

Targeted Cancer Therapy

Targeted cancer therapy uses drugs or other substances that block the growth and spread of cancer by interfering with specific molecules involved in cancer growth and progression. A targeted drug called sorafenib may be used to treat patients with advanced liver cancer. Sorafenib targets cancers by stopping them from growing their own blood vessels. As cancer cells need a blood supply to bring nutrients and oxygen, sorafenib may therefore limit the cancer's ability to develop. Sorafenib has been demonstrated to prolong survival in patients with advanced HCC, compared with supportive care alone. Sorafenib is an oral treatment and is usually taken twice a day.

ABOUT NCIS

The National University Cancer Institute, Singapore (NCIS) is the only comprehensive public cancer centre in Singapore treating both paediatric and adult cancers in one facility. Located at the National University Hospital (NUH), NCIS offers a broad spectrum of cancer care with expertise in prevention, screening, diagnosis, treatment, rehabilitation and palliative care.

CONTACT INFORMATION

National University Cancer Institute, Singapore (NCIS)

Radiation Therapy Centre and Breast Care Centre

NUH Medical Centre, Level 8

Chemotherapy Centre and Stem Cell Therapy Centre

NUH Medical Centre, Level 9

Cancer Centre

NUH Medical Centre, Level 10

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

For appointments, please contact

Tel: (65) 6773 7888

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-hour Helpline)

Fax: (65) 6777 8065

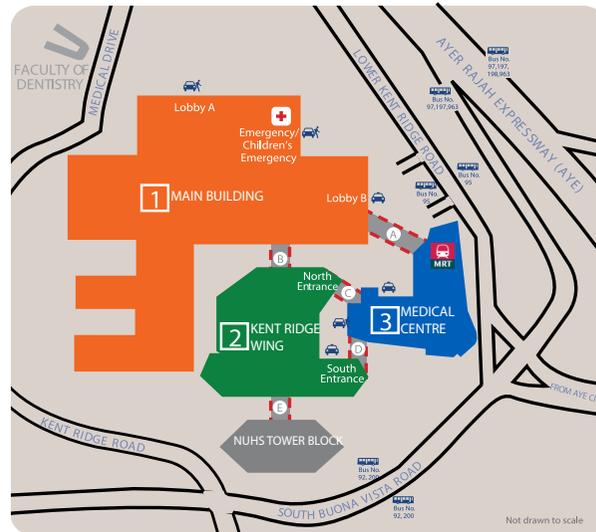
Website: www.nuh.com.sg/iplc

For all other general enquiries, please contact

National University Cancer Institute, Singapore (NCIS)

1E Kent Ridge Road,
NUHS Tower Block, Level 7, Singapore 119228

Email: ncis@nuhs.edu.sg
Website: www.ncis.com.sg



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.

For more information on directions to NUH, log on to www.nuh.com.sg.

For more information on specific directions to NCIS Clinics, log on to www.ncis.com.sg.



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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 questions related to the surgery, your health or medical condition.

Information is correct at time of printing (Oct 2012) and subject to revision without notice.



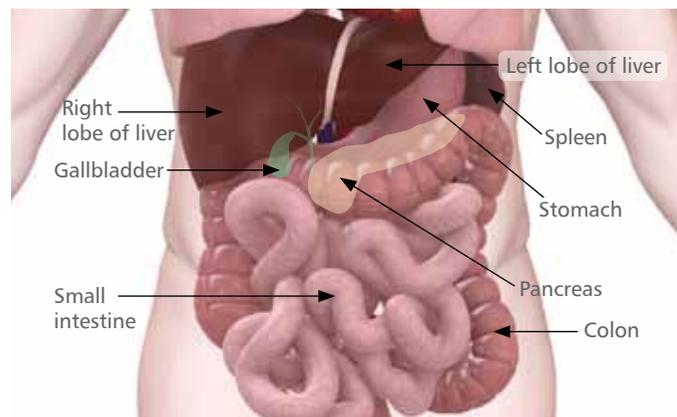
PATIENT INFORMATION

ABOUT
**LIVER
CANCER**

A member of the NUHS

• WHAT IS LIVER CANCER?

Liver cancer is cancer that originates in the cells of the liver. The liver is an organ situated in the upper right portion of the abdomen, beneath the diaphragm and above the stomach. It is one of the major organs responsible for removing toxins from the body. Liver cancer is common in Asian countries such as Hong Kong, Taiwan and Singapore. In the early stages, most patients may not have any specific symptoms.



• WHO IS AT RISK?

- Chronic carriers of Hepatitis B virus and Hepatitis C virus
- Those with liver cirrhosis
- Those with Hepatitis B or C related diseases
- Those with a bile duct disease called primary sclerosing cholangitis
- Alcohol abusers (Alcohol abuse can lead to liver cirrhosis)

People who think they may be at risk should discuss this with their doctor.

