

## CURRICULUM VITAE



**Shesh N. Rai**

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**Citizenship:** US and Canada

### ACADEMIC BACKGROUND:

**Ph.D. (1993)** University of Waterloo, Waterloo, Canada  
Statistics **Thesis:** *Marker Processes and Inference on Incomplete Data*

**M. Sc. (1981)** Banaras Hindu University, India  
Statistics **Project:** *Socio-economic Factors Affecting Health of Rural Inhabitants in the villages of U.P., India*

**B.Sc. (1979)** Banaras Hindu University, India  
Science **Subjects:** Physics, Mathematics, Statistics

### RESEARCH INTERESTS:

Clinical Trials, Survival Analysis, Bioinformatics, Mixed Effects Model, Sample Surveys, Quantitative Risk Assessment

### HONORS:

2012 2011-2012 Provost's Award for Exemplary Advising Award Nominee, University of Louisville

2010 2010 Faculty Favorite- An Outstanding Professor Nominated by Students, Delphi Center for Teaching and Learning, University of

	Louisville
1995 - 1997	Recipient of NSERC (Natural Science and Engineering Research Council), most prestigious research funding organization, Canadian Government Laboratory fellowship
1986 - 1991	Recipient of Canadian Commonwealth Scholarship (most prestigious in Commonwealth countries for higher learning)
1975 - 1981	Throughout 1st class in High School, I.Sc., B.Sc. and M.Sc.
1975 - 1979	Winner of Indian National Scholarship
1971 - 1977	Consistently ranked first for 7 years in school

**BRIEF CHRONOLOGY OF EMPLOYMENT:**

2013 - Present	Professor (Associate Faculty), Department of Pharmacology and Toxicology, School of Medicine, University of Louisville, Kentucky
2010 - Present	Professor, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Kentucky
2009 - Present	Wendell Cherry Chair in Clinical Trial Research, University of Louisville, Kentucky
2007 - Present	Director, Biostatistics Shared Facility, James Graham Brown Cancer Center, School of Medicine, University of Louisville, Kentucky
2007 - 2009	Associate Professor, Department of Bioinformatics and Biostatistics, School of Public Health and information Sciences, University of Louisville, Kentucky
2003 - 2007	Associate Member, Department of Biostatistics, St. Jude Children's Research Hospital, Memphis, Tennessee
2000 - 2003	Assistant Member, Department of Biostatistics, St. Jude Children's Research Hospital, Memphis, Tennessee
2002- 2007	Distinguished Adjunct Professor of Mathematics, Department of Mathematical Sciences, University of Memphis, Tennessee
1999 - 2002	Adjunct Professor, Department of Epidemiology and Community Medicine, University of Ottawa, Ottawa, Canada
1997 - 2000	Analyst, Statistics Canada, Ottawa, Ontario, Canada
1995 - 1997	Post-Doctoral Fellow (NSERC), Environmental Health Centre, Health Canada, Ottawa, Ontario, Canada

1994 - 1995	College Professor, Division of Science, Okanagan University College, Kelowna, British Columbia, Canada
1993 - 1994	Statistical Consultant, Statistical Consulting Service, University of Waterloo, Waterloo, Ontario, Canada
1986 - 1993	Research/Teaching Assistant, Department of Statistics and Actuarial Science, University of Waterloo, Ontario, Canada
1982 - 1986	Assistant Professor, Department of Statistics and Mathematics, Rajendra Agricultural University, Pusa, Samastipur, Bihar, India
1982 - 1982	Statistician, Community Based Project, Institute of Medical Sciences, Banaras Hindu University, Varanasi, U.P., India

#### **OUTSIDE CONSULTING EXPERIENCE :**

Sept 18-19, 2013	Reviewed NIH Grants: Environmental Health Sciences Core Centers (P30), RFA-ES-13-002, Dr. Linda Bass, SRA.
June 15-17, 2011	Reviewed NIH Grants: Population-based Research Optimizing Screening through Personalized Regimens (PROSPR) (U54) RFA-CA-10-11-003, Drs. Adriana Stoica and Ellen Schwartz, SRA
June 15-17, 2011	Reviewed NIH Grants: Statistical Coordination Center for the Population-based Research Optimizing Screening through Personalized Regimens (PROSPR) (PSCC) (U01) RFA-CA-10-11-004, Drs. Adriana Stoica and Ellen Schwartz, SRA
Dec 1-2, 2005	Reviewed NIH Grants: Clinical Outcomes of Live organ Donors (RFA-AI-05-015) (U01), Dr. Kenneth E. Santora, SRA
Nov 16-17, 2004	Reviewed NIH Grants: Community Clinical Oncology Program (CA 05-014) and Minority Based Community Clinical Oncology Program (CA 05-015) (U10), Joyce C. Pegues, SRA
Oct 8, 2003	Reviewed NIH Grants: Long-Term Cancer Survivors Research Initiative, 2004/01 Council ZCA1 SRRB-Y F1 R, Gerald Lovinger, SRA
Jun 20-21, 2000	Peer Review of the "Research Report: The Risk Assessment of Mixtures of Disinfection Byproducts (DBPs) for Drinking Water Treatment Systems", U.S. Environmental Protection Agency, National Center for Environmental Assessment, Cincinnati, Ohio
1998 – 2000	On Empirical Methods in Software Engineering; National Research Council and Cistel Technology, Ottawa, Canada
1995 – 1997	On Health Effects of Exposure to Low Levels of Ionizing Radiation

(BIER VI); National Academy of Sciences, Washington, D.C.

**ACADEMIC SUPERVISION (TOTAL=23):****Current (total=7):****Supervision:**

- PhD: Alex Cambon and Xiaohong Li
- MS: Derek Childers and Patrick Trainor

**Co-supervision:**

- Post-Doc: Drs. A Connor, S Boone, and N DeJarnett

**Past (Total=16):****Supervision:**

- Post-docs: Drs. D Hunt and J Pan
- PhD: Drs. C Barnes and H Ray
- MS: A Rai

**Co-supervision:**

- Medical Residents/Fellow: Dr. J Baker
- PhD: Dr. J Zhang (Co-supervision)
- MS: Y Ma and K Cheon

**Thesis committee:**

- PhD: Drs. N Ferguson, J Ndukum, A Connor and N Das
- MS: D Luo, V Shetty, S Kendrick

**COMPUTING AND SOFTWARE EXPERIENCE:**

- Many years of experience using S-PLUS, R and SAS
- Also used SYSTAT, SPSS, MINITAB, SUDAAN, GIS
- Acquainted with DOS/WINDOWS and UNIX on PC and SUN workstation
- Knowledge of LaTeX, WordPerfect, MS Office applications
- Knowledge of MAPLE and APL

**OTHER EXPERIENCE:**

- December 2014 – Present, Editorial Board, Journal of Probability and Statistics, Hindawi Publications
- October 2013 – Present, Editorial Board, Medical Statistics and Informatics, Herbert Publications
- July 2011 – Present : Editorial Board Member, Journal of Open Access Medical Statistics, Dovepress Publications
- July 2008 - Present: Editorial Board Member, Journal of Ovarian Research, Springer Publications
- November 2008 - Present: Vice-Chair, Data and Safety Monitoring Committee (DSMC), JG Brown Cancer Center, University of Louisville
- November 2007 - Present: Statistical Expert, Clinical Scientific Research Committee (CSRC), JG Brown Cancer Center, University of Louisville
- October 2013 – March 2013: Faculty Search Committee member, Department of Epidemiology and Population Health, University of Louisville

- June 2013 – Present, Member the Advisory Committee of the University of Louisville MD/PhD Program
- July 01, 2012 – June 2014, Member, Faculty Forum, School of Public Health and Information Sciences, University of Louisville
- January 01, 2012 – December 31, 2013, University Faculty Grievance Committee, University of Louisville
- November, 2010—April, 2012, Department of Bioinformatics and Biostatistics Chair Search Committee Member
- February 2000 - Present: Referee for Life time Data Analysis Journal, Communications in Statistics: Theory and Methods, Journal of Clinical Oncology, Contemporary Clinical Trials; Pediatric Blood and Cancer, etc.
- May 03, 2010: Distinguished Faculty Awards Service Selection Committee Member, University of Louisville
- October 15-18, 2008: Judge for best poster and contributed presentations in “Winemiller Conference 2008: Workshop on Survival Analysis and its Applications”, Department of Statistics, University of Missouri, Columbia
- September 2005 - October 2006: Institutional Review Board Member, St. Jude Children’s Research Hospital, Memphis, Tennessee
- January 2005 - May 2005: Instructor for a graduate level course (Survival Analysis), University of Memphis, Tennessee
- September 2003 - August 2005: Vice Chair, Safety Committee, St. Jude Children’s Research Hospital, Memphis, Tennessee
- September 2004 - February 2005: Acting Chair, Safety Committee, St. Jude Children’s Research Hospital, Memphis, Tennessee
- July 2001 - May 2002: Associate Editor for Statistics 2001 Canada Symposium Proceedings published by World Scientific Publication, London
- August 2004 - May 2005: Volunteered time for Red Cross
- April 2002 – June 2002: Referee for “Third Symposium for Applied Statistic”, Department of Statistics, University of Missouri-Columbia for best paper award
- Jan 2002 - Dec 2003: Chapter Representative, West Tennessee ASA Chapter
- Jan 2004 – Dec 2005: President, West Tennessee ASA Chapter
- Jan 2007 – Sept 2007: Chapter Representative, West Tennessee ASA Chapter
- Jan 2002 – Dec 2005: School Science Fair Judge

