

ONCOLOGY

Elective Opportunities

Seminar Course: Biology of Cancer

This is an advanced graduate seminar course that is held biannually (alternating with New Approaches to Cancer Prevention and Therapy) in the Spring Semester. Selected timely topics are considered in some detail by world-famous experts, both local and international, using a combination of in-person and zoom-based seminars. Emphasis is placed on the fundamental processes underlying oncogenesis, and factors affecting the progression of various neoplastic diseases. Through this course, students will develop a basic foundation that enables them to explore various aspects of oncology including epidemiology, carcinogenesis, environmental issues, the biological behavior of the neoplastic cell, and the rationale for using different treatment modalities.

Seminar Course: New Approaches to Cancer Prevention and Therapy

This is an advanced graduate seminar course that is held biannually (alternating with Biology of Cancer) in the Spring Semester. It covers selective timely topics related to the novel diagnostic and treatment techniques being developed for the management of neoplastic diseases.

Emphasis is placed on illuminating the chemical and biological basis of therapy and its translational impact on clinical practice.

Fundamentals of Cancer: Cause to Cure

This is a basic graduate-level lecture course that is held in the late summer/fall every other year. The course aims to provide a broad perspective on basic science and its impact on important clinical issues, with a focus on bridging the gap between the laboratory and the clinic. The course is highly translational, targeting clinically-oriented students such as residents and fellows, as well as laboratory-oriented students such as graduate students and postdoctoral fellows. The topics covered in the course include the fundamental molecular biology of cancer, the processes and pathophysiology of transformation and metastasis, and how new scientific knowledge leads to the emergence of targeted screening strategies and therapies for treatment and prevention.

Introduction to Cancer Research

Research experiences are offered on a space-available basis to U.S. and international medical students who meet the appropriate qualifications and submit their application materials to the Registrar's Office. Please note that positions are based on limited availability and are not guaranteed. Interested and qualified students are encouraged to collaborate with staff members on clinical and laboratory research projects. The program also includes research seminars and related teaching sessions. Staff members will conduct interviews with students to develop a mutually agreed-upon plan of study and research. Visiting students are advised not to contact the department directly, as the application process must be coordinated through the Registrar's Office. The program is offered throughout the year, with a minimum duration of four weeks for Johns Hopkins students and nine weeks for visiting students.

Clinical Clerkship in Bone Marrow Transplantation

The principles and practices of bone marrow transplantation (BMT) will be stressed. Students will work in the inpatient BMT Unit of the Oncology Center and participate in the daily activities of the service including rounds, lectures, seminars, and informal discussions. Under supervision,

the student will follow the clinical course of selected inpatients including follow-up marrow graft recipients in the BMT Outpatient Clinic. The student will have the opportunity to become acquainted with the allied disciplines and procedures that relate to clinical BMT, including histocompatibility testing, marrow collection ("harvesting"), and ex vivo marrow processing. A syllabus of pertinent literature will be provided. The student will also be encouraged to conduct and present a BMT-related research/literature review project. Availability/Duration: All year; ½ quarter; visiting medical students must follow JHUSOM quarter dates Prerequisite(s): Core Clerkship in Medicine or Pediatrics

Advanced Clinical Clerkship in Oncology

This elective will acquaint students with the principles and practice of oncology. Each student will serve as an advanced clinical clerk on one of three inpatient units. The student is expected to attend the weekly outpatient clinics, daily rounds with the attending physician as well as two weekly conferences: Oncology Grand Rounds and the Translational Research Conference. Other disease-oriented conferences should be attended as appropriate. Appropriate readings are recommended. Availability/Duration: All year; ½ quarter; visiting medical students must follow JHUSOM quarter dates Prerequisite(s): Core Clerkship in Medicine

Advanced Clerkship in Pediatric Oncology

Students will have the opportunity to help care for children with cancer on the inpatient Pediatric General Oncology Service. The patient population includes children with newly diagnosed cancers and those requiring admission related to complications of treatment. Students will be assigned patients to primarily follow along with resident supervision and will become integral members of the inpatient medical team. Additionally, each student will have an outpatient oncology clinic once per week. Core lectures occur at least twice a week. Students also attend weekly conferences including fellows' educational sessions and tumor boards. Availability/Duration: All year; 4 weeks; visiting medical students must follow JHUSOM quarter dates Prerequisite(s): Core Clerkship in Pediatrics and Internal Medicine.

Advanced Clerkship in Pediatric Bone Marrow Transplant and Cellular Therapy

Students will have the opportunity to help care for children with malignant and non-malignant conditions who are undergoing workup before a bone marrow transplant, are admitted for a bone marrow transplant, and are admitted for complications following a bone marrow transplant. Additionally, they will also care for patients receiving cellular therapy, such as chimeric antigen receptor T cell therapy (CAR-T). Students will be assigned patients to primarily follow along with fellow supervision and will become integral members of the inpatient medical team. Additionally, each student will have an outpatient BMT clinic once per week. Core lectures occur at least twice a week. Students also attend weekly conferences including fellows' educational sessions and tumor boards. Availability/Duration: All year; 4 weeks; visiting medical students must follow JHUSOM quarter dates Prerequisite(s): Core Clerkship in Pediatrics and Internal Medicine.

Advanced Laboratory Research

Advanced research under the supervision of an Oncology faculty member. Research fellowships in basic and translational laboratory research on clinically relevant questions are available to students preparing themselves for careers in teaching and research. Availability/Duration: All four quarters; 1 year. Positions are based on limited availability and are not guaranteed. Prerequisite(s): Completion of years one and two

Clinical Clerkship in Medical Oncology at Johns Hopkins Bayview Medical Center

This clinical experience in medical oncology exposes trainees to the multi-disciplinary practice of medical oncology. A special feature of the clerkship is the weekly Thoracic Multidisciplinary Clinic with medical, radiation, and surgical oncologists. Availability/Duration: All year; 2-4 weeks; visiting medical students must follow JHUSOM quarter dates
Prerequisite(s): There are no absolute prerequisites but completion of a Core Clerkship in Medicine will help the student fully participate in the elective.