

Degree programme	Type	Course
Medicine	OB	4

Contact lecturer

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Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

Students should have acquired all the knowledge corresponding to the structure and function of the human organism.

In addition, students should have a basis of knowledge and competence in Structural Pathology,

Physiopathology, Semiology, Epidemiology and Surgery principles.

Students will acquire the commitment to preserve confidentiality and professional secrets corresponding to the data they could have access to in relationship to their learning in healthcare departments. In addition, they should maintain professional ethics in all their actions.

Objectives

Medical Oncology is a medical specialty that deals with the classification, staging, treatment and comprehensive care of patients suffering from cancer.

Oncological diseases represent the second cause of death in Western countries and having knowledge of them must allow future medical graduates to have competence in the care of these patients encompassing aspects of diagnostic and therapeutic orientation, identification of the complications arising from treatment, the control of symptoms in advanced disease and at the same time some aspects about prevention.

The objectives of the subject are: 1) To acquire knowledge of the mechanisms of carcinogenesis and progression of tumor diseases; 2) Acquire knowledge of the signs and symptoms that guide diagnosis of the most frequent neoplasms; 3) Acquire knowledge about the diagnosis, classification, staging and therapeutic orientation of the most frequent neoplasms; 4) Acquire knowledge about targeted therapies, the complications of treatments; 5) Acquire skills and competencies in the multidisciplinary management of the disease and the comprehensive care of a patient with cancer

Learning outcomes

1. Describe the person as a multidimensional being in which the interplay of biological, psychological, social, environmental and ethical factors determines and alters the states of health and disease and their manifestations.
2. Explain ethical, legal and technical features and those of confidentiality related to patient documentation.
3. Explain multidisciplinary intervention during patient care.
4. Anticipate and compare information for good decision-making.
5. Identify tumour diseases, and the diagnosis and management of these.
6. Assess the importance of every sign and symptom in the current illness.
7. Assess the semiological value of laboratory tests used in the most common human pathologies.
8. Identify the physical, chemical, environmental, psychological, social and occupational and carcinogenic factors, and the factors associated with food habits and drug use, that determine the development of the disease.
9. Identify the biochemical, cytogenetic and molecular biology markers applied to clinical diagnosis of importance in diagnostic imaging: radiological-anatomopathological.
10. Describe the general and local factors that affect the development of diseases.
11. Assess the relationship between efficacy and risk in the main therapeutic interventions.
12. Assess the efficiency of the main therapeutic interventions.
13. Make a record that includes the personal, physiological and pathological antecedents of the illness, as well as the main symptoms of diseases of the respiratory, circulatory and digestive systems, blood and hematopoietic organs, nervous system, musculoskeletal system, genitourinary system, metabolism and endocrine system.
14. Conduct the interview correctly to obtain significant clinical data.
15. Gather, choose and record important information patient supplied by patients and accompanying persons.
16. Identify serious clinical situations.
17. a complete physical examination general and the respiratory, circulatory and digestive systems, blood and hematopoietic organs, nervous system, musculoskeletal system, genitourinary system, metabolism and endocrine system.
18. Identify symptoms of anxiety, depression, psychosis, toxics consumption, delirium and cognitive deterioration.

19. Propose a basic diagnostic strategy to reach a definitive diagnosis.
20. Critically assess the results of complementary examinations, taking their limitations into account.
21. Order signs and symptoms to perform a differential syndromic diagnosis.
22. Establish a therapeutic action plan considering the needs of patients and their family and social environment, and involving all members of the healthcare team.
23. Distinguish situations that require hospitalisation and those that require intensive care.
24. Identify type, evolution and limitations in chronic diseases, their possible treatments and prevention of complications.
25. Assess physical incapacity, and its impact on patients and their families.
26. Categorise emergency situations in accordance with the available indices of seriousness.
27. Establish a diagnostic and therapeutic approach in emergencies.
28. Identify the fundamental principles of palliative medicine.
29. Indicate suitable therapeutic interventions for the main health problems.
30. Give patients the maximum possible information about their health, diagnostic steps, complementary examinations and treatments in an appropriate way.
31. Detail the steps and procedures for giving bad news.
32. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
33. Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
34. Communicate clearly, orally and in writing, with other professionals and the media.
35. Use information and communication technologies in professional practice.
36. Explain the mechanisms of radiological image and anatomopathological alterations of the commonest diseases of the different body systems.
37. Establish clear and effective communication with patients and their family-members.
38. Identify the guiding symptoms of the most common neoplasms.
39. Identify images showing normality.
40. Relate clinical findings to those of imaging tests.
41. Describe the main diagnostic and therapeutic techniques performed in the hospital service corresponding to the subject.
42. Describe the natural history of neoplasms.
43. Describe the pain mechanisms and other common symptoms in the terminal phase and establish a treatment plan.
44. Identify the most common neoplasms from the warning signs.

