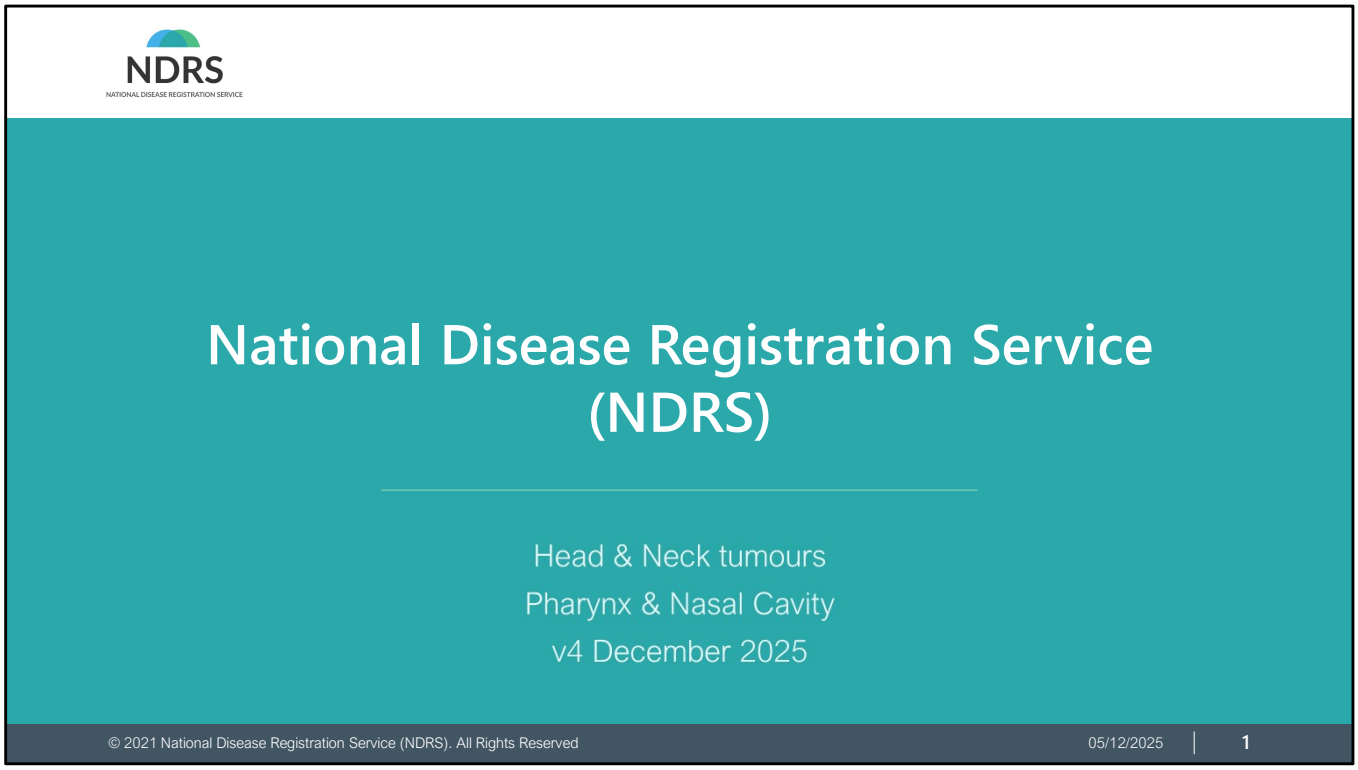


Welcome to this NDRS training module on Head & Neck tumours of the pharynx and nasal cavity, which has been designed to help Cancer Administration staff gain a better understanding of the diseases and the terminology used by the clinical teams.

Agenda

- Introduction
- Head & Neck tumours – Pharynx & Nasal Cavity (includes tumours of the nasal & paranasal sinuses)
- Summary
- Acknowledgements

This module may be paused at any time

We're going to give you a brief introduction to Head & Neck tumours including some of the symptoms that patients might experience. We'll look at the anatomy & physiology and will then go through diagnosis & treatment options. This module can be paused at any time.

Introduction

In this section we will cover:

- Types of Head & Neck tumour

Firstly, we'll look at the various types of tumour in the head & neck area…

Introduction

The head and neck region is comprised of areas of the body that deal with, amongst other things, air intake and food consumption:

- Oral cavity – from the lips to the area behind the wisdom teeth. Includes salivary glands
- Pharynx – the throat, subcategorised as the nasopharynx, oropharynx and hypopharynx (sometimes called the laryngopharynx)
- Larynx - the voice box
- Thyroid – the endocrine gland in the throat that helps regulate heart rate, blood pressure and metabolism
- Nasal cavity – includes the nasal and paranasal sinuses

The Head & Neck cancer site encompasses those areas normally associated with air- and food-intake including the nasal cavity, mouth and throat. It also covers the larynx as well as the thyroid and salivary glands. This module will focus on tumours of the Pharynx and nasal cavity - Oral cavity, Larynx and thyroid are covered in a separate module. Please note that tumours of the brain, bones and other soft tissue tumours are not included in the head and neck tumour site.

Head & Neck
Pharynx & Nasal Cavity

In this section we will cover:

- Causes and Risk Factors
- Signs and Symptoms
- Anatomy & Physiology
- Regional Lymph Nodes
- Diagnosis
- Morphology
- ICD10 coding
- Grade
- Stage
- Treatment

We'll start off by looking at the causes and risk factors …

Head & Neck – Causes & Risk Factors

	Nasal cavity	Nasopharynx	Oropharynx / Hypopharynx
Smoking / other oral tobacco use	X	X	X
Alcohol			X
Diet	X	X	X
Epstein Barr virus	X	X	
HPV	X	X	X
Family History	X	X	X
Chemical / occupational exposure	X	X	
Radiation exposure	X	X	

… which can vary according to the tumour location. However, smoking, diet and family history may be risk factors for all types of pharyngeal and nasal cavity tumours.

Head & Neck – Signs & Symptoms

Nasal Cavity – includes:

- Persistent nosebleeds
- Decreased sense of smell
- Bulging of one eye
- Loss of vision
- Pain in the area of the eye

Nasopharynx – includes:

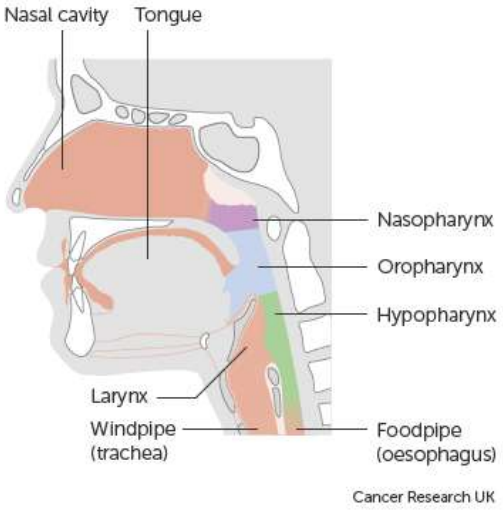
- A lump in the throat for 3 weeks or more
- Fluid in the ear
- Hearing loss
- Headaches
- Double vision

Oropharynx / Hypopharynx – includes:

- Difficulty swallowing
- A lump in the neck
- Weight loss
- Bad breath

Symptoms may include loss of vision, smell, sight or hearing, depending on the location of the tumour.

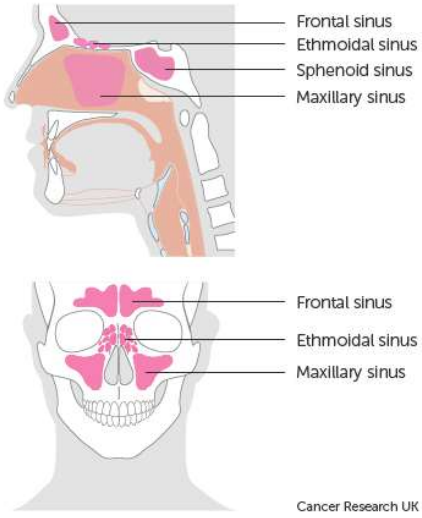
Head & Neck – Anatomy & Physiology – Pharynx & Nasal Cavity



- Nasal cavity
  - Including the nasal and paranasal sinuses
- Pharynx
  - Nasopharynx – at the back of the throat above the soft palate
  - Oropharynx – at the back of the throat slightly below the soft palate
  - Hypopharynx – behind the larynx

The nasal cavity is the air passage behind the nose, next to which are the nasal and paranasal sinuses. The pharynx is classified in three parts: at the top is the nasopharynx, below that the oropharynx and behind the larynx is the hypopharynx (sometimes called the laryngopharynx)

Head & Neck – Anatomy & Physiology – Nasal Cavity & Sinuses



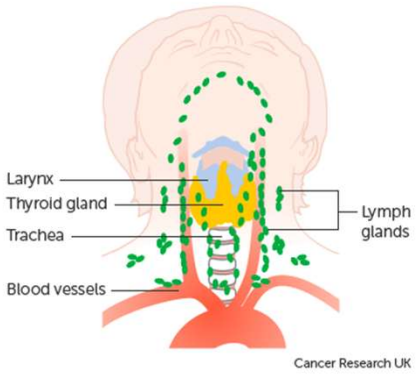
Nasal and Paranasal Sinuses

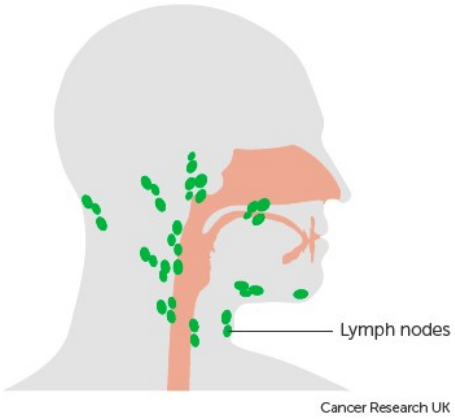
- Frontal sinus
- Ethmoid sinus
- Sphenoid sinus
- Maxillary sinus

