

Alexander M. Kaizer

Contact Information

Department of Biostatistics and Informatics
Colorado School of Public Health
University of Colorado
13001 E. 17th Place
Campus Box B119
Aurora, CO 80045
email: alex.kaizer@cuanschutz.edu

Education

Ph.D. Biostatistics, 2017
Minor in Population Geography
University of Minnesota, Minneapolis, MN
Dissertation Title: “Bayesian Hierarchical Modeling based on Multi-Source Exchangeability”
Advisor: Joseph Koopmeiners
Committee: Brad Carlin, Haitao Chu, Julia Drew

B.S. Demographic Analysis, *Summa Cum Laude*, 2012
Minors in Actuarial Science, Geography, Mathematics, Statistics, and Statistical Methods
Truman State University, Kirksville, MO

Employment

Associate Professor (with tenure), 2024-present
Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, Aurora, CO

Assistant Professor (tenure-track), 2017-2024
Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, Aurora, CO

Planning Analyst Intern, 2016-2017
Integrated Planning and Analysis Division of Human Services and Public Health Department of Hennepin County, Minneapolis, MN

Survival Analysis Tutor, 2015-2016
Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN

Research Assistant, 2015 - 2017
Biostatistical Design and Analysis Center, University of Minnesota, Minneapolis, MN

Data Analysis Intern, 2013-2014
City of Minneapolis IT Department, Minneapolis, MN

Research Assistant, 2012 - 2015
Division of Biostatistics, University of Minnesota, Minneapolis, MN

Quality Engineering Intern, 2012
Hollister Incorporated, Kirksville, MO

Senior Student Consultant and Webmaster, 2011 - 2012

Center for Applied Statistics and Evaluation at Truman State University, Kirksville, MO

Research Assistant, 2011 - 2012

MathBio NSF REU, Truman State University, Kirksville, MO

SMACS (Science, Math and Computer Science) Tutor, 2010 - 2012

Truman State University, Kirksville, MO

Level I Tutor, 2010 - 2015

tutor.com, New York, NY

Honors and Awards

Coca-Cola Scholar, 2008

Dean's List, Truman State University, 2008 - 2012

General John J. Pershing Scholarship, Truman State University, 2008 - 2012

Kappa Mu Epsilon National Mathematics Honor Society, 2010

Outstanding Biostatistics Teaching Assistant, 2015

Outstanding Student Seminar Presenter, 2016

Outstanding Paper Competition Recipient for the Medical Devices and Diagnostics Section of the American Statistical Association, 2016

Outstanding Paper Competition Recipient for the Health Policy Section of the American Statistical Association, 2017

ACTStat Early Career Award for the Association of Clinical and Translational Statisticians, 2021

Faculty Excellence in Teaching Award for the Colorado School of Public Health, 2022.

Refereed Publications

—— = advised by Dr. Kaizer

‡ shared first, senior, or corresponding authors

1. Powell, S., **Kaizer, A.**, Koopmeiners, J.S., Iwamoto, C., Klein, M. "High Expression of Class III tubulin in Small Cell Lung Carcinoma." *Oncology Letters*, **7**, 405-410, 2014.
2. **Kaizer, A.**, Fore, S., Kim, H-J., York, E. "Modeling the Biotic and Abiotic Factors that Describe the Number of Active Off-Host *Amblyomma americanum* Larvae." *Journal of Vector Ecology*, **40**, 1-10, 2015.
3. **Kaizer, A.**, Koopmeiners, J.S. "Identifying Optimal Approaches to Early Termination in Two-Stage Biomarker Validation Studies." *Journal of the Royal Statistical Society: Series C*, **66**, 187-199, 2016.
4. Ryder, J., **Kaizer, A.**, Rudser, K., Daniels, S., Kelly, A. "Utility of BMI in Determining Excess Adiposity in Youth across the Obesity Spectrum." *Journal of Pediatrics*, **177**, 255-261, 2016.
5. Fox, C., **Kaizer, A.**, Rudser, K., Nathan, B., Gross, A., Sunni, M., Abuzzahab, M.J., Schwartz, B., Kumar, S., Petryk, A., Billington, C., Ryder, J., Kelly, A. "Meal-Replacements followed by Topiramate for BMI Reduction in Adolescents with Obesity: A Pilot Randomized Controlled Trial." *Obesity*, **24**, 2553-2461, 2016.
6. Ryder, J., **Kaizer, A.**, Rudser, K., Gross, A., Kelly, A., Fox, C. "Effect of Phentermine on Weight Reduction in a Pediatric Weight Management Clinic." *International Journal of Obesity*, **41**, 90-93, 2017.
7. Iroh Tam, P-Y., Thielen, B., Obaro, S.K., Brearley, A., **Kaizer, A.**, Chu, H., Janoff, E.N. "Childhood Pneumococcal Disease in Africa: A Systematic Review and Meta-Analysis of Incidence, Serotype Distribution, and Antimicrobial Susceptibility." *Vaccine*, **35**, 1817-1827, 2017.

8. Rodgers, N.J., **Kaizer, A.**, Miller, W., Rudser, K., Orchard, P., Braunlin, E. "Mortality After Hematopoietic Stem Cell Transplantation for Severe Mucopolysaccharidosis Type I: The 30-Year University of Minnesota Experience." *Journal of Inherited Metabolic Disease*, **40**, 271-280, 2017.
9. Ryder, J., Gross, A., Fox, C., **Kaizer, A.**, Rudser, K., Jenkins, T., Ratcliff, M., Kelly, A., Kirk, S., Siegel, R., Inge, T. "Factors Associated with Long-term Weight Loss Maintenance Following Bariatric Surgery in Adolescents with Severe Obesity." *International Journal of Obesity*, **42**, 102-107, 2018.
10. **Kaizer, A.**, Koopmeiners, J.S., Hobbs, B.P. "Bayesian Hierarchical Modeling based on Multi-Source Exchangeability." *Biostatistics*, **19**, 169-184, 2018.
11. **Kaizer, A.**, Hobbs, B.P., Koopmeiners, J.S. "A Multi-source Adaptive Platform Design for Testing Sequential Combinatorial Therapeutic Strategies." *Biometrics*, **74**, 1082-1094, 2018.
12. Andrade, R., Diaz-Gutierrez, I., Hutchins, J., **Kaizer, A.**, Small, J., Rao, M. "Laparoscopic Trans-diaphragmatic Chest Surgery: Early Experience." *The Journal of Thoracic and Cardiovascular Surgery*, **155**, 1294-1299, 2018.
13. Fox, C., **Kaizer, A.**, Rudser, K., Ryder, J., Kelly, A., Kumar, S., Gross, A. "Cardiometabolic Profiles of Community versus Treatment-Seeking Youth with Obesity." *Obesity Science and Practice*, **4**, 207-215, 2018.
14. Gross, A., **Kaizer, A.**, Ryder, J., Fox, C., Rudser, K., Dengel, D., Kelly, A. "Relationships of Anxiety and Depression with Cardiovascular Health in Youth with and without Obesity." *Journal of Pediatrics*, **199**, 85-91, 2018.
15. Hutchins, J., Grandelis, A., **Kaizer, A.**, Jensen, E. "Thoracic Paravertebral Block Versus Thoracic Epidural Analgesia for Post-Operative Pain Control in Open Pancreatic Surgery: A Randomized Controlled Trial." *Journal of Clinical Anesthesia*, **48**, 41-45, 2018.
16. Kline, S., Neaton, J., Lynfield, R., Ferrieri, P., Kulasingam, S., Dittes, K., Glennen, A., Jawahir, S., **Kaizer, A.**, Menk, J., Johnson, J. "Randomized Controlled Trial of a Self-Administered Five-Day Antiseptic Bundle versus Usual Disinfectant Soap Showers for Pre-Operative Eradication of *Staphylococcus aureus* Colonization." *Infection Control & Hospital Epidemiology*, **39**, 1049-1057, 2018.
17. Kirsch, J., Duran, A., **Kaizer, A.**, Thompson-Buum, H., Robiner W., Weber-Main, A.M. "Career-Focused Mentoring for Early-Career Clinician Educators in Academic General Internal Medicine." *The American Journal of Medicine*, **131**, 1387-1394, 2018.
18. Cuneo, B., Sonnesson, S.-E., Levasseur, S., Moon-Grady, A., Krishnan, A., Donofrio, M., Raboisson, M.-J., Hornberger, L., van Eerden, P., Sinkovskaya, E., Abuhamad, A., Arya, B., Szwast, A., Gardiner, H., Jacobs, K., Freire, G., Howley, L., Lam, A., **Kaizer, A.**, Benson, W., Jaeggi, E. "Home Monitoring for Fetal Heart Rhythm During Anti-Ro Pregnancies." *Journal of the American College of Cardiology*, **72**, 1940-1951, 2018.
19. Gross, A., **Kaizer, A.**, Kelly, A., Rudser, K., Ryder, J., Borzutzky, C., Santos, M., Tucker, J., Yee, J., Fox, C., on behalf of POWER. "The Long and Short of It: Early Response Predicts Longer-term Outcomes." *Obesity*, **27**, 272-279, 2019.
20. Ryder, J., **Kaizer, A.**, Jenkins, T., Kelly, A., Shaibi, G., Inge, T. "Heterogeneity in Response to Treatment of Adolescents with Severe Obesity: The Need for Precision Obesity Medicine." *Obesity*, **27**, 288-294, 2019.
21. Cuneo, B., **Kaizer, A.**, Strasburger, J., Bitant, S., and Wakai, R. "Assessment of Atrioventricular Conduction by Echocardiography and Magnetocardiography in Normal and AntiRo/SSA Antibody Positive Pregnancies." *Ultrasound in Obstetrics and Gynecology*, **54**, 625-633, 2019.
22. Ream, K., Sandhu, A., Valle, J., Weber, R., **Kaizer, A.**, Wiktor, D., Borne, R., Tumolo, A., Marzec, L., Zipse, M., Schuller, J., Tompkins, C., Rosenberg, M., Nguyen, D., Carrol, J., Messenger, J., Sauer, W., Aleong, R., Tzou, W. "Delayed High-Grade Atrioventricular Block Following

Transcatheter Aortic Valve Replacement: Utility of Ambulatory Monitoring.” *Journal of the American College of Cardiology*, **73**, 2538-2547, 2019.

23. Price, P., **Kaizer, A.**, Daniels, S., Jenkins, T., Inge, T., Eckel, R. “Physical Activity Improves Lipid and Weight Loss Outcomes Post-Metabolic Bariatric Surgery in Adolescents with Severe Obesity.” *Obesity*, **27**, 989-996, 2019.
24. Weber-Main, A., Shanedding, J., **Kaizer, A.**, Connett, J., Lamere, M., El-Fakahany, E. “A Randomized Controlled Pilot Study of the University of Minnesota Mentoring Excellence Training Academy: A Hybrid Learning Approach to Research Mentor Training.” *Journal of Clinical and Translational Science*, **3**, 152-164, 2019.
25. Eisengart, J., Pierpont, E., **Kaizer, A.**, Rudser, K., King, K., Pasquali, M., Polgreen, L., Dickson, P., Le, S., Miller, W., Tolar, J., Orchard, P., Lund, T. “Intrathecal Enzyme Replacement for Hurler Syndrome: Biomarker Association With Neurocognitive Outcomes.” *Genetics in Medicine*, **29**, 2552-2560, 2019.
26. Gross, A., **Kaizer, A.**, Vock, D., Siddiqui, S., Fox, C. “Cognitive, Emotional, and Behavioral Contributors to Early Childhood Weight Status.” *Journal of Child Health Care*, **23**, 382-391, 2019.
27. Hutchins, J., Argenta, P., Berg, A., Habeck, J., **Kaizer, A.**, Geller, M. “Ultrasound-Guided Subcostal Transversus Abdominis Plane Block With Liposomal Bupivacaine Compared to Bupivacaine Infiltration for Patients Undergoing Robotic-Assisted and Laparoscopic Hysterectomy: A Prospective Randomized Study.” *Journal of Pain Research*, **12**, 2087-2094, 2019.
28. Cuneo, B., Olson, C., Haxel, C., Howley, L., Gagnon, A., Benson D.W., **Kaizer, A.**, Thomas, J.F. “Risk Stratification of Fetal Cardiac Anomalies in an Underserved Population Using Telecardiology.” *Obstetrics & Gynecology*, **134**, 1096-1103, 2019.
29. Cuneo, B., **Kaizer, A.**, Clur, S., Swan, H., Herberg, U., Winbo, A., Rydberg, A., Haugaa, K., Etheridge, S., Ackerman, M., Dagradi, F., Killen, S., Wacker-Gussmann, A., Benson, D.W., Wilde, A., Pan, Z., Lam, A., Spazzolini, C., Horigome, H., Schwartz, P. “Mothers with Long QT Syndrome Are at Increased Risk for Fetal Death: Findings from a Multicenter International Study.” *American Journal of Obstetrics and Gynecology*, **222**, 263.e1-263.e11, 2019.
30. **Kaizer, A.**, Koopmeiners, J.S., Kane, M.J., Roychoudhury, S., Hong, D.S., Hobbs, B.P. “Basket Designs: Statistical Considerations for Oncology Trials.” *JCO Precision Oncology*, **3**, 1-9, 2019.
31. Bartels, K., **Kaizer, A.**, Jameson, L., Bullard, K., Dingman, C., Fernandez-Bustamante, A. “Hypoxemia Within the First 3 Postoperative Days Is Associated With Increased 1-Year Postoperative Mortality After Adjusting for Perioperative Opioids and Other Confounders.” *Anesthesia & Analgesia*, **131**, 555-563, 2019.
32. Derderian S.C., Patten, L., **Kaizer, A.**, Inge, T., Jenkins, T., Michalsky, M., Changchun, X., Dewberry, L., Sitzman, T. “Body Contouring in Adolescents After Bariatric Surgery.” *Surgery for Obesity and Related Diseases*, **16**, 137-142, 2020.
33. Kelly, A., **Kaizer, A.**, Bosch, T., Rudser, K., Ryder, J., Gross, A., Chow, L., Fox, C., Dengel, D. “Reaching the Tipping Point: Identification of Thresholds at which Visceral Adipose Tissue Steeply Increases in Youth.” *Obesity*, **28**, 139-145, 2020.
34. Northrop, E., Milbauer, L., Rudser, K., Fox, C., Solovey, A., **Kaizer, A.**, Hebbel, R., Kelly, A., Ryder, J. “Reproducibility of Endothelial Microparticles in Children and Adolescents.” *Biomarkers In Medicine*, **14**, 43-51, 2020.
35. Chen, A., Harmatz, P., Nestrail, I., Eisengart, J., King, K., Rudser, K., **Kaizer, A.**, Svatkova, A., Wakumoto, A., Le, S., Madden, J., Young, S., Zhang, H., Polgreen, L., Dickson, P. “Intrathecal Enzyme Replacement for Cognitive Decline in Mucopolysaccharidosis Type I, a Randomized, Open-Label, Controlled Pilot Study.” *Molecular Genetics and Metabolism*, **129**, 80-90, 2020.
36. **Kaizer, A.**, Koopmeiners, J.S. “A Fully Bayesian Mixture Model Approach for Identifying Non-Compliance in a Regulatory Tobacco Clinical Trial.” *Statistics in Medicine*, **39**, 1328-1342, 2020.

