



Stephen Salerno Jr.

ASSISTANT PROFESSOR

Bursky School of Public Health, Washington University in St. Louis

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Education

Fred Hutchinson Cancer Center · Public Health Sciences, Biostatistics

POSTDOCTORAL RESEARCH FELLOW · ADVISOR: JEFFREY T. LEEK

Seattle, WA

July 2023 – June 2026

University of Michigan · Rackham Graduate School

DOCTOR OF PHILOSOPHY · BIOSTATISTICS

Advisor: Yi Li · Thesis Title: Novel Deep Learning Approaches for Semi-Competing Risk Prediction

Ann Arbor, MI

August 2018 - April 2023

University of Michigan · Rackham Graduate School

MASTER OF SCIENCE · BIOSTATISTICS

Ann Arbor, MI

August 2016 - April 2018

Cornell University · College of Agriculture and Life Sciences

BACHELOR OF SCIENCE · BIOMETRY & STATISTICS · MINOR IN HEALTH POLICY · MAGNA CUM LAUDE · DISTINCTION IN RESEARCH

Advisor: Martin T. Wells · Thesis Title: Batch Effect Correction and Standardization of Metabolomics Data in the Absence of Internal Standards

Ithaca, NY

August 2012 - May 2016

Experience

Assistant Professor · Washington University in St. Louis

BURSKY SCHOOL OF PUBLIC HEALTH

St. Louis, MO

July 2026 – Present

Postdoctoral Research Fellow · Fred Hutchinson Cancer Center

ADVISOR: JEFFREY T. LEEK · PUBLIC HEALTH SCIENCES, BIOSTATISTICS

Seattle, WA

July 2023 – June 2026

Graduate Student Research Assistant · University of Michigan

ADVISOR: YI LI · KIDNEY EPIDEMIOLOGY AND COST CENTER

Ann Arbor, MI

August 2016 - July 2023

Research Biostatistician · Weill Cornell Medical College

PI: KYU Y. RHEE · NIH U19 AI111143-01: BIOMARKERS OF PZA ACTIVITY AND ITS TARGET POPULATIONS

New York, NY

May 2016 - August 2017

Undergraduate Research Assistant · Cornell University

ADVISORS: MARTIN T. WELLS & JAMES G. BOOTH · DEPARTMENT OF STATISTICS AND DATA SCIENCE

Ithaca, NY

August 2013 - May 2016

TEACHING

Graduate Student Instructor · University of Michigan

INTRODUCTION TO SAS PROGRAMMING · DEPARTMENT OF BIOSTATISTICS · UNIVERSITY OF MICHIGAN

Ann Arbor, MI

Fall 2017, 2018, 2019

Undergraduate Teaching Assistant · Cornell University

BIOLOGICAL STATISTICS II · DEPARTMENT OF BIOLOGICAL STATISTICS AND COMPUTATIONAL BIOLOGY · CORNELL UNIVERSITY

Ithaca, NY

Spring 2015

Undergraduate Statistics Tutor · Cornell University

INTRODUCTORY STATISTICS · OFFICE OF ACADEMIC DIVERSITY INITIATIVES · CORNELL UNIVERSITY

Ithaca, NY

August 2014 - May 2016

Leadership

Statistics in the Community (STATCOM)

STUDENT PRESIDENT · DATA FOR PUBLIC GOOD SYMPOSIUM ORGANIZER · PROJECT AND R WORKSHOP LEAD

A community outreach program provided by graduate students in data organization, analysis, and interpretation.

University of Michigan

August 2016 - April 2023

Michigan Institute for Data Science (MIDAS) Student Leadership Board

DOCTORAL, PUBLIC HEALTH, & BIOSTATISTICS REPRESENTATIVE

Member of the Data for Good, Women+ Data Science, Mentoring, and Community Outreach committees.

University of Michigan

July 2020 - June 2022

Professional Services

Core for Global Health (Global STATCORE)

RESEARCH BIOSTATISTICIAN: WEST CHINA HOSPITAL COLLABORATION · STATISTICAL CONSULTANT: OFFICE OF GLOBAL PUBLIC HEALTH

An initiative intended to enhance biostatistical support of global public health research.

University of Michigan

August 2016 - April 2023

Cornell University Statistical Consulting Unit (CSCU)

UNDERGRADUATE CONSULTANT: DEPARTMENT OF STATISTICAL SCIENCE

A professional service group that aims to strengthen research on campus by assisting with statistical methods.

