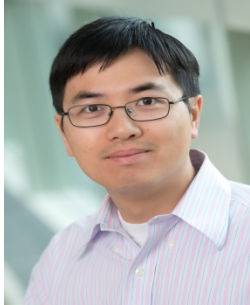


## **Xiaodong Luo**



**[PRESENT POSITION]** Director, Statistical Sciences and Modeling, Sanofi USA, Bridgewater, NJ, USA.

**[FORMER POSITION]** Associate Director (2016-2018), Statistical Sciences and Modeling, Sanofi USA, Bridgewater, NJ, USA; Director for Data Management and Statistics Core (2010-2015), Alzheimer's Disease Research Center, Icahn School of Medicine at Mount Sinai, New York, NY, USA; Assistant Professor (2006-2015), Department of Psychiatry, Icahn School of Medicine at Mount Sinai, New York, NY, USA.

**[DEGREES]** Ph.D. in Biostatistics, Columbia University, 2006; M.Phil. in Biostatistics, Columbia University, 2004; B.S. in Statistics, Renmin University of China, 2000.

**[FILED OF MAJOR STATISTICAL ACTIVITIES]** Thirteen years of experience in academia and industry, with research and applications in areas including oncology, Alzheimer's disease, cardiovascular diseases, immunology, psychiatric disorders, epidemiology and design and analysis of clinical trials. Dr. Luo's statistical methodology research includes survival analysis, missing data handling, longitudinal data analysis, analysis of biased sampling data, adaptive design and analysis of composite endpoints.

**[SELECTED PUBLICATIONS]** Dr. Luo has published over 40 statistical methodology and statistical application papers in peer-reviewed journals including *Biometrika*, *JASA*, *Biometrics*, *Statistics in Medicine*, *Journal of Statistical Planning and Inference*, *Contemporary Clinical Trials*, *Statistics in Biopharmaceutical Research* and various medical journals (see the list in the back)

**[ICSA ACTIVITIES]** Dr. Luo was a member of the Organizing Committee and Chair of the Registration Committee for the 2018 ICSA Joint Applied Statistics Symposium. Dr. Luo has served as session organizer, speaker and discussant in multiple ICSA conferences.

**[RELATED PROFESSIONAL ACTIVITIES]** Dr. Luo has served as a referee for peer-reviewed statistical journals such as *JASA*, *Biometrika*, *Biometrics*, *Biostatistics*, *Lifetime Data Analysis*, *Statistical Science*, *Statistics in Medicine*, *Journal of Biopharmaceutical Statistics*,

Contemporary Clinical Trials, Statistica Sinica, Annals of the Institute of Statistical Mathematics, Pharmaceutical Statistics, TEST, Communications in Statistics, Statistics in Biopharmaceutical Research, Scandinavian Journal of Statistics, Statistical Papers. Dr. Luo also served a statistical reviewer for medical journals such as Stroke and Journal of Alzheimer's Disease.

**[STATEMENT]** I am very honored to be nominated by the ICSA Nomination and Election Committee as a candidate for a member of the Board of Directors.

Over the years, I have participated and enjoyed many ICSA activities. In return, I believe this is the time for me to serve for the members of ICSA. If elected, I will be in a better position to help the association to make decisions to better serve our members in their respective fields. The experiences from both academia and industry put me in a unique position to listen to the voices from both worlds, which are sometimes disconnected.

I believe most (if not all) of the important and difficult statistical problems come from applications. One of the most important areas is clinical trials. The field statisticians are often able to identify problems and issues but oftentimes only have time and resource to provide temporary or limited solutions. The statisticians at universities sometimes have to deal with difficult theoretical problems of limited practical use. Having large bodies of members from both worlds in ICSA, we need to provide a more viable bridge to connect them. This effort will benefit both groups. If elected, I will work hard to establish and strengthen the connection. Dear fellow ICSA members, your support and understanding to make this goal as a reality through my service on the ICSA Board of Directors will be well-appreciated.