Contents

Subject 1: Introduction to Oncology. Epidemiological principles of cancer.

- Cancer as a systemic disease
- Epidemiology of cancer
- Early diagnosis
- Primary and secondary prevention

Subject 2: Diagnosis of oncological diseases (I).

- Dissemination patterns
- Staging principles
- Classification methods used
- General symptoms in advanced disease:
 - Malnutrition
 - Tumoural fever
 - Hematological alterations in cancer

Subject 3: Diagnosis of oncological diseases (II).

- Bone metastases
- Cerebral metastases
- General performance
- Evaluation scales: Karnofsky index and ECOG
- Prognostic variables in cancer
- Predictive variables in cancer

Subject 4: Diagnosis of oncological diseases (III): Biomarkers.

- Biomarkers definition and their use in clinical practice

- Plasmatic tumoural markers
- Genomic platforms
- Massive sequencing
- Liquid biopsy

Subject 5: Hereditary cancer.

- Principles of familial cancer and principal hereditary syndromes
- Genetic Counselling principles

Subject 6: Principles of cancer treatment (I): Surgery.

- Objectives of the surgical treatment of cancer
- Radical and palliative treatment concept
- Breast cancer surgery

Subject 7: Principles of cancer treatment (II): Surgery.

- Colon cancer surgery

Subject 8: Principles of cancer treatment (III): Radiotherapy and Chemotherapy.

- Radiotherapy principles
- Chemotherapy principles
- Pharmacological and pharmacodynamics principles

- Concept of dose intensity and dose density
- Groups of cytostatic agents and their mechanism of action

- Endocrine therapy principles

- Endocrine sensitive neoplasms

Subject 9: Principles of cancer treatment (IV): Biological therapy.

- Main signal transduction pathways

- Biological treatment principles

- Pharmacological fundamentals

- Effective biological dose concept

- Biological drug groups in solid tumours

- Mechanisms of action and applicability

Subject 10: Principles of cancer treatment (V): Immunotherapy.

- Principles of the immune system in cancer

- Primary utilities in cancer treatment:

- Melanoma
- Head and neck tumours

- Lung cancer
- Urological tumours

Subject 11: Principles of cancer treatment (VI): Chemotherapy side-effects.

- Acute secondary effects

- Vomiting
- Stomatitis
- Neutropenia and febrile neutropenia
- Anaemia
- Thrombopenia
- Alopecia

- Chronic side effects

- Cardiac effects
- Neurological effects
- Pulmonary effects
- Gonadal effects

Subject 12: Principles of cancer treatment (VII).

- Endocrine therapy side-effects

- Biological therapy side-effects

- Immunotherapy side-effects

- Immuno-related effects
- Pathogenesis
- Diagnostic and treatment strategies

Subject 13: Palliative care and cancer.

- Quality of life concept
- Measurement instruments and scales
- Information for cancer patients
- Terminal situation protagonists: the patient, the family and therapeutic team
- Factors contributing to suffering: physical, emotional, social and spiritual
- Patient and family adaptation to the terminal situation: Kübler-Ross phases

Subject 14: Symptom control strategy in advanced disease (I).

- Pain:
 - Pathogenesis
 - Evaluation
 - Prognostic factors and basic principles of pain treatment
- Respiratory symptoms

Subject 15: Symptom control strategy in advanced disease (II)

- Digestive symptoms
- Cachexia and anorexia
- Cognitive dysfunction syndromes

Subject 16: Attention to the most frequent neoplasms (I): Lung Cancer.

- Epidemiology and risk factors
- Diagnosis and staging
- Treatment options: a multidisciplinary approach
- Prognosis
- Follow-up

Subject 17: Attention to the most frequent neoplasms (II): Colon and Rectal Cancer.

- Epidemiology and risk factors
- Diagnosis and staging
- Treatment options: a multidisciplinary approach
- Prognosis
- Follow-up

Subject 18: Attention to the most frequent neoplasms (III): Breast Cancer.

