

CURRICULUM VITAE

Yuan Liu, Ph.D. ♦ July 2022



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EDUCATION

2008 Ph.D. Biostatistics, University of South Carolina, Columbia, SC, USA
2004 M.S. Mathematics, University of North Carolina at Wilmington, Wilmington, NC, USA
1998 B.S. Bioengineering National Huaqiao University, Fujian, China

ACADEMIC APPOINTMENT

2020 – Research Associate Professor, Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, GA
2010 –2020 Research Assistant Professor, Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, GA
2008 –2010 Post-Doctoral Trainee, Division of Biostatistics and Epidemiology, Medical University of South Carolina, Charleston, SC
2006 –2008 Research Assistant, Department of Family and Preventive Medicine, School of Medicine, University of South Carolina, Columbia, SC
2004 –2006 Research Assistant, Department of Epidemiology and Biostatistics, University of South Carolina, Columbia, SC
2002 – 2004 Teaching Assistant, Department of Mathematics, University of North Carolina at Wilmington, Wilmington, NC

RESEARCH INTEREST

- Cancer comparative effectiveness research by utilization of publicly available observational database
- Causal inference by generalized propensity score approaches.
- Dynamic and early prognostics biomarkers development and validation.
- Risk classification or optimal treatment regimes.
- Application areas: cancer, radiation oncology, surgery oncology, immunotherapy therapy, dermatology.

OTHER TRAININGS

2020-2021 Team Science Workshops - Georgia Clinical & Translational Science Alliance
2021 – Foundations of Everyday Leadership – Online course by University of Illinois at Urbana-Champaign

HONORS/AWARD

2013 American Statistical Association Travel Grant award for attending the 59th ISI conference.
2019 RSPH Supervisor Award
2019 Biostatistics Faculty Mentor Award

PROFESSIONAL ACTIVITIES

Extramural

2019 Reviewer for the DoD, CDMRP Prostate Cancer Research Program (PCRP).

2020 Reviewer for the DoD, CDMRP Prostate Cancer Research Program (PCRP).

2021 Reviewer for the DoD, CDMRP Prostate Cancer Research Program (PCRP).

2022 Referee to the Medical Research Council's Clinical Academic Research Partnerships Panel in UK Research and Innovation (UKRI)

2010- External Reviewer for journals - Statistics in Medicine; International Journal of Biostatistics; Spatial and Spatial-temporal Epidemiology; Cancer; BMC Medical Research Methodology; BMC Health Services Research; IEEE journal of Biomedical and Health Informatics; Cancer Investigation; Nature Cancer; Frontier in Public Health; Nature Cancer;

Intramural

2011- Independent Biostatistics Reviewer for Clinical Trail Review Committee board at Winship Cancer Institute, Emory University (reviewed over **402** research protocols as of July 2022)

2013 Independent Reviewer for University Research Committee at Emory (responsible for awarding small, short-term research grants available to regular, full-time faculty of Emory University through a competitive selection process.)

2014 Independent Reviewer for University Research Committee at Emory.

BIBLIOGRAPHY (<https://www.ncbi.nlm.nih.gov/myncbi/1T5XEYLq7kXQA/bibliography/public/>)

*: denotes students advised/mentored

⊙: denotes contributed as the lead biostatistician (role: study design, data analysis, writing the manuscript, and addressing journal review)

☆: denotes contributed as the senior biostatistician (role: same role as in lead biostatistician except data analysis was done by staff or student under my close guidance).

➤ Statistical Methodology: Peer-reviewed

1. Lawson, A. B., Williams, F. L., & **Liu, Y.** (2007). Some simple tests for spatial effects around putative sources of health risk. *Biom J*, 49(4), 493-504.
2. Ma, B., Lawson, A. B., & **Liu, Y.** (2007). Evaluation of Bayesian Models for Focused Clustering in Health Data. *Environmetrics*, 18(8), 871-887.
3. **Liu, Y.**, & Bottai, M. (2009). Mixed-effects models for conditional quantiles with longitudinal data. *Int J Biostat*, 5(1), Article 28.
4. **Liu, Y.**, Lawson, A. B., Ma, B., & Bottai, M. (2009). Evaluation of Putative Hazard Tests under Background Risk Heterogeneity. *Environmetrics*, 20(3), 260-274.
5. **Liu, Y.**, McDermott, S., Lawson, A., & Aelion, C. M. (2010). The relationship between mental retardation and developmental delays in children and the levels of arsenic, mercury and lead in soil samples taken near their mother's residence during pregnancy. *Int J Hyg Environ Health*, 213(2), 116-123.
6. Tighiouart, M., **Liu, Y.**, & Rogatko, A. (2014). Escalation with overdose control using time to toxicity for cancer phase I clinical trials. *PLoS One*, 9(3), e93070.
7. **Liu, Y.**, Nickleach, D, Zhang, C., Switchenko, J., Kowalski, J. (2018). Carrying out streamlined routine data analyses with reports for observational studies: introduction to a series of generic SAS® macros. *F1000Res*, 7:1955. DOI: 10.12688/f1000research.16866.1. License: CC BY4.0. PMID: 31231506.

