

Brian J Smith

Department of Biostatistics
University of Iowa
145 North Riverside Drive
Iowa City, IA 52242

Phone: 319-384-1587
Email: brian-j-smith@uiowa.edu
Profiles: [ResearchGate](#), [LinkedIn](#)

Education

2001	University of Iowa PhD, Biostatistics	Iowa City, IA
1995	University of Texas MS, Mathematical Statistics	Austin, TX
1993	Saint Louis University BA, Mathematics; Minor, Computer Science	St. Louis, MO

Appointments

Department of Biostatistics, University of Iowa

2017-Present	Professor
2008-2017	Associate Professor
2002-2008	Assistant Professor
2001-2002	Visiting Assistant Professor

Holden Comprehensive Cancer Center, University of Iowa

2006-Present	Director, Biostatistics Core
2006-Present	Co-Director, Biostatistics and Bioinformatics Core, University of Iowa/Mayo Clinic Lymphoma SPORE
2005-2006	Co-Director, Biostatistics Core
2004-Present	Member, Cancer Epidemiology and Population Science Program
2001-Present	Member, Biostatistics Core

University of Texas

1993-1995	Research Scientist
-----------	--------------------

Teaching

Primary Instructor, University of Iowa

Special Topics in Biostatistics: Matrix Theory (BIOS:7700) – Course Creator
PhD level biostatistics course: Fall 2009

Advanced Biostatistics Seminar: Bayesian Methods and Design (BIOS:7600) – Course Creator
PhD level biostatistics course: Fall 2008, Fall 2010

Advanced Biostatistics Seminar: Statistical Methods in Bioinformatics (BIOS:7600) – Course Creator
PhD level biostatistics course: Spring 2012, Spring 2014, Spring 2016

Preceptorship in Biostatistics (BIOS:7500)

Master's level biostatistics supervised research project: Fall 2003, Fall 2005, Spring 2006, Fall 2006, Spring 2009, Spring 2010, Fall 2011, Fall 2012, Spring 2014, Fall 2014, Spring 2015, Fall 2016

Bayesian Methods and Design (BIOS:6810) – Course Creator

PhD level biostatistics course: Spring 2013, Spring 2015

Applied Survival & Cohort Data Analysis (BIOS:6210)

Master's level biostatistics course: Spring 2003, Spring 2005

Applied Categorical Data Analysis (BIOS:6110)

Master's level biostatistics course: Fall 2003, Fall 2004, Fall 2005, Fall 2007

Biostatistical Methods in Categorical Data Analysis (BIOS:5730) – Course Creator

Master's level biostatistics course: Spring 2007, Spring 2008, Spring 2010, Spring 2017

Biostatistical Methods II (BIOS:5720)

Master's level biostatistics course: Spring 2009, Spring 2011

Biostatistical Computing with R and SAS (BIOS:5510)

Master's level biostatistics course: Fall 2011-2016

Introduction to Biostatistics (BIOS:4120)

Master's level course for non-biostatistics majors: Fall 2001, Spring 2002, Summer 2002, Fall 2002, Spring 2006

Biostatistics Seminar for Radiation Oncology – Course Creator

15 lectures for medical residents: Fall 2010, 2012, 2014, 2016

Contributed Lectures, University of Iowa

General Biostatistics (BIOS:4110)

Undergraduate level course for Iowa Summer Institute in Biostatistics (ISIB) Program: Summer 2010-2016

Biostatistics Seminar for Hematology, Oncology, and Blood & Marrow Transplantation Core

Medical fellows: Fall 2006, Spring 2010

Bioinformatics Summer Course, Iowa Institute for Human Genetics

R training for graduate students and professionals: Summer 2015-2016

Environmental Health Sciences Institute for Rural Youth

High school students: Summer 2002

Course Supervisor, University of Iowa

Applied Survival & Cohort Data Analysis (BIOS:6210)

Master's level biostatistics course: Spring 2007

Research Interests

- Statistical Applications in Cancer Research, Public Health, and Biomedical Informatics
- Preclinical Studies and Clinical Trials, Epidemiologic Studies, Quantitative Medical Imaging, Radiomics, Diagnostic Testing, Disease Risk and Outcomes Modeling, Environmental Radon
- Bayesian Methods, Statistical Computing, MCMC, Spatial Statistics, Hierarchical Statistical Modeling, Statistical/Machine Learning

Computing Experience

- Scientific Programming: C/C++, JAGS, julia, OpenBUGS, R, SAS, STAN
- Data Management: Microsoft Access, OnCore, REDCap, SQL
- Web Development: HTML, RStudio Shiny
- Software Development: Git, Markdown, SVN

Peer-Reviewed Publications

105. Schoenfeld JD, Sibenaller ZA, Mapuskar KA, Wagner BA, Cramer-Morales KL, Furqan M, Sandhu S, Carlisle TL, Smith MC, Abu Hejleh T, Berg DJ, Zhang J, Keech J, Parekh KR, Bhatia S, Monga V, Bodeker KL, Ahmann L, Vollstedt S, Brown H, Kauffman EP, Schall ME, Hohl RJ, Clamon GH, Greenlee JD, Howard MA, Shultz MK, **Smith BJ**, Riley DP, Domann FE, Cullen JJ, Buettner GR, Buatti JM, Spitz DR, Allen BG (2017). O₂- and H₂O₂-mediated disruption of Fe metabolism causes the differential susceptibility of NSCLC and GBM cancer cells to pharmacological ascorbate. *Cancer Cell*, 31(4):487-500. PMID: 28366679
104. Beichel RR, **Smith BJ**, Bauer C, Ulrich EJ, Admadvand P, Budzevich MM, Gillies RJ, Goldhof D, Grkovski M, Mamarneh G, Huang Q, Kinahan PE, Laymon CM, Mountz JM, Muzi JP, Muzi M, Nehmeh S, Oborski MJ, Tan Y, Zhao B, Sunderland JJ, Buatti JM (2017). Multi-site quality and variability analysis of 3D FDG PET segmentations based on phantom and clinical image data. *Medical Physics*, 44(2):479-496. PMID: 28205306
103. Zahra A, Fath MA, Opat E, Mapuskar KA, Bhatia SK, Ma DC, Lii SN, Snyders TP, Chenard CA, Eichenberger-Gilmore JM, Bodeker KL, Ahmann L, **Smith BJ**, Vollstedt SA, Brown HA, Hejleh TA, Clamon GH, Berg DJ, Szweda LI, Spitz DR, Buatti JM, Allen BG (2017). Consuming a ketogenic diet while receiving radiation and chemotherapy for locally advanced lung cancer and pancreatic cancer: The University of Iowa experience of two phase 1 clinical trials. *Radiation Research*, 187(6):743-754. PMID: 28437190
102. Rogers LM, Mott SL, **Smith BJ**, Link BK, Sahin D, Weiner GJ (2016). Complement regulatory proteins CFHR1 and CFHR3 and patient response to anti-CD20 monoclonal antibody. *Clinical Cancer Research*, 23(4):954-961. PMID: 27528699
101. Gonzales Bosquet J, Newton AM, Chung RK, Thiel KW, Ginader T, Goodheart MJ, Leslie KK, **Smith BJ** (2016). Prediction of chemo-reponse in serous ovarian cancer. *Molecular Cancer*, 15(1):66. PMC: PMC5070116, PMID: 27756408

