Curriculum Vitae

Joseph G. Ibrahim

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Date of Birth: March $2,\,1962$

Citizenship: U.S.A.

EDUCATION:

1983	Mathematics	B.S.	University of Minnesota
1988	Statistics	M.S.	University of Minnesota
1988	Statistics	Ph.D.	University of Minnesota

ACADEMIC APPOINTMENTS:

2006 – present	Alumni Distinguished Professor (with tenure), Department of Biostatis-
	tics, University of North Carolina at Chapel Hill
2009 - present	Joint Appointment in the Department of Statistics and Operations
	Research (STOR), University of North Carolina at Chapel Hill
2007 - present	Director of the Center for Innovative Clinical Trials, University of
	North Carolina at Chapel Hill
2006-present	Biostatistics Core Faculty Director, Lineberger Comprehensive Cancer
	Center, University of North Carolina at Chapel Hill
2002 - present	Professor (with tenure), Department of Biostatistics, University of North
	Carolina at Chapel Hill
1996 - 2002	Associate Professor, Department of Biostatistics, Harvard University, and
	Dana-Farber Cancer Institute

Home:

12304 Birchfalls Drive Raleigh, NC 27614 (919) 741-0518

ACADEMIC APPOINTMENTS:

1994 - 1996	Assistant Professor, Department of Biostatistics, Harvard University, and
	Dana-Farber Cancer Institute
1994	Associate Professor, (with tenure), Division of Statistics, Northern Illinois
	University
1988 - 1994	Assistant Professor, Division of Statistics, Northern Illinois University

HONORS AND DISTINCTIONS:

1999	Elected Fellow, American Statistical Association
2000	Elected Fellow, Institute of Mathematical Statistics
1989	Elected Fellow, Royal Statistical Society
2000	Elected member, International Statistical Institute
2005	Janssen Research Foundation Chair in Survival Analysis, Limbergs Univer-
	sitair Centrum (LUC), Belgium
2006	Alumni Distinguished Professor, University of North Carolina at Chapel Hill
2020	Elected Fellow, International Society of Bayesian Analysis (ISBA)
2023	Statistical Partnerships Among Academe, Industry, and Government
	(SPAIG) Award
2024	Gillings School of Global Public Health McGavran Award for Excellence in
	Teaching

PROFESSIONAL SOCIETIES:

Royal Statistical Society American Statistical Association International Biometric Society Institute of Mathematical Statistics

MAJOR ADMINISTRATIVE RESPONSIBILITIES:

2003 – present	Director of Graduate Studies , Department of Biostatistics, University of North Carolina at Chapel Hill
2007 – present	Director of the Laboratory for Innovative Clinical Trials (LICT), University of North Carolina at Chapel Hill
2006 – present	Biostatistics Core Faculty Director, Lineberger Comprehensive Cancer Center, University of North Carolina at Chapel Hill
2004– present	Director: Cancer Genomics Training Grant, University of North Carolina at Chapel Hill
2007 - 2008	Faculty Retreat Committee, Department of Biostatistics, University of North Carolina at Chapel Hill
2007 - 2008	Self-Study Committee, Department of Biostatistics, University of North Carolina at Chapel Hill
2006 - 2009	Committee on Education of Public Health (CEPH), University of
2002 – present	North Carolina at Chapel Hill Member, Qualifying Exam Committee, Department of Biostatistics, Uni-
1994 - 1997	versity of North Carolina at Chapel Hill Member, Student Admissions Committee, Department of Biostatistics,
1994 - 2002	Harvard School of Public Health Member, Curriculum Committee, Department of Biostatistics, Harvard
1997 - 1998	School of Public Health Chair, Curriculum Committee, Department of Biostatistics, Harvard School
1996 – 1998	of Public Health Member, Degree Program Committee, Department of Biostatistics, Har-
2001 - 2002	vard School of Public Health Chair, Degree Program Committee, Department of Biostatistics, Harvard
1997 - 1998	School of Public Health Member, Qualifying Exam Committee, Department of Biostatistics, Har-
1998 - 2002	vard School of Public Health Chair, Qualifying Exam Committee, Department of Biostatistics, Harvard
1999 - 2000	School of Public Health Chair, Masters Degree Program Committee, Department of Biostatistics,
1000 2000	Harvard School of Public Health

MAJOR PROFESSIONAL SERVICE:

2013 - 2015	Editor for the Journal of the American Statistical Association (Applications and Case Studies)
2001 - 2012	Associate Editor for the Journal of the American Statistical Association
	(Applications and Case Studies)
2018 - present	Associate Editor for the Journal of the American Statistical Association
	(Applications and Case Studies)
2011 - 2021 present	Associate Editor for the Journal of the American Statistical Association
_	(Theory and Methods)
2004 - 2018	Associate Editor for Bayesian Analysis
2007 - 2010	Section Chair, Section on Bayesian Statistical Sciences, American Statis-
	tical Association
2005 - 2009	Biostatistical Methods and Research Design (BMRD) NIH Study
	Section (Regular Member)
1999 - 2002	Treasurer, Section on Bayesian Statistical Sciences, American Statistical
1000 2002	Association
2003 - 2008	Associate Editor for the Journal of the American Statistical Association
2000 2000	(Theory and Methods)
1000 0000	,
1999 - 2002	Associate Editor for Lifetime Data Analysis
2000 - 2002	Associate Editor for Biometrics
2002 - 2006	Associate Editor for Applied Statistics
2002 - 2005	Epidemiology of Cancer (EPIC) NIH Study Section (Regular
	Member)

BUSINESS EXPERIENCE:

2006 - 2013	Consultant, Glaxo-Smith-Kline Pharmaceuticals, Raleigh, NC
2007 - present	Consultant, Amgen, Inc, Thousand Oaks, CA
2007 - present	Consultant, Merck, Inc, Rahway, NJ
2010 - 2012	Consultant, Eli Lilly and Company, Indianapolis, IN
2012 - 2015	Consultant, Pfizer Inc, Cambridge, MA
2003 - 2010	Consultant, SAS Institute, Cary, NC
2006 - 2008	Consultant, Schering-Plough Research Institute, Roselle, NJ
1999 - 2007	Consultant, Cytel Corporation, Cambridge, MA
2001 - 2002	Consultant, Insightful Corporation, Seattle, WA
1999 - 2002	Consultant, Genta Incorporated, Lexington, MA
1993 - 1995	Consultant, DeGussa Corporation, Palatine, IL

MAJOR RESEARCH INTERESTS:

Bayesian methods, missing data problems, cancer genomics

RESEARCH SUPPORT:

2010 magant	NIII. "Statistical Matheda for Canon Clinical Trials." (D01)
2010 – present	NIH: "Statistical Methods for Cancer Clinical Trials," (P01)
	Co- Principal Investigator: Joseph Ibrahim
1996 - present	NIH: "Bayesian Approaches to Model Selection for Survival Data" (R01)
	Principal Investigator: Joseph Ibrahim
1997 - 2012	NIH: "Inference in Regression Models With Missing Covariates" (R01)
	Principal Investigator: Joseph Ibrahim
2002 - 2013	NIH: "Semiparametric Bayesian Survival Analysis," (R01)
	Co-principal Investigator: Joseph Ibrahim
2004 – present	NIH: "Biostatistics for Genomics and Cancer," (T32, Department of Biostatistics Training Grant),
	Principal Investigator: Joseph Ibrahim
2004 - 2011	NIH: SPORE in Gastrointestinal Cancer,
	Biostatistical Core Leader: Joseph Ibrahim
2011-present	NIH: SPORE in Breast Cancer,
	Biostatistical Core Leader: Joseph Ibrahim
2004 - present	NIH: Lineberger Comprehensive Cancer Center Core Grant,
	Biostatistical Core Faculty Director: Joseph Ibrahim
2007 - 2012	NIH: Program Project Grant in Systems Biology of Melanoma,
	Biostatistical Core Leader: Joseph Ibrahim
2004 - 2008	NIH: "Statistical Methods for Cardiotoxicity in AIDS" (R01)
	Co-principal Investigator: Joseph Ibrahim
1997 - 2004	NIH: "Methods for Analyzing Repeated Categorical Data" (R01)
	Co-principal Investigator: Joseph Ibrahim

TEACHING EXPERIENCE:

2016 - 2024	BIOS 762 (Theory and Applications of Linear and Generalized Linear Models) Department of Biostatistics University of North Carolina at Chapel Hill (Course Developer and Lecturer)
2011, 2013	BIOS 763 (Generalized Linear Model Theory and Applications) Department of Biostatistics University of North Carolina at Chapel Hill (Course Developer and Lecturer)
2005 - 2008, 2014 - 2016	BIOS 761 (Advanced Probability and Statistical Inference II) Department of Biostatistics University of North Carolina at Chapel Hill (Course Developer and Lecturer)
2004, 2013	BIOS 773 (Statistical Analysis With Missing Data) Department of Biostatistics University of North Carolina at Chapel Hill (Course Developer and Lecturer)
2002, 2003, 2005, 2007 2009, 2011, 2017, 2021, 2023	BIOS 779 (Bayesian Statistics)
	Department of Biostatistics University of North Carolina at Chapel Hill (Course Developer and Lecturer)
1997, 1999, 2000	BIO 249 (Bayesian Methods in Biostatistics) Department of Biostatistics Harvard School of Public Health (Course Developer and Lecturer)
1995, 1996, 1999	BIO 235 (Regression and Analysis of Variance) Department of Biostatistics Harvard School of Public Health (Course Developer and Lecturer)
2002	BIO 211 (Regression and Analysis of Variance in Experimental Research), Department of Biostatistics, Harvard School of Public Health (Course Developer and Lecturer)
1988 – 1994	STAT 572 (Theory of Linear Models), STAT 574 (Theory of Statistical Inference STAT 579 (Applied Statistical Methods), STAT 593 (Advanced Regression Analysis), STAT 475 (Applied Regression Analysis), STAT 350 (Introduction to Probability and Statistics), Department of Mathematical Sciences, Northern Illino University (Course Developer and Lecturer)

Doctoral Students

- 1. Kenneth Kleinman (Graduated in 1996), Thesis title: "Longitudinal Repeated Measures: Missing Data and Semi-parametric Random Effects Models"
- 2. David Shera (Graduated in 1999), Thesis title: "Bayesian Factor Analysis"
- 3. Anna Legedza (Graduated in 1999), Thesis title: "Bayesian Approaches to the Design of Phase I Clinical Trials"
- 4. Amy Herring (Graduated in 1999), Thesis title: "Missing Covariates in Survival Analysis"
- 5. Elizabeth Brown (Graduated in 2002), Thesis title: "Bayesian Methods for Joint Models of Longitudinal and Survival Data"
- 6. Mahlet Tadesse (Graduated in 2002), Thesis title: "Bayesian Models for Gene Expression Analysis"
- 7. Amy Stubbendick (Graduated in 2003), Thesis title: "Longitudinal Models with Nonignorable Missing Response and Covariate Data"
- 8. Qingxia Chen (Graduated in 2005), Thesis title: "Theory and Inference for Parametric and Semiparametric Methods in Missing Data Problems"
- 9. Yueh-Yun Chi (Graduated in 2005), Thesis title: "Bayesian Methods for Longitudinal and Survival Data with Applications to Clinical Trials and Genomics"
- Jonathan Gelfond (Graduated in 2007, Winner of Margolin Award for best doctoral dissertation), Thesis title: "Bayesian Model-based Methods For the Analysis of DNA Microarrays with Survival, Genetic, and Sequence Data"
- 11. Xiaoyan (Amy) Shi (Graduated in 2008, Winner of Margolin Award for best doctoral dissertation), Thesis title: "Diagnostic Measures for Missing Covariate Data and Semiparametric Models for Neuroimaging"
- 12. Hyunsoon Cho (Graduated in 2009), Thesis title: "Bayesian Influence Diagnostic Methods for Parametric Regression Models"
- 13. Ramon Garcia (Graduated in 2009), Thesis title: "Variable Selection for Models with Missing Data"
- 14. Yimei Li (Graduated in 2009), Thesis Title: "Statistical Analysis of Complex Neuroimaging Data"
- 15. Yunhee Kim (Graduated in 2009), Thesis Title: "Nonparametric and Semiparametric Methods in Medical Diagnostics"

- 16. Liddy Chen (Graduated in 2010, Winner of Margolin Award for best doctoral dissertation), Thesis Title: "Design Considerations for Complex Survival Models"
- 17. Ryan May (Graduated in 2011), Thesis Title: "Estimation Methods for Data Subject to Detection Limits"
- 18. Zakaria Khondker (Graduated in 2013), Thesis Title: "Bayesian Penalized Methods for High-Dimensional Data"
- 19. Ja-an Lin (Graduated in 2013), Thesis title: "Statistical Methods for Imaging Genetic Data"
- 20. Naim Rashid (Graduated in 2013, Winner of Margolin Award for best doctoral dissertation), Thesis title: "Model-based Approaches for the Detection of Biologically Active Genomic Regions from Next Generation Sequencing Data"
- 21. Qiang Sun (Graduated in 2014), Thesis title: "On High Dimensional Sparse Regression and Its Inference"
- 22. Michelle Miranda (Graduated in 2014), Thesis title: "Bayesian Analysis of Ultra-high Dimensional Neuroimaging Data"
- 23. Shangbang Rao (Graduated in 2014), Thesis title: "Spatially Regularizing High Angular Resolution Diffusion imaging,"
- 24. Emil Cornea (Graduated in 2014), Thesis title: "Advanced Biostatistical Methods for Curved and Censored Biomedical Data"
- 25. Christopher Bryant (Graduated in 2016), Thesis title: "Bayesian Methods For Weighted Block Models with Applications in Brain Functional Connectomics"
- 26. Eunjee Lee (Graduated in 2016), Thesis title: "Bayesian Models for High-dimensional Biomedical Data"
- 27. Hojin Yang (Graduated in 2016), Thesis title: "Learning Methods in Reproducing Kernel Hilbert Space Based on High Dimensional Features"
- 28. Matt Psioda (Graduated in 2016, Winner of Margolin Award for best doctoral dissertation), Thesis title: "Statistical Methods for Bayesian Clinical Trial Design and DNA Methylation Deconvolution"
- 29. Jingwen Zhang (Graduated in 2018): Thesis title: "Advanced Methods for Discovering Genetic Markers Associated with High Dimensional Imaging Data"
- 30. Doug Wilson (Graduated in 2018), Thesis title: "Statistical Methods for the Estimation of Cell-Type Composition and Cell-Type Specific Association Studies"
- 31. Yue Wang (Graduated in 2018), "Partial Least Squares Methods for Functional Regression Models"

Joseph G. Ibrahim

- 32. Anqi Zhu (Graduated in 2019), "Statistical Methods for Sequencing Count Data and Integrative Functional Genomics"
- 33. Pedro Baldoni (Graduated in 2020), "Statistical Methods for the Analysis of Epigenomic Data"
- 34. Xifeng Wang (Graduated in 2021), "Spatially Robust Adaptive Ensemble Average Propagator Reconstruction via Spherical Polar Fourier Imaging"
- 35. Jiawei Xu (Graduated in 2021), "Bayesian Methods for Clinical Trial Design: Approaches for Joint Models"
- 36. Ziliang Zhu (Graduated in 2021), "Prediction Methods in Large Scale Network Analysis for Neuroimaging Data"
- 37. Ethan Alt (Graduated in 2021), "Bayesian Methods for the Use of Historical Data and Prior Information in Clinical Trials"
- 38. Brady Nifong (Graduated in 2021), "The Scale Transformed Power Prior for Use with Historical Data from a Different Outcome Model"
- 39. David Lim (Graduated in June 2022), "Clustering of Bulk RNA-Seq Data and Missing Data Methods in Deep Learning"
- 40. Nate Bean (Graduated in October 2022), "Bayesian Multiregional Trials Using Model Averaging"
- 41. Hillary Heiling (Graduated in August, 2023), "Scalable Statistical Methods for Cell Type Deconvolution and Mixed Models Applied to High Dimensional Genomic Data"
- 42. Paloma Hauser (Graduated in August, 2023), "Bayesian Models for High Dimensional Discrete Multivariate Data"
- 43. Seoyoon Cho (Graduated in May, 2024), "Bayesian Joint Modeling of Multivariate Longitudinal and Time-to-Event Outcomes and Joint Cure Rate Models with Multivariate Time-to-Event Outcomes Using Gaussian Copulas"
- 44. Yueqi Shen (Graduated in May, 2024), "Incorporating Historical Information in Bayesian Clinical Trial Design Using the Normalized Power Prior"
- 45. Emily Damone (current)
- 46. Peter Guan (current)
- 47. Claire Zhu (current)
- 48. Xinxin Chen (current)
- 49. Yixiang Qu (current)

