UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Haematologic Disorders

2627-3-H4601D013-H4601D036M

Aims

The main objectives of the course are to provide a general framework relating to the classification and clinical characteristics of anemias, acute and chronic leukemias, myelodysplastic syndromes, Hodgkin and non-Hodgkin lymphomas and multiple myeloma, as well as to provide the molecular basis of their pathogenesis. Particular attention will be paid to pathologies of dental interest, in order to encourage a multidisciplinary clinical approach.

Knowledge and understanding - at the end of the course the student will be able to understand and integrate interdisciplinary knowledge useful for understanding the methodologies applied in the hematological field.
Ability to apply knowledge and understanding - at the end of the course the student must be able to use the knowledge acquired to understand the key aspects of hematology.
Autonomy of judgment - at the end of the course, the student will be able to understand the diagnostic process of the main hematological pathologies and will be able to integrate information from different fields (biology, medicine, technology) to better understand hematological pathologies.
Communication skills - at the end of the course the student will have acquired adequate scientific terminology and will be able to explain the topics covered in the course with proper language.
Learning ability - at the end of the course the student will be able to understand and critically evaluate the scientific literature regarding hematology.

Contents

The form includes the following contents:

- Introduction to the hematopoietic system
- Anemias: classification, clinical characteristics and molecular mechanisms
- Chronic Myeloid Leukemia: classification, clinical characteristics and molecular mechanisms
- Chronic Lymphatic Leukemia: classification, clinical characteristics and molecular mechanisms
- Acute Myeloid Leukemia: classification, clinical characteristics and molecular mechanisms

- Acute Lymphoblastic Leukemia: classification, clinical characteristics and molecular mechanisms
- Myelodysplasias: classification, clinical characteristics and molecular mechanisms
- Hodgkin lymphomas: classification, clinical characteristics and molecular mechanisms
- Non-Hodgkin's lymphomas: classification, clinical characteristics and molecular mechanisms
- Multiple Myeloma: classification, clinical characteristics and molecular mechanisms

Detailed program

Morphology, phyisiology and physiopathology of the blood and the bone marrow; hematopoietic stem cells; anaemias; thrombocytopenias; main clonal disorders, such as: acute myeloid leukemias, myelodysplastic syndromes, chronic myeloid leukemia, acute lymphoblastic leukemia, chronic lymphocytic leukemia, main Philadelphia-negative myeloproliferative disorders, main monoclonal gammopathies, Hodgkin and non-Hodgkin lymphomas.

- Anaemias: causes, symptoms and signs.
- Leucemie acute mieloidi: molecular mechanisms, symptoms, signs, prognosis, evolution.
- Myelodysplastic syndromes: molecular mechanisms, symptoms, signs, prognosis, evolution.
- Leucemia mieloide cronica: molecular mechanisms, symptoms, signs, prognosis, evolution, role of targeted therapies in the treatment of LMC.
- Acute lymphoblastic leukemia: molecular mechanisms, symptoms, signs, prognosis, evolution.
- Chronic lymphocytic leukemia: molecular mechanisms, symptoms, signs, prognosis, evolution.
- Main Philadelphia-negative myeloproliferative disorders: polycythaemia vera, essential thrombocythemia, idiopathic myelofibrosis: molecular mechanisms, role of JAK2, MPL and CALR; symptoms, signs, prognosis, evolution.
- Main monoclonal gammopathies: multiple myeloma and MGUS; molecular mechanisms, symptoms, signs, prognosis, evolution.
- Hodgkin and non-Hodgkin lymphomas: molecular mechanisms, symptoms, signs, prognosis, evolution, main differences

Prerequisites

Please refer to what is defined in the general description of the course.

Teaching form

80% of the teaching activities will have a delivery nature (DE), carried out in the form of frontal teaching.
20% will have an interactive nature (DI), carried out in particular as a collegial discussion of case studies focused

on the topics addressed in DE.
The teaching activity will be delivered in person.

Textbook and teaching resource

Harrison – Principles of internal medicine.
Slides and reference articles (on request).

Semester

Second semester.

Assessment method

Written multiple choice exam (closed questions) and oral upon request of the student or teacher.

The exam is intended to test the knowledge and skills acquired in the different modules that make up the teaching and the student's ability to develop the notions in a mature manner.

Office hours

On appointment.

Sustainable Development Goals

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