100. McGuire SM, Bhatia SK, Sun W, Jacobson GM, Menda Y, Ponto LL, **Smith BJ**, Gross BA, Bayouth JE, Sunderland J, Graham M, Buatti JM (2016). Using [(18)F]Fluorothymidine (FLT) imaged with Positron Emission Tomography (PET) to quantify and reduce hematologic toxicity due to chemoradiation therapy for pelvic cancer patients. *International Journal of Radiation Oncology, Biology, Physics*, 96(1):228-239. PMC: PMC4982822, PMID: 27319286
99. Barnes KT, McDowell BD, Button A, **Smith BJ**, Lynch CF, Gupta A (2016). Obesity is associated with increased risk of invasive penile cancer. *BMC Urology*, 16(1):42. PMC: PMC4944270, PMID: 27411982
98. Beichel BR, Van Tol M, Ulrich EJ, Bauer C, Chang T, Plichta KA, **Smith BJ**, Sunderland JJ, Graham MM, Sonka M, Buatti JM (2016). Semiautomated segmentation of head and neck cancers in 18F-FDG PET scans: A just-enough-interaction approach. *Medical Physics*, 43(6):2948-2964. PMC: PMC4874930, PMID: 27277044
97. Dilger SK, Uttoff J, Judisch A, Hammond E, Mott SL, **Smith BJ**, Newell JD, Hoffman EA, Sieren JC (2015). Improved pulmonary nodule classification utilizing quantitative lung parenchyma features. *Journal of Medical Imaging*, 2(4):041004. PMC: PMC4748146, PMID: 26870744
96. Du J, Cieslak JA, Welsh JL, Sibenaller ZA, Allen BG, Wagner BA, Kalen AL, Doskey CM, Strother RK, Button AM, Mott SL, **Smith B**, Tsai S, Mezhir J, Goswami PC, Spitz DR, Buettner GR, Cullen JJ (2015). Pharmacological ascorbate radiosensitizes pancreatic cancer. *Cancer Research*, 75(16):3314-26. PMC: PMC4537815, PMID: 26081808
95. Hoover AC, Milhem MM, Anderson CM, Sun W, **Smith BJ**, Hoffman HT, Buatti JM (2015). Efficacy of nelfinavir as monotherapy in refractory adenoid cystic carcinoma: results of a phase II clinical trial. *Head & Neck*, 37(5):722-6. PMC: PMC4285572, PMID: 24596143
94. McDowell BD, Chapman CG, **Smith BJ**, Button AM, Mezhir JJ (2015). Pancreatectomy predicts improved survival for pancreatic adenocarcinoma: results of an instrumental variable analysis. *Annals of Surgery*, 261(4):740-745. PMC: PMC4277740, PMID: 24979599
93. Anderson CM, Chang T, Graham MM, Marquardt MD, Button A, **Smith BJ**, Menda Y, Sun W, Pagedar NA, Buatti JM (2015). Change of maximum standardized uptake value slope in dynamic triphasic [18F]-fluorodeoxyglucose positron emission tomography/computed tomography distinguishes malignancy from postradiation inflammation in head-and-neck squamous cell carcinoma: a prospective trial. *International Journal of Radiation Oncology * Biology * Physics*, 91(3):472-9. PMC: PMC4335357, PMID: 25680593
92. Wudhikarn K, **Smith BJ**, Button AM, Habermann TM, Thompson CA, Rosenstein LJ, Syrbu SI, Weiner GJ, Cerhan JR, Link BK (2015). Relationships between chemotherapy, chemotherapy dose intensity and outcomes of follicular lymphoma in the immunochemotherapy era: a report from the University of Iowa/Mayo Clinic SPORE Molecular Epidemiology Resource. *Leukemia & Lymphoma*, 56(8):2365-2372. PMC: PMC4530103, PMID: 25530345
91. TenNapel MJ, Lynch CF, Burns TL, Wallace RB, **Smith BJ**, Button A, Domann FE (2014). SIRT6 minor allele genotype is associated with > 5-year decrease in lifespan in an aged cohort. *PLOS One*, 9(12):e115616. PMC: PMC4277407, PMID: 25541994

90. Xia C, Leon-Ferre R, Laux D, Deutsch J, **Smith BJ**, Frees M, Milhem M (2014). Treatment of resistant metastatic melanoma using sequential epigenetic therapy (Decitabine and Panobinostat) combined with chemotherapy (Temozolomide). *Cancer Chemotherapy and Pharmacology*, 74(4):691-697. PMC: PMC4175037, PMID: 25062770
89. **Smith BJ**, Mezhir JJ (2014). An interactive Bayesian model for prediction of lymph node ratio and survival in pancreatic cancer patients. *Journal of the American Medical Informatics Association*, 21(e2):e203-211. PMC: PMC4173165, PMID: 24444460
88. Muruganandham M, Clerkin PP, **Smith BJ**, Anderson CM, Morris A, Capizzano AA, Magnotta V, McGuire SM, Smith MC, Bayouth JE, Buatti JM (2014). 3-dimensional magnetic resonance spectroscopic Imaging at 3 Tesla for early response assessment of glioblastoma patients during external beam radiation therapy. *International Journal of Radiation Oncology, Biology, and Physics*, 90(1):181-189. PMC: PMC4183193, PMID: 24986746
87. McGuire SM, Menda Y, Ponto LL, Gross B, TenNapel M, **Smith BJ**, Bayouth JE (2014). Spatial mapping of functional pelvic bone marrow using FLT PET. *Journal of Applied Clinical Medical Physics*, 15(4):4780. PMC: PMC4161980, PMID: 25207403
86. Bedford RL, Lourens SG, Lynch CF, **Smith BJ**, Field R (2014). Utility of death certificate data in predicting cancer incidence. *American Journal of Industrial Medicine*, 57(2):153-162. PMC: PMC3951491, PMID: 24037961
85. Oleson JJ, Kumar N, **Smith BJ** (2013). Spatiotemporal modeling of irregularly spaced aerosol optical depth data. *Environmental and Ecological Statistics*, 20(2):297-314.
84. Muniz VP, Askeland RW, Zhang X, Reed SM, Tompkins VS, Hagen J, McDowell BD, Button A, **Smith BJ**, Weyedert JA, Mezhir JJ, Quelle DE (2013). RABL6A promotes oxaliplatin resistance in tumor cells and is a new marker of survival for resected pancreatic ductal adenocarcinoma patients. *Genes & Cancer*, 4(7-8):273-284. PMC: PMC3807645, PMID: 24167655
83. Barnes KT, **Smith BJ**, Lynch CF, Gupta A (2013). Obesity and invasive penile cancer. *European Urology*, 63(3):588-59. PMID: 23219085
82. Nadkarni NJ, Geest KD, Neff T, Young BD, Bender DP, Ahmed A, **Smith BJ**, Button A, Goodheart MJ (2013). Microvessel density and p53 mutations in advanced-stage epithelial ovarian cancer. *Cancer Letters*, 331(1):99-104. PMID: 23268330
81. Jacobus JJ, Duda CG, Coleman MC, Martin SM, Mapuskar K, Mao G, **Smith BJ**, Aykin-Burns N, Guida P, Gius D, Domann FE, Knudson CM, Spitz DR (2013). Low-dose radiation-induced enhancement of thymic lymphomagenesis in Lck-Bax mice is dependent on LET and gender. *Radiation Research*, 180(2):156-165. PMC: PMC3821998, PMID: 23819597
80. Allen BG, Bahatia SK, Buatti JM, Lindholm KE, Button AM, Szweda LI, **Smith BJ**, Spitz DR, Fath MA (2013). Ketogenic diets enhance oxidative stress and radio-chemo-sensitization of human lung cancer xenografts. *Clinical Cancer Research*, 19(14):3905-3913. PMC: PMC3954599, PMID: 23743570
79. Tompkins VS, Han S, Olivier A, Syrbu S, Bair T, Button A, Jacobus L, Wang Z, Raychaudhuri P, Morse III HC, Weiner G, Link B, **Smith BJ**, Janz S (2013). Identification of candidate B-lymphoma genes by