8. Li, H., **Liu, Y.**, & Luo, Y. (2020). Double Penalized Quantile Regression for the Linear Mixed Effects Model. *Journal of Systems Science and Complexity*, 33(6), 2080-2102. doi:10.1007/s11424-020-9065-4
 9. **Liu, Y.**, Patel, S. A., Jani, A. B., Gillespie, T. W., Patel, P. R., Godette, K. D., . . . McDonald, M. W. (2020). Overall Survival After Treatment of Localized Prostate Cancer With Proton Beam Therapy, External-Beam Photon Therapy, or Brachytherapy. *Clin Genitourin Cancer*. PMID: 32972877.
- Collaborative Research Based on Large Scale Observational Database: NCDB, SEER, and Others.
10. Hall, W. A., Colbert, L. E., **Liu, Y.** [☺], Gillespie, T., Lipscomb, J., Hardy, C., . . . Landry, J. C. (2013). The influence of adjuvant radiotherapy dose on overall survival in patients with resected pancreatic adenocarcinoma. *Cancer*, 119(12), 2350-2357. PMID: 23625519
 11. Kooby, D. A., Gillespie, T. W., **Liu, Y.** [☺], Byrd-Sellers, J., Landry, J., Bian, J., & Lipscomb, J. (2013). Impact of adjuvant radiotherapy on survival after pancreatic cancer resection: an appraisal of data from the national cancer data base. *Ann Surg Oncol*, 20(11), 3634-3642. PMID: 23771249
 12. Hall, W. A., Colbert, L. E., Nickleach, D., Switchenko, J., **Liu, Y.** [☆], Gillespie, T., . . . Landry, J. C. (2014). The influence of radiation therapy dose escalation on overall survival in unresectable pancreatic adenocarcinoma. *J Gastrointest Oncol*, 5(2), 77-85. PMID: 24772334
 13. Colbert, L. E., Hall, W. A., Nickleach, D., Switchenko, J., Kooby, D. A., **Liu, Y.** [☆], . . . Landry, J. C. (2014). Chemoradiation therapy sequencing for resected pancreatic adenocarcinoma in the National Cancer Data Base. *Cancer*, 120(4), 499-506. PMID: 24390739
 14. Mikell, J. L., Gillespie, T. W., Hall, W. A., Nickleach, D. C., **Liu, Y.** [☆], Lipscomb, J., . . . Higgins, K. A. (2015). Postoperative radiotherapy is associated with better survival in non-small cell lung cancer with involved N2 lymph nodes: results of an analysis of the National Cancer Data Base. *J Thorac Oncol*, 10(3), 462-471. PMID: 25384064
 15. Khullar, O. V., Gillespie, T., Nickleach, D. C., **Liu, Y.** [☆], Higgins, K., Ramalingam, S., . . . Fernandez, F. G. (2015). Socioeconomic risk factors for long-term mortality after pulmonary resection for lung cancer: an analysis of more than 90,000 patients from the National Cancer Data Base. *J Am Coll Surg*, 220(2), 156-168.e154. PMID: 25488349
 16. Nanda, R. H.* [☆], **Liu, Y.** [☆], Gillespie, T. W., Mikell, J. L., Ramalingam, S. S., Fernandez, F. G., . . . Higgins, K. A. (2015). Stereotactic body radiation therapy versus no treatment for early stage non-small cell lung cancer in medically inoperable elderly patients: A National Cancer Data Base analysis. *Cancer*, 121(23), 4222-4230. PMID: 26348268
 17. Melvan, J. N., Sancheti, M. S., Gillespie, T., Nickleach, D. C., **Liu, Y.** [☆], Higgins, K., . . . Fernandez, F. G. (2015). Nonclinical Factors Associated with 30-Day Mortality after Lung Cancer Resection: An Analysis of 215,000 Patients Using the National Cancer Data Base. *J Am Coll Surg*, 221(2), 550-563. PMID: 26206651
 18. Khullar, O. V., **Liu, Y.** [☺], Gillespie, T., Higgins, K. A., Ramalingam, S., Lipscomb, J., & Fernandez, F. G. (2015). Survival After Sublobar Resection versus Lobectomy for Clinical Stage IA Lung Cancer: An Analysis from the National Cancer Data Base. *J Thorac Oncol*, 10(11), 1625-1633. PMID: 26352534
 19. Medbery, R. L., Gillespie, T. W., **Liu, Y.** [☺], Nickleach, D. C., Lipscomb, J., Sancheti, M. S., . . . Fernandez, F. G. (2016). Nodal Upstaging Is More Common with Thoracotomy than with VATS During Lobectomy for Early-Stage Lung Cancer: An Analysis from the National Cancer Data Base. *J Thorac Oncol*, 11(2), 222-233. PMID: 26792589
 20. Medbery, R. L., Gillespie, T. W., **Liu, Y.** [☺], Nickleach, D. C., Lipscomb, J., Sancheti, M. S., . . . Fernandez, F. G. (2016). Socioeconomic Factors Are Associated with Readmission After Lobectomy for Early Stage Lung Cancer. *Ann Thorac Surg*, 102(5), 1660-1667. PMID: 27476821

21. Jegadeesh, N., **Liu, Y.**[☆], Gillespie, T., Fernandez, F., Ramalingam, S., Mikell, J., . . . Higgins, K. A. (2016). Evaluating Intensity-Modulated Radiation Therapy in Locally Advanced Non-Small-Cell Lung Cancer: Results From the National Cancer Data Base. *Clin Lung Cancer*, 17(5), 398-405. PMID: 26936682
22. Zureikat, A. H., Postlewait, L. M., **Liu, Y.**[☺], Gillespie, T. W., Weber, S. M., Abbott, D. E., . . . Kooby, D. A. (2016). A Multi-institutional Comparison of Perioperative Outcomes of Robotic and Open Pancreaticoduodenectomy. *Ann Surg*, 264(4), 640-649. PMID: 27433907
23. Higgins, K. A., O'Connell, K. *, **Liu, Y.**[☆], Gillespie, T. W., McDonald, M. W., Pillai, R. N., . . . Simone II, C. B. (2017). National Cancer Database Analysis of Proton Versus Photon Radiation Therapy in Non-Small Cell Lung Cancer. *Int J Radiat Oncol Biol Phys*, 97(1), 128-137. PMID: 27979443
24. Jegadeesh, N., **Liu, Y.**[☺], Zhang, C., Zhong, J., Cassidy, R. J., Gillespie, T., Kucuk, O., . . . Jani, A. B. (2017). The role of adjuvant radiotherapy in pathologically lymph node-positive prostate cancer. *Cancer*, 123(3), 512-520. PMID: 27859018
25. Cassidy, R. J., **Liu, Y.**[☺], Patel, K., Zhong, J., Steuer, C. E., Kooby, D. A., . . . Landry, J. C. (2017). Can we eliminate neoadjuvant chemoradiotherapy in favor of neoadjuvant multiagent chemotherapy for select stage II/III rectal adenocarcinomas: Analysis of the National Cancer Data base. *Cancer*, 123(5), 783-793. PMID: 27780316
26. Cassidy, R. J., **Liu, Y.**[☆], Kahn, S. T., Jegadeesh, N. K., Liu, X. *, Subhedar, P. D., . . . Torres, M. A. (2017). The role of postmastectomy radiotherapy in women with pathologic T3N0M0 breast cancer. *Cancer*, 123(15), 2829-2839. PMID:28387923
27. Ahmed, H. Z., * **Liu, Y.**[☆], O'Connell, K. *, Ahmed, M. Z., Cassidy, R. J., Gillespie, T. W., . . . Higgins, K. A. (2017). Guideline-concordant Care Improves Overall Survival for Locally Advanced Non-Small-cell Lung Carcinoma Patients: A National Cancer Database Analysis. *Clin Lung Cancer*, 18(6), 706-718. PMID: 28601387
28. Gerhard, R. S., Patil, D., **Liu, Y.**[☆], Ogan, K., Alemozaffar, M., Jani, A. B., . . . Filson, C. P. (2017). Treatment of men with high-risk prostate cancer based on race, insurance coverage, and access to advanced technology. *Urol Oncol*, 35(5), 250-256. PMID: 28089387
29. Steuer, C. E., Behera, M., **Liu, Y.**[☆], Fu, C. *, Gillespie, T. W., Saba, N. F., . . . Ramalingam, S. S. (2017). Pulmonary Sarcomatoid Carcinoma: An Analysis of the National Cancer Data Base. *Clin Lung Cancer*, 18(3), 286-292. PMID: 28043773
30. Naik, K. B. *, **Liu, Y.**[☆], Goodman, M., Gillespie, T. W., Pickens, A., orce, S. D., . . . Saba, N. F. (2017). Concurrent chemoradiotherapy with or without surgery for patients with resectable esophageal cancer: An analysis of the National Cancer Data Base. *Cancer*, 123(18), 3476-3485. PMID:28464264
31. Evans, M., **Liu, Y.**[☆], Chen, C. *, Steuer, C., Cassidy, R., III, Landry, J., . . . Saba, N. F. (2017). Adenosquamous Carcinoma of the Esophagus: An NCDB-Based Investigation on Comparative Features and Overall Survival in a Rare Tumor. *Oncology*, 93(5), 336-342. PMID:28848104
32. Jhaveri, J., Rayfield, L. *, **Liu, Y.**[☆], Chowdhary, M., Cassidy, R. J., Madden, N. A., . . . Landry, J. C. (2017). Prognostic relevance of human papillomavirus infection in anal squamous cell carcinoma: analysis of the national cancer data base. *J Gastrointest Oncol*, 8(6), 998-1008. PMID: 29299360
33. Jhaveri, J., **Liu, Y.**[☺], Chowdhary, M., Buchwald, Z. S., Gillespie, T. W., Olson, J. J., . . . Curran, W. J. (2018). Is less more? Comparing chemotherapy alone with chemotherapy and radiation for high-risk grade 2 glioma: An analysis of the National Cancer Data Base. *Cancer*, 124(6), 1169-1178. PMID:29205287
34. Becerra-Culqui, T. A., **Liu, Y.**[☺], Nash, R., Cromwell, L., Flanders, W. D., Getahun, D., . . . Goodman, M. (2018). Mental Health of Transgender and Gender Nonconforming Youth Compared with Their Peers. *Pediatrics*, 141(5). PMID: 29661941

