Knowing Cancer

What Is Cancer?

Our body is made up of a vast collection of cells and every cell contains 23 pairs of chromosomes. Windings through each pair is a double spiral of DNA molecules, the genetic blueprint for life. Each of these molecules contains numerous numbers of genes.

Almost all our cells need to be replaced regularly. Some cells divide every few hours and are shed after living for only a few days. Others live for years. The process of all divisions and growth are controlled by genes that start and stop the growth process. Some of these growth-controlling genes may undergo changes (mutation) that cause them to malfunction and cell growth is then uncontrolled. Simple overgrowth may lead to harmless benign tumour (not likely to spread). However, some genes in a cell not only induce uncontrolled growth, but also cause the cell to invade and damage surrounding blood vessels, nerves, other body tissues or other parts of the body. The latter process is called metastasis.

Doubling Times

Cancer starts with one abnormal cell. That cell divides and becomes two abnormal cells and then four abnormal cells and so on. Cells divide at various rates called doubling times. Fast growing cancer may double over one to four weeks, while slow growing cancer may double over two to six months. So there is a "silent" period after the cancer has started to grow. There is no lump or mass, and the tumour is too small to be detected by any means now known. After many months or years, the doubling process has occurred about 30 times or so. By then the lump may have reached the size of about 1 cm that can be felt, seen on X-ray etc., although some new imaging techniques and laboratory tests may sometimes detect smaller tumours.
What Causes Cancer?

For many cancers, no definite causes are known and there is no single cause. There are, however, 4 groups of aetiological factors we now know.

1. **Viral Carcinogenesis**
   - Two DNA viruses, the hepatitis B and human papilloma viruses, are responsible for hepatocellular and cervical cancers respectively.
   - Other common viruses directly linked to human tumours include Epstein Barr virus (EBV), Human Herpes virus, Human Immunodeficiency virus, Herpes Simplex virus.

2. **Chemical Carcinogenesis**
   - An important cause of cancer and can be implicated by certain lifestyles. For example, cigarette smoking and exposure to chemicals in the community or workplace such as asbestos cause lung cancer, dye causes bladder cancer and benzene causes leukaemia.

3. **Radiation**
   - Cancerous cellular contents are damaged by x-rays and other forms of radiation. The main radiation hazard is sunlight, which causes most of the skin cancers.

4. **Hormones**
   - Different hormones and their related growth factors play a variety of roles in carcinogenesis in a number of malignancies including cancer of the breast, endometrium, prostate, ovary, thyroid, testes and bone. In these sites, the cancer results from excessive hormonal stimulation of relevant target cells.

Our Centre

The Comprehensive Oncology Centre is established in collaboration with the Faculty of Medicine, University of Hong Kong, to assure the standard of patient care and promote research, education and training.

Our Centre provides comprehensive and multi-disciplinary services for the management of cancer.
Our Services

Patients referred to our Centre will be seen by a team of specialists in surgery, medical oncology and radiation oncology. A treatment plan will be formulated at a package price for the patient to choose or refer to.

Our Oncology Nurses will follow the progress of patients receiving treatment at our Centre and provide support and counselling as needed.

Our full range of services include:
1. Screening
2. Diagnosis
3. Surgery
4. Chemo-therapy
5. Radiotherapy
6. Pain Management
7. Disease Management
8. Cancer Genetics
9. Counselling
10. Education and Information

Screening

Cancer is best treated if detected early. Screening means checking for cancer or precancerous conditions before symptoms appear. In conjunction with the Hospital’s Department of Health Assessment, our Centre provides screening packages for the following types of cancer to the high risk group:

1. Lung cancer
2. Colorectal cancer
3. Liver cancer
4. Nasopharynx cancer
5. Breast cancer
6. Cervical cancer
7. Prostate cancer

For details, please contact us or refer to respective pamphlets.
腫瘤診斷

我們運用最先進的診斷儀器，包括最新的核磁共振成像儀、正電子掃描器、超音波檢查、X光機和電腦斷層掃描器。這些儀器提供了全面的診斷，能夠準確地診斷癌症。診斷的反應以及腫瘤的狀況，我們的臨床化驗室會利用最新的分子生物學技術，迅速準確地診斷癌症。

外科手術

外科手術是癌症的主要治療方法。本中心擁有不同腫瘤科的外科專家，為病人提供最佳的手術治療。

優質的外科手術對病症的治療非常重要，因為：

- 術後可切除腫瘤組織（活組織），作進一步檢查，並且可以確定術後所需的療程。
- 診斷病變的範圍，有助診斷病變部位的受影響程度，從而決定是否需要進一步治療。

近年外科手術有很大的進步，而顯微手術更是一項重大的發展。顯微手術特別適用於進行椎間孔（腰間盤）、眼區及腦部手術。由於手術創傷及失血較少，術後復原時間較長，病人可以較快康復及出院，也能使傷口減小，留下疤痕及術後感染的機會大大減少。

Surgery

Surgery remains the mainstay of treatment for cancer. With a team of leading oncology surgeons of various disciplines, we provide the best surgical treatment available in Hong Kong.

High-quality cancer surgery is important for several reasons:

- Surgery provides diagnostic (biopsy) tumor tissue, which allows pathologists to conduct special tests that predict the future behavior of the disease and its likely response to different treatments;
- Examination of the surgical specimens will also reveal the local extent of the disease in the body, which may in turn indicate the need for further treatment;
- The adequacy and thoroughness of the surgery can help to minimize the risk of the cancer recurring within the same area of the body, and may even cure the disease.

Surgical techniques have improved dramatically in recent years. A major step forward has been the development of minimally invasive surgery (MIS) which is particularly applicable to gynaecological (pelvic), abdominal and chest operations. Because of the reduced surgical trauma, MIS patients can undergo a quicker postoperative recovery and hence be discharged from hospital much earlier. There is also the benefit of less postoperative discomfort, smaller surgical scars, reduced need for blood transfusion, and reduced chance of infection.

Diagnosis

To help doctors make an accurate diagnosis, staging of cancer and monitoring of treatment response or tumour recurrence, the Comprehensive Oncology Centre is well-supported by the Hospital's advanced imaging equipment which consists of the latest models of CT, MRI, Ultrasound and PET-CT scanners, and a team of specialist radiologists. Our clinical laboratory provides up-to-date molecular biological diagnostics.
Chemotherapy

Chemotherapy is given to cure a specific cancer or to control tumour growth when cure is not possible. It is also recommended for some cancer patients as an adjuvant treatment after surgery to reduce the risk of metastasis or tumor recurrences, or before surgery to reduce the size of the tumour to render it operable. At the Comprehensive Oncology Centre, chemotherapy is mainly given as outpatients and patients can be discharged on the same day.

Our brand-new Day Care Centre for chemotherapy is furnished with the latest equipment, fittings, decorations and fixtures, and is designed to ensure the privacy and comfort of our patients and their families. A key function of our experienced Oncology Nurses in the Centre is to counsel and educate our patients about the possible side effects of their treatment, in addition to delivering these therapies with care and efficiency. Many of the newer drugs that we now use are better tolerated and/or more targeted at the cancer and spare the healthy tissues, which makes the experience of treatment more acceptable than in the past.

Radiotherapy

The Hospital's Department of Radiotherapy is equipped with the most advanced machines for cancer treatment. Our state-of-the-art linear accelerator enables delivery of the latest radiotherapeutic techniques, including intensity modulated radiation treatment (IMRT) and 3-dimensional conformal radiotherapy (3DCRT). Stereotactic XKnife facility is also available. These technological advances enable precise irradiation of the tumour target with minimal sparing of normal organs, thus achieving maximum efficacy with minimum side effects.
疼痛管理

Pain is a common symptom in advanced cancer patients. Our Pain Management Team consists of anesthesiologists who have extensive experience in pain control such as nerve block and ambulatory pain control by continuous infusion pumps. They are dedicated to providing multimodal types of pain management so as to improve patients' quality of life.

疾病管理

Reports in the field of surgery, medical and radiation oncology, radiology and pathology meet every week at the Tumor Board Meeting to discuss the management plan of patients who have undergone treatment in our Hospital. This ensures the provision of the best management to cancer patients treated in our Hospital. However, patient's identity is always kept confidential, and the recommendation will be related to the patient through his/her own doctor.

The Tumor Board Meeting also ensures continued medical education and development.
Cancer Genetics

Cancer genetics is an important and relatively new service in Hong Kong. Our Centre offers such genetics service and counselling to families who have possible hereditary cancers, such as breast, ovarian and colorectal cancers.

Counselling

Oncology Nurses provide pre- and post-treatment psychological support to cancer patients and their family members, both directly and over the telephone.

Videotapes are available on different topics such as:
- Post-operative care
- Adjuvant chemotherapy
- Coping with cancer
- Dietary advice

A Breast Cancer Patient Support Group has been formed since 2000. These patients meet regularly to share their experience in coping with the new challenge in their life.

Education and Information

Regular seminars and workshops are held, often with the participation of overseas experts, to discuss the advances in the management of various cancers.

Patient education seminars on various cancer topics are held regularly so as to raise cancer awareness of the general public. These seminars are free and open to all.