## [SELECTED PUBLICATIONS]

### Statistical Methodology

1. Luo X, Tsai W-Y and Xu Q (2009). Pseudo-partial likelihood estimators for Cox regression model with missing covariates. *Biometrika*. 96, 617-633.
2. Luo X and Tsai W-Y (2009). Nonparametric estimation of right-censored length-biased data: A pseudo-partial likelihood approach. *Biometrika*. 96, 873-886.
3. Xu Q, Paik MC, Luo X and Tsai W-Y (2009). Reweighting estimators for Cox regression with missing covariates. *Journal of the American Statistical Association*. 104, 1155-1167.
4. Luo X and Tsai W-Y (2009). Nonparametric estimation of bivariate distribution under right truncation with application to panic disorder. *Journal of Statistical Planning and Inference*. 139, 1559-1568.
5. Luo X and Tsai W-Y (2011). Conditional Nelson-Aalen and Kaplan-Meier estimators with Muller-Wang boundary kernel. In *Recent Advances in Biostatistics, False Discovery, Survival Analysis and Other Topics (vol.4, Series in Biostatistics)*, WorldScientific. pp. 61-86. DOI: [https://doi.org/10.1142/9789814329804\\_0004](https://doi.org/10.1142/9789814329804_0004)
6. Luo X and Tsai W-Y (2012). A proportional likelihood ratio model. *Biometrika*. 99, 211-222.
7. Luo X and Tsai W-Y (2015). Moment-type estimators for the proportional likelihood ratio model with longitudinal data. *Biometrika*. 102, 121-134.
8. Luo X, Tian H, Mohanty S and Tsai W-Y (2015). An alternative approach to confidence interval estimation for the win ratio statistic. *Biometrics*. 71, 139-145.
9. Luo X, Qiu J, Bai S and Tian H (2017). Weighted win loss approach for analyzing prioritized outcomes. *Statistics in Medicine*. 36, 2452-2465.
10. Qiu J, Luo X, Bai S, Tian H and Mikailov M (2017). WWR: An R package for analyzing prioritized outcomes. *Journal of Medical Statistics and Informatics*. DOI: <http://dx.doi.org/10.7243/2053-7662-5-4>
11. Tsai W-Y., Luo X., Crowley J. (2017). The Probability of Being in Response Function and Its Applications. In: Matsui S., Crowley J. (eds) *Frontiers of Biostatistical Methods and Applications in Clinical Oncology*. Springer, Singapore. DOI: [https://doi.org/10.1007/978-981-10-0126-0\\_10](https://doi.org/10.1007/978-981-10-0126-0_10)
12. Quan H, Qi L, Luo X and Darchy L (2018). Considerations of multiple imputation approaches for handling missing data in clinical trials. *Contemporary Clinical Trials*. 70, 62-71.
13. Luo X and Quan H (2018). An adaptive timeline determination of survival trials. *Statistics in Biopharmaceutical Research*. 10, 204-212. DOI: <https://doi.org/10.1080/19466315.2018.1459311>.
14. Luo X, Tian H, Mohanty S and Tsai W-Y (2018). Rejoinder to “on the alternative hypotheses for the win ratio”. *Biometrics*. DOI: <https://doi.org/10.1111/biom.12953>.
15. Luo X, Mao X, Chen X, Qiu J, Bai S and Quan H (2019). Design and monitoring of survival trials in complex scenarios. *Statistics in Medicine*. 38, 192-209.
16. Quan H, Luo X, Zhou T and Zhao PL (2019). Seamless phase II/III/IIIb clinical trial designs with different endpoints for different phases. *Communications in Statistics-Theory and Methods*. DOI: <https://doi.org/10.1080/03610926.2019.1618871>.

