# Charles E. Gaber, PhD, MPH

Assistant Professor Retzky College of Pharmacy, University of Illinois Chicago

## **EDUCATION**

University of North Carolina	Chapel Hill, NC
PhD, Epidemiology	2022
University of Michigan	Ann Arbor, MI
MPH, Epidemiology	2015
Tulane University	New Orleans, LA
BSPH, Public Health & Economics	2013
EXPERIENCE	
Assistant Professor	2023-Present
Department of Pharmacy Systems, Outcomes & Policy, Retzky College of Pharmacy, University of Illinois Chicago	
Visiting Research Assistant Professor	2022-2023
Department of Pharmacy Systems, Outcomes & Policy, Retzky College of Pharmacy, University of Illinois Chicago	
NIH T32 Predoctoral Trainee	2019-2022
University of North Carolina	
Pharmacoepidemiology Intern	Summer 2020
RTI Health Solutions	
Database Manager	2017-2019
Department of Surgery, University of North Carolina	
Research Analyst	2015-2017
Arbor Research Collaborative for Health	
Collaborating Research Assistant	2014
Karmanos Cancer Institute, Wayne State University	
Graduate Research Assistant	2013-2015
Department of Epidemiology, University of Michigan	
Epidemiology Intern	Summer 2014
Marshfield Clinic Research Institute	
Research Analyst	Summer 2013
Searle Center, Northwestern University	

## RESEARCH FUNDING **EXTRAMURAL** AbbVie-UIC Fellowship in Pharmacovigilance & Drug Safety 2024-2026 AbbVie-UIC Fellowship in Pharmacovigilance & Drug Safety 2023-2025 **INTRAMURAL KL2 CATS Affiliate Scholar (PI: Gaber)** 2024-2026 My Affiliate Scholar position was funded by the University of Illinois Cancer Center (UICC). I receive salary support for 75% of my time and \$25,000 in research-related expenses. My project focuses on predictive individualized treatment effects of therapeutics used in metastatic prostate cancer. NIH T32 DK007634 Pre-Doctoral Trainee (PI: Sandler) 2019-2022 Goal: Train pre-doctoral and post-doctoral candidates to improve the understanding of the magnitude, etiology, and impact of digestive diseases, and to assume leadership roles in GI epidemiology and outcomes research. Role: Pre-doctoral trainee. **TEACHING PSOP 506 – Independent Study** University of Illinois Chicago Fall 2022-Present Instructor **EPID 766 – Epidemiologic Research Using Healthcare Databases University of North Carolina Chapel Hill** Spring 2021 **Teaching Assistant** EPID 718 - Analytic Methods in Observational Epidemiology **University of North Carolina Chapel Hill** Fall 2019 **Teaching Assistant** MENTORING PhD Advisor (2) Owen Jokinen 2024-Present Lubna Hassan 2023-Present PhD Preliminary Exam Committee Member (5) Ebere Okpara 2024 Victoria Kulbokas 2024 **Jyotirmoy Sarker** 2023 Abdullah Abdelaziz 2023

Kent Hanson

Huiwen Deng

Kent Hanson

PhD Dissertation Committee Member (2)

2022

2024

2024

Masters Thesis Committee Member (2)	
Kaite Carlson Abdullah Abdelaziz	2024 2023
PharmD HEOR Concentration Mentor (1)	
Alexis Rhodes	2024
Medical Resident Research Preceptor	
Arooj Mohammed	2024-2025
Visiting PhD Student Mentor	
Ida Ravnsbæk Johannsen Department of Clinical Medicine, Aarhus University, Aarhus, Denmark	2024
SERVICE	
SERVICE TO DEPARTMENT	
Qualifying Exam Committee Chair	2024
Qualifying Exam Committee Member	2023
SERVICE TO COLLEGE	
Strategic Plan - Research Subcommittee Member	2024
Strategic Plan Ad-Hoc Committee	
SERVICE TO UNIVERSITY	
Scientific Abstract and Poster Judge	
Dr. Gary Kruh Cancer Research Symposium & Poster Competition	2024
Data Safety Monitoring Board Member	
ACTION, A Lifestyle Physical Activity Intervention for Minority Women with Asthma	2023-Present
SERVICE TO FIELD	
Manuscript Reviewer	
Pharmacoepidemiology & Drug Safety Journal of Clinical Oncology American Journal of Epidemiology Journal of Geriatric Oncology Cancer Causes and Control Epidemiology European Urology and Oncology Europe Open Research	
Presentation Award Judge	
Midwest Social and Administrative Pharmacy Conference	2022

