MEDI 419: Cancer Immunotherapy

Over the past decade, new therapies have led to the successful application of basic immunologic principles to treat human malignancies. The development of adoptive T cell transfer and the use of monoclonal antibodies to turn on an inhibited or 'exhausted' immune system are the type of radical innovations that are generating a remarkable series of clinical results.New concepts are emerging to explain how even large tumors can be eliminated or controlled for long periods of time. The course will discuss the successes of the newly emerging era of the immunotherapy of cancer. The course will emphasize the remarkable accomplishments of the past five years in molecular and immune biology as well as provide a detailed review of emerging therapies using adoptive T cell transfer and immune check point inhibitors, prospects for new agents, and the application of biomarkers and bioinformatics in this rapidly developing field. Throughout, the course aims to provide an underlying framework for how the human immune system functions in infectious diseases, tumor immunity, and in immune-mediated adverse events.

Learning Objectives

- Gain an understanding of the rapidly emerging results in basic and clinical studies using innovative therapies for human malignancies
- Develop theoretical and practical framework for studying the human immunology of infectious disease, malignancy, and autoimmunity
- Understand the nature of 'final common pathway' of successful T cell-mediated immunotherapy

Credits: 2
Class Type: Graduate Course
Prerequisites:
Familiarity with basic immunology is strictly required; prior college-level coursework in immunology is highly encouraged.
Program: Biology, Genetics, and Medicine
Availability Spring 2022