Nasal and Paranasal sinus tumours are rare

The facial sinuses are cavities in the bone that produce a thin mucus … which drains into the nasal cavity and nose

Head & Neck – Regional Lymph Nodes





Nasal Cavity, Nasopharynx, Oropharynx & Hypopharynx

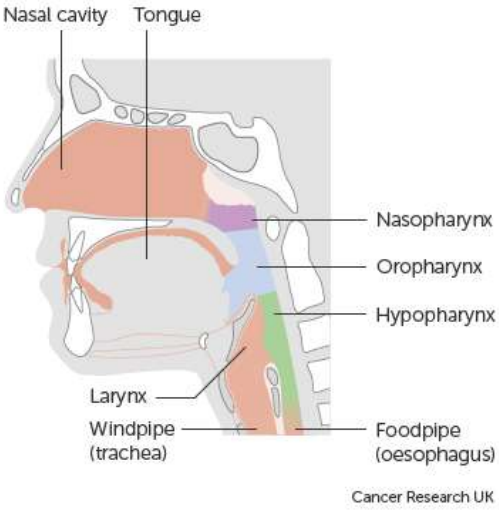
- Cervical

Of the approximately 800 lymph nodes in the average human body, over 300 are located in the head and neck area. Lymph nodes regarded as regional for the Nasal cavity, Nasopharynx, Oropharynx and Hypopharynx are the Cervical nodes

Head & Neck – Diagnosis – Nasal Cavity & Nasopharynx

Nasal Cavity & Nasopharynx

- Nasendoscopy
- Biopsy (examination of solid tissue under a microscope)
- Ultrasound of the neck
- Cytology (examination of cells from a fluid sample under a microscope, usually from a Fine Needle Aspirate or FNA)
- CT scan
- PET–CT scan
- MRI scan

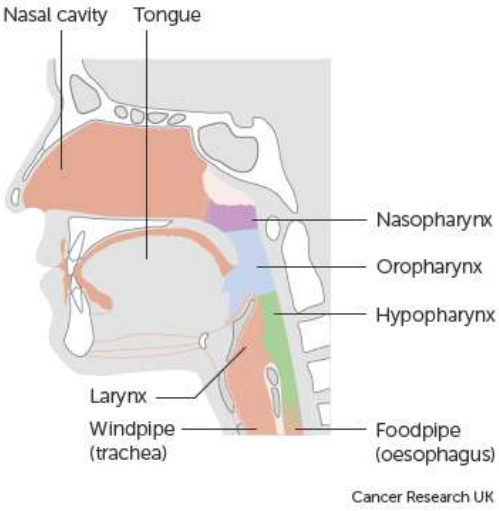


Investigations for a tumour of the nasal cavity or nasopharynx may include a Nasendoscopy, biopsy and some form of imaging…

Head & Neck – Diagnosis – Oropharynx & Hypopharynx

Oropharynx & Hypopharynx

- Blood tests for liver & kidney function
- Panendoscopy
- Ultrasound of the neck
- Cytology (examination of cells from a fluid sample under a microscope, usually from a Fine Needle Aspirate or FNA)
- CT scan
- MRI scan
- PET/CT scan

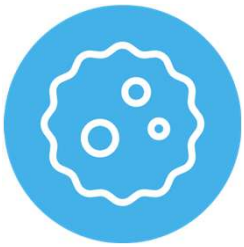


… while investigations for a lower pharyngeal tumour might also include blood tests to assess liver or kidney function

Head & Neck – Morphology – Nasal Cavity & Paranasal Sinuses

Squamous Cell Carcinoma (SCC) is the most common morphology arising in the tissues of the nasal cavity and the paranasal sinuses.

- Squamous cell carcinoma – M8070/3



Subtypes include:

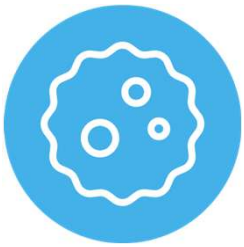
- Keratinising – M8071/3
- Non-keratinising – M8072/3

The most common morphology in the nasal cavity is Squamous cell carcinoma. Subtypes include Adenosquamous, basaloid and spindle cell

Head & Neck – Morphology – Nasal Cavity & Paranasal Sinuses

Other types of tumour that may arise include:

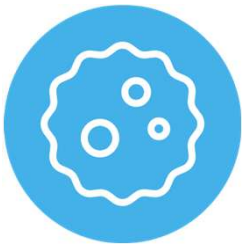
- Adenocarcinoma – most common in the nasal cavity and ethmoid sinus – M8140/3
- Intestinal type sinonasal adenocarcinoma – M8144/3
- Non-intestinal type sinonasal adenocarcinoma – M8140/3
- Melanoma – M8720/3
- Olfactory neuroblastoma – very rare tumours of the nasal cavity –M9522/3
- Sinonasal undifferentiated carcinoma (SNUC) – M8020/3



Other morphologies that may arise include adenocarcinoma and melanoma

Head & Neck – Morphology – Nasopharynx

- Around 95% of the malignancies found in the nasopharynx are squamous cell carcinoma
- Squamous cell carcinoma – M8070/3

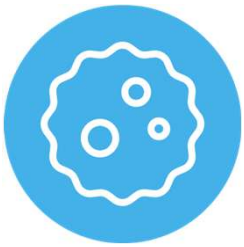


- Subtypes include
  - Basaloid – M8083/3
  - Keratinising – M8071/3
  - Non-keratinising – M8072/3
  - Papillary – M8052/3
  - Verrucous – M8051/3

Around 95% of pharyngeal tumours are also SCCs

Head & Neck – Morphology – Nasopharynx

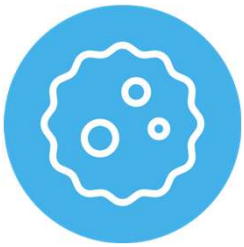
- Other, rarer types of nasopharyngeal tumour include:
  - Adenocarcinoma- M8140/3
  - Low grade nasopharyngeal papillary adenocarcinoma – M8140/3 (grade should be recorded as Low / Grade 1)



Although other types can occur

Head & Neck – Morphology – Oropharynx

- Around 95% of the malignancies found in the oropharynx are squamous cell carcinoma
- Squamous cell carcinoma (SCC) – M8070/3
  - HPV-associated SCC – M8085/3*
  - HPV-independent SCC – M8086/3*



* If the morphology codes M8085/3 or M8086/3 do not appear in your cancer data management system, please record the morphology as M8070/3 temporarily and note any HPV association (positive or negative) in the Primary Diagnosis Subsidiary Comment Field. It may be necessary for trusts to contact their system supplier to inform them of the missing morphology codes

Around 95% of pharyngeal tumours are also SCCs. If your cancer data management system does not have the HPV-associated or -independent morphology codes available as an option, please record the tumour as M8070/3, adding any positive (or negative) HPV association in the Primary Diagnosis Subsidiary Comment field.

Head & Neck – ICD10 coding – Invasive Pharynx, Nasal Cavity & Sinuses

- C10.* - Malignant neoplasm of oropharynx
- C11.* - Malignant neoplasm of nasopharynx
- C12.* - Malignant neoplasm of piriform sinus
- C13.* - Malignant neoplasm of hypopharynx
- C14.* - Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx
- C30.* – Malignant neoplasm of nasal cavity and middle ear
- C31.* - Malignant neoplasm of accessory sinuses

- * - Final digit denotes location

The ICD10 codes for invasive tumours of the pharynx, nasal cavity & sinuses are shown here. Where an asterix is shown at the end of the code, this indicates that the final digit is used to define the location

Head & Neck – ICD10 coding – Non-Invasive Pharynx, Nasal Cavity & Sinuses

- D00.0 – Carcinoma in-situ of lip, oral cavity & pharynx
- D02.3 – Carcinoma in-situ: Other parts of respiratory system (includes accessory sinuses, middle ear, nasal cavities)
- D37.0 – Neoplasm of uncertain or unknown behaviour: Lip, oral cavity and pharynx (includes aryepiglottic fold and salivary glands)
- D38.9 - Neoplasm of uncertain or unknown behaviour: Other respiratory organs (includes accessory sinuses, cartilage of nose, middle ear, nasal cavities)

- While your clinical team may request that D coded tumours are recorded, these do not currently require a COSD submission from your cancer data management system. NDRS obtains data on these tumours direct from pathology laboratories

ICD10 codes for non-invasive tumours of the nasal cavity, sinuses and pharynx are shown here. It should be noted that while the clinical team may request that these non-invasive tumours are recorded, these ICD10 codes don't require a COSD record from your cancer data management system. We collect data on these head and neck tumours direct from the path labs

Head & Neck – Grade

Nasal Cavity & Pharynx

- Grade 1 (well differentiated / low grade) - Tumours look very similar to the normal tissue and retain a degree of functionality. Grade 1 tumours have the best prognosis
- Grade 2 (moderately differentiated / intermediate grade) - Tumours are formed of cells that somewhat resemble the normal tissue and retain limited functionality
- Grade 3 (poorly differentiated / high grade) - Tumours have very abnormal cells with little or no functionality. Grade 3 tumours have the worst prognosis

The grade of these tumours is assessed under a microscope by comparing the appearance of tumour cells to normal, healthy cells. A number is assigned from 1 to 3 to denote the grade. The higher the number, the less similar they appear and the lower the functionality of the cells.

Head & Neck – Stage

- Most invasive tumours are staged as follows:
  - For diagnosis dates up to 31st December 2025 use UICC TNM v8
  - For diagnosis dates from 1st January 2026 use UICC TNM v9
- Please note that the TNM version must be accurately recorded – if you are unable to amend the version on your cancer data management system, please refer to your line manager
- If, after 1st January 2026, your cancer data management system has not been amended to include TNM v9 please record the TNM v9 stage and add the following statement to the Primary Diagnosis Subsidiary Comment field:
- Patient staged using TNM9 not TNM8 as per CR2070
- Please note that malignant melanomas of the upper aerodigestive tract (which includes the nasal cavity and paranasal sinuses) are aggressive and staged according to different criteria than non-melanoma tumours
- Carcinomas of the frontal sinus and sphenoid sinus are not staged

Most Invasive neoplasms are staged using the appropriate UICC TNM version.

Head & Neck – Stage

- For details on recording stage, please see the NDRS training module KPI-TNM Staging 101, available on this link: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials

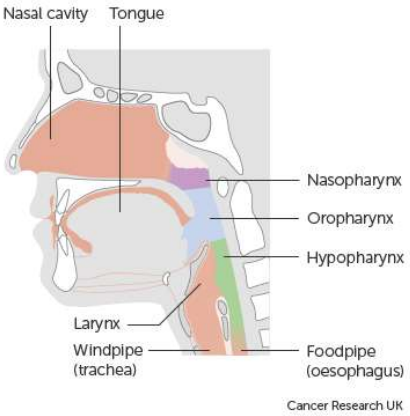
- Staging data sheets detailing the specific staging requirements can also be downloaded from the NDRS website for clinical use: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials/staging-sheets

For more details on recording stage, please see the NDRS training module KPI-TNM Staging 101 and the relevant staging data sheets, available on the NDRS website.

Head & Neck – Treatment – Nasal Cavity - Surgery

The type of surgery offered for tumours of the nasal cavity will depend on the location and stage of the cancer

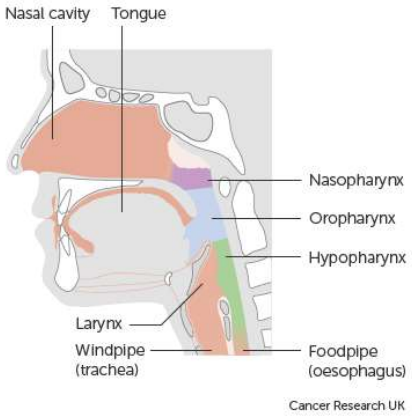
- Endoscopic surgery via the nose may be offered where the tumour is accessible and can be removed without damage to surrounding structures. It may also be offered if the tumour is causing an obstruction and the patient is not sufficiently fit for another surgical approach



Where surgery is offered for tumours of the nasal cavity, an endoscopic approach may be used for accessible tumours or where patient fitness and obstruction of airways demands it

Head & Neck – Treatment – Nasal Cavity - Surgery

- External nasal surgery may be needed where the tumour cannot be reached with an endoscope or is very large
- Where the tumour also affects the skin or underlying tissue of the nose, that tissue may need to be removed. This is known as a partial or complete rhinectomy

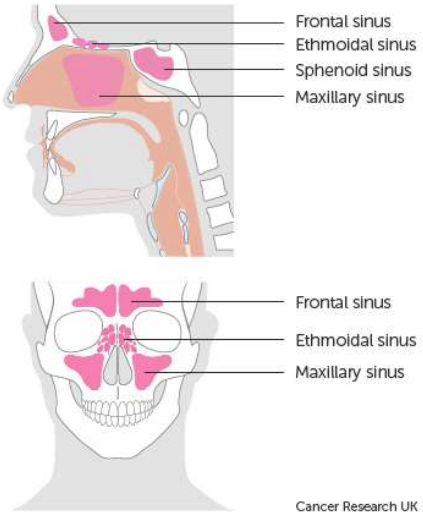


… although for very large or inaccessible tumours, an open surgical approach may be required. In some cases where the tissue of the nose is affected, part or all of the nose may need to be removed.

Head & Neck – Treatment – Nasal Cavity - Surgery

The type of surgery offered for tumours of the nasal and paranasal sinuses will also depend on the location and stage of the cancer

- Ethmoid sinus: Removal of the lining/bone of the ethmoid sinus (ethmoidectomy) may be endoscopic or open
- Maxillary sinus: Surgical removal of part/all of the upper jawbone and roof of the mouth (maxillectomy). The surgical approach may be down the side of the nose or through the roof of the mouth. Bone grafts or prosthetics may be used to replace the roof of the mouth

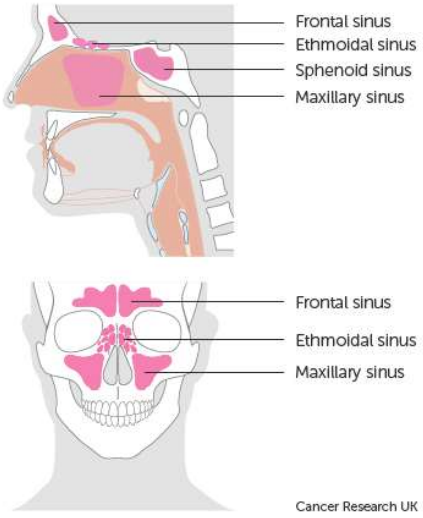


Where surgery is offered for sinus tumours, the type of surgery will depend on the tumour location and stage.