Cornell University

January 2016 - May 2016

Departmental Peer Advisor

UNDERGRADUATE PEER ADVISOR: · DEPARTMENT OF BIOLOGICAL STATISTICS AND COMPUTATIONAL BIOLOGY · CORNELL UNIVERSITY,

GRADUATE PEER ADVISOR · DEPARTMENT OF BIOSTATISTICS · UNIVERSITY OF MICHIGAN

July 2013 - Present

Admissions Ambassador

CORNELL ALUMNI ADMISSIONS AMBASSADOR NETWORK

Cornell University

August 2018 - Present

Reviewer

COMPUTATIONAL AND STRUCTURAL BIOTECHNOLOGY JOURNAL (2023-), COGENT ENGINEERING (2023-), (PLOS ONE (2023-), PUBLIC HEALTH NURSING (2022-), RAPID REVIEWS: COVID-19 (2021-), JAMA NETWORK OPEN (2021-), THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES (2020-), JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION (2020-)

September 2020 - Present

Session Organizer, Statistical Conferences

2023 LIFETIME DATA SCIENCE CONFERENCE

Session 1: Cutting-Edge Methods for Modern Epidemiology Studies; Session 2: High Dimensional Methods for Survival Data: Beyond Regularization

May 2023

Raleigh, NC

Professional Memberships

MEMBERSHIP TO PROFESSIONAL ORGANIZATIONS

American Statistical Association (2014); Institute of Mathematical Statistics (2016); American Society of Nephrology (2016); AcademyHealth (2018); International Biometric Society · Eastern North American Region (2018)

2014 - Present

Awards & Achievements

HONORS

2023 **Winner**, Student Paper Competition · Lifetime Data Science Section

American Statistical Association

2021 **Recipient**, Student Citizenship and Outreach Award · Biostatistics

University of Michigan

2015 **Recipient**, Outstanding Undergraduate Teaching Assistant · Biometry and Statistics

Cornell University

SCHOLARSHIPS

2025 **Recipient**, Postdoc Travel Award · Student/Postdoc Advisory Committee (SPAC)

Fred Hutchinson Cancer Center

2025 **Recipient**, Chen Hu Family Endowment Trainee Travel Award · Public Health Science Division

Fred Hutchinson Cancer Center

2023 **Recipient**, Rackham Conference Travel Grant · Rackham Graduate School

University of Michigan

2022 **Recipient**, Rackham Conference Travel Grant · Rackham Graduate School

University of Michigan

2020 **Recipient**, Rackham Conference Travel Grant · Rackham Graduate School

University of Michigan

2019 **Recipient**, Rackham Conference Travel Grant · Rackham Graduate School

University of Michigan

2018 **Recipient**, Rackham Conference Travel Grant · Rackham Graduate School

University of Michigan

2014 **Fellow**, Susan H. Murphy Tradition Scholarship · Cornell Tradition Fellowship

Cornell University

2012 **Fellow**, Robert H. Foote Tradition Scholarship · Cornell Tradition Fellowship

Cornell University

2012 **Fellow**, Dr. Louis A. Dreyfus Scholarship · College of Agriculture and Life Sciences

Cornell University

FELLOWSHIPS

2018	Rackham Merit Fellow , Rackham Merit Fellowship	University of Michigan
2016	Rackham Master's Award , Rackham Merit Fellowship	University of Michigan
2014	Fellow , Summer Institute for Training in Biostatistics (SIBS)	Boston University
2013	McNair Scholar , Ronald E. McNair Post-Baccalaureate Achievement Program	Cornell University
2012	Tradition Fellow , Cornell Tradition Fellowship	Cornell University

Software

2018	RRmix: Model-Based Classification & Simultaneous Adjustment for Unwanted Variation (GitHub)
2024	pseudoSCR: Pseudo-Value Approach to Causal Deep Learning of Semi-Competing Risks (GitHub)
2024	svydiff: Controlled Difference Estimation for Complex Surveys (CRAN , GitHub)
2024	ipd: Inference on Predicted Data (CRAN , GitHub)
2024	scorch: High-Level API for Torch (GitHub)
2025	SemiCompDNN: Deep Learning of Semi-Competing Risk Data via a New Neural Expectation-Maximization Algorithm (GitHub)