#### **ADDITIONAL TRAINING/SHORT COURSES WHILE AT ST. JUDE:**

##### **STATISTICAL:**

- Generalized Linear and Nonlinear Models for Clustered Data and Repeated Measurements by Dr. EF Vonesh
- Analysis of Event History Data by Dr. J Lawless
- Analysis of Multivariate Failure Time Data by Drs. D Lin, LJ Wei and Z Ying
- Theory and Application of Longitudinal Surveys by Dr. P Lavalley
- Power and Sample Size Analysis Using SAS/STAT Software by SAS Institute
- A course in Multiple Comparisons and Multiple Testing by Dr. PH Westfall
- Sample-Size Analysis in Study Planning: Concepts and Issues by Dr. R O’Brien

##### **OTHER:**

- Protecting Study Volunteers in Research
- Working Together Works
- The 7 Habits for Managers

**PROFESSIONAL MEMBERSHIP:**

- American Statistical Association (ASA)
- Statistical Society of Canada
- International Indian Statistical Association
- Forum for Interdisciplinary Mathematics

**GRANTS:**

1. Co-Investigator, R01-CA82378 grant: "Measurement of Adaptive Style in Children with Cancer" (PI: Sean Phipps, Ph.D.), (2000-2002), 5% effort and salary.
2. Co-Investigator, R01-CA85891 grant: "Hepatitis C in Childhood Cancer Survivors" (PI: Melissa Hudson, M.D.), (2000-2002), 5% effort.
3. Co-Investigator, Oncology Nursing Foundation grant: "Sleep, Fatigue and Enhanced Activity in Children" (PI: Pamela Hinds, RN, Ph.D.), (8/01/2001 – 7/31/2002), 5% effort and salary.
4. Statistician, Patient Safety Task Force (AHRQ, CDC, CMS, FDA) grant. "Risk Analysis of Pediatric Chemotherapy Processes" (PI: Jerry, Shenep, M.D.), (2003-2004), 20% effort and 5% salary.
5. Co-investigator, Oncology Nursing Foundation grant: "Explaining Health and Risk Behavior in Childhood Cancer" (PI: Cheryl Cox, Ph.D.), (2003-2005), 10% effort and 5% salary.
6. Co-investigator, NINR-R03 grant: "Health Promotion in Childhood Cancer Survivors" (PI: Cheryl Cox, Ph.D.), (2003-2005), 10% effort and salary.
7. Co-investigator, NINR/NIH- R21 grant: "Good Parent Intervention at End of Life" (PI: Pamela Hinds, Ph.D.), (2003-2006), 5% effort and salary.
8. Co-Investigator, R01-CA60616 grant: "Psychosocial Impact of Pediatric Bone Marrow Transplant" (PI: Sean Phipps, Ph.D.), (2002-2007), 10% effort and salary.
9. Co-Investigator, R01- CA85406 grant: "Reduction of ETS exposure in Pediatric Cancer Patients" (PI: Vida Tyc, Ph.D.), (2002-2007), 10% effort and salary for years 1 & 5 and 5% effort and salary for years 2-4.
10. Co-supervisor, NINR/NIH- R07 grant: "The Molecular Profile of Women with Secondary Breast Cancer after Treatment of Pediatric Hodgkin Disease" (PI: Belinda N. Mandrell, PhD Candidate, RN; Supervisor: Pamela Hinds, Ph.D.), (2006-2008).
11. Co-Investigator, CEGIB Director's Biomarker Discovery Pilot Program, "MicroRNAs as Biomarkers in Human heart Failure" PI: S. Prabhu, M.D., 2009.
12. NIH 3P20RR018733-07S1  
09/24/09-09/23/11 Role: Biostatistics Director, PI: Miller, Donald M. M.D., Ph.D.

13. Biostatistician, Clinical & Translational Science Pilot Grant Program Advanced Award, University of Louisville, "A novel method for the diagnosis and prognosis of inflammatory bowel disease associated cancer", \$82,797.00, PI: Susan Galandiuk, M.D.
14. Biostatistician, Melanoma Research Foundation, "Develop a Prognostic Scoring System in Node-Negative Patients, Amount: \$180,000.00, PI: Kelly M McMasters, M.D. Ph.D.
15. Biostatistician, Collaborative Matching Grant, University of Louisville, "Develop Gene Expression Signatures to Predict Prognosis in Melanoma Patients with Tumor-Negative Sentinel Lymph Nodes", Amount: \$40,000.00, PI: Hongying Hao. Ph.D.
16. Biostatistician, University of Louisville Innovative Translational Research Award, "Develop a prognostic system incorporating gene signatures in melanoma patients with positive sentinel lymph nodes", Amount: \$250,000.00, PI: Kelly M McMasters, M.D., Ph.D.

#### **CURRENT**

17. Co-I, NIH R15 grant (1R15CA156322-01A1); "Nanotube Antibody Arrays for Profiling Circulating Diseased Cells", (08/09/2011-07/31/2014). 5% effort and salary. PI: B Panchapakesan, Ph.D. Direct Cost: \$424,133.
18. Co-I, NIH HL-12-026 CCTRN grant (1UM1HL113530-01); "Regional Clinical Centers for the Cardiovascular Cell Therapy Research Network", (2012-2019). 15% effort and salary. PI: R Bolli, MD. Direct Cost: \$3,045,000.
19. Co-I, Biostatistics Core NIH P01 grant (1P01CA163223-01); "Systems Biochemistry in Lung Cancer: toward a mechanistic understanding of NSCLC", (3/1/2013-07/31/2013). 10% effort and salary. PI: A Lane, Ph.D. \*\* (Moved to Another Institution) Direct Cost: \$6,473,550.
20. Co-I, NIH R01 grant (1R01CA166327-01A1): "Regulation of Tumor Metabolism by Retinoblastoma Protein", (06/01/2013-05/31/2018). 5% effort and salary. PI: B Clem, Ph.D. Direct Cost: \$1,888,816.
21. Co-I, NIH COBRE grant (1P20 GM103492): "Center of Excellence in Diabetes and Obesity Research", (07/01/2013-06/30/2018). 10% effort and salary. PI: A Bhatnagar, Ph.D. Direct Cost: \$7,500,000.
22. Co-I, NIH UH2-UH3 grant (1UH2TR000875-01): "Fruit Exosomes-like Particles for Therapeutic Delivery of Extracellular miRNAs", (08/01/2013-07/31/2018). 5% effort and salary. PI: HG Zhang, Ph.D., Direct Cost: \$2,709,997.
23. Co-I, NIH Grant (P50 HL120163-01): "AHA Tobacco Regulation and Addiction Center – U of L Component", (09/30/2013-09/29/2018). 15% effort and salary. PI: Srivastava S, Ph.D. Direct Cost: \$16,547,952.

#### **Grants Pending (8):**

**LIST OF SELECTED PROTOCOLS:**

1. PI: Burton E, PH.D. CO-I Rai SN. Title: A Regional Multi-Center Retrospective Study of Treatment and Clinical Outcomes of Primary CNS Lymphoma
2. PI: Herzig R, MD, CO-I Rai SN. The Incidence of Latrogenic Iron Overload: A Retrospective Review
3. PI: Rai SN. Title: University of Louisville Registry for Patients Treated with Surgical Cytoreduction and Hyperthermic Intraperitoneal Chemotherapy
4. PI: Rai SN. Title: University of Louisville Registry for Patients with Gynecologic Malignancy Treated with Surgical Cytoreduction and Hyperthermic Intraperitoneal Chemotherapy (Retrospective) (05.0375)
5. PI: Rai SN. Title: A Phase I Study of Intraperitoneal Hyperthermic Docetaxel at the Time of Second Look Surgery Following Front-line Normothermic Intraperitoneal and Intravenous Cisplatin/Paclitaxel for Patients with Stage II and III Ovarian Carcinoma. (07.0240)
6. PI: Rai SN. Title: Computer-assisted and regular laparoscopy in gynecologic cancer at the University of Louisville. (08.0304)

**REFEREED PUBLICATIONS (140+ in Total; 88 first, second or senior authored):**

1. Sharma DD and **Rai SN**. Effect of Temperature and Relative Humidity on the Development and Survival of Various Stages of Acrocorcops Oramerella. Sn. *Journal of Current Biosciences*, 31:101-103, **1984**.
2. Sisodia BVS and **Rai SN**. On Estimation Procedures of Variance Subsequent to Preliminary Test of Significance. *Microelectron Reliability*, 31:1101-1104, **1991**.
3. **Rai SN** and Matthews, D.E. Improving the EM Algorithm. *Biometrics*, 49:587-591, **1993**.
4. **Rai SN**, Abraham B and Peiris S. Analysis of Short Time Series with an Over-Dispersion Model. *Communications in Statistics - Theory and Methods*, 24:335-348, **1995**.
5. **Rai SN** and Matthews DE. Analysis of Incomplete Data Using Stochastic Covariates. *The Canadian Journal of Statistics*, 23:29-42, **1995**.
6. Bartlett S, Richardson GM, Krewski D, **Rai SN** and Fyfe, M. Commentary: Characterizing Uncertainty in Risk Assessment – Conclusions Drawn from a Workshop. *Human and Ecological Risk Assessment*, 2:217-227, **1996**.
7. **Rai SN**, Krewski D and Bartlett S. A General Framework for the Analysis of Uncertainty and Variability in Risk Assessment. *Human and Ecological Risk Assessment*, 2:972-989, **1996**.
8. **Rai SN** and Matthews DE. Discrete Scale Models for Survival/Sacrifice Experiments. *Journal of the Royal Statistical Society Series C*, 46:93-109, **1997**.
9. **Rai SN**. On semi-Parametric Models in Occult Tumour Experiments. *Biometrical Journal*,



39:909-918, **1997**.

10. **Rai SN** and Krewski, D. Uncertainty and Variability Analysis in Multiplicative Risk Models. *Risk Analysis*, 18:37-45, **1998**. PMID: 9556442.
11. **Rai SN**, Zielinski JM and Krewski D. Uncertainties in Estimates of Radon Lung Cancer Risks. *Proceedings of Statistics Canada Symposium 99: Combining Data from Different Sources*, pages 99-107, **1999**.
12. Krewski D, **Rai SN**, Zielinski J and Hopke PK. Characterization of Uncertainty and Variability Characterization in Residential Radon Cancer Risks. *The Annals of the New York Academy of Sciences*, 895:245-272, **1999**. PMID: 10676422.
13. Kovacevic MS and **Rai SN**. A Pseudo Maximum Likelihood Approach to Inference on Hierarchically Structured Data. *Proceedings of Joints Statistical Meetings 1999, Section of Survey Research Methods*, pages 605-610, **1999**.
14. Benlarbi S, Emam KEI, Goel N and **Rai SN**. Thresholds for Object-Oriented Measures. *Proceedings of the International Symposium on Software Reliability Engineering*, pages 24-37, 2000.
15. **Rai SN**, Matthews DE and Krewski D. Mixed Scale Models for Survival/Sacrifice Experiments. *The Canadian Journal of Statistics*, 28: 65-80, 2000.
16. Emam KEI, Benlarbi S, Goel N and **Rai SN**. Comparing Case-Based Reasoning Classifiers for Predicting High Risk Software Components. *The Journal of Systems and Software*, 55: 301-320, 2000.
17. Emam KEI, Benlarbi S, Goel N and **Rai SN**. The confounding effect of class size on the validity of object-oriented metrics. *IEEE Transactions on Software Engineering*, 27(7): 630-650, 2001.
18. Sun J and **Rai SN**. Non-parametric Tests for the Comparison of Point Processes Based on Incomplete Data. *Scandinavian Journal of Statistics*, 28: 725-732, 2001.
19. **Rai SN**., Kovacevic, M.S. and Srivastava, D.K. Estimation in Hierarchical Linear Models using Pseudo Maximum Likelihood Method *Far East Journal of Theoretical Statistics*, 5(2): 205-221, 2001.
20. Emam KEI, Benlarbi S, Goel N, Melo W, Lounis H and **Rai SN**. The optimal class-size for object-oriented software. *IEEE Transactions on Software Engineering*, 28(5):494-509, 2002.
21. **Rai SN**, Bartlett S, Krewski D and Peterson J. The Use of Probabilistic Risk Assessment in Establishing Drinking Water Quality Objectives. *Human and Ecological Risk Assessment*, 8: 493-509, 2002.
22. Phipps S, Dunavant M, Garvie P, Lensing S and **Rai SN**. Acute Health-Related Quality of Life in Children Undergoing Stem Cell Transplant: I. Descriptive Outcomes. *Bone Marrow Transplant*, 29(5):425-434, 2002. PMID: 11919733

23. Sun J, Zhao Q and **Rai SN**. A Nonparametric Comparison of Tumour Incidences with Intermediate Lethality and Different Death Rates. In: *Recent Advances in Statistical Methods*, (Ed.) Y. P. Chaubey, World Scientific Publishing, London, 296-303, 2002.
24. Phipps S, Dunavant M, Lensing S and **Rai SN**. Acute Health-Related Quality of Life in Children Undergoing Stem Cell Transplant: II. Medical and Demographic Determinants. *Bone Marrow Transplant*, 29(5):435-442, 2002. PMID: 11919734
25. Kovacevic MS and **Rai SN**. Log-Linear Modeling of Change Using Longitudinal Survey Data. *Communications in Statistics – Theory and Methods*. 31(10):1815-1835, 2002.
26. **Rai SN**, Sun J and Hunt D. Analysis of Occult Tumour Trial Data with Varying Lethality. In: *Recent Advances in Statistical Methods*, (Ed.) Y. P. Chaubey, World Scientific Publishing, London, 233-251, 2002.
27. Kovacevic MS and **Rai SN**. A Pseudo Maximum Likelihood Approach to Multilevel Modelling of Survey Data. *Communications in Statistics – Theory and Methods*. 32(1):103-121, 2003.
28. Lusting RL, Hinds PS, Smith HK, Christensen RK, Kaste SC, Schreiber RE, **Rai SN**, Lensing SY, Wu S and Xiong X. Octreotide therapy of pediatric hypothalamic obesity: A double-blind, placebo-controlled trial. *The Journal of Clinical Endocrinology and Metabolism*, 88(6):2586-2592, 2003. PMID: 12788859
29. Hunt D. and **Rai SN**. A Threshold Dose-Response Model with Random Effects in Teratological Experiments. *Communications in Statistics – Theory and Methods*, 32:1439-1457, 2003.
30. Tyc VL, **Rai SN**, Lensing S, Klosky J, Stewart DB and Gattuso J. Intervention to Reduce Intentions to Use Tobacco among Pediatric Cancer Survivors. *Journal of Clinical Oncology*, 21(7):1366-1372, 2003. PMID: 12663728
31. Pui C, Cheng C, Leung W, **Rai SN**, Rivera GK, Sandlund JT, Ribeiro RC, Relling MV, Kun LE, Evans WE and Hudson MM. Extended Follow-up of Long-term Survivors of Childhood Acute Lymphoblastic Leukemia. *The New England Journal of Medicine*, 349:640-649, 2003. PMID: 12917300
32. Gow KW, Lensing S, Hill DA, Krasin MJ, McCarville MB, **Rai SN**, Zacher M, Spunt SL, Strickland DK and Hudson MM. Thyroid Carcinoma Presenting in Childhood or After Treatment of Childhood Malignancies: An Institutional Experience and Review of the Literature. *Journal of Pediatric Surgery*, 38(11):1574–80, 2003. PMID: 14614703
33. Hinds PS, Gattuso JS, Fletcher A, Baker E, Coleman B, Jackson T, Jacobs-Levine A, June D, **Rai SN**, Lensing S and Pui CH. Quality of Life as Conveyed by Pediatric Patients with Cancer. *Quality of Life Research*, 13(4): 761-772, 2004. PMID: 15129886
34. Castellino S, Lensing S, Riely C, **Rai SN**, Davila R, Hayeden RT, Fleckenstein J, Levstik M, Taylor S, Dean PJ, Kippenbrock S, Pope J, Carr J, Strickland DK and Hudson MM. The Epidemiology of Chronic Hepatitis C Infection in Survivors of Childhood Cancer – An Update of the St. Jude Children’s Research Hospital Hepatitis C Seropositive Cohort.

*Blood*, 103(7): 2460 -2466, 2004. PMID: 14684419

35. Paul SR, Jiang X, **Rai SN** and Balasooriya U. Test of treatment effect in pre-drug and post-drug count data with zero-inflation. *Statistics in Medicine*, 23(10):1541-1554, 2004. PMID: 15122735
36. Tyc VL, Hadley W, Allen D, Varnell S, Ey S, **Rai SN** and Lensing S. Predictors of Smoking Intentions and Smoking Status among Non-Smoking and Smoking Adolescents. *Addictive Behaviors*, 29(6):1143-1147, 2004. PMID: 15236815
37. Tyc VL, Klosky J, Throckmorton-Belzer L, Lensing S, and **Rai SN**. Parent-Reported Environmental Tobacco Smoke Exposure among Preadolescents and Adolescents Treated for Cancer. *Psycho-Oncology*. 13(8):537-46, 2004. PMID: 15295775
38. Phipps S, Dunavant M, Lensing S and **Rai SN**. Patterns of Distress in Parents of Children Undergoing Stem Cell Transplant. *Pediatric Blood & Cancer*. 43(3):267-74, 2004. PMID: 15266412
39. Tyc VL, Throckmorton-Belzer L, Klosky J, Lensing S, **Rai SN** and Hudson MM. Smoking among parents of pediatric cancer patients and children's exposure to environmental tobacco smoke. *Journal of Child Health Care*. 8(4):288-300, 2004. PMID: 15507466
40. Hudson MM, Krasin M, Link MP, Donaldson SS, Billups C, Merchant T, Kun L, Billet AL, Kaste S, Tarbell NJ, Howard S, Friedmann AM, Hurwitz CA, Young JA, Marcus KC, **Rai SN**, Cowan T and Weinstein HJ. Risk-adapted Combined Modality Therapy with VAMP/COP and Response-based, Involved-field Radiation for Unfavorable Pediatric Hodgkin's disease. *Journal of Clinical Oncology*. 22(22): 4541-4550, 2004. PMID: 15542805
41. **Rai SN**, Lensing S, Boyett J and Phipps S. On the Analysis of Messy Longitudinal Data from a Study of Pediatric Cancer Patients. *Proceedings of Joint Statistical Meetings* 2004, Toronto, Biometrics Section, pages 427-433, 2004.
42. Tyc VL, Lensing S, Klosky JL, **Rai SN** and Robinson L. A Comparison of Tobacco-Related Risk Factors between Adolescents with and without Cancer. *Journal of Pediatric Psychology*, 30(4):359-370, 2005. PMID: 15863432
43. Cox CL, Lensing S, **Rai SN**, Burghen L, Hinds P, Pui CH. Proxy-assessed Health Utilities in Pediatric Clinical Trials. *Quality of Life Research*. 14(4): 1045 – 1056, 2005. PMID: 16041900
44. Cox CL, **Rai SN**, McLaughlin R, Steen B and Hudson M. Adolescent Survivors: A Secondary Analysis of a Clinical Trial Targeting Behavior Change. *Pediatric Blood & Cancer*. 45 (2):144 -154, 2005. PMID: 15770636
45. Hinds PS, Gattuso JS, Fletcher A, Baker E, Coleman B, Jackson T, Jacobs-Levine A, June D, **Rai S**, Lensing S, Pui CH. Quality of life: The child's voice. *SOCRA*. 46, 18-22, 2005.
46. Hunt D. and **Rai, SN**. Testing Threshold and Hormesis in a Random Effects Dose-Response Model Applied to Developmental Toxicity Data. *Biometrical Journal*. 47(3):319-

- 328, 2005. PMID: 16053256
47. Hunt D and **Rai SN**. A New Threshold Dose-Response Model including Random Effects for Data from Developmental Toxicity Studies. *Journal of Applied Toxicology*. 25(5):435-439, 2005. PMID: 16092077
  48. Phipps S, Long A, Hudson MM and **Rai SN**. Symptoms of Post-traumatic Stress in Children with Cancer and Their Parents: Effects of Informant and Time from Diagnosis. *Pediatric Blood & Cancer*, 45(7):952-959, 2005. PMID: 15806541
  49. Phipps S, Dunavant M, Lensing S and **Rai SN**. Psychosocial Predictors of Distress in Parents of Children Undergoing Stem Cell Transplantation. *Journal of Pediatric Psychology*, 30(2):139-153, 2005. PMID: 15681309
  50. Krasin MJ, **Rai SN**, Kun LE, Merchant TE, Metzger ML, Kaste SC, Howard SC and Hudson MM. Patterns of Treatment Failure in Pediatric and Young Adult Patients with Hodgkin's Disease: Local Disease Control with Combined Modality Therapy. *Journal of Clinical Oncology*, 23(33):8406-8413, 2005. PMID: 16293871
  51. Phipps S, Dunavant M, Gray E and **Rai SN**. Massage Therapy in Children Undergoing Hematopoietic Stem Cell Transplant: Results of a pilot trial. *Journal of Cancer Integrative Medicine*. 3(1):62-70, 2005.
  52. Tyc VL, Lensing S, **Rai SN**, Klosky J, Stewart DB and Gattuso J. Predicting Perceived Vulnerability to Tobacco-Related Health Risks and Future Intentions to Use Tobacco Among Pediatric Cancer Survivors. *Patient Education and Counseling*, 62(2):198-204, 2006. PMID: 16139983
  53. Karimova EJ, **Rai SN**, Deng X, Ingle DJ, Ralph AC, Neel MD and Kaste SC. MRI of Knee Osteonecrosis in Children with Leukemia and Lymphoma: Part 1, Observer Agreement. *American Journal of Roentgenology*, 186(2):470-6, 2006. PMID: 16423955
  54. Karimova EJ, **Rai SN**, Ingle DJ, Ralph AC, Deng X, Neel MD, Howard SC, Pui CH, Kaste SC. MRI of knee osteonecrosis in children with leukemia and lymphoma: Part 2, clinical and imaging patterns. *American Journal of Roentgenology*, 186(2):477-82, 2006. PMID: 16423956
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10. Hunt D and **Rai SN**. A Threshold Dose-Response Model with Random Effects in Teratological Experiments. *Technical Report, Department of Biostatistics, St. Jude Children's Research Hospital*, # 2001-11, 2001.

11. **Rai SN**, Sun J and Hunt D. Analysis of Occult Tumour Trial Data with Varying Lethality. *Technical Report, Department of Biostatistics, St. Jude Children's Research Hospital*, # 2002-02, 2002.
12. Paul SR, Jiang X, **Rai SN** and Balasooriya U. Score tests for no treatment effect in the Premature Ventricular Contractions (PVC) Data. *Technical Report, Department of Biostatistics, St. Jude Children's Research Hospital*, # 2002-08, 2002.
13. Hunt D and **Rai SN**. Testing Threshold and Hormesis in a Random Effects Dose-Response Model Applied to Developmental Toxicity Data. *Technical Report, Department of Biostatistics, St. Jude Children's Research Hospital*, # 2003-2, 2003.

## SELECTED PRESENTATIONS:

### Invited:

1. Ontario Cancer Institute, Toronto, March 23, 1994. Topic: Inference in Occult Tumour Trials using Biological Markers.
2. Department of Mathematics and Statistics, Simon Fraser University, Burnaby, British Columbia, October 11, 1994. Topic: Analysis of Incomplete Data.
3. Department of Epidemiology and Biostatistics, McGill University, Montreal, March 01, 1996. Topic: Inference in Occult Tumour Trials Using Stochastic Markers.
4. Meeting of Committee on Biological Effects on Ionizing Radiations (BEIR VI), National Academy of Sciences, Washington, D.C., USA, July 14-15, 1996. Topic: Uncertainty and Variability Analysis in Multiplicative Risk Models.
5. Department of Public Health Sciences, University of Alberta, Edmonton, April 17, 1997. Topics: A. Inference on Incomplete Data with an Application to Occult Tumour Trials, B. Uncertainty Analysis in Risk Assessments.
6. Faculty of Medicine, University of Ottawa, Ottawa, June 12, 1997. Topic: A General Framework for Uncertainty Analysis in Risk Assessments.
7. School of Mathematics and Statistics, Carleton University, Ottawa, March 29, 1999. Topic: Characterization and Analysis of Uncertainty and Variability in Multiplicative Risk Models.
8. Symposium 99 – Methodology Symposium and Workshops: Combining Data from Different Sources, May 5, 1999. Topic: Uncertainties in Estimates of Radon Lung Cancer Risks Based on a Combined Analysis of Cohort Mortality Studies.
9. Department of Mathematical Sciences, University of Memphis, Tennessee, April 14, 2000. Topic: A Pseudo Maximum Likelihood Approach to Inference on Hierarchically Structured Data.
10. U.S. Environmental Health Protection Agency, National Center for Environmental Assessment, Cincinnati, June 20, 2000. Topic: A General Framework for Uncertainty Analysis- Risk Assessment of DBPs for Drinking Water Treatment Systems.

