

## Jong H. Jeong

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### General Information

Professor and Interim Chair  
Department of Biostatistics, Public Health  
University of Pittsburgh  
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### Education

Ph.D. Statistics, University of Rochester, Rochester, NY, 1996  
*Thesis Title:* New applications of frailty model in survival analysis  
*Thesis Advisor:* David Oakes  
M. A. Statistics, University of Rochester, Rochester, NY, 1991

### Research Interests

Causal Inference, Clinical Trials, Deep Learning, Empirical Processes, Machine Learning, Mixed Models, Prediction Modeling, Survival Analysis

### Professional Appointments

2020 – date Professor and **Interim Chair**, Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, PA  
2017 – 2020 Professor and Vice Chair, Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, PA  
2016 – 2017 Professor and **Interim Chair**, Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, PA  
2015 – 2016 Professor and Vice Chair, Department of Biostatistics  
Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA  
2013 – date Professor, Department of Biostatistics  
Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA  
2013 – 2016 Professor, Clinical and Translational Sciences Institute (CTSI)

School of Medicine, University of Pittsburgh, Pittsburgh, PA  
1998 – date Senior Statistician, National Surgical Adjuvant Breast and Bowel Project (NSABP)  
2011 – 2013 Associate Professor, Clinical and Translational Sciences Institute (CTSI)  
School of Medicine, University of Pittsburgh, Pittsburgh, PA  
2009 – 2013 Tenured Associate Professor, Department of Biostatistics  
Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA  
2007 – 2013 Associate Professor, Department of Biostatistics  
Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA  
1998 – 2007 Assistant Professor, Department of Biostatistics  
Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA  
1998 – 2001 Senior Statistician, University of Pittsburgh Cancer Institute (UPCI)

## Professional Society Membership

2021 Statistician of the Year Award, ASA Pittsburgh Chapter  
2017 – date *Fellow*, American Statistical Association (ASA)  
**Citation:** For outstanding research in competing risks, residual life, and survival analysis, for collaborative contributions to clinical trials on breast cancer, and for leadership and service to the profession  
2007 – date *Elected Member*, International Statistical Institute (ISI)  
2013 – date *Elected Member*, Omicron of the Delta Omega Society (Honorary Public Health Society)  
2015 – date *Elected Member*, Board of Directors, Korean International Statistical Society (KISS), a sister society to American Statistical Association (ASA)  
1994 – date Member, American Statistical Association (ASA)  
1996 – date Member, The International Biometric Society/Eastern North American Region (ENAR)

## Professional Society Editorship

2015 – 2018 *Associate Editor*, Journal of Statistical Research  
2016 – date *Associate Editor*, Lifetime Data Analysis  
2017 – date *Editorial Board Member*, Scientific Reports

## Scientific Advisory Positions

2012 – 2014 Member, Committee on Career Development, American Statistical Association  
2011 – 2013 Member, Special Emphasis Panel, Clinical Assay Development Program, National Cancer Institute  
2011 – date Member, Institutional Data and Safety Monitoring Board, University of

	Pittsburgh
2011 – date	Member, Data Safety and Monitoring Committee and Data Quality and Auditing Committee, International Evaluation of Radiotherapy Technology in Cervical Cancer, University of California – San Diego
2009 – 2014	Member, National Surgical Adjuvant Breast and Bowel Project (NSABP) B-49 Steering Committee
2014 – 2017	Member, Steering Committee for TARGET Trial to Prevent Chronic Low Back Pain
2021 – date	Member, Steering Committee for PCORnet PaTH network

## Professional Service

2019—date	University Faculty Assembly/Senate (elected member)
2019—date	University Senate Computer and Information Technology Committee (elected member)
2015 – date	Chair, Faculty Recruitment Committee
2014 – 2015	Chair, PhD Qualifying Exam Committee
2013 – 2016	Chair, Faculty Recruitment Committee
2011	Group Leader for PhD Program Session, Departmental Strategic Planning Meeting
2012 – 2013	Chair, Curriculum Committee (PhD and MS combined)
2011 – 2012	Chair, Doctoral Curriculum Committee
2010	Chair, PhD Exam Working Group Committee
2010	Chair, Departmental Curriculum Evaluation Committee
2009 –2014	Appointed Member, School-wide Faculty Diversity Committee
2008	Appointed Member, Search Committee for Director for University of Pittsburgh Cancer Institute (UPCI) Biostatistics Unit
2006	Appointed Member, Statistical Innovations Committee
2006 – 2001	Appointed Member, M.S. Program (Working) Committee
2006 – 2010	Appointed Member, Doctoral Student Monitoring Committee
2002, 2005	Appointed Member, GSPH school marketing committee
2000 – 2003	Appointed Member, Judge for the student presentations (poster and oral) for school-wide Dean’s day events
1998 – 2009	Appointed Member, Admissions and Student Performance Committee (ASPC)

## Invited Lectureships and Seminars

Mar., 2001	“On the asymptotic relative efficiency of estimates from Cox’s model”, Department of Statistics, University of Pittsburgh
Sep., 2005	“Nonparametric two-sample test for comparing median residual lifetimes”, Department of Biostatistics, SUNY-Buffalo

