

Inspired by Hope
Committed to Care



National Cancer
Centre Singapore
SingHealth

PROSTATE CANCER

What is Prostate Cancer?
Symptoms
Treatment

An Educational Initiative by National Cancer Centre Singapore

Contents

Introduction3

What is prostate cancer?4

Causes and risk factors of prostate cancer4

Symptoms of prostate cancer5

How to prevent?5

Diagnosis of prostate cancer6

Treatment of prostate cancer7

How to know if the cancer is gone?9

Questions you can ask your doctor10

Supportive care11

Treatment and support units at NCCS12

Internet resources12

Special thanks to the following members who have contributed to the development of this booklet:

Content:

Clin Asst Prof Tuan Kit Loong Jeffrey | Senior Consultant, Division of Radiation Oncology
Clin Asst Prof Tan Wee Kiat Terence | Senior Consultant, Division of Radiation Oncology
Assoc Prof Lau Kam On Weber | Visiting Consultant, Division of Surgery & Surgical Oncology
Ms Yusnita Bte Omar | Asst Director, Department of Radiation Oncology - Operation

Disclaimer

The National Cancer Centre Singapore does not endorse or promote the use of any product mentioned in this booklet. The information is presented in a summary to provide an understanding and knowledge only. It does not recommend the self-management of health problems or replace consultation with your doctor. You should never disregard medical advice or delay seeking it because of something you have read here.

Copyright © National Cancer Centre Singapore

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from the publisher.

Introduction

Prostate Cancer is the most common cancer for men in Singapore with 6912 cases diagnosed from 2017 to 2021 (Singapore Cancer Registry Annual Report, 2021). It usually occurs after the age of 50 years and is seen mostly in those over 70 years of age.

This information booklet is intended for patients who are about to receive radiotherapy treatment for prostate cancer. It contains some general information on prostate cancer and outlines the treatment options. 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.