- cross-species gene expression profiling. *PLOS ONE*, 8(10):e76889. PMC: PMC3793908, PMID: 24130802
78. Bauer C, Krueger M, Lamm WJ, **Smith BJ**, Glenn RW, Beichel RR (2013). Airway tree segmentation in serial block-face cryomicrotome images of rat lungs. *IEEE Transactions on Biomedical Engineering*, 61(1):119-130. PMC: PMC3925465, PMID: 23955692
77. Witzig TE, Wiseman GO, Maurer MJ, Habermann TM, Micallef I, Nowakowski GS, Ansell SM, Colgan JP, Inwards DJ, Porrata LF, Link BK, Zent CS, Johnston PB, Shanafelt TD, Allmer C, Asmann YW, Gupta M, Ballas ZK, **Smith BJ**, Weiner GJ (2013). A phase I trial of immunostimulatory CpG 7909 Oligodeoxynucleotide and 90Yttrium Ibritumomab Tiuxetan radioimmunotherapy for relapsed B-cell non-Hodgkin lymphoma. *American Journal of Hematology*, 88(7):589-593. PMC: PMC3951424, PMID: 23619698
76. Sun RC, Button AM, **Smith BJ**, Hoshi H, Leblond RF, Howe JR, Mezhir JJ (2013). A comprehensive assessment of transfusion in elective pancreatectomy: Risk factors and complications. *Journal of Gastrointestinal Surgery*, 17(4):627-635. PMID: 23423430
75. Du J, Nelson ES, Simons AL, Olney KE, Moser JC, Wagner BA, Buettner GR, **Smith BJ**, Teoh ML, Tsao M, Cullen JJ (2012). Regulation of pancreatic cancer growth by superoxide. *Molecular Carcinogenesis*, 52(7):555-567. PMC: PMC3375391, PMID: 22392697
74. Jacobson G, Bhatia S, **Smith BJ**, Button AM, Bodeker K, Buatti J (2012). Randomized trial of pentoxifylline and vitamin E vs standard follow-up after breast irradiation to prevent breast fibrosis, evaluated by tissue compliance meter. *International Journal of Radiation Oncology, Biology, Physics*, 85(3):604-608. PMID: 22846413
73. Harshman LA, Barron S, Button AM, **Smith BJ**, Link BK, Lynch CF, Denburg NL (2012). Population-based exploration of academic achievement outcomes in pediatric acute lymphoblastic leukemia survivors. *Journal of Pediatric Psychology*, 37(4):458-466. PMC: PMC3334536, PMID: 22271791
72. Zent CS, **Smith BJ**, Ballas ZK, Wooldridge JE, Link BK, Call TG, Shanafelt TD, Bowen DA, Kay NE, Witzig TE, Weiner GJ (2012). Phase I clinical trial of CpG oligonucleotide 7909 (PF-03512676) in patients with previously treated chronic lymphocytic leukemia. *Leukemia & Lymphoma*, 53(2):211-217. PMC: PMC3438221, PMID: 21812536
71. Esser AK, Miller MR, Huang Q, Meier MM, Bernabe DB, Stipp CS, Campbell KP, Lynch CF, **Smith BJ**, Cohen MB, Henry MD (2012). Loss of LARGE2 disrupts functional glycosylation of alpha-dystroglycan in prostate cancer. *Journal of Biological Chemistry*, 288(4):2132-2142. PMC: PMC3554886, PMID: 23223448
70. Bauer C, Sun S, Sun W, Wallace A, **Smith BJ**, Sunderland JJ, Graham MM, Sonka M, Buatti JM, Beichel RR (2012). Automated measurement of uptake in cerebellum, liver, and aortic arch in full-body FDG PET/CT scans. *Medical Physics*, 39(6):3112-3123. PMC: PMC3365916, PMID: 22755696
69. Aykin-Burns N, Slane BG, Liu AT, Owens KM, O'Malley MS, **Smith BJ**, Domann FE, Spitz DR (2011). Sensitivity to low-dose/low-LET ionizing radiation in mammalian cells harboring mutations in succinate dehydrogenase subunit C is governed by mitochondria-derived reactive oxygen species. *Radiation Research*, 175(2):150-158. PMC: PMC3080019, PMID: 21268708

68. Du J, Liu J, **Smith BJ**, Tsao MS, Cullen JJ (2011). Role of Rac1-dependent NADPH oxidase in the growth of pancreatic cancer. *Cancer Gene Therapy*, 18(2):135-143. PMC: PMC3058504, PMID: 21037555
67. Morton CM, Peterson NA, Schneider JE, **Smith BJ**, Armstead TL (2010). Tobacco sales in community pharmacies: remote decisions and demographic targets. *Journal of Community Psychology*, 38(1):39-48.
66. Olson AK, Bhatia S, Duncan C, Betts V, **Smith BJ**, Jacobson G (2010). Definitive radiation therapy for the treatment of inoperable endometrial cancer: pelvic radiation followed by HDR brachytherapy or IMRT/conformal boost. *International Journal of Radiation Oncology*, 78(3):S421-S422.
65. Juweid ME, **Smith BJ**, Itti E, Meignan M (2010). Can the interim fluorodeoxyglucose-positron emission tomography standardized uptake value be used to determine the need for residual mass biopsy after dose-dense immunochemotherapy for advanced diffuse large B-cell lymphoma? *Journal of Clinical Oncology*, 28(34):e719-720. PMID: 20733137
64. Chen C, Johnson M, **Smith BJ** (2010). Azidothymidine enhances fluorodexoyuridine mediated radiosensitization. *International Journal of Radiation Oncology, Biology, Physics*, 76(3):905-913. PMC: PMC2900777, PMID: 20159365
63. Thomas A, Gingrich RD, **Smith BJ**, Jacobus L, Ristow K, Allmer C, Maurer MJ, Habermann TM, Link BK (2010). 18-fluoro-deoxyglucose positron emission tomography report interpretation as predictor of outcome in diffuse large B-cell lymphoma including analysis of 'indeterminate' reports. *Leukemia & Lymphoma*, 51(3):439-446. PMC: PMC3122075, PMID: 20141442
62. Cowles MK, Yan J, **Smith BJ** (2009). Reparameterized and marginalized posterior and predictive sampling for complex Bayesian geostatistical models. *Journal of Computational and Graphical Statistics*, 18(2):262-282.
61. Robinson JG, Wang S, **Smith BJ** (2009). Meta-analysis of the relationship between non-high density lipoprotein cholesterol reduction and coronary heart disease risk. *Journal of the American College of Cardiology*, 53(4):316-322. PMID: 1916187
60. Lal G, Hashimi S, **Smith BJ**, Lynch CF, Zhang L, Robinson RA, Weigel RJ (2009). Extracellular Matrix 1 (ECM1) expression is a novel prognostic marker for poor long-term survival in breast cancer: a hospital-based cohort study in Iowa. *Annals of Surgical Oncology*, 16(8):2280-2287. PMID: 19521735
59. Sun W, Kalen AL, **Smith BJ**, Cullen JJ, Oberley LW (2009). Enhancing the antitumor activity of adriamycin and ionizing radiation. *Cancer Research*, 69(10):4294-4300. PMID: 19401447
58. Konety BR, Raut H, **Smith BJ**, Sharp V, Williams RD (2009). Effect of uniform consensus recommendations for PCa screening in older population: differential effects and perceptions of healthcare providers and patients. *Urology*, 73(3):603-608. PMID: 19118877
57. Goodheart MJ, Rose SL, Hattermann-Zogg M, **Smith BJ**, De Young BR, Buller RE (2009). BRCA2 alteration is important in clear cell carcinoma of the ovary. *Clinical Genetics*, 76(2):161-167. PMID: 19656163

56. Hare ND, **Smith BJ**, Ballas ZK (2009). Antibody response to pneumococcal vaccination as a function of preimmunization titer. *The Journal of Allergy and Clinical Immunology*, 123(1):195-200. PMID: 3613280
55. Chen Y, **Smith BJ** (2009). Adaptive group sequential design for phase II clinical trials: a Bayesian theoretic approach. *Statistics in Medicine*, 28(27):3347-3362. PMID: 19725024
54. Johnson TJ, Guidroz JA, **Smith BJ**, Graham MM, Scott-Conner CE, Sugg SL, Weigel RJ (2009). A single institutional experience of factors affecting successful identification of sentinel lymph node in breast cancer patients. *Surgery*, 146(4):671-677.
53. Luthe G, Boy RG, Jacobus J, **Smith BJ**, Rahaman A, Robertson LW, Ludewig G (2008). Xenobiotic geometry and media pH determine cytotoxicity through solubility. *Chemical Research in Toxicology*, 21(5):1017-1027.
52. **Smith BJ**, Yan J, Cowles MK (2008). Unified geostatistical modeling for data fusion and spatial heteroskedasticity with R package ramps. *Journal of Statistical Software*, 25(10):1-21.
51. Dennis LK, VanBeek MJ, Beane Freeman LE, **Smith BJ**, Dawson DV, Coughlin JA (2008). Sunburns and risk of cutaneous melanoma: does age matter? A comprehensive meta-analysis. *Annals of Epidemiology*, 18(8):614-627. PMC: PMC2873840, PMID: 18652979
50. Khanna G, O'Dorisio MS, Menda Y, Glasier C, Deyoung B, **Smith BJ**, Graham M, Juweid M (2008). Somatostatin receptor scintigraphy in surveillance of pediatric brain malignancies. *Pediatric Blood & Cancer*, 50(3):561-566. PMID: 17387742
49. Adam LA, **Smith BJ**, Calva-Cerqueira D, Howe JR, Lal G (2008). Role for limited neck exploration in young adults with apparently sporadic primary hyperparathyroidism. *World Journal of Surgery*, 32(7):1518-1524. PMID: 18335277
48. Van De Wetering CI, Coleman MC, Spitz DR, **Smith BJ**, Knudson M (2008). Manganese superoxide dismutase gene dosage affects chromosomal instability and tumor onset in a mouse model of T cell lymphoma. *Free Radical Biology Medicine*, 44(8):1677-1686. PMID: 18291119
47. Weydert CJ, Zhang Y, Sun W, Waugh TA, Teoh ML, Andringa KK, Aykin-Burns N, Spitz DR, **Smith BJ**, Oberley LW (2008). Increased oxidative stress created by adenoviral MnSOD or CuZnSOD plus BCNU (1,3-bis(2-chloroethyl)-1-nitrosourea) inhibits breast cancer cell growth. *Free Radical Biological Medicine*, 44(5):856-867. PMID: 18155673
46. **Smith BJ**, Oleson JJ (2008). Geostatistical hierarchical model for temporally integrated data measured with error. *Journal of Agricultural, Biological, and Environmental Statistics*, 13(2):140-158.
45. Mazumdar S, Rushton G, **Smith BJ**, Zimmerman D, Donham KJ (2008). Geocoding accuracy and the recovery of relationships between environmental exposures and health. *International Journal of Health Geographics*, 7:13. PMID: 18387189
44. Olson AK, Smith MC, Ryken TC, Hitchon PW, Pennington EC, **Smith BJ**, Bayouth JE, Buatti JM (2008). Frameless stereotactic radiosurgery for treatment of intracranial metastases *International Journal of Radiation Oncology, Biology, and Physics*, 72(1):S203.

43. Lal G, Padmanabha L, Nicholson R, **Smith BJ**, Zhang L, Howe JR, Robinson RA, O'Dorisio S (2008). ECM1 expression in thyroid tumors - a comparison of real-time RT-PCR and immunohistochemistry. *Journal of Surgical Research*, 149(1):62-68. PMID: 18374945
42. Goodheart M, Jacobson G, **Smith BJ**, Zhou L (2008). Chemoradiation for invasive cervical cancer in elderly patients: outcomes and morbidity. *International Journal of Gynecological Cancer*, 18(1):95-103. PMID: 17466049
41. Coleman MC, Asbury CR, Daniels D, Du J, Aykin-Burns N, **Smith BJ**, Li L, Spitz DR, Cullen JJ (2008). 2-deoxy-D-glucose causes cytotoxicity, oxidative stress, and radiosensitization in pancreatic cancer. *Free Radical Biology Medicine*, 44(3):322-331. PMID: 18215740
40. Zhang Z, **Smith BJ**, Steck DJ, Guo Q, Field RW (2007). Variation in yearly residential radon concentrations in the upper midwest. *Health Physics*, 93(4):288-297. PMID: 17846525
39. Teoh ML, Sun W, **Smith BJ**, Oberley LW, Cullen JJ (2007). Modulation of reactive oxygen species in pancreatic cancer. *Clinical Cancer Research*, 13(24):7441-7450. PMID: 18094428
38. Clava-Cerqueira D, **Smith BJ**, Hostetler ML, Lal G, Menda Y, O'Dorisio TM, Howe JR (2007). Minimally invasive parathyroidectomy and preoperative MIBI scans: correlation of gland weight and preoperative PTH with MIBI scans. *Journal of the American College of Surgeons*, 205(Suppl 4):S38-44. PMID: 17916517
37. Oleson JJ, **Smith BJ**, Kim H (2007). Joint spatio-temporal modeling of low incidence cancers sharing common risk factors. *Journal of Data Science*, 6(1):105-124.
36. **Smith BJ**, Zhang L, Field R (2007). Iowa radon leukemia study: a hierarchical population risk model for spatially correlated exposure measured with error. *Statistics in Medicine*, 26:4619-4642. PMID: 17373673
35. Simons AL, Fath MA, Mattson DM, **Smith BJ**, Walsh SA, Graham MM, Hichwa RD, Buatti JM, Dornfeld K, Spitz DR (2007). Enhanced response of human head and neck cancer xenograft tumors to cisplatin combined with 2-deoxy-D-glucose correlates with increased 18F-FDG uptake as determined by PET imaging. *International Journal of Radiation Oncology, Biology, Physics*, 69(4):1222-1230. PMID: 17967311
34. **Smith BJ**, Crowles MK (2007). Correlating point-referenced radon and areal uranium data arising from a common spatial process. *Journal of Royal Statistical Society, Series C*, 56(3):313-326.
33. **Smith BJ** (2007). boa: An R Package for MCMC Output Convergence Assessment and Posterior Inference. *Journal of Statistical Software*, 21(11):1-37.
32. Joudi FN, **Smith BJ**, O'Donnell MA, Konety BR (2006). The impact of age on response of patients with superficial bladder cancer to intravesical immunotherapy. *The Journal of Urology*, 175(5):1634-1640. PMID: 16600718
31. Liu J, Du J, Zhang YJ, Sun W, **Smith BJ**, Oberley LW, Cullen JJ (2006). Suppression of the malignant phenotype in pancreatic cancer by overexpression of phospholipid hydroperoxide glutathione peroxidase. *Human Gene Therapy*, 17(1):105-116. PMID: 16409129

30. Lal G, Padmanabha L, **Smith BJ**, Nicholson RM, Howe JR, O'Dorisio MS, Domann FE (2006). RIZ1 is epigenetically inactivated by promoter hypermethylation in thyroid carcinoma. *Cancer*, 107(12):2752-2759. PMID: 17103461
29. Joudi FN, **Smith BJ**, O'Donnell MA (2006). National BCG-interferon Phase 2 Investigator Group. Final results from a national multicenter phase II trial of combination bacillus calmette-guérin plus interferon α -2B for reducing recurrence of superficial bladder cancer. *Urologic Oncology*, 24(4):344-348. PMID: 16818189
28. Slane BG, Alykin-Burns N, Andrekopoulos C, Kalyanaraman B, **Smith BJ**, Domann FE, Spitz DR (2006). Mutation of succinate dehydrogenase subunit C results in increased O₂^{•-}, oxidative stress, and genomic instability. *Cancer Research*, 66(15):7615-7620. PMID: 16885361
27. Konety BR, Veerasathpurush A, Modak S, **Smith BJ**, Luft HS (2006). Mortality after major surgery for urologic cancers in specialized urology hospitals: are they any better? *Journal of Clinical Oncology*, 24(13):2006-2012.
26. Zhang Y, **Smith BJ**, Spitz DR, Oberley LW (2006). Enzymatic activity is necessary for the tumor suppressive effects of MnSOD. *Antioxidants and Redox Signaling*, 8(7-8):1282-1293. PMID: 16910776
25. **Smith BJ**, Field RW (2006). Effect of housing factors and surficial uranium on the spatial prediction of residential radon in Iowa. *Environmetrics*, 18(5):481-497.
24. Weyer PJ, **Smith BJ**, Feng ZF, Kantamneni JR, Riley DG (2006). Comparison of nitrate levels in raw water and finished water from historical monitoring data on Iowa municipal drinking water supplies. *Environmental Monitoring and Assessment*, 116(1-3):81-90. PMID: 16779582
23. Jacobson G, Betts V, **Smith BJ** (2006). Change in volume of lumpectomy cavity during external beam irradiation of the intact breast. *International Journal of Radiation Oncology, Biology, and Physics*, 65(4):116-1164. PMID: 16682143
22. Bowles JA, Wang S, Link BK, Allan B, Beuerlein G, Campbell M, Marquis D, Ondek B, Wooldridge JE, **Smith BJ**, Breitmeyer JB, Weiner GJ (2006). Anti-CD20 monoclonal antibody with enhanced affinity for CD16 activates NK cells at lower concentrations and more effectively than rituximab. *Blood*, 108(8):2648-2654. PMC: PMC1895597, PMID: 16825493
21. Jacobson GM, Kamath RS, **Smith BJ**, Goodheart MJ (2005). Thromboembolic events in patients treated with definitive chemotherapy and radiation therapy for invasive cervical cancer. *Gynecologic Oncology*, 96:470-474. PMID: 15661237
20. Yang GS, Bishop W, **Smith BJ**, Goudy S, Bauman NM (2005). Radiographic and endoscopic measurement of esophageal length in pediatric patients. *The Annals of Otolaryngology, Rhinology, and Laryngology*, 114(8):587-592.
19. Robinson JG, **Smith BJ**, Maheshwari N, Schrott H (2005). Pleiotropic effects of statins: benefit beyond cholesterol reduction? A meta-regression analysis. *Journal of the American College of Cardiology*, 46(10):1855-1862. PMID: 16286171

