Peter N. Murakami

Johns Hopkins Department of Biostatistics
615 North Wolfe Street
Baltimore, Maryland 21205

Phone: 410-814-8177
peter.murakami@gmail.com
www.biostat.jhsph.edu/~pmurakam

Education

Master of Science, Biostatistics, The Johns Hopkins Bloomberg School of Public Health, 2008
Advisor: Dr. Rafael Irizarry, Ph.D., Professor of Biostatistics

B.A. Economics, The University of Illinois, Champaign-Urbana, 2005
B.A. Finance, The University of Illinois, Champaign-Urbana, 2005
Minor in Mathematics
Edmund J. James Scholar
Mitsui USA Scholarship for Study Abroad, Morocco, 2003
International Programs and Studies (IPS) General Merit Scholarship, 2003

Employment

Hawaii State Department of Health Honolulu, HI
Disease Outbreak Control Division
Disease Investigation Branch
Epidemiological Specialist October 2014-June 2016

Engaged in the identification, prevention, and control of communicable diseases through investigative epidemiological activities
Educated and motivate patients, contacts, and suspects of communicable disease to comply with current public health regulations
Conducted medical, social, cultural and psychological aspects of field interviewing and investigation in obtaining source spread information
Performed a variety of informational-educational activities for the prevention of communicable diseases in the community
Conducted state-wide Hepatitis C disease surveillance
Supervised data analytical activities of Department of Health student interns

Johns Hopkins School of Public Health Baltimore, MD
Biostatistics Center
Biostatistician April 2008-July 2014

Provided key biostatistical consultations and actively collaborated on the design, conduct, analysis, monitoring, evaluation, interpretation, and reporting of diverse biomedical and public health research projects and projects pertaining to The Johns Hopkins University and Hospital operations and administration as a member of diverse, multi-disciplinary teams of researchers and university and hospital personnel
Serve on multi-disciplinary Johns Hopkins Hospital study teams as the lead statistician on institution-wide initiatives to improve patient safety, compensation equity, staff recruitment and retention, and on-time immunization delivery

Johns Hopkins School of Public Health Baltimore, MD
Department of Mental Health
Biostatistics Research Associate October 2013-July 2014

Collaborated on the development of biostatistical methods for mental health and education research, with a particular focus on those involving the use of propensity score methods in non-experimental studies

Johns Hopkins School of Medicine Baltimore, MD
Center for Epigenetics
Biostatistician October 2008-November 2012
Collaborated with large teams of interdisciplinary investigators in high-throughput medical research, independently formulating and performing complex statistical analyses to further research into the epigenetic basis of cancer, schizophrenia, autism, depression, and other diseases
Created, reviewed, and implemented automated analysis programs that prevented expensive errors in product procurement and contributed to reductions in costs, improvements in organizational operating efficiency, and increased user satisfaction
Provided statistical and computational guidance and training to research collaborators
Coordinated communication between non-technical team members and computing cluster system administrators

Teaching/Training Experience

Teaching Assistant Spring 2008
Quantitative Analysis of Clinical Data Johns Hopkins School of Public Health

Teaching Assistant Spring 2008
Introduction To The SAS Statistical Package Johns Hopkins School of Public Health

Teaching Assistant Fall 2007
Statistical Methods in Public Health II Johns Hopkins School of Public Health

Teaching Assistant Fall 2007
Statistical Methods in Public Health I Johns Hopkins School of Public Health

Biostatistics Tutor 2007-2008
Johns Hopkins School of Public Health

Mathematics Tutor 2004-2005
Division of Intercollegiate Athletics University of Illinois, Champaign-Urbana

Internships

Laboratory Research Assistant Summer 2005
Summer Program for Undergraduate Research University of Oregon, Eugene
Conducted several lines of laboratory-based research to identify and determine the function of hypoxia-response genes in Drosophila melanogaster in the molecular genetics laboratory of Dr. Eric Johnson

Credit Analyst Intern Summer 2003
Merrill Lynch & Co., Inc. Chicago, Illinois

Publications

Qing, P., Jampel, H., Murakami, P., Ramulu, P., Schwartz, G., Cute, D., Yassine, D., & Stark, W. (2016). Clinical Outcomes of Gamma-Irradiated Sterile Cornea in Aqueous Drainage Device Surgery: A Multicenter Retrospective Study. *Eye*, in press.

Thapa, K., Sanghvi, H., Rawlins, B., Karki, Y. B., Regmi, K., Aryal, S., Murakami, P., Suhowatsky, S., et al. (2016). Coverage, compliance, acceptability and feasibility of a program to prevent pre-eclampsia and eclampsia through calcium supplementation for pregnant women: an operations research study in one district of Nepal. *BMC Pregnancy and Childbirth*, 16(1), 241.