37. Yadlapati, R., Triggs, J., Quader, F., Eluri, S., Bhatia, S., **Kaizer, A.**, Van De Voorde, Z., Pandolfino, J., Komanduri, S., Gyawali, P., Shaheen, N., Menard-Katcher, P., Wani S. "Reduced Esophageal Contractility Is Associated with Dysplasia Progression in Barretts Esophagus: A Multicenter Cohort Study." *Digestive Diseases and Sciences*, **65**, 3631-3638, 2020.
38. Gawron, A., Bell, R., Abu Dayyeh, B., Buckley, T., Chang, K., Dunst, C., Edmundowicz, S., Jobe, B., Lipham, J., Lister, D., Canto M.I., Smith, M., Starpoli, A., Triadafilopoulos, G., Watson, T., Wilson, E., Pandolfino, J., **Kaizer, A.**, Van de Voorde, Z., Yadlapati, R. "Surgical and Endoscopic Management Options for Patients with GERD Based on Proton Pump Inhibitor Symptom Response: Recommendations from an Expert U.S. Panel." *Gastrointestinal Endoscopy*, **92**, 78-87, 2020.
39. Hutchins, J., Habeck, J., Novaczyk, Z., Campbell, R., Creedon, C., Spartz, E., Richter, M., Wolter, J., Suryawanshi, G., **Kaizer, A.**, Berg, A. "Patient Complications After Interscalene Block: A Retrospective Comparison of Liposomal Bupivacaine to Nonliposomal Bupivacaine." *Anesthesiology Research and Practice*, **2020**, 1-7, 2020.
40. Zabor, E., **Kaizer, A.**, Hobbs, B. "Randomized Controlled Trials." *CHEST*, **158**, 79-87, 2020.
41. DeLay, K., Pandolfino, J., Gyawali, P., Frye, J., **Kaizer, A.**, Menard-Katcher, P., Sloan, J., Gawron, A., Peterson, K., Carlson, D., Khan, A., Keswani, R., Yadlapati, R. "Esophageal Manometry Competency Program Improves Gastroenterology Fellow Performance in Motility Interpretation." *The American Journal of Gastroenterology*, **115**, 1453-1459, 2020.
42. Price, P., **Kaizer, A.**, Inge, T., Eckel, R. "Physical Activity Impacts Insulin Sensitivity Post-Metabolic Bariatric Surgery in Adolescents with Severe Obesity." *International Journal of Obesity*, **44**, 1479-1486, 2020.
43. Derderian, S.C., Dewberry L., Patten, L., Sitzman, T., **Kaizer, A.**, Jenkins, T., Michalsky, M., Changchun, X., Mitchell, J., Inge, T. "Excess Skin Problems Among Adolescents Following Bariatric Surgery." *Surgery for Obesity and Related Diseases*, **16**, 993-998, 2020.
44. Lundberg, E., Strong, D., Anderson, M., **Kaizer A.**, Gubbels, S. "Do Patients Benefit from a Cochlear Implant When They Qualify Only in the Presence of Background Noise?" *Otology & Neurotology*, **42**, 251-259, 2020.
45. Derderian, S.C., Patten, L., **Kaizer, A.**, Moore, J., Ogle, S., Jenkins, T., Michalsky, M., Mitchell, J., Bjornstad, P., Dixon, J., Inge, T. "Influence of Weight Loss on Obesity-Associated Complications After Metabolic and Bariatric Surgery in Adolescents." *Obesity*, **28**, 2397-2404, 2020.
46. Kane, M., Chen, N., **Kaizer, A.**, Jiang, X., Xia, H.A., Hobbs, B. "Analyzing Basket Trials under Multisource Exchangeability Assumptions." *R Journal*, **12**, 359-371, 2020.
47. Anderson, M., Rallapalli, V., Walker, K., **Kaizer, A.**, Uhler, K. "Do Infants with Hearing Loss Listen Like Little Adults?" *Canadian Audiologist*, **7**, 2020.
48. Shahi, N., Skillman, H., Phillips, R., Cooper, E., Shirek, G., Goldsmith, A., Meier, M., **Kaizer, A.**, Recicar, J., Banks, A., Moulton, S. "Why Delay? Early Enteral Nutrition in Pediatric Burn Patients Improves Outcomes." *Journal of Burn Care & Research*, **42**, 171-176, 2021.
49. Yadlapati, R., Masihi, M., Gyawali, C.P., Carlson, D., Kahrilas, P., Nix, B., Jain, A., Triggs, J., Vaezi, M., Kia, L., **Kaizer, A.**, Pandolfino, J. "Ambulatory Reflux Monitoring Guides Proton Pump Inhibitor Discontinuation in Patients With Gastroesophageal Reflux Symptoms: A Clinical Trial." *Gastroenterology*, **1**, 174-182, 2021.
50. Clavijo, C., Oliva, A., Dingmann, C., **Kaizer, A.**, Christians, U., Burger, E., Patel, V., Kleck, C., Vogel, S., Scott, B., Janik, D., Jameson, L., Ginde, A. "Toxicology Screening Testing in Spine Surgical Patients: A Prospective Observational Pilot Study." *Therapeutic Drug Monitoring*, **43**, 136-138, 2021.
51. Ghadersohi, S., Haville, S., Hedman, M., Adkisson, K., Cooper, E., **Kaizer, A.**, Gitomer, S., Kelley, P. "Socioeconomic and Clinical Factors Influencing Treatment Selection in Microtia and Aural Atresia." *International Journal of Pediatric Otorhinolaryngology*, **141**, 110551, 2021.

52. **Kaizer, A.**, Koopmeiners, J., Chen, N., Hobbs, B. "Statistical Design Considerations for Trials That Study Multiple Indications." *Statistical Methods in Medical Research*, **30**, 785-798, 2021.
53. Goel, V., Moran, B., **Kaizer, A.**, Sivanesan, E., Patwardhan, A., Ibrahim, M., DeWeerth, J., Shannon, C., Shankar, H. "Opioid Prescriptions by Pain Medicine Physicians in the Medicare Part D Program: A Cross Sectional Study." *Anesthesia & Analgesia*, **132**, 1748-1755, 2021.
54. DeLay, K., Pandolfino, J., Roman, S., Gyawali, C.P., Savarino, E., Tye, M., **Kaizer, A.**, Yadlapati, R. "Diagnostic Yield and Reliability of Post-Prandial High-Resolution Manometry and Impedance-pH for Detecting Rumination and Supragastric Belching in PPI Non-Responders." *Neurogastroenterology and Motility*, **33**, e14106, 2021.
55. Hanna, P., Regmi, S., Kalapara, A., Mulpuri, K., Zabell, J., Albersheim, J., Wahr, J., Randle, D., **Kaizer, A.**, Patten, L., Konety, B., Weight, C. "Alvimopan as a Part of the Enhanced Recovery After Surgery Protocol Following Radical Cystectomy Is Associated With a Decreased Hospital Stay." *International Journal of Urology*, **28**, 696-701, 2021.
56. Beswick, D., Hwang, P., Adappa, N., Le, C., Humphreys, I., Getz, A., Suh, J., Aasen, D., Abuzeid, W., Change, E., **Kaizer, A.**, Kingdom, T., Kohanski, M., Nabavizadeh, S., Nayak, J., Palmer, J., Patel, Z., Ramakrishnan, V., Snyderman, C., St. John, M., Wild, J., Wang, E. "Surgical Approach Is Associated With Complication Rate in Sinonasal Malignancy: A Multicenter Study." *International Forum of Allergy & Rhinology*, **11**, 1617-1625, 2021.
57. Prin, M., **Kaizer, A.**, Cardenas, J., Mtalimanja, O., Kadyaudzu, C., Charles, A., Ginde, A. "Tracheostomy Practices for Mechanically Ventilated Patients in Malawi." *World Journal of Surgery*, **45**, 2638-2642, 2021.
58. Kammer, M., Lakhani, D., Balar, A., Antic, S., Kussrow A., Webster, R., Mahapatra, S., Barad, U., Shah, C., Atwater, T., Diergaarde, B., Qian, J., **Kaizer, A.**, New, M., Hirsch, E., Fraser, W., Strong, J., Rioth, M., Miller, Y., Balagurunathan, Y., Rowe, D., Helmey, S., Chen, S.-C., Bauza, J., Deppen, S., Sandler, K., Maldonado, F., Spira, A., Billatos, E., Schabath, M., Gillies, R., Wilson, D., Walker, R., Landman, B., Chen, H., Grogan, E., Barón, A., Bornhop, D., Massion, P. "Integrated Biomarker for the Management of Indeterminate Pulmonary Nodules." *American Journal of Respiratory and Critical Care Medicine*, **204**, 1306-1316, 2021.
59. Vigers, T., Vanderlinden, L., Johnson, R., Carry, P., Yang, I., DeFelice, B., **Kaizer, A.**, Pyle, L., Rewers, M., Fiehn, O., Norris, J., Kechris, K. "A Mediation Approach to Discovering Causal Relationships Between the Metabolome and DNA Methylation in Type 1 Diabetes." *Metabolites*, **11**, 542, 2021.
60. Lupei, M., Munshi, N., **Kaizer, A.**, Patten, L., Wahr, J. "Implementation and One Year Follow Up of the Cardiovascular ICU Standardized Handover." *BMJ Open Quality*, **10**, e001063, 2021.
61. Uhler, K., **Kaizer, A.**, Walker, K., Gilley, P. "Relationship Between Behavioral Infant Speech Perception Abilities and Hearing Age for Children With Hearing Loss." *Journal of Clinical Medicine*, **10**, 4566, 2021.
62. Ma, M., Rosenberg, S., **Kaizer, A.** "The Impact of Nonresponse in Different Survey Stages on the Precision of Prevalence Estimates for Multi-Stage Survey Studies." *BMC Research Notes*, **14**, 423, 2021.
63. Nguyen, W., Cullen, M., **Kaizer, A.**, Randle, D. "Development of an Abbreviated Longitudinal Approach for Medical Student Learning in Perioperative Medicine: Teaching the Perioperative Surgical Home." *The Journal of Education in Perioperative Medicine*, **23**, E675, 2021.
64. Yadlapati, R., **Kaizer, A.**, Greytak, M., Ezekewe, E., Simon, V., Wani, S. "Diagnostic Performance of Salivary Pepsin for Gastroesophageal Reflux Disease." *Diseases of the Esophagus*, **34**, doaa117, 2021.
65. Ling, S., Hobbs, B., **Kaizer, A.**, Koopmeiners, J. "Calibrated Dynamic Borrowing Using Capping Priors." *Journal of Biopharmaceutical Statistics*, **31**, 852-867, 2021.