Head & Neck – Treatment – Nasal Cavity - Surgery

Advanced tumours of the sinuses may require a radical surgery involving a specialist team of surgeons

- A craniofacial resection is the removal of the affected sinus cavities, parts of the base of the skull and parts of the eye sockets. This may be required if an advanced cancer is found in the ethmoid, frontal and/or sphenoid sinuses



Cancer Research UK

A radical type of surgery (known as a craniofacial resection) may be needed for advanced cancers in the… ethmoid, frontal or sphenoid sinuses.

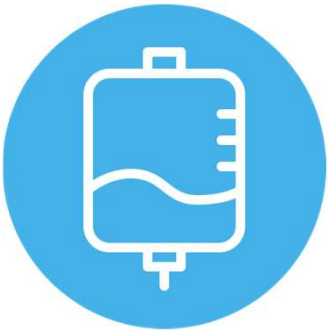
Head & Neck – Treatment – Nasal Cavity - Radiotherapy

- Radiotherapy may be offered as a first treatment and can cure many early stage tumours of the nasal cavity and sinuses
- More advanced tumours are usually treated with both radiotherapy and chemotherapy at the same time (chemoradiotherapy) if the patient is fit enough
- Radiotherapy may also be given as a post-surgical adjuvant treatment or as a palliative treatment

However, radiotherapy may be a suitable alternative to surgery for nasal cavity or sinus tumours, depending on the type and stage of the tumour. It may also be offered adjuvantly or as a palliative treatment to control symptoms

Head & Neck – Treatment – Nasal Cavity - Chemotherapy

- Chemotherapy may be offered to shrink a tumour prior to surgery
- Chemotherapy may also be offered in conjunction with radiotherapy (chemoradiotherapy)
- Where a cancer is very advanced or has recurred after surgery, chemotherapy may be used to slow the growth of the tumour and relieve symptoms



Chemotherapy may be offered to shrink a tumour prior to surgery, as an adjuvant treatment together with radiotherapy or to slow the growth of a recurring tumour

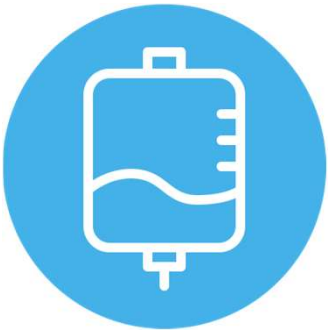
Head & Neck – Treatment – Nasopharynx - Radiotherapy

- Radiotherapy alone can cure most early stage nasopharyngeal tumours
- More advanced tumours are usually treated with both radiotherapy and chemotherapy at the same time (chemoradiotherapy) if the patient is fit enough

For Nasopharyngeal tumours, Radiotherapy is often the first treatment or some types and stage of tumour. It may also be offered adjuvantly or as a palliative treatment to control symptoms

Head & Neck – Treatment – Nasopharynx - Chemotherapy

- Chemotherapy alone may be offered when the lymph nodes are involved. This may be two or more drugs in combination
- If fit enough, chemoradiotherapy may be offered



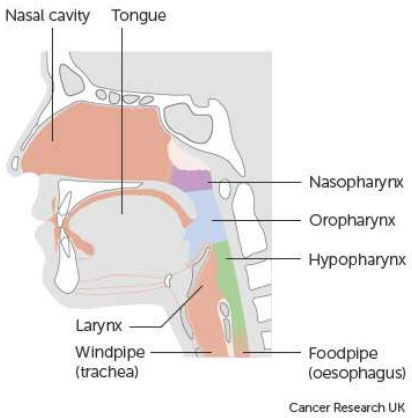
… while chemotherapy may be offered alone or in conjunction with radiotherapy

Head & Neck – Treatment – Nasopharynx - Surgery

Surgery is not a common treatment for nasopharyngeal tumours due to the proximity of important blood vessels and nerves and because other treatment modalities often work well

Surgery may be required to remove lymph nodes as a subsequent treatment after radiotherapy and/or chemotherapy depending on the type of tumour