- Epidemiology and risk factors
- Diagnosis and staging
- Treatment options: a multidisciplinary approach
- Prognosis
- Follow-up

Subject 19: Attention to the most frequent neoplasms (IV): Prostate Cancer.

- Epidemiology and risk factors
- Diagnosis and staging
- Treatment options: a multidisciplinary approach
- Prognosis
- Follow-up

Subject 20: Oncological Emergencies

- Hypercalcemia
- Other metabolic alterations: AIDS
- Medullar compression syndrome

- Endocraneal hypertension

- Superior vena cava syndrome

Seminars Programme

Seminar A: Communication in Oncology: shared decision. Role-playing session.

- Information at diagnosis

- Information at the beginning of the disease

- Information at recurrence

- Information in advanced disease

Seminar B: Clinical research in Oncology.

- Role of clinical trials in developing new treatments

- Result evaluation methodology: RECIST method

Seminar C: Bioethics at the end of life.

Seminar D: Role of the Multidisciplinary tumour board in the definition of the diagnosis and treatment strategies. Role of the Molecular Boards.

Seminar E: Rare tumours.

- Rare tumour concept: sarcoma, central nervous system tumours, germ-cell tumours

- Tumour agnostic concept

- Role of the reference institutions

Seminar F: Clinical cases in surgery.

- Metastases surgery

- Palliative surgery

Seminar G: Clinical cases in gynecological tumours.

Seminar H: Clinical cases in melanoma/kidney and urological tumours

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Personal study, essay preparation	50	2	1, 2, 3, 4, 5, 6, 7, 9
HUMAN CLINICAL CARE PRACTICE (PCAh)	15	0.6	3, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44
Advanced Clinical Simulation Practices (PSCA)	2	0.08	9, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33
Clinical case seminars (SCC)	4	0.16	16, 17, 18, 19, 20, 21
Seminars (SEM)	4	0.16	16, 17, 18, 19, 20, 21
Theory (TE)	20	0.8	5, 7, 8, 10, 11, 12, 13, 14, 15

- Theory (TE): 20 hours

Group dimension: 1 Group. Number of scheduled sessions: 20

- Simulation seminar (PSCA): 2 hour

Group dimension: 10 people attending

Number of scheduled sessions: 1

- Seminars 4 hours

Group dimension: 15 people attending.

Number of scheduled sessions: 3

- Clinical Case seminars: 4 hours

Group dimension: 15 people attending.

Number of scheduled sessions: 3

- Care Practicum (PCAh)

Groups of 2-4 students

Scheduled hours: 15 hours (3 hours every day for one week)

- Autonomous work (50% of total time)

Reading of texts and articles

Study to assimilate contents

Essay preparation and presentation based on clinical cases

- Evaluation (5% of total time: 4.0 hours)

Annotation: within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
CLASS PARTICIPATION (7 lessons minimum)	5%	0.2	0.008	1, 2, 3, 4, 5, 6, 9, 26, 36
PRACTICAL EXAM	30%	1	0.04	7, 8, 9, 10, 11, 12, 13, 14, 28, 42, 43, 44
THEORIC EXAM	40%	1.3	0.052	5, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
CLINICAL CASE PRESENTATION	20%	2.3	0.092	4, 6, 9, 27, 28, 29, 30, 31, 32, 33, 34, 35
SEMINARS (All)	5%	0.2	0.008	4, 9, 37, 38, 39, 40, 41, 42, 43, 44

This subject does not provide the single assessment system

The theoretical assessment consists of 40 multiple choice questions with five possible options in which only one for each question is valid.

The practical assessment consists of 20 multiple choice questions which five possible options in which only one for each question is valid.

Each student will deliver an essay with the description of a clinical case experienced first-hand during the rotation at the end of practicum. This essay will have the following parts: a) Introduction; b) Description of the clinical case; c) Identification of problems that motivated the admission to the hospital; d) Treatment strategy; e) Evolution; f) Discussion with five references.

Full attendance to the seminars is obligatory and the total attendance will represent 5% of the final qualification. The evaluation will be made with a final question at the end of each session

Students who have not passed the continuous evaluation of the subject can resit the exam which will be

announced in advance notice

Students who do not sit the exams (Theoretical and Practicum) and also the practicum will be considered as Not Evaluated and lose their right of registration for that year's course.

Bibliography

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Software

none specific software is used

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE