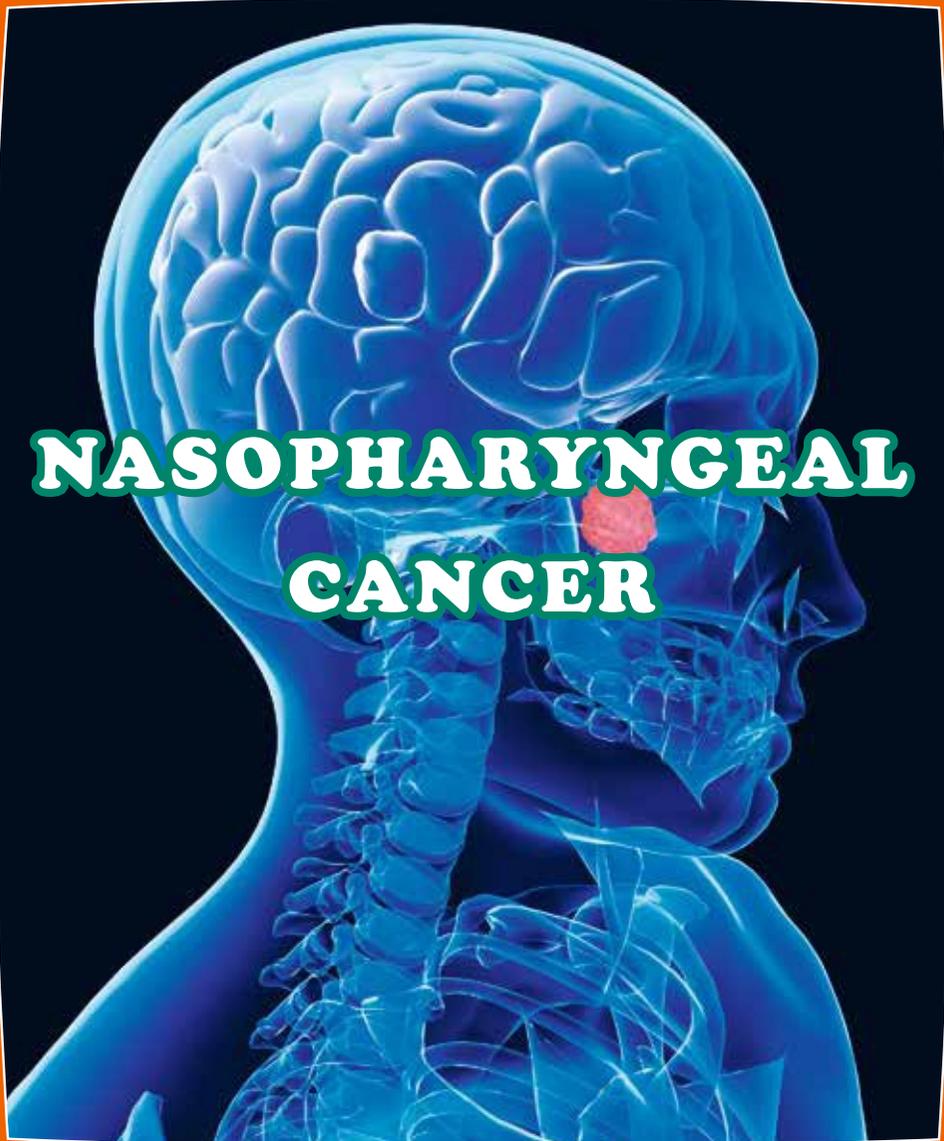


Inspired by Hope  
Committed to Care



National Cancer  
Centre Singapore  
SingHealth



An Educational Initiative by National Cancer Centre Singapore

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# Introduction

Nasopharyngeal cancer (NPC) affects more men than women. In Singapore, NPC is the 10th most common cause of cancer death in males, and one of the most common cancers in males aged between 30 and 49 years old. (Singapore Cancer Registry Annual Report, 2022). This cancer also tends to run in the family i.e. patients with relatives with NPC are at a higher risk of developing the cancer.

This information booklet is intended for patients who are about to receive radiotherapy treatment for nasopharyngeal cancer. It contains some general information on nasopharyngeal cancer and outlines the treatment options with particular attention to radiotherapy treatment. Your doctor will discuss with you in more detail, giving you information specific to your condition and treatment.

We hope you will find this booklet helpful. However, it is intended to serve only as a guide and is not a substitute for medical advice. If you have any further questions or concerns, please do not hesitate to ask a member of your healthcare team.