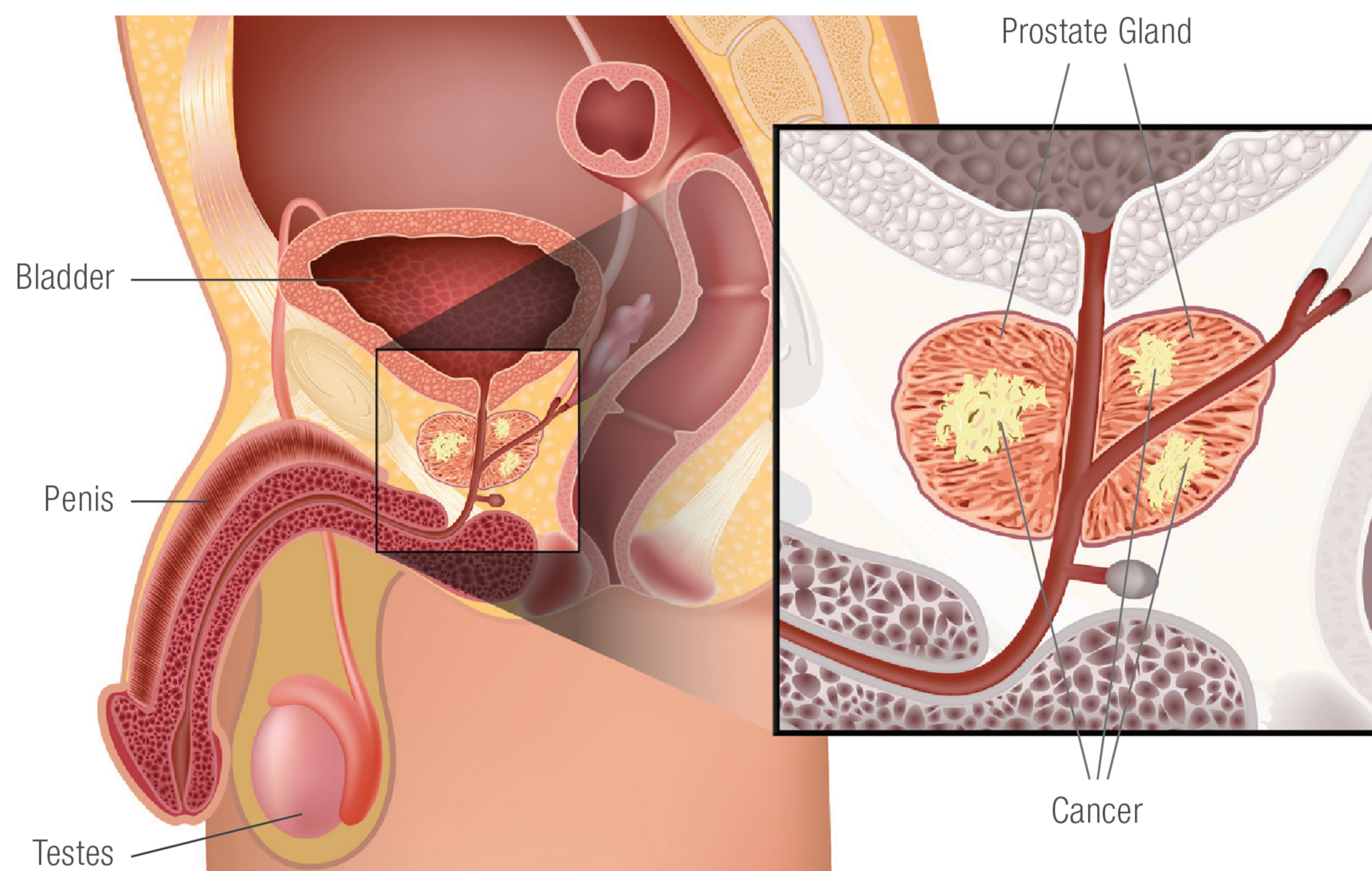
If you find this booklet useful, share it with your family and friends. If you have any questions about the issues raised in this booklet, or if there is any information you are seeking that is not covered here, please contact the Cancer Helpline by calling 6225 5655 to speak with a nurse counsellor. You can also reach them by email: cancerhelpline@nccs.com.sg.

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 versions of this booklet and other booklets, please visit www.nccs.com.sg or scan the following QR code.



WHAT IS PROSTATE CANCER?

The prostate gland is part of the male reproductive system. Prostate cancer is a disease which develops from the tissue of the prostate, a gland located below the bladder and in front of the rectum.



In most cases, prostate cancer is slow-growing and is confined to the prostate gland. It typically takes a number of years to become large enough to detect, and even longer to spread beyond the prostate. However, there are some aggressive forms of prostate cancer that can spread quickly.

CAUSES AND RISK FACTORS OF PROSTATE CANCER

The exact causes of prostate cancer are still unknown and are being studied through research. Some of the risk factors that are known to increase the risk of developing prostate cancer are:

- **Age** – This is the strongest risk factor. Men above the age of 50 are at risk, and the risk increases with age.
- **Ethnicity** – In Singapore, Chinese men have a higher risk of getting prostate cancer compared to Malay or Indian men.
- **Family history** – Men with a father or brother with prostate cancer are more likely to get the disease. The risk is higher for men who have a brother with prostate cancer than for those with an affected father. Risk is also much higher for men with several affected family members, especially if they were young when the prostate cancer was detected.
- **Diet** – Men who consume large amounts of fat, particularly from red meat and other sources of animal fat (including dairy products), appear to have a slightly higher chance of getting prostate cancer.

SYMPTOMS OF PROSTATE CANCER

There are usually no symptoms in the early stages of prostate cancer. As most prostate cancers are slow growing, many men reach old age or pass away without knowing that they have prostate cancer. Most men discover that they have prostate cancer during routine medical check-ups.

