# **CURRICULUM VITAE**

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# **PERSONAL**

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# **EDUCATION**

6/2013	Doctor of Philosophy (PhD) in Epidemiology University of California Los Angeles, Los Angeles, CA "Multiple Bias Modeling in a Multicenter Epidemiologic Study of Endometrial Cancer"
6/2010	Master of Public Health (MPH) in Epidemiology University of California Los Angeles, Los Angeles, CA "Shift Work and Cancer"
12/1999	Bachelor of Arts (BA) in Biology The University of North Carolina at Chapel Hill, Chapel Hill, NC Minor in Chemistry
6/1995	High School Diploma Myers Park High School, Charlotte, NC International Baccalaureate (IB) Program

# PROFESSIONAL EXPERIENCE

# **Primary Appointment**

2021 – Associate Professor of Epidemiology (with tenure, 4/1/2022), The University of North Carolina Gillings School of Global Public Health, Chapel Hill, NC

# **Current Additional Affiliations**

2023 –	Fellow, UNC Carolina Population Center, Chapel Hill, NC
2022 –	Research Fellow, UNC Center for Health Promotion and Disease Prevention, Chapel Hill, NC
2021 –	Full Member, UNC Lineberger Comprehensive Cancer Center, Chapel Hill, NC
2021 –	Core Investigator, California Teachers Study, City of Hope, Duarte, CA
2021 –	Adjunct Associate Professor of Epidemiology (non-salaried), San Diego State University School of Public Health, San Diego, CA

# Former Appointments and Affiliations

2020 – 2021	Associate Professor of Epidemiology (with tenure, 9/1/2020), San Diego State University School of Public Health, San Diego, CA
2017 – 2023	Adjunct Assistant Professor of Epidemiology (non-salaried), Herbert Wertheim School of Public Health and Human Longevity Science, University of California, San Diego, CA
2017	Visiting Lecturer (non-salaried), Epidemiology of Cancer Healthcare and Outcomes (ECHO) Research Group, Department of Behavioural Science and Health, University College London, England
2016 – 2023	Associate Member, Moores Cancer Center - Cancer Control Program, University of California San Diego, San Diego, CA
2015 – 2023	Member, Altman Clinical and Translational Research Institute, University of California San Diego, San Diego, CA
2015 – 2020	Assistant Professor of Epidemiology (tenure-track), San Diego State University School of Public Health, San Diego, CA
2015 – 2023	Consulting Investigator, Sutter Health Center for Health Systems Research, Palo Alto Medical Foundation, Palo Alto, CA
2014 - 2015	Assistant Research Epidemiologist, Palo Alto Medical Foundation Research Institute, Palo Alto, CA
2014 - 2015	Instructor (part-time), University of California Santa Cruz Silicon Valley Extension, Santa Clara, CA
2013 – 2014	Postdoctoral Fellow, Stanford University and Palo Alto Medical Foundation Research Institute (joint appointment), Palo Alto, CA
2011 – 2013	Predoctoral Fellow, Department of Epidemiology, University of California Los Angeles (UCLA) School of Public Health, Los Angeles, CA
2010	Visiting Scholar (non-salaried), Department of Epidemiology, Medical University of Vienna, Austria
2009 – 2011	Graduate Research Assistant, Department of Epidemiology, University of California Los Angeles (UCLA) School of Public Health, Los Angeles, CA
2006 - 2008	Clinical Data Management Consultant, San Francisco Bay Area, CA
2004 - 2006	Clinical Data Manager, Pfizer, Inc. San Diego, CA
2002 - 2004	Clinical Data Manager, Chugai Pharma USA, San Diego, CA
2001 - 2002	Clinical Data Coordinator, PAREXEL, Research Triangle Park, NC
2000	Clinical Data Assistant, Quintiles, Research Triangle Park, NC

# **HONORS**

2021 - 2023	Loan Repayment Program Award (2 <sup>nd</sup> renewal, \$15,000), National Institutes of Health
2018 - 2020	Loan Repayment Program Award (1st renewal, \$35,000), National Institutes of Health
2019	Travel Award (\$1,500), NCI Geographic Management of Cancer Health Disparities Program (GMaP)
2017 - 2018	Grants and Research Enterprise Writing (GREW) Fellowship (\$5,000), San Diego State University
2017	Travel Award (\$1,500), NCI Geographic Management of Cancer Health Disparities Program (GMaP)
2016 - 2019	KL2 Career Development Award, UCSD Altman Clinical and Translational Research Institute
2016 - 2018	Loan Repayment Program Award (\$35,000), National Institutes of Health
2013 - 2014	AcademyHealth Delivery Systems Science Fellowship
2013	Dean's Outstanding Graduating Student Award, UCLA Fielding School of Public Health

2013	Delta Omega Honorary Society Award for Academic Excellence, Iota Chapter
2013	NCI Predoctoral Fellowship in Cancer Epidemiology, University of California Los Angeles
2009 - 2010	Academic Merit Award (\$10,000), Department of Epidemiology, University of California Los Angeles

## **MEMBERSHIPS**

2020 -	American Society of Preventive Oncology
2017 –	American Association for Cancer Research
2014 - 2021	Health Care Systems Research Network
2012 –	Society for Epidemiologic Research
2012 –	AcademyHealth

## **BIBLIOGRAPHY**

# **Book Chapters**

- 1. **Thompson CA**, Ilango S\*, Gibbons J, Nara A, Tsou MH. (2019). "A Systematic Review of Geospatial Approaches to Breast Cancer Epidemiology" (pages 141-160). *Geospatial Approaches to Energy Balance and Breast Cancer (Volume 15)*. Springer International Publishing: Switzerland.
- 2. Gomez SL, McKinley MA, **Thompson CA**, Leung R, Cheng I, Noone AM, Palaniappan L, Cullen M, Clarke CA, Keegan THM, and Glaser SL. (2016). "Cancer incidence and mortality among Filipinos in the United States and the Philippines: Patterns and Trends" (pages 47-49). *Cancer Epidemiology among Asian Americans*. Springer International Publishing: Switzerland.

## **Journal Articles**

## Published or In Press

- 1. Sheridan P\*, Chen C, **Thompson CA**, Benmarhnia T. Immortal time bias with time-varying exposures in environmental epidemiology: a case study in lung cancer survival. *American Journal Epidemiology*. 2023 Jul 3;kwad135. Doi:10.1093/aje/kwad135. Online ahead of print. PMID: 37400995.
- 2. Prado MG, Kessler LG, Au MA, Burkhardt HA, Suchsland MZ, Kowalski L, Stephens KA, Yetisgen M, Walter FM, Neal RD, Lybarger K, **Thompson CA**, Al Achkar M, Sarma EA, Turner G, Farjah F, Thompson MJ. Symptoms and signs of lung cancer prior to diagnosis: case-control study using electronic health records from ambulatory care within a large US-based tertiary care centre. *BMJ Open*. 2023 Apr 20; 13(4):e068832. PMID: 37080616; PMCID: PMC10124310; DOI: 10.1136/bmjopen-2022-068832.
- 3. Weiskopf NG, Dorr DA, Jackson C, Lehmann HP, **Thompson CA**. Healthcare utilization is a collider: an introduction to collider bias in EHR data reuse. *J Am Med Inform Assoc*. 2023 Apr 19; 30(5):971-977. PMID: 36752649; PMCID: PMC10114115; DOI: 10.1093/jamia/ocad013.

<sup>\*</sup>Denotes student/trainee author for whom Dr. Thompson was the primary mentor

4. **Thompson CA**, Sturmer T. Putting GLP-1 Ras and Thyroid Cancer in Context: Additional Evidence and Remaining Doubts. *Diabetes Care*. 2023 Feb 1;46(2):249-251. PMID: 36525594; PMCID: PMC9887624; DOI: 10.2337/dci22-0052.

# 2022

- Suchsland MZ, Kowalski L, Burkhardt H, Prado MG, Kessler LG, Yetisgen M, Au MA, Stephens KA, Farjah F, Schleyer AM, Walter FM, Neal RD, Lybarger K, Thompson CA, Al Achkar M, Sarma EA, Turner G, Thompson M. How Timely is Diagnosis of Lung Cancer? Cohort Study of Individuals with Lung Cancer Presenting in Ambulatory Care in the United States. *Cancers (Basel)*. 2022 Nov 23;14(23):5756. PMID: 36497238; PMCID: PMC9740624; DOI: 10.3390/cancers14235756.
- 6. Tripathi O\*, Posis AIB, Thompson CA, Ferris J, Anuskiewicz B, Nguyen B, Liles S, Berardi V, Zhu S, Winstock A, Bellettiere J. (2022). In-home cannabis smoking among a cannabis-using convenience sample from the Global Drug Survey with weighted estimates for U.S. respondents. *Cannabis and Cannabinoid Research* 2022 Nov 1. Online ahead of print. PMID: 36318789; DOI: 10.1089/can.2022.0139.
- 7. Obrochta CA\*, Parada H, Murphy JD, Nara A, Trinidad D, Araneta MR, **Thompson CA**. Travel Time to Treatment Facilities and Racial/Ethnic and Socioeconomic Disparities in Treatment for Early Stage Lung Cancer in California. *PLoS ONE* 2022 Oct 5; 17(10):e0272076. PMID: 36197902; PMCID: PMC9534452; DOI: 10.1371/journal.pone.0272076.
- Nelson TJ, Thompson CA, Zou J, Kumar A, Sangchan P, Williamson CW, Vitzthum LK, Sharabi AB, Murphy JD, Fakhry CA, Mell LK. (2022). Validation of NRG Oncology's Prognostic Nomograms for Oropharyngeal Cancer in the Veterans Affairs Database. *Cancer*. 2022 May 15;128(10):1948-1957. PMID: 35194791; DOI: 10.1002/cncr.34141.
- 9. Williamson CW, Nelson T, **Thompson CA**, Vitzthum LK, Zakeri K, Bryant AK, Sharabi AB, Zou J, Mell L. Bias Reduction through Analysis of Competing Events (BRACE) Method to Address Residual Confounding in Observational Data. *Clinical Cancer Research*. 2022 May 2;28(9):1832-1840. PMID: 35140122; DOI: 10.1158/1078-0432.CCR-21-2468.
- Sangaramoorthy M, Yang J, Guan A, DeRouen MC, Tana MM, Somsouk M, Thompson CA, Gibbons J, Ho C, Chu JN, Cheng I, Gomez SL, Shariff-Marco S. (2022). Asian American/Pacific Islander and Hispanic Ethnic Enclaves, Neighborhood Socioeconomic Status, and Hepatocellular Carcinoma Incidence in California: An Update. *Cancer Epidemiology, Biomarkers and Prevention*, 2022 Feb;31(2):382-392. PMID: 34853019. PMCID: PMC8825691. DOI: 10.1158/1055-9965.EPI-21-1035.
- 11. Tripathi O\*, He Y\*, Han B\*, Paraga DG\*, Sharp NS\*, Offor P\*, Palaniappan L, Srinivasan M, **Thompson CA.**Cancer Mortality in US-born vs. Foreign-born Asian American Groups (2008-2017). *Cancer Epidemiology Biomarkers and Prevention*; 2022 Jan;31(1):58-65. PMID: 34697057. PMCID: PMC8767961. DOI: 10.1158/1055-9965.EPI-21-0359.
- 12. **Thompson CA**, Begi T\*, Parada H. (2022). Alarming Recent Rises in Early Onset Colorectal Cancer. 2022 Jan 15;128(2):230-233. PMID: 34529834. PMCID: PMC8931859. DOI:10.1002/cncr.33919.
- 13. DeRouen MC, Canchola AJ, **Thompson CA**, Jin A, Nie S, Wong C, Lichtensztajn D, Allen L, Patel MI, Daide Y, Luft H, Shariff-Marco S, Reynolds P, Wakelee HA, Liang SY, Waitzfelder BE, Cheng I, Gomez SL. Incidence of Never Smoking Lung Cancer among Asian American, Native Hawaiian, and Pacific Islander Females. *JNCI: Journal of the National Cancer Institute*; 2022 Jan 11;114(1):78-86. PMID: 34345919. PMCID: PMC8755498. DOI: 10.1093/jnci/djab143.