• WHAT ARE THE SIGNS AND SYMPTOMS?

Early stage liver cancer may not produce any signs. As the cancer advances to a later stage, it may produce the following symptoms:

- Loss of appetite and weight
- Weakness and fatigue
- Nausea and vomiting
- Abdominal swelling/bloatedness
- Lump in the abdomen
- Abdominal pain
- Yellowish discoloration of the skin and whites of eyes (jaundice)

A doctor should be consulted if the above symptoms occur.

• WHAT CAN YOU DO TO PREVENT LIVER CANCER?

- Prevent Hepatitis B by:
 - getting vaccinated
 - avoiding body piercing and tattooing
 - not abusing drugs or sharing intravenous drug needles
- Prevent Hepatitis C by:
 - not engaging in unprotected sex
 - avoiding body piercing and tattooing
 - not abusing drugs or sharing intravenous drug needles
- Limit alcohol intake to less than one drink a day or avoid completely

• WHAT ABOUT SCREENING?

Screening for liver cancer is still under investigation. However, patients who are in the high-risk* group are often advised to consider regular evaluations with:

- Blood test for alphafetoprotein (AFP) and liver function assessment every 3 months
- Ultrasound scan of liver every 6 months

**People with liver cirrhosis, are hepatitis B carriers or have chronic hepatitis C infection.*

• HOW IS LIVER CANCER DIAGNOSED?

If you present with one or more of the above symptoms, your doctor will try to find out if it is caused by liver cancer or something else. You may be asked to do one or more of the following tests:

- Blood tests: Liver function abnormalities may be revealed by conducting blood tests.
- Imaging tests: Ultrasound, Computed Tomography (CT) scans and Magnetic Resonance Imaging (MRI) scans may be performed.
- Laparoscopy: In this procedure, a thin, lighted tube with a camera on the tip is inserted through a small incision in the front of the abdomen to examine the liver and other organs. It can help doctors confirm the extent of the cancer.
- Biopsy: In a biopsy, a sample of tissue is removed to see if it is cancerous. Different procedures such as a needle biopsy, a laparoscopic biopsy or a surgical biopsy may be performed.

• WHAT ARE THE TREATMENT OPTIONS?

There are different treatments available for liver cancer depending on the stage of the cancer as well as the health of your liver. Treatment options may include:

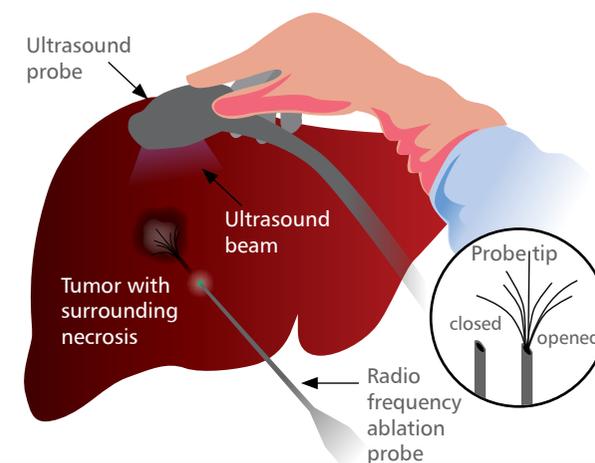
Surgery

Currently surgery to remove the tumour is the only treatment proven to cure the cancer. This operation called surgical resection may be suitable for some patients with liver cancer. Some others can benefit from liver transplantation which is removal of the whole liver and replacement with a liver graft. Both these procedures are routinely offered to patients in NUH.

Liver-Directed Therapies

Radiofrequency Ablation

Radiofrequency ablation is a procedure which destroys the tumour without removing the liver. High-energy beams travel down a thin metal probe that is inserted into the liver and through the tumour. Ultrasound is used to guide the probe into place and the heat that is emitted destroys the tumour.



Trans-Arterial Chemoembolisation

Chemotherapy is the use of anti-cancer drugs to destroy cancer cells or stop them from dividing. It may be administered as part of a treatment called chemoembolisation. Chemoembolisation involves the insertion of chemotherapy drugs directly into the tumour in the liver, together with a gel or tiny plastic beads to block blood flow to the cancer (embolisation). Embolisation prevents the tumour from growing as it is deprived of blood.

Selective Internal Radiation Therapy

Selective Internal Radiation Therapy is a technique that involves the use of many tiny beads in delivering extremely high dosages of radiation. The radiation travels directly to the tumour through the hepatic artery. This limits the amount of radiation that the normal tissue in the liver is exposed to.