

- **Stop smoking**
Immediate benefits of less airway irritation with less cough and shortness of breath.
- **Eat well**
Avoid hot, spicy and acidic food. Eat soft food with a high liquid content eg: ice cream, congee or soup. Eat a balanced diet of small frequent meals.
- **Stay active (even gentle short bouts of activity helps!)**
Improves mood, reduces fatigue and helps with appetite.
- **Enlist support**
Mental and emotional health is as important as physical health. It might be helpful to talk to counsellors or join a cancer support group.
- **Have a caregiver who can manage your care**
It is good to have someone who can help to keep track of hospital appointments and medications prescribed.

MAINTAIN GOOD DENTAL AND ORAL HYGIENE

Dental care and oral hygiene are very important for head and neck cancer patients who plan to receive radiation therapy. Dry mouth and inflammation caused by radiation may change the environment in the mouth and increase the risk of mouth infections.

The following steps are recommended for maintaining oral hygiene and dental health:



- Go for a dental evaluation and treatment prior to the start of radiation therapy.
- Use a toothbrush with soft bristles.
- Rinse mouth with baking soda and salt mouthwash, and avoid mouthwash that contains alcohol.

- Use non-shredding dental floss at least once a day.
- Use fluoride treatment for your teeth, in accordance with your dentist's advice.
- Follow up regularly at six monthly intervals with your dentist after the completion of your radiation therapy treatment.

WHAT ARE THE POTENTIAL SIDE EFFECTS?

You will experience minimal side effects in the first one to two weeks of your radiation therapy course. Many of these side effects will improve over time and some can be controlled with medication. Inform your doctor or nurse if you are experiencing any discomfort so they can help you better.

- Redness, irritation and sores in the mouth
- Dry and thickened saliva
- Difficulty in swallowing
- Change/loss in taste
- Swelling of soft tissues
- Change in texture of skin
- Fatigue

Late side effects, such as hardening of the neck skin, hearing loss, or decrease in thyroid hormone levels, can occur months to years after treatment in some patients. There are other rare side effects, such as damage to nerves or the jaw bone, which may affect less than five percent of our patients.

Informed Consent

Informed consent is an important process before the start of radiation therapy. Your doctor will explain to you the benefits and risks of the recommended therapy in detail during consultation, before the initiation of the treatment.

Information in this brochure is given as a guide only and does not replace medical advice from your doctor. Please seek advice from your doctor if you have any questions related to the treatment, your health or medical condition.

CONTACT INFORMATION



Nearest MRT Station: Kent Ridge Station (Circle Line)

Commuters can alight at the Kent Ridge Station, right at the doorstep of the NUH Medical Centre. Please exit the station via Exit C. NCIS is located on levels 8, 9 and 10 which are accessible via Lift Lobby B.

National University Cancer Institute, Singapore (NCIS) Radiation Therapy Centre (RTC)

NUH Medical Centre, Level 8
 Opening Hours : 8.30am – 5.30pm
 (Mon – Fri, except Public Holidays)
 Appointment Line : (65) 6773 7888
 (8.30am – 5.30pm, Mon – Fri,
 except Public Holidays)
 Email : CancerApptLine@nuhs.edu.sg

For all other general enquiries

National University Cancer Institute, Singapore (NCIS)
 Email : ncis@nuhs.edu.sg
 Website : www.ncis.com.sg



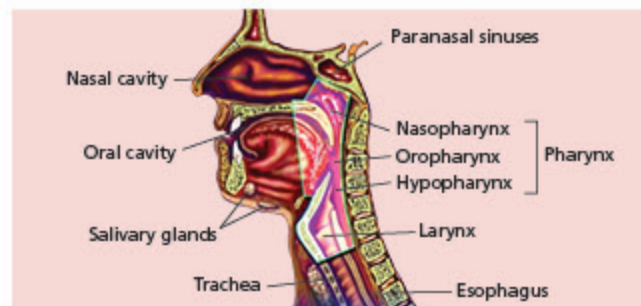
National University Hospital
 5 Lower Kent Ridge Road, Singapore 119074
 Tel: 6779 5555 Fax: 6779 5678
 Website: www.nuh.com.sg

Radiation Therapy for HEAD & NECK CANCER



WHAT ARE THE TYPES OF HEAD AND NECK CANCERS?

Head and neck cancers begin in the cells that line the inner surface of the head and neck area, and are further identified by the sites in which they begin:



Oral – Lips, front two-thirds of the tongue, gums, lining inside the cheeks, floor of the mouth under the tongue, the hard palate, and small area behind the wisdom teeth.

Laryngeal – Cartilage and tissues located just below the pharynx in the neck, containing the voicebox.

Nasopharyngeal – Upper part of the pharynx, which is behind the nose.