- 14. Parada H, Vu A\*, Pinheiro PS, **Thompson CA.** Comparing Age at Cancer Diagnosis between Hispanics and Non-Hispanic Whites in the United States. *Cancer Epidemiology Biomarkers and Prevention*; 2021 Oct;30(10):1904-1912PMID: 34321282. PMCID: PMC8492520. DOI: 10.1158/1055-9965.EPI-21-0389.
- 15. Obrochta CA\*, Murphy J, Tsou MH, **Thompson CA.** Disentangling Racial, Ethnic, and Socioeconomic Disparities in Treatment for Colorectal Cancer. *Cancer Epidemiology, Biomarkers, and Prevention;* 2021 Aug;30(8):1546-1553. PMID: 34108139; PMCID: PMC8338765; DOI: 10.1158/1055-9965.EPI-20-1728.

- 16. DeRouen MC, Thompson CA, Canchola AJ, Jin A, Nie S, Wong C, Jain J, Lichtensztajn D, Li Y, Allen L, Patel MI, Daide Y, Luft H, Shariff-Marco S, Reynolds P, Wakelee HA, Liang SY, Waitzfelder BE, Cheng I, Gomez SL. Integrating electronic health record, cancer registry, and geospatial data to study lung cancer in Asian American, Native Hawaiian and Pacific Islander ethnic groups. *Cancer Epidemiology, Biomarkers, and Prevention;* 2021 Aug;30(8):1506-1516. PMID: 34001502. PMCID: PMC8530225. DOI: 10.1158/1055-9965.EPI-21-0019.
- 17. Medina HM, Callahan KE, Morris CR, **Thompson CA**, Siweya A, and Pinheiro PS. Cancer Mortality Disparities among Asian American and Native Hawaiian/Pacific Islander Populations in California'. *Cancer Epidemiology Biomarkers and Prevention*, 2021 Jul;30(7):1387-1396. PMID: 33879454; PMCID: PMC8254771; DOI: 10.1158/1055-9965.EPI-20-1528.
- 18. Pettit N, Al-Hader A, **Thompson CA**. Emergency Department Associated Lung Cancer Diagnosis: Case Series Demonstrating Poor Outcomes and Opportunities to Improve Cancer Care. *Current Problems in Cancer: Case Reports* (3):100059.

- Cavanaugh A, Raugh MJ, Thompson CA, Alcaraz J, Mihalko WM, Bird CE, Corbie-Smith G, Rosal MC, Li W, Shadyab AH, Gilmer T, LaCroix A. Racial and ethnic disparities in physical function before and after total knee arthroplasty. *JAMA Network Open*. 2020 May 1;3(5):e204937. PMID: 32412635; PMCID: PMC7229524; DOI:10.1001/jamanetworkopen.2020.4937.
- 20. **Thompson CA**, Jin A, Luft HS, Liang SY, Schumacher B\*, Lichtensztajn D, Gomez SL. Population-based registry linkages to improve the validity of electronic health record-based cancer research. *Cancer Epidemiology Biomarkers and Prevention*; 2020 Apr;29(4),796-806. PMID: 32066621; PMCID: PMC8208472; DOI: 10.1158/1055-9965.EPI-19-0882.
- 21. Cavanaugh A, Raugh MJ, **Thompson CA**, Alcaraz J, Bird CE, Gilmer T, LaCroix AZ. Rehabilitation after Total Knee Arthroplasty: Do Racial Disparities Exist? *The Journal of Arthroplasty*. 2020 Mar;35(3):683-689. PMID: 31801659; PMCID: PMC7032536; DOI: 10.1016/j.arth.2019.10.048.
- 22. Sangaramoorthy M, Yang J, DeRouen M, Ho C, Somsouk M, Tana M, **Thompson CA**, Gibbons J, Gomez SL, Shariff-Marco S. Disparities in Liver Cancer Incidence in California: An Update. *Cancer Epidemiology, Biomarkers and Prevention*. 2020 Jan; 29(1):79–87. PMID: 31719066; PMCID: PMC6986424; DOI: 10.1158/1055-9965.EPI-19-0560.

# 2019

- 23. Cavanaugh A, Rauh MJ, **Thompson CA**, Alcaraz J, Mihalko WM, Bird CE, Eaton CB, Rosal M, Li W, Shadyab A, Gilmer T, LaCroix AZ. Racial and Ethnic Disparities in Utilization of Total Knee Arthroplasty among Older Women. *Osteoarthritis and Cartilage* 2019 Dec;27(12):1746-1754. PMID: 31404657; PMCID: PMC6875623; DOI: 10.1016/j.joca.2019.07.015.
- 24. Zamora S\*, Pinheiro PS, Gomez SL, Hastings KG, Palaniappan LP, Hu J, **Thompson CA.** Disaggregating Hispanic American Cancer Mortality Burden by Detailed Ethnicity. *Cancer Epidemiology Biomarkers and Prevention*. 2019 Aug;28(8):1353-1363. PMID: 31147314; PMCID: PMC6771432; DOI: 10.1158/1055-9965.EPI-18-0872.
- 25. Gibbons J, Malouf R, Spitzberg B, Martinez L, Appleyard B, **Thompson C**, Nara A, Tsou MH. Twitter-based measures of neighborhood sentiment as predictors of residential population health. *PLoS One*. 2019 Jul 11;14(7): e0219550. PMID: 31295294; PMCID: PMC6622529; DOI: 10.1371/journal.pone.0219550.

- 26. Nelson SH, Nataranjan L, Patterson R, Hartman SJ, **Thompson CA**, Godbole SV, Johnson E, Marinac CR, Kerr J. Physical Activity Change in an RCT: Comparison of Measurement Methods. *American Journal of Health Behavior*. 2019 May 1;43(3):543-555. PMID: 31046885; PMCID: PMC6812571; DOI: 10.5993/AJHB.43.3.9.
- 27. Lam S, Sivitz A, Kiyetta A, Doniger S, Tessaro M, Rabiner J, Arroyo A, Castillo E, **Thompson CA**, Yang M, Mistry R. Comparative Effectiveness of Emergency Ultrasound Guided Management of Pediatric Skin and Soft Tissue Infections. *Journal of Emergency Medicine*. 2018 Nov;55(5):693-701. PMID: 30170835; PMCID: PMC6369916; DOI: 10.1016/j.jemermed.2018.07.010.

- 28. Thomas I, **Thompson CA**, Yang M, Allison M, Forbang N, Micos E, McClelland R, Budoff M, Criqui M. Thoracic Aorta Calcification and Non-Cardiovascular Disease Related Mortality: The Multi-Ethnic Study of Atherosclerosis. *Arteriosclerosis, Thrombosis and Vascular Biology.* 2018 Aug;38(8):1926-1932. PMID: 29954753; PMCID: PMC6202121; DOI: 10.1161/ATVBAHA.118.310850.
- 29. Bandoli G, Palmsten K, Chambers CD, Jelliffe-Pawlowski LL, Baer RJ, **Thompson CA**. Revisiting the Table 2 Fallacy: A Motivating Example Examining Preeclampsia and Pre-term Birth. *Paediatric and Perinatal Epidemiology*. 2018 Jul;32(4):390-397. PMID: 29782045; PMCID: PMC6103824; DOI: 10.1111/ppe.12474.
- 30. Afghahi A, Purington N, Han SS, Desai M, Pierson E, Mather MB, Seto T, **Thompson CA**, Rigdon J, Telli ML, Badve SS, Curtis CN, West RB, Horst K, Gomez SL, Ford JM, Sledge GW, Kurian AW. Higher Peripheral Blood Lymphocyte Counts Predict Improved Survival from Early-Stage Triple-Negative Breast Cancer. *Clinical Cancer Research*. 2018 Jun 15;24(12):2851-2858. PMID: 29581131; PMCID: PMC6366842; DOI: 10.1158/1078-0432.CCR-17-1323.
- 31. **Thompson CA,** Boothroyd DB, Hastings KG, Cullen MR, Palaniappan LP, Rehkopf DH. A multiple imputation "forward bridging" approach to address changes in Asian race classification on the U.S. death certificate. *American Journal of Epidemiology*. 2018 Feb 1;187(2):347-357. PMID: 29401361; PMCID: PMC5860289; DOI: 10.1093/aje/kwx215.
- 32. Lesser LI, **Thompson CA**, and Luft HS. Association between Monetary Deposits and Weight Loss in Online Commitment Contracts. *American Journal of Health Promotion*. Jan;32(1):198-204. PMID: 27502832; PMCID: PMC5316505; DOI: 10.1177/0890117116661157.

33. Low YS, Daugherty AC, Schroeder EA, Chen W, Seto T, Weber S, Lim M, Hastie T, Mathur M, Desai M, Farrington C, Radin AA, Sirota M, Kenkare P, **Thompson CA**, Yu P, Gomez SL, Sledge GW, Kurian AW, and Shah NH. Synergistic drug combinations from electronic health records and gene expression. *Journal of the American Medical Informatics Association*. 2017 May 1;24(3):565-576. PMID: 27940607; PMCID: PMC6080645; DOI: 10.1093/jamia/ocw161.

## 2016

- 34. **Thompson CA**, Gomez SL, Hastings KG, Kapphahn K, Yu P, Shariff-Marco S, Bhatt HA, Wakelee HA, Patel MI, Cullen MR, Palaniappan LP. The Burden of Cancer in Asian Americans: A Report of National Mortality Trends by Asian Ethnicity. *Cancer Epidemiology, Biomarkers, and Prevention*. 2016 Oct;25(10):1371-1382. PMID: 27694108; PMCID: PMC5218595; DOI: 10.1158/1055-9965.EPI-16-0167.
- 35. Afghahi A, Mathur M, **Thompson CA**, Mitani A, Rigdon J, Desai M, Yu P, De Bruin MA, Seto T, Olson C, Kenkare P, Gomez SL, Das AK, Luft HS, Sledge GW, Sing AP, Kurian AW. Use of Gene Expression Profiling and Chemotherapy in Early-Stage Breast Cancer: A Study of Linked Electronic Medical Records, Cancer Registry Data, and Genomic Data Across Two Health Care Systems. *Journal of Oncology Practice*. Jun;12(6):e697-709. PMID: 27221993; PMCID: PMC4957259; DOI: 10.1200/JOP.2015.009803.

