OMB No. 0925-0001 and 0925-0002 (Rev. 09/17 Approved Through 03/31/2020)

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Lund, Jennifer L.

eRA COMMONS USER NAME (credential, e.g., agency login): JENLUND

POSITION TITLE: Associate Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

| INSTITUTION AND LOCATION | DEGREE*(if applicable)* | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| Tufts University, Medford, MA | B.A. | 05/2003 | Economics and International Relations |
| University of North Carolina at Chapel Hill, Chapel Hill, NC | M.S.P.H. | 12/2009 | Epidemiology |
| University of North Carolina at Chapel Hill, Chapel Hill, NC | Ph.D. | 12/2011 | Epidemiology |
| Aarhus University (Denmark), Aarhus | Postdoctoral | 09/2013 | Clinical Epidemiology |
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### A. Personal Statement

I am an Associate Professor in the Department of Epidemiology at the University of North Carolina at Chapel Hill. I conduct pharmacoepidemiologic and comparative effectiveness research with a focus in aging populations and individuals diagnosed with cancer. The overall objective of my work is to generate robust evidence on the uses, benefits, and harms of therapies that will improve decisions made by policymakers, payers, providers, and ultimately patients. My research draws upon large healthcare databases and advanced epidemiologic methods to evaluate: (1) the delivery of high-quality care and (2) the effectiveness and safety of alternative treatment options.

1. Lund JL,Meyer AM, Deal AM, Choi BJ, Chang Y, Williams GR, Pergolotti M, Guerard EJ, Muss HB, Sanoff HK. Data Linkage to Improve Geriatric Oncology Research: A Feasibility Study. The Oncologist. 2017; 22(8):1002-1005. PMID: 28408619, PMCID: PMC5553948.
2. Sanoff HK, Chang Y, Reimers M, Lund JL. Hospice Utilization and Its Effect on Acute Care Needs at the End of Life in Medicare Beneficiaries with Hepatocellular Carcinoma. Journal of Oncology Practice. 2017 Mar; 13(3):e197-e206. PMID: 28029300, PMCID: PMC5946704.
3. Guerard EJ, Deal AM, Chang YK, Williams GR, Nyrop KA, Pergolotti M, Muss HB, Sanoff HK, Lund JL. Frailty Index Developed from a Cancer-Specific Geriatric Assessment and the Association with Mortality among Older Adults with Cancer. Journal of the National Comprehensive Cancer Network. 2017 Jul; 15(7):894-902. PMID: 28687577.
4. Lund JL, Stürmer T, Sanoff HK. Comparative effectiveness of postoperative chemotherapy among older non-metastatic rectal cancer patients treated with preoperative chemoradiotherapy. Journal of Geriatric Oncology. 2016 May; 7(3):176-86. PMID: 26926829, PMCID: [PMC4871747](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4871747/).

### B. Positions and Honors

Positions and Employment

|  |  |
| --- | --- |
| 2003 - 2004 | Associate Analyst, Healthcare Antitrust Practice, National Economic Research Associates, White Plains, NY |
| 2005 - 2007 | Senior Consultant, International Transfer Pricing Economics, Ernst & Young LLP, New York, NY |
| 2007 - 2009 | Research Assistant, Department of Epidemiology, UNC-Chapel Hill, Chapel Hill, NC |
| 2008 - 2008 | Summer Fellow, National Cancer Institute, Applied Research Program, Rockville, MD |
| 2009 - 2011 | Research Assistant, Worldwide Epidemiology, GlaxoSmithKline, Research Triangle Park, NC |
| 2009 - 2011 | Pre-Doctoral Trainee, School of Medicine, Division of Gastroenterology and Hepatology, UNC-Chapel Hill, Chapel Hill, NC |
| 2010 - 2012 | Teaching Assistant, Department of Epidemiology, UNC-Chapel Hill, Chapel Hill, NC |
| 2012 - 2013 | Consultant, New England Research Institute, Watertown, MA |
| 2012 - 2013 | Consultant, GlaxoSmithKline, Research Triangle Park, NC |
| 2012 - 2013 | Post-Doctoral Fellow, Department of Clinical Epidemiology, Aarhus University, Aarhus |
| 2013 - 2019 | Assistant Professor, Department of Epidemiology, UNC-Chapel Hill, Chapel Hill, NC |
| 2019 - | Associate Professor, Department of Epidemiology, UNC-Chapel Hill, Chapel Hill, NC |

Other Experience and Professional Memberships

|  |  |
| --- | --- |
| 2009 -  | Member, Society of Epidemiological Research (SER) |
| 2009 -  | Member, International Society of Pharmacoepidemiology (ISPE) |
| 2011 -  | Member, American Society of Clinical Oncology (ASCO) |
| 2015 -  | Member, International Society of Geriatric Oncology |
| 2015 - | Member, Cancer and Aging Research Group |
| 2018 - | Editorial Board Member, *Journal of Geriatric Oncology* |
| 2019 -  | Associate Editor, *Pharmacoepidemiology and Drug Safety* |

Honors

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| --- | --- |
| 2003 | Graduated summa cum laude, Tufts University |
| 2003 | Audrey L. Hale Prize recipient, Tufts University |
| 2008 | Methodologies in Healthcare Outcomes in Gastroenterology Trainee Scholarship Recipient, Gastroenterology Research Group and the American Gastroenterological Association |
| 2010 | Scholarship Recipient, 26th Annual Meeting for the International Society for Pharmacoepidemiology |
| 2011 | Student Dissertation Workshop Participant, Society for Epidemiologic Research, 3rd Annual North American Congress of Epidemiology |
| 2011 | Student Travel Scholarship Award Recipient, Society for Epidemiologic Research, 3rd Annual North American Congress of Epidemiology |
| 2012 | Delta Omega Honor Society Member, Theta Chapter, UNC-Chapel Hill |
| 2013 | Abstract Achievement Award winner, American Society of Hematology |
| 2015 | Gordon H. DeFriese Career Development in Aging Research Award, UNC-Chapel Hill |

### C. Contribution to Science

1. Using the Geriatric Assessment (GA) to Understand Prognosis and Outcomes in Older Adults with Cancer. Aging is a heterogeneous process, and in turn, chronological age is often a poor proxy for physiologic and cognitive status. The GA, a multidimensional evaluation of comorbidity, functional status, cognitive status, psychological status, nutritional status, polypharmacy, and social support, can be used to identify age-related problems not typically uncovered using traditional clinical assessments. In oncology, the GA has been adapted for the busy clinic setting and is increasingly used for both research and clinical purposes. While the GA has been used to predict chemotherapy toxicity in older adults, further efforts to use the GA to understand prognosis and other clinical outcomes of interest are warranted. Efforts to increase data linkage and apply predictive analytics represent promising avenues for future research.
2. Lund JL,Meyer AM, Deal AM, Choi BJ, Chang Y, Williams GR, Pergolotti M, Guerard EJ, Muss HB, Sanoff HK. Data Linkage to Improve Geriatric Oncology Research: A Feasibility Study. The Oncologist. 2017; 22(8):1002-1005. PMID: 28408619, PMCID: PMC5553948.
3. Guerard EJ, Deal AM, Chang YK, Williams GR, Nyrop KA, Pergolotti M, Muss HB, Sanoff HK, Lund JL. Frailty Index Developed from a Cancer-Specific Geriatric Assessment and the Association with Mortality among Older Adults with Cancer. Journal of the National Comprehensive Cancer Network. 2017 Jul; 15(7):894-902. PMID: 28687577.
4. Nishijima TF, Deal AM, Lund JL, Nyrop KA, Muss HB, Sanoff HK. Inflammatory Markers and Overall Survival in Older Adults with Cancer. J Geriatric Oncology. 2018. PMID: 30131235.
5. Williams GR, Dunham L, Chang Y, Deal AM, Pergolotti M, Lund JL, Guerard E, Kenzik K, Muss HB, Sanoff HK. Geriatric Assessment Predicts Hospitalization Frequency and Long-Term Care Utilization in Older Adult Cancer Survivors. Journal of Oncology Practice 2019 May;15(5):e399-e409.
6. Assessing Patterns of Care among Cancer Patients Treated in Routine Practice Settings. Cancer-specific mortality for many different cancer types have steadily declined over the past decades in the United States, in part due to advances in prevention, screening, and treatment. However, the dissemination and uptake of new cancer therapies often varies according to patients’ age, race/ethnicity, socioeconomic status, and level of comorbidity, but also provider and practice type. The “appropriateness” of cancer treatment among older cancer patients is particularly complex due to the high prevalence of multimorbidity and competing health risks. As the population ages and new therapies are developed, uncertainties surrounding optimal treatment approaches, particularly for older cancer patients, will need to be addressed.
7. Sanoff HK, Chang Y, Reimers M, Lund JL. Hospice Utilization and Its Effect on Acute Care Needs at the End of Life in Medicare Beneficiaries With Hepatocellular Carcinoma. Journal of Oncology Practice. 2017 Mar; 13(3):e197-e206. PMID: 28029300, PMCID: PMC5946704.
8. Mohiuddin JJ, Deal AM, Carey LA, Lund JL, Baker BR, Zagar TM, Jones EL, Marks LB, Chen RC. Neoadjuvant Systemic Therapy Use for Younger Patients with Breast Cancer Treated in Different Types of Cancer Centers Across the United States. Journal of the American College of Surgeons. 2016 Nov; 223(5):717-728.e4. PMID: 27788894, PMCID: PMC6059614.
9. Murphy CC, Harlan LC, Lund JL, Lynch CF, Geiger AM. Patterns of Colorectal Cancer Care in the United States: 1990-2010. Journal of the National Cancer Institute. 2015 Oct; 107(10). PMID: [26206950](http://www.ncbi.nlm.nih.gov/pubmed/26206950/), PMCID: PMC4840367.
10. Lund JL, Stürmer T, Sanoff HK, Brookhart A, Sandler RS, Warren JL. Determinants of Adjuvant Oxaliplatin Receipt among Older Stage II and III Colorectal Cancer Patients. Cancer. 2013 Jun 1; 119(11):2038-47. PMID: [23512326](http://www.ncbi.nlm.nih.gov/pubmed/23512326/), PMCID: [PMC3663924](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3663924/).
11. Evaluating the Effectiveness and Safety of Cancer Treatments among Older Adults**.** As randomized controlled trials of cancer therapies tend to underrepresent older adults and those with multimorbidity, substantial uncertainties remain regarding the safety and effectiveness of these treatments in medically complex populations. My research seeks to evaluate the effectiveness and safety of cancer therapies among older adults treated in “real world” settings. Confounding is of particular concern in non-experimental comparative effectiveness studies of older adults diagnosed with cancer; however, bias can be (at least partially) mitigated through study design and analytic methods. The comparative effectiveness and safety of cancer therapies can vary across subgroups and highlighting these heterogeneous effects can lead to more personalized approaches for older adults.
12. Østgård LSG, Lund JL, Nørgaard JM, Nørgaard M, Medeiros BC, Nielsen B, Nielsen OJ, Overgaard UM, Kallenbach M, Marcher CW, Riis AH, Sengeløv H. Impact of Allogeneic Stem Cell Transplantation in First Complete Remission in Acute Myeloid Leukemia: A National Population-Based Cohort Study. Biology of Blood and Marrow Transplantation. 2018 Feb; 24(2):314-323. PMID: 29051022.
13. Sanoff HK, Chang Y, Stavas JM, Stürmer T, Lund JL. Effectiveness of Initial Transarterial Chemoembolization for Hepatocellular Carcinoma among Medicare Beneficiaries. J Natl Compr Canc Network. 2015; 13(9):1102-1110. PMID: 26358794, PMCID: PMC4861995.
14. Lund JL, Stürmer T, Sanoff HK. Comparative Effectiveness of Postoperative Chemotherapy among Older Non-metastatic Rectal Cancer Patients Treated with Preoperative Chemoradiotherapy. Journal of Geriatric Oncology. 2016 May; 7(3):176-86. PMID: 26926829, PMCID: [PMC4871747](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4871747/).
15. Lund JL, Østgård LS, Prandoni P, Sørensen HT, de Nully Brown P. Incidence, Determinants, and the Transient Impact of Cancer Treatments on Venous Thromboembolism Risk among Lymphoma Patients in Denmark. Thrombosis Research. 2015 Nov; 136(5):917-23. PMID: [26371409](http://www.ncbi.nlm.nih.gov/pubmed/26371409/).
16. Validation of Treatment and Health Status Using Administrative Claims and Registry Data. My research also assesses the validity of large administrative and registry data for identifying a variety of cancer treatments (e.g., surgery, radiation therapy, hormone therapy, and chemotherapy) and measures of health status (e.g., comorbidity and frailty) among older adults. In the era of “big data,” these resources (and others, including electronics medical records) are increasingly being used to evaluate the dissemination, benefits, and harms of cancer treatments in “real world” settings. However, misclassification of exposures and confounders could bias estimates of frequency and association, warranting continued monitoring and validation, particularly as new therapies are introduced to the market.
17. Mayer SE, Tan HJ, Peacock Hinton S, Sanoff HK, Stürmer T, Hester LL, Faurot KR, Jonsson Funk M, Lund JL. Comparison of Medicare Claims-based Proxy Measures of Poor Function and Associations With Treatment Receipt and Mortality in Older Colon Cancer Patients. Medical Care. 2019 Apr;57(4):286-294.
18. Cuthbertson CC, Kucharska-Newton A, Faurot KR, Stürmer T, Funk MJ, Palta P, Windham BG, Thai S, Lund JL. Controlling for Frailty in Pharmacoepidemiologic and Comparative Effectiveness Studies of Older Adults: Validation of an Existing Medicare Claims-based Algorithm. Epidemiology 2018 Jul; 29(4):556-561. PMID: 29621057, PMCID: PMC5980766 [Available on 2019-07-01].
19. Lund JL, Stürmer T, Harlan LC, Sanoff HK, Sandler RS, Brookhart MA, Warren JL. Identifying Specific Chemotherapeutic Agents in Medicare Data: A Validation Study. Medical Care. 2013 May; 51(5):e27-34. PMID: [22080337](http://www.ncbi.nlm.nih.gov/pubmed/22080337/), PMCID: [PMC3290707](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3290707/).
20. Noone AM, Lund JL, Mariotto A, Cronin K, McNeel T, Deapen D, Warren JL. Comparison of SEER Treatment Data with Medicare Claims. Medical Care. 2016 Sep; 54(9):e55-64. PMID: [24638121](http://www.ncbi.nlm.nih.gov/pubmed/24638121/), PMCID: PMC4981219.

**Complete List of Published Work in My Bibliography:** <https://www.ncbi.nlm.nih.gov/sites/myncbi/1zIfcqiKRRckm/bibliography/40957013/public/?sort=date&direction=ascending>

### D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

ME 2017C3-9337 Lund (PI) 03/01/19-06/01/22

Enhancing hybrid study designs for comparative effectiveness research

To develop methods and guidance that inform the design and analysis of hybrid studies that use both randomized clinical trial and observational data for comparative effectiveness research.

Role: Principal Investigator

R01 AG056479 Stürmer (PI) 09/15/17-04/30/21

Propensity scores and preventive drug use in the elderly

Insights into and development of different novel analytic strategies to control for selection and confounding bias in non-experimental research based on propensity scores and validation data.

Role: Co-Investigator

R01AG050733-01A1 Trogdon (PI) 01/01/16-05/31/20

Cancer, Care Coordination, and Medication Use for Multiple Chronic Conditions

The goal of this study is to investigate the management of MCC among cancer patients diagnosed after the age of 65 compared with cancer-free patients. This study will analyze complex older patients with diabetes, hyperlipidemia, and/or hypertension diagnosed with the four most common cancers.

Role: Co-Investigator

Completed Research Support

1R21CA191454-01A1 Lewis (PI) 01/01/16-12/31/18

Improving Targeted Colorectal Cancer Screening in the Elderly

This study will use North Carolina Medicare claims data to better identify older adults who are unlikely to benefit from colorectal cancer screening.

Role: Site Principal Investigator

Lineberger Comprehensive Cancer Center Developmental Grant Lund (PI) 01/01/18-12/31/18

A multi-database approach to evaluating targeted therapy utilization, sequencing, and adherence in patients diagnosed with metastatic renal cell carcinoma (mRCC)

This study will investigate the real-world utilization, sequencing, and adherence to targeted therapies for mRCC by pooling information from large healthcare databases in the United States.

Role: Principal Investigator

IBM Junior Faculty Development Award Lund (PI) 01/01/18-12/31/18

Investigating the effects of potential drug-chemotherapy interactions among older adults diagnosed with breast and colon cancer

This study will evaluate the association between concomitant hydrochlorothiazide exposure and neutropenia-related hospitalizations in: (1) breast cancer patients initiating chemotherapy containing cyclophosphamide and (2) colon cancer patients initiating chemotherapy containing 5-fluorouracil.

Role: Principal Investigator

Lineberger Comprehensive Cancer Center Developmental Grant Lund (PI) 01/01/17-12/31/17

Generalizing colorectal cancer trial results to real world populations: A pilot study

This study harnessed clinical trial, population-based cancer registry, and Medicare claims data to assess and apply inverse odds of sampling weights for generalization of two colorectal cancer trials that targeted populations of older adults treated in routine care.

Role: Principal Investigator

5K12CA120780-08 Sharpless (PI) 07/01/15-06/30/17

Medication use, chemotherapy and adverse outcomes among older cancer patients

This study used the SEER-Medicare database to describe the prevalence and outcomes of polypharmacy, potentially inappropriate medication use, and medications with the potential to interact with chemotherapy among older adults initiating chemotherapy for the treatment of non-metastatic breast, colon, and lung cancer.

Role: Trainee

PhRMA Foundation Lund (PI) 01/01/15-06/30/16

Evaluating the heterogeneity of cancer treatment benefits among older adults

The goal of this study was to evaluate whether claims-based measures of multimorbidity and disability modified the comparative effectiveness of adjuvant chemotherapy with and without oxaliplatin among older stage III colon cancer patients using the SEER-Medicare linked data.

Role: Principal Investigator