Symptoms, which typically occur in more advanced prostate cancer may include:

- Difficulty passing urine
- Increased urinary frequency, especially at night
- Weak, interrupted urinary stream
- Burning or pain during urination
- Blood in the urine
- Blood in the semen
- Weight loss
- Loss of appetite
- Pain in the back (spine), hips, chest (ribs), pelvis or other bony areas
- Weakness or numbness in the legs and difficulty walking
- Difficulty controlling bladder or bowels

When to see a doctor?

The symptoms mentioned above can be caused by a number of reasons and may not indicate the presence of prostate cancer. However, please make an appointment to see a doctor if you have any signs or symptoms that worry you.

HOW TO PREVENT?

At present, there is a lack of evidence to support population-based screening for prostate cancer in Singapore. Individuals should seek medical attention if they have any of the above symptoms.

Currently, there are no proven preventive strategies. In general, adopting a healthy lifestyle can help reduce the risk of prostate cancer. This includes:

- Eating a diet rich in fruit, vegetables and whole grains, while limiting the consumption of fat
- Quitting or not start smoking
- Limiting alcohol consumption
- Regular exercise

DIAGNOSIS OF PROSTATE CANCER

Several different tests can be used to diagnose prostate cancer, including:

Digital Rectal Examination (DRE) – Often part of a routine physical examination, the doctor inserts a lubricated gloved finger into the rectum and gently feels for abnormal growths. This may be uncomfortable but should not be painful.

Prostate-Specific Antigen (PSA) blood test – A blood test that measures PSA levels in the blood may indicate prostate cancer. The PSA is a substance produced by the prostate and a small amount of it is normal. Men with prostate cancer tend to have higher levels of PSA in their blood. As elevated PSA levels may be caused by other non-cancerous conditions, additional tests are needed to confirm the presence of prostate cancer.

Transrectal Ultrasound scan (TRUS) – This test uses high-frequency sound waves to produce images of the prostate. It is done by inserting a small probe into the rectum. TRUS is often conducted if a man has an abnormal DRE or a high level of PSA. It is also commonly used during a prostate biopsy, to allow the doctor to see where to take small samples of tissue from the prostate.

Biopsy - A prostate biopsy involves taking small samples of prostate tissue for further examination in the lab to determine the presence of prostate cancer cells. Prostate biopsy samples can be collected in different ways, by inserting a thin needle either through the rectum (transrectal biopsy) or through the area between the anus and scrotum (transperineal biopsy).

Computer Tomography (CT) scan – A CT scan takes X-ray images from different angles to build up a 3D picture of the inside of the body. This can identify the area of the prostate cancer and any spread to nearby structures or body parts.

Magnetic Resonance Imaging (MRI) scan – An MRI scan uses magnetic fields to give detailed pictures of the pelvic area. It can help to detect prostate cancer and look for any spread to the lymph nodes.

Bone scan – A bone scan can detect if cancer has spread from the prostate to the bones. A small amount of radioactive material called a tracer is injected and a scan is done to see how the tracer is absorbed, to indicate the presence of prostate cancer.

Positron Emission Tomography - Computed Tomography (PET-CT) scan – A PET-CT scan combines both a CT scan and a PET scan to provide a more comprehensive view of the cancer and the extent of its spread. A CT scan uses X-rays to take images to check for any areas with abnormalities. With the PET scan, a radioactive glucose solution is injected and absorbed by cells in the body that are growing quickly, indicating the presence of prostate cancer, which can be seen with a special camera. The PET scan helps to show if areas with abnormalities seen on the CT scan are suspicious for cancerous growth.

TREATMENT OF PROSTATE CANCER

Treatment for prostate cancer depends on several factors including the patient's age, medical conditions, significant illnesses, prostate-specific antigen level, digital rectal examination results, aggressiveness of the cancer and spread of the disease.