17. Luo X, Huang B and Quan H (2019). Design and monitoring of survival trials based on restricted mean survival times. *Clinical Trials*. 16, 616-625.
18. Quan H, Zhang B, Lan Y, Luo X and Chen X (2019). Bayesian hypothesis testing with frequentist characteristics in clinical trials. *Contemporary Clinical Trials*. DOI: <https://doi.org/10.1016/j.cct.2019.105858>.
19. Quan H, Chen X, Lan Y, Luo X and Kubiak R (2020). Applications of Bayesian analysis to proof-of-concept trial planning and decision making. *Pharmaceutical Statistics*. DOI: <https://doi.org/10.1002/pst.1985>.
20. Luo X and Quan H (2020). Some meaningful weighted Log-rank and weighted win loss statistics. *Statistics in Biosciences*. DOI: <https://doi.org/10.1007/s12561-020-09273-4>.
21. Lin RS, Lin J, Roychoudhury S, Anderson KM, Hu T, Huang B, Leon LF, Liao J, Liu R, Luo X, Mukhopadhyay P, Qin R, Tatsuoka K, Wang X, Wang Y, Zhu J, Chen T-T, Iacona R and the Cross-Pharma Non-proportional Hazards Working Group (2020). Alternative analysis methods for time to event endpoints under nonproportional hazards: a comparative analysis. *Statistics in Biopharmaceutical Research*. 12, 187-198.

### Statistical Application

1. Wright CB, Elkind MS, Luo X, Paik MC, Sacco RL. Reported alcohol consumption and cognitive decline: The northern Manhattan study. *Neuroepidemiology*. 2006;27(4):201-7. Silverman JM, Schmeidler J, Schnaider-Beeri M, Grossman HT, Luo X, West R, Lally RC, Wang JY. Increased longevity in offspring of mothers with Alzheimer's disease. *Am J Med Genet B Neuropsychiatr Genet*. 2008 Sep 5;147B(6):754-8.
2. Sano M, Jacobs D, Andrews H, Bell K, Graff-Radford N, Lucas J, Rabins P, Bolla K, Tsai WY, Cross P, Andrews K, Costa R, Luo X. A multi-center, randomized, double blind placebo-controlled trial of estrogens to prevent Alzheimer's disease and loss of memory in women: design and baseline characteristics. *Clin Trials*. 2008;5(5):523-33.
3. Nickolas TL, Khatri M, Boden-Albala B, Kiryluk K, Luo X, Gervasi-Franklin P, Paik M, Sacco RL. The association between kidney disease and cardiovascular risk in a multiethnic cohort: findings from the Northern Manhattan Study (NOMAS). *Stroke*. 2008 Oct;39(10):2876-9.
4. Anello A, Reichenberg A, Luo X, Schmeidler J, Hollander E, Smith CJ, Puleo CM, Kryzak LA, Silverman JM. Brief report: parental age and the sex ratio in autism. *J Autism Dev Disord*. 2009 Oct;39(10):1487-92. Epub 2009 May 19.
5. Guerrero-Berroa E, Luo X, Schmeidler J, Rapp MA, Dahlman K, Grossman HT, Haroutunian V, Beeri MS. The MMSE orientation for time domain is a strong predictor of subsequent cognitive decline in the elderly. *Int J Geriatr Psychiatry*. 2009 Dec;24(12):1429-37.
6. Mitsis EM, Jacobs D, Luo X, Andrews H, Andrews K, Sano M. Evaluating cognition in an elderly cohort via telephone assessment. *Int J Geriatr Psychiatry*. 2010 May;25(5):531-9.
7. Wang S, Jacobs D, Andrews H, Tsai WY, Luo X, Bergmann C, Sano M. Cardiovascular risk and memory in non-demented elderly women. *Neurobiol Aging*. 2010 Jul;31(7):1250-3
8. Ravona-Springer R, Luo X, Schmeidler J, Wysocki M, Lesser G, Rapp M, Dahlman K, Grossman H, Haroutunian V, Schnaider Beeri M. Diabetes is associated with increased