- Mar., 2007 “Statistical analysis in cancer clinical trials”, SWITCH Forum organized by Pfizer at Early Breast Cancer Symposium, St. Gallen, Switzerland
- Aug., 2007 “Statistical methods to analyze breast cancer data”, Department of Statistics, Korea University, Seoul, Korea
- Aug., 2007 “Statistical methods to analyze breast cancer data”, Department of Statistics, Seoul National University, Seoul, Korea
- Mar, 2008 “Parametric inference on cumulative incidence function”, In “Recent Advances in the Modeling of Competing Risks Data”, International Biometric Society East Northern American Region (ENAR)
- Jul., 2009 “Regression on quantile residual life”, In “Recent Development in Survival Analysis”, The 1st Institute of Mathematical Statistics (IMS) Asia Pacific Rim Meeting, Seoul, Korea
- Jul., 2009 “Phase III clinical trials on breast cancer: NSABP experienceInternational Symposium on Statistical Applications in Clinical Trials”, International Biometric Society, Korean Region, Seoul, Korea
- Mar., 2010 “Inference on quantile residual life under competing risks”, In “Competing Risks in Action”, International Biometric Society East Northern American Region (ENAR)
- April, 2010 “Inference on residual life under dependent censoring”, Department of Statistics, University of Kentucky
- May, 2010 “Application of quantile residual life in medical data, WebEx seminar”, Department of Radiation Oncology, University of California, San-Diego
- June, 2010 “Bivariate analysis of competing risks data”, Annual Meeting of Chinese Statistical Association, Indianapolis, IN
- Jul., 2010 “An alternative summary measure for time-to-event data: residual life?” FDA/Industry Workshop, Washington, D.C.
- Feb., 2011 “Inference on quantile residual life under competing risks”, Department of Biostatistics, Yale University
- Aug., 2011 “Cause-specific quantile residual life regression”, Joint Statistical Meeting, Miami, FL.
- Aug., 2011 “Clinical trials on breast cancer”, Haany Medical University, Daegu, Korea
- March, 2012 “Residual life: A useful summary measure for survival data?”, Department of Biostatistics and Bioinformatics, University of California-San Diego
- April, 2012 “Quantile residual life for subdistribution”, Department of Biostatistics, University of Pittsburgh
- June, 2012 “Quantile residual life under dependent censoring”, Department of Statistics, Seoul National University, South Korea
- August, 2012 “Censored quantile regression for residual lifetimes: empirical likelihood approach”, Joint Statistical Meetings, San Diego, CA
- August, 2013 “Hierarchical likelihood inference on clustered competing risks data”, Joint meeting of the IASC Satellite and the 8th IASC-ARS Conference, Seoul, Korea

- August, 2013 “Statistical inference on residual life” (2 hour lecture), SRC Symposium, Department of Statistics, Seoul National University, Seoul, Korea
- June, 2014 “Quantile residual life”, Annual Meeting of Chinese Statistical Association, Oregon, Portland
- June, 2015 “Statistical inference on quantile residual life”, Annual Meeting of Chinese Statistical Association, Fort Collins, Colorado
- Aug, 2016 “Recent development in residual life inference”, Joint Statistical Meetings, Chicago, IL
- Oct., 2016 “Nonparametric inference on life lost”, Department of Statistics, Virginia Tech
- May., 2017 “Statistical inference on life lost”, Lifetime Data Science Conference, University of Connecticut
- Aug., 2017 “Semiparametric regression on life lost”, Joint Statistical Meetings (JSM), Baltimore, MD
- Jun., 2019 “Nonparametric inference on the win ratio for clustered semicompeting risks data”, Lifetime Data Science Conference, Pittsburgh, PA
- Aug., 2019 Discussant for the session “New innovations and challenges in HGLMs and H-likelihood”, Joint Statistical Meetings, Denver, Colorado.
- Sep., 2019 “Statistical inference on quantile inactivity time”, University of Maryland-Baltimore County (UMBC), MD
- Oct., 2020 “Nonparameric and semiparametric inference on quantile inactivity time”, Department of Biostatistics and Medical Bioinformatics, University of Wisconsin-Madison
- Nov., 2020 “The win ratio approach to composite endpoints”, Society for Clinical Trials
- Aug., 2022 “Nonlinear quantile prediction for censored survival data using deep learning”, Joint Statistical Meetings

## Books and Book Chapters

1. **Jeong, J.** (2014). *Statistical Inference on Residual Life*. New York: Springer.
2. Ha I., **Jeong, J.**, Lee, Y. (2017). *Statistical Modelling of Survival Data with Random Effects: H-likelihood Approach*. Springer.
3. Redmond C. K. and **Jeong, J.** “Design, Implementation, and interpretation of Clinical Trials” In *Management of Breast Diseases*. Jatoi I. and Kaufmann M. (Editors), 2<sup>nd</sup> Edition, Springer, 2016.