66. Yadlapati, R., **Kaizer, A.**, Sikavi, D., Greytak, M., Cai, J., Carroll, T., Gupta, S., Wani, S., Menard-Katcher, P., Weissbrod, P., Vahabzadeh-Hagh, A., Pandolfino, J., Chan, W. "Distinct Clinical Physiologic Phenotypes of Patients with Laryngeal Symptoms Referred for Reflux Evaluation." *Clinical Gastroenterology and Hepatology*, **20**, 776-786, 2022.
67. Scott, A., Kanaster, K., **Kaizer, A.**, Young, C., Pantcheva, M., Ertel, M., Kahook, M., Seibold, L. "The Utility of iCare HOME Tonometry for Detection of Therapy-Related Intraocular Pressure Changes in Glaucoma and Ocular Hypertension." *Ophthalmology Glaucoma*, **5**, 85-93, 2022.
68. Cass, N., Hebbe, A., Meier, M., **Kaizer, A.**, Kalmanson, O., Stevens, C., Tholen, K., Haville, S., Handley, E., Francom, C., Herrmann, B. "Pediatric Primary Tympanoplasty Outcomes with Autologous and Non-Autologous Grafts." *Otology & Neurotology*, **43**, 94-100, 2022.
69. Yadlapati, R., Pandolfino, J., Greytak, M., Cahoon, J., Clarke, M., Clary, M., Fink, D., Menard-Katcher, P., Vahabzadeh-Hagh, A., Weissbrod, P., Gupta, S., **Kaizer, A.**, Wani, S. "Upper Esophageal Sphincter Compression Device as an Adjunct to Proton Pump Inhibition for Laryngopharyngeal Reflux." *Digestive Diseases and Sciences*, **67**, 3045-3054, 2022.
70. Brooks Peterson, M., Strupp, K., Brockel, M., Wilder, M., Zieg, J., Bruckner, A., **Kaizer, A.**, Szolnoki, J. "Anesthetic Management and Outcomes of Patients with Epidermolysis Bullosa: Experience at a Tertiary Referral Center." *Anesthesia & Analgesia*, **134**, 810-821, 2022.
71. Shahi, N., **Kaizer, A.**, Stevens, J., Phillips, R., Acker, S., Choi Y.M., Shirek, G., Bensard, D., Bruny, J., Dannull, K., Moulton, S. "A Surgeons Predicament: Clinical Predictors of Surgery and Mortality in Neutropenic Enterocolitis." *Journal of Pediatric Surgery*, **57**, 443-449, 2022.
72. Diaz-Miron, J., Ogle, S., **Kaizer, A.**, Acker, S., Rove, K., Inge, T. "Surgeon, Patient and Care-giver Perspective of Surgical Telemedicine in the COVID-19 Pandemic Era." *Pediatric Surgery International*, **38**, 241-248, 2022.
73. Diaz-Miron, J., Reppucci, M., Weinman, J., **Kaizer, A.**, Annam, A., Orsborn, J., Steward, L., Wilson, J., Bensard, D. "The Use of Ultrasound in Establishing COVID-19 Infection as Part of a Trauma Evaluation." *Emergency Radiology*, **29**, 227-234, 2022.
74. Roach, J., Derderian, S., Ketzer, J., Bengel, M., **Kaizer, A.**, Bischof, A. "The Pediatric Surgery Match from the Applicant Perspective." *Journal of Pediatric Surgery*, **57**, 589-591, 2022.
75. Simmons, C., Alvey, N., **Kaizer, A.**, Williamson, K., Faruki, A., Kacmar, R., Jevtovich-Todorovich, V., Weitzel, N. "Benchmarking of Anesthesia and Surgical Control Times by Current Procedural Terminology (CPT) Codes." *Journal of Medical Systems*, **46**, 19, 2022.
76. Hobbs, B., Pestana, R., Zabor, E., **Kaizer, A.**, Hong, D. "Basket Trials: Review of Current Practice and Innovations for Future Trials." *JCO Precision Oncology*, **40**, 3520-3528, 2022.
77. Flaherty, J., Berg, A., Harrison, A., Braman, J., Pearson, J., Matelich, B., **Kaizer, A.**, Hutchins, J. "Comparing Liposomal Bupivacaine plus Bupivacaine to Bupivacaine alone in Interscalene Blocks for Rotator Cuff Repair Surgery: A Randomized Clinical Trial." *Regional Anesthesia & Pain Medicine*, **47**, 309-312, 2022.
78. Bliss, D., Strandness, T., Derderian, S., **Kaizer, A.**, Patrick, D. "Ultrasound-Guided Erector Spinae Plane Block Versus Thoracic Epidural Analgesia: Postoperative Pain Management After Nuss Repair for Pectus Excavatum." *Journal of Pediatric Surgery*, **57**, 207-212, 2022.
79. Zabor, E., **Kaizer, A.**, Garrett-Mayer, L., Hobbs, B. "Optimal Sequential Predictive Probability Designs for Early-Phase Oncology Expansion Cohorts." *JCO Precision Oncology*, **6**, e2100390, 2022.
80. Stevens, J., Phillips, R., Mourani, P., Cooper, E., **Kaizer, A.**, Wilder, M., French, B., Wilkinson, C., Moulton, S., Derderian, S. "Measurement of Intravascular Volume Status in Infants Undergoing Cranial Vault Reconstruction for Craniosynostosis." *Surgery in Practice and Science*, **9**, 100067, 2022.

