HMX Pro Immunology - Immuno-oncology

Advances in our knowledge of the immune system are changing the ways in which we treat various types of cancer. Understanding how immune cells recognize and kill cancer cells, and what we can do to enhance their ability to fight cancer, is important for anyone working to develop new cancer treatments or apply them in the clinic.

This course offers a unique way for professionals to learn about cutting-edge cancer immunotherapies from leading Harvard Medical School faculty. Participants will:

- Understand the basics of tumor immunology
- Get an inside look at novel immunotherapies including checkpoint blockade and CAR T cell therapy
- See how advanced knowledge of the immune system is impacting patient care

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Topics Covered

Overview of Immuno-oncology
- What is Cancer?
- The Promise of Immuno-oncology

Basic Tumor Immunology
- The Biology of Cancer
- Immune Recognition
- Induction of the Immune Response: CD8+ T Cells
- Induction of the Immune Response: CD4+ T Cells
- Immune Response of NK Cells
- Immune Evasion: T Cells
- Immune Evasion: Other Cells
- Clinical Linkage: Tumor Immunology

Checkpoint Blockade
- Mechanisms of Checkpoint Blockade
- Response of Different Tumor Types
- Complications of Checkpoint Blockade
- Clinical Linkage: Checkpoint Blockade Therapy in Melanoma

CAR T and Other Novel Therapies
- Basics of Chimeric Antigen Receptor (CAR) T Cells
- Complications of CAR T Cell Therapy
- Bispecific T Cell Engagers (BiTEs)
- Tumor Vaccines
- Oncolytic Viruses
- Advances in Checkpoint Blockade Therapy
- Novel CAR Cells

- Combination Treatments
- Other Therapies
- Clinical Linkage: CAR T Cell Therapy

Wrap-up
- The Future of Immuno-oncology

The HMX Pro Series offers a new online learning experience designed to get busy professionals up to speed on the latest advances in medicine. Concepts are taught using whiteboard-style videos and animations and reinforced by interactive elements, true-to-life scenarios, and real patient cases to enhance learning.