

CURRICULUM VITAE



Shesh N. Rai

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Citizenship: USA

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:

2016-2017 Dean's Award for Graduate Student Development and Welfare Committee Nominee, School of Interdisciplinary Graduate Studies, UofL

2014-2018	Faculty Favorite- An Outstanding Professor Nominated by Students, DCTL, UofL
2014	Fellow, American Statistical Association
2011-2012	Provost's Award for Exemplary Advising Award Nominee, University of Louisville
2009-2010	Faculty Favorite- An Outstanding Professor Nominated by Students, DCTL, UofL
1995-1997	Natural Science & Engineering Research Council Canadian Lab Fellowship
1986-1991	Canadian Commonwealth Scholarship
1975-1981	Throughout 1st class in High School, Intermediate School, B.Sc. and M.Sc.
1975-1979	Indian National Scholarship
1971-1977	Consistently ranked first for 7 years in school

BRIEF CHRONOLOGY OF EMPLOYMENT:

March 2018 – Present	Director, Biostatistics and Informatics Facility Core, Center for Integrated Environmental Health Sciences (CIEHS), University of Louisville, Kentucky
Sept 2013 – Present	Associate Appointment, Department of Pharmacology and Toxicology, School of Medicine, University of Louisville, Kentucky
Jan 2010 – Present	Professor, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Kentucky
Oct 2009 – Present	Wendell Cherry Chair in Clinical Trial Research, University of Louisville, Kentucky
Nov 2007 – Present	Director, Biostatistics and Bioinformatics Facility, James Graham Brown Cancer Center, School of Medicine, University of Louisville, Kentucky
Nov 2007 – Dec 2009	Associate Professor, Department of Bioinformatics and Biostatistics, School of Public Health and information Sciences, University of Louisville, Kentucky
Jan 2003 – Oct 2007	Associate Member, Department of Biostatistics, St. Jude Children's Research Hospital, Memphis, Tennessee
Feb 2000 – Jan 2003	Assistant Member, Department of Biostatistics, St. Jude Children's Research Hospital, Memphis, Tennessee
Aug 2002 – Oct 2007	Distinguished Adjunct Professor of Mathematics, Department of Mathematical Sciences, University of Memphis, Tennessee

Nov 1999 – Jun 2002	Adjunct Professor, Department of Epidemiology and Community Medicine, University of Ottawa, Ottawa, Canada
Jul 1997 – Feb 2000	Analyst, Statistics Canada, Ottawa, Ontario, Canada
Jul 1995 – Jun 1997	Post-Doctoral Fellow (NSERC), Environmental Health Centre, Health Canada, Ottawa, Ontario, Canada
Aug 1994 – Jun 1995	College Professor, Division of Science, Okanagan University College, Kelowna, British Columbia, Canada
May 1993 – Jul 1994	Statistical Consultant, Statistical Consulting Service, University of Waterloo, Waterloo, Ontario, Canada
Sept 1986 – Apr 1993	Research/Teaching Assistant, Department of Statistics and Actuarial Science, University of Waterloo, Ontario, Canada
Nov 1982 – Aug 1986	Assistant Professor, Department of Statistics and Mathematics, Rajendra Agricultural University, Pusa, Samastipur, Bihar, India
May 1982 – Nov 1982	Statistician, Community Based Project, Institute of Medical Sciences, Banaras Hindu University, Varanasi, U.P., India

OUTSIDE CONSULTING EXPERIENCE:

Mar 07, 2019	Reviewed Grants U2C HHEAR, NIEHS, SRA: Dr. Linda Bass
Nov 14, 2018	Reviewed Grants VHA CO SRGA, SRA: Dr. K Potter
June 18, 2018	Reviewed Grants R21 and R01 (PAR 18-378), SRA: Dr. Delia Sam
May 23, 2018	Reviewed Grants VHA Co SRGA Review ; SRA: Dr. K Potter
Feb 26, 2018	Reviewed Grants R21 and R01 (PAR 16-260): NIH, SRA: Dr. Delia Sam
Nov 15-16, 2016	Reviewed Grants T32: NIEHS, SRA: Dr. Linda Bass
Feb 2-4, 2016	Reviewed Grants P50: SPOREs in Human Cancer, SRA: Dr. D Ransom
May 12-14, 2015	Reviewed Grants P50: Children's Center, SRA: Dr. Linda Bass
Feb 2-4, 2015	Reviewed Grants P50: SPOREs in Human Cancer, SRA: DR. C Bianco
Dec 03, 2014	Reviewed Grants IMMA-1: Immunology & Dermatology A, SRA: Dr. K Potter
Sept 18-19, 2013	Reviewed Grants P30: RFA-ES-13-002, Dr. Linda Bass, SRA
June 15-17, 2011	Reviewed 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 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 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:

Current (total=8):

Supervision:

- PhD: Sudhir Srivastava, Arinjita Bhattacharya, Qian Chen, Samarendra Das, Aanchal Malhotra, Dan Riggs, Christy Pinkston
- MS: Rachana Lele, Divya Srivastava
- Post-Doc:

Thesis Committee- Biostatistics:

Riqui Liu, John Craycroft

Thesis Committee- Other:

Sam Carlisle, Y Sen, M Lewatis, L Al-Eryani, J Carter, Collin Stocke, Joseph Carhart, Jianzhu Luo

Past (Total=16):