18. Humann MJ, Donham KJ, Jones ML, Achutan C, **Smith BJ** (2005). Occupational noise exposure assessment in intensive swine farrowing systems: dosimetry, octave band, and specific task analysis. *Journal of Agromedicine*, 10(1):23-37. PMID: 15927915
17. Dennis LK, Snetselaar LG, **Smith BJ**, Stewart RE, Robbins ME (2004). Problems with the assessment of dietary fat in prostate cancer studies. *American Journal of Epidemiology*, 160(5):436-444. PMID: 15321840
16. Eichholz AC, Van Voorhis BJ, Sorosky JI, **Smith BJ**, Sood AK (2004). Operative note dictation: should it be taught routinely in residency programs? *Obstetrics & Gynecology*, 103(2):342-346. PMID: 14754706
15. Field R, **Smith BJ**, Platz CE, Robinson RA, Neuberger JS, Brus CP, Lynch CF (2004). Lung cancer histologic type in the Surveillance, Epidemiology, and End Results registry versus independent review. *Journal of the National Cancer Institute*, 96:1105-1107. PMID: 15265973
14. Stone PJ, Goodheart MJ, Rose SL, **Smith BJ**, DeYoung BR, Buller RE (2003). The influence of microvessel density on ovarian carcinogenesis. *Oncology*, 90:566-571. PMID: 13678725
13. Rose SL, Robertson AD, Goodheart MJ, **Smith BJ**, DeYoung BR, Buller RE (2003). The impact of p53 protein core domain structural alteration on ovarian cancer survival. *Clinical Cancer Research*, 9:4139-4144. PMID: 14519637
12. Rose SL, Goodheart MJ, DeYoung BR, **Smith BJ**, Buller RE (2003). p21 expression predicts outcome in p53-null ovarian cancer. *Clinical Cancer Research*, 9:1028-1032. PMID: 12631602
11. Joudi FN, **Smith BJ**, O'Donnell MA, Konety B (2003). Contemporary management of superficial bladder cancer in the United States: a pattern of care analysis. *Urology*, 62:1083-1088. PMID: 14665360
10. Field R, **Smith BJ**, Steck DJ, Lynch CF (2002). Residential radon exposure and lung cancer: variation in risk estimates using alternative exposure scenarios. *Journal of Exposure Analysis & Environmental Epidemiology*, 12(3):197-203. PMID: 12032816
9. Field R, Steck DJ, **Smith BJ**, Brus CP, Fisher EF, Neuberger JS, Lynch CF (2001). The Iowa Radon Lung Cancer Study phase I: residential radon gas exposure and lung cancer. *The Science of the Total Environment*, 272:67-72. PMID: 11379939
8. Field RW, Steck DJ, **Smith BJ**, Brus CP, Fisher EF, Neuberger JS, Platz CE, Robinson RA, Woolson RF, Lynch CF (2000). Residential radon gas exposure and lung cancer: the Iowa Radon Lung Cancer Study. *American Journal of Epidemiology*, 151(11):1091-1102. PMID: 10873134
7. Field RW, **Smith BJ**, Lynch CF (1999). Response to Straja and Moghissi concerning ecologic studies. *Health Physics*, 76(3):318-319.
6. Field R, Lynch CF, Steck DJ, **Smith BJ**, Brus CP, Neuberger JS, Woolson RF, Fisher EF, Platz CE, Robinson RA (1999). Iowa Radon Lung Cancer Study. *Radiation Research*, 151:101-103.
5. Field R, **Smith BJ**, Lynch CF (1999). Cohen's paradox. *Health Physics*, 77(3):328-329.

4. Fisher EL, Field RW, **Smith BJ**, Lynch CF, Steck DJ, Neuberger S (1998). Spatial variation of residential radon concentrations: the Iowa Radon Lung Cancer Study. *Health Physics*, 75(5):506-513. PMID: 9790560
3. Field RW, **Smith BJ**, Brus CP, Lynch CF, Neuberger JS, Steck DJ (1998). Retrospective temporal and spatial mobility of adult Iowa women. *Risk Analysis*, 18(5):575-584. PMID: 9853393
2. **Smith BJ**, Field RW, Lynch CF (1998). Residential Rn-222 exposure and lung cancer: testing the linear no-threshold theory with ecologic data. *Health Physics*, 75(1):11-17. PMID: 9645661
1. Field RW, **Smith BJ**, Lynch CF (1998). Ecologic bias revisited, a rejoinder to Cohen's response to "Residential Rn-222 exposure and lung cancer: testing the linear no-threshold theory with ecologic data". *Health Physics*, 75(1):31-33.

Statistical Software

5. **Smith BJ**, Deonovic B (2017). Mamba: Markov chain Monte Carlo for Bayesian analysis, julia software package. *GitHub*. <https://github.com/brian-j-smith/Mamba.jl>
4. **Smith BJ** (2016). boa: Bayesian Output Analysis Program (BOA) for MCMC, R software package, version 1.1.8. *The Comprehensive R Archive Network*. <http://cran.r-project.org/package=boa>
3. **Smith BJ**, Yan J, Cowles MK (2016). ramps: Bayesian Geostatistical Modeling with RAMPS, R software package, version 0.6. *The Comprehensive R Archive Network*. <http://cran.r-project.org/package=ramps>
2. **Smith BJ** (2014). Survival calculator for surgically treated pancreatic cancer, R shiny software application. <http://www.myweb.uiowa.edu/bjsmith/pancreas/>
1. **Smith BJ** (2013). magma: Matrix Algebra on GPU and Multicore Architectures, R software package, version 0.2. *The Comprehensive R Archive Network*. <http://cran.r-project.org/package=magma>

Other Publications

Smith BJ, Deonovic B (2017). Mamba: Markov chain Monte Carlo for Bayesian analysis in julia (documentation). <http://mambajl.readthedocs.io/>

Smith BJ (2001). A Bayesian framework for analyzing exposure data from the Iowa radon lung cancer study. *Department of Preventive Medicine, University of Iowa, Iowa City, IA*

Invited Presentations

22. Holden Comprehensive Cancer Center Biostatistics Core (**Smith BJ**)
2016: Invited Lecture, Informatics Showcase, University of Iowa Informatics Initiative, Iowa City, Iowa, United States
21. ramps: An R Package for Unified Geostatistical Modeling of Complex Spatiotemporal Data (**Smith BJ**, Yan J, Cowles MK)
 - Invited Lecture, Seminar Series, Department of Biostatistics, University of Alabama, Birmingham, Alabama: 2009

- Invited Presentation, SAMSI Program on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change, National Science Foundation, Research Triangle Park, North Carolina: 2009
 - Joint Statistical Meetings, American Statistical Association, Washington, District of Columbia: 2009
 - Invited Lecture, Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods, American Statistical Association, Kansas City, Missouri: 2010
20. Joint Spatio-Temporal Modeling of Low Incidence Cancers Sharing Common Risk Factors (**Oleson JJ**, Smith BJ) Invited Lecture, Department of Statistics, Iowa State University, Ames, Iowa: 2007
 19. Computing for Bayesian Spatial Estimation and Prediction with Application to Residential Radon (**Cowles K**, Smith BJ, Yan J) Invited Lecture. DIMACS Workshop on Markov Chain Monte Carlo: Synthesizing Theory and Practice, Rutgers University, Piscataway, New Jersey: 2007
 18. Geostatistical Hierarchical Model for Temporally Integrated Data Measured with Error (**Smith BJ**) Invited Lecture, Spring Meeting, Eastern North American Region of the International Biometry Society, Tampa, Florida: 2006
 17. Geostatistical Hierarchical Model for Temporally Integrated Data Measured with Error (**Smith BJ**, Oleson JJ) Invited Lecture, Department of Biostatistics, University of Iowa, Iowa City, Iowa: 2006
 16. Fusing Point-Referenced Radon Data with Areal Uranium Data Arising from a Common Spatial Process (**Cowles MK**, Smith BJ) Invited Lecture, Department of Statistics, University of Wisconsin, Madison, Wisconsin: 2004
 15. Prostate Cancer Meta-Analysis: Combining Dose-Response Data, Study-Specific Covariates, and Dietary Quality Scores (**Smith BJ**, Dennis L, Snetelaar LG) Invited Lecture, College of Public Health, University of Iowa, Iowa City, Iowa: 2004
 14. Modeling the Distribution of Radon Levels in Iowa: Combining Multiple Sources of Spatial Data (**Smith BJ**) Invited Lecture, Kohn Colloquium, Department of Geography, University of Iowa, Iowa City, Iowa: 2004
 13. Modeling the Distribution of Environmental Radon Levels in Iowa: Combining Multiple Sources of Spatially Misaligned Data (**Smith BJ**) Invited Lecture, Department of Statistics, University of Iowa, Iowa City, Iowa: 2004
 12. Iowa and Missouri Residential Radon Studies: State-of-the-Art Exposure Assessment (**Field R**, Steck DJ, Smith BJ, Lynch CF, Lubin JH, Parkhurst MA, Alavanja MC) Invited Lecture, First National Cancer Institute Leadership Workshop: Tobacco, Diet, and Genes, Chicago, Illinois: 2004
 11. Bayesian Statistics: An Idea Whose Time Has Come (**Smith BJ**) Invited Lecture, Statistics Symposium, Arkansas State University, Jonesboro, Arkansas: 2004
 10. Iowa Radon Lung Cancer Study: Exposure Assessment (**Field R**, Lynch CF, Steck DJ, Smith BJ, Brus CP, Neuberger JS, Woolson RF, Fisher EF, Platz CE, Robinson RA) Invited Lecture, American Chemical Society, New York City, New York