- 36. Suñol R, Wagner C, Arah OA, Kristensen S, Pfaff H, Klazinga N, **Thompson CA**, Wang A, DerSarkissian M, Bartels P, Michel P, Groene O; DUQuE Project Consortium. Implementation of Departmental Quality Strategies Is Positively Associated with Clinical Practice: Results of a Multicenter Study in 73 Hospitals in 7 European Countries. *PLOS One*. 2015 Nov 20;10(11):e0141157. PMID: 26588842; PMCID: PMC4654625; DOI: 10.1371/journal.pone.0141157.
- 37. Kristensen S, Hammer A, Bartels P, Suñol R, Groene O, **Thompson CA**, Arah OA, Kutaj-Wasikowska H, Michel P, Wagner C; DUQuE Project Consortium. Quality management and perceptions of teamwork and safety climate in European hospitals. *International Journal for Quality in Health Care*. 2015 Dec;27(6):499-506. PMID: 26443813; DOI: 10.1093/intqhc/mzv070.
- 38. Chan JK, Gardner AB, **Thompson CA**, Kapp DS. The use of clinical characteristics to help prevent morcellation of leiomyosarcoma: An analysis of 491 cases. *American Journal of Obstetrics and Gynecology*. 2015 Dec;213(6):873-4. PMID: 26226552; DOI: 10.1016/j.ajog.2015.07.040.

- 39. Chan JK, Gardner AB, Taylor K, **Thompson CA**, Blansit K, Yu X, and Kapp DS. Robotic versus laparoscopic versus open surgery in morbidly obese endometrial cancer patients a comparative analysis of total charges and complication rates. *Gynecologic Oncology*. 2015 Nov;139(2):300-5. PMID: 26363212; DOI: 10.1016/j.ygyno.2015.09.006.
- 40. Groene O, Arah OA, Klazinga N, Wagner C, Bartels PD, Kristensen S, Saillour F, Thompson A, **CA Thompson**, Pfaff H, DerSarkissian M, Suñol R; DUQuE Project Consortium. Patient Experience Shows Little Relationship with Hospital Quality Management Strategies. *PLOS One*. 2015 Jul 7;10(7):e0131805. PMID: 26151864; PMCID: PMC4494712; DOI: 10.1371/journal.pone.0131805.
- 41. Chan JK, Gardner AB, Taylor K, Blansit K, **Thompson CA**, Brooks R, Yu X, and Kapp DS. The centralization of robotic surgery in high-volume centers for endometrial cancer patients--a study of 6560 cases in the U.S. *Gynecologic Oncology*. 2015 Jul;138(1):128-32. PMID: 25933680; DOI: 10.1016/j.gyno.2015.04.031.
- 42. Hastings KG, Jose PO, Kapphahn KI, Frank ATH, Goldstein BA, **Thompson CA**, Eggleston K, Cullen MR, and Palaniappan LP. Leading Causes of Death among Asian American Subgroups (2003-2011). *PLOS One*. 2015 Apr 27;10(4):e0124341. PMID: 25915940; PMCID: PMC4411112; DOI: 10.1371/journal.pone.0124341.
- 43. **Thompson CA**, Kurian AW, and Luft HS. Linking electronic health records to better understand breast cancer patient pathways within and between two health systems. *EGEMS (Wash DC)*. 2015 Mar 4;3(1):1127. PMID: 25992389; PMCID: PMC4435001; DOI: 10.13063/2327-9214.1127.

- 44. **Thompson CA**, Gomez SL, Chan A, Chan JK, McClellan SR, Chung S, Olson C, Nimbal V, and Palaniappan LP. Patient and provider characteristics associated with colorectal, breast, and cervical cancer screening among Asian Americans. *Cancer Epidemiology, Biomarkers and Prevention*. 2014 Nov;23(11):2208-17. PMID: 25368396; PMCID: PMC4221799; DOI: 10.1158/1055-9965.EPI-14-0487.
- 45. **Thompson CA**, Arah OA. Selection bias modeling using observed data augmented with imputed record-level probabilities. *Annals of Epidemiology*. 2014 Oct;24(10):747-53. PMID: 25175700; PMCID: PMC4259547; DOI: 10.1016/j.annepidem.2014.07.014.
- 46. Lombarts K, Plochg T, **Thompson CA**, Arah OA; DUQuE Consortium. Measuring professionalism in medicine and nursing: results of a European survey. *PLOS One*. 2014 May 21;9(5):e97069. PMID: 24849320; PMCID: PMC4029578; DOI: 10.1371/journal.pone.0097069.
- 47. Botje D, Klazinga N, Suñol R, Groene O, Pfaff H, Mannion R, Depaigne-Loth A, Arah OA, DerSarkissian M, Wagner C; DUQuE Project Consortium (including **Thompson CA**). Is having quality as an item on the executive board agenda associated with the implementation of quality management systems in European hospitals: a quantitative analysis. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:92-9. PMID: 24550260; PMCID: PMC4001687; DOI: 10.1093/intqhc/mzu017.
- 48. Shaw CD, Groene O, Botje D, Suñol R, Kutryba B, Klazinga N, Bruneau C, Hammer A, Wang A, Arah OA, Wagner C; DUQuE Project Consortium (including **Thompson CA**). The effect of certification and accreditation on quality management in 4 clinical services in 73 European hospitals. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:100-7. PMID: 24615598; PMCID: PMC4001697; DOI: 10.1093/intqhc/mzu023.
- 49. Wagner C, Mannion R, Hammer A, Groene O, Arah OA, DerSarkissian M, Suñol R; DUQuE Project Consortium (including **Thompson CA**). The associations between organizational culture, organizational structure and quality management in European hospitals. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:74-80. PMID: 24671119; PMCID: PMC4001695; DOI: 10.1093/intqhc/mzu027.
- 50. Secanell M, Groene O, Arah OA, Lopez MA, Kutryba B, Pfaff H, Klazinga N, Wagner C, Kristensen S, Bartels P, Garel P, Bruneau C, Escoval A, França M, Mora N, Suñol R; DUQuE Project Consortium (including **Thompson CA**). Deepening our understanding of quality improvement in Europe (DUQuE): overview of a study of hospital quality management in seven countries. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:5-15. PMID: 24671120; PMCID: PMC4001699; DOI: 10.1093/intqhc/muz025.
- 51. Wagner C, Groene O, DerSarkissian M, **Thompson CA**, Klazinga NS, Arah OA, Suñol R; DUQuE Project Consortium. The use of on-site visits to assess compliance and implementation of quality management at hospital level. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:27-35. PMID: 24671121; PMCID: PMC4001692; DOI: 10.1093/intqhc/mzu026.

- 52. Wagner C, **Thompson CA**, Arah OA, Groene O, Klazinga N, DerSarkissian M, Suñol R; DUQuE Project Consortium. A checklist for patient safety rounds at the care pathway level. *International Journal for Quality in Health Care*. Apr;26 Suppl 1:36-46. PMID: 24615594; PMCID: PMC4001694; DOI: 10.1093/intqhc/mzu019.
- 53. Plochg T, Arah OA, Botje D, **Thompson CA**, Klazinga NS, Wagner C, Mannion R, Lombarts K; DUQuE Project Consortium. Measuring clinical management by physicians and nurses in European hospitals: development and validation of two scales. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:56-65. PMID: 24615595; PMCID: PMC4001689; DOI: 10.1093/intqhc/mzu014.
- 54. Wagner C, Groene O, **Thompson CA**, DerSarkissian M, Klazinga NS, Arah OA, Suñol R; DUQuE Project Consortium. DUQuE quality management measures: associations between quality management at hospital and pathway levels. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:66-73. PMID: 24615597; PMCID: PMC4001696; DOI: 10.1093/intqhc/mzu020.
- 55. Suñol R, Wagner C, Arah OA, Shaw CD, Kristensen S, **Thompson CA**, DerSarkissian M, Bartels PD, Pfaff H, Secanell M, Mora N, Vlcek F, Kutaj-Wasikowska H, Kutryba B, Michel P, Groene O; DUQuE Project Consortium. Evidence-based organization and patient safety strategies in European hospitals. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:47-55. PMID: 24578501; PMCID: PMC4001691; DOI: 10.1093/intqhc/mzu016.
- 56. Groene O, Suñol R, Klazinga N, Wang A, DerSarkissian M, **Thompson CA**, Thompson A, Arah OA; DUQuE Project Consortium. Involvement of patients or their representatives in quality management functions in EU hospitals: implementation and impact on patient-centered care strategies. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:81-91. PMID: 24615596; PMCID: PMC4001693; DOI: 10.1093/intqhc/mzu022.
- 57. Groene O, Kristensen S, Arah OA, **Thompson CA**, Bartels P, Suñol R, Klazinga N; DUQuE Project Consortium. Feasibility of using administrative data to compare hospital performance in the EU. *International Journal for Quality in Health Care*. 2014 Apr;26 Suppl 1:108-15. PMID: 24554645; PMCID: PMC4001688; DOI: 10.1093/intqhc/mzu015.
- 58. Wagner C, Groene O, **Thompson CA**, Klazinga N, DerSarkissian M, Arah OA, Suñol R; DUQuE Project Consortium. Development and validation of an index to assess hospital quality management systems. *International Journal for Quality in Health Care*. Apr;26 Suppl 1:16-26. PMID: 24618212; PMCID: PMC4001698; DOI: 10.1093/intqhc/mzu021.
- 59. Groene O, Suñol R; DUQuE Project Consortium (including **Thompson CA**). The investigators reflect: what we have learned from the Deepening our Understanding of Quality Improvement in Europe (DUQuE) study. *International Journal for Quality in Health Care*. Apr;26 Suppl 1:2-4. PMID: 24643959; PMCID: PMC4001690; DOI: 10.1093/intqhc/mzu024.

- 60. Hammer A, Arah OA, DerSarkissian M, **Thompson CA**, Mannion R, Wagner C, Ommen O, Suñol R, Pfaff H; DUQuE Project Consortium. The relationship between social capital and quality management systems in European hospitals: a quantitative study. *PLOS One*. 2013 Dec 31;8(12):e85662. PMID: 24392027; PMCID: PMC3877377; DOI: 10.1371/journal.pone.0085662.
- 61. DerSarkissian M, **Thompson CA**, and Arah OA. Time series analysis of maternal mortality in Africa from 1990 to 2005. *Journal of Epidemiology and Community Health*. 2013 Dec 1;67(12):992-8. PMID: 23851148; PMCID: PMC4689199; DOI: 10.1136/jech-2013-202565.
- 62. van der Kooi, ALF, Stronks K, **Thompson CA**, DerSarkissian M, and Arah OA. The modifying influence of country development on the effect of individual educational attainment on self-rated health. *American Journal of Public Health*. Nov;103(11):e49-54. PMID: 24028233; PMCID: PMC3828725; DOI: 10.2105/AJPH.2013.301593.
- 63. **Thompson CA**, Zhang ZF, and Arah OA. Competing risk bias to explain the inverse relationship between smoking and malignant melanoma. *European Journal of Epidemiology*. 2013 Jul;28(7):557-67. PMID: 23700026; PMCID: PMC3864891; DOI: 10.1007/s10654-013-9812-0.

