

Course: Oncology and Pathology

credits: 5

Course code BOVH26MDPATHONC
Name Oncology and Pathology
Study year 2026-2027
ECTS credits 5
Language Dutch, with parts in English
Coordinator A. de Haan

Modes of delivery Assignment
 Guest lecture
 Lecture
 Tutorial

Assessments Portfolio Oncology and Pathology - Other assessment
 Theory Oncology and Pathology - Computer, organised by STAD examinations

Learning outcomes

This module has the following learning outcomes:

- You will describe the cell cycle and its regulation in eukaryotes, and predict the consequences of changes in (the regulation of) the cell cycle for the cell, the tissue and the organism as a whole.
- You will recognise different types of DNA alterations, identify their possible causes and speculate on their potential effects at the protein and cellular levels.
- You will study the pathology of tumour tissue in depth; you will be familiar with various biological markers and be able to apply them to determine the presence of tumour cells; and you will understand the operation and function of various (radiological) techniques.
- You apply your knowledge of the anatomy and physiology of the cardiovascular and respiratory systems, the kidneys, the liver, the gut and the endocrine pancreas to explain the health effects that occur in the pathology of these (organ) systems.
- You use your biological knowledge to explain different forms of cancer and pathological conditions, and you speculate on potential targets for treatment.
- You explore a topic relevant to oncology and pathology in depth and present both in a relevant manner to an audience of your peers.

Content

This module covers various aspects of oncology and pathology, building on the Pathology and Cytology module from Year 2. It briefly covers the causes, pathology, analytical techniques used and possible treatments for tumours. Furthermore, this module also discusses (examples of) the pathology of various organ systems. Using various medical case studies ('patients'), the anatomy and (dys)function of the cardiovascular system, the respiratory system, the liver, the kidneys and the endocrine pancreas are covered.

This module comprises lectures and seminars. During these sessions, you will work through the theory yourself, which will be assessed individually. In addition, each student, working in pairs, will deliver a short theoretical lecture on an oncological topic relevant to this module. You will also work on a case study (a pathological condition) in pairs to apply the theory directly. This module ties in with the topics of the Year 3 projects, in which the theory covered in this module can be used to understand the biological background of the projects.

Included in programme(s)

Major Medical Diagnostics

School(s)

Engineering, Life Sciences & ICT