35. Jiang, R., **Liu, Y.** [☆], Ward, K. C., Force, S. D., Pickens, A., Sancheti, M. S., . . . Khullar, O. V. (2018). Excess Cost and Predictive Factors of Esophagectomy Complications in the SEER-Medicare Database. *Ann Thorac Surg*, 106(5), 1484-1491. PMID:2994881
36. Johnson, A. C., Ethun, C. G., **Liu, Y.** [☉], Lopez-Aguiar, A. G., Tran, T. B., Poultides, G., . . . Maithel, S. K. (2018). Studying a Rare Disease Using Multi-Institutional Research Collaborations vs Big Data: Where Lies the Truth? *J Am Coll Surg*, 227(3), 357-366. PMID:29906615
37. Li, S., Wang, J., Zhang, B., **Liu, Y.**, Lu, T., Shi, Y., . . . Dong, L. (2018). Urinary Lead Concentration Is an Independent Predictor of Cancer Mortality in the U.S. General Population. *Front Oncol*, 8, 242. PMID:30013948
38. Ferris, M. J., **Liu, Y.** [☆], Ao, J., * Zhong, J., Abugideiri, M., Gillespie, T. W., . . . Jani, A. B. (2018). The addition of chemotherapy in the definitive management of high risk prostate cancer. *Urol Oncol*, 36(11), 475-487. PMID: 30309766
39. Jhaveri, J., Rayfield, L.* **Liu, Y.** [☆], Chowdhary, M., Tian, S., Cassidy, R. J., . . . Patel, K. R. (2018). Impact of intensity modulated radiation therapy on survival in anal cancer. *J Gastrointest Oncol*, 9(4), 618-630. PMID:30151258
40. Johnson, A. C., Ethun, C. G., **Liu, Y.** [☉], Poultides, G., Howard, J. H., Bedi, M., . . . Cardona, K. (2018). A novel, simplified, externally validated staging system for truncal/extremity soft tissue sarcomas: An analysis of the US Sarcoma Collaborative database. *J Surg Oncol*, 118(7), 1135-1141. PMID: 30261111
41. Jhaveri, J., Cheng, E.* **Liu, Y.** [☆], Tian, S., Buchwald, Z., Chowdhary, M., **Liu, Y.** [☆], . . . Patel, K. R. (2018). Proton vs. Photon Radiation Therapy for Primary Gliomas: An Analysis of the National Cancer Data Base. *Front Oncol*, 8, 440. PMID: 30547008
42. Jia, Z., Li, X., Yuan, X., Zhang, B., **Liu, Y.** [☆], Zhao, J., & Li, S. (2019). Depression is associated with diabetes status of family members: NHANES (1999-2016). *J Affect Discord*. PMID: 30771642.
43. Gupta, D. R., **Liu, Y.** [☉], Jiang, R., Walid, S., Higgins, K., Landry, J., . . . Saba, N. F. (2019). Racial Disparities, Outcomes, and Surgical Utilization among Hispanics with Esophageal Cancer: A Surveillance, Epidemiology, and End Results Program Database Analysis. *Oncology*, 1-9. PMID: 31108497.
44. Troeschel, A. N.* **Liu, Y.** [☆], Collin, L. J., Bradshaw, P. T., Ward, K. C., Gogineni, K., & McCullough, L. E. (2019). Race differences in cardiovascular disease and breast cancer mortality among US women diagnosed with invasive breast cancer. *Int J Epidemiol*. doi:10.1093/ije/dyz108. PMID: 31155644.
45. Zaidi, M. Y., Ethun, C. G., **Liu, Y.** [☉], Poultides, G., Howard, J. H., Mogal, H., . . . Cardona, K. (2019). The impact of unplanned excisions of truncal/extremity soft tissue sarcomas: A multi-institutional propensity score analysis from the US Sarcoma Collaborative. *J Surg Oncol*. PMID: 31172536.
46. Arciero, C., **Liu, Y.** [☉], Gillespie, T., & Subhedar, P. (2019). Surgery and survival in patients with stage IV breast cancer. *Breast J*. doi:10.1111/tbj.13296. PMID: 31087448.
47. Li, S., Wang, J., Zhang, B., Li, X., **Liu, Y.** [☆] (2019). Diabetes Mellitus and Cause-Specific Mortality: A Population-Based Study. *Diabetes Metab J*, 43(3): 319-341. PMID: 31210036.
48. Koerner, C., Sheng, X.* **Liu, Y.** [☉], Gillespie, T., Balch, G., Shaffer, V., . . . Sullivan, P. (2019). Decreased Overall Survival of Transanal vs. Transabdominal Resection of Early Rectal Cancer in Treatment Naïve Patients: A National Cancer Data Base Study. *Journal of Surgery*. Vol. 7, No. 3, 2019, pp. 78-86.
49. Lee, R.M., **Liu, Y.** [☉], Gamboa, A.C., Zaidi, M.Y., Kooby, D.A., Shah, M.M., Cardona, K., Russell, M.C., Maithel, S.K. (2019). Race, ethnicity, and socioeconomic factors in cholangiocarcinoma: What is driving disparities in receipt of treatment?. *J Surg Oncol*. 120(4), 611-623. doi:10.1002/jso.25632. PMID: 31301148