## HONORS & AWARDS

Rebecca James Baker Scholarship in Epidemiology	2022
Department of Epidemiology, UNC Chapel Hill	
Scientific Poster Competition Finalist	2020
Center for Gastrointestinal Biology and Disease, UNC Chapel Hill	
Deans Scholarship	2013-2015
University of Michigan School of Public Health	
Deans Mentored Research Award	2013-2015
University of Michigan School of Public Health	
Paul Tulane Award for Excellence in Economics	2013
Tulane University	
Presidential Scholarship	2009-2013
Tulane University	
Omicron Delta Epsilon	2011
National Economics Honor Society	

## PROFESSIONAL MEMBERSHIPS

American Association of Colleges of Pharmacy (AACP)	2023-Present
Cancer and Aging Research Group (CARG)	2022-Present
American Society of Clinical Oncology (ASCO)	2021-Present
International Society for Pharmacoepidemiology (ISPE)	2018-Present
Society for Epidemiologic Research (SER)	2017-Present

## INVITED PRESENTATIONS

#### **SEMINARS**

#### **PSOP Research Seminar**

February 23, 2023

"Using the Clone Censor Weight Strategy to Improve Trial Emulation in Observational Oncology Research: An Application in Esophageal Cancer"

#### **Health Services Research Core, Cancer and Aging Research Group**

February 11, 2022

"The Comparative Effectiveness of Trimodal Therapy Versus Definitive Chemoradiation in Older Adults with Locally Advanced Esophageal Cancer"

#### **PSOP Research Seminar**

October 14, 2021

"Estimating the Effects of Drug Exposure on the Burden of Recurrent Events in Pharmacoepidemiologic Studies"

## **Center for Gastrointestinal Biology and Disease Research Seminar**

August 26, 2021

"Using Administrative Claims Data and Pharmacoepidemiologic Principles to Advance Esophageal Disease Research"

#### **Digestive Disease Epidemiology Seminar**

January 27, 2021

"Group-Based Trajectory Models: An Application to Proton Pump Inhibitor Adherence"

#### **Digestive Disease Epidemiology Seminar**

January 22, 2020

"Using Weights in Observational Epidemiology"

#### **COURSE GUEST LECTURES**

## University of North Carolina EPID 771 - Cancer Epidemiology Survivorship and Outcomes

April 5, 2022

"Cancer Outcomes Research Using the National Cancer Database"

#### **CONFERENCE SYMPOSIA**

#### **UNC Center for Pharmacoepidemiology Methods Symposium**

April 12, 2024

"Analyzing Recurrent Events in Pharmacoepidemiology"0

#### International Society for Pharmacoepidemiology (ISPE) Annual Conference

August 27, 2022

"Cloning, Censoring, and Weighting – Oh My! Applications of Target Trial Emulation for Evaluating Cancer Interventions When Study Eligibility, Intervention Initiation, and Start of Follow-up Are Not Aligned"

#### **WEBINARS & WORKSHOPS**

COTA Healthcare May 18, 2023

"Applying Real-World Data for Oncology Research: Observational Study Design and Analytic Methods"