50. Xiuya (Coco) Chang (current)

Postdoctoral Fellows

- 1. Seong Kim (1998 1999)
- 2. Maura Mezzetti (1999 2001)
- 3. Pingping Qu (2005 2007)
- 4. Fuxia Cheng (2005 2007)
- 5. Bernard Omolo (2009 2011)
- 6. Ruixin Guo (2009 2011)
- 7. Jing Chang (2012 2014)
- 8. Maxmillian Chen (2014 2015)

PUBLICATIONS:

Articles:

- 1. Ibrahim, JG. "Incomplete Data in Generalized Linear Models," *Journal of the American Statistical Association*, 1990; **85**:765–769.
- 2. Ibrahim JG and Laud PW. "On Bayesian Analysis of Generalized Linear Models Using Jeffreys's Prior", *Journal of the American Statistical Association*, 1991; **86**:981–986.
- 3. Boult C, Kane RL, Louis TA, and Ibrahim JG. "Forecasting The Number of Future Disabled Elderly Using Markovian and Mathematical Models", *Journal of Clinical Epidemiology*, 1991; 44:973–980.
- 4. Ibrahim JG and Weisberg S. "Incomplete Data in Generalized Linear Models With Continuous Covariates," Australian Journal of Statistics. 1992; **34**:461–470.
- 5. Ibrahim JG and Laud PW. "A Predictive Approach to the Analysis of Designed Experiments," *Journal of the American Statistical Association*, 1994; **89**:309–319.
- 6. Laud PW and Ibrahim JG. "Predictive Model Selection," Journal of the Royal Statistical Society, Series B, 1995; **57**:247–262.
- Laud, PW and Ibrahim JG, "Predictive Specification of Prior Model Probabilities in Variable Selection", Biometrika, 1996; 83:267–274.
- 8. Lipsitz, SR, and Ibrahim JG, "A Conditional Model for Incomplete Covariates in Parametric Regression Models", *Biometrika*, 1996; **83**:916–922.

- 9. Ibrahim, JG, and Lipsitz SR, "Parameter Estimation From Incomplete Data in Binomial Regression When the Missing Data Mechanism is Nonignorable," *Biometrics*, 1996; **52**:1071–1078.
- 10. Lipsitz, SR, and Ibrahim JG, "Using the EM Algorithm for Survival Data with Incomplete Categorical Covariates," *Lifetime Data Analysis*, 1996; **2**:5–14.
- 11. Ibrahim, JG, and Ryan LM, "Use of Historical Control Data in Time Adjusted Trend Tests for Carcinogenicity," *Biometrics*, 1996; **52**:213–220.
- 12. Ibrahim, JG, Discussion of "Quantifying and Using Expert Opinion for Variable-Selection Problems in Regression," *Chemometrics and Intelligent Laboratory Systems*, 1996; **35**:27–28.
- 13. Ayash, LJ, Elias, AE, Schwartz, G, Wheeler, CW, Ibrahim, JG, Teicher, B, Warren, D, Lynch, C, Richardson, P, Schnipper, L, Frei, E, III., and Antman, K, "Double Dose-Intensive Chemotherapy with Autologous Stem Cell Support for Metastatic Breast Cancer: No Improvement in PFS by the Sequence of High-Dose Melphalan Followed by CTCb", Journal of Clinical Oncology, 1996; 14:2984–2992.
- 14. Ibrahim JG, and Chen MH, "Predictive Variable Selection in the Multivariate Linear Model," *Biometrics*, 1997; **53**:465–478.
- 15. Ibrahim, JG, "On Properties of Predictive Priors in Linear Models," *The American Statistician*, 1997; **51**:333–337.
- 16. Weiss, RE, Wang Y, and Ibrahim, JG, "Model Selection for Repeated Measures Random Effects Models Using Bayes Factors", *Biometrics*, 1997; **53**:159–169.
- 17. Ewell, M, and Ibrahim, JG, "The Large Sample Distribution of the Weighted Log Rank Statistic Under General Local Alternatives," *Lifetime Data Analysis*, 1997; **3**:5–12.
- 18. Glencross, PM, Weinberg, JM, Ibrahim, JG, and Christiani, DC, "Loss of Lung Function Among Sheet Metal Workers: Ten Year Study," *American Journal of Industrial Medicine*, 1997; **32**:460–466.
- 19. Wheeler C, Eickhoff C, Elias AE, Ibrahim JG, Ayash L, McCauley M, Mauch P, Schwartz G, Eder JP, Mazanet R, Ferrara J, Rimm IJ, Bierer B, Gilliland G, Churchill HW, Ault K, Parsons S, Antman K, Schnipper L, Tepler I, Gaynes L, Frei E III, Kadin M, Antin JH, "High Dose Cyclophosphamide, Carmustine and Etoposide with Autologous Transplantation in Hodgkin's Disease: A Prognostic Model for Treatment Outcomes," Biology of Blood and Bone Marrow Transplantation, 1997; 3:98–106.
- 20. Kleinman, K, Ibrahim, JG., and Laird, NM, "A Bayesian Framework for Intent-to-treat Analysis with Missing Data", *Biometrics*, 1998; **54**:265–278.

- 21. Ibrahim, JG, Ryan, LM, and Chen, MH, "Use of Historical Controls to Adjust for Covariates in Trend Tests for Binary Data", *Journal of the American Statistical Association*, 1998; **93**:1282–1293.
- 22. Kleinman, KP, Ibrahim, JG, "A Semi-Parametric Bayesian Approach to the Random Effects Model," *Biometrics*, 1998; **54**:921–938.
- 23. Ayash, LJ, Elias AE, Ibrahim JG, Schwartz G, Wheeler C, Reich E, Lynch C, Warren D, Shapiro C, Richardson P, Hurd D, Schnipper L, Frei E, Antman K, "High-Dose Multimodality Therapy with Autologous Stem Cell Support for Stage IIIB Breast Carcinoma," *Journal of Clinical Oncology*, 1998; **16**:1000–1007.
- 24. Lipsitz, SR, and Ibrahim JG, "Estimating Equations with Incomplete Categorical Covariates in the Cox Model", *Biometrics*, 1998; **54**:1002–1013.
- 25. Lipsitz, SR, Ibrahim, JG, Chen, MH, Peterson, H, "Non-ignorable Missing Covariates in Generalized Linear Models," *Statistics in Medicine*, 1998; **18**:2435–2448.
- 26. Falkson, CI, Ibrahim, JG, Kirkwood, JM, Coates, AS, Atkins, MB, Blum, RH, "A Phase III Trial of Dacarbazine versus Dacarbazine with Interferon α2b versus Dacarbazine with Tamoxifen (TMX) versus Dacarbazine with Interferon α2b and Tamoxifen in Patients with Metastatic Malignant Melanoma: an Eastern Cooperative Oncology Group Study (E3690)," Journal of Clinical Oncology, 1998; 16:1743–1751.
- 27. Kleinman, KP, Ibrahim, JG, "A Semi-Parametric Bayesian Approach to Generalized Linear Mixed Models," *Statistics in Medicine*, 1998; **17**:2579–2596.
- 28. Hoeting, JA, and Ibrahim, JG, "Bayesian Predictive Simultaneous Variable and Transformation Selection in the Linear Model," *Journal of Computational Statistics and Data Analysis*, 1998; **28**:87–103.
- 29. Elias AE, Wheeler C, Ayash LJ, Schwartz G, Ibrahim JG, ills L, McCauley M, Coleman N, Warren D, Schnipper L, Antman KH, Teicher BA, Frei, E, "Dose Escalation of the Hypoxic Cell Sensitizer Etanidazole Combined With Ifosfamide, Carboplatin, Etoposide, and Autologous Hematopoietic Stem Cell Support," *Journal of Clinical Cancer Research*, 1998; 4:1443–1449.
- 30. Ibrahim, JG, and Chen, MH, "Prior Distributions and Bayesian Computation for Proportional Hazards Models," *Sankhya, Series B*, 1998; **60**:48–64.
- 31. Leong, T, Lipsitz, SR, and Ibrahim, JG, "Using missing data methods in Genetic studies with missing mutation status," *Statistics in Medicine*, 1999; **18**:473–485.
- 32. Lipsitz, SR, Ibrahim, JG, and Fitzmaurice, GM, "Likelihood Methods for Incomplete Longitudinal Binary Responses with Incomplete Categorical Covariates," *Biometrics*, 1999; **55**:214–223.

- 33. Ibrahim, JG, Chen, MH, and Lipstiz SR, "Monte Carlo EM for Missing Covariates in Parametric Regression Models," *Biometrics*, 1999; **55**:591–596.
- 34. Chen, MH, Ibrahim, JG, and Yiannoutsos, C, "Prior Elicitation, Variable Selection and Bayesian Computation for Logistic Regression Models," *Journal of the Royal Statistical Society, Series B*, 1999; **61**:223–242.
- 35. Ibrahim, JG, Lipsitz, SR, and Chen, MH, "Missing Covariates in Generalized Linear Models When the Missing Data Mechanism is Nonignorable," *Journal of the Royal Statistical Society, Series B*, 1999; **61**:173–190.
- 36. Lipsitz, SR, Ibrahim, JG, and M Parzen, "A Degrees-of-Freedom Approximation for a t-statistic With Heterogeneous Variance," *The Statistician*, 1999; **48**:495–506.
- Elias, E, Ibrahim, JG, Skarkin, AT, Wheeler, C, McCauley, M, Ayash, L, Richardson, P, Schnipper, L, Antman, K and Frei, E, "Dose-Intensive Therapy for Limited-Stage Small-Cell Lung Cancer: Long-Term Outcome," *Journal of Clinical Oncology*, 1999; 17:1175–1184.
- 38. Chen, MH, Ibrahim, JG, and Sinha, D, "A New Bayesian Model for Survival Data with a Surviving Fraction," *Journal of the American Statistical Association*, 1999; **94**:909–919.
- 39. Lipsitz, SR, Ibrahim, JG, and Zhao, LP, "A New Weighted Estimating Equation for Missing Covariate Data with Properties Similar to Maximum Likelihood," *Journal of the American Statistical Association*, 1999; **94**:1147–1160.
- 40. Hochster, H, Ibrahim, JG, O'Dwyer PJ, Liebes, L, Benson, AB, "A Phase II Study of Topotecan 21-day Infusion in Advanced Colorectal Cancer: An Eastern Cooperative Oncology Group Study (E4293)," Cancer Therapeutics, 1999; 2:37–43.
- 41. Ibrahim, JG, Chen, MH, and MacEachern, SN, "Bayesian Variable Selection for Proportional Hazards Models," *Canadian Journal of Statistics*, 1999; **27**:701–717.
- 42. Chen, MH, Ibrahim, JG, and Shao, QM, "Power Prior Distributions for Generalized Linear Models," *Journal of Statistical Planning and Inference*, 2000; 84:121–137.
- 43. Klar, N, Lipsitz, SR, Ibrahim, JG, "An Estimating Equations Approach for Modeling Kappa," *Biometrical Journal*, 2000; **42**:45–58.
- 44. Lipsitz, SR, Ibrahim, JG, and Molenberghs, G, "Using a Box-Cox Transformation in the Analysis of Longitudinal Data with Incomplete Responses," *Applied Statistics*, 2000; 49:287–296.
- 45. Kim, SW, and Ibrahim, JG, "Intrinsic Bayes Factors for Generalized Linear Models," *Journal of Statistical Planning and Inference*, 2000; 87:301–315.
- 46. Ibrahim, JG, Chen, MH, and Ryan, LM, "Bayesian Variable Selection for Time Series Count Data," *Statistica Sinica*, 2000; **10**:971–987.

- 47. Ibrahim, JG, and Chen, MH, "Power Prior Distributions for Regression Models," *Statistical Science*, 2000; **15**:46–60.
- 48. Lipsitz, SR, Molenberghs, G, Fitzmaurice, G, and Ibrahim, JG, "GEE With Gaussian Estimation of the Correlations When Data are Incomplete," *Biometrics*, 2000; **56**:528–536.
- Kirkwood, JM, Ibrahim, JG, Sondak, VK, Richards, J, Flaherty, LE, Ernstoff, MS, Smith, TJ, Rao, U, Steele, M, and Blum, RH, "The Role of High- and Low-Dose Interferon Alfa-2b in High-Risk Melanoma: First Analysis of Intergroup Trial E1690/S9111/C9190," *Journal of Clinical Oncology*, 2000; 18:2444–2458.
- 50. Chen, MH, and Ibrahim, JG, "Bayesian Predictive Inference for Time Series Count Data," *Biometrics*, 2000; **56**:678–685.
- 51. Kim, SW, and Ibrahim, JG, "On Bayesian Inference for Parametric Proportional Hazards Models Using Noninformative Priors," *Lifetime Data Analysis*, 2000; **6**:331–341.
- 52. Lipsitz, SR, and Ibrahim, JG, "Estimation with Correlated Censored Survival Data with Missing Covariates," *Biostatistics*, 2000; 1:315–327.
- 53. Bernardo, MVP, and Ibrahim, JG, "Group Sequential Designs for Cure Rate Models With Early Stopping in Favor of the Null Hypothesis," *Statistics in Medicine*, 2000; 19:3023–3035.
- Manola, J, Atkins, M, Ibrahim, JG, Borden, E, Blum, R, Cunningham, T, Golumb, F, Kirkwood, JM, "Prognostic Factors in Metastatic Melanoma: A Pooled Analysis of Eastern Cooperative Oncology Group Trials," *Journal of Clinical Oncology*, 2000; 18:3782–3793.
- 55. Frank, DA, Meuse, J, Hirsch, D, Ibrahim, JG, and Abbeele, A, "The Treatment and Outcome of Cancer Patients with Thromboses on Central Venous Catheters," *Journal of Thrombosis and Thrombolysis*, 2000; **10**:271–275.
- 56. Legedza, ATR, and Ibrahim, JG "Longitudinal Design for Phase I Clinical Trials Using the Continual Reassessment Method," *Controlled Clinical Trials*, 2000; **21**:574–588.
- 57. Fitzmaurice, GM, Lipsitz, SR, Molenberghs, G, and Ibrahim, JG, "Bias in Estimating Association Parameters for Longitudinal Binary Responses with Drop-outs," *Biometrics*, 2001; **57**:15-21.
- 58. Legedza, ATR, Ibrahim, JG, "Heterogeneity in Phase I Clinical Trials: Prior Elicitation and Computation Using the Continual Reassessment Method," *Statistics in Medicine*, 2001; **20**:867–882.
- 59. Ibrahim, JG, Chen, MH, and Sinha, D, "Criterion Based Methods for Bayesian Model Assessment," *Statistica Sinica*, 2001; **11**:419–443.

- 60. Ibrahim, JG, Chen, MH, and Lipsitz, SR, "Missing Responses in Generalized Linear Mixed Models When The Missing Data Mechanism is Nonignorable," *Biometrika*, 2001; 88:551–564.
- 61. Chen, MH, and Ibrahim, JG, "Maximum Likelihood Methods for Cure Rate Models with Missing Covariates," *Biometrics*, 2001; **57**:43–52.
- 62. Leong, T, Lipsitz, SR, and Ibrahim, JG, "Incomplete Covariates in the Cox model With Applications to Biologic Marker Data," *Applied Statistics*, 2001; **50**:467–484.
- 63. Ibrahim, JG, Lipsitz, SR, and Horton N, "Using Auxiliary Data for Parameter Estimation with Nonignorably Missing Outcomes," *Applied Statistics*, 2001; **50**:361–373.
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- 7. Tan, X, Wang, W, Liu, GF, Zeng, D, Diao, G, Ibrahim, JG, "Detecting Safety Signals from the VAERS Data with Complex and High Dimensional Covariates," submitted.
- 8. Alt, EM, Nifong, B, Chen, X, Psioda, MA, Ibrahim, JG, "The Scale Transformed Power Prior for Time-To-Event Data," submitted.
- 9. Diao, G, Jiang, X, Zeng, D, Mo, M, Xia, HA, Ibrahim, JG, "Improving Power in Adaptive Expansion of Biomarker Populations in Phase 3 Clinical Trials," submitted.
- 10. Gwon, Y, Chen, MH, Mo, M, Jiang, X, Xia, HA, Ibrahim, JG, "Bayesian Network Meta-Regression for Aggregate Ordinal Outcomes with Missing Categories: Applications in Comparing Crohn's Disease Treatments," submitted.
- 11. Vincent, BG, File, DM, McKinnon, KP, Moore, D, Frelinger, JA, Collins, E, Ibrahim, JG, Bixby, L, Reisdorf, S, Laurie, S, Park, Y Anders, C, Collichio, F, Muss, H, Carey, LA, van Deventer, HW, Dees, EC, Serody, JS, "A phase I/II trial evaluating the efficacy of a multiepitope dendritic cell vaccine given with trastuzumab and vinorelbine for the treatment of women with metastatic breast cancer who express HLA-A0201 and whose tumors express/overexpress HER2, submitted.
- 12. Quinter, A, Tan, X, Zeng, D, Ibrahim, JG, "Joint Sparse Factor Regression Models for Analyzing High-Dimensional Data," submitted.
- 13. Weideman, AMK, Wang, R, Jiang, Y, Ibrahim, JG, "Canopy2: Tumor Phylogeny Inference Using Bulk DNA and Single-cell RNA Sequencing," submitted.
- 14. Hauser, P, Tan, X, Chen, F, Chen, R, Ibrahim, JG, "Bayesian Generalized Linear Mixed Models for Vaccine Safety Monitoring: Incorporating Adverse Event Ontology Amidst Uncertainty," submitted.
- 15. Heiling, H, Rashid, NU, Li, Q, Peng, XL, Yeh, J, Ibrahim, JG, "Efficient Computation of High-dimensional Penalized Piecewise Constant Hazard Random Effects Survival Models," submitted.
- 16. Zhang, C, Li, H, Chen, MH, Ibrahim, JG, Shah, AK, Lin, J, "Assessment of Homogeneity and Consistency for Network Meta-Analysis," submitted.