50. Shah, N. N., Xi, Y. *, **Liu, Y.** ☆, Koff, J. L., Flowers, C. R., Behera, M., & Cohen, J. B. (2019). Racial and Socioeconomic Disparities in Mantle Cell Lymphoma. *Clin Lymphoma Myeloma Leuk.* doi:10.1016/j.clml.2019.03.006. PMID: 31029647.
51. Gamboa, A. C., **Liu, Y.** ☺, Lee, R. M., Zaidi, M. Y., Staley, C. A., Russell, M. C., . . . Maithel, S. K. (2019). A novel preoperative risk score to predict lymph node positivity for rectal neuroendocrine tumors: An NCDB analysis to guide operative technique. *J Surg Oncol*, 120(6), 932-939. doi:10.1002/jso.25679. PMID: 31448820.
52. Gamboa, A. C., **Liu, Y.** ☺, Lee, R. M., Zaidi, M. Y., Staley, C. A., Kooby, D. A., . . . Maithel, S. K. (2019). Duodenal neuroendocrine tumors: Somewhere between the pancreas and small bowel? *J Surg Oncol*, 120(8), 1293-1301. doi:10.1002/jso.25731. PMID: 31621090
53. Bean, M. B., **Liu, Y.** ☺, Jiang, R., Steuer, C. E., Patel, M., McDonald, M. W., . . . Saba, N. F. (2019). Small Cell and Squamous Cell Carcinomas of the Head and Neck: Comparing Incidence and Survival Trends Based on Surveillance, Epidemiology, and End Results (SEER) Data. *Oncologist*. PMID: 31391295.
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55. Enofe, N., Morris, A. D., **Liu, Y.** ☺, Liang, W. *, Wu, C. S., Sullivan, P. S., . . . Shaffer, V. O. (2020). Receipt of Adjuvant Chemotherapy in Stage II Colon Cancer and Overall Survival: A National Cancer Database Study. *J Surg Res*, 252, 69-79. doi:10.1016/j.jss.2020.02.016. PMID: 32244127.
56. Behera, M., Steuer, C. E., **Liu, Y.** ☺, Fernandez, F., Fu, C. *, Higgins, K. A., . . . Ramalingam, S. S. (2020). Trimodality Therapy in the Treatment of Stage III N2-Positive Non-Small Cell Lung Cancer: A National Cancer Database Analysis. *Oncologist*. doi:10.1634/theoncologist.2019-0661. PMID: 31943520
57. Patel, S. A., Goyal, S., **Liu, Y.** ☆, Moghanaki, D., Patel, P. R., Hanasoge, S., . . . Fischer-Valuck, B. W. (2020). Analysis of Radiation Facility Volume and Survival in Men With Lymph Node-Positive Prostate Cancer Treated With Radiation and Androgen Deprivation Therapy. *JAMA Netw Open*, 3(12), e2025143. doi:10.1001/jamanetworkopen.2020.25143. PMID: 33301015
58. Fischer-Valuck, B. W., Rao, Y. J., Brenneman, R. J., Patel, P. R., Filson, **Liu, Y.**, C. P., Jani, A. B., . . . Patel, S. A. (2020). Overall survival comparison between androgen deprivation therapy (ADT) plus external beam radiation therapy (EBRT) vs ADT plus EBRT with brachytherapy boost in clinically node-positive prostate cancer. *Brachytherapy*, 19(5), 557-566. PMID: 32624405
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60. Royce, T. J., **Liu, Y.** ☺, Milowsky, M. I., Efstathiou, J. A., Jani, A. B., Fischer-Valuck, B., & Patel, S. A. (2021). Trimodality Therapy With or Without Neoadjuvant Chemotherapy for Muscle-Invasive Bladder Cancer. *Clin Genitourin Cancer*. doi:10.1016/j.clgc.2021.03.007. PMID:33839040
61. Xu, K. M., **Liu, Y.** ☺, Gillespie, T. W., Osunkoya, A. O., Carthon, B., Bilen, M. A., . . . Jani, A. B. (2021). Small-Cell Carcinoma of the Prostate: Report of Outcomes of Localized Disease Using the National Cancer Database. *Clin Genitourin Cancer*. doi:10.1016/j.clgc.2021.01.002. PMID: 33582100
62. Janopaul-Naylor, J. R., Zhong, J., **Liu, Y.** ☺, Zhang, C., Osunkoya, A. O., Joshi, S. S., . . . Jani, A. B. (2021). Bladder preserving chemoradiotherapy compared to surgery for variants of urothelial carcinoma and other tumors types involving the bladder: An analysis of the National Cancer Database. *Clin Transl Radiat Oncol*, 26, 30-34. doi:10.1016/j.ctro.2020.11.002. PMID: 33294644
63. Schlafstein, A., **Liu, Y.** ☆, Goyal, S., Kahn, S., Godette, K., Lin, J., . . . Patel, S. A. (2021). Regional Nodal Irradiation for Clinically Node-Positive Breast Cancer Patients with Pathologic Negative Nodes after

Neoadjuvant Chemotherapy. *Clin Breast Cancer*. doi:<https://doi.org/10.1016/j.clbc.2021.06.003>. PMID: 34229943

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➤ Collaborative Research: Basic Science, Clinical Trial, Public Health, et al.

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154. Martini, D. J., Kline, M. R., **Liu, Y.** [☺], Shabto, J. M., Carthon, B. C., Russler, G. A., . . . Bilen, M. A. (2021). Novel risk scoring system for metastatic renal cell carcinoma patients treated with cabozantinib. *Cancer Treat Res Commun*, 28, 100393. doi:10.1016/j.ctarc.2021.100393. PMID: 34029879
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159. Dhere, V. R., Fischer-Valuck, B. W., Goyal, S., **Liu, Y.** [☆], Morgan, T. M., Ghavidel, E., . . . Patel, S. A. (2021). Patient-reported outcomes after Low-dose-rate versus High-dose-rate brachytherapy boost in combination with external beam radiation for intermediate and high risk prostate cancer. *Brachytherapy*, 20(6), 1130-1138. doi:10.1016/j.brachy.2021.07.005. PMID: 34417136
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Carcinoma Patients Treated with Immune Checkpoint Inhibitors. *Oncologist*, 26(12), 1017-1025. doi:10.1002/onco.13922. PMID: 34342095

