



SUBJECT OUTLINE

HEMATOPOIETIC STEM CELL TRANSPLANTATION AND CELL THERAPIES

1. Programme of study description

1.1.	THE "CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY
1.2.	THE FACULTY OF MEDICINE / THE CLINICAL DEPARTMENT
1.3.	DISCIPLINE
1.4.	DOMAIN OF STUDY: Healthcare – regulated sector within the EU
1.5.	CYCLE OF STUDIES: BACHELOR'S DEGREE
1.6.	PROGRAMME OF STUDY: MEDICINE

2. Subject description

2.1.	Name of the subject/compulsory subject/elective subject within the discipline: MCS-HEMATOLOGIE (CLINICĂ ȘI DE LABORATOR) SUUB						
2.2.	Location of the discipline: Spitalul Universitar de Urgenta Bucuresti						
2.3.	Course tenured coordinator: PROF. UNIV. DR. BUMBEA HORIA (53 ani, vechime activitate didactică – 21 ani) SEF LUCR. DR. CIUFU CRISTINA MARIA (46 ani, vechime activitate didactică – 13 ani)						
2.4.	Practicals/clinical rotations tenured coordinator: ASIST UNIV. DR. DIACONESCU DANIELA (30 ani, vechime activitate didactică – 2 luni)						
2.5. Year of study	VI	2.6. Semester	XI or XII	2.7. Type of assessment	Theoretical exam	2.8. Subject classification	Obligatory DS

3. Total estimated time (hours/semester of didactic activity) – teaching module

Number of hours per week	14	Out of which: course	10	Clinical rotation	4
Total number of hours from curriculum	14	Out of which: course	10	Clinical rotation	4
Distribution of allotted time	1 week	Out of which: course	2 h/day	Clinical rotation	1 Hour/day
Study from textbooks, courses, bibliography, and student notes					
Additional library study, study on specialized online platforms and field study					
Preparing seminars / laboratories, assignments, reports, portfolios and essays					
Tutoring					
Examinations					
Other activities					
Total hours of individual study					
Number of credit points					4

4. Prerequisites (where applicable)

4.1. of curriculum	Anatomie, Biochimie, Fiziologie, Genetica, Farmacologie, Semiologie Medicală
4.2. of competencies	History / clinical examination of patient

5. Requirements (where applicable)

5.1. for delivering the course	Classroom, videoprojector, PC
5.2. for delivering the clinical rotation	Clinical department, lab

6. Acquired specific competencies

Professional competencies (expressed through knowledge and skills)	Description of concepts, theories, and fundamental notions regarding the production of diseases, signs and
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	<p>symptoms characteristic of each condition useful for guiding clinical diagnosis in hematology</p> <p>Description of the mechanisms of action of drugs, indications, contraindications and adverse effects of therapeutic resources used in medical practice, as well as knowledge of resuscitation maneuvers in first aid / emergency conditions in hematology</p> <p>The correct assessment of the risk of illness or the context of the occurrence of an individual / collective illness, followed by the choice and application of appropriate prophylaxis measures.</p> <p>Clinical examination of a hematological patient</p> <p>Diagnostic algorithm in anemias / hemorrhagic / thrombotic syndromes</p> <p>Interpretation of results</p> <p>Establishing a hematological diagnosis, on clinical and paraclinical bases</p> <p>Correct treatment of anemias / principles of treatment in malignant hematological diseases</p>
Transversal competencies (of role, of professional and personal development)	<p>It has the ability to suspect a diagnosis</p> <p>He has knowledge about therapies/molecules, the latest procedures, the concept of stem cell transplantation therapies</p> <p>It can establish a prognosis depending on the pathology, particularly the case.</p> <p>He has knowledge regarding mitigation and insurance Measures of patients' quality of life.</p> <p>Know the indications for hematopoietic stem cell transplantation, the types of transplant, the main post-transplant complications, evaluation of a posttransplant patient</p> <p>Know the indications of cellular therapies, the types of cellular therapies, the main complications, the evaluation of a patient after administration cell therapies</p>