Oropharyngeal – Middle part of the pharynx, includes back of pharynx, base of the tongue, and the tonsils.

Hypopharyngeal – Lower part of the pharynx.

WHAT ARE THE SIGNS AND SYMPTOMS?

Oral

- White or red patches, and ulceration on gums, tongue, or lining of mouth
- Swelling of the jaw
- Unusual pain or bleeding

Laryngeal

- Prolonged throat pain when swallowing
- Hoarseness of voice
- Ear pain

Nasopharyngeal

- Frequent headaches
- Neck lump(s)
- Nasal bleeding or blood in sputum
- Pain or ringing in ears or reduced hearing
- Numbness in one side of the face

Oropharyngeal/ Hypopharyngeal

- Ear or throat pain

WHAT ARE THE DIFFERENT TYPES OF TREATMENT?

Treatment depends on the type of head and neck cancer, the stage of cancer, as well as the general medical condition of the patient.

Oropharyngeal and hypopharyngeal cancer

- Radiation therapy, with or without chemotherapy, plays a major role in the treatment of cancers of the oropharynx and hypopharynx.
- As these diseases are often diagnosed in more advanced stages, surgery may be needed but may cause excessive functional abnormality.

Nasopharyngeal cancer

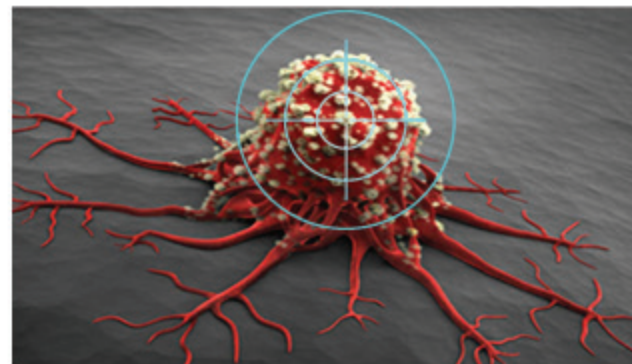
- Radiation therapy is the most important treatment method for nasopharyngeal cancer. Many patients may also benefit from the addition of chemotherapy to radiation therapy.
- Nasopharyngeal cancer is highly curable with radiation therapy if discovered early.

Oral and laryngeal cancer

- Cancers originated from the larynx, lip, and oral cavity including the tongue can be treated with surgery or radiation alone in their early stages.
- Radiation therapy is often used with chemotherapy for advanced diseases, with or without surgery.

WHAT IS RADIATION THERAPY?

Radiation therapy treats cancer by using high-energy X-rays generated from a radiation therapy machine to destroy the cancer cells. It inhibits cancer cells from multiplying by delivering ionising radiation to destroy cancer cells whilst minimising radiation to normal tissues. When these cancer cells die, the body naturally eliminates them. Healthy tissue is then able to repair itself in a way cancer cells cannot, and this leads to a much higher proportion of tumour cell death compared to normal cells.



HOW IS RADIATION THERAPY DONE?

1. **Consultation:** The Radiation Oncologist determines the most appropriate method and discusses with you the treatment intent, schedule, risks and side-effects.
2. **Mark-Up and Simulation:** A CT scan of the treatment area will be obtained, while a face mask is used to ensure accurate positioning during your daily treatment.
3. **Treatment Planning:** A multidisciplinary team produces a customised treatment plan for you.
4. **Treatment:** Radiation therapy for head and neck cancer is delivered daily (Mondays to Fridays) for two to seven weeks depending on the treatment intent (curative or palliative). Each treatment session lasts 20 to 25 minutes.



5. **Follow-up:** Your first follow-up appointment varies depending on how you do during treatment, and is usually about four to eight weeks after you have completed the course of radiation therapy.

WHAT ARE THE TYPES OF RADIATION THERAPY AVAILABLE FOR HEAD & NECK CANCER?

- **3-Dimensional Conformal Radiation Therapy (3DCRT)**
3DCRT delivers very precise doses of radiation to the head and neck area and spares surrounding normal tissue through a machine called a linear accelerator.
- **Intensity Modulated Radiation Therapy (IMRT)**
IMRT involves varying (or modulating) the intensity of the radiation being delivered during treatment. Compared to 3DCRT, this technique can deliver more tightly focused radiation beams to cancerous tumours while reducing the amount of radiation to surrounding healthy tissues.

CARING FOR YOURSELF DURING AND AFTER RADIATION THERAPY

- **Be careful caring for the affected area**
Avoid hot or cold packs and only use lotions and ointments after checking with your doctor or nurse. Clean the affected area with lukewarm water and mild soap.
- **Rest well**
Get plenty of rest during treatment.
- **Check your medications**
Inform your doctor if you are taking medications, to make sure that they are safe to use during radiation therapy.