UNB					
Universitat Autònoma					
de Barcelona					

Blood Transfusion

Code: 44437

2022/2024

1

ECTS Credits: 9

de Barcelona			
Degree	Туре	Year	Semester
4317563 Transfusion Medicine and Cellular and	Tissue		

OB

Contact

Therapies

Use of Languages

1

Principal working language: English (Eng)

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Other comments on languages

The primary language used during the course will be English. However, the use of Spanish will also be allowed. The course materials will also be in English.

Teachers

Jaap Jan Zwaginga: is full professor in Clinical Transfusion Medicine, section leader of the Centre for Stem Cell and Cell therapy both within the department Immunohematology and Bloodtransfusion and chairman of the LUMC Blood transfusion committee. Within Internal Medicine, he directs the differentiation Bloodtransfusion Medicine. Next, Zwaginga is co-responsible for the LUMC-Sanquin Jon J van Rood Center for Clinical Transfusion Medicine Research, chairman of the Benign Hematologic Diseases working party of the Dutch Hematology Association and national (HOVON) JACIE representative and chairman of the stearing committee for the Blood transfusion guideline

Joan Ramon Grífols Ronda: is a specialist in Hematology and Hemotherapy. He has a university postgraduate degree in Transfusion Medicine from the Louis Pasteur University of Strasbourg as well as a Master's Degree in Hospital Management from ESADE Barcelona. He is a professor at the Autonomous University of Barcelona in its Official Master's program in Transfusion Medicine and Cellular Therapies. He has been working in the field of Transfusion Medicine for more than 25 years with multiple national and international publications. He is currently the Medical Director of the Banc de Sang i Teixits de Catalunya as well as coordinator of international affairs of this organization. He has extensive international experience as an advisor to the European Commission for the implementation and development of organizational models and structuring of transfusion networks, as well as the development of programs that promote the voluntary and altruistic donation of blood components. He has worked on European projects in Croatia, Montenegro, Serbia, Georgia and Ukraine. He currently coordinates a project led by the Banc de Sang i Teixits in the Dominican Republic for the training, start-up, opening and support of the National Blood Center and its network operation. He is an active member of different national and international scientific societies and of the Editorial Board of the journal Blood Transfusion.

Prerequisites

Level B2 or equivalent in English.

Objectives and Contextualisation

This module is dedicated to blood transfusion, and in it the quality indicators of the different methods for the preparation of blood components will be studied. The indications for the transfusion, as well as the incidents and possible adverse effects.

The different alternatives to transfusion will be studied and therapeutic apheresis and plasma exchange will be studied in depth, as well as the use of plasma derivatives.

Competences

- Use acquired knowledge to solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
- Identify and analyse quality indicators in the different blood components production methods.
- Describe the selection processes of units of blood and blood components compatible with each clinical situation.
- Integrate scientific and technical knowledge in accordance with a commitment to ethics and the code of conduct.
- Take reasoned decisions based on critical, objective analysis.

Learning Outcomes

- 1. Identify the basic concepts of the European regulations on transfusion and how they are applied to daily practice.
- 2. Analyse quality indicators of blood components.
- 3. Identify quality indicators from practical cases.

- 4. Identify the indications for performing a transfusion.
- 5. Identify the alternatives to blood transfusion.
- 6. Identify the clinical situations for the use of plasma derivatives.

Content

- 1. Introduction to transfusion medicine.
- 2. Pre-transfusion tests.
- 3. Indications for the transfusion.
- 4. Incidents and adverse effects of the transfusion.
- 5. Alternatives to the transfusion.
- 6. Indications for stable components.

Methodology

The methodology for this course is active and constructive. It does not only contemplate the content but also reading, reflecting and applying knowledge to reasonably close situation to create meaningful learning.

Students will work on real life examples and case studies, reflecting on complex and relatively unstructured situations to find adequate solutions.

Faithful to the proposed methodology, students form the centre of the learning process and generate knowledge by interacting significantly with their peers, with the teaching materials and with the environment. This programme not only teaches training in a virtual environment but also allows them to experience their learning every day.

At the beginning of the unit, the teacher will present a learning plan to the group with specific objectives, learning activities, the necessary resources and recommended deadlines for each activity.

The dates for carrying out the activities are recommended in order to be able to follow the course. The only fixed dates are the beginning and end of each teaching unit. This means that students can do their own planning, but they must respect the dates for the beginning and the end of each unit.

Students are recommended to work in a continuous and consistent manner and not allow tasks to accumulate around the deadlines, which may lead to haste, undue time pressure and not allow the

students to enjoy their learning or carry out additional reflections. Also, the course offers group activities which require synchronisation among the group.

Some of the activities must be send online to the teacher for assessment and receive feedback of progress. Teachers will return the work with comments and together the students can continue to think and learn. The deadline for each of these activities is the end of the teaching unit. Other activities will consist in discussion and working together in shared spaces.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed	50	2	
Discussions			5,7
Type: Supervised	75	3	
Virtualcases/Problem Solving			4
Elaboration of Projects			2, 3, 6
Type: Autonomous	150	6	
Test/Scheme			3, 5, 7
Personal Study			1, 8, 9
Reading Articles/Reports of Interest/Videos			1, 2, 3, 4, 5, 6, 7, 8, 9

Assessment

This module will be assessed on the following exercises:

1. Exercise 1. Individual work in which students review the situation of donation and transfusion in their own countries. The text should not exceed 900 words. This exercise counts for 10% of the final grade.

2. Exercise 2. Group work centred on the analysis of key points in a transfusion request. The text should not exceed 900 words. This exercise counts for 10% of the final grade.

3. Exercise 3. Individual multiple-choice test on indications of transfusion. This test counts for 10% of the final grade.

4. Exercise 4. Individual multiple-choice test on transfusion in special situations. This test counts for 20% of the final grade.

5. Group discussion on different national surveys on haemovigilance. Student contribution will count for 10% of the final grade.

6. Exercise 5. Group work focused on a specific transfusion procedure related to one of the special critical situations (to be chosen by the group). The text should not exceed 900 words. This exercise counts for 10% of the final grade.

7. Exercise 6. This exercise is in two parts: Individual multiple-choice test on therapeutic apheresis (8% of the final grade) and individual participation and comments in a forum on therapeutic apheresis (2% of the final grade).

8. Exercise 7. Individual work where students propose and develop at least three measures to improve self-sufficiency in stable blood components. The text should not exceed 900 words. This exercise counts for 10% of the final grade.

9. Exercise 8. Individual work in which students analyse a case on how to implement lean management in a transfusion service. The text should not exceed 900 words. This exercise counts for 10% of the final grade.

Title	Weighting	Hours	ECTS	Learning Outcomes
Exercice 1	10 %	12,5	0,5	1, 2, 3
Exercice 2	10 %	12,5	0,5	3
Exercice 3 and 4	30 %	12,5	0,5	3, 4, 5, 6
Exercice 5	10 %	100	4	6
Student's Participation	10 %	25	1	7, 8, 9, 10
Exercice 6/ Student's Participation	10 %	25	1	10, 11, 12, 13, 14
Exercice 7	10 %	25	1	15, 16
Exercice 8	10 %	12,5	0,5	17

Assessment Activities

Bibliography

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