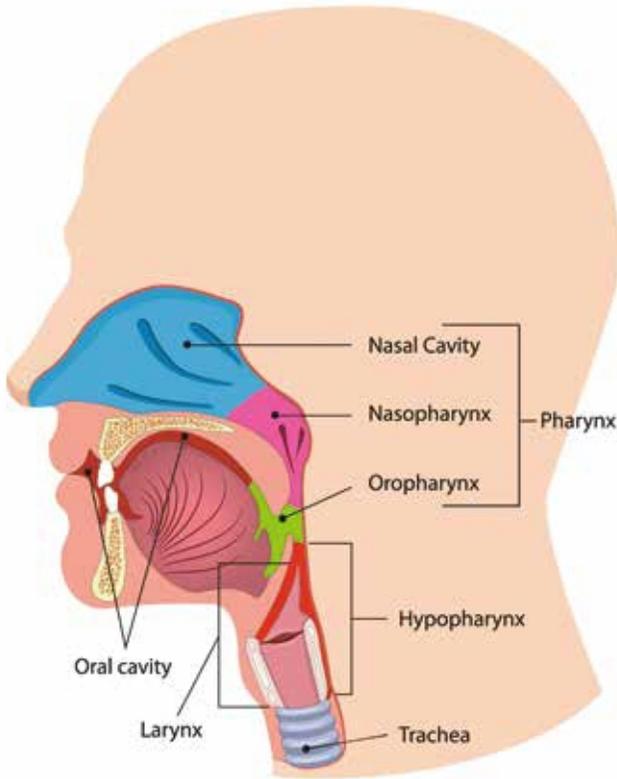
If you find this booklet useful, share it with your family and friends. If you have any questions about the issues raised in this booklet, or if there is any information you are seeking that is not covered here, please contact the Cancer Helpline by calling 6225 5655 to speak with a nurse counsellor.

Other cancer information booklets are available from the National Cancer Centre Singapore's Cancer Education and Information Services department. You can contact the Cancer Helpline to request for a copy. For the electronic version of this booklet, please visit: [www.nccs.com.sg](http://www.nccs.com.sg)

# WHAT IS NASOPHARYNGEAL CANCER?

Nasopharyngeal Cancer (NPC), also known as nose cancer, is a disease in which cancer cells develop from the tissues of the nasopharynx.

The nasopharynx is the passageway located behind the nose, just above the throat (oropharynx) which connects the nose to the respiratory system. The nasopharynx is also connected to the ear via the Eustachian tubes which open into the middle ear.



# SYMPTOMS OF NASOPHARYNGEAL CANCER

In the early stages of NPC, there are often no or mild symptoms. When the cancer progresses, some symptoms may show.

Symptoms of NPC may include:

- A painless neck lump
- Persistent blood stained saliva/ sputum
- Bleeding/ bloody discharge from the nose or in nasal secretions
- Nasal blockage that does not go away
- Hearing loss or ringing in the ears (often one sided)
- Persistent sensation of blocked ear/ ears
- Unusual face pain or numbness
- Double vision
- Headache
- In advanced NPC, where the cancer has spread to other parts of the body such as the lung, bone or liver, symptoms such as breathlessness, cough or pain may surface.

## WHEN TO SEE A DOCTOR

Make an appointment with your doctor if you have any signs or symptoms that worry you. If you have a strong family history of NPC (two or more first degree relatives with NPC), you may also wish to see a doctor to be screened for NPC.

## HOW TO PREVENT NPC?

There are several ways to lower the risk of NPC:

- Reduce consumption of salted and preserved foods
- Adopt a healthy diet with fruits, vegetables and whole grains
- Avoid smoking or inhaling second-hand smoke
- Exercise regularly and maintain a healthy weight

## CAUSES AND RISK FACTORS OF NASOPHARYNGEAL CANCER

While the exact cause of NPC is unknown, several factors have been found to contribute to its development. These risk factors include:

- Gender - NPC is more common in men than in women
- A diet high in salted or preserved (cured/ smoked/ pickled) foods
- Epstein-Barr virus (EBV) infection
- Ethnicity - NPC more commonly affects people in parts of China and Southeast Asia. In Singapore, people of Southern Chinese heritage have higher incidence of NPC.
- Family history of NPC
- Smoking

# DIAGNOSIS OF NASOPHARYNGEAL CANCER

Tests and procedures used to diagnose NPC include:

**Nasoendoscopy** - A thin, flexible camera called a nasoscope, is inserted through the nostril to check for any abnormalities such as bleeding or growths within the nasopharynx and the rest of the head and neck structures.