# 2012

64. **Thompson CA**, Waldhör T, Schernhammer ES, Hackl M, Vutuc C, and Haidinger G. Smoking and lung cancer: current trends in Austria. *Wiener klinsche Wochenschrift*. 2012 Aug;124(15-16):493-9. PMID: 22815002; PMCID: PMC3782091; DOI: 10.1007/s00508-012-0207-0.

65. Schernhammer ES and **Thompson CA**. Light at night and health: the perils of rotating shift work. *Occupational and Environmental Medicine*. 2011 May;68(5):310-1. PMID: 20921271; PMCID: PMC8931862; DOI: 10.1136/oem.2010.058222.

#### **Published Abstracts**

- DeRouen MC, Canchola AJ, Thompson CA, Jin A, Nie S, Wong C, Lichtensztajin D, Allen L, Patel MI, Daida YG, Luft HS, Shariff-Marco S, Reynolds P, Wakelee HA, Liang SY, Waitzfelder BE, Cheng I, Gomez SL. (2022). Applying a data integrative and convergence epidemiology approach to study multilevel risk factors for cancer in distinct AANHPI populations. *Cancer Epidemiology, Biomarkers, and Prevention.* 31 (1\_Supplement): IA-21.
- 2. Obrochta CA\*, Gibbons J, **Thompson CA**. (2020). Neighborhood disparities in timeliness of treatment for early stage lung cancer patients. *Cancer Epidemiology, Biomarkers, and Prevention*. Sep; 29(12 Suppl): PO164.
- 3. Begi T\*, Tripathi O\*, Offor P\*, **Thompson CA**. (2020). National trends in younger onset obesity-related cancer incidence. *Cancer Epidemiology, Biomarkers, and Prevention*. Sep; 29(12 Suppl): PO175.
- 4. Offor P\*, Obrochta C\*, Schumacher B\*, **Thompson CA**. (2020). Trends in stage at diagnosis for lung cancer in the U.S., 2009-2016. Cancer Epidemiology, Biomarkers, and Prevention. Sep; 29(12 Suppl): PO199.
- 5. **Thompson CA**. (2020). Linking electronic health records with cancer registry data for epidemiology and health services research: Challenges and opportunities. *Cancer Epidemiology, Biomarkers, and Prevention*. Sep; 29(9 Suppl): PR08.
- 6. **Thompson CA**, Tsou MH. (2020). Improving researcher accessibility to publicly available data through creative integration, geospatial visualization, and open data portals. *Cancer Epidemiology, Biomarkers, and Prevention*. Sep; 29(9 Suppl):IA08.
- 7. DeRouen MC, **Thompson CA**, Canchola AJ, Jin A, Nie S, Jain J, Shariff-Marco S, Lichetensztajn DY, Daida Y, Wong C, Li Y, Patel MI, Wakelee HA, Liang SY, Waitzfelder BE, Cheng I, Gomez SL. (2020). Lung cancer incidence and risk factors in never-smoking Asian American, Native Hawaiian, and Pacific Islander women: Development of a multilevel dataset of electronic health record, cancer registry, and environmental data. *Cancer Epidemiology Biomarkers and Prevention*. Jun; 29(6 Suppl 2):PR07.
- 8. Obrochta CA, Nara A, Murphy J, Thompson CA. (2020). Sociodemographic and geographic disparities in treatment for early-stage non-small cell lung cancer (NSCLC) patients in California. *Cancer Epidemiology Biomarkers and Prevention*. Jun; 29(6 Suppl\_2):D077.
- 9. Sheridan P\*, Lyratzopoulos G, Murphy JD, **Thompson CA**. (2019). Emergency department-mediated cancer diagnosis among older adults in the United States. *Journal of Clinical Oncology*. Sep;37(27 Suppl):139.
- 10. Obrochta C\*, Murphy JD, Nara A, **Thompson CA**. (2019). Disparities in receipt of guideline-concordant treatment for early stage non-small cell lung cancer patients in California. *Journal of Clinical Oncology*. Sep;37(27 Suppl):160.
- 11. San Miguel Y, Tao L, Gomez SL, Komenaka I, Schwab R, **Thompson CA**, Nodora J, Murphy J, Martinez ME. (2018). Differences in survival for older compared to younger female breast cancer patients in the California cancer registry by race/ethnicity, insurance, socioeconomic status, and tumor subtype. *Cancer Epidemiology Biomarkers and Prevention*. Jul;27(7 Suppl):88.
- 12. DeRouen M, Shariff-Marco S, Lichtensztajn D, Jin A, Daide Y, Canchola AJ, Li Y, Jain J, Hertz A, Allen L, Nie S, Wong CP, Haile R, Patel MI, Nelson D, Reynolds P, Wakelee HA, Luft HS, **Thompson CA**, Waitzfelder BE, Cheng I, Gomez SL. (2018). Development of a multilevel integrated dataset to study lung cancer incidence and risk factors in never-smoking Asian American, Native Hawaiian, and Pacific Islander females. *Cancer Epidemiology Biomarkers and Prevention*. Jul;27(7 Suppl):81-82.
- 13. Tao L, Gomez SL, **Thompson CA**, Tsou MH, Gibbons J, Nodora JN, Komenaka I, Schwab R, Jonathan Unkart, Murphy J, Martinez ME. (2017). Mortality Differences in Younger and Older Breast Cancer Patients according to

- Insurance, Race/Ethnicity, and Neighborhood Socioeconomic Status in the California Cancer Registry. *Cancer Epidemiology Biomarkers and Prevention*. Feb;26(2 Suppl):C30.
- 14. Jin A\*, Gomez SL, Luft HS, Lichtensztajn D, **Thompson CA**. (2017). External validity of electronic health record studies of cancer patients. *Journal of Patient Centered Research and Reviews*. Aug;4:150.
- 15. Afghahi A, Rigdon J, Purington N, Desai M, Pierson E, Mathur M, Thompson CA, Curtis C, West RB, Horst KC, Gomez SL, Ford JM, Sledge GW, Kurian AW (2016). Higher peripheral lymphocyte count to predict survival in triple-negative breast cancer (TNBC). *Journal of Clinical Oncology*. May;34(15\_supp):1010-1010.
- 16. Rai A\*, **Thompson CA**, Kurian AW, Luft HS. (2016). Determinants of patient choice of health care providers for breast cancer treatment. *Journal of Patient Centered Research and Reviews*. Aug;3:174-5.
- 17. Rai A\*, Liang SY, **Thompson CA**, Luft HS. (2016). Restructuring oncology payments: estimates of resource use by phases of oncology care in breast cancer patients. *Journal of Patient Centered Research and Reviews*. Aug;3:175.
- 18. Rendle KA, **Thompson CA**, Ahern J, Bauer HM, Wilson SR. (2016). Changes in adolescent HPV vaccination following incorporation into California's pay-for-performance program. *Journal of Patient Centered Research and Reviews*. Aug; 3:211
- 19. **Thompson** CA Gardner AB, Kapp DS, Chan JK. (2015). The use of electronic health record-based tools to improve cervical cancer screening compliance in a large community-based healthcare organization. *Gynecologic Oncology*, April; Volume 137, 142
- 20. **Thompson CA,** Luft HS. (2015). Characterizing Longitudinal Patterns of Breast Cancer Care. *Journal of Patient Centered Research and Reviews*. Apr;2:138.
- 21. **Thompson CA,** Arah OA. (2014). A Novel Technique for Analysis of Uncontrolled Confounding in Non-Experimental Comparative Effectiveness Research. *Clinical Medicine and Research*; Sept; vol. 12 no. 1-2; 108.
- 22. **Thompson CA,** Luft HS. (2014). Linking Electronic Health Records Across Institutions to Understand why Women Seek Care at Multiple Sites for Breast Cancer. *Clinical Medicine and Research*. Sept; vol. 12 no. 1-2; 77.
- 23. Plochg T, Arah OA, Botje D, **Thompson CA**, Klazinga N, Wagner C, Mannion R, MJ Lombarts. (2014). Measuring clinical management by physicians and nurses in European hospitals: development and validation of two scales. *International Journal for Quality in Health Care. Apr;* 26(2):b8.
- 24. **Thompson CA,** Setiawan VW, Zhang ZF, Arah OA. (2012). Record-Level Bias Analysis for Uncontrolled Confounding in Cancer Pooling Projects with Multiple Investigators. *American Journal of Epidemiology*, Jun; 175: suppl\_11, S16.
- 25. **Thompson CA,** Setiawan VW, Zhang ZF, Arah OA. (2012). Using DAGs to Guide the Translation of Priors for Record-Level Analysis of Bias Due to Unmeasured Confounding. *American Journal of Epidemiology*, Jun; 175, suppl\_11, S73.
- 26. Arah OA, **Thompson CA**. (2012). Total and chronic disease mediated effects of educational attainment on multi-dimensional health score. *Journal of Epidemiology & Community Health*. Aug;65:A322.
- 27. Witvliet Mt, A. Kunst, K Stronks, Mahapatra T, **Thompson CA**, Arah OA. (2011). What's politics got to do with global healthcare? A multilevel examination of individual-patient reports of health system responsiveness in 45 low, middle and high income. *Journal of Epidemiology & Community Health*. Aug; 65:A170
- 28. Arah OA, **Thompson CA**. (2011). The influence of health state domains on overall self-reported general health among individuals in 68 countries. *Journal of Epidemiology & Community Health* Aug;65:A322.
- 29. **Thompson CA,** Zhang ZF, Arah OA. (2011). Competing Risk Bias to Explain the Inverse Relationship Between Smoking and Malignant Melanoma. *American Journal of Epidemiology*, June; Volume 173, Issue suppl\_11, S76.
- 30. Arah OA, **Thompson CA**. (2011). Global Impact of Different Health States on Self-Assessed General Health Among Individuals in 68 Countries. *American Journal of Epidemiology*, June; Volume 173, Issue suppl 11, S226.