## **PUBLICATIONS**

- Xue AZ, Anderson C, Cotton CC, <u>Gaber CE</u>, Feltner C, Dellon ES. Prevalence and Costs of Esophageal Strictures in the United States. *Clinical Gastroenterology and Hepatology*. 2024;22(9):1821-1829.e4. doi:10.1016/j.cgh.2024.03.026
- 2. Kirkegård J, <u>Gaber CE</u>, Heide-Jørgensen U, et al. Effect of surgery versus chemotherapy in pancreatic cancer patients: a target trial emulation. *JNCI: Journal of the National Cancer Institute*. Published online February 4, 2024:djae024. doi:10.1093/jnci/djae024
- 3. <u>Gaber CE</u>, Sarker J, Abdelaziz AI, et al. Pathologic complete response in patients with esophageal cancer receiving neoadjuvant chemotherapy or chemoradiation: A systematic review and meta-analysis. *Cancer Medicine*. 2024;13(4):e7076. doi:10.1002/cam4.7076
- 4. **Gaber CE**, Hanson KA, Kim S, Lund JL, Lee TA, Murray EJ. The Clone-Censor-Weight Method in Pharmacoepidemiologic Research: Foundations and Methodological Implementation. *Curr Epidemiol Rep.* Published online February 17, 2024. doi:10.1007/s40471-024-00346-2

- 5. **Gaber CE**, Abdelaziz AI, Sarker J, et al. Adherence to prescription proton pump inhibitor therapy amongst individuals diagnosed with Barrett's esophagus. *Pharmacoepidemiology and Drug*. 2024;33(2):e5760. doi:10.1002/pds.5760
- 6. Su IH, Lund JL, <u>Gaber CE</u>, Sanoff HK, Strassle PD, Duchesneau ED. Regarding "Neoadjuvant Versus Adjuvant Chemotherapy for Resectable Metastatic Colon Cancer in Non-academic and Academic Programs." *The Oncologist*. 2023;28(7):e588-e589. doi:10.1093/oncolo/oyad130
- Smith JS, Vaz OM, <u>Gaber CE</u>, et al. Recruitment strategies and HPV self-collection return rates for underscreened women for cervical cancer prevention. Bowles EJA, ed. *PLoS ONE*. 2023;18(3):e0280638. doi:10.1371/journal.pone.0280638
- 8. **Gaber CE**, Edwards JK, Lund JL, Peery AF, Richardson DB, Kinlaw AC. Inverse Probability Weighting to Estimate Exposure Effects on the Burden of Recurrent Outcomes in the Presence of Competing Events. *American Journal of Epidemiology*. 2023;192(5):830-839. doi:10.1093/aje/kwad031
- Abdelaziz AI, Hanson KA, <u>Gaber CE</u>, Lee TA. Optimizing large real-world data analysis with parquet files in R: A step-by-step tutorial. *Pharmacoepidemiology and Drug*. Published online November 20, 2023:pds.5728. doi:10.1002/pds.5728
- <u>Gaber CE</u>, Shaheen NJ, Sandler RS, et al. Patterns of care amongst older adults diagnosed with locally advanced esophageal cancer: A cohort study. *Journal of Geriatric Oncology*. 2022;13(8):1178-1187. doi:10.1016/j.jgo.2022.08.009
- 11. <u>Gaber CE</u>, Eluri S, Cotton CC, et al. Epidemiologic and Economic Burden of Achalasia in the United States. *Clinical Gastroenterology and Hepatology*. 2022;20(2):342-352.e5. doi:10.1016/j.cgh.2021.02.035
- Gaber CE, Cotton CC, Eluri S, Lund JL, Farrell TM, Dellon ES. Autoimmune and viral risk factors are associated with achalasia: A case-control study. *Neurogastroenterology Motil*. 2022;34(7):e14312. doi:10.1111/nmo.14312
- Gaber CE, Shaheen NJ, Edwards JK, et al. Trimodality Therapy vs Definitive Chemoradiation in Older Adults With Locally Advanced Esophageal Cancer. *JNCI Cancer Spectrum*. 2022;6(6):pkac069. doi:10.1093/jncics/pkac069
- Gaber CE, Kinlaw AC, Edwards JK, et al. Comparative Effectiveness and Harms of Antibiotics for Outpatient Diverticulitis: Two Nationwide Cohort Studies. *Ann Intern Med*. 2021;174(6):737-746. doi:10.7326/M20-6315
- Schlottmann F, <u>Gaber CE</u>, Strassle PD, Charles AG, Patti MG. Health care disparities in colorectal and esophageal cancer. *The American Journal of Surgery*. 2020;220(2):415-420. doi:10.1016/j.amjsurg.2019.12.025
- 16. Schlottmann F, <u>Gaber CE</u>, Strassle PD, Herbella FAM, Molena D, Patti MG. Disparities in esophageal cancer: less treatment, less surgical resection, and poorer survival in disadvantaged patients. *Diseases of the Esophagus*. 2020;33(2):doz045. doi:10.1093/dote/doz045
- 17. Perez AJ, Strassle PD, Sadava EE, <u>Gaber CE</u>, Schlottmann F. Nationwide Analysis of Inpatient Laparoscopic Versus Open Inguinal Hernia Repair. *Journal of Laparoendoscopic & Advanced Surgical Techniques*. 2020;30(3):292-298. doi:10.1089/lap.2019.0656