9. Assessing the Proportion of Treatment Effect Captured by Two Surrogate Markers Measured Longitudinally (**Cowles MK**, Smith BJ) Invited Lecture, Department of Biostatistics, University of Iowa, Iowa City, Iowa
8. Beyond BEIR VI – The Iowa Radon Lung Cancer Study (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Illinois Department of Nuclear Safety, Radon Professionals Conference, University of Illinois at Chicago School of Public Health, Peoria, Illinois: 1999
7. What Do We Know About the Risk Posed by Residential Radon? The Iowa Radon Lung Cancer Study (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Annual Education Conference, Illinois Environmental Health Association, Peoria, Illinois: 1999
6. The Iowa Radon Lung Cancer Study Phase I: Residential Radon Gas Exposure and Lung Cancer (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Radon in the Living Environment, European Commission, Directorate General for Science, R&D Radiation Research Unit, Athens, Greece: 1999
5. The Iowa Radon Lung Cancer Study Phase I: Improved Methods for Residential Radon Exposure Assessment (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Interagency Workshop on the Role of Human Exposure Assessment in the Prevention of Environmental Disease, National Institute for Environmental Health Sciences, Rockville, Maryland: 1999
4. Preliminary Findings of the Iowa Radon Lung Cancer Study (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Radon Conference, American Association of Radon Scientists and Technologists, Cherry Hill, New Jersey: 1998
3. Preliminary Findings of the Iowa Radon Lung Cancer Study (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Council of Radiation Control Program Directors, U.S. Environmental Protection Agency, Cherry Hill, New Jersey: 1998
2. Iowa Radon Lung Cancer Study: Modeling the Linear Excess Risk of Lung Cancer associated with Radon Exposure (**Smith BJ**) Invited Lecture, Department of Biostatistics, University of Iowa, Iowa City, Iowa: 1998
1. Indoor Radon and Risk of Lung Cancer: Iowa Radon Lung Cancer Study (**Field R**, Steck DJ, Smith BJ, Brus CP, Fisher EF, Neuberger JS, Lynch CF) Invited Lecture, Conference on Radiation and Health, American Statistical Association, San Diego, California: 1998

Contributed Presentations

19. Convergence Diagnostic for MCMC Draws of a Categorical Variable (**Benjamin Deonovic**, Brian Smith) Oral and Poster Joint Statistical Meetings Chicago, Illinois: 2016
18. ramps: An R Package for Unified Geostatistical Modeling of Complex Spatiotemporal Data (**Smith BJ**, Yan J, Cowles MK) Oral, Spring Meeting, Eastern North American Region of the International Biometry Society, Washington, District of Columbia: 2008

17. Optimal Adaptive Group Sequential Design for Phase II Clinical Trials: A Bayesian Decision Theoretical Approach (**Chen Y**, Smith BJ) Poster, Midwest Biopharmaceutical Statistics Workshop, Ball State University, Muncie, Indiana: 2007
16. Fusing Point-Referenced Radon Data with Areal Uranium Data Arising from a Common Spatial Process (**Cowles MK**, Smith BJ) Oral, Annual Meeting, Interface Foundation of North American, Pasadena, California: 2006
15. Geostatistical Hierarchical Model for Temporally Integrated Radon Measurements (**Smith BJ**, Oleson JJ) Poster, Conference on Radiation and Health, American Statistical Association, Pacific Grove, California: 2006
14. Influence of Pregnancy on Breast Cancer Characteristics and Receptor Status in Iowa Women (**Scott-Connor CE**, Romitti PA, Lynch CF, Smith BJ, Lal G, Wilkinson N) Poster, San Antonio Breast Cancer Symposium, CTSC-AACR, San Antonio, Texas: 2006
13. Variation in Yearly Residential Radon Concentrations in the Upper Midwest (**Zhang Z**, Field R, Smith BJ, Steck BJ) Poster, James F. Jakobsen Graduate Student Conference, University of Iowa, Iowa City, Iowa: 2006
12. Variation in Yearly Residential Radon Concentrations in the Upper Midwest (**Zhang Z**, Field R, Smith BJ, Steck BJ) Poster, Research Week, Carver College of Medicine and College of Public Health, University of Iowa, Iowa City, Iowa: 2006
11. Venous Thromboembolic Events and Survival in Cervical Carcinoma (**Lammi J**, Jacobson G, Smith BJ, Goodheart MJ) Poster, Research Week, Carver College of Medicine, University of Iowa, Iowa City, Iowa: 2006
10. Modeling the Distribution of Environmental Radon Levels in Iowa: Combining Multiple Sources of Spatially Misaligned Data (**Smith BJ**) Oral, Joint Statistical Meetings, American Statistical Association, Minneapolis, Minnesota: 2005
9. Statistical Issues in the Study of Residential Radon (**Smith BJ**) Oral, New Researcher's Conference, Institute of Mathematical Statistics, Minneapolis, Minnesota: 2005
8. Maspin Expression is Activated by Loss of Promoter Methylation in Ovarian Carcinoma (**Rose SL**, Fitzgerald MP, Geest KD, White N, Smith BJ, Domann FE) Poster, Research Week, Carver College of Medicine and College of Public Health, University of Iowa, Iowa City, Iowa: 2005
7. Radiographic and Endoscopic Measurement of Esophageal Length in Pediatric Patients (**Yang G**, Bishop W, Smith BJ, Goudy S, Bauman NM) Poster, Annual Meeting, The American Broncho-Esophago-logical Association, Boca Raton, Florida: 2005
6. A Bayesian Meta-Analysis of the Impact of Dietary Fat Intake on Prostate Cancer Risk (**Smith BJ**, Dennis L, Snetselaar LG) Poster, Research Week, Carver College of Medicine, University of Iowa, Iowa City, Iowa: 2004
5. Is Being Obese and Eating a Low Carbohydrate Diet the Norm among Both Sexes – A Cross Sectional Survey Study in a Rural Community of Iowa (**Bardia A**, Snetselaar LG, Smith BJ, Lowe J, Peterson J, Faryle N) Poster, Annual Meeting, American College of Epidemiology, Boston, Massachusetts: 2004

4. Bayesian Risk Analysis of Radon Exposure Data from the Iowa Radon Lung Cancer Study (**Smith BJ**) Oral, Conference on Monte Carlo in the New Millennium, Department of Statistics, University of Florida, Gainesville, Florida: 2001
3. Bayesian Spatial Analysis for Data Obtained from Multiple Measurement Sources (**Smith BJ**, Cowles MK) Oral, Spring Meeting, Eastern North American Region of the International Biometry Society, Chicago, Illinois: 2000
2. Bayesian Spatial Analysis of Radon Exposure Data from the Iowa Radon Lung Cancer Study (**Smith BJ**, Cowles MK) Oral, Annual Meeting, American Statistical Association, Iowa Chapter, Indianola, Iowa: 2000
1. Bayesian Spatial Analysis of Radon Exposure Data from the Iowa Radon Lung Cancer Study (**Smith BJ**, Cowles MK) Oral, Joint Statistical Meetings, American Statistical Association, Indianapolis, Indiana: 2000