- 17. Diao, G, Zeng, D, Chen, L, Shi, Y, Wang, Z, Ibrahim, JG, "Network Meta-Analysis Integrating Individual Participant Data and Aggregated Data," submitted.
- 18. Damone, EM, Zhu, J, Pang, H, Li, X, Kwiatkowski, E, Carey, LA, Ibrahim, JG, "Incorporating External Controls in the Design of Randomized Clinical Trials: A Case Study in Solid Tumors," submitted.
- 19. Damone, EM, Psioda, MA, Ibrahim, JG, "A Bayesian Approach for Joint Models of Recurrent Events, Terminal Events, and Longitudinal Data," submitted.
- 20. Cho, S, Rockwell, E, Zhu, Z, Abu-Bakkar, S, Dickinson, S, Keith, S, Golzarri-Arroyo, L, Ibrahim, JG, Allison, D, "Variable Selection in Life Span Expectation with Measurement Error in the Covariates with Applications to Wrongful Death Lawsuits," submitted.
- 21. Brewer, NT, Rockwell, EM, Tomar, A, Fisher, EB, Gilkey, MB, Lazard, AJ, Ibrahim, JG, "Covid-19 Vaccine Incentives Effectiveness and Differential Impact on High-risk Groups: A prospective Cohort Study," submitted.
- 22. Zhang, H, Anderson, KM, Zimmer, Z, Golm, G, Sapre, A, Ibrahim, JG, "Prior Effective Sample Size When Borrowing on the Treatment Effect Scale," submitted.

SHORT COURSE PRESENTATIONS at WNAR, ENAR, and JSM

- 1. "Monte Carlo Methods in Bayesian Computation," (with M.-H. Chen). Presented at the 2001 WNAR meetings.
- 2. "Monte Carlo Methods in Bayesian Computation," (with M.-H. Chen). Presented at the 2001 JSM meetings.
- 3. "Bayesian Survival Analysis," (with M.-H. Chen), Presented at the 2002 ENAR meetings.
- 4. "Bayesian Survival Analysis," (with M.-H. Chen), Presented at the 2003 JSM meetings.
- 5. "Missing Data in Regression Models," (with M.-H. Chen), Presented at the 2004 JSM meetings.
- 6. "Missing Data in Regression Models," (with M.-H. Chen), Presented at the 2007 ENAR meetings.
- 7. "Bayesian Methods in SAS," presented at the 2010 ENAR meetings.
- 8. "Missing Data in Regression Models," presented at the 2011 ENAR meetings.
- 9. "Joint Models for Longitudinal and Survival Data" presented at the 2014 ENAR meetings.
- 10. "Missing Data in Regression Models," presented at the 2014 JSM meetings.

Joseph G. Ibrahim

- 11. "Joint Models for Longitudinal and Survival Data" presented at the 2015 JSM meetings.
- 12. "Missing Data in Regression Models," presented at the 2016 ENAR meetings.
- 13. "Introduction to Bayesian Methods, Modeling, and Computation," two-day short course presented at the 2016 JSM meetings.
- 14. "Introduction to Bayesian Methods for Clinical Trial Design and Sample Size Determination," 2022 ENAR Meetings.
- 15. "Introduction to Bayesian Methods for Clinical Trial Design and Sample Size Determination," 2022 International Society of Bayesian Analysis (ISBA) World Meeting.
- 16. "Introduction to Bayesian Methods for Clinical Trial Design and Sample Size Determination," 2022 JSM Meetings.
- 17. "Informative Prior Elicitation Using Historical Data, Expert Opinion, and Other Sources," 2023 ENAR Meetings.
- 18. Informative Prior Elicitation Using Historical Data, Expert Opinion, and Other Sources," 2023 JSM Meetings.
- 19. "Introduction to Bayesian Methods for Clinical Trial Design and Sample Size Determination," 2023 ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop.

INVITED PRESENTATIONS at ENAR and JSM

- 1. "Transformations and Variable Selection in Bayesian Linear Regression," 1991 JSM meetings.
- 2. "Predictive Model Selection," 1992 JSM meetings.
- 3. "Predictive Specification of Prior Model Probabilities in Variable Selection," 1994 JSM meetings.
- 4. "Properties of Predictive Priors in Linear Models," 1995 JSM meetings.
- 5. "Bayesian Predictive Simultaneous Variable and Transformation Selection in the Linear Model," 1996 JSM meetings.
- "Bayesian Variable Selection for Generalized Linear Mixed Models," 1997 WNAR meetings.
- 7. "Bayesian Variable Selection for Generalized Linear Mixed Models," 1997 JSM meetings.
- 8. "Criterion Based Methods for Bayesian Survival Analysis," 1998 ENAR meetings.