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163. Hadadi, A., Smith, K. E., Wan, L. *, Brown, J. R., Russler, G., Yantorni, L., . . . **Liu, Y.** *, Bilen, M. A. (2022). Baseline basophil and basophil-to-lymphocyte status is associated with clinical outcomes in metastatic hormone sensitive prostate cancer. *Urol Oncol*, 40(6), 271.e279-271.e218. doi:10.1016/j.urolonc.2022.03.016. PMID: 35466038
164. Webster, L. A., Newsome, J., Guo, M. *, Lee, S., Majdalany, B. S., Gichoya, J., **Liu, Y.**, . . . Kokabi, N. (2022). Utilization and Comparative Effectiveness of Uterine Artery Embolization versus Hysterectomy for Severe Postpartum Hemorrhage: A National Inpatient Sample Study. *J Vasc Interv Radiol*, 33(4), 427-435.e424. doi:10.1016/j.jvir.2021.12.004. PMID: 34915166
165. Martini, D. J., Evans, S. T., **Liu, Y.** *, Shabto, J. M., Uner, O. E., Olsen, T. A., . . . Bilen, M. A. (2022). Analysis of Toxicity and Clinical Outcomes in Full Versus Reduced Starting Dose Cabozantinib in Metastatic Renal Cell Carcinoma Patients. *Clin Genitourin Cancer*, 20(1), 53-59. doi:10.1016/j.clgc.2021.11.004. PMID: 34785235
166. Martini DJ, Olsen A, Goyal S, **Liu, Y.** *, Evans ST, Hitron E, Russler G, Yantorni L, Caulfield S, Brown JT, Goldman JM, Nazha B, Carthon BC, Harris WB, Kucuk O, Master VA, Bilen M. (2022). Combination Immune Checkpoint Blockade Regimens for Previously Untreated Metastatic Renal Cell Carcinoma: The Winship Cancer Institute of Emory University Experience. *Journal of Immunotherapy and Precision Oncology*. <https://doi.org/10.36401/JIPO-22-2>

➤ Statistical Methodology: Non- Peer-Reviewed Manuscripts (Proceedings or Under Review).

1. **Liu, Y.**, Tighiouart, M., & Rogatko, A. (2011). Escalation with overdose control using time to toxicity data for cancer phase I clinical trials. *JSM proceedings, Biometrics Section. Alexandria, VA: American Statistical Association*. 4139-4151.
2. **Liu, Y.**, Nickleach, D., Lipscomb, J. (2013). Propensity Score Matching for Multiple Treatment Comparisons in Observational Studies. *The 59th World Statistics Congress proceeding*.
3. Nickleach D., **Liu Y.**, Shrewsbury A., Ogan K., Kim S., Wang Z. (2013). SAS® Macros to Conduct Common Biostatistical Analyses and Generate Reports. *SESUG: The Proceeding of the SouthEast SAS User Group*. <http://analytics.ncsu.edu/sesug/2013/PO-05.pdf>.
4. Zhang. C., Rupji, M., **Liu, Y.**, Kowalski, J. (2017). SAS® Macros for Time – Dependent Effects and Risk Factors on Survival. *SESUG: The Proceeding of the SouthEast SAS User Group*, paper AD-136-2017.
5. Zhang. C., Rupji, M., **Liu, Y.**, Kowalski, J. (2018). Two SAS® Macros on Backward Elimination in Firth’s penalized partial likelihood Approach: Firth’s Logistic and Cox Models. *SESUG: The Proceeding of the SouthEast SAS User Group*.

GRANT SUPPORTS

➤ Active Support or Newly Funded Support

Source of Funding: NIH: P01 CA257906-01 (PI: Fu)
Period of Activity: 6/1/2022 – 5/31/2027

Total Direct Cost: \$14,005,605
Title: Deciphering LKB1-associated immunotherapy resistance in lung adenocarcinoma (LUAD)
Role: Core Director (25% effort)

Source of Funding: NIH: 1R01CA266613 (PI: Kang)
Period of Activity: 2/1/2022 – 1/31/2027
Total Direct Cost: \$268,234
Title: Decoding and targeting saccharopine pathway in cancer metastasis
Role: Core Director (5% effort)

Source of Funding: NIH: 1R01AI145231-02 (PI: Waller)
Period of Activity: 6/1/2020 – 5/31/2025
Total Direct Cost: \$3,624,041
Title: Duvelisib Ameliorates Manifestations of Pneumonia in Established Novel Coronavirus Infection (DAMPEN-CI)
Role: Co-investigator (10% effort)

Source of Funding: DoD (PI: Master)
Period of Activity: 06/01/20-05/31/23
Total Direct Cost: \$1,676,724
Title: CD8 T-cell Infiltration as a Predictor of Renal Cancer Progression after Surgery
Role: Co-investigator (10% effort)

Source of Funding: NIH: AR076089-01A1 (PI: Feldman)
Period of Activity: 07/01/20-06/30/23
Total Direct Cost: \$205,920
Title: Improving Clinical Trial Recruitment and Outcome Measures in Bullous Pemphigoid
Role: Co-investigator (5% effort)

Source of Funding: NIH/NCI: 1U54CA260563 (I. Sanz)
Period of Activity: 9/30/2020 – 8/31/2022
Total Direct Cost: \$156,000
Title: Immune Regulation of COVID-19 Infection in Cancer and Autoimmunity
Role: Co-investigator (10% effort)

Source of Funding: NIH/NCI: 1R01CA245386-01A1 (S. Sun)
Period of Activity: 07/07/2020-06/30/2025
Total Direct Cost: \$255,902
Title: c-Myc modulation and its implications in EGFR-targeted cancer therapy
Role: Co-investigator (3% effort)

Source of Funding: DoD: W81XWH1910840 (B. Olson)
Period of Activity: 09/30/2019-09/29/2022
Total Direct Cost: \$384,615
Title: Targeting Rb loss using BET inhibition to reprogram the prostate tumor Microenvironment
Role: Co-investigator (2.3% effort)

Source of Funding: DoD: W81XWH2110213 (S. Kang)
Period of Activity: 09/01/2021-08/31/2023
Total Direct Cost: \$547,750
Title: Krebs Cycle Signaling for Therapy of Metastatic Lung Cancer
Role: Co-investigator (3.6% effort)

Source of Funding: NIH/NIHR: 1R01NR020154-01 (Wells)
Period of Activity: 07/29/2021-05/31/2026
Total Direct Cost: \$1,955,938
Title: Implementing an Evidence Based, Multilevel Intervention to Promote HPV Vaccination Among HIV Positive Adults
Role: Co-investigator (3% effort)

Source of Funding: Georgia Tech: AWD-002284-G1 (Bilen)
Period of Activity: 08/01/2021-07/31/2023
Total Direct Cost: \$180,000
Title: Investigation of Circulation Tumor Cell Clusters as Potential Biomarkers for Aggressive
Role: Co-investigator (10% effort)

➤ Completed Support

Source of Funding: NIH: 1R01CA203928-01(PI: Wei Zhou)
Period of Activity: 04/01/17-03/31/22
Total Direct Cost: \$228,750
Title: Targeted Inhibition of Ribosomal RNA Synthesis in LKB1-deficient Cancers
Role: Co-investigator (5% effort)

Source of Funding: US DEPARTMENT OF DEFENSE (PI: Jin-Tang, Dong)
Period of Activity: 08/15/2018-08/14/2021
Total Direct Cost: \$922,183
Title: A novel regulator of cancer stem cell plasticity and its roles in prostate cancer
Role: Co-investigator (4% effort)