Publications

REFEREED JOURNAL ARTICLES

1. **Stephen Salerno***, Mahya Mehrmohamadi*, Maria V Liberti, Muting Wan, Martin T Wells, James G Booth, and Jason W Locasale. RRMix: A method for simultaneous batch effect correction and analysis of metabolomics data in the absence of internal standards. *PLoS one*, 12(6):e0179530, 2017. *Authors Contributed Equally
2. Rong-Shuang Huang, Jiao-Jiao Zhou, Yu-Ying Feng, Min Shi, Fan Guo, Shen-Ju Gou, **Stephen Salerno**, Liang Ma, and Ping Fu. Pharmacological inhibition of macrophage toll-like receptor 4/nuclear factor-kappa b alleviates rhabdomyolysis-induced acute kidney injury. *Chinese medical journal*, 130(18):2163, 2017
3. Yu-Jie Liao, Rong-Shuang Huang, Wei-Jing Lai, Fang Liu, Liang Ma, Yuan-Sheng Xie, **Stephen Salerno**, Yi Li, and Ping Fu. Effects of cyclosporine a on the development of metanephros in the pregnant BALB/c mice. *Chinese medical journal*, 130(18):2156, 2017
4. Flonza Isa, Sean Collins, Myung Hee Lee, Diessy Decome, Nancy Dorvil, Patrice Joseph, Lauren Smith, **Stephen Salerno**, Martin T Wells, Steven Fischer, et al. Mass spectrometric identification of urinary biomarkers of pulmonary tuberculosis. *EBioMedicine*, 31:157–165, 2018
5. Jing Liu, Shao-Bin Yu, Xiao-Xi Zeng, Huai-Hong Yuan, **Stephen Salerno**, and Ping Fu. Clinical characteristics of pneumonia in chinese hemodialysis patients. *Chinese medical journal*, 131(4):498, 2018
6. Lingzhi Li, Min Shi, **Stephen Salerno**, Minghai Tang, Fan Guo, Jing Liu, Yanhuan Feng, Martina Fu, Qinwan Huang, Liang Ma, et al. Microbial and metabolomic remodeling by a formula of Sichuan dark tea improves hyperlipidemia in apoe-deficient mice. *PLoS One*, 14(7):e0219010, 2019
7. Hongxia Mai, Yuliang Zhao, **Stephen Salerno**, Yi Li, Yanhuan Feng, Liang Ma, and Ping Fu. Citrate versus heparin lock for prevention of hemodialysis catheter-related complications: updated systematic review and meta-analysis of randomized controlled trials. *International urology and nephrology*, 51(6):1019–1033, 2019
8. Hongxia Mai, Yuliang Zhao, **Stephen Salerno**, Yi Li, Letian Yang, and Ping Fu. Rhabdomyolysis-induced acute kidney injury in a patient with undifferentiated connective tissue disease: A case report and literature review. *Medicine*, 98(30):e16492, 2019
9. Deng-Yan Ma, Chong-Cheng Chen, Yong-Shu Diao, Kun Yang, Yi Li, **Stephen Salerno**, and Ping Fu. Efficacy of exercises in improving the quality of life for chronic kidney disease patients without dialysis. *Chinese Medical Journal*, 133(14):1738–1740, 2020
10. Belinda Needham*, **Stephen Salerno***, Emily Roberts, Jonathan Boss, Kristi L Allgood, and Bhramar Mukherjee. Do black/white differences in telomere length depend on socioeconomic status? *Biodemography and Social Biology*, 65(4):287–312, 2020. *Authors Contributed Equally
11. Yan Xiong, Lu Lin, Yu Chen, **Stephen Salerno**, Yi Li, Xiaoxi Zeng, and Huafeng Li. Prediction of gestational diabetes mellitus in the first 19 weeks of pregnancy using machine learning techniques. *The Journal of Maternal-Fetal & Neonatal Medicine*, pages 1–7, 2020
12. Ling Yang, Letian Yang, Yuliang Zhao, Yating Wang, Yang Yu, **Stephen Salerno**, Yi Li, Ping Fu, and Tianlei Cui. The feasibility and safety of sharp recanalization for superior vena cava occlusion in hemodialysis patients: A retrospective cohort study. *Hemodialysis International*, 24(1):52–60, 2020
13. Shao-Bin Yu, Huai-Hong Yuan, **Stephen Salerno**, Shen-Ju Gou, Wen-Wen Chen, Hong-Liu Yang, Yi Li, and Ping Fu. Risk factors for mortality at beginning of maintenance hemodialysis. *Chinese medical journal*, 133(07):868–870, 2020
14. Yuliang Zhao, Letian Yang, Shaobin Yu, **Stephen Salerno**, Yi Li, Tianlei Cui, Ling Zhang, and Ping Fu. Blood pressure variability and prognosis in hemodialysis patients: A systematic review and meta-analysis. *Kidney Diseases*, 7(5):411–424, 2021
15. **Stephen Salerno**, Claudia Dahlerus, Joseph Messina, Karen Wisniewski, Lan Tong, Richard A Hirth, Jordan Affholter, Garrett Gremel, YiFan Wu, Ji Zhu, et al. Evaluating national trends in outcomes after implementation of a star rating system: Results from Dialysis Facility Compare. *Health Services Research*, 56(1):123–131, 2021
16. **Stephen Salerno***, Zhangchen Zhao*, Swaraaj Prabhu Sankar, Maxwell Salvatore, Tian Gu, Lars G Fritsche, Seunggeun Lee, Lynda D Lisabeth, Thomas S Valley, and Bhramar Mukherjee. Patterns of repeated diagnostic testing for COVID-19 in relation to patient characteristics and outcomes. *Journal of internal medicine*, 289(5):726–737, 2021. *Authors Contributed Equally