Daugherty Biddison, E. L., Paine, L., Murakami, P., Herzke, C., & Weaver, S. (2016). Associations

between safety culture and employee engagement over time: a retrospective analysis. *BMJ Quality and Safety*, 25(1), 31-37.

Mitchell, C. J., Getnet, D., Kim, M. S., Manda, S. S., Kumar, P., Huang, T. C., Murakami, P., Wu, X., et al. (2015). A multi-omic analysis of human nave CD4+ T cells. *BMC systems biology*, 9(1), 75.

McClellan, S., Soiberman, U., Gehlbach, P., Murakami, P., & Stark, W. (2015). Outcomes Associated With Concurrent Iris-Sutured Intraocular Lens Placement and Subluxated Crystalline Lens Extraction. *JAMA ophthalmology*, 133(8), 867-873.

Soiberman, U., Gehlbach, P., Murakami, P., & Stark, W. (2015). Pars plana vitrectomy and iris suture fixation of posteriorly dislocated intraocular lenses. *Journal of Cataract & Refractive Surgery*, 41(7), 1454-1460.

Soiberman, U., Pan, Q., Daoud, Y., Murakami, P., & Stark, W. J. (2015). Iris suture fixation of subluxated intraocular lenses. *American journal of ophthalmology*, 159(2), 353-359.

Webb-Vargas, Y., Rudolph, K. E., Lenis, D., Murakami, P., & Stuart, E. A. (2015). An imputation-based solution to using mismeasured covariates in propensity score analysis. *Statistical methods in medical research*, 0962280215588771.

Jung, N., Dai, B., Gentles, A. J., Murakami, P., Majeti, R., & Feinberg, A. P. (2014). Epigenetic Signature of Leukemia Stem Cells Defines Subgroups Associated with Clinical Outcome and Cell of Origin in AML. *Blood*, 124(21), 2147-2147.

Ellison, T. A., Wolfgang, C. L., Shi, C., Cameron, J. L., Murakami, P., Mun, L. J., Choti, M. et al. (2014). A single institutions 26-year experience with nonfunctional pancreatic neuroendocrine tumors: a validation of current staging systems and a new prognostic nomogram. *Annals of surgery*, 259(2), 204.

Bundy, D., Persing, N., Solomon, B., King, T., Murakami, P., Thompson, R., Miller, M., et al. (2013). Improving immunization delivery using an electronic health record: the ImmProve project. *Academic pediatrics*, 13(5), 458-465.

Glen, D. R., Murakami, P., & Nunez, J. S. (2013). Symptom index P?value and symptom sensitivity index P?value to determine symptom association between apnea and reflux in premature infants at term. *Diseases of the Esophagus*, 26(6), 549-556.

Goodwin, H., Gill, R., Murakami, P., Thompson, C., Lewin, J., & Mirski, M. (2013). Dexmedetomidine preserves attention/calculation when used for cooperative and short-term intensive care unit sedation. *Journal of critical care*, 28(6), 1113-e7.

Sabunciyan, S., Aryee, M., Irizarry, R., Rongione, M., Webster, M., Kaufman, W., Murakami, P., Potash, J., et al. (2012). Genome-wide DNA methylation scan in major depressive disorder. *PloS one*, 7(4), e34451.

Jaffe, A. E., Murakami, P., Lee, H., Leek, J. T., Fallin, M. D., Feinberg, A. P., & Irizarry, R. A. (2012). Bump hunting to identify differentially methylated regions in epigenetic epidemiology studies. *International journal of epidemiology*, 41(1), 200-209.

Best, S. R., Ha, P. K., Blanco, R. G., Saunders, J. R., Zinreich, E. S., Levine, M. A., Murakami, P., et al. (2011). Factors associated with pharyngoesophageal stricture in patients treated with concurrent chemotherapy and radiation therapy for oropharyngeal squamous cell carcinoma. *Head*

& neck, 33(12), 1727-1734.

Lee, R. S., Tamashiro, K. L., Aryee, M. J., Murakami, P., Seifuddin, F., Herb, B., Potash, J. B., et al. (2011). Adaptation of the CHARM DNA methylation platform for the rat genome reveals novel brain region-specific differences. *Epigenetics*, 6(11), 1378-1390.

Boland, M. V., McCoy, A. N., Quigley, H. A., Miller, N. R., Subramanian, P. S., Ramulu, P. Y., Murakami, P., & Danesh-Meyer, H. V. (2011). Evaluation of an algorithm for detecting visual field defects due to chiasmal and postchiasmal lesions: the neurological hemifield test. *Investigative ophthalmology & visual science*, 52(11), 7959-7965.

