Cancer Concepts

Course Co-Leaders: James Liebmann, MD and Rick Pieters, MD

Foundations of Medicine I: Spring Semester, 20 hours (excluding student and course assessment time)

A Note from Course Leadership:
This course will be entirely case based, so that the clinical relevance of each bit of information presented will be immediately apparent, but a very limited number of cases will be used to keep the focus on the basic science. The precept concept will require students to do reading before each session, and then be prepared to discuss. Recall of learned information is known to be better when it is learned in the same context in which it must be recalled. This structure is the way we wish we had been taught introduction to oncology.

Course Overview:
This course will cover the basic pathophysiology of malignancy, with each concept introduced by or tied back to one or more specific clinical cases. The course will utilize a combination of lectures and small group – either precepts, in which students discuss assigned reading with the assistance of a faculty preceptor, or virtual laboratories, in which students will use computer images of the pathology and the 3-dimensional anatomy of malignancy to understand the process at the cellular, tissue, organ and organism levels. In addition, introductions will be provided to the 3 clinical disciplines of oncology and to the epidemiology and societal implications of cancer.

Scope of Content:
This course will cover basic concepts including but not limited to carcinogenesis, tumor cell biology, angiogenesis, tissue invasion and metastasis. However, material will be presented in the context of clinical medicine. The curriculum will be based on five cancer cases. Basic principles of oncology highlighted by each case will be reviewed.

Connections to Other Courses:
The course will be built on the foundation of the Building Cells and Working Tissues course for the molecular and cellular basis of malignancy, Genetics and Population Health for genetic basis of cancer and epidemiologic approaches to malignancy, and the Structure and Function course (with which it will overlap in time) for the organ and organism effects of malignancy. Cancer Concepts will tie to the organ specific blocks which follow this course with the presentation of some of the cancers specific to each organ system within those blocks.

Educational Methodologies:
Lectures, Precepts, Case-Based Teaching; Precepts, 3-D Anatomy Lab, Virtual Lab.
The case-based teaching will include a case of pediatric cancer. The fact that most adult cancers are seen in older individuals will be emphasized. Review of cancer prevention and screening will include an overview of differences in care based on cultural and ethnic factors. Classes will be divided between lectures involving all students and small groups (precepts) with 10-25 students per group. It is our preference that precept groups be limited to 10-12 students.

Student Assessment: Methods Planned:
Preceptors will provide written evaluations of their students. Criteria to assess include attendance, participation in and preparation for precepts, and presentations at precepts. A two hour test using Medical Boards format will conclude the class and will be worth 50% of the grade. The Preceptor evaluation will cover the remaining 50% of the grade.