

Medical Oncology Department — Facilities and Services

Introduction and mission

The Medical Oncology Department is dedicated to delivering safe, evidence-based, and compassionate cancer care. Its mission is to: (1) provide comprehensive medical oncology treatment across the spectrum of solid tumors and hematologic malignancies; (2) ensure access to advanced systemic therapies including cytotoxic chemotherapy, immunotherapy, and targeted agents; (3) maintain high standards of safety and quality for complex procedures such as intensive chemotherapy and intrathecal drug administration; and (4) support patients and families with integrated supportive, palliative, and survivorship care.

The department's activity over the previous two years — 2,000 patients have been consulted in OPD and 1,200 chemotherapy courses — reflects both high throughput and the trust of the community it serves.

Core clinical services

1. Systemic chemotherapy (ambulatory and inpatient)

The department delivers systemic cytotoxic chemotherapy in both ambulatory (day-care) and inpatient settings. Services include:

- Standard regimens for common solid tumors (breast, lung, colorectal, gastric, head & neck, gynecologic cancers) and hematologic malignancies.
- **Dose-dense** and **dose-intense** protocols with appropriate supportive measures (growth factors, hydration, transfusions).
- High-acuity inpatient chemotherapy for patients requiring close observation due to comorbidities, severe tumor burden, risk of tumor lysis syndrome, or organ dysfunction.
- Oral chemotherapy management programs to monitor adherence and toxicity.

2. Intensive chemotherapy services (including high-dose and complex regimens)

Intensive chemotherapy refers to protocols that carry elevated risks of immediate toxicity, myelosuppression, and organ adverse events. The department provides:

- Protocol-specific nursing and pharmacy workflows.
- Pre-chemotherapy risk assessment, including organ function, infection screening, and performance status evaluation.
- Chemotherapy through PICC line, Chemoports.
- Anticipatory supportive care: antiemetics, tumour lysis management, hydration protocols, early growth factor planning.
- 24/7 access to inpatient medical and intensive care support.
- Multidisciplinary tumor board review for complex cases.

3. **Intrathecal chemotherapy** and CNS-directed therapy

The department performs intrathecal (IT) chemotherapy for leukemia, lymphoma, and leptomeningeal disease.

Key elements:

- Dedicated procedure room with aseptic environment.
- Trained oncology physicians and nursing staff.
- Protocolized IT agents including methotrexate, cytarabine, and liposomal cytarabine.
- Post-procedure monitoring pathways.

4. **Targeted therapies and precision oncology**

The department offers modern targeted agents across various cancer types.

Services include:

- Molecular testing and biomarker-driven therapy selection.

- Access to oral and IV targeted agents (TKIs, monoclonal antibodies, PARP inhibitors, CDK4/6 inhibitors).
- Therapeutic drug monitoring.
- Structured follow-up and toxicity monitoring.

5. **Immunotherapy** for solid tumours and hematologic indications

The department provides checkpoint inhibitors and combination immunotherapy protocols.

Key features:

- PD-1/PD-L1 and CTLA-4 inhibitors.
- Protocol-driven screening for immune-related adverse events.
- Multidisciplinary management of endocrinopathy, pneumonitis, colitis, and hepatitis.
- Dedicated patient education for early symptom recognition.

6. **Hematologic oncology** care

Comprehensive leukemia, lymphoma, and myeloma management including:

- Induction, consolidation, and maintenance chemotherapy.
- CNS prophylaxis with IT chemotherapy.
- Transfusion and infection prophylaxis.
- Myeloma therapy (proteasome inhibitors, IMiDs, monoclonal antibodies).

7. **Clinical trials and research**

The department participates in investigator-initiated and multicenter clinical trials.

Regular multidisciplinary tumor board meetings ensure integrated decision-making.

Patient volume and flow

The department served 2,000 patients in the last 2 years with 1,200 chemotherapy administrations.

Key achievements

First centre in the district to provide intensive chemotherapy.

First centre in the district to achieve remission of disease in case of Acute lymphoblastic leukemia with high-dose chemotherapy.

The only centre in the district to provide end-to-end care for lymphoma and multiple myeloma.

Palliative care & survivorship programs

- Symptom control, pain management.
- End-of-life care planning.
- Long-term follow-up for survivors.

Future directions

- Expansion of precision oncology.
- Telemedicine integration.
- Increase in clinical trials portfolio.
- Infrastructure expansion.