An individual with prostate cancer should be assessed by a multidisciplinary team of specialists to determine which modality of treatment is best suited for them. Prostate cancer treatment requires the involvement of different specialists - urologists, interventional radiologists, nuclear medicine physicians, medical oncologists, radiation oncologists and palliative medicine specialists. Such multidisciplinary care is available at SingHealth healthcare institutions. It is important to discuss all the possible treatment choices, including what to expect and possible side effects, to help you make an informed decision. Types of approaches and treatments include:

ACTIVE SURVEILLANCE

Men with early-stage prostate cancer, that is slow-growing and causing little or no symptoms, may not need immediate treatment. In such cases, their doctors may advise waiting and observing to see if the cancer progresses before starting any treatment. Active surveillance may include regular tests such as prostate-specific antigen level blood test or digital rectal examination.

FOCAL THERAPY

This is a minimally invasive approach to treating prostate cancer using ablative energy to target just the area of cancer in the prostate gland for destruction. The non-cancerous part of the prostate as well as surrounding critical structures are preserved thus maintaining sexual and urinary function. This treatment may be suggested if your cancer is early stage and limited to just 1 or maximally, 2 areas within the prostate.

SURGERY

The surgical approach to treating prostate cancer is known as prostatectomy. It involves removing all or part of the prostate gland. Surgery is usually offered to men with early-stage disease or cancer that is confined to the prostate, who do not have other serious health problems.

In radical prostatectomy, the entire prostate gland and other nearby tissues (e.g. surrounding structures and lymph nodes) are surgically removed.

Another approach is the robotic-assisted laparoscopic radical prostatectomy, where the urologist makes several small incisions in the lower abdomen and uses instruments attached to a mechanical device, known as robotic arms, to perform the surgery. Tissues that have been surgically removed will be examined to indicate how advanced the prostate cancer is, the risk of cancer recurrence and if additional treatment is necessary.

Preparing for Surgery

Your urologist will perform a comprehensive medical work-up including blood tests, exams and scans to see if you are suitable for surgery and advise you on the risks involved. This treatment recommendation is often based on consensus by a group of different specialists' opinions (tumour board) which weighs the pros and cons of every treatment strategy.

Before the surgery, the anaesthesia team will also assess your fitness for surgery and advise you on various aspects of general anaesthesia and pain control after surgery.

Specialist nurses will also provide pre-surgery counselling.

Post-Surgery Care

After recovering from surgery, you will be given regular outpatient appointments to see your team of doctors. These visits may include blood tests and scans to monitor and check if prostate cancer recurs.

It is important to follow your doctor's advice, keep to scheduled clinic visits and do the prescribed tests so that timely treatment can be administered if any problems arise.

HORMONE THERAPY

Hormone therapy, also known as androgen deprivation therapy, works by preventing prostate cancer cells from receiving testosterone, causing the prostate cancer cells to die or grow more slowly. Hormone therapy for prostate cancer usually involves the use of drugs, given as injections or tablets. Another less common form of hormone therapy is the surgical removal of the testicles or the parts of the testicles that produce testosterone.

RADIOTHERAPY

Radiotherapy, also known as radiation therapy, is the use of high-energy radiation (rays or particles) to kill or damage the prostate cancer cells. Radiation affects both normal and prostate cancer cells. Generally, prostate cancer cells are more sensitive to radiation and more cancer cells are killed compared to normal cells. Normal cells are also better able to repair themselves after radiotherapy.

Radiotherapy can be delivered in two main ways: either external beam radiotherapy (EBRT) or internal radiotherapy. In EBRT, radiation beams are generated from a machine outside the body and directed at the prostate. For internal radiotherapy, also known as Brachytherapy, radiation is delivered to the prostate by placing radioactive materials in the prostate.

The type of radiotherapy the doctor would recommend depends on the stage of the prostate cancer and the patient's underlying health condition.

Who will I meet?

During your radiotherapy treatment, you will meet many healthcare professionals who specialise in different aspects of your treatment as part of a multidisciplinary team. They include the following:

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

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.