7. Subject learning objectives (based on the scale of acquired specific competencies)

7.1. General learning objective	Familiarization of the student with the specific pathology of the hematological patient with an indication for hematopoietic stem cell transplantation and cellular therapies (clinical aspect, paraclinical and interdisciplinary approach, principles of treatment, particularities of the care of the hematological patient)
7.2. Specific learning objectives	<p>At the end of the internship, the student must be able to:</p> <ul style="list-style-type: none"> - examine the patient with hematological disease with the possible indication of transplantation or cell therapy - draw up an algorithm for evaluating the indication of transplantation / cellular therapy - know the management of patients with hematological diseases with hematopoietic stem cell transplantation or cell therapy

8. Content

8.1. Course	Teaching methods	Observations
Course 1. The biological properties of the hematopoietic stem cell	Direct exposure electronic support (Power Point presentation)	2 h



Immunogenetics in allogeneic stem cell transplantation The choice of the donor according to the HLA typing and the source of stem cells. The principles of conditioning Transfusion support in patients with stem cell transplantation Supportive therapy in stem cell transplantation		
Course 2. Early post-transplant complications Posttransplantation infectious complications Late complications in post-transplant patients	Direct exposure electronic support (Power Point presentation)	2 h
Course 3 Reconstitution of immunity after allotransplantation of stem cells Molecular monitoring after transplantation (BMR and Chimerism) Posttransplant immunotherapy of stem cells	Direct exposure electronic support (Power Point presentation)	2 h
Course 4 General indications in the current practice of auto- and allo-transplantation. Stem cells in regenerative medicine	Direct exposure electronic support (Power Point presentation)	2 h
Course 5 Cell therapies in hematology. Indications, mechanisms of action, complications, supportive treatment	Direct exposure electronic support (Power Point presentation)	2 h

8.2. Clinical rotation	Teaching methods	Observations
Direct exposure of clinical cases / patients with hematological diseases admitted to the Departments of Hematology and the Bone Marrow Transplantation department	Direct interaction with patients / medical history / Patient clinical examination / Evaluation of laboratory samples / Recognition of hematological disorders based on specific investigations.	4 h

Bibliography for course and clinical rotation

Cursul catedrei: Hematologie Clinică, Anca Roxana Lupu, Ana Maria Vladareanu, Daniel Coriu, Editura UMF Carol Davila, Sept 2017

A beginner's guide to blood cells / Barbara J. Bain. – 2nd ed.

Practical Haematology; Dacie and Lewis; Eleventh Edition, 2012

HEMATOLOGY, Basic Principles and Practice; Hoffman et al, 7th Edition (2018)

The EBMT Handbook, Hematopoietic Stem Cell Transplantation and Cellular Therapies, 2019

Indications for haematopoietic stem cell transplantation for haematological diseases, solid tumours and immune disorders: current practice in Europe, Duarte et al, Bone Marrow Transplantation, 2019

9. Corroboration of the subject content with the expectations of the representatives of the epistemic community, professional associations, and major employers in the field of the programme of study



10. Assessment

Type of activity	Assessment criteria	Assessment methods	Assessment weighting within the final grade
Course	Knowledge of the theoretical notions of the subject	Theoretical exam 10 subjects	60%
Clinical rotation	Activity during the clinical internship	Condition attendance / discussions with the group assistant	10%
	- guidance on the indication of transplantation in a clinical case	Practical exam with the group assistant / teacher	30%
Minimum performance standard			
Minimum 50% in each component of the assessment			

Date of filing

Signature of the course tenured coordinator

Signature of the seminar tenured coordinator

30 March 2023

According to the state of functions

According to the state of functions

Date of approval in the Council of the Department:

Signature of the Head of the Department

Prof. Univ. Dr. Horia Bumbea

Prof. Univ. Dr. Daniel Coriu