

Summer Institute of Advanced Epidemiology and Preventive Medicine **Summer 2014**

Cancer Epidemiology* - Course Syllabus

Course number: 0158.1155

2 Academic Credits

June 29th – July 3rd 2014, 08:30-13:00

Room 215, Sackler Medical Faculty Building, Tel Aviv University

*** Conducted in collaboration with the Stanley Steyer Institute
for Cancer Epidemiology and Research**

Course Instructors

Prof. Siegal Sadetzki

Professor of Epidemiology and
Preventive Medicine
Tel Aviv University

Prof. Michael Goodman

Associate Professor of Epidemiology
Emory University

Guest Lecturers

Prof. Daniel Cohen, Tel Aviv University

Dr. Lital Keinan-Boker, University of Haifa

Prof. Liat Lerner-Geva, Tel Aviv University

Course Assistant: Ms. Yael Barer – barer.yael@gmail.com

I. Course Description:

The aim of this course is to present an integrated overview of the current concepts and issues central to the discipline of cancer epidemiology. Emphasis will be placed on a global perspective of cancer epidemiology, while integrating knowledge across cancer sites, various risk factors and prevention.

This course assumes that students have a basic understanding of epidemiology and key exposures, including smoking, nutrition, and hormones. Descriptive and analytical epidemiology will be covered and methods such as cancer screening, survival curves, use of cancer registries etc. will be discussed. The course will provide an in depth understanding of the most common cancer sites (breast, colon, prostate and lung) as well as cancers that carry medium risks and rare diseases (ovarian, brain and cervical cancer). The course will present an overview of the mechanisms for cancer initiation and progression and will address possible risk factors for cancer development (including life style, environmental and host dependent variables). A basic presentation of the role of genetic components in cancer and its development will be given. Additionally, we will discuss issues related to primary and secondary prevention of cancer.

II. **Course location and schedule:** All classes will take place at the [Sackler Medical Faculty building](#) - room 215.

	Sunday June 29, 2014	Monday June 30, 2014	Tuesday July 1, 2014	Wednesday July 2, 2014	Thursday July 3, 2014
8:30-10:00	Introduction to Cancer Epidemiology - definitions, sources of data, principles of cancer surveillance in US & worldwide (Prof. S. Sadetzki and M. Goodman)	Primary Prevention of cancer - examples of nutrition, physical activity &, obesity (Prof. M. Goodman)	Ionizing Radiation & Brain Tumors - establishment of causality & the use of cohort design for the study of rare diseases (Prof. S. Sadetzki)	Cancer Prevention Trials: Past & Future – antioxidants and vitamin D (Prof. M. Goodman)	Interaction between Genetics and Environment and the Development of Cancer (Prof. S. Sadetzki)
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	Descriptive Epidemiology of Cancer in Israel - the Israeli cancer registry, trends in morbidity and mortality (Dr. L. Keinan-Boker)	Selected Research Issues in Prostate Cancer Epidemiology (Prof. M. Goodman)	Non Ionizing Radiation & Cancer Risk - the challenge of investigating new risk factors, assessment of environmental exposures & interpretation of inconclusive results (Prof. S. Sadetzki)	Secondary Prevention of Cancer - example of screening for breast cancer (Prof. S. Sadetzki)	Cancer Survivorship & Outcomes (Prof. M. Goodman)
12:00-12:15	Break	Break	Break	Break	Break
12:15-13:00	Selected Research Issues in Lung Cancer Epidemiology (Prof. M. Goodman)	Traditional & Molecular Studies of Cancer Etiology — example of colon cancer (Prof. M. Goodman)	From Scientific Data to Public Health Implications – the use of ionizing radiation in diagnostic procedures and primary prevention of cancer (Prof. S. Sadetzki)	The Possible Association between Fertility and Cancer (Prof. L. Lerner-Geva)	Infectious Diseases & Cancer (Prof. D. Cohen)

III. Course required prerequisites:

- Basic course in Epidemiology
- Basic course in Biostatistics

IV. Final exam

Course participants, who wish to receive academic credits for the course, must pass the final exam with a grade of at least 60 (D-).

Participants who will chose not take the exam or will receive grade below 60 (F) - will receive a participation diploma only.

**The final exam will take place on Friday, July 4th, at 09:00-11:00, room 215.
An additional date for the exam will be scheduled if required.**