#### **Invited Talks**

- 1. "Creative Use of Electronic Health Records for Research Across the Cancer Control Continuum" Society for Epidemiologic Research (SER) "SER Visit" to University of Arkansas Fay W. Boozman College of Public Health. Little Rock, Arkansas. April 11, 2023.
- 2. Invited Participant, 4th CanTest Collaborative Faculty School, The Queens's College, Oxford University, Oxford, 'England, April 11-13, 2022.
- 3. "Big health data for cancer population science: big answers or big problems?" **American Society of Preventive Oncology** 46th Annual Meeting. Tucson, AZ. March 13-15, 2022.
- 4. "Cancer-related Emergency and Urgent Care: Prevention, Management, and Care Coordination" (virtual scientific workshop). **National Cancer Institute (NCI) and the NIH Office of Emergency Care Research.** *December 1-2, 2021*.
- 5. "Achieving Excellence in Cancer Diagnosis" (virtual workshop). National Academies of Science, Engineering and Medicine. October 6, 2021.
- 6. "Bias in the Reuse of Electronic Health Records." Institute for Public Health and Medicine (IPHAM) Seminar, Northwestern University Feinberg School of Medicine, Chicago, IL (virtual seminar). March 25, 2021.
- 7. "Integrative Data Approaches to Understand and Improve Disparities in Cancer Healthcare and Outcomes." Epidemiology Department Seminar, Gillings School of Global Public Health, **The University of North Carolina at Chapel Hill**, Chapel Hill, NC (virtual seminar). February 26, 2021.
- 8. "Disentangling Cancer Healthcare Disparities: Real World Data and Causal Inference Methodology." Epidemiology Department Seminar, **Oregon Health and Science University** School of Public Health, Portland, OR (virtual seminar). March 16, 2020.
- "Population-based Registry Linkages to Improve the Validity of Electronic Health-Record based Cancer Research."
   American Statistical Association International Conference on Health Policy Statistics, San Diego, CA. January 6, 2020.
- 10. "Disentangling Cancer Healthcare Disparities: Real World Data and Causal Inference Methodology." Epidemiology Department Seminar, Mailman School of Public Health, **Columbia University**, New York, NY. October 30, 2019.
- 11. "Improving Research Accessibility to Publicly Available Data through Creative Integration, Geospatial Visualization, and Open Data Portals." **American Association of Cancer Research** Modernizing Population Sciences in the Digital Age Conference, San Diego, CA. February 20, 2019.
- 12. "The Sutter Health System Wide Cancer Registry Linkage: A Case Study on Obtaining Gold Standard Data." San Diego Epidemiology Exchange, San Diego, CA. April 28, 2018.
- 13. "Use of registry-linked electronic health records to study screening uptake and downstream effects of false positive mammograms in a large Northern California health care system." Behavioural Science and Health Department Seminar, Institute of Epidemiology and Health Care, **University College London**, London, UK. July 13, 2017.
- 14. "Electronic health care record linkage enhancement of cancer registration records in Northern California: Lessons from an NCI-funded special study." National Cancer Registration and Analysis Services, **Public Health England**, London, UK. July 12, 2017.
- 15. "Linked electronic health records to study cancer prevention and treatment: opportunities and challenges." **Cancer Prevention Institute of California**, Freemont, CA. June 23, 2014.
- 16. "Linked electronic health records to study cancer prevention and treatment: opportunities and challenges." **University of California Los Angeles** Fielding School of Public Health, Los Angeles, CA. April 22, 2014.
- 17. "Quantitative bias modelling via data augmentation." Brown Bag Seminar, Center for Gerontology and Healthcare Research, **Brown University** School of Public Health, Providence, RI. April 15, 2013.
- 18. "Sensitivity analyses of the DUQuE project findings." Final Conference, **Deepening our Understanding of Quality Improvement in European Hospitals (DUQuE)**. Berlin, Germany. December 17, 2012.

## Oral presentations from submitted abstracts (as presenting author)

- 1. "The Selected, The Generalizable and The Transportable: Dealing with Threats to Internal and External Validity". **Society for Epidemiologic Research** Annual Meeting, virtual conference. December 16, 2020.
- 2. "Bias in the Reuse and Analysis of Electronic Health Record Data". **American Medical Informatics Association** Annual Symposium, virtual conference. November 18, 2020.
- 3. "Using Population-Based Registry Linkages to Improve the External Validity of Electronic Health Record-Based Research". **AcademyHealth** Annual Research Meeting, virtual conference. August 4, 2020.
- 4. "Emergency-Department Mediated Cancer Diagnosis in the United States". **American Association of Cancer Research** Conference on the Science of Cancer Disparities, San Francisco, CA. September 23, 2019.
- 5. "Linking Electronic Health Records with Cancer Registry Data for Epidemiology and Health Services: Challenges and Opportunities". **American Association of Cancer Research** Modernizing Population Sciences in the Digital Age Conference, San Diego, CA. February 20, 2019.
- 6. "The Balanced Case-Crossover Design." **Society for Epidemiologic Research** Annual Meeting, Baltimore, MD. June 21, 2018.
- 7. "Are Electronic Health Records Useful for Supplementing National Cancer Registry Data?" **Health Care Systems Research Network** Meeting, San Diego, CA. March 21, 2017.
- 8. "Characterizing longitudinal patterns of breast cancer care." **HMO Research Network**, Long Beach, CA. March 12, 2015.
- 9. "Linked electronic medical records to better understand cancer patient journeys within and between two care delivery systems." **AcademyHealth** Annual Research Meeting, San Diego, CA. June 10, 2014.
- "Linked electronic medical records to better understand cancer patient journeys within and between two care delivery systems." AcademyHealth Electronic Data Methods (EDM) Forum Stakeholder Symposium, San Diego, CA. June 8, 2014.
- 11. "A Novel Technique for Analysis of Uncontrolled Confounding in Non-Experimental Comparative Effectiveness Research." **HMO Research Network** Conference, Phoenix, AZ. April 1, 2014.
- 12. "Linking Electronic Health Records Across Institutions to Understand Why Women Seek Care at Multiple Sites for Breast Cancer." **HMO Research Network** Conference, Phoenix, AZ. April 1, 2014.
- 13. "Handling uncontrolled confounding in the comparative effectiveness research of cancer." **AcademyHealth** Annual Research Meeting, Walt Disney World, FL. June 25, 2012.
- 14. "Competing risk bias to explain the inverse relationship between smoking and melanoma." **North American Congress for Epidemiology**, Montreal, Canada. June 22, 2011.

# Poster presentations from submitted abstracts

- Thompson CA, Peacock SH, Rohde R, Metwally EM, Soppe SE, Halula JC, Al Amin S, Mullins MA, Barclay M, Kurian AW, Deillon EC, Pettit NR, Thompson M, Lyratzopoulos G, Pruitt SL. "Emergency Presentation as a Novel Indicator of U.S. Cancer Disparities by Patient Race, Ethnicity, and Income Level. 4<sup>th</sup> National Cancer Institute Symposium on Cancer Health Disparities. Bethesda, Maryland, April 4-5, 2023.
- 2. Wilson K, Ghebrendrias E, Page T, Gibbons J, Oren E, **Thompson CA**. "Investigating Lagged Associations Between Mobility to Retail Stores, Grocery Stores, and Workplaces and COVID-19 Case Count". Society for Epidemiologic Research Annual Meeting (virtual). June 22-25, 2021.
- 3. Tripathi O\*, **Thompson CA**, Ferris J, Bellettiere J. "Who's really smoking at home? Transporting prevalence estimates of in-home cannabis smoking from the 2020 Global Drug Survey (GDS) to the 2018 National Survey on Drug Use and Health (NSDUH) survey population". Society for Epidemiologic Research Annual Meeting (virtual). June 22-25, 2021.

- 4. Obrochta C\*, Nara A, Murphy JD, Thompson CA. "Travel Time to Treatment Facilities and Socioeconomic Disparities in Treatment for Early Stage Lung Cancer in California". Society for Epidemiologic Research Annual Meeting (virtual). June 22-25, 2021.
- 5. Tripathi O\*, He Y\*, Han B\*, Paragas DG\*, Sharp NS, Offor P\*, Palaniappan, Srinivasan M, **Thompson CA**. "Cancer Mortality among Asian American Ethnicities by Nativity and Etiology of Cancer (2008-2017)". 45th Annual Meeting of the American Society of Preventive Oncology (virtual). March 29 April 1, 2021.
- 6. Begi T\*, Tripathi O\*, Offor P\*, **Thompson CA**. "National Trends in Younger Onset Obesity-Related Cancer Incidence". 45th Annual Meeting of the American Society of Preventive Oncology (virtual). March 29 April 1, 2021.
- 7. Offor P\*, Schumacher B\*, Obrochta C\*, **Thompson CA**. "Evidence of Stage Shift in US Lung Cancer Diagnosis, 2009-2016". 45th Annual Meeting of the American Society of Preventive Oncology (virtual). March 29 April 1, 2021.
- 8. Obrochta C\*, Gibbons J, **Thompson CA**. "Neighborhood Disparities in Timeliness of Treatment for Early Stage Lung Cancer Patients". AACR Virtual Conference on The Science of Cancer Health Disparities. October 2-4, 2020.
- 9. Offor P\*, Obrochta C\*, Schumacher B\*, **Thompson CA**. "Trends in Stage at Diagnosis for Lung Cancer in the US, 2009-2016". AACR Virtual Conference on The Science of Cancer Health Disparities. October 2-4, 2020.
- 10. Begi T\*, Tripathi O\*, Offor P\*, **Thompson CA**. "National Trends in Younger Onset Obesity-Related Cancer Incidence". AACR Virtual Conference on The Science of Cancer Health Disparities. October 2-4, 2020.
- 11. **Thompson CA**, Sheridan P\*, Murphy JD, Lyratzopoulos G. "Cancer Detection in the Emergency Department: An Understudied Driver of Disparities". AcademyHealth Annual Research Meeting (virtual). July 28 August 6, 2020.
- 12. Vu, A\*, Parada H, Pinheiro P, **Thompson CA.** "Comparing Age at Cancer Diagnosis between Hispanic and non-Hispanic Whites in the United States". American Society for Preventive Oncology (virtual). March 23-27, 2020.
- 13. Obrochta C\*, Nara A, Murphy J, **Thompson CA**. "Proximity to Healthcare Facilities and Racial/Ethnic Disparities in Timeliness of Treatment for Lung Cancer Patients". International Conference on Health Policy Statistics; San Diego, CA. January 6-8, 2020.
- 14. Schumacher B\*, Li J, **Thompson CA**. "Analysis of Electronic Health Records to Identify Contextual Factors Associated with Breast Cancer Screening Patterns". International Conference on Health Policy Statistics; San Diego, CA. January 6-8, 2020.
- 15. Offor P\*, Obrochta C\*, Schumacher B\*, **Thompson CA**. Investigating Racial Differences in Stage Shift for Lung Cancer After the Introduction of Screening Guidelines. Southern California Conference for Undergraduate Research; San Marcos, CA. November 23, 2019.
- 16. **Thompson CA**, Sheridan P\*, Murphy JD, Lyratzopoulos G. "Emergency-Department Mediated Cancer Diagnosis in the United States". American Association of Cancer Research (AACR) Science of Cancer Disparities; San Francisco, CA. September 20-23, 2019.
- 17. Obrochta C\*, Murphy JD, Nara A, **Thompson CA**. "Disparities in Receipt of Guideline Concordant Treatment for Early Stage Non-Small Cell Lung Cancer (NSCLC) Patients in California". American Association of Cancer Research (AACR) Science of Cancer Disparities; San Francisco, CA. September 20-23, 2019.
- 18. DeRouen M, **Thompson CA**, Canchola AJ, Jin A, Nie S, Jain J, Shariff-Marco S, Lichetensztajn DY, Daida Y, Wong C, Li Y, Patel MI, Wakelee HA, Liang SY, Waitzfelder BE, Cheng I, Gomez SL. "Lung cancer incidence and risk factors in never-smoking Asian American, Native Hawaiian, and Pacific Islander women: A multilevel dataset of electronic health record, cancer registry, and environmental data." American Association of Cancer Research (AACR) Science of Cancer Disparities; San Francisco, CA. September 20-23, 2019.
- 19. Sheridan P\*, Lyratzopoulos G, Murphy JD, **Thompson CA**. "Emergency department-mediated cancer diagnosis among older adults in the United States". American Society of Clinical Oncology (ASCO) Quality Care Symposium; San Diego, CA. September 6-7, 2019.
- 20. Obrochta C\*, Murphy JD, Nara A, **Thompson CA**. "Disparities in Receipt of Guideline Concordant Treatment for Early Stage Non-Small Cell Lung Cancer (NSCLC) Patients in California". American Society of Clinical Oncology (ASCO) Quality Care Symposium; San Diego, CA. September 6-7, 2019.

- 21. Jain P\*, Nara A, Gibbons J, **Thompson CA**. "Identifying Spatial Patterns and Predictors of Liver Cancer Incidence within Small Geographic Areas in California". Society for Epidemiologic Research Annual Meeting; Minneapolis, MN. June 18-21, 2019.
- 22. Zamora S\*, Pinheiro PS, Gomez SL, Hastings KG, Palaniappan LP, Jiaqi Hu, **Thompson CA.** "Disaggregating Cancer Mortality Burden by Hispanic Ethnicity". American Public Health Association (APHA) Annual Meeting; San Diego, CA. November 10-14, 2018.
- 23. Gibbons J and **Thompson CA**. "A Nationally Representative Study of the Impact of Neighborhood Racial Composition and Segregation on Breast Cancer Screening Rates among Black Women". American Public Health Association (APHA) Annual Meeting, San Diego, CA. November 10-14, 2018.
- 24. Obrochta C\*, Murphy J, Tsou MH, and **Thompson CA**. "Ethnic Disparities in the Receipt of Guideline Concordant Treatment in Colorectal Cancer Patients, with Causal Mediation Analysis." American Public Health Association (APHA) Annual Meeting, San Diego, CA. November 10-14, 2018.
- 25. Obrochta C\*, Murphy J, Tsou MH, and **Thompson CA**. "Ethnic Disparities in the Receipt of Guideline Concordant Treatment in Colorectal Cancer Patients, with Causal Mediation Analysis." Society for Epidemiologic Research Annual Meeting, Baltimore, MD. June 18-22, 2018.
- 26. San Miguel Y, Tao L, Gomez SL, Komenaka I, Schwab R, Thompson CA, Nodora J, Murphy J, and Martinez ME. "Differences in Survival for Older Compared to Younger Female Breast Cancer Patients in the California Cancer Registry by Race/Ethnicity, Insurance, Socioeconomic Status, and Tumor Subtype". American Association for Cancer Research (AACR) Conference on the Science of Cancer Health Disparities, Atlanta, GA. September 25-28, 2017.
- 27. DeRouen MC., Shariff-Marco S, Lichtensztajn D, Jin A, Daide Y, Canchola AJ, Li Y, Jain J, Hertz A, Allen L, Nie S, Celeste Wong, Haile R, Patel MI, Nelson D, Reynolds P, Wakelee HA, Luft HS, **Thompson CA**, Waitzfelder BE, Cheng I, and Gomez SL. "Lung cancer incidence and risk factors in never-smoking Asian American, Native Hawaiian, and Pacific Islander women: the development of a multilevel integrated dataset of electronic health record, cancer registry, and environmental data". American Association for Cancer Research (AACR) Conference on the Science of Cancer Health Disparities, Atlanta, GA. September 25-28, 2017.
- 28. Gholizadeh S, **Thompson CA**, Malcarne V, Backhaus A, and Afari N. "General and mental health service connection in Post 9/11 veterans." Annual Meeting for the Society of Behavioral Medicine, San Diego, CA. March 29 April 1, 2017.
- 29. Jin A\*, Gomez SL, Luft HS, Lichtensztajn D, **Thompson CA**. "External validity of electronic health records of cancer patients". Health Care Systems Research Network (HCSRN) Annual Meeting, San Diego, CA. March 21-23, 2017.
- 30. Tao L, Gomez SL, **Thompson CA**, Tsou MH, Gibbons J, Nodora JN, Komenaka I, Schwab R, Unkart J, Murphy J, and Martinez ME. "Mortality Differences in Younger and Older Breast Cancer Patients according to Insurance, Race/Ethnicity, and Neighborhood Socioeconomic Status in the California Cancer Registry." American Association for Cancer Research (AACR) Conference on the Science of Cancer Health Disparities, Ft Lauderdale, FL. September 25-28, 2016.
- 31. Ilango S\*, Torres K\*, Doshi V\*, Obrochta C\*, Tsou MH, Nara A, Gibbons J, Han SY, Shariff-Marco S, Gomez SL, **Thompson CA**. "A systematic review of research utilizing geospatial analytic approaches to describe and understand the burden of screening-detectable cancers in the United States". National Cancer Institute Conference on Geospatial Approaches to Cancer Control and Population Sciences, Bethesda, MD. September 12-14, 2016.
- 32. **Thompson CA** "Bias due to "missing data" in epidemiologic research using electronic health records." Epidemiology Congress of the Americas Meeting, Miami, FL. June 21-24, 2016.
- 33. Rai A\*, Liang SY, **Thompson CA**, and Luft HS. "Restructuring Oncology Payments: Estimates of Resource Use by Phases of Oncology Care in Breast Cancer Patients". Health Care Systems Research Network (HCSRN) Annual Conference, Atlanta, GA. April 13-16, 2016.
- 34. Rai A\*, **Thompson CA**, Kurian AW, and Luft HS. "Determinants of Patient Choice of Health Care Providers for Breast Cancer Treatment." Health Care Systems Research Network (HCSRN) Annual Conference, Atlanta, GA. April 13-16, 2016.

- 35. Rai A\*, Liang SY, **Thompson CA**, and Luft HS. "Restructuring Oncology Payments: Estimates of Resource Use by Phases of Oncology Care in Breast Cancer Patients". Health Care Systems Research Network (HCSRN) Annual Conference, Atlanta, GA. April 13-16, 2016.
- 36. Rendle KR, **Thompson CA**, Ahern J, Bauer H, and Wilson SR. "Changes in Adolescent HPV Vaccination following Incorporation into California's Pay-for-Performance Program." Health Care Systems Research Network (HCSRN) Annual Conference, Atlanta, GA. April 13-16, 2016.
- 37. **Thompson CA,** Boothroyd DB, Hastings KG, Cullen MR, Palaniappan LP, Rehkopf DH. "A missing data approach for the calculation of U.S. national mortality statistics by disaggregated Asian ethnicity over time." Society for Epidemiologic Research Annual Meeting, Denver, CO. June 16-19, 2015.
- 38. **Thompson CA** and Luft HS. "Relationship between prior false positive mammograms and choice of contralateral prophylactic mastectomy in early stage breast cancer treatment." AcademyHealth Annual Research Meeting, Minneapolis, MN. June 14-16, 2015.
- 39. **Thompson CA** and Arah OA. "Using DAGs to guide the translation of priors for record-level analysis of bias due to unmeasured confounding." Society for Epidemiologic Research Annual Meeting, Minneapolis, MN. June 29-29, 2012.
- 40. **Thompson CA,** Setiawan VW, Zhang ZF, and Arah OA. "Record-level bias analysis for uncontrolled confounding in cancer pooling projects with multiple investigators." Society for Epidemiologic Research Annual Meeting, Minneapolis, MN. June 29-29, 2012.
- 41. **Thompson CA**, DerSarkissian M, Stronks K, and Arah OA. "Global health spending and non-communicable disease co-occurrence." AcademyHealth Annual Research Meeting, Walt Disney World, Florida. June 14-17, 2012.
- 42. Arah OA and **Thompson CA**. "Global impact of different health states on self-assessed general health among individuals in 68 countries." North American Congress of Epidemiology, Montreal, Canada. June 21-24, 2011.

## **Doctoral dissertation**

1. **Thompson CA.** (2013). Multiple bias modeling in a multi-center epidemiologic study of endometrial cancer. Available from ProQuest Dissertations & Theses Global. (1412729897).

# TEACHING RECORD

# The University of North Carolina Gillings School of Global Public Health

2023 – EPID718: Analytical Methods in Observational Epidemiology Core course in intermediate-level epidemiologic methods

Lead Instructor, 35-40 PhD students, 40 contact hours

2022 EPID718: Analytical Methods in Observational Epidemiology

Core course in intermediate-level epidemiologic methods

Co-Instructor, 35 PhD students, 40 contact hours

# University of Michigan Summer Session in Epidemiology

2023 EPID716: Clinical Epidemiology and Evidence Based Medicine

One-week course in introductory-level epidemiologic methods

Lead Instructor, 12-15 students, 16 contact hours

# San Diego State University School of Public Health

2021	PH623: Epidemiologic Methods Core course in intermediate-level epidemiologic Methods Lead Instructor, 38 MPH students, 40 contact hours
2019 – 2020	PH700A: Seminar in Cancer Prevention and Control Elective topical course in cancer epidemiology Lead Instructor, 10-15 MPH students, 40 contact hours
2019 – 2021	PH820B: Modern Epidemiology Methods II Core course in advanced-level epidemiologic methods Lead Instructor, 5-10 PhD students, 40 contact hours
2018 – 2020	PH820A: Modern Epidemiology Methods I Core course in intermediate-level epidemiologic methods Lead Instructor, 10-15 PhD students, 40 contact hours
2016 – 2018	PH824: Design of Cohort Studies Elective course in intermediate-level epidemiologic methods Lead Instructor, 5-10 MPH/PhD students, 40 contact hours
2015 – 2017	PH823: Design of Case-Control Studies Elective course in intermediate-level epidemiologic methods Lead Instructor, 5-10 MPH/PhD students, 40 contact hours

# University of California San Diego Herbert Wertheim School of Public Health and Longevity Science

2018 – 2021 FMPH291: Advanced Epidemiology Methods and Causal Inference

Elective course in advanced-level epidemiologic methods Co-Instructor, 5-10 PhD students, 15 contact hours

# University of California Santa Cruz Silicon Valley Extension

2014 – 2015 CT2345: Clinical Statistics for Non-Statisticians

Core course in Clinical Trials Design and Management Certificate program Lead Instructor, 15-20 mid-career professional students, 25 contact hours

# University of California Los Angeles School of Public Health, Department of Epidemiology

2010 EPI100: Introduction to Epidemiology

MPH core course for non-majors

Teaching Assistant, 40 MPH students, 20 contact hours

# The University of North Carolina at Chapel Hill Department of Biology

1998 – 1999 BIO11L: Introduction to Biology Laboratory

"Freshman biology lab"