- rate of cognitive decline in questionably demented elderly. *Dement Geriatr Cogn Disord.* 2010;29(1):68-74.
9. Wysocki M, Luo X, Schmeidler J, Dahlman K, Lesser GT, Grossman H, Haroutunian V, Schnaider-Beeri M. Hypertension is associated with cognitive decline in elderly at high risk of dementia. *American Journal of Geriatric Psychiatry* 2012 Feb; 20(2): 179-87.
  10. Nandipati, S., Luo, X., Schimming, C. Grossman, HT. and Sano, M. Cognition in non-demented diabetic older adults. *Current Aging Science* 2012 5(2): 131-5.
  11. Perlick DA, Straits-Troster K, Strauss JL, Norell D, Tupler LA, Levine B, Luo X, Holman C, Marcus T, Dixon LB, Dyck DG. Implementation of multifamily group treatment for veterans with traumatic brain injury. *Psychiatr Serv.* 2013 Jun;64(6):534-40.
  12. Wang S, Luo X, Barnes D, Sano M, Yaffe K. Physical Activity and Risk of Cognitive Impairment Among Oldest-Old Women. *Am J Geriatr Psychiatry.* 2013 Jul 3.pii: S1064-7481(13)
  13. Sewell MC, Luo X, Neugroschl J, Sano M. Detection of mild cognitive impairment and early stage dementia with an audio-recorded cognitive scale. *Int Psychogeriatr.* 2013 Aug;25(8):1325-33.
  14. Benson G, de Felipe J, Luo X, Sano M. Performance of Spanish-speaking community-dwelling elders in the United States on the Uniform Data Set. *Alzheimers Dement.* 2014 Jan 10.
  15. Neugroschl J, Sano M, Luo X and Sewell M. Why they stay: understanding research participant retention in studies of aging, cognitive impairment and dementia. *J Gerontol Geriatr Res.* 2014 Oct;3(4). pii: 1000170.
  16. Deiner S, Luo X, Silverstein JH and Sano M. Can Intraoperative Processed EEG Predict Postoperative Cognitive Dysfunction in the Elderly? *Clin Ther.* 2015 Dec 1;37(12):2700-5. doi: 10.1016/j.clinthera.2015.11.004. Epub 2015 Nov 24. PubMed PMID: 26621628; PubMed Central PMCID: PMC4695244.
  17. Neugroschl J, Sewell M, De La Fuente A, Umpierre M, Luo X and Sano M. Attitudes and Perceptions of Research in Aging and Dementia in an Urban Minority Population. *J Alzheimers Dis.* 2016 Apr 23;53(1):69-72. doi: 10.3233/JAD-151072.
  18. Schimming C, Luo X, Zhang C and Sano M. Cognitive performance of older adults in a specialized diabetes clinic. *J Diabetes.* 2017 Oct; 9(10): 929-935.
  19. Deiner S, Luo X, Lin HM, Sessler DI, Saager L, Sieber FE, Lee HB, Sano M; and the Dexlirium Writing Group, Jankowski C, Bergese SD, Candiotti K, Flaherty JH, Arora H, Shander A, Rock P. (2017). Intraoperative Infusion of Dexmedetomidine for Prevention of Postoperative Delirium and Cognitive Dysfunction in Elderly Patients Undergoing Major Elective Noncardiac Surgery: A Randomized Clinical Trial. *JAMA Surgery* Aug 16; 152(8)
  20. Li C, Neugroschl J, Luo X, Zhu C, Aisen P, Ferris S, Sano M. (2017). The Utility of the Cognitive Function Instrument (CFI) to Detect Cognitive Decline in Non-Demented Older Adults. *Journal of Alzheimers Disease.* 60(2): 427-437.
  21. Perlick DA, Jackson C, Grier S, Huntington B, Aronson A, Luo X, Miklowitz DJ. (2018). Randomized trial comparing caregiver-only family-focused treatment to standard health education on the 6-month outcome of bipolar disorder. *Bipolar Disorder.* Doi:10.1111/bdi.12621.