



McGill

Department of  
Epidemiology, Biostatistics  
and Occupational Health



**EPIDEMIOLOGY SEMINAR SERIES**  
**Winter 2017**

**\*\*THE DEPARTMENT OF EPIDEMIOLOGY, BIostatISTICS AND OCCUPATIONAL HEALTH, - SEMINAR SERIES IS A SELF-APPROVED GROUP LEARNING ACTIVITY (SECTION 1) AS DEFINED BY THE MAINTENANCE OF CERTIFICATION PROGRAM OF THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA\*\***

**Jennifer L. Lund, PhD**

Assistant Professor, Department of Epidemiology – University of North Carolina at Chapel Hill, NC

***Alternative approaches for evaluating the comparative effectiveness of cancer therapies using real world data***

**Monday, 16 January 2017**  
**4:00 pm - 5:00 pm – McIntyre Medical Building**  
**3655 promenade Sir William Osler – Meakins – Rm 521**

**ALL ARE WELCOME**

**SYNOPSIS:** Well-designed randomized controlled trials (RCTs) represent the gold standard for establishing the efficacy of new cancer therapies because they can generate internally valid results. However, barriers to trial enrollment can lead to underrepresentation of particular patient subgroups (e.g., older adults, women, racial/ethnic minorities) and limit the external validity of trial findings. In contrast, observational data sources and epidemiologic methods can be used to estimate the effectiveness of cancer treatments in more generalizable populations treated in routine care settings. Yet, these studies are subject to unmeasured confounding by indication and frailty, which may ultimately threaten internal validity. This talk will provide an overview of various epidemiologic approaches employed to assess cancer therapy effectiveness in real world populations and highlight a novel, hybrid approach that draws upon both RCT and observational data sources. As a motivating clinical example, the talk will focus on evaluating the comparative effectiveness of alternative adjuvant chemotherapies for the treatment of stage III colon cancer.

**OBJECTIVES:** At the end of this seminar, participants will be able to:

- 1) define internal and external validity and discuss the relevance of these concepts to the interpretation of findings from RCTs and observational studies of cancer therapies
- 2) describe the strengths and limitations of alternative epidemiologic approaches for evaluating the comparative effectiveness of cancer therapies using observational data sources
- 3) explain at a conceptual level how RCT and observational data can be combined to effectively transport RCTs findings to target populations of patients in routine care

**BIO:** Jennifer Lund, PhD is a pharmacoepidemiologist with expertise in health services and comparative effectiveness research. Her portfolio of work addresses a range of medication-related issues faced by older adults, with a specific focus in cancer populations. The overall objective of her research is to generate robust evidence regarding the uses, benefits, and harms of medical interventions that will lead to improved medical decisions, clinical outcomes, and quality of life for older adults diagnosed with cancer. To address these objectives, her work draws upon administrative and linked healthcare databases, advanced epidemiologic methods, and multidisciplinary collaboration with experts in geriatrics, oncology, and clinical pharmacy. Dr. Lund received her graduate education in epidemiology from the University of North Carolina at Chapel Hill (UNC) (MSPH, 2009; PhD, 2011). After graduation, she completed two years of post-doctoral training within the Department of Clinical Epidemiology at Aarhus University in Denmark before returning to UNC to join the faculty as an assistant professor in the Department of Epidemiology in October 2013.

[http://sph.unc.edu/adv\\_profile/jennifer-lund-phd-msph/](http://sph.unc.edu/adv_profile/jennifer-lund-phd-msph/)

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