Grant Activity

Grant	Role	Funding Period
Cancer Center Support Grant NCI 5 P30 CA086862	George J Weiner, <i>PI</i> Brian J Smith, <i>Core Director</i>	7/14/2000- 11/30/2021
Quantitative Imaging to Assess Response in Cancer Therapy Trials NIH 5 U01 CA140206	John Buatti, <i>PI</i> Brian J Smith, <i>Statistician</i>	4/1/2010- 3/31/2020
Iowa Summer Institute in Biostatistics (ISIB) NIH T15 HL097622 NIH R25 HL131467	Kathryn M Chaloner, <i>PI</i> Gideon J Zamba, <i>PI</i> Brian J Smith <i>Co-Investigator</i>	9/1/2009- 1/31/2019
MTDH Regulates Fanconi Anemia Repair Pathway to Mediate Drug Resistance NIH 1 R01 CA184101	Xiangbing Ming, <i>PI</i> Kimberly Leslie, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	9/18/2014- 8/31/2019
Pharmacological Ascorbate as a Radiosensitizer in Pancreatic Cancer NIH R01 CA184051	Joseph Cullen, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	4/1/2015- 3/31/2019
Targeting Extracellular Histones with Novel RNA Bio-Drugs for the Treatment of Acute Lung Injury DOD W81XWH-16-1-0180	Paloma Giangrande, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	9/15/2016- 9/14/2019
Targeted Therapy for Endometrial Cancer NIH 5 R01 CA099908	Kimberly K Leslie, <i>PI</i> Brian J Smith, <i>Statistician</i>	7/1/2009- 04/30/2018
Developing Enabling PET-CT Image Analysis Tools for Predicting Response in Radiation Cancer Therapy NIH R21 CA209874	Xiaodong Wu, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	9/6/2016- 7/31/2018

Grant	Role	Funding Period
Specialized Program of Research Excellence (SPORE) NCI 5 P50 CA097274	George Weiner, <i>PI</i> Brian J Smith, <i>Core Co-Director</i>	09/11/2002- 06/30/2022
IGERT: Geoinformatics for Environmental and Energy Modeling and Prediction (GEEMaP) NIH 5 R01 CA169336	Mary K Cowles, <i>PI</i> Brian J Smith, <i>Supporting</i>	7/15/2010- 6/30/2018
Improving Pelvic Cancer Patient Chemoradiotherapy Outcomes with FLT PET Imaging NIH 5 R01 CA169336	Sarah McGuire, <i>PI</i> Brian J Smith, <i>Statistician</i>	9/22/2012- 06/30/2015
Gene-Environment Interaction Effects Influence the Risk of Breast, Prostate and Colorectal Cancer HCCC Oberley Seed Grant	Brian J Smith, <i>PI</i>	5/1/2012- 4/30/2014
Role of Dystroglycan in Prostate Cancer Progression NIH 1 R01 CA130916-02	Michael Henry, <i>PI</i> Brian J Smith, <i>Statistician</i>	7/10/2008- 5/31/2013
Statistics in Microbiology, Infectious Diseases & Bioinformatics NIH/NIGMS 1 T32 GM077973-01	Kathryn M Chaloner, <i>PI</i> Brian J Smith, <i>Supporting</i>	8/1/2006- 6/30/2011
ARRA: Dosimetry Guided Phase II of 90Y-DOTA-tyr3-Octreotide + Retinoic Acid in Kids NIH 1 R21 CA141840-01	Sue O'Doriso, <i>PI</i> Brian J Smith, <i>Statistician</i>	8/15/2009- 7/31/2011
Mitochondrial-Derived Oxidants and Cellular Responses to Low Dose/Low LET Ionizing Radiation DoE DE-SC0000830	Douglas Spitz, <i>PI</i> Brian J Smith <i>Statistician</i>	9/1/2009- 1/1/2011
Dosimetry in Children and Young Adults with Neuroblastoma or Neuroendocrine Tumors NIH R21 CA134198-01A1	Sue O'Doriso, <i>PI</i> Brian J Smith, <i>Statistician</i>	8/1/2008- 7/31/2011
Epidemiological and Medical Monitoring Proposal of Former Department of Defense Workers at the Iowa Army Ammunitions Plant in Middletown, Iowa DoD W911SR-05-C-005	Laurence J Fuortes, <i>PI</i> Brian J Smith, <i>Statistician</i>	8/29/2005- 9/28/2010
Mechanisms of Ascorbate-Induced Cytotoxicity in Pancreatic Cancer NIH 1 R21 CA137230-01A1	Joseph Cullen, <i>Principal</i> Brian J Smith, <i>Statistician</i>	11/1/2009- 06/30/2010
Ad5-TRAIL Gene Therapy for Prostate Cancer DoD X81XWH-05-1-0536	Richard Williams, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	5/19/2006- 7/1/2008

Grant	Role	Funding Period
Evaluation of the Edit Process as Applied to Lung Cases (SEER) N01-PC-35143	Charles F Lynch, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	8/1/2003- 09/30/2007
Sexually Transmitted Infections as a Risk Factor for Prostate Cancer among Military Personnel DoD PC030310	Leslie K Dennis, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	4/1/2004- 1/1/2007
Comprehensive Assessment of Rural Health in Iowa Iowa Department of Public Health 5883CA02	Kelly J Donham, <i>PI</i> Brian J Smith, <i>Consultant</i>	1/1/2004- 8/31/2006
Iowa and Missouri Radon Lung Cancer Study NCI 5 R01 CA85942-2	R William Field, <i>Principal</i> Brian J Smith, <i>Co-Investigator</i>	1/17/2001- 12/31/2005
Cumulative Sun Exposure and Melanoma: A Meta-Analysis ACS RSGPB-04-008-01-CPPB	Leslie K Dennis, <i>PI</i> Brian J Smith, <i>Co-Investigator</i>	1/1/2004- 12/31/2005
Bayesian Models for Meta-Analysis: The Impact of Dietary Fat Intake on Prostate Cancer CPH-COM New Investigator Award	Brian J Smith, <i>PI</i>	1/1/2003- 12/31/2003

Mentoring

Preceptorship Supervisor

- Brandon Butcher, Stephanie Lussier, Ryan Peterson (2016) "The Parkinson's Progression Markers Initiative: Data Challenge"
- Janel Barnes (2015) "Statistical Modeling of Biomedical Imaging Features for Lung Nodule Classification and Screening"
- Joseph Moen (2015) "Prognostic Value of Solitary versus Non-isolated Peritoneal Carcinomatosis in Metastatic Colorectal Patients: A Pooled Analysis Based on 9,629 Individual Patient Data from Prospective Randomized Studies"
- Kaitlin Lockhart (2014) "Screening the Performance of Predicting Cancer Recurrence with Quantitative Imaging Metrics Measured with Semi-automated Methods"
- Nan Hu (2013) "MCMC Sampler Design for Hierarchical Modeling of Cancer Lymph Node Ratio and Survival"
- Camden Bay (2012) "Exploration of the 3D Visualization of Tumor Growth over Time Using PET Scans"
- Jennifer Griffiths (2012) "flowGUI: A Custom R Graphical Interface for the Visualization and Analysis of Flow Cytometry Data"
- Jun Yin (2009) "Bayesian Survival Analysis of Stereotactic Radiosurgery Treated Patients"
- Carmen Smith (2009) "Survival and Tumor Growth Analysis of Cancer Treatments in Mice"
- Kainan Sun (2006) "Regression Calibration for the Iowa Radon and Lung Cancer Study"

Li Zhou (2006) "Computing Scores for Published Categories of a Continuous Risk Factor"

Lixun Zhang (2005) "Leukemia Rates in Iowa and their Association with Predicted County-Average Radon Levels"

Boikanyo Makubate (2004) "Subcutaneous and Intraperitoneal Delivery of Cancer Vaccines and Their Comparative Effect on Tumor Growth in Mice"

Qun Guo (2004) "The Effect of Housing Characteristics on Temporal Variation of Indoor Radon Levels"

Adam Summers (2003) "Home Radon Detection: Can Short-Term Measurements Predict with Long-Term Accuracy?"