## Peer-Reviewed Publications

### Methodology Papers

\* indicates papers with students

1. Oakes, D. and **Jeong, J.** (1998). Frailty models and rank tests. *Lifetime Data Analysis* 4, 209-228.
2. **Jeong, J.** (2001). A note on asymptotic efficiency of a regression coefficient parameter under ordinal logistic regression model. *Communications in Statistics: Theory and Methods* 30, 1257-1269.
3. **Jeong, J.**, Jung, S. and Wieand, S. (2003). A parametric modeling of long-term follow-up data from phase III breast cancer clinical trials. *Statistics in Medicine* 22, 339-352.
4. Jung, S. and **Jeong, J.** (2003). Rank tests for clustered survival data. *Lifetime Data Analysis* 9, 19-31.
5. **Jeong, J.** and Oakes, D. (2003). On the asymptotic relative efficiency of estimates from Cox's model. *Sankhya* 65, 411-421.
6. **Jeong, J.** (2003). Efficiency of log-rank test under dependent censorship. *Communications in Statistics: Theory and Methods* 32, 1197-1211.
7. **Jeong, J.** and Oakes, D. (2005). Effects of different hazard ratios on asymptotic relative efficiency of estimates from Cox's model. *Communications in Statistics Theory and Methods* 34, 429.
8. **Jeong, J.** and Jung, S. (2006). Rank tests for clustered survival data when dependent subunits are randomized. *Statistics in Medicine* 25, 361-373.
9. **Jeong, J.** and Fine, J. (2006). Direct parametric inference for cumulative incidence function. *Journal of the Royal Statistical Society-Series C (Applied Statistics)* 55, 187-200.
10. **Jeong, J.** (2006). A new parametric distribution for modeling cumulative incidence function: Application to breast cancer data. *Journal of the Royal Statistical Society - Series A (Statistics in Society)* 169, 289-303.
11. **Jeong, J.** and Costantino, J. P. (2006). Application of smoothing methods to evaluate treatment-prognostic factor interactions in breast cancer data. *Cancer Investigation* 24, 288-293.
12. **Jeong, J.** and Fine, J. (2007). Parametric regression on cumulative incidence function. *Biostatistics* 8, 184-196.
13. **Jeong, J.**, Jung, S., and Joseph Costantino. (2008). Nonparametric inference on median residual lifetimes in breast cancer patients. *Biometrics* 64, 157-163.
14. **Jeong, J.** (2008). Statistical analysis in cancer clinical trials. *Anti-Cancer Drugs* 19 Supplement 1:S9-S10.
15. **Jeong, J.** and Lee, S. (2009). A note on the asymptotic relative efficiency of estimators from the additive hazards model. *Journal of Statistical Planning and Inference* 139, 4242-4250.
16. Jung, S., **Jeong, J.**, and Bandos, H. (2009). Regression on quantile residual life. *Biometrics* 65, 1203-1212.
17. **Jeong, J.** and Fine, J.P. (2009). A note on quantile residual life under competing risks. *Biometrika* 96, 237-242.
18. Wahed, AS, Luong TM, and **Jeong, J.** (2009). A new generalization of Weibull distribution with application to a breast cancer data set. *Statistics in Medicine* 28, 2077-94.

19. Choi, B.-Y., Kim, H., Go, U.-Y., **Jeong, J.**, and Lee, J.W. (2010). Comparison of various statistical methods for detecting disease outbreaks. *Computational Statistics* 25, 603-617.
20. Zhou, M. and **Jeong, J.** (2011). Empirical likelihood ratio test for median and mean residual lifetime. *Statistics in Medicine* 30, 152-159.
21. Fan, C., Fine, J.P., and **Jeong, J.** (2012). Optimal inferences for proportional hazards model with parametric covariate transformations. *Annals of the Institute of Statistical Mathematics* 64, 715-736.
22. \*Tang, S. and **Jeong, J.** (2012). Median tests for censored survival data; a contingency table approach. *Biometrics* 68, 983-989.
23. Kim, M.-O., Zhou, M., and **Jeong, J.** (2012). Censored quantile regression for residual lifetimes. *Lifetime Data Analysis* 18,177-94.
24. Park, T., **Jeong, J.**, and Lee, J. (2012). Nonparametric Bayesian inference on quantile residual life function. *Statistics in Medicine* 31, 1972–1985.
25. \*Xu, Q. Christian, N., and **Jeong, J.** (2012). Maximum likelihood estimation of optimal weight function for weighted log-rank test. *Journal of Statistical Research* 46, 219-232.
26. Jeong, J. and Fine, JP. (2013). Nonparametric inference on cause specific quantile residual life. *Biometrical Journal* 55, 68-81.
27. Shi, H., Cheng, Y. and **Jeong, J.** (2013). Constrained parametric regression on cumulative incidence functions. *Biometrical Journal* 55, 82-96.
28. Ha, I., \*Christian, N., **Jeong, J.**, Park, J., and Lee, Y. (2014). Analysis of clustered competing risks data using subdistribution hazard models with multivariate frailties. *Statistical Methods in Medical Research*, DOI: 10.1177/0962280214526193.
29. Ha, I., Lee, M., Oh, S., **Jeong, J.** et al. (2014) Variable selection in subdistribution hazard frailty models with competing risks data. *Statistics in Medicine* 33(26), 4590–4604, DOI: 10.1002/sim.6257.
30. \*Christian, N., Il Do Ha, and **Jeong, J.** (2016). Hierarchical likelihood inference on clustered competing risks data. *Statistics in Medicine* 35(2), 251–267, DOI: 10.1002/sim.6628.
31. \*Haile, S. R., **Jeong, J.**, Chen, X., and Cheng, Y. (2016). A 3-parameter Gompertz distribution for survival data with competing risks, with an application to breast cancer data. *Journal of Applied Statistics*. DOI:10.1080/02664763.2015.1134450.
32. \*Lim, J-Y and **Jeong, J.** (2015). Cause-specific quantile residual life regression. *Statistical Methods in Medical Research*. DOI: 10.1177/0962280215592426.
33. \*Balmert, L. and **Jeong, J.** (2016). Nonparametric inference on quantile lost lifespan. *Biometrics* 73:252-259. DOI: 10.1111/biom.12555.
34. \*Tang, S., **Jeong, J.**, and Song, C. (2017). Fractional logistic regression for censored survival data. *Journal of Statistical Research* 51:101-114.
35. **Jeong, J.** (2018). Domain of inverse double arcsine transformation. *arXiv:1811.07827*.
36. Ha, I., Xiang, L., Peng, M., **Jeong, J.**, and Lee, Y. (2020). Frailty modelling approaches for semi-competing risks data. *Lifetime Data Analysis* 26:109–133.