Source of Funding: NIH - NIAID (PI: Edmund K. Waller)
Period of Activity: 05/01/2019-04/30/2020
Total Direct Cost: \$242,748
Title: A novel regulator of cancer stem cell plasticity and its roles in prostate cancer
Role: Co-investigator (3% effort)

Source of Funding: V Foundation for Cancer Research-V2015-005 (PI: Lauren McCullough)
Period of Activity: 11/1/2017-10/31/2019
Total Direct Cost: \$200,000
Title: Breast adipose inflammation: epidemiology and outcomes in Black and White women diagnosed with breast cancer
Role: Co-investigator (4% effort)

Source of Funding: NIH: 5 R01 CA142858-04 (PI: A. Marcus)
Period of Activity: 03/01/11-02/29/16
Total Direct Cost: \$201,275
Title: Control of Lung Cancer Invasion and Metastasis by Vimentin
Role: Co-investigator (3.7% effort)

Source of Funding: NIH: 1 R01 CA180805-01 (PI: Van Meir)
Period of Activity: 09/01/13-08/31/16
Total Direct Cost: \$323,672
Title: Discovery of Chemical Probes for Uveal Melanoma
Role: Co-investigator (5.6% effort)

Source of Funding: PCORI: AD-12-11-4532 (PI: M. Goodman)

Period of Activity: 07/01/13-12/31/17
Total Direct Cost: \$2,154,946
Title: Targeted Inhibition of Ribosomal RNA Synthesis in LKB1-deficient Cancers
Role: Co-investigator (10% effort)

Source of Funding: Emory Health Sciences Center SYNERGY Award (PI: T. Gillespie)
Period of Activity: 10/1/16-9/30/17
Total Direct Cost: \$100,000
Title: Advancing Cancer Screening and Early Detection among People Living with HIV (PLWH)
Role: Co-investigator (5% effort)

Source of Funding: Movember Foundation (PI: T. Gillespie)
Period of Activity: 03/01/16-02/28/19
Total Direct Cost: \$1,200,000
Title: Prostate Survivorship Research Network – True NTH
Role: Co-investigator (10% effort)

Source of Funding: Pfizer (PI: Ron Feldman)
Period of Activity: 11/01/17-12/30/19
Total Direct Cost: \$58,959
Title: Impact of Pruritus on Clinical and Biological Outcomes in Atopic Dermatitis
Role: Co-investigator (5% effort)

Source of Funding: Hematology/Oncology Pharmacy Association (PI: Harvey III)
Period of Activity: 01/01/19-12/31/20
Total Direct Cost: \$49,312
Title: Phase II Evaluation of the Effect of 2 Versus 6 Hour Oxaliplatin Infusions on Neuropathy
Role: Co-investigator (5% effort)

Source of Funding: NIH/AID: 1R56AI145231-01 (PI: Waller)
Period of Activity: 05/01/19-04/30/21
Total Direct Cost: \$242,750
Title: Using donor dendritic cells to optimize GvHD and GvL in allogeneic stem cell trans
Role: Co-investigator (3% effort)

Source of Funding: NIH/NCI: 5R01CA140515-10 (PI: Chen)
Period of Activity: 08/01/19-07/31/20
Total Direct Cost: \$244,535
Title: Metabolic rewiring by oncogenic BRAF V600E links ketogenesis pathway to BRAF-MEK1
Role: Co-investigator (5% effort)

Source of Funding: (PI: Rosen)
Period of Activity: 01/01/20-12/31/20
Total Direct Cost: \$50,000
Title: Analysis of objective performance metrics during robotic-assisted colon and rectal surgery
Role: Co-investigator (5% effort)

TEACHING/MENTORING ACTIVITIES

- Course Instructor:
2017 Fall - **BIOS 500 Lab** – *Introduction to SAS programming*
2018 Spring- **BIOS 560R** - *Applied and Advanced Statistical Techniques in Observational Studies*

2020 Spring- **BIOS 560R** - *Applied and Advanced Statistical Techniques in Observational Studies* (Average score of evaluation: 4.5/5 for a class size of 33, response rate: 79%)

2022 Spring- **BIOS 530** - *Applied and Advanced Statistical Techniques in Observational Studies* (Average score of evaluation: 4.4/5 for a class size of 27, response rate 85%)

This BIOS 560R is driven by the real-world experience and designed to cover the concepts and implementations of modern analytic methodologies and strategies in observational studies and to equip the students with essential tools and mindset to conduct an observational study for causal inference and prediction. Propensity score methods, modeling for prediction, risk stratification/validation, and the guidance of Good Research Practice will be illustrated along with real-life projects based on National Cancer Database (NCDB) and backed up by the recent literature.

➤ MPH/MSPH/MS Thesis Committee Chair:

Name: [Kelli O'Connell](#)
Program: MSPH in Biostatistics 2016
Thesis: Propensity Score Matched Analysis to Compare the Effectiveness of Proton Therapy versus Photon-Based Radiation for Non-Small Cell Lung Cancer Patients Based on National Cancer Database (Peer-Reviewed Publication #22, 26; Conference Abstract #54, 58, 67)

Name: [Yaqi Jia](#)
Program: MPH in Global Environmental Health 2016
Thesis: Stereotactic body radiotherapy (SBRT) vs. surgery in elderly early stage non-small Cell lung cancer patients (Conference Abstract #63, 69)

Name: [Wendi Liang](#)
Program: MSPH in Biostatistics 2016
Thesis: Analysis of Socioeconomic Disparities in Receipt of Adjuvant Chemotherapy in Stage II Colon Cancer: An Inquiry Based on National Cancer Database (Peer-Reviewed Publication #54; Conference Abstract #79)

Name: [Sun Qin](#)
Program: MPH in Biostatistics 2017
Thesis: Apocrine Carcinoma of the Breast: Treatment Patterns and Outcomes (Conference Abstract #78)

Name: [Alexandra Aiello](#)
Program: MSPH in Biostatistics 2017
Thesis: The Application of Generalized Propensity Score Approaches on Dichotomous, Continuous, and Ordinal Treatment to Analyze the Effect of Total Radiation Dose on Cervical Esophageal Cancer Survival (Conference Abstract #73).

Name: [Ao Jingning](#)
Program: MSPH in Biostatistics 2017
Thesis: A Propensity Score Analysis Exploring the Effect of Adjuvant Chemotherapeutic Agent with Radiation Therapy and Androgen Deprivation Therapy in Patients with High Risk Prostate Cancer (Peer-Reviewed Publication #37; Conference Abstract #76).

Name: [Lael Rayfield](#)
Program: MS in Biostatistics 2017
Thesis: Prognostic Relevance of HPV Infection in Cases of Anal Squamous Cell Carcinoma: A Weighted Propensity Score Analysis See (Peer-Reviewed Publication #31, 38, Conference Abstract #88)

Name: [Xiting Zhu](#)

Program: MPH in Biostatistics 2017
Thesis: Propensity Score Matched Analysis on Survival Profile of Head and Neck Cancer in the U.S. Hispanic Population (Conference Abstract #72)

Name: [Yizhao Xi](#)
Program: MSPH in Biostatistics 2018
Thesis: Assess Balance of Covariates after Propensity Score as Covariate Adjustment: SAS® macro Development and Application (Peer-Reviewed Publication #49, Conference Abstract #85, 91).