Laboratory Instructor, 20-25 undergraduate students, 45 contact hours

## **Postdoctoral Fellows**

2022 –	Eman Metwally, MD, PhD, Cancer Control Education Training Program (T32CA057726) The University of North Carolina at Chapel Hill
2021 - 2022	Sanah Vohra, PhD, Cancer Control Education Training Program (T32CA057726) The University of North Carolina at Chapel Hill
	Current position: Medical Student, University of California Los Angeles
2016 – 2017	Anqi Jin, PhD, AcademyHealth Delivery Systems Science Fellow
	Palo Alto Medical Foundation Research Institute, Palo Alto, CA
	Current position: Data Scientist, Paradigm
2016 – 2017	Ashish Rai, PhD, AcademyHealth Delivery Systems Science Fellow
	Palo Alto Medical Foundation Research Institute, Palo Alto, CA
	Current position: Research Scientist, Harvard Pilgrim Health Care Institute

# **Doctoral Degree Students**

#### **Dissertation Chair**

# SDSU/UCSD Joint Doctoral Program in Epidemiology

2018 – 2021 Chelsea Obrochta, MPH; PhD in Epidemiology

"Geospatial-, Neighborhood-, and Healthcare System-Related Drivers of Racial and Ethnic Disparities in Lung Cancer Treatment in California"

Current position: Senior Manager of Epidemiology, Alexion, AstraZeneca Rare Disease

# **Dissertation Committee Member**

# The University of North Carolina at Chapel Hill

2023 – Matthew Dunn, PhD in Epidemiology

"Individual and community determinants of treatment delay in the Carolina Breast Cancer Study"

# SDSU/UCSD Joint Doctoral Program in Epidemiology

2018 – 2021	Paige Sheridan, PhD in Epidemiology "Methodological Considerations for Studying Neighborhood Contextual Determinants of Lung Cancer Survival"
2015 – 2021	Toni Rush, PhD in Epidemiology "The effects of pregravid body mass index and gestational weight gain on indicators of placental Health"
2018 – 2021	Pedro Kramer, PhD in Epidemiology "Trends and decomposition of sex gaps in tobacco smoking among the youth in Latin America"
2017 – 2020	Sindana Ilango, PhD in Epidemiology "The Role of Chronic Exposure to Ambient Air Pollution in Dementia and Cognitive Aging"

2016 – 2019 Alyson Cavanaugh, PhD in Epidemiology
 "Racial and Ethnic Disparities in Total Knee Arthroplasty Utilization and Outcomes among Older
 Women"
 2015 – 2018 Sandahl Nelson, PhD in Epidemiology
 "Physical Activity Measurement in Breast Cancer Survivors: Methodological Issues, Solutions, and

# **Masters Degree Students**

# **SDSU Thesis Chair**

- 2021 Elsa Ghebrendrias, MPH in Epidemiology
- 2021 Hannah Marquez, MPH in Epidemiology
- 2021 Kaelah Wilson, MPH in Epidemiology

Applications"

- 2020 Andrew Vu, MPH in Epidemiology
- 2019 Lara Schwartz, MPH in Epidemiology
- 2019 Summer Reames, MPH in Epidemiology
- 2019 Malek Guerbaoui, MPH in Epidemiology
- 2018 Megan Webb-Morgan, MPH in Epidemiology
- 2018 Steven Zamora, MPH in Epidemiology
- 2017 Sutton Fox, MPH in Epidemiology
- 2017 Samuel Lam, MPH in Epidemiology
- 2017 Chelsea Obrochta, MPH in Epidemiology
- 2017 Osika Tripathi, MPH in Epidemiology
- 2016 Robert Arieli, MPH in Epidemiology
- 2016 Shadi Gholizadeh, MPH in Epidemiology

# **Undergraduate Students**

#### **SDSU Special Project**

2020 Talia Begi, BS student in Public Health

# SDSU/UCSD Cancer Partnership Summer Scholars

- 2016 Michael Morrison, BS student in Public Health
- 2019 Paris Offor, BS student in Public Health
- 2020 Helen Nguyen, BS student in Public Health

# Stanford University Center for Asian Research and Education Summer Research Immersion

- 2020 Gayle Paragas, BA graduate in Language and International Health, Clemson University
- 2020 Yuelin He, BS student in Computational and Systems Biology, University of California Los Angeles
- 2020 Brigette Han, BA student in Asian American Health Disparities, Duke University

# **Mentee Honors & Competitive Awards**

Oral Abstract Presentation, Society for Epidemiologic Research Annual Meeting
Poster Award, Health Disparities Special Interest Group, American Society of Preventive Oncology

"Evidence of Stage Shift in US Lung Cancer Diagnosis, 2009-2016"

Mentee: Paris Offor, BSPH student

2019-2022 Predoctoral Fellowship, University of California Tobacco Related Diseases Research Program

"Spatial-, Neighborhood- and Healthcare-Related drivers of Lung Cancer Treatment Disparities"

Mentee: Chelsea Obrochta, PhD student

2018 Summer Fellowship, Cancer Epidemiology Education in Special Populations

"Liver Cancer Among Hispanic Populations in California"

Mentee: Purva Jain, PhD student

2018 Best Student Poster, Society for Epidemiologic Research Annual Meeting

"Ethnic Disparities in the Receipt of Guideline Concordant Treatment in Colorectal Cancer Patients, with

Causal Mediation Analysis"

Mentee: Chelsea Obrochta, PhD student

2017 Summer Fellowship, Cancer Epidemiology Education in Special Populations (CEESP)

"Disaggregating Cancer Burden Data in Hispanic Americans"

Mentee: Steven Zamora, MPH student

#### RESEARCH SUPPORT

# **Pending Research Support**

# **Active Research Support**

CDC Health Promotion and Disease Prevention Research Centers (6-U48-DP006400-01-04) 9/30/2022-9/29/2024 2022 Special Interest Project Competitive Supplement \$499,880 (total budget)

MPIs: Alice Ammerman (contact) / Caroline Thompson (study lead)

# Understanding Pathways to Earlier Diagnosis for Ovarian Cancer in North Carolina

Despite low incidence rates and excellent treatment options for early-stage disease, ovarian cancer is the fifth leading cause of cancer-related mortality among women in the United States, due to it frequently being diagnosed at later stages when treatment success is less likely. In this study, we will analyze electronic health records, which contain rich clinical detail, to quantify and classify the cancer patient experience in the weeks and months before diagnosis. Our results will contribute evidence about clinical and healthcare factors related to early detection, which will be communicated to providers and patients in order to improve population-level ovarian cancer outcomes.

Role: Principal Investigator (2.4 CM)

Gordon and Betty Moore Foundation (Diagnostic Excellence Award; GBMF11505) 7/1/2022 - 12/31/2023 MPIs: Natalia Khalaf (Baylor College School of Medicine) / Caroline Thompson (UNC) \$500,000 (total budget) *Measuring Missed Opportunities in the Diagnosis of Gastrointestinal Cancers* 

We will develop digital quality measures (dQMs) of missed opportunities in diagnosis (MODs) in the GI cancer care diagnostic pathway, including avoidable emergency presentations (EPs). Our dcQMs will directly assess diagnostic process quality to help identify system-based and/or organizational factors for improving diagnosis, as the measures are sensitive to deficiencies in the diagnostic process. They will also address inequities as certain populations are more likely to experience avoidable MODs and EPs. The goal of our measures is to potentially facilitate earlier treatment, reduce care disparities, and allow assessment of the impact of multifaceted interventions to improve cancer diagnosis. Role: MPI; UNC team lead (1.2 CM)

National Cancer Institute (R01-CA-264176)

PI: Caroline Thompson (SDSU)

7/1/2021 – 6/30/2026 \$1,716,204 (total budget)

# Cancer Diagnosis in the Emergency Department: Explaining Persistent Disparities

Cancer is a frequent diagnosis in the emergency department (ED); ED cancer diagnoses are more common among minority and low income patients and result in poor outcomes, including lower survival. Evidence about emergency diagnosis of cancer in the United States (U.S.), and how to prevent it from occurring, is limited. This study will generate much needed evidence about this important problem, including who is affected, where, and why, illuminating a largely unrecognized issue to help identify modifiable drivers of disparities.

Role: Principal Investigator (2.4 CM)

SDSU HealthLINK Center Pilot Project

PI: Humberto Parada (SDSU)

Characterizing the Burden of Cancer among Adults from the Hispanic Community Health Study/Study of Latinos

The objectives of this pilot study are to 1) identify definitive cancer outcomes in the NIH-funded Hispanic Community Health Study/Study of Latinos (HCHS/SOL), a prospective multi-center epidemiologic study of 16,415 Cuban, Puerto Rican, Dominican, Mexican, or Central/South American adults, via record linkage to the state cancer registries in New York, Illinois, Florida, and California; 2) describe the cancer burden among participants of the HCHS/SOL; and 3) estimate associations between body fat and obesity and incidence of 13 obesity-related cancers, overall and by Hispanic/Latino subgroup.

Role: Co-Investigator (0.3 CM)

National Institutes of Health (U01-CA-199277)

9/2020 - 9/2025

1/2021-12/2022

MPIs: James Lacey (City of Hope) & Elena Martinez (UC San Diego)

\$35,000 (subaward)

# Innovative Infrastructure to Enhance and Sustain the California Teachers Study Cohort

This proposal requests support to maintain the high-quality data and streamline the innovative infrastructure of the prospective California Teachers Study (CTS). During the next five years, as the CTS's 133,477 female participants pass through ages of high disease risk, we will conduct efficient linkages that capture new cancer, inpatient and outpatient hospitalization, mortality, and geospatial data.

Role: Subcontract Principal Investigator (2.4 CM)

National Institutes of Health (R01-CA-225478)

4/2019 - 3/2024

PI: Salma Shariff-Marco (UC San Francisco)

\$80,414 (Y1-Y2 subaward)

# Understanding the Multilevel Drivers of Liver Cancer Disparities

We will study the relative contribution of established and emerging risk factors, discover and validate novel risk factors, and to understand patient, clinician, healthcare system and geographic factors that influence surveillance; these findings can then be used to inform strategies in clinical and community settings to reduce the burden of liver cancer particularly for those at high risk.

Role: Subcontract Principal Investigator (2.4 CM)

# **Completed Research Support**

Gordon and Betty Moore Foundation (GBMF8837)

2/1/2021 - 6/1/2022

PI: Matthew Thompson (University of Washington)

\$6,106 (subaward)

# Development and Pilot Testing of a Measurement Tool for the Diagnosis of Lung Cancer

Lung cancer is the most common cause of cancer-related death in the United States, and many patients have symptoms and repeated visits to health care providers in the months before diagnosis. This project will develop and test a new method for measuring and tracking the timeliness of the patient's cancer trajectory from first onset of symptoms to final diagnosis of lung cancer. This measure will draw information from the electronic medical record as well as from patients and their caregivers. The goal of this measure is to identify places in the diagnostic pathway where improvements are needed to improve the early diagnosis and eventual outcomes for lung cancer.