37. \*Lopa, S. and **Jeong, J.** (2020). Inference on quantile residual life for length-biased survival. *Journal of Statistical Research* 54:65-82.
38. \*Balmert, L., Li, R., Peng, L., and **Jeong, J.** (2021). Quantile regression on inactivity time. *Statistical Methods in Medical Statistics* 30:1332-1346.  
DOI:10.1177/0962280221995977.
39. \*Jia, Y. and **Jeong, J.** (2021). Cause-specific quantile regression on life lost. *Statistics in Medicine* 40:1811-1824. DOI: 10.1002/sim.8871.
40. \*Di, Z. and **Jeong, J.** (2021). Inference on the win ratio for cluster-randomized semi-competing risk data. *Japanese Journal of Statistics and Data Science*.  
<https://doi.org/10.1007/s42081-021-00131-1>.
41. \*Jia, Y. and **Jeong, J.** (2021). Deep learning for quantile regression: DeepQuantreg. arXiv.2007.07056. *Journal of Computational and Graphical Statistics*.  
<https://doi.org/10.1016/j.csda.2021.107323>.

### Collaborative Papers

42. Fisher, B., **Jeong, J.**, Dignam, J., Anderson, S., Mamounas, E. P., Wickerham, L., and Wolmark, N. (2001). Findings from recent national surgical adjuvant breast and bowel project adjuvant studies in stage one breast cancer. *Journal of the National Cancer Institute Monographs*, 62-66.
43. Fisher, B, **Jeong, J.**, Anderson, S. Bryant, J., Fisher, E., and Wolmark Norman. (2002). Twenty-five year findings from a randomized clinical trial comparing radical mastectomy with total mastectomy and with total mastectomy followed by radiation therapy. *New England Journal of Medicine* vol. 347, 8, 567-575.
44. Kunkel, M., Reichert, T.E., Benz, P., Lehr, H.-A., **Jeong, J.**, Wieand, S., Bartenstein, P., Wagner, W., and Whiteside, T.L. (2003). Overexpression of Glut-1 and increased glucose metabolism in the tumor are associated with poor prognosis in oral squamous cell carcinoma. *Cancer* 97, 4, 1015-1024.
45. Fisher, B., Anderson, S., Bryant, B., Margolese, R.G., Deutsch, M., Fisher, E.R, **Jeong, J.**, and Wolmark, N. (2002). Twenty-Year follow up of a randomized trial comparing total mastectomy, lumpectomy, and lumpectomy with irradiation in the treatment of invasive breast cancer. *New England Journal of Medicine* 347, 16, 1233-1241.
46. Kunkel, M., Forster, G. J., Reichert, T. E., **Jeong, J.**, Benz, P., Bartenstein, P., Wagner, W., and Whiteside, TL. (2003). Detection of recurrence oral squamous cell carcinoma by {F}FDG-PET: Implications for clinical management and patients survival. *Cancer* 98, 10, 2257-2265.
47. Taghian, A., **Jeong, J.**, Anderson, S., Bryant, J., and Mamounas, T. (2004). Pattern of loco-regional failure in patients with breast cancer treated by mastectomy and chemotherapy (+/- tamoxifen) without radiation: results from five NSABP randomized trials. *Journal of Clinical Oncology* 22, 21, 4247-4254.



