Paper II: Technical Subject

1. Pharmacology of Chemotherapeutic Drugs
   1.1 Classification
   1.2 Plant alkaloids
   1.3 Alkylating agents
   1.4 Antimetabolites
   1.5 Anthracyclines, Antitumor antibiotics
   1.6 Topo-isomerase inhibitors, proteosome inhibitors
   1.7 Corticosteroids

2. Cancer of various Systems: Solid Tumors
   2.1 Bone and soft tissue sarcomas
   2.2 Respiratory system
   2.3 GI Malignancies
   2.4 Genitourinary Malignancies
   2.5 CNS Tumors
   2.6 Hepatobiliary and pancreatic cancers
   2.7 Cardiovascular malignancies
   2.8 Cancer of unknown primary
   2.9 Cancer of breast
   2.10 Cancer of skin
   2.11 Cancer of endocrine system
   2.12 Mesotheliomas
   2.13 Gynaecologic cancers
   2.14 Malignant melanomas

3. Haematological malignancies
   3.1 Myelodysplastic Syndrome
   3.2 Acute and chronic leukemias
   3.3 Hodgkin’s and Non-Hodgkin’s Lymphomas
   3.4 Plasma cell Dyscrasias
   3.5 Myeloproliferative disorders

4. Childhood cancers and their management
   4.1 CNS Tumors
   4.2 Bone and soft tissue sarcomas
   4.3 PNET tumors
   4.4 Lymphoma and leukemias
   4.5 Nephroblastoma
   4.6 Hepatoblastoma
   4.7 Retinoblastomas
   4.8 Palliative care in children
5. **Manifestation of complications of cancer and cancer treatment in various systems and their management**
   - 5.1 Haematological complications
   - 5.2 Renal complications
   - 5.3 GI related complications
   - 5.4 Infection and sepsis
   - 5.5 Para- Neoplastic syndrome
   - 5.6 Cardiovascular complications
   - 5.7 Respiratory Complications
   - 5.8 CNS complications
   - 5.9 Metabolic Complications
   - 5.10 Neuromuscular complications
   - 5.11 Bone and joint complications
   - 5.12 Skin and Appendages
   - 5.13 Fertility issues
   - 5.14 Psychosocial issues

6. **Stem Cell Transplant**
   - 6.1 Indications and principles of stem cell transplant
   - 6.2 Sources of stem cells preparative regimen
   - 6.3 Procedure, complications, prognosis

7. **Cancer Diagnostics**
   - 7.1 Radiological diagnostics
   - 7.2 Molecular and cytogenetics
   - 7.3 Cytological and Histopathological diagnostics
   - 7.4 Biochemical Diagnostics
   - 7.5 Tumor markers, IHC (Immunohistochemistry), Flowcytometry
   - 7.6 Nuclear and Radionuclear imaging
   - 7.7 Interventional Radiology
   - 7.8 Basics of Radiation Oncology
   - 7.9 Basics of Surgical Oncology

8. **Recent Advances in cancer management**
   - 8.1 Essentials of Molecular Biology
   - 8.2 Molecular Biology of cancer
   - 8.3 Newer approaches in cancer; Immunotherapy, Biotherapy, Genetherapy

9. **Palliative Care**
   - 9.1 Introduction and basic concept including definition
   - 9.2 Pain assessment and management, WHO ladder, balanced use of opioids
   - 9.3 Common symptom management
   - 9.4 Communication, Breaking Bad News
   - 9.5 Ethical issues in Palliative care
   - 9.6 Psychosocial issues
   - 9.7 End of life care
   - 9.8 Supportive care and quality of life
   - 9.9 Rehabilitation of cancer patient

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