

Modul designation	Hematology and Onkology System
Semester in which the module is taught	2nd Semester of Academic/Bachelor Stage
Person responsible for the module	<ol style="list-style-type: none"> <li>1. Rika Nilapsari, dr., SpPK., M.Pd.Ked.</li> <li>2. Sara Puspita, dr., SpPK</li> <li>3. Dr. Yani Triyani, dr., SpPK., M.Kes.</li> <li>4. Meike Rachmawati, dr., M.Kes., SpPA.</li> <li>5. Agung Firmansyah Somantri, dr., SpPD., M.Kes.</li> </ol>
Language	Bilingual (Indonesia & English)
Relation to curriculum	Compulsory
Teaching methods	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Tutorial</li> <li>- Laboratory activity</li> </ul>
Workload	<p>Total workload : 4 weeks</p> <p>Contact hours : Lecture 2 hours/week</p> <p style="padding-left: 40px;">Tutorial 3 hours/meeting (3 meeting/week)</p> <p style="padding-left: 40px;">Laboratory activity 3 hours/meeting</p>
Credit points	5 ECTS (4 SKS)
Required & recommended prerequisites for joining the module	Learning course at first semester
Module Objective	<p>At the end of course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Describe the process of formation, development, and morphology of blood cells related to hematology and oncology cases (C3)</li> <li>2. Describe the microstructure of the bone marrow and lymph nodes associated with hematology and oncology cases (C3)</li> <li>3. Relating the function and components of blood (cells and plasma) and its microstructure to cases of hematological and oncological disorders (C3)</li> <li>4. Describe the components of the hemostasis process, microvascular microstructure, coagulation mechanisms, and inhibitors associated with cases of hemostasis disorders</li> <li>5. Linking primary and secondary hemostasis processes, fibrinolytic processes in cases of hemostasis disorders. (C4)</li> <li>6. Determine the definition, etiology, and classification of blood cell disorders, haemostasis disorders, and malignancies in accordance with the rules of clinical medicine. (C2)</li> <li>7. Implement biochemical processes related to hematological</li> </ol>

	<p>and oncological diseases (C3)</p> <ol style="list-style-type: none"> <li>8. Analyze clinical manifestations based on the pathogenesis and pathophysiology of blood cell disorders, hemostasis disorders, and solid and non-solid malignancies in accordance with the rules of clinical medicine. (C4)</li> <li>9. Correlate histopathological images (anatomical pathology) related to diseases of the system (C3)</li> <li>10. Determine clinical pathology examinations related to abnormalities in blood cells, hemostasis processes, and blood malignancies (C3)</li> <li>11. Analyze differential diagnoses to determine the diagnosis, complications, and disease prognosis of blood cell disorders, hemostasis disorders, and solid and non-solid malignancies. (C4)</li> <li>12. Describe the management of transfusion procedures and the use of drugs (pharmacology) as well as education regarding hematology and hemostasis cases based on Islamic and humanities values (C4, A3)</li> <li>13. Explain the management of chemotherapy and surgery as well as education regarding cases of solid and non-solid malignancies based on Islamic and humanistic values (C2, A3)</li> <li>14. Explain the morphology and life cycle of hookworms (C3) associated with hematological cases (CPMK 7)</li> </ol>
Content	<p>The Hematology-Oncology System module discusses basic science, including the formation and development of blood cells, the morphology and function of each blood cell, and oncogenesis and pathophysiology of solid and non-solid malignancies. This module also discusses several disorders in the hematology and oncology system that general practitioners must know based on the 2012 Indonesian Doctor Competency Standards (SKDI), which include disease epidemiology, clinical manifestations, pathogenesis and pathophysiology, supporting examinations, principles of therapy, complications, and prognosis.</p>
Examination forms	<p>Multidisciplinary Examination (MDE), SOOCA, Lab exam</p>
Study and examination requirements	<p>System Pass Criteria : Minimum MDE, SOOCA and Lab exam score 55.5 (C)</p>
Reading list	<ol style="list-style-type: none"> <li>1. D.M. Harmening. Clinical Hematology and Fundamentals of Hemostasis. F.A. Davis Company. Fifth Edition.</li> <li>2. Henry's Clinical Diagnosis And Management By Laboratory Methods. Chapter 30 and 31.</li> <li>3. Junqueira, Basic Histology</li> <li>4. Guyton &amp; Hall, Textbook of Medical Physiology, 11th Edition</li> <li>5. Tortora GJ. Principles of Anatomy &amp; Physiology 15th Edition</li> <li>6. Vander, Human Physiology, 13th Edition</li> <li>7. Seeley Anatomy &amp; Physiology, 11th Edition</li> <li>8. S.C Anderson Young, K.B Poulsen. Anderson's Atlas of Hematology. Wolters Kluwer. Second Edition</li> </ol>

	<ol style="list-style-type: none"><li>9. J.P. Greer, D.A Arber, B. Glader, A.F. List et al. Wintrobe's Clinical Hematology. Lippincott Williams and Wilkins. Thirteen Edition</li><li>10. M.A. Lichtman, K. Kaushansky, J. T. Prchal, et al. Williams Manual Of Hematology. McGrawHill. 9th Edition</li><li>11. Katzung B G . Basic and Clinical Pharmacology,12th ed, Lang</li><li>12. Lippincott Illustrated Reviews: Pharmacology Sixth Edition</li><li>13. Kumar V, Abbas AK, Aster JC. Robbins basic pathology e-book. Elsevier Health Sciences</li></ol>
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