48. Fisher, B., **Jeong, J.**, Bryant, J., Mamounas, E.P., Dignam, J., and Wolmark, N. (2004). Treatment of lymph node-negative, estrogen receptor-positive breast cancer: long-term findings from National Surgical Adjuvant Breast and Bowel Project clinical trials. *Lancet* 364, 858-868.
49. Fisher, B, **Jeong, J.**, Anderson, S., et al. (2004). Treatment of lymph node-negative, estrogen receptor-negative breast cancer: Long-term findings from National Surgical Adjuvant Breast and Bowel Project clinical trials. *Journal of the National Cancer Institute* 96, 1823-1831.
50. Kunkel, M., Helisch, A., Reichert, T. E., **Jeong, J.**, et al. (2006). Clinical and Prognostic value of [18F]FDG-PET for surveillance of oral squamous cell carcinoma after surgical salvage therapy. *Oral Oncology* 42, 297-305.
51. Wapnir, I., Anderson, S., Mamounas, E., Geyer, C.E., Jr., **Jeong, J.**, Fisher, B., Wolmark, N. (2006). Survival after IBTR in NSABP Node Negative Protocols B-13, B-14, B-19, B-20 and B-23. *Journal of Clinical Oncology* 24, 2028-2037.
52. Taghian, A., **Jeong, J.**, Mamounas, E., Parada, D.M., Deutsch, M., Costantino, J.P., and Wolmark, N. (2006). Low loco-regional recurrence rate among node negative breast cancer patients with tumor size 5cm and larger treated by mastectomy with or without adjuvant systemic therapy and without radiotherapy: results from five National Surgical Adjuvant Breast and Bowel Project randomized clinical trials. *Journal of Clinical Oncology* 24, 3937-3932.
53. Kunkel, M., Moergel, M, Stockinger, M., **Jeong, J.** et al. (2007). Overexpression of Glut-1 is associated with resistance to radiotherapy and adverse prognosis in squamous cell carcinoma of the oral cavity. *Oral Oncology* 43, 796-803.
54. Mamounas, EP, Lembersky, B., **Jeong, J.** et al. (2006). NSABP B-42: A clinical trial to determine the efficacy of five years of letrozole compared with placebo in patients completing five years of hormonal therapy consisting of an aromatase inhibitor (AI) or tamoxifen followed by an AI in prolonging disease-free survival in postmenopausal women with hormone receptor-positive breast cancer. *Clinical Breast cancer* 7, 416-421.
55. Mamounas, E.P., **Jeong, J.**, Wickerham, L. et al. (2008). Benefit from exemestane as extended Adjuvant therapy after five years of tamoxifen: results from the NSABP B-33 trial. *Journal of Clinical Oncology* 26, 1965-1971.
56. Anderson, S., Wapnir I., Dignam J., Fisher B., Mamounas, T., **Jeong, J.**, et al. (2009). Prognosis after IBTR and locoregional recurrences in patients treated by breast conserving surgery in five NSABP node-negative protocols. *Journal of Clinical Oncology* 27, 2466-73.
57. Pusztai, L., **Jeong, J.**, Gong, Y., et al. (2009). Evaluation of Microtubule Associated Protein-Tau expression as prognostic and predictive marker in the NSABP-B 28 randomized clinical trial. *Journal of Clinical Oncology* 27, 4287-92.
58. Swain SM, **Jeong J.**, Geyer CE Jr., Costantino JP, Pajon ER, Fehrenbacher L, Atkins JN, Polikoff J, Vogel VG, Erban JK, Rastogi P, Livingston RB, Perez EA, Mamounas EP, Land SR, Ganz PA, and Wolmark N. (2010). Longer duration of treatment and chemotherapy-

- induced amenorrhea are associated with improved survival in early breast cancer. *New England Journal of Medicine* 362, 2053-65.
59. Mell, L.K., **Jeong, J.**, Nochols, M.A. et al. (2010). A risk score for competing mortality in stage I-II breast cancer. *Cancer*, 116:5365-5373.
  60. Yang, S.X., Costantino, J.P., Kim, C., Mamounas, E.P., Nguyen, D., **Jeong, J.** et al. (2010). Akt Phosphorylation at Ser473 predicts benefit to Paclitaxel chemotherapy in node-positive breast cancer. *Journal of Clinical Oncology* 28:2974-2981.
  61. Mell, L. and **Jeong, J.** (2010). Pitfalls of using composite primary end points in the presence of competing risks. *Journal of Clinical Oncology* 28:4297-4299.
  62. Swain, S., **Jeong, J.**, and Wolmark, N. (2010). Amenorrhea from breast cancer therapy- Not a matter of dose. *New England Journal of Medicine* 363:2268-2270.
  63. Jatoi, I., Anderson, W.F., **Jeong, J.**, and Redmond, C. (2011). Breast Cancer Adjuvant Therapy: Time to Consider its Time-Dependent Effects? *Journal of Clinical Oncology* 29(17) :2301-4.
  64. Perez, E., Romond, E., Suman, V, **Jeong, J.** et al. (2011). 4-year follow-up of trastuzumab plus adjuvant chemotherapy for operable HER2-positive breast cancer: Joint analysis of data from NCCTG N9831 and NSABP B-31. *Journal of Clinical Oncology* 29 : 3366-3373.
  65. Rose, B.S., **Jeong, J.**, Nath, S.K. et al. (2011). Population-based study of competing mortality in head and neck cancer, *Journal of Clinical Oncology* 29 :3503-3509.
  66. Farrell, T. C., Cario, C. L., Milanese, C., Vogt, A., **Jeong, J.**, Burton, E. A. (2011). Evaluation of spontaneous propulsive movement as a screening tool to detect rescue of Parkinsonism phenotypes in zebrafish models. *Neurobiology of Disease* 44(1):9-18.
  67. Jatoi, I., Anderson, W.F., **Jeong, J.**, and Redmond, C. (2011). Reply to J.J. Dignam. *Journal of Clinical Oncology*, 29(33):4470.
  68. Romond, E., **Jeong, J.**, Rastogi, P. et al. (2012). Seven year follow-up assessment of cardiac function in NSABP B-31, a randomized trial comparing doxorubicin and cyclophosphamide Followed by paclitaxel (ACP) with ACP plus trastuzumab as adjuvant therapy for patients with node-positive, Human Epidermal Growth Factor Receptor 2-positive breast cancer. *Journal of Clinical Oncology* 30, 3792-3799.
  69. Kirk, K., Shoykhet, M., **Jeong, J.** et al. (2012). Dysautonomia after pediatric brain injury in a rehabilitation setting. *Developmental Medicine & Child Neurology*, 54, 759-64
  70. Mell, L.K., Lau, S.K., Rose, B.S., and **Jeong, J.** (2012). Treatment effect (de)composition in cancer clinical trials. *Contemporary Clinical Trials* 33, 920–924.
  71. Shaikh, N., Hoberman, A., Kearney, D.H., Colborn, D.K., Kurs-Lasky, M., **Jeong, J.**, Haralam, M.A., Bowen, A., Flom, L.L., Wald, E.R. (2013). Signs and symptoms that differentiate acute sinusitis from viral upper respiratory tract infection. *Pediatr Infect Dis J* 32(10):1061-5. PMID: 23694838.
  72. Pogue-Geile, K.L., Kim, C., **Jeong, J.** et al. (2013). Predicting degree of benefit from adjuvant trastuzumab in NSABP Trial B-31. *Journal of the National Cancer Institute* 105, 1782-1788.