Surgery to remove lymph nodes may also be needed if the cancer recurs

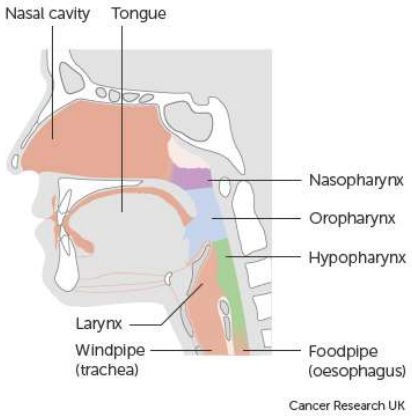


And while surgery is not a common treatment for these tumours, it may be used to remove lymph nodes as a subsequent treatment

Head & Neck – Treatment – Oropharynx - Surgery

Surgery is a common treatment for early stage oropharyngeal tumours and may be required for some late stage tumours

- Early stage oropharyngeal tumours may be excised through the mouth, either by transoral laser microsurgery (TLM) or by transoral robotic surgery (TORS)
- More advanced oropharyngeal tumours may have spread to the jawbone, requiring the removal of some or all of the bone and tissue. This is known as a mandibular resection



Surgery is however a common treatment for tumours of the oropharynx. Early stage tumours may be removed via the mouth using laser- or robotic-surgery techniques. Where the cancer has spread to the jawbone, more extensive surgery may be required.

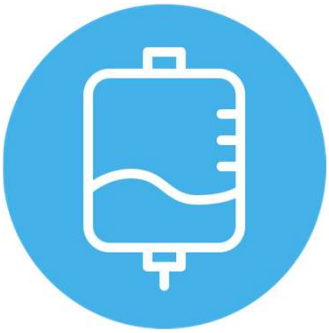
Head & Neck – Treatment – Oropharynx - Radiotherapy

- Radiotherapy may be offered as a first treatment
- Radiotherapy may be combined with chemotherapy in individuals with a good performance status
- Radiotherapy is also used as adjuvant treatment after surgery to reduce the risk of recurrence or as a palliative treatment to control symptoms

Radiotherapy might be offered as a first treatment but may also be used in combination with chemotherapy, as an adjuvant treatment or to provide symptomatic relief

Head & Neck – Treatment – Oropharynx - Chemotherapy

- Chemotherapy is often given in conjunction with radiotherapy
- Chemotherapy may sometimes be offered as a neo-adjuvant treatment prior to surgery if the tumour is large or at an advanced stage
- Chemotherapy may also be offered palliatively to control symptoms

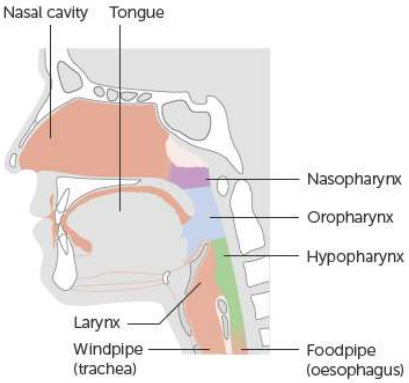


Again, chemotherapy may be given in conjunction with radiotherapy but may also be given alone prior to surgery if the tumour is large or advanced. It may also be given palliatively.

Head & Neck – Treatment – Hypopharynx - Surgery

Surgery may be offered for tumours of the hypopharynx. This may be:

- Partial or complete removal of the hypopharynx (pharyngectomy)
- For very aggressive or advanced tumours, removal of the larynx may be needed at the same time (laryngopharyngectomy)
- Following such extensive surgery, a reconstruction of the throat will be required to allow the patient to swallow



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Surgery is sometimes offered for tumours of the hypopharynx and may involve the removal of either the pharynx alone or both the pharynx and larynx depending on the nature and spread of the tumour. Reconstructive surgery would be needed to allow the patient to swallow.

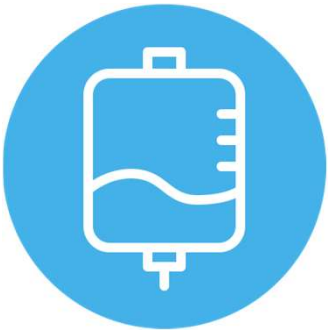
Head & Neck – Treatment – Hypopharynx - Radiotherapy

- Radiotherapy may be offered as a first treatment
- Radiotherapy may be combined with chemotherapy in individuals with a good performance status
- Radiotherapy is also used as adjuvant treatment after surgery to reduce the risk of recurrence or as a palliative treatment to control symptoms

As with many head and neck cancers, radiotherapy may be offered as a main treatment, neo-adjuvantly, adjuvantly or palliatively

Head & Neck – Treatment – Hypopharynx - Chemotherapy

- Chemotherapy is often given in conjunction with radiotherapy
- Chemotherapy may sometimes be offered as a neo-adjuvant treatment prior to surgery if the tumour is large or at an advanced stage
- Chemotherapy may also be offered palliatively to control symptoms

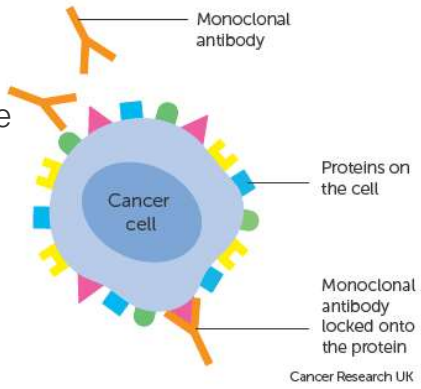


as may chemotherapy. Chemotherapy and radiotherapy are often used in combination for hypopharyngeal tumours

Head & Neck – Treatment – Pharynx – Targeted Treatment

Biological treatment, also known as targeted therapy, can be used to prevent pharyngeal tumour cells growing and dividing

- A type of drug called a monoclonal antibody therapy is used to block the signals that tell the tumour cells to grow and multiply
- Targeted therapy may be used if the patient is unable to have chemotherapy or if a tumour has recurred
- Targeted therapy may be used in conjunction with radiotherapy if the cancer has spread to local lymph nodes
- Monoclonal antibody therapy drugs are easily recognised as the names all end in "…mab"



Pharyngeal tumours may also be treated with monoclonal antibody therapies which block the chemical signals telling the tumour cells to grow and divide. These targeted treatments are sometimes used in conjunction with radiotherapy or where the patient is unable to have chemo

Summary

In summary

Summary

- Common risk factors for tumours of the pharynx and nasal cavity include smoking, diet and family history. Other risks factors, depending on tumour location, can include viral infection, alcohol or radiation exposure

Smoking, diet and family history are risk factors for tumours of both the nasal cavity and pharynx. Viral infections and prior radiation exposure may also be risk factors for some tumours.

Summary

- Common risk factors for tumours of the pharynx and nasal cavity include smoking, diet and family history. Other risks factors, depending on tumour location, can include viral infection, alcohol or radiation exposure
- Signs of a nasal cavity tumour may include loss of vision, pain around one eye or persistent nosebleeds. Pharyngeal tumours may present with symptoms including hearing loss, headaches or difficulty swallowing, depending on the tumour location

Nasal cavity tumours may present with a loss of vision or pain around one eye. Depending on their location, pharyngeal tumours might cause difficult swallowing or hearing loss.

Summary

- Common risk factors for tumours of the pharynx and nasal cavity include smoking, diet and family history. Other risks factors, depending on tumour location, can include viral infection, alcohol or radiation exposure
- Signs of a nasal cavity tumour may include loss of vision, pain around one eye or persistent nosebleeds. Pharyngeal tumours may present with symptoms including hearing loss, headaches or difficulty swallowing, depending on the tumour location
- Investigations will usually include a form of endoscopy, imaging and possibly one or more biopsies

Investigations generally include either a Nasendoscopy or Panendoscopy, some form of imaging and either a solid tissue biopsy or a fine needle aspirate sample

Summary

- All invasive tumours must be recorded

All invasive tumours – those C coded in ICD10 – must be recorded in your cancer data management system

Summary

- All invasive tumours must be recorded
- Stage must be recorded for all stageable cancers. Carcinomas of the frontal sinus and sphenoid sinus are not staged

While carcinomas of the frontal sinus and sphenoid sinus are not staged, a full TNM stage must be recorded for all stageable cancers

Summary

- All invasive tumours must be recorded
- Stage must be recorded for all stageable cancers. Carcinomas of the frontal sinus and sphenoid sinus are not staged
- Treatment is determined depending on the type, location and stage of the tumour – this may include surgery, radiotherapy, chemotherapy or targeted therapy

The treatment regimen depends on the type, location and stage of the tumour. Some tumours will need a combination of treatments

Summary

- Additional guidance on recording COSD data including morphology, topography, staging and recording a diagnosis can be found at: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials
- Staging data sheets can also be downloaded from the NDRS website for clinical use: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials/staging-sheets

Additional training modules as well as Staging sheets for clinical use may be downloaded from the NDRS website.

Summary

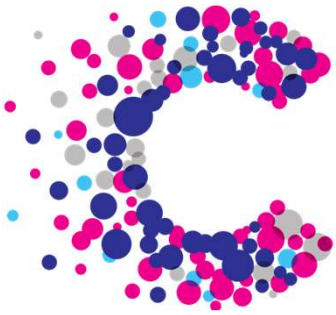
- If in any doubt as to whether you should be recording a diagnosis, please refer to the latest COSD User Guide, Appendix A & Appendix B
- For guidance on the required staging system, please refer to the latest COSD User Guide, Appendix E

- https://digital.nhs.uk/ndrs/data/data-sets/cosd#downloads

Do please remember, guidance **is** available on our website. You can download the COSD User Guide by clicking on this link and selecting the COSD version appropriate to your trust.

Acknowledgements

Many thanks to Cancer Research UK for the use of their images within this training module.



CANCER RESEARCH UK

We'd like to thank Cancer Research UK for the use of their images within this training module.

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If you have any questions on the information contained within this module or about COSD in general, do please feel free to email your regional Data Liaison Manager