AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Cancer Stem Cell and Its Clinical Importance								
Course Code	KHÜ529		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	6	Workload	145 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To comprehend the biological, molecular and genetic characteristics of cancer stem cells as translational correlations with clinical parameters.								
Course Content	Definition of cancer stem cell, its renewal and differentiation, characteristics of cancer stem cell, function of stem cell in cancer formation, cancer stem cell related signaling pathways, the importance of stem cell in hematopoietic cancers, the importance of stem cell in solid tumors, tissue-specific stem cell markers, cancer root in treatment resistance The role of cancer cells, cancer stem cell, cancer stem cell isolation and identification techniques as treatment target will be described. Compilation articles on the subject will be reviewed								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	60
Assignment	1	20

Recommended or Required Reading	
1	Diagnostic Approach to Clinical Oncology Mario W. Fiorentino PICCIN 1999
2	Molecular Biology in Cancer Medicine. Razelle Kurzrock, Moshe Talpaz, Martin Dunitz 1995.
3	Manual of Clinical Oncology. D.K. Hossfeld, C.D. Sherman, R.R. Love, F.X. Bosch Springer- Verlag, 1990 Fith Edition.
4	Molecular Mechanism of Cancer. Georg F. Weber, Springer, 2007
5	The Biology of Cancer. Robert A. Weinberg, Gariand Science 2007

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition and Morphology of Cancer Stem Cells
2	Theoretical	Cancer Stem Cell Obtaining Method
3	Theoretical	Biological Characteristics of Cancer Stem Cells
4	Theoretical	Phenotyping in cancer stem cells-I
5	Theoretical	Phenotyping in cancer stem cells-II
6	Theoretical	Cancer Stem Cell Related Signal Pathways-I
7	Theoretical	Cancer Stem Cell Related Signal Pathways-II
8	Intermediate Exam	Mid-term exam
9	Theoretical	Stem Cell in Hematopoietic Cancers-I
10	Theoretical	Stem Cells in Hematopoietic Cancers-II
11	Theoretical	Stem Cells in Solid Tumors-I
12	Theoretical	Stem Cells in Solid Tumors-II
13	Theoretical	Treatment Resistance and Cancer Stem Cells
14	Theoretical	Cancer Stem Cell as Target in Treatment
15	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	1	2	39
Assignment	2	14	1	30
Midterm Examination	1	24	2	26

Final Examination	1	48	2	50
			Total Workload (Hours)	145
			[Total Workload (Hours) / 25*] = **ECTS**	6
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To have in-depth knowledge of cancer stem cells
2	Explain cancer stem cell production and identification
3	Discuss the relationship between cancer stem cells in treatment resistance
4	Understand the importance of cancer stem cells as a therapeutic target
5	Knows the importance of stem cells in solid and hematopoietic cancers

Programme Outcomes *(Stem Cell and Regenerative Medicine Interdisciplinary Master)*	
1	To have comprehensive and in-depth knowledge of Stem Cell and Regenerative Medicine
2	To have information about stem cell production and characterization
3	To learn stem cell sources, stem cell types and their differences
4	To understand the molecular and genetic structure of stem cells
5	To be able to learn and make stem cell culture methods
6	To be able to adapt the knowledge in the field of stem cells to research in line with current developments
7	To be able to use molecular laboratory methods used in stem cell research
8	Learning in vitro disease models and in vivo experiments related to stem cells
9	To have knowledge about stem cell therapies and clinical use
10	Conduct independent research in accordance with the principles of research and publication ethics

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	4	4	4	4	4
P2	3	5			
P4	4	3	3	3	3
P6	4	3	3	3	3
P9	3		4	4	4