**Biopsy** - If any abnormalities are seen during nasoendoscopy, a tissue sample may be collected (under local anaesthesia) for further examination in the lab.

**Imaging tests** - Imaging tests (e.g. Computer Tomography (CT) scan or Magnetic Resonance Imaging (MRI) scans may be ordered by the doctor to examine the head and neck regions, nearby organs and lymph nodes for signs of cancer.

If NPC is diagnosed, further tests may be required to determine if the cancer has spread and to determine the stage of cancer. Tests may include:

**Blood tests** - Blood tests to check for general health and infections, including how well the liver, kidney and other organs are functioning.

**Staging scans** - Positron Emission Tomography (PET) scan may be ordered. In this scan, a low-level radioactive substance is injected to determine if there is spread of cancer to the rest of the body. A CT scan of the chest and abdomen, and bone scan may also be used.

# TREATMENT OF NASOPHARYNGEAL CANCER

Treatment for NPC depends on the following factors:

- Size, type and location of the tumour
- Stage of the disease
- The patient's general stage of health

The main treatment for NPC is radiation therapy. Some patients may also require radiation therapy in combination with chemotherapy. Surgery may be required in some patients with persistent or relapsed disease after initial radiation treatment.

An individual with cancer should be assessed by a specialist to determine which treatment is best suited for them.

## Radiotherapy

Radiotherapy, also known as radiation therapy, uses powerful and targeted X-ray beams to kill cancer cells, and can be given to the region that covers the nasopharynx, the neck and down to the collarbone to treat NPC. A new modality of radiotherapy known as Proton Therapy, allows radiation to be delivered to the tumour, yet sparing the normal tissues better than the conventional X-ray radiotherapy.

Receiving radiation treatment is a painless process, though radiation therapy to the head and neck can cause some cumulative side effects over the entire course of treatment, such as sores in the throat or mouth, hearing loss and dry mouth. Your doctor will discuss with you how to manage these side effects while undergoing treatment.

For more information on radiotherapy for NPC, please scan the QR code below to refer to the "Understanding Radiotherapy for Head & Neck Cancers" booklet.



Understanding  
Radiotherapy for Head  
and Neck Cancers  
Booklet





## Chemotherapy

Chemotherapy uses chemicals to kill cancer cells in the body. In patients with localised NPC, chemotherapy may be offered before the start of radiotherapy, during the radiation treatment, and after the completion of radiotherapy. When combined with radiation, chemotherapy can improve the effectiveness of radiotherapy. In patients with advanced NPC, chemotherapy may be recommended to help control the growth of the cancer.



## Surgery

Surgery is not a common treatment for NPC and is usually reserved for cases where the cancer recurs after initial treatment. In cases where there is a small cancer recurrence at the nasopharynx or in the lymph nodes of the neck, surgery may be considered to treat the recurrence. This may be performed either through open surgery or endoscopic (keyhole) surgery through the nose. However, suitability for these procedures is best determined after appropriate scans and consultation with your surgical oncologist.

## Your Radiation Team

**Radiation Oncologists** - They are doctors in charge of radiotherapy treatment. They have overall responsibility for the management of each treatment, including planning, follow up and clinical care.

**Radiation Oncology Nurses** - They are trained to provide radiotherapy-related care. They provide support and care for patients and their caregivers throughout the course of treatment.

**Radiation Therapists** - They are professionals trained in the actual delivery of radiotherapy. They also inform, orientate, and educate the patients.

**Medical Physicists** - They ensure that complex treatments are properly tailored for each patient. They also perform quality control programmes for each treatment plan.

**Dosimetrists** - They calculate the dose of radiation and ensure that the tumour is targeted accurately. They develop treatment plans that are customised for each patient.

**Dentists** - They will check your teeth before and after your radiation treatment as radiotherapy will affect gum healing.

**Dietitians** - They calculate the required calorie intake for you and advise on the appropriate calorie and protein requirements during the treatment.

**Speech Therapists** - They will assess your speech and jaw movement and check how well you can swallow. They will teach you exercises to keep your jaw and swallowing muscles strong.

**Ancillary Staff** - They assist in the general coordination of patient care and general administration (i.e. appointment booking, financial counselling).

# QUESTIONS YOU CAN ASK YOUR DOCTOR

You may find the following list of questions helpful when thinking about what to ask your doctor.

## About your illness

1. What type of cancer do I have?
2. What is the stage of my cancer?
3. Is my type of cancer hereditary?

## About tests

1. What are these tests for?
2. What will these investigations involve?
3. What are the risks of doing these test?
4. Will the results of this test make any difference to the treatment you provide?
5. How much will these tests cost?