73. Shaikh, N., Hoberman, A., Colborn, D.K., Kearney, D.H., **Jeong, J.**, Kurs-Lasky, M., Barbadora, K.A., Bowen, A., Flom, L.L., Wald, E.R. (2013). Are nasopharyngeal cultures useful in diagnosis of acute bacterial sinusitis in children? *Clin Pediatr (Phila)* 52(12):1118-21. Epub 2013 Oct 17. PMID: 24137025.
74. Shaikh, N., Wald, E.R., **Jeong, J.**, Kurs-Lasky, M., Bowen, A., Flom, L.L., Hoberman, A. (2013). Predicting response to antimicrobial therapy in children with acute sinusitis. *J Pediatr* [Epub ahead of print] PMID: 24367985.
75. Park, B.-H., Kook, S., Lee, S.-B., **Jeong, J.** et al. (2013). An isoform of C/EBP beta, LIP, regulates CXCR4 expression and modulates breast cancer cell migration. *Journal of Biological Chemistry* 288, 28656-28667.
76. Nau, A., Pintar, C., Fisher, C., **Jeong, J.**, Jeong, K. (2014). A standardized obstacle course for the assessment of visual function in ultra low vision and artificial vision. *Journal of Visualized Experiments* 84, e51205 <http://dx.doi.org/10.3791/51205>.
77. Perez, E.A., Romond, E.H., Suman, V.J., **Jeong, J.**, et al. (2014). Trastuzumab plus adjuvant chemotherapy for HER2-positive breast cancer: Planned joint analysis of overall survival from NSABP B-31 and NCCTG N9831. *Journal of Clinical Oncology* 32(33):3744-52. doi: 10.1200/JCO.2014.55.5730. Epub 2014 Oct 20. PMID: 25332249.
78. Pogue-Geile, K.L., Song, N., **Jeong, J.** et al. (2015). Intrinsic subtypes, PIK3CA mutation, and the degree of benefit from adjuvant trastuzumab in NSABP trial B-31. *Journal of Clinical Oncology* 33(12):1340-7. doi: 10.1200/JCO.2014.56.2439. Epub 2015 Jan 5. PMID: 25559813.
79. Lu S.Y., Konig G., Yazer M.H., Brooks J.P., Chen Y.F., **Jeong J.**, Waters J.H. (2014). Stationary versus agitated storage of whole blood during acute normovolemic hemodilution. *Anesthesia & Analgesia* 118(2):264-8.
80. Gingo, M.R., Zhang, Y., Ghebrehawariat, K.B., **Jeong, J.**, Chu, Y., Yang, Q., Lucht, L., Hanna, D.B., Lazar, J.M., Gladwin, M.T., Morris, A. (2015). Elevated NT-pro-brain natriuretic peptide level is independently associated with all-cause mortality in HIV-infected women in the early and recent HAART eras in the Women's Interagency HIV Study cohort. *PLoS ONE* 10(3):e0123389. doi: 10.1371/journal.pone.0123389. eCollection 2015.
81. Zakeri, K., Rose, B.S., D'Amico, A.V., **Jeong, J.**, Mell, L.K. (2015). Competing events and costs of clinical trials: analysis of a randomized trial in prostate cancer. *Radiotherapy and Oncology* 115(1):114-9. doi: 10.1016/j.radonc.2015.03.018.
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- Trastuzumab in Patients With Node-Positive Breast Cancer With Tumors Overexpressing Human Epidermal Growth Factor Receptor 2. *Journal of Clinical Oncology* 35, no. 35 (December 10 2017) 3942-3948, DOI: 10.1200/JCO.2017.74.1165.
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  95. Lee S, Libman I, Hugan K, Kuk JL, **Jeong, J** et al. (2018). Effects of exercise modality on insulin resistance and ectopic fat in adolescents with overweight or obesity: A randomized trial. *Journal of Pediatrics*, Accepted.
  96. Mamounas EP, Bandos H, Lembersky BC, **Jeong J** et al. (2019). Use of letrozole after aromatase inhibitor-based therapy in postmenopausal breast cancer (NRG Oncology/NSABP B-42): a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet Oncology*, 20: 88–99.
  97. Delitto, A., ..., **Jeong, J.**, ..., Saper, R.B. (2020). Study protocol for targeted interventions to prevent chronic low back pain in high-risk patients: A multi-site pragmatic cluster randomized controlled trial (TARGET Trial). *Controlled Clinical Trials* 82:66-76.
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  100. Gillman A, Zhang D, Jarquin S, Karp JF, **Jeong J**, Wasan AD. (2020). Comparative effectiveness of embedded mental health services in pain management clinics versus standard care. *Pain Medicine* 21(5):978-991.
  101. Muthiah N, Zhang J, Remick M, Welch W, Sogawa Y, **Jeong J**, Abel TJ. (2020). Efficacy of vagus nerve stimulation for drug-resistant epilepsy in children age six and younger. *Epilepsy & Behavior*, [doi.org/10.1016/j.yebeh.2020.107373](https://doi.org/10.1016/j.yebeh.2020.107373).
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104. Alter B, ..., **Jeong J**, Wasan A. (2021). Hierarchical clustering by patient-reported pain distribution alone identifies distinct chronic pain subgroups differing by pain intensity, quality, and response to treatment. *PLOS One*, Accepted.
105. Muthiah N, ..., **Jeong J**, ..., White GE, Abel TJ. (2021). Comparison of traditional and closed loop vagus nerve stimulation for treatment of pediatric drug-resistant epilepsy: A propensity-matched retrospective cohort study. *Epilepsia*, Accepted.