Name: [Haocan Song](#)
Program: MPH in Biostatistics 2018
Thesis: Assess Improvement of Balancing Covariates by Propensity Score approach using Generalized Boosted Model (GBM) and Application Based on National Cancer Database.
Practicum: Comparison of the seventh and eighth editions of the American Joint Committee on Cancer (AJCC) staging for oropharyngeal squamous cell carcinomas (OPSCC): A Surveillance, Epidemiology and End Results Program (SEER) database analysis. (Conference Abstract #99 112)

Name: [Ruizhe Wu](#)
Program: MPH in Biostatistics 2018
Thesis: Risk Stratification by Nomogram for Stage II Colon Cancer Patients and Impacts from Adjuvant Chemotherapy on Overall Survival Based on NCDB.

Name: Yiman Li
Program: MPH in Biostatistics 2019
Thesis: The impact of concurrent radiotherapy on overall survival among late-stage melanoma patients treated with immunotherapy.

Name: Mengyu Di
Program: MPH in Biostatistics 2019
Thesis: The predictors for overall survival for small-cell lung cancer patients who treated by immunotherapy.

Name: Chen Jiang
Program: MPH in Biostatistics 2019
Thesis: The role of adjuvant chest wall irradiation in intermediate risk breast cancer following mastectomy based on NCDB. (Peer-Reviewed Publication #115; Conference Abstract #10)

Name: Yuxian Sun
Program: MPH in Biostatistics 2020
Thesis: Whether the proton beam radiation leads to less secondary malignancies among localized prostate cancer patients.

Name: Yuhan Ji
Program: MSPH in Biostatistics 2020
Thesis: Development and validation of risk stratification for metastasis prostate cancer patients.

Name: Ruowen Qi
Program: MSPH in Biostatistics 2020
Thesis: The impact of radiation to the primary tumor for newly diagnosed metastatic prostate cancer.

Name: Xueying Lyu

Program: MSPH in Biostatistics 2020
Thesis: Identify optimum subgroup who would benefit androgen blockade after salvage radiation therapy in prostate cancer.

Name: Xingyu Gao
Program: MSPH in Biostatistics 2021
Thesis: Explore the optimal condition of using propensity score method using the overlap coefficient of covariates.

Name: Mian Guo
Program: MSPH in Biostatistics 2021
Thesis: Using Machine Learning approach to identify the optimal treatment subgroup for breast cancer patient in receiving radiation.

Name: Feifei Geng
Program: MSPH in Biostatistics 2021
Thesis: Evaluation the OS difference among breast cancer patients who received SLND vs. ALND.

Name: Shirley Li
Program: MSPH in Biostatistics 2021
Thesis: The Log Odds of Positive Lymph Nodes (LODDS) Predicts Survival of Cervical cancer

Name: Sihong Li
Program: MSPH in Biostatistics 2022
Capstone: Comparing survival outcomes in men with localized prostate cancer who undergo radiation therapy with versus without treatment delay

Name: Chenbo Sun
Program: MSPH in Biostatistics 2022
Capstone: Overall Survival of Non-Small Cell Lung Cancer Patients Receiving Immunotherapy in Different Radiation Subgroups

Name: Zelin Wang
Program: MSPH in Biostatistics 2022
Capstone: Evaluating the use of the surgery as primary recommended treatment for localized, high risk prostate cancer before and after 2012

➤ MPH/MSPH/MS Thesis Committee Member:

Name: Juhee Lee
Program: MPH in Biostatistics 2010
Chair: Limin Peng
Thesis: Application of Competing Risks Quantile Regression for the Warfarin Aspirin Symptomatic Intracranial Disease (WASID) Study.

Name: Wei Li
Program: MPH in Biostatistics 2014
Chair: Limin Peng
Thesis: Exploring Risk Factors for Vitamin D Deficiency in Cystic Fibrosis Patients and Generally healthy Population

Name: Benjamin J. Flink

Program: MPH in Global Health 2015
Chair: Roger Roachat
Thesis: Disparities in Pancreatic Adenocarcinoma Care Using the National Cancer Data Base

Name: Samuel M. Hyde
Program: MMS in Human Genetics & Genetic Counseling 2015
Advisor: Theresa Gillespie
Thesis: From Mendel's Peas to Applications-Based Genetics: A Novel High School Education Intervention Aimed at Increasing Understanding of Health-Related Genetics and Genomics

Name: Kushal Naik
Program: MPH in Epidemiology 2016
Chair: Michael Goodman
Thesis: Chemo-Radiation With or Without Surgery for Resectable Esophageal Cancer: An Analysis of Survival among 11,122 Patients in the National Cancer Data Base (NCDB) (Peer-Reviewed Publication #29, Conference Abstract #61)

Name: Hiba Z. Ahmed
Program: MPH in Global Epidemiology 2017
Chair: Kristin Higgins, Michael Goodman
Thesis: Guideline Concordant Care Improve Overall Survival for Locally Advanced Non-Small Cell Lung Carcinoma Patients: A National Cancer Data Base Analysis (Peer-Reviewed Publication #26, Conference Abstract #67)

Name: Shuo Wang
Program: MPH in Epidemiology 2018
Chair: Theresa Gillespie
Thesis: Effect of Surgical Margins on Overall Survival in Resectable Pancreatic Cancer.

➤ MPH/MSPH/PHD Student Practicum Supervisor

Name: Priti Shah
Program: MPH in Epidemiology 2017
Chair: Michael Goodman
Thesis: Follow up Imagine and Survival in Head and Neck Cancer Patients

Name: Fu Chao
Program: MPH in Epidemiology 2015
Projects: Pulmonary Sarcomatoid Carcinoma: An Analysis of the National Cancer Data Base (Peer-Reviewed Publication #28, 55, Conference Abstract #44, 80)

Name: Michael Mengyeh Yuan
Program: MPH in Epidemiology 2016
Projects: Squamous Cell Carcinoma of Lung in the United States: Analysis of the National Cancer Database (NCDB) (Conference Abstract #45)

Name: [Xi Liu](#)
Program: MPH in Epidemiology 2016
Projects: The role of postmastectomy radiotherapy in women with pathologic T3N0M0 breast cancer (Peer-Reviewed Publication #25; Conference Abstract # 51, 66)

Name: Chuqing Chen
Program: MPH in Epidemiology 2016

Projects: Adenosquamous Carcinoma of the Esophagus: An NCDB-Based Investigation on Comparative Features and Overall Survival in a Rare Tumor (Peer-Reviewed Publication #30; Conference Abstract #52)

Name: [Zixun Ye](#)

Program: MPH in Biostatistics 2017

Projects: Cognitive Impairment and Overall Survival in Frail Surgical Patients (Peer-Reviewed Publication #95)

Name: [Na Bo](#)

Program: MPH in Biostatistics 2017

Projects: Developing biomarkers for predicting clinical relapse in pemphigus patients treated with rituximab (Peer-Reviewed Publication #96)

Name: En Cheng

Program: MPH in Epidemiology 2017

Projects: Proton vs. Photon Radiation Therapy for Primary Gliomas: An Analysis of the National Cancer Data Base (Peer-Reviewed Publication #40; Conference Abstract #70)

Name: Xi Sheng

Program: MPH in Epidemiology 2017

Projects: The Utilization and Overall Survival of Transanal Local Excision for Stage I Rectal Cancer Persist Compared to Standard Resection: A Retrospective Study Based on the National Cancer Database (Peer-Reviewed Publication #47; Conference Abstract #77)

Name: Minxuan Huang

Program: PhD in Epidemiology 2017

Projects: Epidemiology and Prognosis of Gallbladder Cancer: an Analysis of the National Cancer Data (Manuscript submitted).