17. Zhongyou Li, Wentao Jiang, **Stephen Salerno**, Yi Li, Yu Chen, Zhi Xu, and Guanshi Wang. Acute hemodynamic improvement by thermal vasodilation inside the abdominal and iliac arterial segments of young sedentary individuals. *Journal of Vascular Research*, 58(3):191–206, 2021
18. Zhongyou Li, Yu Chen, Xiaoxi Zeng, **Stephen Salerno**, Yi Li, Huafeng Li, Lihua Dong, Teng He, Shihong Zhang, Pei Yang, et al. Clinical and hemodynamic insights into the use of internal iliac artery balloon occlusion as a prophylactic technique for treating postpartum hemorrhage. *Journal of Biomechanics*, 129:110827, 2021
19. **Stephen Salerno**, Joseph M. Messana, Garrett W. Gremel, Claudia Dahlerus, Richard A. Hirth, Peisong Han, Jonathan H. Segal, Tao Xu, Dan Shaffer, Amy Jiao, Jeremiah Simon, Lan Tong, Karen Wisniewski, Tammie Nagra, Robin Padilla, Kathryn Sleeman, Tempie Shearon, Sandra Callard, Alexander Yaldo, Lisa Borowicz, Wilfred Agbenyikey, Golden M. Horton, Jesse Roach, and Yi Li. COVID-19 Risk Factors and Mortality Outcomes Among Medicare Patients Receiving Long-term Dialysis. *JAMA Network Open*, 4(11):e2135379–e2135379, 11 2021
20. **Stephen Salerno**, Yuming Sun, Emily L Morris, Xinwei He, Yajing Li, Ziyang Pan, Peisong Han, Jian Kang, Michael W Sjoding, and Yi Li. Comprehensive evaluation of COVID-19 patient short-and long-term outcomes: Disparities in healthcare utilization and post-hospitalization outcomes. *PloS one*, 16(10):e0258278, 2021
21. Fang Wang, Dengyan Ma, **Stephen Salerno**, Yi Chen, Min Liu, Yan Luo, Yongshu Diao, Chongcheng Chen, Ping Fu, and Yi Li. Reproductive concerns and associated factors among female chronic kidney diseases patients: a multi-center cross-sectional study. *Nursing Open*, 8(5):2743–2749, 2021
22. Xinyuan Zhang, Yu Chen, **Stephen Salerno**, Yi Li, Libin Zhou, Xiaoxi Zeng, and Huafeng Li. Prediction of intrahepatic cholestasis of pregnancy in the first 20 weeks of pregnancy. *The Journal of Maternal-Fetal & Neonatal Medicine*, pages 1–7, 2021
23. Zhangchen Zhao, **Stephen Salerno**, Xu Shi, Seunggeun Lee, Bhramar Mukherjee, and Lars G. Fritsche. Understanding the patterns of serological testing for COVID-19 pre- and post-vaccination rollout in Michigan. *Journal of Clinical Medicine*, 10(19), 2021
24. Xing Li, Xueli Zhou, Dengyan Ma, **Stephen Salerno**, Min Qi, Yongshu Diao, Chongcheng Chen, Hui Zhong, Shuxin Xiao, Yan Wang, et al. Status and factors related to post-traumatic growth in continuous ambulatory peritoneal dialysis: A multi-centre study. *Nursing Open*, 9(1):550–558, 2022
25. Xi Shen, Qiuyan Zhao, **Stephen Salerno**, and Tianlei Cui. Sharp recanalization with transeptal needle for superior vena cava occlusion: A retrospective single-center analysis. *Asian Journal of Surgery*, 45(2):816–817, feb 2022
26. **Stephen Salerno**, Garrett Gremel, Claudia Dahlerus, Peisong Han, Jordan Affholter, Lan Tong, Karen Wisniewski, Jesse Roach, Yi Li, and Richard A Hirth. Understanding the tradeoffs between travel burden and quality of care for in-center hemodialysis patients. *Medical Care*, 60(3):240–247, 2022
27. Ji-Bo Sun, Qiu-Yan Zhao, **Stephen Salerno**, Xi Shen, Yi Li, Ping Fu, and Tian-Lei Cui. The efficacy and safety of blunt impingement followed by a sharp recanalization technique in hemodialysis patients with refractory central vein occlusion: a single-center experience. *Annals of Translational Medicine*, 10(14), 2022
28. Xinyuan Zhang, Yu Chen, **Stephen Salerno**, Yi Li, Libin Zhou, Xiaoxi Zeng, and Huafeng Li. Prediction of severe preeclampsia in machine learning. *Medicine in Novel Technology and Devices*, 15:100158, 2022
29. Emily K Roberts, Jonathan Boss, Bhramar Mukherjee, **Stephen Salerno**, Ami Zota, and Belinda L Needham. Persistent organic pollutant exposure contributes to Black/White differences in leukocyte telomere length in the National Health and Nutrition Examination Survey. *Scientific Reports*, 12(1):1–15, 2022
30. **Stephen Salerno** and Yi Li. High-dimensional survival analysis: Methods and applications. *Annual Review of Statistics and Its Application*, 10:25–49, 2023
31. Yuming Sun*, **Stephen Salerno***, Xinwei He, Ziyang Pan, Eileen Yang, Chinakorn Sujimongkol, Jiyeon Song, Xinan Wang, Peisong Han, Jian Kang, et al. Use of machine learning to assess the prognostic utility of radiomic features for in-hospital COVID-19 mortality. *Scientific Reports*, 13(1):7318, 2023. *Authors Contributed Equally
32. Yuming Sun*, **Stephen Salerno***, Ziyang Pan, Eileen Yang, Chinakorn Sujimongkol, Jiyeon Song, Xinan Wang, Peisong Han, Donglin Zeng, Jian Kang, David C. Christiani, and Yi Li. Assessing the Prognostic Utility of Clinical and Radiomic Features for COVID-19 Patients Admitted to ICU: Challenges and Lessons Learned. *Harvard Data Science Review*, 6(1), 2024. *Authors Contributed Equally
33. **Stephen Salerno**, Jiacheng Miao, Awan Afiaz, Kentaro Hoffman, Anna Neufeld, Qiongshi Lu, Tyler H. McCormick, and Jeffrey T. Leek. ipd: An R package for conducting inference on predicted data. *Bioinformatics*, 41(2):btaf055, 2025
34. **Stephen Salerno**, Eileen Yang, Claudia Dahlerus, Richard A Hirth, Tao Xu, Ashley Eckard, Wilfred Agbenyikey, Golden M Horton, Stephanie Clark, Joseph M Messana, and Yi Li. Adding new components to a composite quality metric: How good is good enough? *Medical Care*, 63(4):293–299, 2025
35. **Stephen Salerno**, Emily K Roberts, Belinda L Needham, Tyler H McCormick, Fan Li, Bhramar Mukherjee, and Xu Shi. What's the weight? estimating controlled outcome differences in complex surveys for health disparities research. *Statistics in Medicine*, 44(23-24):e70289, 2025
36. Eileen Yang, **Stephen Salerno**, Claudia Dahlerus, Richard A Hirth, Tao Xu, Ashley Eckard, Wilfred Agbenyikey, Golden M Horton, Stephanie Clark, Joseph M Messana, et al. The impact of transplant waitlisting measures on dialysis facilities' star ratings. *Health Services Research*, page e70071, 2025
37. **Stephen Salerno** and Yi Li. A pseudo-value approach to causal deep learning of semi-competing risks. *Arabian journal of mathematics*, 15(1):385–404, 2026