81. **Kaizer, A.**, Wild, J., Lindsell, C., Rice, T., Self, W., Brown, S., Thompson, B.T., Hart, W., Smith, C., Pulia, M., Shapiro, N., Ginde, A. "Trial of Early Antiviral Therapies during Non-hospitalized Outpatient Window (TREAT NOW) for COVID-19: A Summary of the Protocol and Analysis Plan for a Decentralized Randomized Controlled Trial." *Trials*, **23**, 273, 2022.
82. Lanigan, M., Siers, D., Wilkey, A., Barakat, A., Shaffer, A., John, R., Knoper, R., Huddleston, S., **Kaizer, A.**, Perry, T. "The Use of a Viscoelastic Based Transfusion Algorithm Significantly Reduces Non-Red Blood Cell Transfusion in Patients Undergoing Left Ventricular Assist Device Placement or Heart Transplantation: A Single-Center Observational Study." *Journal of Cardiothoracic and Vascular Anesthesia*, **36**, 3038-3046, 2022.
83. Patten, L., Blatchford, P., Strand, M., **Kaizer, A.** "Assessing the Performance of Different Outcomes for Tumor Growth Studies with Animal Models." *Animal Models and Experimental Medicine*, **5**, 248-257, 2022.
84. Berg, A., Flaherty, J., Habeck, J., Harrison, A., Braman J., **Kaizer, A.**, Hutchins, J. "Evaluation of Diaphragmatic Function After Interscalene Block With Liposomal Bupivacaine: A Randomized Controlled Trial." *Anesthesiology*, **136**, 531-541, 2022.
85. Kammer, M., Rowe, D., Deppen, S., Grogan, E., **Kaizer, A.**, Barón, A., Maldonado, F. "The Intervention Probability Curve: Modeling the Practical Application of Threshold-Guided Decision Making, Evaluated in Lung, Prostate, and Ovarian Cancers." *Cancer Epidemiology, Biomarkers & Prevention*, **31**, 1752-1759, 2022.
86. **Kaizer, A.**, Lindblade, C., Clancy, R., Tebo, A., Drewes, B., Masson, M., Chang, M., Fraser, N., Buyon, J., Cuneo, B. "Reducing the Burden of Surveillance in Pregnant Women With No History of Fetal Atrioventricular Block Using the Negative Predictive Value of Anti-Ro/SSA Antibody Titers." *American Journal of Obstetrics and Gynecology*, **227**, 761.e1-761.e10, 2022.
87. Yadlapati, R., Gyawali, C.P., Masihi, M., Carlson, D., Kahrilas, P., Nix, B.D., Jain, A., Triggs, J., Vaezi, M., Kia, L., **Kaizer, A.**, Pandolfino, J. "Optimal Wireless Reflux Monitoring Metrics to Predict Discontinuation of Proton Pump Inhibitor Therapy." *American Journal of Gastroenterology*, **117**, 1573-1582, 2022.
88. Berg, A., Habeck, J., Strigenz, M., Pearson, J., **Kaizer, A.**, Hutchins, J. "Sublingual Sufentanil vs. Intravenous Fentanyl for the Treatment of Acute Postoperative Pain in the Ambulatory Surgery Center: A Randomized Clinical Trial." *Anesthesiology Research and Practice*, **2022**, 5237877, 2022.
89. Goel, V., **Kaizer, A.**, Patwardhan, A., Ibrahim, M., DeSimone, D., Sivanesan, E., Shankar, H. "Post-Operative Oral Antibiotic Use and Infection-Related Complications After Spinal Cord Stimulator Surgery." *Neuromodulation: Technology at the Neural Interface*, **25**, 738-744, 2022.
90. **Kaizer, A.**, Zabor, E., Nie, L., Hobbs, B. "Bayesian and Frequentist Approaches to Sequential Monitoring for Futility in Oncology Basket Trials: A Comparison of Simons Two-Stage Design and Bayesian Predictive Probability Monitoring With Information Sharing Across Baskets." *PLOS ONE*, **17**, e0272367, 2022.
91. Low, E., Abbas Fehmi, S., Hasan, A., Chang, M., Kwong, W., Krinsky, M., Anand, G., Greytak, M., **Kaizer, A.**, Carlson, D., Pandolfino, J., Yadlapati, R. "Type II Achalasia with Focal Elevated Pressures: A Distinct Manometric and Clinical Sub-Group." *Neurogastroenterology and Motility*, **34**, e14449, 2022.
92. Buard, I., Yang, X., **Kaizer, A.**, Lattanzio, L., Kluger, B., Enoka, R. "Finger Dexterity Measured by the Grooved Pegboard Test Indexes Parkinsons Motor Severity in a Tremor-Independent Manner." *Journal of Electromyography and Kinesiology*, **66**, 102695, 2022.
93. Nguyen, W., Remskar, M., Zupfer, E., **Kaizer, A.**, Fromer, I., Chugaieva, I., Kloesel, B. "Development and Use of an Induction of General Endotracheal Anesthesia Checklist Assessment for Medical Students in a Clinical Setting During Their Introductory Anesthesiology Clerkship." *The Journal of Education in Perioperative Medicine*, **24**, E690, 2022.
94. Zabor, E., **Kaizer, A.**, Pennell, N., Hobbs, B. "Optimal Predictive Probability Designs for Randomized Biomarker-Guided Oncology Trials." *Frontiers in Oncology*, **12**, 955056, 2022.

95. Reis, D., **Kaizer, A.**, Kinney, A., Holliday, R., Forster, J., Brenner, L. "A Practical Guide to Random-Effects Bayesian Meta-Analyses with Application to the Psychological Trauma and Suicide Literature." *Psychological Trauma: Theory, Research, Practice, and Policy*, **15**, 121-130, 2023.
96. Reis, D., **Kaizer, A.**, Kinney, A., Bahraini, N., Forster, J., Brenner, L. "The Unique Association of Posttraumatic Stress Disorder with Hypertension Among Veterans: A Replication of Kibler et al. (2009) Using Bayesian Estimation and Data from the United States-Veteran Microbiome Project." *Psychological Trauma: Theory, Research, Practice, and Policy*, **15**, 131-139, 2023.
97. Crouch, C., Wilkey, B., Hendrickse, A., **Kaizer, A.**, Schniedewind, B. Christians, U., Henthorn, T., Fernandez-Bustamante, A. "Lidocaine Intraoperative Infusion Pharmacokinetics during Partial Hepatectomy for Living Liver Donation." *Anesthesiology*, **138**, 71-81, 2023.
98. **Kaizer, A.**, Shapiro, N., Wild, J., Brown, S., Cwik, B.J., Hart, K., Jones, A., Pulia, M., Self, W., Smith, C., Smith, S., Ng, P., Thompson, B.T., Rice, T., Lindsell, C., Ginde, A. "Lopinavir/ritonavir for Treatment of Non-Hospitalized Patients with COVID-19: A Randomized Clinical Trial." *International Journal of Infectious Diseases*, **128**, 223-229, 2023.
99. Zhou, W., Kroehl, M., Meier, M., **Kaizer, A.** "Approaches to Analyzing Binary Data for Large-Scale A/B Testing." *Contemporary Clinical Trials Communications*, **32**, 101091, 2023.
100. Wild, J., **Kaizer, A.**, Willems, E., Kramer, S.E., Perreault, L. "Prelude to PATHWEIGH: Pragmatic Weight Management in Primary Care." *Family Practice*, **40**, 322-329, 2023.
101. Ma, S., Vandan, P., Greytak, M., Rubin, J., **Kaizer, A.**, Yadlapati, R. "Diagnostic Thresholds and Optimal Collection Protocol of Salivary Pepsin for Gastroesophageal Reflux Disease." *Digestive Diseases and Sciences*, **36**, doac063, 2023.
102. Bothwell, S., **Kaizer, A.**, Peterson, R., Ostendorf, D., Catenacci, V., Wrobel, J. "Shape-Based Clustering of Daily Weigh-In Trajectories using Dynamic TimeWarping." To appear in *Biometrics*.
103. Speltz Paiz, R., **Kaizer, A.**, Jain, S., Darrow, D., Shankar, H., Goel, V. "Lead and Pulse Generator Migration After Spinal Cord Stimulation Surgery. Insights From Analysis of 7322 Patients." *Neuromodulation: Technology at the Neural Interface*, **26**, 1095-1011, 2023.
104. Holmes, S., Hornberger, L., Jaeggi, E., Howley, L., Moon-Grady, A., Uzun, O., **Kaizer, A.**, Gilicze, O., Cuneo, B. "Treatment, Not Delivery, of the Late Preterm and Term Fetus With Supraventricular Arrhythmias." To appear in *Ultrasound in Obstetrics and Gynecology*.
105. Reppucci, M., **Kaizer, A.**, Prendergast, C., Acker, S., Mandell, E., Euser, A., Diaz-Miron, J. "Incidence of Congenital Complications Related to COVID-19 Infection During Pregnancy." To appear in *Journal of Neonatal-Perinatal Medicine*.
106. **Kaizer, A.**, Belli, H., Zhongyang, M., Nicklawsky, A., Roberts, S., Wild, J., Wogu, A., Xiao, M., Sabo, R. "Recent Innovations in Adaptive Trial Designs: A Review of Design Opportunities in Translational Research." To appear in *Journal of Clinical and Translational Science*.
107. Zhou, W., Kroehl, M., Meier, M., **Kaizer, A.** "Building a Foundation for More Flexible A/B Testing: Applications of Interim Monitoring to Large Scale Data." *Journal of Data Science*, **21**, 412-427, 2023.
108. Acker, S., Ogle, S., Cooper, E., **Kaizer, A.**, Kulungowski, A. "What Is the Role of Neutropenia in Pediatric Cancer Patients With Pneumatosis Intestinalis?" To appear in *Journal of Pediatric Surgery*.
109. Ciolino, J., **Kaizer, A.**, Balmert Bonner, L. "Guidance on Interim Analysis Methods in Clinical Trials." To appear in *Journal of Clinical and Translational Science*.
110. Campos, L., Prochazka, A., Anderson, M., **Kaizer, A.**, Foster, C., Hullar, T. "Consistent Hearing Aid Use Is Associated With Lower Fall Prevalence and Risk in Older Adults With Hearing Loss." To appear in *Journal of the American Geriatrics Society*.
111. Low, E., Hasan, A., Abbas Fehmi, S., Chang, M., Kwong, W., Krinsky, M., Anand, G., Greytak, M., **Kaizer, A.**, Yadlapati, R. "Diagnostic Methods to Measure Spastic Segment and Guide Tailored Myotomy Length in Type 3 Achalasia." To appear in *Neurogastroenterology and Motility*.

