

CHL5409H: CANCER EPIDEMIOLOGY – FALL 2025

Course Directors:

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Time: Thursdays 1:00 p.m. - 4:00 p.m.

Location: Room MY317, Myhal Centre for Engineering Innovation and Entrepreneurship
55 St. George Street, University of Toronto

Course Description:

This is a seminar course for Masters and Doctoral students with a focused interest or thesis topic in cancer epidemiology.

Course objectives: At the end of the course, the students are expected to:

1. Acquire an understanding of current issues and directions in cancer epidemiology including surveillance, prevention, cancer control and a wide range of research topics,
2. Obtain basic knowledge related to risk factors for cancer,
3. Be able to identify and obtain data on cancer burden and derive basic cancer statistics globally and in Canada,
4. Be able to critically assess a given topic related to cancer epidemiology,
5. Be able to identify a research gap in cancer epidemiology either in prevention or control.

Pre/Co-Requisites: CHL5201, CHL5202, CHL5401, CHL5402 (or equivalent knowledge of epidemiologic and biostatistical methods); or upon permission of the instructors.

Useful textbook(s):

Michael J. Thun, Martha S. Linet, James R. Cerhan, Christopher A. Haiman, David Schottenfeld. Cancer Epidemiology and Prevention, Fourth Edition, Oxford University Press, New York 2018

Hans-Olov Adami, David Hunter, Pagona Lagiou and Lorelei Mucci. Textbook of Cancer Epidemiology Third Edition, Oxford University Press, New York 2018.

Evaluation:

(a) The mid-term assignment is a **brief report on cancer statistics** of a given cancer site globally and in Canada, including figures derived from the on-line analyses and result interpretations. The report is due on October 15 at 12 noon.

The report includes the following components, and should be no more than 5 pages.

1. A text paragraph (~0.5 page single space) to synthesize the main patterns and key observation
2. Figures: Global geographical variation of incidence and mortality
3. Figures: Time trend for incidence and mortality based on global and Canadian statistics
4. Figures: Incidence by age group based on Canadian statistics

(b) The final assignment is a term paper and presentation of a specific risk/prognostic factor-cancer relation, focused on **gaps identified in this topic**. Each student should submit their topic of the term paper before 12 noon on October 30, and the term paper is due by 12 noon on December 8.

Each student should choose a specific risk/prognostic factor-cancer relation as their focused topic, and identify the gaps in this topic with respect to research, prevention or control. The objective is to acquire a broad understanding and critical thinking of the key descriptive, analytic and interventional epidemiology of the chosen topic. The paper should not cover material that is already covered in depth in the lectures. The term paper should be approximately 5 pages (single-spaced) in length and cover the following:

1. Brief description of the burden, including incidence/prevalence of the cancer, and background of the specific risk/prognostic factor,
2. Brief overview of what we know about this risk/prognostic factor-cancer relationship,
3. Identify the gaps of knowledge, and justification of why this is an important gap,
4. Outline the steps to fill this gap in knowledge, in research, prevention or control.

(c) Active participation in in-class activities is expected and will be evaluated. Students are expected to prepare for classes when necessary and to participate in discussion during the classes.

Mid-Term assignment:	30%
Final term paper:	40%
Presentations:	10%
Participation and engagement:	20%