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.

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

Before you can receive radiotherapy treatment, your Radiation Oncologist will discuss with you what radiotherapy will involve, as well as its benefits and risks. You will be asked to sign a consent form, which is a written record that you understand and have agreed to undergo a course of radiotherapy treatment.

Side Effects of Radiotherapy

Side effects can vary from patient to patient. They depend on the exact area being treated, the total dose received and the duration of treatment. Every individual is unique and you may not have the same side effects as another patient who is also receiving radiotherapy for prostate cancer.

Side effects in general only affect the area of the body that are treated, i.e. the pelvis region for prostate cancer. Your Radiation Oncologist will discuss these in greater detail with you.

For more information on radiotherapy for prostate cancer, please scan the following QR code (right) for the “Understanding Radiotherapy for Prostate Cancer” booklet.

Scan here for Understanding
Radiotherapy for Prostate
Cancer Booklet



CHEMOTHERAPY

Chemotherapy is the use of anti-cancer drugs to eradicate prostate cancer cells or prevent their growth. Chemotherapy can also help to relieve or delay some symptoms like pain. Early stage prostate cancer is usually not treated with chemotherapy. Chemotherapy is mostly offered to men with advanced or metastatic prostate cancer, which has spread beyond the prostate to other parts of the body. It is commonly given to those who have not responded to hormone therapy.

HOW WILL I KNOW THAT THE CANCER IS GONE?

At each follow-up appointment, you may be asked to do a blood test to check your level of Prostate-Specific Antigen (PSA). PSA is the most accurate way of showing that the cancer cells in the prostate have been treated effectively. The PSA level typically takes 12-18 months after completing radiotherapy to reach its lowest point.

This means that we do not need to take a blood test from you in the first few weeks after the completion of your radiotherapy treatment. Your Radiation Oncologist will ask to see you in the outpatient clinic every year to review your PSA results. A rise in PSA rate in the future would be an early warning sign that the cancer may have returned. Your doctor may order for other diagnostic tests if necessary.

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 for doing this 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?

About follow-up

1. How often must I come back for check-ups?
2. Who should I contact if I want to change my appointments?

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

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 6255 5655 or via email at cancerhelpline@nccs.com.sg

Walnut Warriors

Organised by the Singapore Cancer Society (SCS), the Walnut Warriors is a support group for prostate cancer. It is open to all prostate cancer patients at any stage in their cancer journey, as well as spouses or caregivers. The Walnut Warriors provides psychosocial support and encouragement to its members. It aims to help those affected by prostate cancer, by enhancing their well-being through therapeutic and enrichment programmes. Membership is voluntary and free. To join the Walnut Warriors or to find out more, please contact SCS at 6499 9132 or email: supportgroup@singaporecancersociety.org.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

Useful Contact Details

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

INTERNET RESOURCES

You may find more information on cancer in general, prostate cancer 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 health care team.