## Manuscripts Submitted

1. \*Shuai, Y., **Jeong, J.**, and Cheng, Y. (2020). Multinomial logistic regression and its prediction accuracy for interval-censored competing risks data. *Biometrical Journal*. Under review.
2. Zakeri K, Rose BS, Shen H, **Jeong J**, Mell LK. (2020). Hindsight is 20/20: Implausible hypotheses in recent randomized trials for prostate cancer. *Under review*.
3. Wasan AD, Gillman AG, Yin Q, Jabbari F, **Jeong J**, Cooper GF. Personalized Pain Treatment: Random forest models trained with patient-reported outcomes and electronic medical records predict responses to chronic pain treatments. *Jama Network Open*. Under review.
4. Han L, ..., **Jeong J**, ..., Kühn B. (2021). Lower nuclear pore numbers in cardiomyocytes decrease nuclear import of signaling proteins, which restricts adaptive gene regulation, and improves cardiac stress response in vivo. *Developmental Cell*. Under review.
5. Mamounas EP, Bandos H, Rastogi P, Lembersky BC, Jeong J-H, Geyer CE Jr. et al. (2022). Ten-year results from NRG Oncology/NSABP B-42: Extended Letrozole Therapy in Postmenopausal Women with Hormone-receptor Positive, Early-stage Breast Cancer. *Journal of Clinical Oncology*. Under review.
6. \*Zhang D and **Jeong J**. Causal inference on win ratio for observational data with dependent subjects. *Statistics in Medicine*. Under review.
7. \*Jia Y and **Jeong J**. DeepCENT: Prediction of censored event time via deep learning. *Artificial Intelligence in Medicine*. Under review.
8. **Jeong J** and Jia Y. Causal deep learning for prediction of individual event times. *Statistics in Medicine*. Under review.
9. Lin H, Ha I, **Jeong J** and Lee Y. Joint AFT random-effect modeling approach for clustered competing-risks data. *Statistics in Medicine*. Under review.

## Manuscripts in Revision

1. Shen H, **Jeong J**, and Mell L. (2019). Proportional relative hazards model for competing risks data. *In revision*.

## Manuscripts in Preparation

1. \*Yin Q., **Jeong J**, Peddada SD, and Adibi J. Mediation analysis using semi-parametric shape-restricted regression for analyzing the effect of pesticide exposures on birth weight.

