


3.00 credits

30.0 h

Q1

Teacher(s)	Baurain Jean-François ;Gallez Bernard ;Grégoire Vincent ;Havelange Violaine ;Lecouvet Frédéric ;Lucas Sophie (coordinator) ;
Language :	French > English-friendly
Place of the course	Bruxelles Woluwe
Prerequisites	cellular biology, histology, molecular biology, physics, biochemistry, immunology.
Main themes	Description of the hallmarks of cancer and of the main tools used for its diagnosis and treatment. A few fields will be covered in more detail: the genetic causes of some blood cancers, the pathological examination of tissue samples to faithfully detect a tumor, the imaging technologies and their remarkable progresses over the recent years, radiotherapy and its interaction with modern imaging technologies, the so-called targeted therapies which deal with signal transduction pathways involved in cell proliferation, and immunotherapy.
Learning outcomes	At the end of this learning unit, the student is able to : 1 Understand the main concepts behind the diagnosis and treatment of cancer. On the basis of the hallmarks of cancer, understand which of them can lead to diagnostic tools for many or some cancer types, and which of them can be specifically targeted by chemical or physical agents in order to treat and possibly cure patients.
Evaluation methods	Written examination. Mix of open-ended and multiple-choice questions without penalty. Equal distribution of marks among the 7 teachers.
Teaching methods	Lectures.
Content	Lessons alternate between basic and clinical sciences in order to link as much as possible the progresses of fundamental sciences and their practical consequences for cancer patients. The clinical concepts of oncology will be simplified in order for all the presented materials to be understandable for students in biomedical sciences. Covered topics: Pathological diagnosis of cancer, Principles and applications of anatomical and functional imaging techniques for the diagnosis and assessment of cancer, Genetics and cancer, Anticancer chemotherapy, Radiotherapy, Cancer immunotherapy.
Inline resources	Slides available on Moodle.
Faculty or entity in charge	FASB

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Biomedicine	SBIM2M	3		
Master [60] in Biomedicine	SBIM2M1	3		