112. Mackie, V., Yang, X., **Kaizer, A.**, Callaway, C. "Therapeutic Art: Transforming Self-Awareness for Those Impacted by Cancer." *Oncology Issues*, **38**, 49-55, 2023.
113. Goel, V., **Kaizer, A.**, Darrow, D., Jain, S., Shankar, H. "Intraoperative Neurophysiological Monitoring and Spinal Cord Stimulator Implantation." To appear in *Regional Anesthesia & Pain Medicine*.
114. Lemons, K., Archambault, E., Anderson, M., **Kaizer, A.**, Baiduc, R. "Recovery from Idiopathic Sudden Sensorineural Hearing Loss: Association with Cardiovascular Disease Risk." To appear in *American Journal of Audiology*.
115. Krause, A., Greytak, M., **Kaizer, A.**, Carlson, D., Chan, W., Chen, C.-L., Gyawali, C.P., Jenkins, A., Pandolfino, J., Polamraju, V., Wong, M.-W., Yadlapati, R. "Diagnostic Yield of Ambulatory Reflux Monitoring Systems for Evaluation of Chronic Laryngeal Symptoms." To appear in *American Journal of Gastroenterology*.
116. Vahedi, F., Low, E., **Kaizer, A.**, Fehmi, S.A., Hasan, A., Chang, M., Kwong, W., Krinsky, M., Anand, G., Greytak, M., Yadlapati, R. "Esophageal Anatomy and Physiology Vary Across Spastic and NonSpastic Phenotypes of Disorders of Esophagogastric Junction Outflow." To appear in *Neurogastroenterology and Motility*.
117. Pourzand, P., Moore, J., Metzger, A., Salverda, B., Suresh, M., Arango, S., Rosenhagen, H., **Kaizer, A.**, Duval, S., Debaty, G., Lurie, K. "Hemodynamics, Survival and Neurological Function With Early Versus Delayed Automated Head-up CPR in a Porcine Model of Prolonged Cardiac Arrest." To appear in *Resuscitation*.
118. Gunn-Sandell, L., Bedrick, E., Hutchins, J., Berg, A., **Kaizer, A.**[‡], Carlson, N.[‡] "A Practical Guide to Adopting Bayesian Analyses in Clinical Research." To appear in *Journal of Clinical and Translational Science*.
119. **Kaizer, A.**[‡], Winbo, A.[‡], Clur, S.-A., Etheridge, S., Ackerman, M., Horigome, H., Herberg, U., Dagradi, F., Spazzolini, C., Killen, S., Wacker-Gussmann, A., Wilde, A., Sinkovskaya, E., Abuhamad, A., Torchio, M., Ng, C.-A., Rydberg, A., Schwartz, P., Cuneo, B. "Effects of Cohort, Genotype, Variant, and Maternal β -Blocker Treatment on Foetal Heart Rate Predictors of Inherited Long Qt Syndrome." To appear in *Europace*.
120. Suresh, M., Arango, S., Moore, J., Salverda, B., Lick, M., Rojas-Salvador, C., Metzger, A., Debaty, G., **Kaizer, A.**, Lurie, K. "The Association of Regional Cerebral Oximetry and Neurologically Intact Survival in a Porcine Model of Cardiac Arrest." To appear in *Resuscitation Plus*.
121. Krause, A., Greytak, M., **Kaizer, A.**, Chan, W., Yadlapati, R. "High Diagnostic Yield of Abnormal Upper GI Endoscopy Findings in the Evaluation of Laryngopharyngeal Reflux." To appear in *Clinical Gastroenterology and Hepatology*.
122. Paez, R., Rowe, D., Deppen, S., Grogan, E., **Kaizer, A.**, Bornhop, D., Kussrow, A., Barón, A., Maldonado, F., Kammer, M. "Assessing the Clinical Utility of Biomarkers Using the Intervention Probability Curve (IPC)." To appear in *Cancer Biomarkers*.
123. Krause, A., **Kaizer, A.**, Carlson, D., Chan, W., Chen, C.-L., Gyawali, C.P., Jenkins, A., Pandolfino, J., Polamraju, V., Wong, M.-W., Greytak, M., Yadlapati, R. "Validated Clinical Score to Predict Gastroesophageal Reflux in Patients with Chronic Laryngeal Symptoms: COuGH RefluX." To appear in *Clinical Gastroenterology and Hepatology*.
124. Weber, N., Ogle, S., Cooper, E., **Kaizer, A.**, Kulungowski, A., Acker, S. "Low Risk Pneumatosis Intestinalis in the Pediatric Surgical Population." *Pediatric Surgery International*, **40**, 76, 2024.
125. Lanigan, M., Siers, D., Schramski, M., Shaffer, A., John, R., Knoper, R., Huddleston, S., Gunn-Sandell, L., **Kaizer, A.**, Perry, T. "The Adherence to an Intraoperative Blood Product Transfusion Algorithm Is Associated With Reduced Blood Product Transfusions in Cardiac Surgical Patients Undergoing Coronary Artery Bypass Grafts and Aortic and or Valve Replacement Surgery: A Single-Center, Observational Study." To appear in *Journal of Cardiothoracic and Vascular Anesthesia*.
126. Wild, J., Ginde, A., Lindsell, C., **Kaizer, A.** "Upstrapping to Determine Futility: Predicting Future Outcomes Nonparametrically from Past Data." To appear in *Trials*.

127. Simmons, C., Williams, J.D., Kheirandish, A., **Kaizer, A.**, Brainard, J. “A Randomized, Non-inferiority, Comparative Evaluation of Vascular Securement Devices: Cost and Clinical Analysis.” To appear in *Journal of the Association for Vascular Access*.

Other Publications

1. **Kaizer, A.**, Kittelson, J. Discussion on “Predictively consistent prior effective sample sizes,” by Beat Neuenschwander, Sebastian Weber, Heinz Schmidli, and Anthony O’Hagan. *Biometrics*, **76**, 588-590, 2020.
2. Banik, R., Karuppiah, S., **Kaizer, A.** “Statistical Significance Versus Clinical Relevance. Response to ‘Comparison of Incidence of Anaphylaxis Between Sugammadex and Neostigmine: A Retrospective Multicentre Observational Study.’” *British Journal of Anaesthesia*, **124**, 227-228, 2020.
3. Holmen, I., Beach, J., **Kaizer, A.**, Gumidyala, R. “The Association Between Preoperative Cannabis Use and Intraoperative Inhaled Anesthetic Consumption: A Retrospective Study.” *Journal of Clinical Anesthesia*, **67**, 109980, 2020.

Presentations

Invited Conference Presentations

1. “A Multi-Source Adaptive Platform Design for Emerging Infectious Diseases.” ENAR Spring Meetings, Atlanta, GA, March 2018.
2. “Innovative Statistical Approaches Toward Phase I/II Trial Designs.” NRG Oncology Semiannual Meeting, Phoenix, AZ, February 2019.
3. “A Multi-source Adaptive Platform Design for Testing Sequential Combinatorial Therapeutic Strategies.” Midwest Biopharmaceutical Statistics Workshop, Indianapolis, IN, May 2019.
4. “Adaptive Trial Designs: From Basics to Bayesian.” ACCORDS Emerging Research Designs Conference, Aurora, CO, June 2019.
5. “Novel Trial Designs: Interactive Session.” Association of Clinical and Translational Statisticians, Denver, CO, July 2019.
6. “Adaptive Randomization: How, When, and Why.” Adaptive Designs Workshop at Colorado State University, Fort Collins, CO, November 2019.
7. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability with Predictive Probability Monitoring.” International Indian Statistical Association 2021 Conference, Virtual, May 2021.
8. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability with Predictive Probability Monitoring.” Association of Clinical and Translational Statisticians, Virtual, August 2021.
9. “Statistical Design Considerations for Trials That Study Multiple Indications.” ASA Biopharmaceutical Section Statistics Workshop, Virtual, September 2021.
10. “Understanding Basket Trials from Bayesian and Frequentist Perspectives.” ENAR Spring Meeting, Houston, TX, March 2022.
11. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability with Predictive Probability Monitoring.” Institute of Mathematical Statistics New Researchers Conference, Fairfax, VA, August 2022.
12. “Academic Public Health Careers.” Colorado School of Public Health Research Exchange, Aurora, CO, September 2022.
13. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability with Predictive Probability Monitoring.” BAYES2022, Bethesda, MD, October 2022.
14. “A Sequential Multi-Source Adaptive Platform Design with Information Sharing and Future Directions for Oncology Platform Trials.” Stat4Onc, Portland, OR, May 2023.