## Research Funding

Years Inclusive	Title	Source	Role
07/01/04-06/30/07	Statistical Modeling on Life Expectancy of Breast Cancer Patients	Department of Defense	PI
5/1/2009-12/31/2021	Phase III Trial Comparing the NSABP Foundation, B-46-I Study (PI: Yothers)	NIH	Co-I
7/12/2016 – 5/31/2022	University of Pittsburgh Clinical and Translational Sciences Institute: Research Methods (BERD) Component (PI: Reis)	NIH	Co-I
9/26/2019 – 8/31/2024	Proof of Concept Study to Treat Negative Affect in Chronic Lower Back Pain (PI: Wasan)	NIH	Co-I
9/1/2020 – 8/31/2022	Clinical Development and Evaluation of a Deep Learning Approach to Improve Diagnostic Accuracy of Middle Ear Infections for More Judicious Antibiotic Use (PI: Shelton/Hoberman)	NIH	Co-I
4/1/2021 – 12/31/2021	Medical Marijuana Treatment Outcomes for Pain, Sleep, and Anxiety Using Real-World Evidence (PI: Wasan)	Goodblend Pennsylvan	Co-I

## Teaching and Student Mentorship

### Courses Taught

BIOST 2043: Introduction to Statistical Theory I

BIOST 2044: Introduction to Statistical Theory II  
 BIOST 2049: Applied Regression Analysis  
 BIOST 2051: Statistical Estimation Theory  
 BIOST 2054/STAT 2261: Survival Analysis  
 BIOST 2066: Applied Survival Analysis  
 BIOST 2086: Mixed Models

## Student Advising

Name of Student	Degree Awarded, Year	Title
Paul Ricci	M.S., 2001	An extension of parametric modeling in survival analysis
Truc Truong	M.S., 2004	Estimation of risk patterns over age by frailty among breast cancer patients
Bintu Sherif	M.S., 2007	A comparison of Kaplan-Meier and cumulative incidence estimates in the presence or absence of competing risks in breast cancer data
Shaowu Tang	M.S., 2010	Nonparametric Tests for Quantile Functions for Censored Survival Data
Qing Xu	Ph.D., 2007	Inference on survival data under nonproportional hazards ( <u>Mathematical Statistician, Division of Biometrics V, Center for Drug Evaluation and Research (CDER), FDA</u> )
Hanna Bandos	Ph.D., 2007	Inference on Median Residual Life Function in Censored Survival Data ( <u>Research Assistant Professor, Department of Biostatistics, University of Pittsburgh</u> )
Sarah Haile	Ph.D., 2008	Inference on Competing Risks in Breast Cancer Data ( <u>Research Associate, Department of Biostatistics, University of Zürich, Switzerland</u> )
Nicholas Christian	Ph.D., 2011	Hierarchical Likelihood Inference on Clustered Competing Risks Data ( <u>Senior statistician, PNC Bank, Pittsburgh</u> )



<b>Name of Student</b>	<b>Degree Awarded, Year</b>	<b>Title</b>
Jeong-Youn Lim	Ph.D., 2011	Inference on Censored Survival Data under Competing Risks ( <u>Senior Statistician, Division of Biostatistics, Oregon Health and Sciences University</u> )
Kyung-Ah (Kelly) Im	Ph.D., 2012	A Stochastic EM Algorithm for G-Rho Family Accelerated Failure Time Model with Random Effects
Wen-Chi Wu	Ph.D., 2014	Inference on Conditional Quantile Residual Life for Censored Survival Data ( <u>Senior Scientist at Merck</u> )
Samia Lopa	Ph.D., 2014	Inference on Quantile Residual Life for Length-Biased Survival Data ( <u>Senior Biostatistician, Department of Urology, University of Pittsburgh School of Medicine</u> )
Kidane Ghebrehawariat	Ph.D., 2015	Parametric inference on quantile residual life ( <u>Online Tutor, Wyzant</u> )
Lauren Balmert	Ph.D., 2017	Statistical inference on life lost ( <u>Assistant Professor, Department of Preventive Medicine, Northwestern University</u> )
Di Zhang	Ph.D., 2019	Statistical inference on cluster-randomized semi-competing risks data ( <u>Senior Statistician, Post-marketing division, FDA</u> )
Qing Yin	Ph.D., 2021	Shape detection and mediation analysis using semi-parametric shape-restricted regression spline with applications ( <u>Senior Statistician, CDRH, FDA</u> )
Yichen Jia	Ph.D. 2022	Quantile regression with random effects for time-to-event data

## Journal Referees

American Journal of Epidemiology  
Annals of the Institute of Statistical Mathematics  
Biometrical Journal  
Biometrics  
Biometrika  
Biostatistics

Cancer  
Circulation  
Cleft Palate Cranio-facial Journal  
Computational Statistics  
Computational Statistics and Data Analysis  
Communications in Statistics-Simulation and Computation  
Communications in Statistics-Theory and Methods  
Controlled Clinical Trials  
International Journal of Biostatistics  
Journal of American Statistical Association  
Journal of Clinical Oncology  
Journal of Machine Learning Research  
Journal of Nonparametric Statistics  
Journal of the Royal Statistical Society  
Journal of the National Cancer Institute  
Journal of Statistical Planning and Inference  
Journal of Statistical Research  
Lifetime Data Analysis  
Medical and Pediatric Oncology  
Metron  
Nature Communications  
npj Digital Medicine  
Sankhya  
Scandinavian Journal of Statistics  
Scientific Reports  
Statistica Sinica  
Statistics and Probability Letters  
Statistics in Medicine