Direct Supervision

- Post-docs: Drs. A Connor, S Boone, N DeJarnett, D Hunt and J Pan
- PhD: Drs. C Barnes, H Ray, A Cambon, J Shah, X Li, P Trainor
- MS: Archana Rai, Patrick Trainor, Derek Childers, M Kulkarni

Co-supervision:

- Medical Residents/Fellow: Dr. J Baker

- PhD: Dr. J Zhang (Co-supervision)
 - MS: Y Ma and K Cheon (Co-supervision)
- Thesis committee:
- PhD: Drs. N Ferguson, J Ndikum, 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:

- July 2014 – June 2017, Executive Committee member, PhD in Interdisciplinary Studies – Specialization in Bioinformatics, University of Louisville
- July 2014 – Present, Editor, Biometrics & Biostatistics International Journal, MedCrave Group Publications, Bartlesville, Oklahoma
- December 2013 – March 2017, Editorial Board, Journal of Probability and Statistics, Hindawi Publishing Corporation, New York, NY
- October 2013 – Present, Editorial Board, Journal of Medical Statistics and Informatics, Herbert Publications, Hyderabad, India
- 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
- March 2014 – June 2015, Promotion, Appointment, and Tenure Committee, School of Public Health and Information Sciences
- October 2013 – March 2014, 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 2016, 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

RECENT TEACHING:

2014: PHST 666-01: MASTER'S THESIS RESEARCH; PHST 675-01: CLINICAL INFORMATICS; PHST 680-01: BIOSTATISTICAL METHODS I; PHST 703-02: BIostat CONSULTING PRACT

2015: PHST 603-01: PUB HEALTH PRACTICUM; PHST 666-02: MASTER'S THESIS RESEARCH; PHST 675-07: BIOL TIME-SERIES CLASSIFICATION; PHST 675-08: STAT LRNG TECH CLIN DATA ANALY; PHST 680-01: BIOSTATISTICAL METHODS I; PHST 675-08: TIME SERIES ANALYSIS; PHST 724-01: ADV CLINICAL TRIALS

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.
 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, 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.
 19. Co-I, Department of Defense: “Prevention and Treatment of Breast Cancer by Blueberry Anthos”, (07/01/2014-06/01/2017). 2% effort and salary. PI: Gupta RC, Ph.D., Direct Cost: \$1,039,962.
 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 HL-12-026 CCTR 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.
 23. Co-I, NIH UH2-UH3 grant (1UH2TR000875-01): “Fruit Exosomes-like Particles for Therapeutic Delivery of Extracellular miRNAs”, (08/01/2013-07/31/2019). 5% effort and salary. PI: HG Zhang, Ph.D., Direct Cost: \$2,709,997.

CURRENT

24. 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.
25. Co-I, NIH UH2-UH3 grant (2UH2TR000875-01): “Fruit Exosomes-like Particles for

- Therapeutic Delivery of Extracellular miRNAs”, (08/01/2018-07/31/2023). 5% effort and salary. PI: HG Zhang, Ph.D., Direct Cost: \$965,386.
26. 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.
 27. Co-I, NIH Grant (1R01CA186661-01): “Small molecule targeting of MIF as a novel melanoma therapeutic”, (04/03/14-03/31/2019). 5% effort and salary. PI: Mitchell RA, Ph.D., Direct Cost: \$1,037,500.
 28. Co-I, NIH Grant (1R21ES023627-01A1): “Differential mirRNA expression of arsenic induced skin cancer”, (06/01/15-06/30/2017). 5% effort and salary. PI: States C, Ph.D., Direct Cost: \$275,000.
 29. Co-I, NIH Grant (1R01HL122676-01A1: “Cardiovascular Toxicity of Tobacco Products”, (07/01/15-06/30/2020). 5% effort and salary. PI: Conklin D, Ph.D., Direct Cost: \$2,499,250.
 30. Co-I, NIH Grant (P20 GM113226: “Center of Excellence in Hepatobiology and Toxicology Research”, (04/01/16-06/30/2021). 10% effort and salary. PI: McClain C, MD, Ph.D., Direct Cost: \$1,170,732.
 31. Co-I NIH Grant (1U01HL127518-01: ExCITE Program - “A Plasma microRNA Assay with High Specificity & Sensitivity for Colorectal Neoplasm Diagnosis”, (09/01/16-08/31/18). 1% Effort and salary. PI: Galandiuk S, PhD. Direct Cost: \$200,000.
 32. Co-I NIH Grant (1U01HL127518-01: ExCITE Program - “Development of Mutated Human Parvovirus B19 vaccine”, (09/01/16-08/31/18). 4% Effort and salary. PI: Jenson A, PhD., Direct Cost: \$200,000.
 33. Co-I NIH Grant (1U01HL127518-01): ExCITE Program - “Adenosine Deaminase as a Novel Immunotherapeutic Agent for the Treatment of Cancer”, (09/01/16-08/31/18). 2% Effort and salary. PI: Yaddanapudi K, PhD., Direct Cost: \$200,000.
 34. PI, Kentucky Lung Cancer Research Program Grant Cycle 16. “Statistical Methods for Modelling and Prediction of Lung Cancer Clinical Data”, 06/01/2017-05/30/2019. PI: Rai SN PhD. Direct Cost: \$150,000.
 35. Co-I NIH Grant (1P42ES023716): “Environmental Exposure and Cardiometabolic Disease”, (04/01/17-03/31/22). 15% Effort and salary. PI: Srivastava S, PhD., Direct Cost: \$13,436,920.