## About treatment

1. What are the treatments available for my type of cancer?
2. What treatment would you recommend and why?
3. What is the aim of the treatment?
  - Is it for a cure?
  - Is it for temporary control?
  - Is it to reduce symptoms?
4. What are the benefits of this treatment?
5. What are the possible side effects of this treatment?
6. Can these side effects be prevented or controlled?
7. Are the side effects temporary or permanent?
8. How long is the treatment?
9. How does the treatment work and how is it given?
10. Can I take any herbal medicine or supplements during my treatment?
11. What will happen if I choose not to have any treatment?
12. Can I go back to work while I am on treatment?
13. Will I receive treatment as an outpatient or be admitted to the hospital?
14. What difference will this treatment make to my quality of life, e.g. work, social, physical and sexual activity?

If you have other questions, you may want to add on to the list. Feel comfortable to ask the doctor to explain the answers to you again if you do not understand them. It is also useful to write down the points you have discussed to act as a reference and reminder when you need them.

## SUPPORTIVE CARE

A diagnosis of cancer often leads to a variety of emotions such as shock, anger, sadness, and possibly even depression. You do not have to struggle with your illness alone. Help is available to support you and your loved ones through your cancer journey. Apart from the team of doctors and healthcare professionals looking after you, there are other information and support services you may find useful.

### Medical Social Services/ Department of Psychosocial Oncology

The Department of Psychosocial Oncology at NCCS comprises a team of Medical Social Workers who are additionally qualified as Clinical Psychologists, Groupwork Facilitators, Counsellors, etc. They attend to patients and their families who need emotional support, financial aid, home care, transportation or rehabilitation. You will need a doctor's referral letter to be seen by a Medical Social Worker. You may reach the Department of Psychosocial Oncology at 6306 1777 or [psychosocial@nccs.com.sg](mailto:psychosocial@nccs.com.sg).

### NCCS Cancer Helpline

The Cancer Helpline is a private, confidential and anonymous one-to-one information and support service manned by nurses. Their aim is to help you through your cancer experience. They provide information, support on management of treatment side effects, referral to cancer support services and free cancer-related information materials upon request.

The nurses do not give medical advice and treatment recommendations, but may be able to assist you in clarifying your doubts and help in putting into perspective the information you may have received from your doctors. They may be contacted via telephone at 6225 5655 or via email at [cancerhelpline@nccs.com.sg](mailto:cancerhelpline@nccs.com.sg)

### Nasopharyngeal Cancer (NPC) Support Group

The NPC Support Group is a voluntary group formed to reach out to NPC patients (as well as survivors) and their caregivers for peer support and sharing of experiences. Additionally, it also runs monthly talks related to NPC. For more information, please contact 6306 1777 or email [patientsupport@nccs.com.sg](mailto:patientsupport@nccs.com.sg).



# TREATMENT AND SUPPORT UNITS AT NCCS

## Department of Radiation Oncology

### National Cancer Centre Singapore

Basement 3 & 4

Enquiry line: 6436 8000

### Singapore General Hospital

Blk 2 basement 1

Enquiry line: 6436 8000

- Appointment Scheduling Unit : 6436 8088
- General Enquiries : 6436 8000
- Dept of Psychosocial Oncology : 6306 1777
- Outpatient Pharmacy Helpdesk : 6436 8091
- Cancer Helpline : 6225 5655

## OTHER RESOURCES ON THE INTERNET

You may find more information on cancer in general, NPC and radiotherapy treatment on the Internet resources listed below. Please take note that health information on the Internet may not be applicable to you, and you are encouraged to discuss the information with your healthcare team.

### American Cancer Society

[www.cancer.org](http://www.cancer.org)



### National Cancer Institute

[www.cancer.gov](http://www.cancer.gov)



### Macmillan Cancer Support

[www.macmillan.org.uk](http://www.macmillan.org.uk)



### Cancer Research UK

[www.cancerresearchuk.org](http://www.cancerresearchuk.org)



### Cancer Council Australia

[www.cancer.org.au](http://www.cancer.org.au)









For more information on cancer, please call the

**CANCER HELPLINE AT TEL: 6225 5655  
OR EMAIL [CANCERHELPLINE@NCCS.COM.SG](mailto:CANCERHELPLINE@NCCS.COM.SG)**

MONDAYS - FRIDAYS : 8.30am to 5.30pm

SATURDAYS, SUNDAYS : CLOSED (Please leave a message)  
& PUBLIC HOLIDAYS

Scan here for call back:



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