#### **Targeted Therapy**

The transformation of normal cells to cancer cells is the result of many genetic changes. These changes distinguish cancer cells from normal cells and can be used as a target for therapy. Either a monoclonal antibody or a chemical can be used against the target to inhibit its effects. Mabthera/Rituximab is a monoclonal antibody commonly used to treat all kinds of B-cell lymphomas, while Imatinib is a chemical drug which is very effective in treating chronic myeloid leukaemia.

#### **Bone Marrow Transplantation**

Bone marrow transplantation is commonly used in treating various types of blood cancers. It is often the last hope for patients. There are two main types of bone marrow transplantation, i.e. autologous transplant using the patient's own marrow cells, and allogeneic transplant using marrow from HLA compatible donors, who can be a sibling or an unrelated donor. The source of the marrow cells or haematopoietic stem cells can be the marrow itself of G-CSF-driven peripheral blood stem cell or cord blood. A mini transplant can also be used for elderly patients to minimize the risk.

# Haematological Cancer Lymphoma



# Winning Against Cancer



綜合腫瘤科中心 Comprehensive Oncology Centre

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Our Centre provides state-of-the-art services in haematology and haematological oncology. Our Haematopathology Laboratory has a wide range of diagnostic tests available which are essential for modern management of haematology patients. After making an accurate diagnosis, optimal treatments are given promptly to obtain the best clinical outcome possible.

Blood cancers are one of the top ten cancers in Hong Kong. Every year, over 1,000 new cases are diagnosed. They include leukaemia, lymphoma and myeloma.

### Lymphoma

Lymphoma is the cancer of lymphoid cells, and its causes remain unknown today. Some cases may be related to infections, chemicals, radiation or immunodeficiency.

#### **Common Subtypes**

- Hodgkin's Lymphoma or Non-Hodgkin's Lymphoma
- B-Cell, T-Cell or NK-Cell Lymphoma

Non-Hodgkin's lymphomas account for over 90% of the cases and they are mostly B-cell lymphomas. Common subtypes include:

- Diffuse Large B-Cell Lymphoma
- Follicular Lymphoma
- Mantle Cell Lymphoma
- Marginal Zone Lymphoma
- Lymphocytic Lymphoma
- Burkitt's Lymphoma
- T-Lymphoblastic Lymphoma
- Peripheral T-Cell Lymphoma
- Nasal NK-Cell Lymphoma

#### **Clinical Presentations**

- Enlarged lymph glands
- May affect almost any organ in the body
- May spread to marrow, liver and spleen
- Fever, night sweat and weight loss are often present

#### Diagnosis

- Biopsy of the tumour to confirm the diagnosis and to classify the subtype to assess the extent of the spread
- Positron emission tomography (PET) and computerized tomography (CT)
- Bone marrow biopsy
- Blood tests

#### Treatment

- Chemotherapy is the mainstay treatment
- Mabthera/Rituximab (an anti-CD20 monoclonal antibody) is used for B-cell lymphoma
- Local radiotherapy in selected cases
- Some patients may need bone marrow transplantation
- Supportive care including the use of haematopoietic growth factor (G-CSF) is necessary

#### Prognosis

- Variable depending on the subtypes
- Most cases respond well to chemotherapy
- Cure is the treatment goal in most cases

## **Common Treatment**

#### Chemotherapy

Most blood cancer patients respond very well to various combinations of chemotherapy. Chemotherapy drugs are effective in eradicating rapidly proliferating cells. As blood cancer cells often grow at a very high rate, they are more susceptible to the effects of chemotherapy. Some normal cells in our body also grow rapidly, e.g. the bone marrow cells. Damages to the normal cells are responsible for the side effects, and thus patients must be monitored closely. Serious infections may complicate low white cell count and bleeding tendency if the platelet counts are low. There may also be anaemia. Haematopoietic growth factor G-CSF may be used. Red cells and platelet transfusions may be given. Chemotherapy may be given in our Chemotherapy Centre on either an outpatient or inpatient basis, depending on the intensity of the therapy.

#### Radiotherapy

High-energy radiation is commonly used in cancer treatment. Blood cancer cells are very sensitive to radiotherapy, making it an effective treatment for local control of blood cancers and an adjunct to chemotherapy.