Name: Alyssa Nicole Troeschel

Program: PhD in Epidemiology 2017

Projects: Racial/ethnic differences in all-cause and cause-specific mortality patterns among a cohort of invasive US breast cancer patients. (Peer-Reviewed Publication #43).

Name: [Julian Zhao](#)

Program: MPH in Biostatistics 2018

Projects: Defining Clinical Severity and Treatment Responses in a Historical Cohort of Patients with Bullous Pemphigoid. (Peer-Reviewed Publication #96).

Name: Chen Jiang

Program: MPH in Biostatistics 2019

Projects: New or Worsening Immune-Related Adverse Events with Long-Term Use of PD-1 and PD-L1 Checkpoint Inhibitors.

Name: Niya Xiong

Program: MSPH in Biostatistics 2019

Projects: Early Post-Treatment Mortality after Surgery and SBRT for Early-Stage NSCL

Name: Tao Liang

Program: MSPH in Biostatistics 2019

Projects: The impact of Proton Therapy on Overall Survival among Breast Cancer Patients: A NCDB Based Study.

Name: He Jinjing
Program: MSPH in Biostatistics 2020
Projects: Breast adipose inflammation: epidemiology and outcomes in Black and White women diagnosed with breast cancer

Name: Yuxian Sun
Program: MSPH in Biostatistics 2020
Projects: Impact of Pruritus on Clinical and Biological Outcomes in Atopic Dermatitis

Name: Mingrui Zhang
Program: MSPH in Biostatistics 2020
Projects: Matching generalized propensity score software development

Name: Feng Tian
Program: MSPH in Biostatistics 2020
Projects: SAS Macro Development for Propensity Score Balance Check

Name: Limeng Wan
Program: MSPH in Biostatistics 2021
Projects: Outcomes in docetaxel (DOC) vs. abiraterone (ABI) in castration sensitive prostate cancer

Name: Xiaobo Yan
Program: MSPH in Biostatistics 2021
Projects: Impact of Pruritus on Clinical and Biological Outcomes in Atopic Dermatitis

Name: Kexin Guan
Program: MSPH in Biostatistics 2022
Projects: Second Tumor in Prostate Cancer among Patients who received Radiation

Name: Anyue Ruan
Program: MSPH in Biostatistics 2023
Projects: Mimic clinical trial using Large scale of observational data base in lung cancer

Name: Han Xu
Program: MSPH in Biostatistics 2023
Projects: Mimic clinical trial using Large scale of observational data base in breast cancer

Name: Shannon Lu
Program: MSPH in Biostatistics 2023
Projects: Mimic clinical trial using Large scale of observational data base in prostate cancer

Name: Weiding Fang
Program: MSPH in Biostatistics 2021
Projects: SAS macro development for streamlined data analyses with professional report.

➤ National Cancer Data Base Training Workshop: Course Director

Aug - Nov 2015 at Emory University - This short course was designed to help clinical PIs get familiar with the National Cancer Database, know its advantage and limitation, and step by step guide to starting the research by following a collaborative workflow. The second part of the workshop focused on the analytic workflow by using SAS[®] macros and report template, which was aimed at students/trainees who need to conduct their own data analysis based on NCDB. There were total of **50** participants. A new session will be planned in the near future.

➤ Other Teaching

2015-2017 served as speaker for topic “Observational Study Designs in Medical Research.” at the oncology reviews journal club at Winship Cancer Institute.

2017-2019 lecture to undergraduate students from the Summer Institute for Training in Biostatistics (SIBS)

2020-2022 Speaker of Statistics for Cancer Biomarker at Winship K12 Intensive Skill Building and Orientation Workshop.

➤ Other Mentorship

2016-2017 served as a mentor for Dr. Youxi Luo, a visiting professor from Hubei University of Technology, Wuhan, China.

2016 -2016 served as a mentor for Da Feng, a visiting Ph.D. student from Huazhong University of Science and Technology, Wuhan, China.

PROFESSIONAL SERVICE ACTIVITIES

2018 – Committee member in MSPH/MPH admission committee, diversity committee, and curriculum committee in the department of Biostatistics and Bioinformatics at Emory University.

2021- Department Representative to Research Advisory Committee at Rollins School of Public Health at Emory University.

SOFTWARE DEVELOPMENT

SAS Macros for routine data analyses with professional report (2011 ~ current): Served as the leading effort for making developments and updates. These are a series of high-performance tools that cover the entire analytic streamline of data analysis and produce journal-quality summary tables, including descriptive statistics, univariate associations, multivariable models, subgroup analyses, propensity approaches, and many others. By delivering high-quality reports, the macros help reduce the burden of data processing, eliminate copy and paste errors, provide transparent views of massive data, enhance the communication among non-statistician collaborators, serve as a foundation for investigators to improve study design and to pursue the next level of investigations, and support the iterative nature of the research (See Bibliography #9-12). Those macros have significantly increased our core capabilities and are routinely used in our daily data analysis projects.

Source code are available at: <https://github.com/Emory-Yuan/BBISR-SAS-Macros/tree/V1>. Archived source code at time of publication: <https://doi.org/10.5281/zenodo.221637713>.

SAS Macros for propensity score related implementation (2011 ~ current): Served as the leading effort for making developments and updates. Three SAS macros were developed to calculate the propensity score (PS) for binary or categorical treatment comparison groups, to match or weight the treatments by PS, and to examine the covariate balance after PS implementation. The macros carry out essential steps during the execution of a PS approach and generate professional summary reports and plots to be used in the manuscript directly.

R Function/Package for Propensity Score Matching for multiple treatments: To conduct propensity score matching for more than two-treatment options using generalized propensity scores. It carries a locally optimal matching in the high-dimensional space formed by GPS with a bounded computational burden (See Bibliography #8). In recent development, an R package is underway.

PROFESSIONAL AFFILIATIONS

2004 – Present Member of American Statistical Association

2009 – Present Member of the Society for Clinical Trials

2013 – Present Member of International Statistical Institute