



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Medical Oncology

2627-2-I0101D011-I0101D033M

Aims

At the end of the course, students will be able to:

1. Knowledge and understanding:
Describe the characteristic signs and symptoms of major oncological conditions. Explain the main pathophysiological mechanisms underlying these conditions. Understand the principles of carcinogenesis through the biomolecular analysis of neoplasms. Recognize the essential steps of the diagnostic process and the most commonly used diagnostic tools. Describe the main therapeutic approaches and their clinical objectives.
2. Applying knowledge and understanding:
Relate observed clinical findings (signs and symptoms) to the underlying pathophysiological processes. Analyze the implications of diagnostic investigations for clinical decision-making and therapeutic management.
3. Making judgements:
Critically reflect on diagnostic and therapeutic decisions and on the patient's care pathway.
4. Communication skills:
Communicate the main clinical, pathophysiological/biomolecular, and therapeutic concepts using appropriate scientific and technical terminology.
5. Learning skills:
Develop independent learning skills by continuously expanding knowledge and competencies in response to advances in clinical practice and scientific evidence, while promoting evidence-based nursing care.

Contents

The course addresses the major clinical conditions within its scope, focusing on their characteristic signs and symptoms, underlying pathophysiological and biomolecular mechanisms, the key elements of the diagnostic process, and the main therapeutic approaches.

Detailed program

Epidemiology of cancer.

Definition and characteristics of tumors.

Etiology of cancer: chemical, physical, and biological risk factors.

Cancer prevention and early diagnosis: screening programs.

Cancer diagnosis: laboratory testing (tumor markers), diagnostic imaging, and biopsy.

Cancer staging: TNM classification and other staging systems.

Signs and symptoms of cancer: direct and indirect manifestations.

Classification of tumors according to their potential for cure and treatment: surgery, radiotherapy, hormone therapy, immunotherapy, targeted therapy, antibody-drug conjugates (ADCs), autologous and allogeneic hematopoietic stem cell transplantation.

Chemotherapy: major antineoplastic drugs, mechanisms of action, and therapeutic effects. Adjuvant, neoadjuvant (primary), curative, and palliative chemotherapy. Routes of chemotherapy administration. Toxicity of antineoplastic drugs. Criteria for treatment selection: from controlled clinical trials to bedside clinical decision-making.

Major cancers: breast cancer, gastrointestinal cancers, and lung/pleural cancer.

Hematologic malignancies: leukemia, malignant lymphomas, and multiple myeloma.

Palliative and end-of-life care. Pain management. The healthcare professional–patient–family relationship.

Communication of the diagnosis, patient information, informed consent, and education.

Clinical research and principles of clinical trial development.

Prerequisites

Defined by the academic regulations.

Teaching form

10 two-hour face-to-face lectures delivered in person using an expository teaching approach.

Textbook and teaching resource

- Hinkle J.L., Cheever K.H. (2024) Brunner – Suddarth, Infermieristica Medico-Chirurgica, VI ed. Milano: Casa Editrice Ambrosiana, Vol. 1 e 2.

Course materials provided by the lecturer.

Semester

2nd Year, 2nd Semester.

Assessment method

See the course homepage.

Office hours

Faculty members are available by appointment, which can be requested via email:

- Bergamo Campus:
alessandro.iaculli@unimib.it
vittoria.fotia@unimib.it
- Lecco Campus:
antonio.ardizzoia@unimib.it
- Monza Campus:
diego.cortinovis@unimib.it
- Sondrio Campus:
ornella.fusco@unimib.it

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY