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)
7. PI: Cave MC, Co-I: Rai SN. A Phase 2 Clinical Trial of A Technology-Based Applications to Improve The Triple Therapy Adherence Rate in Subjects with Chronic Genotype 1 Hepatitis C Infection. (13.0383)
8. PI: DeFilippis, PhD., Co-I: Rai SN. Louisville Healthy Heart Study: Exposure to Environmental Aldehydes and Cardiovascular Disease Risk. (09.0174).
9. PIs: Mokshagundam S, Baba S and Dwivedi A; Co-I: Rai SN. Carnosine for peripheral Arterial Disease (Car-PAD). Diabetes and Obesity Center, University of Louisville, 2015.

REFEREED PUBLICATIONS (200+ in Total; 150 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*, 2:221-231, 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.
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Wickramasinghe N, Sithu S, Shah J, O'Toole T, **Rai SN**, Bhatnagar A, Conklin DJ and Srivastava S. Systemic Toxicity of Smokeless Tobacco Products in Mice. *Nicotine and Tobacco Research*, 21:101-110, 2019. doi:10.1093/ntr/ntx230.

Manuscripts Submitted for Publication (Update the Number of publication 1s, 2nd last...)

1. Breit A, Wu X, Cox M, Rai S, Knable M and Rhodes I. Incidence of Infusion-Related Reactions with Rapid Infusion of Rituximab in all Indications: A Retrospective Review. *Leukemia and Lymphoma*, September 2014.
2. Gaweda AE, Jacobs AA, **Rai SN**, and Brier ME. Individualized Anemia Management Implementation in Dialysis Unit – Pragmatic Evaluation. *Journal of American Society of Nephrology*, Jan 2016.
3. DeFilippis A, Trainor P, Hill B, Amraotkar AR, **Rai SN**, Hirsch G and Bhatnagar A. Metabolomic Profile of Thrombotic Myocardial Infarction in Human Subjects. *Arteriosclerosis, Thrombosis, and Vascular Biology*, Submitted March 2016.
4. Shah JS, **Rai SN**, DeFilippis AP, Hill BG, Bhatnagar, A, Brock GN. Distribution Based Nearest Neighbor Imputation for Truncated High Dimensional Data with Applications to Pre-Clinical and Clinical Metabolomics Studies. *BMC Bioinformatics*, Submitted, 2016.
5. Li X, Brock GN, Rouchka EC, Cooper NGF, Wu D, O'Toole TE, Gill RS, Eteleeb AM, O'Brien L, **Rai SN**. Improved Detection of Differentially Expressed Genes in RNA-seq Data Using Global Scaling per Sample and per Gene Normalization across Samples. *BMC Bioinformatics*, Submitted, 2016.

Technical Reports:

1. **Rai SN** and Matthews DE. Improving the EM Algorithm. Technical Report, Statistics & Actuarial Science, University of Waterloo, Waterloo, Canada, Stat 92 – 07, 1992.
2. **Rai SN** and Matthews DE. Marker Processes and Inference in Occult Tumour Trials. Technical Report, Statistics & Actuarial Science, University of Waterloo, Waterloo, Canada, Stat 93 – 10, 1993.
3. **Rai SN** and Matthews DE. Discrete Scale Models for Survival/Sacrifice Experiments. Technical Report, Statistics & Actuarial Science, University of Waterloo, Waterloo, Canada, Stat 93 – 11, 1993.
4. **Rai SN**, Matthews DE and Farewell VT. Mixed Scale Models for Survival/Sacrifice Experiments. Technical Report, Statistics & Actuarial Science, University of Waterloo, Waterloo, Canada, Stat 93 – 12, 1993.
5. Abraham B, **Rai SN** and Peiris S. Analysis of Short Time Series with an Over-Dispersion Model. Technical Report, Statistics & Actuarial Science, University of Waterloo, Waterloo, Canada, Stat 94 – 05, 1994.

6. **Rai SN** and Matthews DE. On Semi-parametric Models for Survival/Sacrifice Experiments. Technical Report, Statistics & Actuarial Science, University of Waterloo, Waterloo, Canada, Stat 96 - 05, 1996.
7. **Rai SN**, Matthews DE and Krewski D. Mixed Scale Models for Survival/Sacrifice Experiments. Technical Report Series of the Laboratory for Research in Statistics and Probability, Carleton University, Ottawa, Canada, # 300, 1997.
8. Kovacevic MS and **Rai SN**. A Pseudo Maximum Likelihood Approach To Inference about Hierarchically Structured Data. Statistics Canada, Methodology Branch, Social Survey Methods Division, SSMD – 2000-004E, 2000.
9. Sun J, Zhao Q and **Rai SN**. A Nonparametric Comparison of Tumour Incidences with Intermediate Lethality and Different Death Rates. Technical Report, Department of Biostatistics, St. Jude Children's Research Hospital, # 2001-10, 2001.
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/Contributed:

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. 2nd 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.
37. Diabetes and Obesity Center Journal Club, University of Louisville, February 18, 2014. Issues in Designing Clinical and Pre-Clinical Studies.
38. Division of Biostatistics and Epidemiology, University of Cincinnati, Cincinnati, Ohio, March 27, 2015. Issues in Estimating Adverse Outcome-Incidence Rate with Partial Status and application to a phase IV cancer trial.
39. Research Louisville, 2015, KCCTR, University of Louisville, October 26, 2015. Issues and Statistical Analysis in Clinical Studies for MicroRNA Data. Published in UofL Today.
40. Grand Rounds, Family Medicine, Jewish Hospital Bottigheimer Auditorium, University of Louisville, November 13, 2015. Propensity Score Analysis: A Tutorial. Published in UofL Today.
41. 2015 International Indian Statistical Association Conference. Department of Statistics, Savitribai Phule Pune University, December 20-24, 2015. Imputing Partial Status to Improve Efficiency of Estimating Incidence Rate with Application to a Phase IV Cancer Trial.

Contributed:

42. Graduate Student Seminar Session in Statistics and Biostatistics, University of Western Ontario, London, July 1988. Topic: A Simple Model for Migration Data.
43. Annual Meeting of the Statistical Society of Canada, Toronto, June 1991. Topic: Modeling Tumour Growth and Inference in Carcinogenicity Experiments.
44. 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.

45. Annual Meeting of the Statistical Society of Canada, Banff, May 10, 1994. Topic: Discrete Scale Models for Survival/Sacrifice Experiments.
46. International Biometric Conference at Hamilton, Ontario, August 8-12, 1994. Topic: Analysis of Incomplete Data Using Stochastic Covariate(s).
47. 1999 Joint Statistical Meetings, Baltimore, August 11, 1999. Topic: A Pseudo Maximum Likelihood Approach to Inference on Hierarchically Structured Data.
48. Statistical Society of Canada Meetings, University of Ottawa, Ottawa, Canada, June 5, 2000. Topic: Evaluating Metric Thresholds for Predicting the Probability of Software Faults.
49. ENAR Meetings, Charlotte, NC, March 27, 2001. Topic: The Use of Probabilistic Risk Assessment in Establishing Drinking Water Quality Objectives.
50. 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
51. Biostatistics Journal Club, St. Jude Children's Research Hospital, Memphis, February 7, 2002. Topic: Survival Analysis and Likelihood Methods.
52. 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".
53. 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.
54. 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.
55. ENAR Meetings, Tampa, Florida, March 31, 2003. Topic: On the Analysis of Longitudinal Data Measured Using Questionnaire Instrument.
56. ENAR Meetings, Pittsburg, Pennsylvania, March 30, 2004. Topic: A Threshold Dose-Response Model with Random Effects in Teratological Experiments.
57. Joint Statistical Meetings, Toronto, August 11, 2004. Topic: A Pseudo Maximum Likelihood Approach to Inference on Hierarchically Structured Data.
58. 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.

59. 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.
60. 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".
61. 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".
62. 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".
63. Joint Statistical Meetings, Washington, DC, August 2-6, 2009. Topic: Modeling heterogeneity and its effect on design parameters in phase II clinical trials.
64. 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.
65. 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.
66. 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.
67. Joint Statistical Meetings, Montreal, QC, Canada, August 03-08, 2013. Topic: A Review of Classification Methods That Could Be used to Identify a Subset of Patients in a Clinical Study- Part 2.
68. Trends and Innovations in Clinical Trials, Durham NC, 4/21/2014-4/23/2014. An Evaluation of a Simon 2-stage Phase II Clinical Trial Design Incorporating Continuous Toxicity Monitoring.
69. Joint Statistical Meetings, Boston, MA, August 02-07, 2014. Topic: Some model-based approaches to treatment subset prediction in a clinical study.
70. Joint Statistical Meetings, Boston, MA, August 02-07, 2014. Topic: Effect of Multiple Imputation in Estimating Adverse Outcome Incidence Rate with Partial Status: Application to a Phase IV Cancer Trial.
71. Joint Statistical Meetings, Seattle, Washington, August 08-13, 2015. Topic: Issues in the Statistical Analyses in Metabolomics Data with Application to Pressure-Overloaded and Infarcted Mouse Hearts.
72. **Rai SN.** Noon Hour Research Seminar, Department of Radiology, University of Louisville,

04/13/2016. Topic: Issues in Clinical Trials – Part I. Invited.

73. **Rai SN.** Continuing Education, the Diabetes and Obesity Center, Department of Medicine, University of Louisville, 05/04/2016, title: Issues in the Statistical Analyses in Metabolomics Data with Application to Pressure-Overloaded and Infarcted Mouse Hearts. Invited.
74. Cambon A and **Rai SN.** Joint Statistical Meetings, Chicago, IL, 07/30-08/04/2016. Topic: A Review of Classification Methods to identify a Subset of Patients in a Clinical Study. Contributed.
75. **Rai SN.** Noon Hour Research Seminar, Department of Radiology, University of Louisville, 09/02/2016. Topic: Issues in Clinical Trials – Part II. Invited.
76. **Rai SN.** SCB Medical College, Cuttack, Bhubaneswar, India, 09/24/2016. Topic: Introduction to Clinical Trials with Application to Pediatric Cancer Study. Invited.
77. **Rai SN.** IASCT 2016 Meeting, Hyderabad, India, 09/22-24/2016. Topic: Phase II Clinical Trial Design Incorporating Toxicity Monitoring. Invited.
78. **Rai SN.** FIM 2017 Meeting, Jaipur, India, 12/22-24/2016. Topic: An Efficient Algorithm for Protein Structure Comparison using Elastic Shape Analysis. Invited.

Presentations by Collaborators (Selected):

79. 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.
80. 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.
81. 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.
82. 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.
83. 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.
84. 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.

85. 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.
86. 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.
87. 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?
88. Kaste S, Shidler T, Lensing S and **Rai SN**. 7th 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.
89. 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.
90. 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.
91. 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.
92. Phipps S, Larson S, Long A, **Rai SN**. and Hudson M. 8th 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.
93. 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.
94. 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.

95. 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.
96. Hinds P, **Rai SN**, and others. Podium Presentation, SOCRA Annual Conference, Montreal, Canada, September, 2004. Topic: Quality of life from the child's perspective.
97. 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.
98. 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.
99. 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.
100. 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.
101. 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.
102. 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.
103. 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.
104. 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.
105. 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.
106. 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.

107. 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.
108. 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.
109. Cox C, **Rai SN**, Phipps S and Hudson MM. 43rd 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.
110. 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.
111. Cox C, Montgomery M, **Rai SN**, and Hudson MM. 135th Annual meeting of American Public Health Association, Washington DC, November 3-7, 2007. Topic: Promoting breast self-exam in childhood cancer survivors.
112. Morris B, **Rai SN**, Kaste S. and others. 50th 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.
113. Crom DB, Lensing S, **Rai SN**, Hudson MM. 43rd 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.
114. Baker JN, **Rai S**, Kane JR, Howard SC, Hinds P. 2nd 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.
115. Hunt DL, **Rai SN** and Li CS. The 7th 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.
116. Minhas A, Kaste SC, Xiong Z, **Rai SN**, Hudson MM and Metzger M. 51st 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).
117. 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.

118. 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.
119. Barnes C and **Rai SN**. The 8th 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.
120. Kanaan Z, Hicks N, Mottern E, Mulhall A, Gholson R, **Rai S** and Galandiuk S. The 8th Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 6, 2009. Topic: MicroRNA expression in inflammatory bowel disease-associated neoplasia.
121. 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.
122. A. Bhatt, A. Zacarias, J. Pan, **S. Rai** and M. Ei-Ghamry. The 9th 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).
123. 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 9th Annual Brown Cancer Center Retreat, the Olmstead, Louisville, KY, November 5, 2010. Topic: Clinical Responses to the Regulatory T Cell-Depleting Agent, Denilekin Diftitox, Are Associated with Prolonged Survival in Stage IV Melanoma Patients.
124. K. E. Olberding, X. Wang, Y. Zhu, J. Pan, **S. Rai** and C. Li. The 9th 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.
125. 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 9th 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.
126. 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 9th 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.
127. 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 102nd 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.

128. A. E. Dragun, J. Pan, E. C. Riley, B. B. Kruse, M. R. Wilson, **S. Rai**, D. Jain. The 47th 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.
129. 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 136th 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.
130. 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 53rd 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.
131. 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.
132. Goetz H. Kloecker, **Shesh Rai**, Jianmin Pan, Joseph Alexander, Alireza Abdolmohammadi. The 2012 Annual Meeting of ASCO, June 1-5, 2012, McCormick Place, Chicago, IL. Topic: Primary Care Physicians (PCPs) and Referral to Oncology.
133. Alireza Abdolmohammadi, **Shesh Rai**, Jianmin Pan, Joseph Alexander, Goetz H. Kloecker. The 2012 Annual Meeting of ASCO, June 1-5, 2012, McCormick Place, Chicago, IL. Topic: Academic and community PCPs underestimate benefits of systemic therapy for lung and breast cancer.
134. 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, McCormick 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.
135. 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.
136. H Hao, D Xiao, J Pan, SN Rai, M Egger, A Cambon, Y Chen, S Waigel, W Zacharias and KM McMasters. 11th 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.

137. A Abdolmohammadi, J Pan, S Rai, J Alexander and GH Kloecker. The 11th Annual Retreat, James Graham Brown Cancer Center, Louisville October 26, 2012. Topic: Primary Care Physicians (PCPs) and Referral to Oncology.
138. 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.
139. 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 133rd Annual Meeting. April 4-6, 2013, JW Marriott Indianapolis, Indiana. Topic: A Plasma MicroRNA Panel for Detection of Advanced Colorectal Adenomas.
140. 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.
141. 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.
142. J Rice, SN Rai, J Pan, H Roberts, MR Eichenberger and S Galandiuk. The 12th Annual Retreat, James Graham Brown Cancer Center, Louisville, October 25, 2013. Topic: Plasma based MircoRNA Detection and Differentiation of Colorectal Neoplasia.
143. EC Riley, LM Roland, LE Barkely, M Mandadi, SN Rai, J Pan and SG Mizuguchi. The 12th 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.
144. PJ Trainor and SN Rai. The 12th Annual Retreat, James Graham Brown Cancer Center, Louisville, October 25, 2013. Topic: Patient Rule Induction Method (PRIM) for Identifying Subgroups in Clinical Studies.
145. Mizuguchi SG, Barkley LE, Roland L, Crawford S, Fry L, Sorrell CL, Pan J, Rai SN, Riley EC. RSNA 99th 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.
146. 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.
147. 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.

148. 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.
149. 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.
150. Anthony E. Dragun, Elizabeth Carlross Riley, Amy R. Quillo, Parul Nafees Barry, Allison M. Hunter, Akanksha A. Rajeurs, Teresa Roberts, Shesh Rai, Jianmin Pan, Dharamvir Jain, Charles Raben Scoggins, Kelly McMasters. The 2014 Breast Cancer Symposium. September 04-06, 2014, San Francisco Marriott Marquis, San Francisco, CA. Topic: A phase II trial of once-weekly hypofractionated breast irradiation (WHBI): interim analysis of cosmetic outcome and quality of life.
151. Elizabeth Carlross Riley , Anthony E. Dragun, Kelly McMasters, Charles Raben Scoggins, Amy R. Quillo, Shesh Rai, Xiaoyong Wu and Dharamvir Jain. The 2014 Breast Cancer Symposium. September 04-06, 2014, San Francisco Marriott Marquis, San Francisco, CA. Topic: Improved compliance with oral antiestrogens utilizing a bubble pack.
152. Riley EC, Shesh Rai, Jianmin Pan, Lane Ronald, Laura Barkley and Sarah Mizuguchi. The 2014 Breast Cancer Symposium. September 04-06, 2014, San Francisco Marriott Marquis, San Francisco, CA. Topic: Uninsured utilization of the mobile mammography: 10 year analysis.
153. Galandiuk S, Roberts H, Rice J, Eichenberger R, Pan J and Rai. The 2014 Research!Louisville, September 17, 2014, Louisville, KY. Topic: Plasma-Based microRNA Panel Specific to Colorectal Neoplasia.
154. Wolff R, Slattery M, Baumgartner R, Connor A, John E, Rai SN, Pinkston C, Riley E, Baumgartner K, Boone S. The 2014 Research!Louisville, September 17, 2014, Louisville, KY. Topic: The Association between Active and Passive Smoke Exposure and Mortality among Hispanic/Native American and non-Hispanic White Women Diagnosed with Invasive Breast Cancer.
155. Riley EC, Rai SN, Mudra S and Jianmin Pan. The 2014 Research!Louisville, September 17, 2014, Louisville, KY. Topic: Breast Cancer Diagnosed through the Mobile Mammography Van in Jefferson County, KY.
156. Riley EC, Rai SN, Mudra S and Jianmin Pan. The 2014 Research!Louisville, September 17, 2014, Louisville, KY. Topic: Breast Cancer Diagnosed through the Mobile Mammography Van in Jefferson County, KY.
157. Hargis C, Chernyauskii I, Amraotkar A, Trainor P, Kotarhi S, Ismal I, Rai SN, Bhatnagar A and DeFilippis A. The 2014 Research! Louisville, September 17, 2014, Louisville, KY. Topic: Plasminogen and Oxidized Phospholipids Bound to Plasminogen as Biomarkers for Acute Myocardial Infarction.

158. Elizabeth Carlross Riley , Anthony E. Dragun, Kelly McMasters, Amy R Quillo, Charles Raben Scoggins, Xiaoyong Wu, Shesh Rai and Dharamvir Jain. ASCO Quality Care Symposium. October 17-18, 2014, Boston, MA. Topic: Demographic trends in clinical trial withdrawal rate within the bubble study: Updated analysis.
159. Shah J, Brock GN and **Rai SN**. 14th Annual UT-KBRIN Bioinformatics Summit 2015. March 20-22, 2015. Paris Landing State Park, Buchanan, TN. Topic: Metabolomics Data Analysis and Missing Value Issues with Application to Infarcted Mouse Hearts.
160. Al-Eryani L, Pan J, Rai SN and States JC. Society of Toxicology Annual Meeting. March 22-26, 2015, San Diego, CA. Topic: MicroRNA Profile Changes in Immortalized Human Keratinocytes after Low Arsenic Exposure.
161. Khanal S, Cole ET, Joh J, Ghim SJ, Jenson A, **Rai SN**, Trainor PJ, Shumway BS. Joint Annual Meeting of American Academy of Oral and Maxillofacial Pathology (AAOMP)/ American Academy of Oral Medicine (AAOM), April 18-24, 2015, San Diego, California. Topic: Human Papillomavirus Detection in Histological Samples of Multifocal Epithelial Hyperplasia: a novel demographic presentation.
162. Song D, Amraotkar A, Ismail I, Kothari V, Trainor P, Singh A, Rai SN and DeFilippis A. The 2015 Research!Louisville, October 27-30, 2015, Louisville, KY. Topic: Mean Platelet Volume in Acute Myocardial Infarction (Atherothrombotic and non-Atherothrombotic) and Stable Coronary Artery Disease.
163. States V, Carter J, Eichenberger R, Pan J, Rai SN and Galandiuk S. The 2015 Research!Louisville, October 27-30, 2015, Louisville, KY. Topic: Development of Plasma miRNA Panel in Detecting Response to Treatment of Colorectal Adenoma and Colorectal Cancer.
164. Trainor P, **Rai SN**, DeFilippis A and Bhatnagar A. The 2015 Research!Louisville, October 27-30, 2015, Louisville, KY. Topic: A Comparison of Statistical Learning Techniques for Discriminating Between Clinical Phenotypes Given Metabolomics Data.
165. Wu J, Al-Eryani L, States V, Hoffman JM, Doll M, Wise S, **Rai SN** and States JC. The 2015 Research!Louisville, October 27-30, 2015, Louisville, KY. Topic: Overexpression of miR-186 Induces Polyploidization in HaCaT Cell Line.
166. Yeager R, Riggs DW, Liu GC, Wilson J, Tollerud DJ, **Rai SN** and Bhatnagar A. The 2015 Research!Louisville, October 27-30, 2015, Louisville, KY. Topic: Residential Exposure to Vegetation with Hospital CVD Admission Rates.
167. Al-Eryani L, Jenkins S, Waigel S, States V, Arumugam V, **Rai SN** and States JC. The 2015 Research!Louisville, October 27-30, 2015, Louisville, KY. Topic: Differential miRNA and mRNA Expression in Immortalized Human Keratinocytes (HaCaT) after Low Arsenic Exposure Suggest Changes in Cell Proliferation, Cell Migration, Cytoskeleton Remodeling and Carcinogenesis Pathways.
168. Natasha DeJarnett, Ray Yeager, Daniel Conklin, Timothy O'Toole, James McCracken, Wesley Abplanalp, Daniel Riggs, Ihab Hamzeh, Stephen Wagner, Atul Chugh, Andrew