11. CANCER PREVENTION & CONTROL CORE, St. Jude Children's Research Hospital, Memphis, July 25, 2000. Topic: Uncertainties in Estimates of Radon Lung Cancer Risks.
12. Western Tennessee Chapter of ASA, Department of Mathematical Sciences, University of Memphis, Memphis, TN, April 27, 2001. Topic: Analysis of Messy Longitudinal Data from an Observational Study of Quality of Life Indicators for Pediatric Cancer Patients.
13. Statistics 2001 Canada Symposium, Session on Biostatistics and Epidemiology, Department of Mathematics and Statistics, University of Concordia, Montreal, Canada, July 07, 2001. Topic: Analyses of Occult Tumour Trial Data.
14. Faculty of Medicine and Department of Epidemiology and Community Medicine, University of Ottawa, Canada, July 4, 2001. Topic: Statistical Analysis of Longitudinal Data involving the Quality of Life Indicators for Pediatric Cancer Patients.
15. Nursing Research Fellowship Program, Patient Care Services, St. Jude Children's Research Hospital, Memphis, March 13, 2002. Topic: Role of Biostatistics at St. Jude Children's Research Hospital and Statistical Analysis of Quality of Life Measured Using HUI3 Tool.
16. Faculty Promotion Seminar Series, St. Jude Children's Research Hospital, Memphis, October 17, 2002. Topic: Methods for Analyzing Longitudinal (Hierarchically Structured) Data and their Applications to St. Jude Studies.
17. Lecture Series, St. Jude Children's Research Hospital, Memphis, January 30, 2003. Topic: Case-Control Designs and their Applications to St. Jude Studies.
18. Workshop on the protocol 'Family/Staff Communication Intervention at a Child's End of Life', R21 grant. St. Jude Children's Research Hospital, Memphis, August 26, 2003.
19. Western Tennessee Chapter of ASA, Department of Mathematical Sciences, University of Memphis, Memphis, TN, August 06, 2004. Topic: Joint Modeling of Messy Longitudinal and Survival Data.
20. Workshop on Survival Analysis. International Conference on Interdisciplinary Mathematical and Statistical Techniques, Sanjay Gandhi Post Graduate Medical Institute Lucknow, India, December 26, 2004.
21. Eleventh International Conference on Interdisciplinary Mathematical and Statistical Techniques, Institute of Engineering and Technology, Lucknow, India, December 27-29, 2004. Topic: Analysis of Longitudinal Data with Informative Observation Process and Applications to Pediatric Cancer Study.
22. International Workshop/Conference on Bayesian Statistics and its Applications, Banaras Hindu University, Varanasi, India, January 6-8, 2005. Topic: Semi-Bayesian Estimating Procedure in Random Effects Threshold Dose Response Model.
23. Twelfth International Conference on Interdisciplinary Mathematical and Statistical Techniques, Auburn University Alabama, USA, December 2-4, 2005. Topic: Effect of Transformation on the Analysis of Messy Longitudinal Data with Application to Pediatric

## Cancer Study.

24. Departments of Nursing Studies and Statistics, the University of Hong Kong, May 18, 2006. Topic: Robustness of an Odds-ratio Test in a Stratified Group Sequential Trial with a Binary Outcome Measure.
25. Conference on Quality of Life Research in Asia, Hong Kong Academy of medicine, Hong Kong, May 19-21, 2006. Topic: Design and Statistics - Analysis of Longitudinal Data in Presence of Informative Observation Process with Application to Pediatric Cancer Study.
26. Department of Preventive Medicine, University of Tennessee Health Science Center, Memphis, TN, October 04, 2006. Topic: Analysis of Longitudinal Data in Presence of Informative Observation Process with Application to Pediatric Cancer Study.
27. Department of Biostatistics, Medical College of Georgia, Augusta, GA, February 08, 2007. Topic: Issues in the Analysis of Messy Longitudinal Data with Application to Pediatric Cancer Studies.
28. Department of Bioinformatics and Biostatistics, University of Louisville, Louisville, KY, February 20, 2007. Topic: Issues in the Analysis of Messy Longitudinal Data with Application to Pediatric Cancer Studies.
29. Sixteenth International Conference on Interdisciplinary Mathematical and Statistical Techniques, University of Memphis, Memphis, TN, USA, May 15-18, 2008. Topic: Issues in the Analysis of QOL Data in Clinical Studies.
30. Winemiller Symposium of Survival Analysis and Its Applications, Department of Statistics, University of Missouri, Columbia, MO, USA, October 16-18, 2008. Topic: Estimating Incidence Rate on Incomplete Data with Application to Pediatric Cancer Survivor Study.
31. Department of Pharmaceutical Sciences, Sullivan University, Louisville, KY, February 25, 2011. Introduction to Clinical Trials Overview/Review.
32. Chitranjan National Cancer Institute, Kolkata, India, May 11, 2011. Statistical Issues and Introduction to Clinical Trials.
33. ISBA Regional Meeting and International Workshop/Conference on Bayesian Theory and Applications, Banaras Hindu University, Varanasi, India, January 6-10, 2013. Estimating Incidence Rate on Incomplete Data with Application to Pediatric Cancer Survivor Study.
34. ISBA Regional Meeting and International Workshop/Conference on Bayesian Theory and Applications, Banaras Hindu University, Varanasi, India, January 6-10, 2013. Estimating Incidence Rate of Adverse Outcomes Imputing Partial Status with Application to Pediatric Cancer Survivor Study.
35. ISBA Regional Meeting and International Workshop/Conference on Bayesian Theory and Applications, Banaras Hindu University, Varanasi, India, January 6-10, 2013. An Approximate Wilks Lambda Test to Compare Efficacy and Toxicity of Pediatric Cancer Treatment.
36. 2<sup>nd</sup> International Conference and Exhibition on Biometrics and Biostatistics. Hilton



Chicago/Northbrook, Illinois, June 10-12, 2013. A small scale Phase IV Clinical study dealing with cardiotoxicity after cancer treatment.

**Contributed:**

37. Graduate Student Seminar Session in Statistics and Biostatistics, University of Western Ontario, London, July 1988. Topic: A Simple Model for Migration Data.
38. Annual Meeting of the Statistical Society of Canada, Toronto, June 1991. Topic: Modeling Tumour Growth and Inference in Carcinogenicity Experiments.
39. 7th Annual Research Day for Graduate Students in Epidemiology, Biostatistics and Community Health, University of Western Ontario, London, November 7, 1992. Topic: Mixed Scale Models for Survival/Sacrifice Experiments.
40. Annual Meeting of the Statistical Society of Canada, Banff, May 10, 1994. Topic: Discrete Scale Models for Survival/Sacrifice Experiments.
41. International Biometric Conference at Hamilton, Ontario, August 8-12, 1994. Topic: Analysis of Incomplete Data Using Stochastic Covariate(s).
42. 1999 Joint Statistical Meetings, Baltimore, August 11, 1999. Topic: A Pseudo Maximum Likelihood Approach to Inference on Hierarchically Structured Data.
43. Statistical Society of Canada Meetings, University of Ottawa, Ottawa, Canada, June 5, 2000. Topic: Evaluating Metric Thresholds for Predicting the Probability of Software Faults.
44. ENAR Meetings, Charlotte, NC, March 27, 2001. Topic: The Use of Probabilistic Risk Assessment in Establishing Drinking Water Quality Objectives.
45. Biostatistics/Hem.-Onc. Journal Club, St. Jude. Children's Research Hospital, Memphis, May 16, 2001. Topic: Discussant on the article "Hematopoietic Stem-Cell Transplantation for Treatment-Related Leukemia or Myelodysplasia" by Robert P. Witherspoon et al., Journal of Clinical Oncology, Vol. 19, 2134-2141
46. Biostatistics Journal Club, St. Jude Children's Research Hospital, Memphis, February 7, 2002. Topic: Survival Analysis and Likelihood Methods.
47. Biostatics Journal Club, St. Jude Children's Research Hospital, Memphis, March 07, 2002. Topic: Discussant on "Analysis of Dependent Interval Censored Failure Time Data by D. Finkelstein, Harvard Medical School".
48. Research Seminar Series, Department of Biostatistics, St. Jude Children's Research Hospital, Memphis, October 10, 2002. Topic: Methods for Analyzing Longitudinal (Hierarchically Structured) Data and their Applications to St. Jude Studies.
49. Biostatistics/Hem.- Onc. Journal Club, St. Jude. Children's Research Hospital, Memphis, March 12, 2003. Topic: Discussant on the article "The Role of Surgery in Stage IV Neuroblastoma" by Victoria Castel et al., Journal of Pediatric Surgery, Vol. 37, 2002: 1574-1578.

