UCLouvain

wsbim2143

2025

Causes and risk factors for cancer

2.00 credits	15.0 h	Q1

Teacher(s)	Baldin Paméla ;Bindels Laure ;Huaux François ;van Gastel Nick (coordinator) ;
Language :	English > French-friendly
Place of the course	Bruxelles Woluwe
Prerequisites	The student should know the cell cycle and its regulation, the mechanisms of apoptosis, histology and general pathology, and immunology. He/she should also have notions in digestive physiology, general and organic chemistry, molecular genetics and epidemiology.
Main themes	Oncogenic effects of toxic factors, nutriments and living organisms will be developed, with focus on some frequent or well understood examples of neoplastic transformation. Toxic factors and drugs : oncogenic effects of tobacco, alcohol, asbest fibres, aristolochic acid, endocrine agents and some chemical products will be presented among others. Food link to cancer : the course will envisage cancer induced by some nutriments, cooking or storing methods, relationship between food culture and types of cancer, and the possible role of gut microbiota on cancer. Viruses and other germs : cancer secondary to infection by Papovaviruses and Herpes viruses will be extensively developed. Cancers linked to hepatitis virus and Helicobacter pylori will be briefly presented.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 The student should understand how foreign factors may alter the mechanisms regulating cell proliferation and differentiation and induce neoplastic transformation.
Evaluation methods	Individual written examination with open questions on each general topic of the course.
Teaching methods	Lecture
Content	The course comprises 8 lectures with slides available before each presentation: An intoductory lecture, two lectures on toxic factors, two on the link between food and cancer, two on the role of micro-organisms in the genesis of some cancers, and one on age and pre-malignant conditions as a cancer risk factor.
Bibliography	A copy of the slides presented during the lectures are 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	2		🔍
Master [60] in Biomedicine	SBIM2M1	2		🔍