Role: Subcontract Principal Investigator (0.84 CM)

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National Institutes of Health (U54-MD-012397)

1/2018 - 8/2021

PI: Kristen Wells (SDSU)

The Research Infrastructure Core of the SDSU HealthLINK Center for Transdisciplinary Health Disparities Research
The overarching theme of the "SDSU HealthLINK Center is to generate new knowledge aimed at improving minority

The overarching theme of the "SDSU HealthLINK Center is to generate new knowledge aimed at improving minority health and reducing health disparities. The Center Research Infrastructure Core will maximize the quality and productivity of minority health and health disparities (MHHD) research at SDSU by serving as a hub for technical and other sources of support. The RIC will streamline and expand the technical capabilities identified by SDSU faculty and staff as critically necessary to conduct innovative, transdisciplinary MHHD research, including management and analysis of electronic health record (EHR) data and other types of 'big data'.

Role: Co-Investigator (0.6 CM)

National Institutes of Health (R01-CA-204070) 6/1/2016 - 4/1/2020 MPIs: Scarlett Gomez & Iona Cheng (UCSF) \$216,000 (subaward)

Lung Cancer in Never Smokers: Incidence, Risk Factors, and Molecular Characteristics in Asian American, Native Hawaiian, and Pacific Islander Women

This application will quantify the burden of lung cancer among Asian American, Native Hawaiian and Pacific Islanders (AANHPIs) and will identify etiologic risk factors among never-smoking AANHPI women, using information from electronic health records linked with data on neighborhood contextual factors, outdoor air pollution, and from cancer registries. Efficiently leveraging and combining existing data, this project will provide much-needed information for better understanding the epidemiology of lung cancer among AANHPI women, among whom the factors responsible for the cause of this common cancer are largely unknown.

Role: Subcontract Principal Investigator

University of California San Diego / National Institutes of Health (KL2-TR-001444) PI: Colin Depp (UCSD)

3/16/2016 – 3/15/2019 \$376,144 (total cost)

Using Electronic Health Records to Understand Pathways of Breast Cancer Screening and Care

Electronic health records (EHRs) contain a vast amount of detail with the potential to improve and personalize care. Using EHR we can look back in time before diagnosis to identify details of care, including screening patterns as well as activities during the diagnosis period that may be relevant to understanding both the circumstances surrounding the diagnosis and cancer treatment decisions. With a characterization of such "care pathways" by integrating EHR with population-based cancer registry data (which provide definitive disease diagnosis details) one can fill in gaps for studies of detection, and variation in breast cancer treatment. This project is designed to examine how EHR data can be used to expand our understanding of the patient pathway from screening to cancer diagnosis, and why patients choose certain treatments.

Role: Trainee Principal Investigator

San Diego State University (Pilot Mechanism)

2017 - 2018

PI: Caroline Thompson (SDSU)

\$10,000 (total cost)

The impact of health care system type and provider clustering on the portability of an electronic health record natural language processing tool

In this study, we will investigate two aspects of natural language processing (NLP) tool portability in the interpretation of free-text radiology reports from an existing mammographic screening cohort. Our aims include: how the type of health care system (academic vs community) impacts the NLP validation, and whether or not clustering of provider-specific aspects of clinical notes should be accounted for when implementing or transporting an NLP tool. Our results will provide important knowledge to aid in the rapid translation of clinical EHRs into actionable research findings. Role: Principal Investigator

SDSU/UCSD Cancer Center Partnership Pilot Award

1/1/2017 - 2/28/2018

PI: Caroline Thompson (SDSU)

\$31,259 (total cost)

# Is it race, or place? Disentangling racial, socioeconomic and geographic disparities in the cancer burden of San Diego and Imperial counties

The objective of this pilot study is to assess the social and neighborhood contextual factors that contribute to advanced-stage diagnoses of screening detectable cancers in California, by developing a multivariable web-enabled mapping tool. Geographic weighted regression will be used to model spatially varying relationships between two outcomes: 1) stage at diagnosis and 2) cancer-related mortality with independent variables reflecting socioeconomic and other contextual factors.

Role: Principal investigator

National Institutes of Health (R01-MD-007012)

1/1/2013 - 12/31/2017

MPIs: Palaniappan/Cullen (Stanford University)

# CAUSES: Causes of Asian American Mortality Understood by Socioeconomic Status

The goal of this study is to examine racial/ethnic, nativity, and geographic differences in Asian American subgroup mortality compared to other racial/ethnic groups (Non-Hispanic Whites, African Americans, Hispanics). Investigation of cause-specific mortality in distinct subgroups, by nativity, and considering sociodemographic factors will be fundamental in assessing and addressing health disparities in Asian American communities.

Role: Consultant

National Institutes of Health (HHSN261201300005I)

PI: Scarlett Gomez (UCSF)

1/1/2015 – 12/1/2016 \$20,000 subcontract

Feasibility of and Potential Biases in Supplementing Cancer Registry Data Using External Sources

Our study objectives are to: 1) evaluate the feasibility of supplementing specific selected cancer registry variables with data from electronic health records (EHR) data, and; evaluate the potential for improving SEER-based standard cancer reporting statistics (e.g., incidence, prevalence, treatment-specific survival) by augmenting race/ethnicity, birthplace, treatment, and tumor biomarkers registry data with supplementary data.

Role: Sutter Health Subcontract Principal Investigator

Richard & Susan Levy Family Trust

7/15/2013 - 8/1/2016

MPIs: Allison Kurian (Stanford University) & Harold Luft (Palo Alto Medical Foundation Research Institute)

Improving Outcomes for Breast Cancer Patients: A PAMF-Stanford Research Collaboration

The Stanford-Palo Alto Medical Foundation (PAMF) Oncoshare Project was founded in 2008 with the goal of using a "big data" approach to improve breast cancer care. The mission is to build a comprehensive breast cancer research tool that integrates data from a number of unique local and national resources: the statewide, population-based California Cancer Registry; electronic medical records (EMRs) from Stanford University Hospital and multiple sites of the community-based PAMF healthcare system; detailed genomic sequencing results directly from clinical testing laboratories; and patient-reported data on cancer care preferences and experiences.

Role: Postdoctoral Trainee

European Commission 7th Framework Programme (241822)

2012 - 2013

MPIs: Rosa Sunol (Avedis Donabedian University) & Oliver Groene (London School of Hygiene and Tropical Medicine) **DUQUE: Deepening Our Understanding of Quality Improvement in European Hospitals** 

The main goal of the DUQuE project is to study the effectiveness of quality improvement systems in European hospitals. This has been done by assessing the relationship of organisational quality improvement systems/management and culture, professionals' involvement, and patient empowerment with the quality of hospital care (including clinical effectiveness, patient safety and patient involvement)

Role: Junior Investigator

National Institutes of Health (T32-CA-009142)

2011 - 2013

# Cancer Epidemiology Training Program

The training program will provide trainees the opportunity to gain experience in both cancer epidemiology methods and molecular biology laboratory skills. This will allow students to utilize the knowledge of epidemiology methods and molecular biology to elucidate genetic predisposition and susceptibility on the risk of cancer, to study effects of environmental exposures on cancer risk, to describe the natural history of cancer among high risk individuals with inherited genetic mutations, and to evaluate potential gene-environment and gene-gene interactions on the risk of cancer. Role: Predoctoral Trainee

## **FACULTY ENGAGEMENT**

#### Service to the Profession

- 2023 Executive Committee co-chair, <u>National Cancer Institute Comprehensive Oncologic Emergencies Research Network (CONCERN)</u>
- 2022 Executive Committee (member), <u>National Cancer Institute Comprehensive Oncologic Emergencies Research Network (CONCERN)</u>
- 2022 Diversity and Inclusion (D&I) Committee (member), Society for Epidemiologic Research
- 2021 Steering Committee Member, California Teachers Study, City of Hope, Duarte, CA

## **Editorial Roles**

2020 - Associate Editor, BMC Health Services Research

2017 - Academic Editor, *PLoS ONE* 

2013 - Review Editor, Frontiers in Public Health

# **Peer Reviewer (Journals, Conferences)**

American Journal of Epidemiology, BMC Cancer, BMC Health Services, BMC Research Notes, Cancer, Cancer Epidemiology, Cancer Epidemiology Biomarkers and Prevention, Cancer Causes & Control, Epidemiology, Journal of Clinical Epidemiology, International Journal of Cancer, International Journal of Colorectal Disease, International Journal of Public Health, PLOS ONE, Society for Epidemiologic Research, Scientific Reports

# **Peer Reviewer (Funding Agencies)**

- 2023 Study Section reviewer for National Cancer Institute (NCI) Cannabis and Cancer RFA
- 2023 Study Section reviewer for National Cancer Institute (NCI) Clinical and Translational Cancer Research
- 2022 UNC Lineberger Comprehensive Cancer Center 2022 Pilot Grant Program in Population Sciences
- 2020 National Institutes of Health, Health Services Organization and Delivery (HSOD) Study Section Early Career Reviewer (ECR)
- 2019 UCSD Altman Clinical and Translational Research Institute
- 2017 Prostate Cancer Canada

# **Academic Conference Planning**

2021 - 2022	Program Committee (member), American Society of Preventive Oncology (ASPO) 2022 Annual
	Meeting, Tucson, AZ
2021	Contributed Session Chair, Society for Epidemiology Research annual meeting (virtual)
2019 - 2020	Program Committee (member), American Statistical Association (ASA) 2020 International Conference
	on Health Policy Statistics, San Diego, CA

# Service to the University, School and Department

2023	Faculty Mentor, Stanford University Center for Asian Health Research and Education Summer Research
	Immersion (CARE-SRI)
2022 -	Graduate Studies Committee (member), Department of Epidemiology, UNC-Chapel Hill
2021	Social Epidemiology Faculty search (chair), SDSU School of Public Health
2020 - 2021	Institutional Review Board (member), San Diego State University
2020	Faculty Mentor, Stanford University Center for Asian Health Research and Education Summer Research
	Immersion (CARE-SRI)
2019	Healthy Aging Faculty search (member), SDSU School of Public Health
2019 - 2021	Scientific Planning committee (member), SDSU Annual Student Research Symposium
2018 - 2021	Qualifying Exam committee (member), SDSU/UCSD Joint PhD in Epidemiology
2018	Strategic Planning for Teaching and Mentorship (chair), SDSU School of Public Health
2017	Faculty Mentor, San Diego Big Data Hackathon
2017 - 2021	Student Affairs committee (member), SDSU School of Public Health
2016 - 2021	Faculty Judge, San Diego Epidemiology Exchange
2016 - 2021	Admissions committee (member), SDSU/UCSD Joint PhD in Epidemiology
2016 - 2021	Admissions committee (member), SDSU MPH in Epidemiology
2016 - 2021	Faculty mentor, SDSU/UCSD Cancer Center Partnership Scholars Program
2016	Faculty Judge, San Diego State University Student Research Symposium
2016	Cancer Epidemiology faculty search (member), SDSU School of Public Health
2016	General Epidemiology faculty search (member), SDSU School of Public Health

# **Service to the Community**

2020	Volunteer New Case Investigator, San Diego County COVID-19 Response Team
2011 - 2013	Patient Services Volunteer, Cancer Support Community of Los Angeles