50. ENAR Meetings, Tampa, Florida, March 31, 2003. Topic: On the Analysis of Longitudinal Data Measured Using Questionnaire Instrument.
51. ENAR Meetings, Pittsburg, Pennsylvania, March 30, 2004. Topic: A Threshold Dose-Response Model with Random Effects in Teratological Experiments.
52. Joint Statistical Meetings, Toronto, August 11, 2004. Topic: A Pseudo Maximum Likelihood Approach to Inference on Hierarchically Structured Data.
53. Joint Statistical Meetings, Minneapolis, Minnesota, August 7, 2005. Topic: Analysis of Longitudinal Data in Presence of Informative Observation Process with Application to Pediatric Cancer Study.
54. Biostatistics/Hem.-Onc. Journal Club, St. Jude Children's Research Hospital, Memphis, September 14, 2005. Topic: Discussant on the article "A double-blind randomized placebo-controlled study of oral glutamine in the prevention of mucositis in children undergoing hematopoietic stem cell transplantation: a pediatric blood and marrow transplant consortium study" by VM Aquino, et al., Bone Marrow Transplantation, 36:611-616, 2005.
55. Biostatistics Journal Club, St. Jude Children's Research Hospital, Memphis, November 04, 2005. Topic: Discussant on "Recurrent Event Data Analysis for Applications Part II: Regression Analysis by J. Lawless, University of Waterloo, Ontario, Canada".
56. Biostatistics Journal Club, St. Jude Children's Research Hospital, Memphis, March 01, 2007. Topic: Discussant on "On the Analysis of Paired Quality of Life Data: Was there a Change? by DFT Fong, University of Hong Kong".
57. Biostatistics Journal Club, St. Jude Children's Research Hospital, Memphis, April 05, 2007. Topic: Discussant on "Statistical Methods for Case-Controls Studies and Related Sampling Designs by A. Scott, University of Auckland, New Zealand".
58. Joint Statistical Meetings, Washington, DC, August 2-6, 2009. Topic: Modeling heterogeneity and its effect on design parameters in phase II clinical trials.
59. Joint Statistical Meetings, Washington, DC, August 2-6, 2009. Topic: Using hierarchical group filters in high-throughput analysis to improve the true positive discovery rate.
60. Joint Statistical Meetings, Vancouver, BC, August 1-5, 2010. Topic: An Evaluation of Simon 2-Stage Phase II Clinical Trial Design Incorporating Continuous Toxicity Monitoring.
61. Joint Statistical Meetings, San Diego, CA, July 29- August 02, 2012. Topic: A Review of Classification Methods That Could Be used to Identify a Subset of Patients in a Clinical Study.

#### **Presentations by Collaborators (Selected):**

62. Hudson MM, Gow KW, Lensing S, Hill DA, Krasin MJ, McCarville MB, **Rai SN**, Zacher M, Spunt SL, Shearer P, Strickland DK, Pratt CB. The 6th International Conference on Long Term Complications of Treatment of Children and Adolescents with Cancer in Niagara-on-the Lake, Ontario Canada, June 2000. Topic: Thyroid Malignancies Presenting in

## Childhood and Following Childhood Cancer.

63. Emam KEI and **Rai SN**. Statistics 2001 Canada Symposium, Invited Session on Reliability/Survival Models, Department of Mathematics and Statistics, University of Concordia, Montreal, Canada. July 07, 2001. Topic: Monte Carlo Simulation of Threshold Models for Identifying Fault-Prone Software Components.
64. Sun J and **Rai SN**. Statistics 2001 Canada Symposium, Invited Session on Biostatistics and Epidemiology, Department of Mathematics and Statistics, University of Concordia, Montreal, Canada. July 07, 2001. Topic: A Nonparametric Comparison of Tumour Incidence Rate in Survival/Sacrifice Experiments.
65. Srivastava DK, **Rai SN** and Boyett JM. Joint Conference of Indian Society for Medical Statistics and International Biometric Society (Indian Region). December 1-3, 2001, Lucknow, INDIA. Topic: Robustness of Generalized Log-Rank Tests Under Unequal Censoring.
66. Phipps S, Lopez-Cordova N, Long A, Larson S, Lensing S and **Rai SN**. The Annual Meeting of the American Psychosomatic Society, Barcelona, Spain, March, 2002. Topic: Symptoms of post-traumatic stress in children with cancer and their parents.
67. Phipps S, Larson S, Long A, Lensing S and **Rai SN**. The Annual Meeting of the American Psychosomatic Society, Barcelona, Spain, March, 2002. Topic: Adaptive style and symptoms of PTSD in children with cancer and their parents.
68. Klosky JL, Tyc VL, Throckmorton-Belzer L, Lensing S and **Rai SN**. Parental reports of pediatric patients' exposure to environmental tobacco smoke. To be presented at the 23rd Annual Conference of the Society of Behavioral Medicine, Washington D.C., April 2002. Topic: Parental reports of pediatric patients' exposure to environmental tobacco smoke.
69. Tyc VL, **Rai SN**, Lensing S, Klosky JL, Stewart D and Gattuso J. An intervention targeting tobacco use among pediatric cancer survivors. To be presented at the 23rd Annual Conference of the Society of Behavioral Medicine, Washington D.C. April 2002. Topic: An intervention targeting tobacco use among pediatric cancer survivors.
70. Phipps S, Larson S, Long A, Lensing S and **Rai SN**. 7th International Conference on Long-Term Complications of Treatment of Children for Cancer, Niagara, Ontario, Canada, June 28-29, 2002. Topic: Differences in symptoms of post-traumatic stress disorder as a function of time since diagnosis and adaptive style. Is PTSD in children with cancer a misnomer?
71. Kaste S, Shidler T, Lensing S and **Rai SN**. 7<sup>th</sup> International Conference on the Long-Term Complications of Treatment of Children and Adolescents for Cancer, Niagara-on-the-Lake, Ontario, Canada, June 28-29, 2002. Topic: Recruitment Issues: Bone Mineral Density in Survivors of ALL – A Risk Adopted Clinical Trial.
72. Caniza MA, Green SD, Leake E, Pedrosa F and **Rai SN**, Lensing, S. 51st Annual Meeting of American Society of Tropical Medicine and Hygiene, Denver, Colorado, November 10-14, 2002. Topic: Training Health Care Providers (HCP) as educators in Infection Control Practices in the Hematology/Oncology (HO) service at Instituto Materno Infantil de Pernambuco (IMIP), Recife, Brazil.

73. Ingle D, Britton L, Lensing S, **Rai SN**, Neel MD and Kaste S. The Society for Pediatric Radiology. Topic: Osteonecrosis of the Knees: MR Findings versus Clinical Function.
74. Tyc VL, Klosky J, Lensing S and **Rai SN**. Sixth World Congress of Psycho-Oncology, Banff, Alberta, Canada, 2003. Topic: A comparison of risk factors associated with tobacco use between adolescent cancer patients and healthy adolescents.
75. Phipps S, Larson S, Long A, **Rai SN**. and Hudson M. 8<sup>th</sup> International Conference on Long-Term Complications of Treatment of Children for Cancer, Niagara, Ontario, Canada, June 2004. Topic: Repressive adaptive style, somatic symptoms, and body consciousness in healthy children and children with cancer.
76. Crom DB, Tyc VL, **Rai SN**, Hudson MM, McCammon E and Kaste SC. 8th International Conference on Long-Term Complications of Treatment of Children & Adolescents for Cancer, Niagara, Ontario, Canada, June 2004. Topic: Participant retention in a longitudinal study of bone mineral density in acute lymphoblastic leukemia (ALL) survivors.
77. Hudson MM, **Rai SN**, Deng X, Merchant T, Marina N, Zalamea N, Cox C, Phipps S and Rosenthal D. 8th International Conference on Long-Term Complications of Treatment of Children & Adolescents for Cancer, Niagara, Ontario, Canada, June 2004. Topic: Non-Invasive Evaluation of Late Cardiac Toxicity in Childhood Cancer Survivors.
78. Phipps S, Cox C, Hudson MM, Rosenthal D, Deng X and **Rai SN**. Paper Presented at the 8th International Conference on Long-Term Complications of Treatment of Children & Adolescents for Cancer, Niagara, Ontario, Canada, June, 2004. Topic: Cardiovascular function, adaptive style, and quality of life in survivors of childhood cancer.
79. Hinds P, **Rai SN**, and others. Podium Presentation, SOCRA Annual Conference, Montreal, Canada, September, 2004. Topic: Quality of life from the child's perspective.
80. Phipps S, Long A, Larson S, **Rai SN**. Annual meeting of the British Health Psychology Society, Edinburgh, Scotland, September, 2004. Topic: Determinants of health-related quality of life in children with cancer: impact of adaptive style.
81. Hinds P, **Rai SN**, and others. Podium Presentation, IX Pediatric Oncology Congress of Brazil, Sao Paulo, Brazil, November, 2004. Topic: Quality of life: the Child's Voice.
82. Cox C, **Rai SN**, Steen B, McLaughlin R and Hudson MM. Paper Presented at the 2004 National State of the Science Conference, Nursing Science: Working toward a Healthier Nation, Marriott JW Hotel on Pennsylvania Avenue Washington, DC, October 6-9, 2004. Topic: Health Promotion in Adolescent Childhood Cancer Survivors: Lessons from a Randomized Trial.
83. Tyc VL, Lensing S, Klosky J and **Rai SN**. American Psychological Association (APA), Honolulu, Hawaii, 2004. Topic: Tobacco risk factors for adolescents with and without cancer.
84. Cox C, **Rai SN**, and others St. Jude Grand Rounds. St. Jude Auditorium. Feb 24. 2005. Topic: New Insights: Behavioral Interventions to Modify Survivors' Risks of Late Effects.