McCall, M. N., Murakami, P., Lukk, M., Huber, W., & Irizarry, R. A. (2011). Assessing affymetrix GeneChip microarray quality. *BMC bioinformatics*, 12(1), 1.

Ji, H., Ehrlich, L. I., Seita, J., Murakami, P., Doi, A., Lindau, P., Rossi, D. J., et al. (2010). Comprehensive methylome map of lineage commitment from haematopoietic progenitors. *Nature*, 467(7313), 338-342.

Kim, K., Doi, A., Wen, B., Ng, K., Zhao, R., Cahan, P., Murakami, P., Yabuuchi, A., et al. (2010). Epigenetic memory in induced pluripotent stem cells. *Nature*, 467(7313), 285-290.

Feinberg, A. P., Irizarry, R. A., Fradin, D., Aryee, M. J., Murakami, P., Aspelund, T., Fallin, M. D., et al. (2010). Personalized epigenomic signatures that are stable over time and covary with body mass index. *Science translational medicine*, 2(49): 49-67.

Mirski, M. A., Lewin III, J. J., LeDroux, S., Thompson, C., Murakami, P., Zink, E. K., & Griswold, M. (2010). Cognitive improvement during continuous sedation in critically ill, awake and responsive patients: the Acute Neurological ICU Sedation Trial (ANIST). *Intensive care medicine*, 36(9), 1505-1513.

Wang, G. C., Kao, W. H. L., Murakami, P., Xue, Q. L., Chiou, R. B., Detrick, B., Fried, L. P., et al. (2010). Cytomegalovirus infection and the risk of mortality and frailty in older women: a prospective observational cohort study. *American journal of epidemiology*, 171(10): 1144-52.

Doi, A., Park, I. H., Wen, B., Murakami, P., Aryee, M. J., Irizarry, R., Miller, J., et al. (2009). Differential methylation of tissue-and cancer-specific CpG island shores distinguishes human induced pluripotent stem cells, embryonic stem cells and fibroblasts. *Nature genetics*, 41(12), 1350-1353.

Miller, C. L., Murakami, P., Ruczinski, I., Ross, R. G., Sinkus, M., Sullivan, B., & Leonard, S. (2009). Two complex genotypes relevant to the kynurenine pathway and melanotropin function show association with schizophrenia and bipolar disorder. *Schizophrenia research*, 113(2), 259-267.

Scientific Software

Aryee M, Murakami P, Jaffee H, Yegnasubramanian S, & Irizarry R (2011): `Charm`, Analysis of DNA methylation data from CHARM microarrays. (R package)

Presentations

Murakami, P., Elm Jr., J., Viray, M., Park, S.Y. "Evaluating the Use of Electronic Laboratory Reporting Data to Achieve Feasible Surveillance: Hepatitis C in Hawaii." Council of State and Territorial Epidemiologists Annual Meeting, June 15, 2015.

Pillari, M., Murakami, P., Paine, L., Weaver, S., Kent, P., Sawyer, M., Daugherty, E.L. "Identifying Hospital-Wide Specific Safety Concerns: Large Scale use of the 2-Question Survey." Poster

presentation. Johns Hopkins Patient Safety Summit, June 6, 2014.

Schafer, E., Murakami, P., Figueroa, M., Melnick, A., Negi, S., & Brown, P. "Lineage and age differences in the methylome of MLL-r leukemias." Clinical and Translational Science. Poster presentation, Translational Science 2012 Annual Meeting.

Murakami, P. & Irizarry, R. "Evaluation of Metrics for Assessment of Microarray Data Quality," International Meeting of the Microarray and Gene Expression Data Society, September 2, 2008.

Computing

R, STATA, SAS, HTML/Css/Javascript, MS Excel, MS PowerPoint, MS Word, MS Access, SQL, UNIX, Subversion, Git, Python, LaTeX

Volunteering

Thread Baltimore, MD
Tutor and mentor October 2008-July 2014
Served as lead tutor and mentor for high school students at Paul Laurence Dunbar High School in Baltimore, MD, following individual students from sophomore year through graduation and beyond. Designed and maintained organization website

Blue Water Baltimore/TreeBaltimore Baltimore, MD
TreeKeeper September 2010-July 2014
Certified TreeKeeper with TreeBaltimore
Active volunteer with Blue Water Baltimore, participating in and leading tree plantings throughout the city to improve local river and harbor water quality.

Joseph Richey Hospice Baltimore, MD
Volunteer March 2013-July 2014
Completed hospice volunteer training course
Sat with hospice residents (at least 2 hours/week)