#	Date	Topic	Instructors/Guest Speakers
1	September 11	Introduction and Overview of Cancer Epidemiology	Dr. Rayjean Hung <i>Head, Prosserman Centre for Population Health Research; Associate Director of Population Health, Lunenfeld-Tanenbaum Research Institute, Sinai Health; Professor, Dalla Lana School of Public Health, University of Toronto</i> Dr. Vasily Giannakeas <i>Scientist, Women's College Hospital Research and Innovation Institute, Women's College Hospital; Assistant Professor, Dalla Lana School of Public Health, University of Toronto</i>
2	September 18	Pathology of Cancer	Dr. Susan Done <i>Pathologist and Associate Professor, Faculty of Medicine, University of Toronto; Princess Margaret Cancer Centre, University Health Network</i>
		Global Cancer Observatory (GCO)	Dr. Rayjean Hung
3	September 25	Cancer Prevention and Screening	Dr. Meghan J. Walker <i>Director, Quality Management, Cancer Screening, Ontario Health; Assistant Professor, Dalla Lana School of Public Health, University of Toronto</i>
4	October 2	Infection and Cancer	Dr. Ann Burchell <i>Scientist, Li Ka Shing Knowledge Institute, St Michael's Hospital; Research Director, Department of Family and Community Medicine, University of Toronto; Associate Professor, Department of Family and Community Medicine & Dalla Lana School of Public Health, University of Toronto; Canada Research Chair in Sexually Transmitted Infection Prevention</i>
5	October 9	Hormones and Cancer	Dr. Julia Knight <i>Senior Investigator, Lunenfeld-Tanenbaum Research Institute, Sinai Health; Professor, Dalla Lana School of Public Health, University of Toronto</i>
	October 16	DLSPH Reading Week	
6	October 23	Population Health Data for Cancer Research	Dr. Vasily Giannakeas <i>Scientist, Women's College Hospital Research and Innovation Institute, Women's College Hospital; Assistant Professor, Dalla Lana School of Public Health, University of Toronto</i>
7	October 30	Biomarkers and Cancer	Dr. Rayjean Hung <i>Head, Prosserman Centre for Population Health Research; Associate Director of Population Health, Lunenfeld-Tanenbaum Research Institute, Sinai Health; Professor, Dalla Lana School of Public Health, University of Toronto</i>
8	November 6	Cancer in First Nations, Inuit, Métis and Urban Indigenous Populations	Dr. Amanda Sheppard <i>Senior Scientist, Indigenous Cancer Care Unit, Ontario Health; Assistant Professor, Dalla Lana School of Public Health, University of Toronto</i>
9	November 13	Hereditary Cancer	Dr. Joanne Kotsopoulos <i>Scientist, Women's College Research Institute, Women's College Hospital; Associate Professor, Dalla Lana School of Public Health, University of Toronto; Canada Research Chair in Hereditary Breast and Ovarian Cancer Prevention</i>
10	November 20	Environment and Cancer	Dr. Todd Norwood <i>Scientist, Surveillance Research, Acute and Hospital-Based Care, Ontario Health; Assistant Professor, Dalla Lana School of Public Health, University of Toronto</i>
11	November 27	Cancer Survivorship	Dr. Shana Kim <i>Senior Research Associate, Evaluation, Cancer Screening, Ontario Health</i>
12	December 4	Student presentations of final term papers	

University of Toronto Policy for All Courses

1. Academic Integrity:

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences: (http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppju_n011995.pdf)

University of Toronto's policy regarding plagiarism:

<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>

Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

- Using or possessing unauthorized aids.
- Looking at someone else's answers during an exam or test.
- Misrepresenting your identity.

2. Use of Generative AI

Students may use artificial intelligence tools for editing an assignment for purposes of revision, but the first draft must be original work produced by the individual student alone. New ideas introduced by the AI during the critique or editing process must be appropriately cited as generated by the AI tool.

3. Turnitin.com: [Turnitin.com](https://www.turnitin.com) is a tool that will assist in detecting textual similarities between compared works. Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

4. Accessibility and Accommodation:

The University provides academic accommodations for students with disabilities in accordance with the terms of the Ontario Human Rights Code. This occurs through a collaborative process that acknowledges a collective obligation to develop an accessible learning environment that both meets the needs of students and preserves the essential academic requirements of the University's courses and programs. For more information, or to register with Accessibility Services, please visit:

<http://studentlife.utoronto.ca/as>

5. Acknowledgment of Territory

We would like to acknowledge the traditional territories of the Mississauga of the New Credit First Nation, Anishnawbe, Wendat, Huron, and Haudenosaunee Indigenous Peoples on which the Dalla Lana School of Public Health now stands. The territory was the subject of the Dish With One Spoon Wampum Belt Covenant, an agreement between the Iroquois Confederacy and Confederacy of the Ojibwe and allied nations to peaceably share and care for the resources around the Great Lakes. We would also like to pay our respects to all our ancestors and to our present Elders.