- 9. "Prior Elicitation, Variable Selection and Bayesian Computation for Logistic Regression Models," 1998 JSM meetings.
- 10. "Prior Elicitation for Model Selection and Estimation in Generalized Linear Mixed Models," 1999 ENAR meetings.
- 11. "Bayesian Cure Rate Models for Malignant Melanoma: A Case Study of Eastern Cooperative Oncology Group Trial E1690", 1999 Harvard-Schering Plough Workshop.
- 12. "Prior Elicitation for Model Selection and Estimation in Generalized Linear Mixed Models," 1999 JSM meetings.
- 13. "A New Bayesian Model for Survival Data with a Surviving Fraction," 2000 ENAR meetings.
- 14. "Missing Responses in Generalized Linear Mixed Models When The Missing Data Mechanism is Nonignorable," 2000 Harvard-Schering Plough Workshop.
- 15. "Criterion Based Methods for Bayesian Model Assessment," 2000 JSM meetings.
- 16. "Bayesian Semi-parametric Models for Survival Data with a Cure Fraction", 2001 ENAR meetings.
- 17. "Missing Data Methods for Regression Models, 2001 JSM meetings.
- 18. "Bayesian Models for Gene Expression with DNA Microarray Data," 2002 ENAR meetings.
- 19. "The Relationship Between the Power Prior and Hierarchical Models," 2002 Bayesian Statistics VII meetings in Valencia, Spain.
- 20. "A Bayesian Approach to False Discovery Rate Control," 2003 JSM meetings.
- 21. "A New Class of Mixture Models for DNA Microarray Data," 2004 ENAR Meetings.
- 22. "A New Class of Mixture Models for DNA Microarray Data," 2004 ISBA World Meeting.
- 23. "Posterior Propriety and Computation for the Cox Regression Model With Applications to Missing Covariates," 2005 JSM meetings.
- 24. "Variable Selection in Regression Mixture Modeling for the Discovery of Gene Regulatory Networks," 2006 ICSA meetings.
- 25. "Variable Selection in Regression Mixture Modeling for the Discovery of Gene Regulatory Networks," 2006 JSM meetings.
- 26. "Prior Elicitation and Variable Selection for High Dimensional Data in Regression Models," 2007 ENAR Meetings.

- 27. "Prior Elicitation and Variable Selection for High Dimensional Data in Regression Models," 2007 ICSA Meetings.
- 28. "Prior Elicitation and Variable Selection for High Dimensional Data in Regression Models," 2007 JSM Meetings.
- 29. "A Bayesian Hidden Markov Model for Motif Discovery Through Joint Modeling of Genomic Sequence and ChIP-Chip Data," 2008 ENAR Meetings.
- 30. "A Bayesian Hidden Markov Model for Motif Discovery Through Joint Modeling of Genomic Sequence and ChIP-Chip Data," 2008 JSM Meetings.
- 31. "Transformation Models with Gamma-Frailty for Multivariate Survival Times," 2009 ENAR Meetings.
- 32. "Transformation Models with Gamma-Frailty for Multivariate Survival Times," 2009 JSM Meetings.
- 33. "Sample Size Determination for Joint Models of Longitudinal and Survival Data," 2010 ENAR meetings.
- 34. "Bayesian meta-experimental design: evaluating cardiovascular risk in new antidiabetic therapies to treat Type 2 diabetes", 2011 ENAR meetings.
- 35. "Bayesian Influence Analysis and its Applications," 2012 ENAR meetings.
- 36. "Bayesian Sequential Meta-Analysis Design in Evaluating Cardiovascular Risk in a New Antidiabetic Drug Development Program", 2013 ENAR mettings.
- 37. "Bayesian Influence Measures for Joint Models of Longitudinal and Survival Data", 2013 JSM meetings.
- 38. "Bayesian Probability of Success for Clinical Trials Using Historical Data," 2014 ENAR Meetings.
- 39. "Statistical Methodology collaborations with Pharmaceuticals: Solving Important and Cutting Edge Applied Problems in Biomedical Research," 2014 JSM meetings.
- 40. "Bayesian Shrinkage Methods for High Dimensional Data," 2015 ENAR Meetings.
- 41. "The Power Prior: Theory and Applications," 2015 JSM Meetings.
- 42. "Bayesian Design of Superiority Clinical Trials for Recurrent Events Data with Applications to Bleeding and Transfusion Events in Myelodysplastic Syndrome," 2016 ENAR Meetings.
- 43. "Bayesian Model Assessment in Joint Modeling of Longitudinal and Survival Data with Applications to Cancer Clinical Trials," 2016 JSM Meetings.

Joseph G. Ibrahim

- 44. "Bayesian Clinical Trial Design for Joint Models of Longitudinal and Survival Data," 2017 JSM Meetings.
- 45. "Bayesian Inference for Network Meta-Regression Using Multivariate Random Effects with Applications to Cholesterol Lowering Drugs," 2018 ENAR Meetings.
- 46. "Bayesian Network Meta-Regression for Ordinal Outcomes," 2019 ENAR Meetings.
- 47. 'Bayesian Inference for Network Meta-Regression Using Multivariate Random Effects with Applications to Cholesterol Lowering Drugs," 2019 JSM Meetings.
- 48. "Bayesian Design Using Historical Data that Inform the Treatment Effect with Applications to Cure Rate Models," 2020 ENAR Meetings.
- "Assessment of Homogeneity and Consistency for Network Meta-Analysis," 2021 JSM Meetings.
- 50. "Bayesian Design of Clinical Trials Using Joint Models for Recurrent and Terminating Events, 2022 ENAR Meetings.
- 51. "The Scale Transformed Power Prior for Use with Historical Data from a Different Outcome Model," 2022 JSM Meetings.
- 52. The Scale Transformed Power Prior for Time-to-Event Data," 2023 JSM Meetings.
- 53. The Scale Transformed Power Prior for Time-to-Event Data," 2024 ENAR Meetings.