American Cancer Society
www.cancer.org



National Cancer Institute
www.cancer.gov



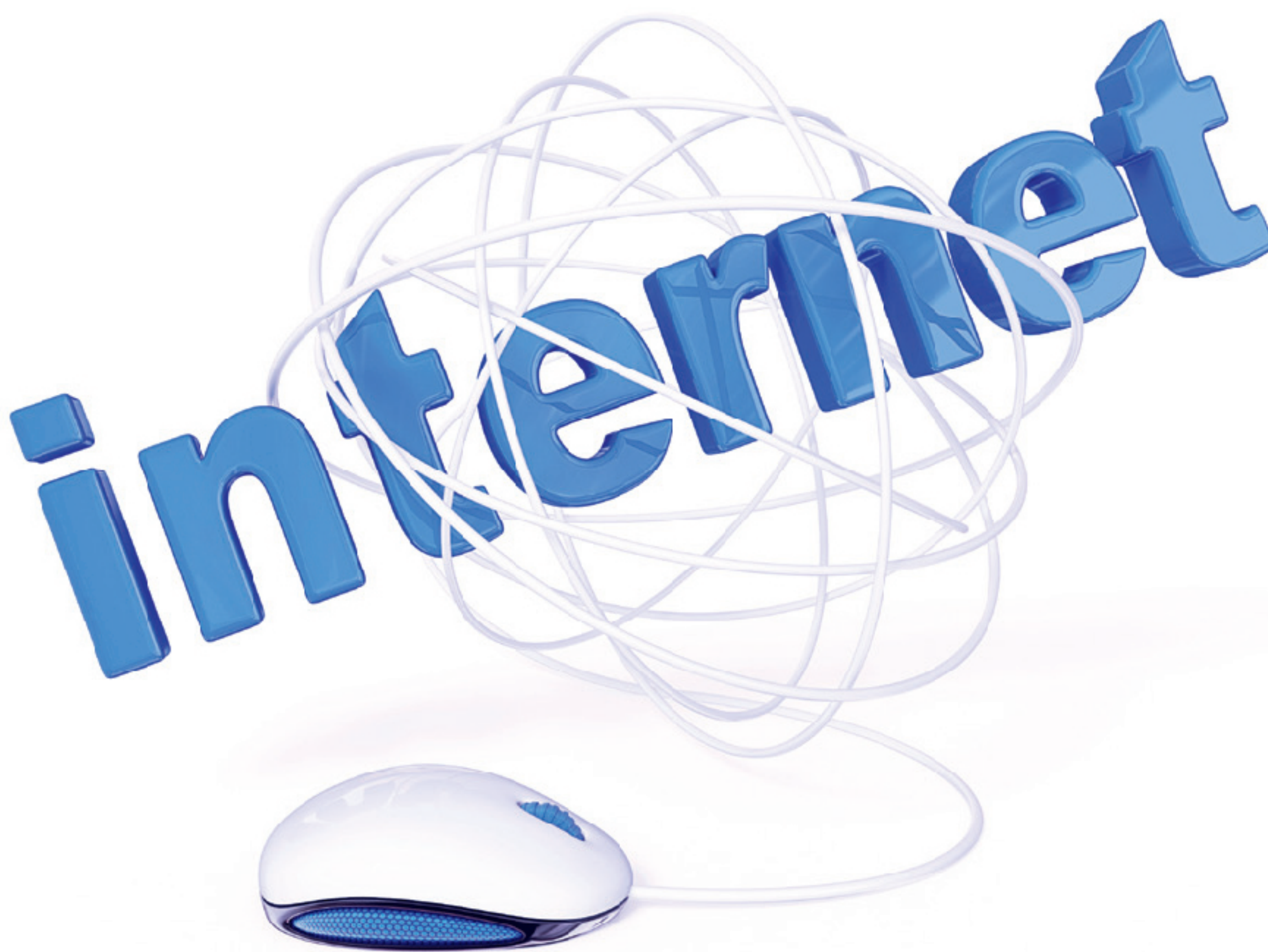
Macmillan Cancer Support
www.macmillan.org.uk



Cancer Research UK
www.cancerresearchuk.org



Cancer Council Victoria
www.cancervic.org.au





NOTES

[illegible]



NOTES

[illegible]

[illegible]

For more information on cancer, please call the
**Cancer Helpline at Tel: 6225 5655 or
email: cancerhelpline@nccs.com.sg**

MONDAYS - FRIDAYS : 8.30am to 5.30pm

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

.....
THIS IS A PUBLIC EDUCATION INITIATIVE BY:

Cancer Education & Information Services

Division of Supportive and Palliative Care
National Cancer Centre Singapore
30 Hospital Boulevard
Singapore 168583
Tel: 6225 5655 Fax: 6683 6174
Website: www.nccs.com.sg
Reg No. 199801562Z

Scan here for call back:

