

Informed Consent

Informed consent is an important process before the start of radiation therapy. As any cancer treatment involves certain risks, it is important for patients to understand the benefits and risks of the recommended therapy before the initiation of the treatment.

Through the process of informed consent, patients are informed about the purpose of the treatment, the technique or approach to be used, and the outcome and potential adverse effects to be expected.

Patients are usually required to sign a consent form before planning of radiation therapy. Signing the consent form indicates that the patient fully understands the therapeutic process and associated benefits and adverse effects, and agrees to accept the recommended treatments and their consequences. However, if questions or concern about the treatment arise after signing the consent form, patients should not hesitate to direct them to the attending physicians.

About RTC@NCIS

Established in 1999, the Radiation Therapy Center of the National University Cancer Institute, Singapore (RTC@NCIS) houses state-of-the-art facilities and an internationally-trained team of radiation oncologists, therapists, physicists, nurses and healthcare professionals. Dedicated to providing holistic and specialized care, RTC@NCIS aims to be one of the world's leading comprehensive cancer centres, dedicated to the prevention, management, and cure of cancer.

Online Resources

Breast Cancer Network of Strength
www.networkofstrength.org

American Cancer Society
www.cancer.org

American Society of Clinical Oncology
www.cancer.net

Macmillan Cancer Support
www.macmillan.org.uk



Contact Information

**National University Cancer Institute, Singapore (NCIS)
Radiation Therapy Centre (RTC)**
5 Lower Kent Ridge Road Singapore 119074
(Kent Ridge Wing, via Linkway on Level 4)

Opening Hours: 8:30am – 5:30pm (Mon- Fri)
(except on Public Holidays)

For appointments, please contact
Tel: (65) 6772 4870/4854 Fax: (65) 6779 4062
Email: CancerApptLine@nuhs.edu.sg

For International Patients and Visitors
The International Patient Liaison Centre (IPLC) is a one-stop centre to support all the medical needs of our foreign patients.

Tel: (65) 6779 2777 (24-Hours Helpline) Fax: (65) 6777 8065
Website: www.nuh.com.sg/iplc

National University Cancer Institute, Singapore (NCIS)
1E Kent Ridge Road,
NUHS Tower Block, Level 7, Singapore 119224
Tel: 6772 4811 Fax: 6872 3137
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

Free Shuttle Bus Service

Free Shuttle Bus Service from Dover MRT Station to NUH

Operation hours : 8.00 am – 8.30 pm (Mondays – Fridays)
: 8.00 am – 2.00 pm (Saturdays)
Not available on Sundays and Public Holidays

Dover/NUH passenger pickup/ drop off point : 1. Dover MRT Station (opposite Singapore Polytechnic)
: 2. Main Building, Lobby Entrance (near roundabout)
: 3. Kent Ridge Wing, Level 3, South Entrance

For more information on Shuttle Bus schedule, log on to www.nuh.com.sg

NEW! Circle Line Kent Ridge Station opens on 8 October 2011.

Commuters can transit at the Buona Vista MRT Interchange and alight two stops after at the Kent Ridge Station, right at the door step of the NUH's Main Building.
The NUH Shuttle Bus Service between Dover Station and NUH will cease on 1 Nov 2011.

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 surgery, your health or medical condition.

Information is correct at time of printing (Aug 2011) and subjected to revision without notice.

Radiation Therapy for Breast Cancer

NEW LIFE, NEW HOPE



What are the symptoms of breast cancer?

- Breast lump
- Bloody or unusual nipple discharge
- Skin changes
- Persistent rash around the nipple
- Retracted nipple
- Breast pain

What are the different types of surgery?

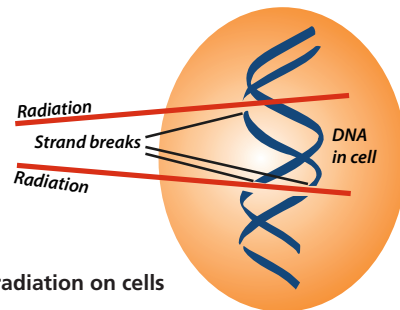
Mastectomy – Removal of the entire affected breast tissue.

Lumpectomy – Breast conserving surgery which involves removal of only the cancerous tissue. This is usually followed by radiation therapy.

During the lumpectomy or mastectomy, the surgeons may perform surgery on the lymph nodes to test if these lymph nodes are involved with cancer.

What is radiation therapy?

Radiation therapy treats cancer by using high-energy X-rays generated from a radiotherapy machine to eradicate cancer cells. It inhibits cancer growth while sparing normal tissues by ionizing radiation effects on the DNA of actively multiplying cancer cells. 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 are hence spared.



Effect of radiation on cells

What are the types of radiation therapy for breast cancer?

Three-Dimensional Conformal External Beam Radiotherapy (3D-CRT)

- 3D-CRT delivers very precise doses of radiation to the breast and spares surrounding normal tissue through a machine called a linear accelerator.
- Before beginning treatment, you will be scheduled for a CT simulation to map out the area being treated.
- At the end of the CT simulation, you may also receive tiny tattoo marks on your skin to help the radiation therapist precisely position you for daily treatment.
- Depending on the stage of your disease, your radiation treatment may treat only the breast, and or nearby lymph nodes as well.
- Treatment sessions span three to eight weeks, Monday to Friday, and lasts approximately ten minutes.

What are the side effects of 3D-CRT?

- Skin irritation similar to a sunburn.
- Mild to moderate breast swelling.
- Mild fatigue that generally gets better a month or two after treatment ends.
- A few women report mild tenderness in the breast or chest wall. This will slowly get better over time.
- Scarring of a small part of the lung just under the breast.

Many of these side effects can be controlled with medications. Please inform your doctor or nurse if you are experiencing any discomfort so they can help you feel better.

Accelerated Partial Breast Irradiation (APBI) -Breast Brachytherapy

- Accelerated partial breast irradiation (or APBI) is currently recommended in selected patients with early stage breast cancer.
- APBI is an outpatient procedure which involves placing flexible plastic tubes called catheters into breast around the scar region. A radioactive source then travels via the catheters to treat the high risk area surrounding the scar. This technique reduces overall treatment time from several weeks to 5 days as well as reduces potential long-term side effects to adjacent normal tissues.

- Before beginning treatment, you will be scheduled for an imaged guided catheter placement. Appropriate sedation and analgesia will be given to you to ensure you are comfortable during the insertion.
- You will receive a total of 10 treatments. There will be 2 treatment sessions a day, 6 hours apart between each treatment. Each treatment sessions will last about 1 hour.
- During treatment the catheters are connected to a brachytherapy machine, called a high-dose-rate afterloader. The placement of the radiation source is temporary and will be removed immediately after each daily treatment. Hence you will be safe to go home after each treatment.
- The nurse will clean your breast and put antibiotic ointment on the catheter sites everyday during the treatment. You will be given instructions on care of your skin.
- After the last treatment session, the catheters will be removed. Most often, there is little or no pain or bleeding.

How do I care for myself after radiotherapy treatment?

- Get plenty of rest during treatment.
- Advise your doctor about any medications you are taking, to make sure they are safe to use during radiation therapy.
- Eat a well balanced diet. If you're having trouble eating, tell your doctor, nurse or dietitian. They might be able to help you to change your diet.
- Stay out of the sun, avoid hot or cold packs, only use lotions and ointments after checking with your doctor or nurse and clean the area with warm water and mild soap.
- Battling cancer is tough. It may help to join a support group.

Clinical Trials

Clinical trials are research studies exploring new ways to improve treatment for cancer patients. Today's radiation treatments are the result of clinical trials completed years ago proving that radiation therapy kills cancer cells and is safe long term. For more information on clinical trials, please visit: www.ncis.com.sg