15. "TREAT NOW: Statistical Challenges and Solutions for a Multi-Site Outpatient COVID-19 Randomized Trial." WNAR Spring Meeting, Anchorage, AK, June 2023.
16. "Basket Trial Designs in Translational Research." Association of Clinical and Translational Statisticians, Toronto, Canada, August 2023.
17. "The Use of Master Protocol Designs With Dose-Optimization Studies." Annual Conference of the International Society for Clinical Biostatistics, Milan, Italy, August 2023.
18. "Platform Trial Designs for Sequential Treatment Evaluation." Society of Decision Professionals (SDP) Annual Conference, Arlington, VA, April 2024.
19. "Increasing the Statistical Efficiency of Rare Disease Research Studies Through Master Protocol Designs." WNAR, Fort Collins, CO, June 2024.

Contributed Conference Presentations

1. "Technical Needs Assessment for Truman State University's ITS." Student Research Conference, Kirksville, MO, April 2010.
2. "Count Regression Modeling of *Amblyomma americanum* Larva." Student Research Conference, Kirksville, MO, April 2012.
3. "Exploring the Cross-Validation Estimate of the ROC Curve for a Combination of Biomarkers." University of Minnesota School of Public Health Student Research Day, Minneapolis, MN, April 2013.
4. "Identifying Optimal Approaches to Early Termination in Two-Stage Biomarker Validation Studies." Joint Statistical Meetings (JSM) 2016, Chicago, IL, August 2016.
5. "Dynamic Multi-Resolution Smoothing Using Multi-Source Exchangeability Models." Joint Statistical Meetings (JSM) 2017, Baltimore, MD, July 2017.
6. "A Fully Bayesian Mixture Model Approach for Identifying Non-Compliance in a Regulatory Tobacco Clinical Trial." Translational Science, Washington, DC, March 2019.
7. "Statistical Considerations for Trials that Study Subpopulation Heterogeneity." ENAR Spring Meeting, Philadelphia, PA, March 2019.
8. "Statistical Considerations for Trials that Study Subpopulation Heterogeneity." Joint Statistical Meetings (JSM), Denver, CO, July 2019.
9. "Basket Trial Design: Challenges and Potential Solutions." Virtual Joint Statistical Meetings (JSM), Philadelphia, PA, August 2020.
10. "Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring." Virtual International Biometric Conference (IBC) 2020, Seoul, South Korea, August 2020.
11. "A Sequential Basket Trial Design Based on Multi-Source Exchangeability with Predictive Probability Monitoring." Joint Statistical Meetings, Washington DC, August 2022.
12. "TREAT NOW: Statistical Challenges and Solutions for a Multi-Site Outpatient COVID-19 Randomized Trial." ENAR Spring Meeting, Nashville, TN, March 2023.

Departmental and Society Seminars

1. "Exploring Urban Size Theory Through an Empirical Lens." University of Minnesota Biostatistics Student Seminar Series, Minneapolis, Minnesota, October 2015.
2. "Using the National Health and Nutrition Examination Survey to Explore Celiac Disease and Gluten-Free Diet Prevalence in the United States." University of Minnesota Biostatistics Student Seminar Series, Minneapolis, Minnesota, December 2016.
3. "A Multi-Source Adaptive Platform Design for Emerging Infectious Diseases." Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, September 2017.

4. “Opinionated Analysis Development.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, March 2018.
5. “Predatory Journal Awareness.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, October 2018.
6. “Frequentist versus Bayesian Approaches to Statistics: A Debate.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, November 2018.
7. “Statistical Considerations and Challenges for Trials That Study Multiple Indications.” Department of Statistics, Colorado State University, September 2019.
8. “Predictive Modeling: From Simple to Complex and Transparent to Opaque, A Debate of Two Extremes.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, November 2019.
9. “A Multi-Source Adaptive Platform Design for Testing Sequential Combinatorial Therapeutic Strategies.” Strategies to Innovate Emergency Care Clinical Trials Network (SIREN) Neurological Emergencies Treatment Trials (NETT) Network, Online Webinar, April, 2020.
10. “COVID-19: Master Protocols and Challenge Trials.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, April 2020.
11. “Statistical Considerations for Trials That Study Multiple Indications.” Bayesian Scientific Working Group Lecture Series, December 2020.
12. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring.” Department of Biostatistics, Vanderbilt University, February 2021.
13. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring.” Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado, February 2021.
14. “A Sequential Basket Trial Design Based on Multi-Source Exchangeability With Predictive Probability Monitoring.” Department of Biostatistics, Yale University, November 2022.
15. “Statistical and Design Considerations for Basket Trials with Applications and Illustrations.” Texas Regional CTSA Consortium Quarterly Seminar Series, University of Texas Medical Branch, January 2023.
16. “Statistical and Design Considerations for Basket Trials with Applications and Illustrations.” University of Nebraska Medical Center Biostatistics Seminar Series, University of Nebraska Medical Center, February 2023.
17. “Statistical and Design Considerations for Basket Trials with Applications and Illustrations.” Department of Biostatistics and Data Science Seminar Series, Wake Forest University, January 2024.
18. “A Practical Guide to Adopting Bayesian Analyses in Clinical Research.” Stanford QSU Research Methods Seminar, Stanford University, February 2024.

Grant Support

Currently Funded Grants

1. **Title:** Statistical Methods and Adaptive Trial Designs for Cardiovascular Outcomes with Information Sharing
Source: NIH K01-HL151754
Role: Principal Investigator, 75% salary support.
Purpose: To develop statistical methods to facilitate information sharing and accompanying trial designs with application and training in cardiovascular outcomes.
Period: 4/1/2021 - 3/31/2026

2. **Title:** Statistical Methods and Adaptive Trial Designs for Cardiovascular Outcomes with Information Sharing Supplement
Source: Cystic Fibrosis Foundation KAIZER23A0-KB
Role: Principal Investigator, 0% salary support.
Purpose: To supplement an awarded K01 to expand methods and results into cystic fibrosis research.
Period: 9/1/2023 - 3/31/2026

3. **Title:** Clinical Utility of Biomarkers Driven Management of Indeterminate Pulmonary Nodules
Source: NIH R01-CA252964
Role: Co-Investigator, 3% salary support. (Multi-PI: Eric Grogan, MD, Anna Baron, PhD)
Purpose: To identify if a biomarker panel can be used to better treat patients who have indeterminate pulmonary nodules detected to identify if invasive procedures or treatment are needed to treat the lung cancer or to avoid them in the case of benign nodules.
Period: 5/1/2021 - 4/30/2027

4. **Title:** Colorado Clinical and Translational Sciences Institute
Source: NIH UM1-TR004399
Role: Co-Investigator, 5% salary support. (PI: Ronald Sokol, MD)
Purpose: To develop education programming and provide grant writing support in the Biostatistics, Epidemiology, and Research Design core and serve as the local biostatistician for the Trial Innovation Network.
Period: 9/15/2023 - 7/31/2030

5. **Title:** Improving Strategies for Cancer Reduction through Early-detection and ENGagement (I-SCREEN)
Source: NIH UG1-CA286941
Role: Co-Investigator, 10% salary support. (Multi-PI: Linda Cook, PhD, Debra Ritzwoller, PhD, Stacey Honda, MD, PhD)
Purpose: TThe goal of this Cancer Research Screening Network Hub is to reduce cancer-related mortality by rapidly investigating emerging, novel screening technologies in diverse study cohorts to ensure that efficacious new technologies have broad reach to decrease, and not widen, cancer-related health disparities.
Period: 2/1/2024 - 12/31/2027

6. **Title:** The Contributions of Age Related Changes in the Sound Localization Pathway to Central Hearing Loss
Source: NIH R01-DC017924-01A1
Role: Co-Investigator, 5% salary support. (Multi-PI: Daniel Tollin, PhD, Achim Klug, PhD, Melinda Anderson, PhD)
Purpose: The goal of this project is to examine age-related hearing loss in both humans and animal models to identify the role of the sound localization pathway, better diagnose central hearing loss, and suggest mechanisms for the development of future medical interventions.
Period: 7/1/2019 - 6/30/2024

Completed Grants

1. **Title:** Statistical Methods for Cancer Biomarkers
Source: NIH R01-CA129102
Role: Co-Investigator, 10% salary support. (Multi-PI: Debashis Ghosh, PhD and Jeremy Taylor, PhD)
Purpose: The goal of this project is to explore statistical methods for incorporating new biomarkers to existing risk prediction models in the context of head and neck cancer and prostate cancer.