85. Hunt D and **Rai SN**. International conference on Design of Experiments, University of Memphis, Memphis, May 12-15, 2005. Topic: Optimal Sample Size Allocation Based on Threshold Dose Response Models for Developmental Toxicology Studies.
86. Cox CL, Lensing S, **Rai SN**, Burghen L, Hinds P, Pui CH. ONS Congress (Annual meeting), Orlando, Florida, April 29, 2005. Topic: Changing childhood cancer survivors' health behaviors to modify risks of late effects.
87. Karimova EJ, Howard S, **Rai SN**, Hendrick J, Neel M and Kaste SC. Annual Meeting, Society for Pediatric Radiology, New Orleans, May 3-7, 2005. Topic: Longitudinal Evaluation of Osteonecrosis of the Hip in Patients with Leukemia or Lymphoma.
88. Garvie PA, Cremeens J, **Rai SN**, An Q, Hadley W and West R. National Conference on Child Health Psychology, Gainesville, Florida, April 19-22, 2006. Topic: Disclosure of children's perinatally acquired HIV-1 diagnosis in relation to medication adherence, physical functioning, and parental psychological functioning: a prospective pilot study of process and outcome.
89. Garvie PA, Cremeens J, **Rai SN**, An Q and Corbett AM. NIMH/IAPAC International Conference on HIV Treatment Adherence, Hyatt Regency Hotel, Jersey City, New Jersey, March 8-10, 2006. Topic: Comparison among Adherence Assessment Strategies for Children with Perinatally Acquired HIV-1: Observations from a Prospective Pilot Study.
90. Marchese VG, **Rai SN**, Carlson CA, Hinds PS, Spearing E, Zhang L, Callaway L, Neel MD, Rao BN, Ginsberg JP. 9th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, Niagara-on-the-Lake, Ontario, Canada, June 9-10, 2006. Topic: Assessing Functional Mobility in Survivors of Lower Extremity Sarcoma: Reliability and Validity of a New Tool.
91. Marchese VG, **Rai SN**, Carlson CA, Hinds PS, Spearing E, Zhang L, Callaway L, Neel MD, Rao BN, Ginsberg JP. The Musculoskeletal Tumor Society Annual Meeting, Key West, Florida, June 8-10 2006. Topic: Assessing Functional Mobility in Survivors of Lower Extremity Sarcoma: Reliability and Validity of a New Tool.
92. Cox C, **Rai SN**, Phipps S and Hudson MM. 43<sup>rd</sup> Annual Meeting of American Society of Clinical Oncology, Chicago, Illinois, June 1-5, 2007. Topic: Subclinical cardiac toxicity and health-related quality of life (hql) in childhood cancer survivors.
93. Garvie PA, Lensing S, **Rai SN**, and others. 2nd International Conference on HIV Treatment Adherence, Hyatt Regency Hotel Jersey City, NJ, March 28-30, 2007. Topic: Diagnostic Disclosure and Parental Anxiety Predict Medication Adherence in Youth with Perinatal HIV Infection.
94. Cox C, Montgomery M, **Rai SN**, and Hudson MM. 135<sup>th</sup> Annual meeting of American Public Health Association, Washington DC, November 3-7, 2007. Topic: Promoting breast self-exam in childhood cancer survivors.
95. Morris B, **Rai SN**, Kaste S. and others. 50<sup>th</sup> Annual meeting of Society for Pediatric Radiology, Miami, Florida, April 18 – 21, 2007. Topic: Impact of Bone Age on Classification

of Bone Mineral Density (BMD) Deficits in Pediatric Brain Tumor Patients.

96. Crom DB, Lensing S, **Rai SN**, Hudson MM. 43<sup>rd</sup> Annual Meeting of American Society of Clinical Oncology, Chicago Illinois, June 1-7, 2007. Topic: Participant retention in a longitudinal study of bone mineral density in acute lymphoblastic leukemia (ALL) survivors.
97. Baker JN, **Rai S**, Kane JR, Howard SC, Hinds P. 2<sup>nd</sup> Annual Meeting of American Academic of Hospice and Palliative Medicine, Tampa Bay, Florida, January 30 – February 02, 2008. Topic: Clinical Care Interventions are not Limited by a “Do Not Resuscitate” Order at a Tertiary Pediatric Oncology Referral Center.
98. Hunt DL, **Rai SN** and Li CS. The 7<sup>th</sup> Annual Meeting of the International Dose Response Society. University of Massachusetts, Amherst, MA, April 29-30, 2008. Topic: Overview of Statistical Modeling for Dose-Response Data from Developmental Toxicity Studies.
99. Minhas A, Kaste SC, Xiong Z, **Rai SN**, Hudson MM and Metzger M. 51<sup>st</sup> Annual Meeting of the Society for Pediatric Radiology, Fairmont Scottsdale Princess, Scottsdale, Arizona, May 7-10, 2008. Topic: Bone Density Deficits in Survivors of Pediatric Hodgkin’s Lymphoma (HL).
100. Dragun AE, Pan J, Jain D, Kruse B, and **Rai SN**. Annual Meeting, American Society of Therapeutic Radiation Oncology (ASTRO), Chicago, November 1-5, 2009. Topic: Locoregional Recurrence in Patients with Triple-Negative Breast Cancer: The Impact of Radiotherapy.
101. Kanaan Z, Galandiuk S, Abby M, Shannon KV, Dajani D, Hicks N and **Rai SN**. International Congress on Peer Review and Biomedical Publications, Vancouver, BC, Canada, September 10-12, 2009. Topic: The Value of Lesser Impact Factor Journals as Source of Negative and Inconclusive Articles.
102. Barnes C and **Rai SN**. The 8<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 6, 2009. Topic: Evaluation of Bayesian Designs Under Frequentist Validity: Phase II 2 Stage Clinical Trials.
103. Kanaan Z, Hicks N, Mottern E, Mulhall A, Gholson R, **Rai S** and Galandiuk S. The 8<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 6, 2009. Topic: MicroRNA expression in inflammatory bowel disease-associated neoplasia.
104. Weller C, Cohen E, Kanaan Z, Eichenberger M, Hicks N, Roberts H, Pan J, **Rai S** and Galandiuk S. 2010 Research!Louisville, Louisville, KY, October 11 - 15, 2010. Topic: Gene-Environment Interactions Affecting Susceptibility to Inflammatory Bowel Disease.
105. A. Bhatt, A. Zacarias, J. Pan, **S. Rai** and M. Ei-Ghamry. The 9<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 5, 2010. Topic: Tumor Volume (GTV) before, during and after Stereotactic Body Radiation Therapy (SBRT) for Early Stage Lung Cancer (ESLC).
106. M. A. Rasku, S. Telang, A. Clem, W. Badger, A. Klarer, B. Clem, H. Gragg, K. Carter, K. M. McMasters, J. Pan, **S. Rai**, D. M. Miller and J. Chesney. The 9<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 5, 2010. Topic: Clinical

Responses to the Regulatory T Cell-Depleting Agent, Denilekin Diffitox, Are Associated with Prolonged Survival in Stage IV Melanoma Patients.