PhD Thesis Advisor

Benjamin Deonovic (2017) "MCMC Sampling Methods for Binary Variables with Application to Haplotype Phasing and Allele Specific Expression"

Keyla Pagan-Rivera (2017) "Improved Adjustment for Covariate Measurement Error in Radon Studies: Alternatives to Regression Calibration"

Andrew Ghattas (2017) "Medical Imaging Segmentation Assessment via Bayesian Approaches to Fusion, Accuracy and Variability Estimation with Application to Head and Neck Cancer"

Jun Yin (2014) "Bayesian Statistical Modeling in Epidemics and the Contact Networks that Transmit Them"

Yiyi Chen (2008) "Optimal Adaptive Group Sequential Design for Phase II Clinical Trials: A Bayesian Decision Theoretic Approach"

Other Mentoring

- Master's advisor for 22 Biostatistics graduate students: 2004-2017
- Member of 44 PhD Thesis Committees (17 Biostatistics, 9 Epidemiology, 7 Statistics, 3 Occupational and Environmental Health, 3 Pharmacy, 1 Applied Mathematics, 1 Geography, 1 Health Management and Policy, 1 Nursing, 1 Statistical Genetics): 2003-2017
- Research project mentor for 25 students in the NHLBI-funded Iowa Summer Institute in Biostatistics at the University of Iowa: 2008-2017
- Member of 8 Master's Thesis Committees (7 Occupational and Environmental Health, 1 Epidemiology): 2002-2009

Honors and Awards

- University of Iowa College of Public Health Teaching Award: 2014
- Delta Omega Honor Society for Public Health: 2009
- American Statistics Association Conference on Radiation and Health New Investigator Research Award: 2006
- U.S. Environmental Protection Agency Children's Environmental Health Recognition Award: 2006
- American Broncho-Esophagological Association Annual Scientific Session Steben D. Gray Resident's Research Award: 2005
- University of Iowa College of Public Health New Investigator Research Award: 2003

- University of Iowa College of Public Health Milford E. Barnes Graduate Student Award: 2001
- American Statistical Association Statistical Computing Section John M. Chambers Statistical Software Award: 2000
- University of Iowa Excellence in Teaching Award for Graduate Teaching Assistants: 1997
- US Congress Barry M. Goldwater Scholarship: 1992

Service

Department of Biostatistics, University of Iowa

- PhD Comprehensive Examination Committee: 2002-2004, 2013-Present
- Master's Comprehensive Examination Committee: 2003-2004, 2005 (Fall Chair), 2006-2007, 2008 (Summer Chair), 2009, 2010-2011 (Summer Chair), 2012-2015, 2017 (Summer Chair)
- MS and PhD Curriculum Committee: 2007-2008, 2012-2014 (Chair), 2015-2017
- Computing Committee: 2005, 2006-2014 (Chair), 2015-Present
- Diversity Committee: 2008-Present
- Faculty Search Committee: 2011-2014, 2014-2015 (Chair), 2016-2017
- Seminar Committee: 2003, 2004 (Chair), 2005, 2006 (Chair), 2014-2015
- Admissions and Recruitment Committee: 2003-2007; 2008-2009
- Departmental Self-Study Committee: 2007-2008
- Social Event Committee: 2006-2007
- MPH Curriculum Committee: 2004-2005
- Teaching Assistant Supervisor: 2001-2002 (6), 2005 (1), 2006 (3), 2013 (1)
- Teaching Evaluation and Promotion Committee: 1996-1997
- Biostatistics Student Organization: 1996-1997 (Chair)

College of Public Health, University of Iowa

- Philanthropy Committee: 2015-Present
- Global Public Health Committee: 2014-2015
- Computation and Informatics Committee: 2010-2014
- Associate Dean for Administration Search Committee: 2014
- Promotion and Tenure Collegiate Consulting Groups: 2009-2013
- Research Week Judge: 2012
- Delta Omega Student Poster Session Competition Judge: 2011
- Faculty Council: 2004-2005, 2008, 2009 (Secretary), 2010 (Chair)
- Epidemiology Department Internal Review Committee: 2009
- Computation and Informatics Committee: 2007-2008
- New Investigator Research Award Committee: 2008
- Admissions Committee for MPH in Clinical Investigation: 2002-2006
- Center for Health Effects and Environmental Contaminants: 2002-2004
- Academic Misconduct Review Committee: 2003-2004
- Continuing Education and Seminar Committee: 2003-2004
- Instructional Development and Evaluation Committee: 2003-2004
- Website Committee: 2002-2003

Holden Comprehensive Cancer Center, University of Iowa

- Protocol Review and Monitoring Committee: 2001-Present
- Data Safety and Monitoring Committee: 2006-Present
- Population Research Core Advisory Committee: 2009-Present
- Biostatistics Core Staff Supervisor: 2010-Present
- Cancer Epidemiology and Population Science Program Leadership Committee: 2016-Present
- Biostatistician Search Committee Chair: 2010, 2013, 2014
- Graduate Research Assistant Supervisor: 2005-2008, 2016-Present

University of Iowa

- Iowa Informatics Initiative ([UI3](#)) Steering Committee: 2013-Present
- Research Computing IT Council, Information Technology Services and Office of the Vice President for Research & Economic Development: 2017-Present
- Faculty Search Committee, Department of Biology: 2016-2017
- Admissions Committee for Bioinformatics Interdisciplinary Graduate Program: 2014-2016
- Center for Global and Regional Environmental Research Seed Grant Reviewer: 2007, 2015
- Faculty Search Committee, Department of Statistics and Actuarial Science: 2014-2015
- Faculty Search Committee, Department of Management Sciences: 2014
- Provost and Vice President for Research Informatics Task Force: 2013
- Jakobsen Graduate Student Conference Judge: 2006-2012
- Women in Science and Engineering Student Travel Grant Reviewer: 2009, 2011

Professional Organizations

Phi Beta Kappa

Member: 1992-Present

American Statistical Association

Member: 1999-Present

JSM Session Chair, Boosting, Ensemble Learning, and Other Data-Mining Methods: 2009

JSM Session Organizer, Efficient Methods for the Analysis of Spatial Data: Computing and Application: 2009

JSM Session Chair, Monitoring and Modeling Air Quality and its Health Effects: 2005

Eastern North American Region of the International Biometric Society

Member: 2001-Present

Regional Advisory Board: 2009-2011

Delta Omega

Member: 2009-Present

President of Alpha Phi Chapter: 2015-2016

Vice President of Alpha Phi Chapter: 2014-2015

United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)

Effects of Exposure to Radon in Home and Workplaces Expert Group: 2016-Present

SAMSI Program on Space-time Analysis for Environmental Mapping

Co-Chair, Epidemiology and Climate Change, Statistical Computing Subgroup: 2010

American Mathematical Association

Member: 2002-2006

Journal/Book Reviews

- *BMC Pediatrics*
- *Circulation*
- *Communications in Statistics*
- *Computational Statistics and Data Analysis*
- *Environmental and Ecological Statistics*
- *Environmental Health Perspectives*
- *Environmetrics*
- *Health Physics*
- *International Journal of Cancer*
- *Journal of the American Informatics Association*
- *Journal of Applied Statistics*
- *Journal of Agricultural, Biological, and Environmental Statistics*
- *Journal of Clinical Oncology*
- *Journal of Computational and Graphical Statistics*
- *Journal of Environmental Management*
- *Journal of Toxicology & Environmental Health*
- *Radiation Protection Dosimetry*
- *Science of the Total Environment*
- *Statistical Computing*
- *Statistics and Computing*
- *Statistics in Medicine*
- Book editor review for *EnteR Monte Carlo Statistical Methods*

Study Sections/Grant Reviews

American Cancer Society, Holden Comprehensive Cancer Center Seed Grants

Reviewer: May 2011

NCI Subcommittee F, Institutional Training and Education Study Section

Reviewer and Permanent Member: October 2016, February 2017, June 2017

NIH Preclinical Pediatric Testing Consortium (U01)

Reviewer: April 2015

NIH Cancer Biomarkers Study Section

Reviewer: February 2010, June 2010, October 2010, February 2011

NIH Cancer Prevention Study Section

Reviewer: September 2010

US EPA Environmental Statistics Research: Novel Analyses of Human Exposure Related Data

Reviewer: April 2003

Veterans Affairs Lung Cancer Surgery or Stereotactic Radiotherapy (VALOR) Cooperative Study

Data Monitoring Committee: 2016-Present