Period: 9/1/2017 - 6/30/2019

2. **Title:** Colorado Clinical and Translational Sciences Institute

Source: NIH UL1-TR002535

Role: Co-Investigator, 10% salary support. (PI: Ronald Sokol, MD)

Purpose: To develop education programming and provide grant writing support in the Biostatistics, Epidemiology, and Research Design core and serve as the local biostatistician for the Trial Innovation Network.

Period: 5/1/2018 - 4/30/2024

Teaching

Course Instruction

at Truman State University

Teaching Assistant, Linear Regression/Time Series, Fall 2011

Teaching Assistant, Junior Interdisciplinary Seminar Course “Why You’re Wrong”, Fall 2011

Teaching Assistant, ANOVA and Experimental Design, Spring 2012

at University of Minnesota

Teaching Assistant, Fundamentals of Biostatistical Inference, Fall 2014

Teaching Assistant, Biostatistics Modeling and Methods, Spring 2015

at University of Colorado

Instructor, Bayesian Biostatistical Methods, Spring 2018

Instructor, Biostatistical Methods I, Fall 2018-Fall 2022

Instructor, Advanced Methods in the Design of Clinical Trials, Spring 2020

Instructor, Advanced Biostatistical Methods I, Fall 2023

Guest Lectures

Bayesian Methods, Division of Biostatistics and Informatics, University of Colorado, Spring 2018

Anesthesia Biostatistics Workshop, Department of Anesthesiology, University of Minnesota, Spring 2020

Short Course Instruction

at University of Colorado

Instructor and Creator, Fundamentals of Study Design, Spring 2019-Fall 2021

at Conferences

Instructor and Co-Creator, Bayesian Modeling in Oncology Trials, Stat4Onc, May 10, 2023, Portland, OR

Instructor and Creator, Adaptive and Bayesian Methods for Clinical Trial Design, WNAR, June 9, 2024, Fort Collins, CO

Advising

PhD Advising

at the University of Colorado

Wenru Zhou, “On the use of Interim Analysis for A/B testing and Information Sharing”, July 2023.

Jessica Wild, current.

Yuanqing Liu, current.

Yizhou Fei, current.

Shannon Murphy, current.

PhD Committees in non-Chair Role

at the University of Colorado

Junxiao Hu, Biostatistics, PhD, 2019.

Ilana Trumble, Biostatistics, PhD, 2022.

Laura Campos, Clinical Science, PhD, 2022.

Paula Langner, Biostatistics, PhD, 2022.

Ian LaCroix, Structural Biology and Biochemistry, PhD, current.

Starlynn Gornail, Community and Behavioral Health, DrPH, current.

Hannah Kisselburgh, Epidemiology, PhD, current.

Nathan Clendenen, Clinical Science, PhD, current.

PhD Comprehensive Exams in non-Chair Role

at the University of Colorado

Betzaida Maldonado, Human Medical Genetics & Genomics PhD, 2022.

Master's Advising

at the University of Colorado

Piper Williams, MS, 2019.

Luke Patten, MS, 2019.

Annika Hebbe, MS, 2020.

Samantha Roberts, MS, 2022.

Savannah Mierau, MPH, 2023.

Natalia Rahman, MS, 2023.

Morgan Macbeth, MS, 2024.

Callyn Rountree-Jablin, MS, current.

Cole Hoffman, MS, current.

Master's Committees

at the University of Colorado

Samantha Bothwell, MS, 2021.

Karen Kanaster, MS, 2021.

Colin Hensen, MS, 2022.

Professional Activities

Professional Memberships

American Statistical Association, 2013 - present

International Biometrics Society - Eastern North American Region (ENAR), 2014 - present

Society for Clinical Trials, 2017 - present

Colorado Clinical and Translational Sciences Institute, 2017 - present

Association for Clinical and Translational Science, 2019 - present

Association of Clinical and Translational Statisticians (ACTStat), 2019 - present

International Biometrics Society - Western North American Region (WNAR), 2019 - present

International Society of Clinical Biostatistics, 2023 - present

Service to Professional Societies

Steering Committee Co-Chair, ENAR Council for Emerging and New Statisticians, 2018 - 2021

Member, ACTStat Annual Meeting Planning Committee, 2018 - present

Member, Committee on Communications for the International Biometrics Society, 2020 - present

Member, Social Media and Educational Marketing Task Force for the Association for Clinical and Translational Science (ACTS), 2020 - 2024

Member, JSM Program Committee, 2023 - 2024

Referee for:

Annals of the American Thoracic Society

Biometrical Journal

Biometrics

Biostatistics

BMJ Open

Clinical Trials

Contemporary Clinical Trials

Electronic Journal of Statistics

Epidemiology

Future Oncology

JCO Clinical Cancer Informatics

JCO Precision Oncology

Journal of Cardiac Failure

Journal of Clinical and Translational Science

Journal of Cystic Fibrosis

Journal of Hospital Medicine

Journal of Pain Research

The New England Journal of Statistics in Data Science

Obesity Medicine

Pediatric Obesity

Pharmaceutical Statistics

Science Translational Medicine

Seminars in Cardiothoracic and Vascular Anesthesia

Stat

Statistical Methods in Medical Research

Statistics in Biopharmaceutical Research

Statistics in Medicine

Surgery for Obesity and Related Diseases

Therapeutic Innovation & Regulatory Science

Trials

Grant Reviewer:

Indiana CTSI, Design and Biostatistics Program Pilot Grant, May 2018
 Member, NIH NIGMS special emphasis panel (R34), November 2018
 Member, Cystic Fibrosis Foundation Clinical Research Committee, April 2019 - present
 Member, Cystic Fibrosis Foundation Infectious Disease Research Committee, October 2019 - present
 Reviewer, Medical Research Council (United Kingdom Research and Innovation), March 2020 - present
 Reviewer, German Research Foundation, March 2020
 Member, Patient-Centered Outcomes Research Institute (PCORI), January 2022 - present
 Reviewer, Institut National de la Santé et de la Recherche Médicale (Inserm; France), April 2023
 Member, Agency for Healthcare Research and Quality (P30) special emphasis panel, May 2023
 Member, Agency for Healthcare Research and Quality (U18) special emphasis panel, July 2024

Data Safety and Monitoring Board Service:

Chair, William Cornwell K-Award Research Studies
 Member, DSMB for Cystic Fibrosis Foundation trials
 Member, Rachel Graham Lucas-Thompson K01 Research Studies (CSU)
 Member, Raj Shah GI Multi-site Clinical Trial (CU)
 Member, NIAMS R21 Clinical Trial

Service

for the Department of Biostatistics and Informatics, University of Colorado
 Admissions Committee, 2017 - present
 Junior Faculty Mentoring Committee, 2017 - 2019
 Social Activities Committee, 2020 - present
 Master's Qualifying Exam Committee, 2023 - present

for the Center for Innovative Design and Analysis, University of Colorado
 Research Tools Committee, 2018 - 2020
 Social Activities Committee, 2018 - present
 Executive Committee, 2021 - present

for the Biostatistics, Epidemiology, & Research Design (BERD) Core of the Colorado Clinical and Translational Sciences Institute, University of Colorado
 Education Committee, 2018 - present

for the Colorado Clinical and Translational Sciences Institute, University of Colorado
 K-to-R Mock Study Section, 2020 - 2022
 Translational Methods Pilot Grant Study Section, 2020 - 2021

for the United States Government
 Pulmonary-Allergy Drugs Advisory Committee, Food and Drug Administration, 2022