107. K. E. Olberding, X. Wang, Y. Zhu, J. Pan, **S. Rai** and C. Li. The 9<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 5, 2010. Topic: Actinomycin D Synergistically Enhances the Efficacy of the BH3 Mimetic ABT-737 by Down-Regulating Mcl-1 Expression.
108. Z. Kanaan, M. R. Eichengerger, C. Barnes, **S. Rai**, C. A. Vahrenhold, A. Mulhall, R. Gholson, R. E. Petras, E. Mottern and S. Galandiuk. The 9<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 5, 2010. Topic: Differential MicroRNA Expression in Inflammatory Bowel Disease-Associated Colorectal Cancer and the Effect on the p53 Pathway.
109. Z. Kanaan, M. R. Eichengerger, C. Barnes, **S. Rai**, C. A. Vahrenhold, A. Mulhall, R. Gholson, R. E. Petras, E. Mottern and S. Galandiuk. The 9<sup>th</sup> Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 5, 2010. Topic: Differential MicroRNA Expression in Inflammatory Bowel Disease-Associated Colorectal Cancer and the Effect on the p53 Pathway.
110. Nandita Das, Kathy B. Baumgartner, Richard A. Kerber, **Shesh N. Rai**, Cornelia M. Ulrich, Marian L. Neuhouser, Leslie Bernstein, Anne McTiernan, Rachel Ballard-Barbash, and Richard N. Baumgartner. The 102<sup>nd</sup> Annual meeting of American Association for Cancer Research, Orange County Convention Center, Orlando, Florida, April 2-6, 2011. Topic: Associations between genetic variability in folate metabolism and breast cancer survival.
111. A. E. Dragun, J. Pan, E. C. Riley, B. B. Kruse, M. R. Wilson, **S. Rai**, D. Jain. The 47<sup>th</sup> Annual meeting of American Society of Clinical Oncology, McCormick Place, Chicago, IL, June 3-7, 2011. Topic: Increasing mastectomy rates for early stage breast cancer are coupled with rising use of immediate reconstruction and contralateral prophylactic mastectomy: A 14- year report from a comprehensive cancer center.
112. Litvan I, Cunningham C, Lees P, Cambon A, Jackson L, Juncos J, Riley D, Bordelon I, Standaert D, Reich S, Jankovic J, Hall D, Dubinsky R, Henchcliffe C, Uitti R, Kluger B, Schprecher D, Marras C, Leverenz J, and **Rai S**. The 136<sup>th</sup> Annual meeting of the American Neurological Association, Manchester Grand Hyatt, San Diego, CA, September 25-28, 2011. Topic: PSP is associated with environmental chemical factors.
113. P. N. Barry, E. C. Riley, J. Pan, J. B. Crew, K. Lee, D. Jain, B. Kruse, A. R. Quillo, **S. N. Rai**, A. E. Dragun. The 53<sup>rd</sup> Annual meeting of American Society of Radiation Oncology (ASTRO), Miami Beach Convention Center, Miami, Florida, October 2-6, 2011. Topic: Delay Of Adjuvant Chemotherapy After Elective Mastectomy And Immediate Reconstruction In Breast Conservation Candidates: A Matched-pair Analysis.
114. A Connor, RN Baumgartner, RA Kerber, L O'Brien, **SN Rai**, RK Wolff, ML Slattery, AR Giuliano, T Byers, KB Baumgartner. The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved. Grand Hyatt Washington, Washington, DC. September 18-21, 2011. Topic: Beta- 2 Adrenergic Receptor Polymorphisms and Risk of Breast Cancer among Hispanic and Non-Hispanic White Women: The 4-Corners Brest Cancer Study.

115. Goetz H. Kloecker, **Shesh Rai**, Jianmin Pan, Joseph Alexander, Alireza Abdolmohammadi. The 2012 Annual Meeting of ASCO, June 1-5, 2012, McCormic Place, Chicago, IL. Topic: Primary Care Physicians (PCPs) and Referral to Oncology.
116. Alireza Abdolmohammadi, **Shesh Rai**, Jianmin Pan, Joseph Alexander, Goetz H. Kloecker. The 2012 Annual Meeting of ASCO, June 1-5, 2012, McCormic Place, Chicago, IL. Topic: Academic and community PCPs underestimate benefits of systemic therapy for lung and breast cancer.
117. Geetika Bhatt, Xiao-Feng Li, Vivek R. Sharma, Aashish D. Bhatt, Alex Cambon, **Shesh Rai**, Ali Cahid Civelek. The 2012 Annual Meeting of ASCO, June 1-5, 2012, McCormic Place, Chicago, IL. Topic: Study evaluating possible causes of the normal variant 18F-FDG uptake in the thoracic spinal cord in patients without CNS malignancy.
118. N Das, K B Baumgartner, C Ulrich, **S N Rai**, R A Kerber, R N Baumgartner. The 2012 Annual Meeting of ACE (American College of Epidemiology), September 8-11, 2012, InterContinental Hotel, Chicago, IL. Topic: Genetic Polymorphisms in the Folate Metabolizing Pathway and Breast Cancer- Specific Survival.
119. H Hao, D Xiao, J Pan, SN Rai, M Egger, A Cambon, Y Chen, S Waigel, W Zacharias and KM McMasters. 11<sup>th</sup> Annual Retreat, James Graham Brown Cancer Center, Louisville October 26, 2012. Topic: Sentinel Lymph Node Gene Panel to Predict Prognosis in Node-Positive Melanoma Patients.
120. A Abdolmohammadi, J Pan, S Rai, J Alexander and GH Kloecker. The 11<sup>th</sup> Annual Retreat, James Graham Brown Cancer Center, Louisville October 26, 2012. Topic: Primary Care Physicians (PCPs) and Referral to Oncology.
121. Michael E Egger, Deyi Xiao, Hongying Hao, Jianmin Pan, Shesh N. Rai, Alexander Cambon, Sabine Waigel, Wolfgang Zacharias and Kelly M McMasters. Society of Surgical Oncology 66th Annual Meeting. March 6-9, 2013, Gaylord national Hotel in National Harbor, Maryland. Topic: Unique Genes in the Tumor-Positive Sentinel Lymph Nodes Associated with Non-Sentinel Lymph Node Metastases in Melanoma.
122. Susan Galandiuk M.D., Ziad Kanaan, M.D., Ph.D., M. Robert Eichenberger M.S., Henry Roberts, Jianmin Pan, Ph.D., Shesh Rai, Ph.D. American Surgical Association 133<sup>rd</sup> Annual Meeting. April 4-6, 2013, JW Marriott Indianapolis, Indiana. Topic: A Plasma MicroRNA Panel for Detection of Advanced Colorectal Adenomas.
123. Susan Galandiuk M.D., Ziad Kanaan, M.D., Ph.D., M. Robert Eichenberger M.S., Henry Roberts, Jianmin Pan, Ph.D., Shesh Rai, Ph.D. DDW2013 (Digestive Disease Week), May 19-21, 2013, Orange County Convention Center, Orlando FL. Topic: A Blood-Based MicroRNA Assay Distinguishes Crohn's Disease and Ulcerative Colitis.
124. Irene Litvan, Chris R Cunningham, Peter SJ Lees, Shesh N. Rai, Alec C Cambon, Leila W Jackson. Annual Meeting of the American Neurological Association (ANA), October 13-15, 2013, Hilton New Orleans Riverside, New Orleans, LA. Topic: Environmental and Occupational Risk Factors for Progressive Supranuclear Palsy: A Case-Control Study.
125. J Rice, SN Rai, J Pan, H Roberts, MR Eichenberger and S Galandiuk. The 12<sup>th</sup> Annual Retreat, James Graham Brown Cancer Center, Louisville, October 25, 2013. Topic: Plasma



based MircoRNA Detection and Differentiation of Colorectal Neoplasia.

126. EC Riley, LM Roland, LE Barkely, M Mandadi, SN Rai, J Pan and SG Mizuguchi. The 12<sup>th</sup> Annual Retreat, James Graham Brown Cancer Center, Louisville, October 25, 2013. Topic: Importance of Insurance Status to predict repeat Mobile mammography utilization: 10 year analysis of a Comprehensive Urban Cancer Center.
127. PJ Trainor and SN Rai. The 12<sup>th</sup> Annual Retreat, James Graham Brown Cancer Center, Louisville, October 25, 2013. Topic: Patient Rule Induction Method (PRIM) for Identifying Subgroups in Clinical Studies.
128. Mizuguchi SG, Barkley LE, Roland L, Crawford S, Fry L, Sorrell CL, Pan J, Rai SN, Riley EC. RSNA 99<sup>th</sup> Scientific Assembly and Annual Meeting. December 1-6, 2013, McCormick Place, Chicago, Illinois. Topic: Mobile Mammography Utilization Trends and Disparities Over a Decade at a Comprehensive Urban Cancer Center.
129. EC Riley, D Jain, B Kantardzic, X Wu and SN Rai. The 2013 San Antonio Breast Cancer Symposium. December 10-14, 2013, Gonzalez Convention Center, San Antonio, Texas. Topic: Demographic Trends in Clinical Trial Withdrawal rate within the Bubble Study.
130. Riley EC, Ronald LC, Barkley LE, Mandad M, Rai SN, Pan J and Mizuguchi SG. The 2013 San Antonio Breast Cancer Symposium. December 10-14, 2013, Gonzalez Convention Center, San Antonio, Texas. Topic: 10 year analysis of a Comprehensive Urban Cancer Center.
131. Rice, J Roberts H, Eichenberger MR, Pan J, Rai S, Galandiuk S. American Surgical Association 134th Annual Meeting. April 10-12, 2014, Marriott Copley Place, Boston, Massachusetts. Topic: Refinement of a Plasma-Based microRNA Panel Specific for Colorectal Neoplasia: An Algorithmic Approach.
132. Bhatt G, Wu, Xiaoyong, Li, XF, Rai SN and Civelek CC. Society of Nuclear Medicine and Molecular Imaging (SNMMI) Annual Meeting. June 7-11, 2014, St. Louis, Missouri. Topic: Three hour solid gastric emptying accurately predicts the 4-h result; Is 4-h measurement necessary.