CONFERENCE PAPERS

38. Timothy NeCamp, Emily Morris, Evan Reynolds, and **Stephen Salerno**. Data for good in your neighborhood: A case study on how data can benefit your local community. *Data for Good Exchange*, Sept 2018

39. Shuxian Fan, Adam Visokay, Kentaro Hoffman, **Stephen Salerno**, Li Liu, Jeffrey T. Leek, and Tyler McCormick. From narratives to numbers: Valid inference using language model predictions from verbal autopsies. In *First Conference on Language Modeling*, 2024

PUBLISHED ABSTRACTS

40. **Stephen Salerno**, Claudia Dahlerus, Garrett Gremel, Karen Wisniewski, Lan Tong, Richard Hirth, Jordan Affholter, Ji Zhu, Elena Balovlenkov, Joel Andress, et al. Impact of missing quality measure values on the dialysis facility compare (dfc) star ratings. In *2019 Annual Research Meeting*. AcademyHealth, 2019
41. Awan Afiaz, **Stephen Salerno**, Somin M Lee, Asher Mendelson, Barret Rush, Matthew Samuel, Max Tang, Takeshi Tohyama, Jennifer Ziegler, Leo A Celi, Jeffrey T Leek, and Barbara Lam. Multimodal deep learning for pulmonary embolism screening using chest x-ray and electrocardiogram data. *American Journal of Hematology*, 101(S2):11–176, 2026. THSNA 2026 Proceedings
42. Simone E Dekker, **Stephen Salerno**, Bodhisattwa P Majumder, Reece Adamson, Rory M Donovan-Maiye, Pang Wei Koh, Lei Deng, Keith D Eaton, Srinivasan Yegnasubramanian, Kenneth L Kehl, et al. Enabling federated discovery leveraging agentic ai systems: The cancer ai alliance and datavoyager., 2026

ACCEPTED/IN PRESS

43. **Stephen Salerno**, Zhilin Zhang, and Yi Li. Deep learning of semi-competing risk data via a new neural expectation-maximization algorithm. *Annals of Applied Statistics*, 2026. *(Accepted)*

SUBMITTED MANUSCRIPTS

44. Di Fei Duan, Tong-Tong Li, **Stephen Salerno**, Yu Yan, Xing-Cheng Li, Deng-Yan Ma, Chong-Cheng Chen, Yi Li, and Ping Fu. The intention and influencing factors of COVID-19 vaccination among Chinese college students. 2023. *(Under Review)*
45. Huaihong Yuan, **Stephen Salerno**, Yi Li, and Ping Fu. Correlation between balance, self-care skills, and the six-minute walking test in patients receiving maintenance hemodialysis. 2023. *(Under Review)*
46. Zhilin Zhang, Yuming Sun, **Stephen Salerno**, Yu Chen Zhao, Xinan Wang, Subharup Guha, Donglin Zeng, Jian Kang, David C. Christiani, and Yi Li. Integrating demographic, clinical, and radiomic data for unbiased personalized in-hospital mortality risk prediction: An online system with individualized uncertainty quantification. 2024. *(Under Review)*
47. Kentaro Hoffman, **Stephen Salerno**, Jeff Leek, and Tyler McCormick. Some models are useful, but for how long?: A decision theoretic approach to choosing when to refit large-scale prediction models. *arXiv preprint arXiv:2405.13926*, 2024. *(Under Review)*
48. Adam Visokay, Kentaro Hoffman, **Stephen Salerno**, Tyler H. McCormick, and Sasha Johfre. How to measure obesity in public health research? problems with using bmi for population inference. *medRxiv*, 2025. *(Under Review)*
49. **Stephen Salerno**, Kentaro Hoffman, Awan Afiaz, Anna Neufeld, Tyler H McCormick, and Jeffrey T Leek. A moment-based generalization to post-prediction inference. *arXiv preprint arXiv:2507.09119*, 2025. *(Under Review)*
50. **Stephen Salerno**, Kentaro Hoffman, Awan Afiaz, Anna Neufeld, Tyler H McCormick, and Jeffrey T Leek. Do we really even need data? a modern look at drawing inference with predicted data. *arXiv preprint arXiv:2512.05456*, 2025
51. **Stephen Salerno**, Zhenke Wu, and Tyler H McCormick. Spatially robust inference with predicted and missing at random labels. *arXiv preprint arXiv:2603.11368*, 2026. *(Under Review)*
52. Shelton Lo, Yi Li, Francine Laden, **Stephen Salerno**, Michael Lanuti, Justin Gainor, Harvey Checkoway, Andrea Shafer, and David C. Christiani. The impact of occupational asbestos exposure on lung cancer recurrence and progression. 2026. *(Under Review)*
53. Yimin Zhao, Sheela R. Damle, Simone E. Dekker, Scott Geng, Karly Williams Silva, Jesse J. Hubbard, Manuel F. Fernandez, Fatima Zelada-Arenas, Alejandra Alvarez, Brianne Flores, Alexis Rodriguez, **Stephen Salerno**, Carrie Wright, Zihao Wang, Pang Wei Koh, and Jeffrey T. Leek. PanCanBench: A comprehensive benchmark for evaluating large language models in pancreatic oncology. 2026. *(Under Review)*

EDITORIALS

1. **Stephen Salerno**. Working in everyones backyard: Statistics in the community. *The Pursuit*, Jun 2018
2. **Stephen Salerno**. Statistics served with love: A family passion for nourishing the community. *We are Michigan Public Health*, July 2019

Presentations

WORKSHOPS

1. **Stephen Salerno**, Jiacheng Miao, Awan Afiaz, Kentaro Hoffman, Jesse Gronsbell, Jianhui Gao, David Cheng, Anna Neufeld, Qiongshi Lu, Tyler H. McCormick, and Jeffrey T. Leek. Inference with predicted data (workshop). In *Galaxy and Bioconductor Community Conference*, Cold Spring Harbor Laboratory, NY, Jun. 2025
2. Jesse Gronsbell, Jianhui Gao, and **Stephen Salerno**. Prediction-based inference: Methods & applications. In *Eastern North American Region Spring Meeting*, Indianapolis, IN, Mar. 2026

INVITED CONFERENCE TALKS

3. **Stephen Salerno.** Statistics in the community: Community-university partnerships fostering data science education. In *Symposium on Data Science and Statistics*, Pittsburgh, PA (delivered virtually, COVID-19), June 2020
4. **Stephen Salerno.** Data for good in your neighborhood: How graduate students and local communities benefit from collaborative partnerships. In *Joint Statistical Meetings*, Philadelphia, PA (delivered virtually, COVID-19), August 2020
5. **Stephen Salerno.** Valid statistical inference on AI/ML predicted outcomes. In *AAAS 2025 Annual Meeting*, Boston, MA, February 2025
6. **Stephen Salerno** and Yi Li. A pseudo-value approach to causal deep learning of semi-competing risks. In *Lifetime Data Science Conference*, Brooklyn, NY, May 2025
7. **Stephen Salerno.** Responsible ai with the whi data resource. In *Women's Health Initiative Investigator Meeting*, Bethesda, MD, May 2026

CONTRIBUTED CONFERENCE TALKS

8. Timothy NeCamp, Evan Reynolds, Emily Morris, and **Stephen Salerno.** Data for good in your neighborhood: A case study on how data can benefit your local community. In *Bloomberg Data for Good Exchange*, New York, NY, September 2018
9. **Stephen Salerno** and Yi Li. Selection and estimation of conditional graphical models. In *The International Biometric Society Eastern North American Region Spring Meeting*, Nashville, TN (delivered virtually, COVID-19), March 2020
10. **Stephen Salerno,** Garrett Gremel, Claudia Dahlerus, Karen Wisniewski, Lan Tong, Jordan Affholter, Brandon Frye, Jingya Gao, Peisong Han, Joseph Messina, Yi Li, and Richard Hirth. Understanding the tradeoffs between travel burden and quality of care for in-center hemodialysis patients. In *The Annual Conference of the American Society of Health Economists*, St. Louis, MO (delivered virtually, COVID-19), June 2020
11. **Stephen Salerno.** How to create data visualizations using best practices. In *Data for Public Good Symposium*, Ann Arbor, MI, February 2021
12. **Stephen Salerno** and Yi Li. A new deep learning approach for predicting survival processes in the presence of semi-competing risks. In *The International Biometric Society Eastern North American Region Spring Meeting*, Houston, TX, March 2022
13. **Stephen Salerno** and Yi Li. Deep learning of semi-competing risk data via a neural expectation-maximization algorithm. In *The International Biometric Society Eastern North American Region Spring Meeting*, Nashville, TN, March 2023
14. **Stephen Salerno** and Yi Li. Deep learning of semi-competing risk data via a neural expectation-maximization algorithm (lids student paper award). In *Joint Statistical Meetings*, Toronto, Ontario, CA, August 2023
15. **Stephen Salerno,** Emily K Roberts, Belinda L Needham, Tyler H McCormick, Bhramar Mukherjee, and Xu Shi. What's the weight? estimating controlled outcome differences in complex surveys for health disparities research. In *Joint Statistical Meetings*, Portland, OR, August 2024
16. **Stephen Salerno** and Yi Li. A pseudo-value approach to causal deep learning of semi-competing risks. In *CFE-CMStatistics*, London, England, December 2024
17. **Stephen Salerno,** Jiacheng Miao, Awan Afiaz, Kentaro Hoffman, Jesse Gronsbell, Jianhui Gao, David Cheng, Anna Neufeld, Qiongshi Lu, Tyler H. McCormick, and Jeffrey T. Leek. Inference with predicted data: What do we do after we have machine learned everything? In *Galaxy and Bioconductor Community Conference*, Cold Spring Harbor Laboratory, NY, Jun. 2025
18. **Stephen Salerno,** Emily K Roberts, Belinda L Needham, Tyler H McCormick, Fan Li, Bhramar Mukherjee, and Xu Shi. What's the weight? estimating controlled outcome differences in complex surveys for health disparities research. In *EcoSta*, Tokyo, JP, August 2025
19. **Stephen Salerno,** Awan Afiaz, and Jeffrey T Leek. scorcher: An r package to democratize building and fitting torch deep learning models. In *The International Biometric Society Eastern North American Region Spring Meeting*, Indianapolis, IN, March 2026

SEMINARS

20. **Stephen Salerno.** A method for simultaneous batch effect correction and analysis of metabolomics data in the absence of internal standards. In *Memorial Sloan Kettering Cancer Center*, New York, NY, March 2018
21. **Stephen Salerno.** Data science for good. In *NxtGen Summer Academy*, Ann Arbor, MI, July 2021
22. **Stephen Salerno.** Data science journey. In *MIDAS Data Science Summer Camp*, Ann Arbor, MI, July 2021
23. **Stephen Salerno.** Dialysis facility star ratings. In *Kidney Disease Measure Development and Maintenance Contract Kickoff Meeting*, Baltimore, MD, October 2021
24. **Stephen Salerno.** Introduction to r and rstudio. In *NeuroNetwork for Emerging Therapies (NeuroNet) at Michigan Medicine*, Ann Arbor, MI, March 2022
25. **Stephen Salerno** and Yuming Sun. Use of machine learning and michigan ehr data to assess the prognostic utility of radiomic features in predicting the survival of hospitalized patient with covid-19. In *MiCHAMP Seminar Series*, Ann Arbor, MI, April 2022
26. **Stephen Salerno** and Yi Li. A new deep learning approach for predicting survival processes in the presence of semi-competing risks. In *Mt. Sinai Biostatistics Seminar Series*, New York, NY, June 2022
27. **Stephen Salerno.** Dialysis facility star ratings. In *Kidney Disease Measure Development and Maintenance Contract Kickoff Meeting*, Baltimore, MD, October 2022
28. **Stephen Salerno.** Deep learning for semi-competing risks and statistics in the community: Some thoughts, current work, and future directions. In *Fred Hutch Data Science Lab Seminar Series*, Seattle, WA, April 2023
29. **Stephen Salerno.** A brief introduction to survival analysis & (semi-) competing risks. In *Etzioni Lab Seminar*, Seattle, WA, October 2023
30. **Stephen Salerno.** Inference with predicted data: What do we do after we have machine learned (or ai'd?) everything? In *Computation, AI, and Data Science Seminar Series*, Wayne State University, Detroit, MI, October 2025
31. **Stephen Salerno,** Yuming Sun, and Yi Li. Assessing the prognostic utility of clinical and radiomic features for covid-19: Data, workflow, challenges, and lessons learned. In *AI & Digital Health Innovation Research Data Talk*, Ann Arbor, MI, Jan. 2026
32. **Stephen Salerno.** Public health in a world where we can predict anything. In *Talking Public Health*, WashU School of Public Health, St. Louis, MO, Apr. 2026

33. **Stephen Salerno**. Scorchers: Democratizing ai/ml workflows for precision oncology. In *Biomarkers for Early Assessment, Cancer detection, and Outcome Navigation (BEACON) Seminar Series*, Seattle, WA, May 2026

POSTERS

34. **Stephen Salerno**, Claudia Dahlerus, Joseph Messana, Karen Wisniewski, Lan Tong, Richard Hirth, Jordan Affholter, Garrett Gremel, YiFan Wu, Ji Zhu, Elena Balovlenkov, Joel Andress, and Yi Li. Evaluating national trends in outcomes after implementation of a star rating system: Results from dialysis facility compare. In *The AcademyHealth Annual Research Meeting (Poster)*, Seattle, WA, June 2018
35. **Stephen Salerno**, Garrett Gremel, Richard Hirth, Yi Li, Ji Zhu, Claudia Dahlerus, Lan Tong, Karen Wisniewski, and Joseph Messana. Can dialysis facility compare (dfc) star ratings inform patient choice of dialysis facility? geographic co-location of facilities by star rating category. In *'Kidney Week,' the Annual Convention of the American Society of Nephrology (Poster)*, San Diego, CA, October 2018
36. **Stephen Salerno**, Claudia Dahlerus, Garrett Gremel, Karen Wisniewski, Lan Tong, Richard Hirth, Jordan Affholter, Ji Zhu, Elena Balovlenkov, Joel Andress, Jesse Roach, and Yi Li. Impact of missing quality measure values on the dialysis facility compare (dfc) star ratings. In *The AcademyHealth Annual Research Meeting (Poster)*, Washington, DC, June 2019
37. **Stephen Salerno**, Lili Zhao, and Yi Li. A bayesian factor model for healthcare rankings: Applications in estimating composite measures of quality. In *The International Biometric Society Eastern North American Region Spring Meeting (Poster)*, Philadelphia, PA, March 2019
38. **Stephen Salerno**, Garrett Gremel, Claudia Dahlerus, Karen Wisniewski, Lan Tong, Jordan Affholter, Brandon Frye, Jingya Gao, Peisong Han, Joseph Messana, Yi Li, and Richard Hirth. Understanding the tradeoffs between travel burden and quality of care for in-center hemodialysis patients. In *The International Conference on Health Policy Statistics (Poster)*, San Diego, CA, Jan. 2020
39. **Stephen Salerno** and Yi Li. A new deep learning approach for predicting survival processes in the presence of semi-competing risks. In *St. Jude Future Fellow Research Conference (Poster)*, Memphis, TN, Jun. 2022
40. **Stephen Salerno**, Jiacheng Miao, Awan Afiaz, Kentaro Hoffman, Jesse Gronsbell, Jianhui Gao, David Cheng, Anna Neufeld, Qiongshi Lu, Tyler H. McCormick, and Jeffrey T. Leek. Inference with predicted data (poster). In *Galaxy and Bioconductor Community Conference*, Cold Spring Harbor Laboratory, NY, Jun. 2025
41. **Stephen Salerno**, Carrie Wright, Ava Hoffman, Awan Afiaz, Sean Kross, Barbara Lam, Xiaoyu Qu, Min Fang, and Jeffrey T. Leek. Scorchers: Democratizing AI/ML for precision oncology. In *Sloan Precision Oncology Symposium*, Seattle, WA, Oct. 2025
42. Awan Afiaz, **Stephen Salerno**, Somin Mindy Lee, Asher Mendelson, Barret Rush, Matthew Samuel, Max Tang, Takeshi Tohyama, Jennifer Ziegler, Leo Anthony Celi, Jeffrey T. Leek, and Barbara Lam. Multimodal deep learning for pulmonary embolism screening using chest x-ray and electrocardiogram data. In *Thrombosis & Hemostasis Summit*, Portland, OR, Mar. 2026

Grants

ONGOING RESEARCH SUPPORT

Data analysis tools for leveraging massive public data to improve hypothesis-driven research	R35GM144128
PI: LEEK · ROLE: POSTDOCTORAL RESEARCHER	April 2022 - February 2027
Enhancing Data Science Skills Through Bio-OCS - Biomedical Open Case Studies	R25GM160622
PI: WRIGHT (CONTACT), HOFFMAN · ROLE: KEY PERSONNEL	July 2025 - August 2030
The Cancer AI Alliance (CAIA)	CAIA
PI: LEEK · ROLE: POSTDOCTORAL RESEARCHER	August 2025 -
Reducing Addiction through Prevention Infrastructure Development (RAPID)	R61DA063683
PI: EISMAN · ROLE: KEY PERSONNEL	September 2025 - August 2027
Democratizing AI/ML Workflows for Precision Oncology	Sloan Precision Oncology Institute
PI: LEEK (CONTACT), Salerno · ROLE: Co-PI · TECHNOLOGY DISSEMINATION AWARD	November 2025 - October 2027

COMPLETED RESEARCH SUPPORT

The Application of Deep Learning in Precision Oncology	Washington Research Foundation
PI: QU (CONTACT), FANG · ROLE: KEY PERSONNEL · TECHNOLOGY COMMERCIALIZATION GRANT	October 2025 - April 2026