- Defilippis, Tiffany Ciszewski, Bradley Wyatt, Carrie Becher, Deirdre Higdon, Jordan Finch, Imtiaz Ismail, David J. Tollerud, **Shesh Rai**, Jasmit Shah, Nagma Zafar, Sathya Krishnasamy, Sumanth Prabhu and Aruni Bhatnagar. The 143rd APHA Annual Meeting and Exposition, October 31- November 4, 2015, Chicago, IL. Topic: Air Pollution and Tobacco Smoke Differentially Depress Circulating Angiogenic Cells in Humans.
169. Wu J, Al-Eryani L, States V, Hoffman JM, Doll M, Wise S, **Rai SN**, Galandiuk S, Giri AK and States JC. The 2015 Ohio Valley Chapter Society of Toxicology meeting, November 13, 2015, Northern Kentucky University in Highland Heights, KY. Topic: Overexpression of miR-186 Induces Polyploidization in HaCaT Cell Line.
 170. Carter J, **Rai SN** and Galandiuk S. The 11th Annual Academic Surgical Congress, February 2-4, 2016, Hyatt Regency Jackson Riverfront, Jackson, FL. Topic: Mastering the Interpretation of the Ubiquitous Receiver Operating Characteristic (ROC) Curve.
 171. Khanal S, Trainor P, Zahin M, Ghim S, Joh J, **Rai SN**, Jenson AB, Shumway BS. The 2016 Multidisciplinary Head and Neck Cancer Symposium. JW Marriott Camelback Resort and Spa, Scottsdale, Arizona, February 18-20, 2016. Topic: Histologic variation in high grade oral epithelial dysplasia when associated with high-risk human papillomavirus.
 172. Sanders MA, Wu X, **Rai SN** and Riley EC. The 105th USCAP Annual Meeting. Washington State Convention Center, Seattle Washington, March 12-18, 2016. Topic: Histologic Grade 1 in Breast Cancer Indicates a lack of Benefit in Ordering Oncotype DX.
 173. Al-Eryani L, Jenkins S, Waigel S, States V, Arumugam V, **Rai SN**, Galandiuk S and States JC. The 2016 Society of Toxicology Annual Meeting, March 13-17, 2016, New Orleans Morial Convention Center, New Orleans, LA. Topic: Remodeling and Carcinogenesis Pathways.
 174. Trainor PJ, DeFilippis AP and **Rai SN**. The 2016 UT-KBRIN Bioinformatics Summit, April 8-10, 2016, Lake Barkley State park Cadiz, KY. Topic: Classifier for multiclass metabolomics phenotypic discrimination.
 175. Al-Eryani L, Jenkins S, Waigel S, States V, Arumugam V, **Rai SN**, Galandiuk S, Giri AK, and States JC. The 2016 UT-KBRIN Bioinformatics Summit, April 8-10, 2016, Lake Barkley State park Cadiz, KY. Topic: Differential miRNA and mRNA expression in immortalized human keratinocytes (HaCaT) after low arsenic exposure suggested changes in cell proliferation cell migration cytoskeleton remodeling and carcinogenesis pathways.
 176. Perez CA, Wu X, Amsbaugh MJ, Claudino WM, Yusuf M, Roberts T, Rios-Perez JA, Jain D, Jenson A, Khanal S, Silverman CI, Tennant P, Dunlap NE, **Rai S** and Redman RA. The 2016 Annual Meeting of ASCO, June 3-7, 2016, McCormick Place, Chicago, IL. Topic: High-dose versus weekly cisplatin definitive chemoradiotherapy for HPV-related oropharyngeal squamous cell carcinoma of the head and neck.
 177. Dragun AE, Ajkay NJ, Riley EC, Roberts T, Pan J, **Rai SN**, Jain D, Quillo AR, Scoggins CR and McMasters KM. The 57th Annual meeting of American Society of Radiation Oncology (ASTRO), Boston Convention and Exhibition Center, Boston, MA, September 25-28, 2016. Topic: First Results of a Phase 2 Trial of Once-Weekly Hypofractionated Breast Irradiation (WHBI) for Early-Stage Breast Cancer.

