



DEPARTMENT OF ONCOLOGY-PATHOLOGY

K7F3110 Tumor Immunology and Immune Therapy of Cancer, 1.5 credits (hec)

Tumörimmunologi och immunterapi av cancer, 1,5 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus is approved by the The Committee for Doctoral Education on 2023-11-27, and is valid from Spring semester 2024.

Responsible department

Department of Oncology-Pathology, Faculty of Medicine

Prerequisite courses, or equivalent

No prerequisite courses, or equivalent, demanded for this course.

Purpose & Intended learning outcomes

Purpose

The purpose of the course is to deepen the knowledge in the field of tumor immunology. More specifically, to understand how the immune system is regulated in cancer and how this knowledge can be used to treat patients with cancer.

Intended learning outcomes

Upon completion of the course the students will be able to; (1) explain central concepts of tumor immunology, (2) discuss specific forms of immunotherapy including cellular therapy, cancer vaccination, and immune checkpoint inhibition and 3) explain advantages and disadvantages of such therapies, (4) describe different mechanisms of immune escape and 5) how the tumor microenvironment impacts on anti-tumor immune responses, and 6) discuss the rationale how different immunotherapies can be combined with conventional cancer therapies and how such therapies impacts on clinical outcome in patients with cancer.

Course content

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This course covers basic and applied immunology and a current review of experimental research and clinical application of tumor immunology. Both pre-clinical and clinical aspects of cancer vaccination, adoptive cell therapy, and antibody therapy will be discussed. Development of novel therapies through modification of immune cell subsets will be presented. Features of the tumor microenvironment, cancer-associated inflammation, immune surveillance and escape, and immunosuppression will also be discussed. One day is dedicated to lectures by invited international experts in the field.

Forms of teaching and learning

Introductory lectures on immunology and tumor immunology. Specific lectures on different forms of immunotherapy including cellular therapy, cancer vaccination, and immune checkpoint inhibition. Approximately ten lectures in total. Reading and group discussions on contemporary literature. Group discussions and presentation on a selected topic. Class room discussions and summary of each day.

Language of instruction

The course is given in English.

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

All lectures and teaching activities are mandatory. Absence from mandatory parts of the course will have to be compensated by other relevant activities after discussion with the course leaders.

Forms of assessment

Oral group presentation and individual assignment based on case-studies and a written examination. Each student will be individually assessed.

Course literature

Recommended course literature will be provided prior to course start.