178. Vatslya V, Tasman A, **Rai SN**, McClain CJ. 39th Annual RSA Scientific Meeting, New Orleans, Louisiana, June 25-29, 2016.
179. Wu J, Al-Eryani L, States V, Hoffman JM, Doll M, Wise S, **Rai SN** and States JC. The EMBO Workshop: Chromosome Segregation and Aneuploidy. June 25-29, 2016. National University of Ireland, Galway, Ireland. Overexpression of miR-186 induces endomitosis and increased chromosomal aberrations in human keratinocytes.
180. Yeager R, Riggs DW, Liu GC, Wilson J, **Rai S** and Bhatnagar A. The 2016 Research!Louisville, October 11-14, 2016, Louisville, KY. Topic: Environmental Greenness and CVD Among United States Ecorgions.
181. Trainor P, Bhatnagar A, **Rai SN** and DeFilippis A. The 2016 Research!Louisville, October 11-14, 2016, Louisville, KY. Topic: Dynamic changes in functionally related plasma metabolites following atherothrombotic and non-atherothrombotic myocardial infarction.
182. Shah S, Brock GN, Bhatnagar A and **Rai SN**. The 2016 Research!Louisville, October 11-14, 2016, Louisville, KY. Topic: The impact and influence of missing value imputation on down-stream analyses of metabolomics profiles.
183. Konkle S, Abplanalp W, Riggs D, DeJarnett N, O'Toole T, **Rai S** and Bhatnagar A. The 2016 Research!Louisville, October 11-14, 2016, Louisville, KY. Topic: The association ob benzene exposure with cardiovascular disease risk.
184. Gordon C, Stocke C, Al-Eryani L, States VAR, **Rai SN**, Galandiuk S, Giri AK, States JC. The 2016 Research!Louisville, October 11-14, 2016, Louisville, KY. Topic: Effect of Arsenic Exposure on ZRANB2 Function.
185. Yeager R, Riggs DW, Liu GC, Wilson J, Tollerud DJ, **Rai S** and Bhatnagar A. APHA 2016 Annual Meetings and Expo, October 29- November 02, 2016, Denver, Co. Topic: Vegetation Density Associated with Hospital CVD Admission Rates.
186. Gosain R, Gill A, Gragg H, Bycroft RG, **Rai S**, Pan J, Chesney and Miller DM. The 2017 Annual Meeting of ASCO, June 2-6, 2017, McCormick Place, Chicago, IL. Topic: Interleukin-2 (IL-2) and 5-(3,3-Dimethyle-1-Triazeno) Imidazole-4-Carboxamide (DTIC) for Adjuvant Therapy in Resected High-Risk Primary and Regionally Metastatic Melanoma.
187. Srinivasamaharaj S, Chaudhary D, Wu X, **Rai S**, Sanders MA, Redman R. The 2017 Annual Meeting of ASCO, June 2-6, 2017, McCormick Place, Chicago, IL. Topic: Survival Analysis and Association of HIPEC in Ovarian metastasis of Gastrointestinal Origin.
188. Yeager R, Riggs DW, Wilson J, **Rai S**, Liu GC, and Bhatnagar A. APHA 2017 Annual Meetings and Expo, November 04-08, 2017, Atlanta, GA. Topic: Association between Area Greenness and Cardiovascular Disease in Ecoregions of the United States.
189. Robert Knear-Bell, Laila Al-Eryan, Vanessa States, Theodore Kalbfleisch, Jianmin Pan, **Shesh Rai**, Christopher States. The 2017 Research!Louisville, September 12-14, 2017, Louisville, KY. Topic: Arsenic-Induced Fluctuations in miR-186 Expression and ZRANB2 Directed Splicing.
190. Logan D. Carney, Jianmin Pan, **Shesh N Rai**, Hongying Hao, Kelly M. McMasters. The

2017 Research!Louisville, September 12-14, 2017, Louisville, KY. Topic: Identifying serum exosomal microRNAs signatures as diagnostic tools in melanoma patients

191. Xiaohong Li, Guy N. Brock, Eric C. Rouchka, Nigel G.F. Cooper, Dongfeng Wu, Timothy E. O'Toole, Ryan S. Gill, Abdallah M. Eteleeb, Liz O'Brien, **Shesh N. Rai**. The 2017 Research!Louisville, September 12-14, 2017, Louisville, KY. Topic: A Comparison of Normalization Methods in Differential Expression Analysis of RNA-seq Data
192. Patrick Trainor, **Shesh Rai**, Andrew DeFilippis. The 2017 Research!Louisville, September 12-14, 2017, Louisville, KY. Topic: Bayesian graphical model selection for inferring a reference plasma metabolite interactome for stable heart disease.
193. Ray Yeager, Daniel Riggs, Daniel Conklin, Pawel Lorkiewicz, Zhenzhi Xie, **Shesh Rai**, David Hoetker, Shahid Baba, Aruni Bhatnagar, Natasha DeJarnett. The 2017 Research!Louisville, September 12-14, 2017, Louisville, KY. Topic: Residential Proximity to Green Vegetation is Negatively Associated with Exposure to Volatile Organic Compounds.
194. Suman Suman, Dominique Jones, Geoffrey Clark, LaCreis Kidd, M. Lee Schmidt, Katharine Hobbing, Shirish Barve, Leila Gobejishvili, Guy Brock, Carolyn Klinge, **Shesh Rai**. The 2017 Research!Louisville, September 12-14, 2017, Louisville, KY. Topic: Inhibition of MiR-186 Supresses Cellular Invasion, pAkt and B-catenin in Metastatic Prostate Cancer Cell Lines