- 18. Louie RJ, <u>Gaber CE</u>, Strassle PD, Gallagher KK, Downs-Canner SM, Ollila DW. Trends in Surgical Axillary Management in Early Stage Breast Cancer in Elderly Women: Continued Over-Treatment. *Ann Surg Oncol*. 2020;27(9):3426-3433. doi:10.1245/s10434-020-08388-8
- 19. Kirkegård J, <u>Gaber CE</u>, Lund JL, et al. Acute pancreatitis as an early marker of pancreatic cancer and cancer stage, treatment, and prognosis. *Cancer Epidemiology*. 2020;64:101647. doi:10.1016/j.canep.2019.101647
- 20. Downs-Canner SM, <u>Gaber CE</u>, Louie RJ, et al. Nodal positivity decreases with age in women with early-stage, hormone receptor–positive breast cancer. *Cancer*. 2020;126(6):1193-1201. doi:10.1002/cncr.32668
- 21. Bryant MK, Ward C, <u>Gaber CE</u>, Strassle PD, Ollila DW, Laks S. Decreased survival and increased recurrence in Merkel cell carcinoma significantly linked with immunosuppression. *Journal of Surgical Oncology*. 2020;122(4):653-659. doi:10.1002/jso.26048
- 22. Schlottmann F, <u>Gaber CE</u>, Strassle PD, Patti MG, Charles AG. Cholecystectomy Vs. Cholecystostomy for the Management of Acute Cholecystitis in Elderly Patients. *J Gastrointest Surg*. 2019;23(3):503-509. doi:10.1007/s11605-018-3863-1
- 23. Mukhopadhyay P, Pearson J, Cogan C, <u>Gaber CE</u>, Gillespie BW, Turenne M. Does One Size Fit All With the Effects of Payment Reform? Dialysis Facility Payer Mix and Anemia Management Under the Expanded Medicare Prospective Payment System. *Medical Care*. 2019;57(8):584-591. doi:10.1097/MLR.000000000001151
- 24. Schlottmann F, Strassle PD, <u>Gaber CE</u>, Patti MG. Stage III esophageal adenocarcinoma: definitive chemoradiation vs. chemoradiation plus surgery. *Updates Surg*. 2018;70(4):423-426. doi:10.1007/s13304-018-0541-5
- 25. Greenlee RT, Go AS, Peterson PN, <u>et al</u>. Device Therapies Among Patients Receiving Primary Prevention Implantable Cardioverter-Defibrillators in the Cardiovascular Research Network. *JAHA*. 2018;7(7):e008292. doi:10.1161/JAHA.117.008292
- 26. Saran R, Robinson B, Abbott KC, <u>et al</u>. US Renal Data System 2016 Annual Data Report: Epidemiology of Kidney Disease in the United States. *American Journal of Kidney Diseases*. 2017;69(3):A7-A8. doi:10.1053/j.ajkd.2016.12.004
- 27. **Gaber CE**, Meza R, Ruterbusch JJ, Cote ML. Endometrial Cancer Trends by Race and Histology in the USA: Projecting the Number of New Cases from 2015 to 2040. *J Racial and Ethnic Health Disparities*. 2017;4(5):895-903. doi:10.1007/s40615-016-0292-2
- 28. Lau YK, Caverly TJ, Cao P, <u>et al</u>. Evaluation of a Personalized, Web-Based Decision Aid for Lung Cancer Screening. *American Journal of Preventive Medicine*. 2015;49(6):e125-e129. doi:10.1016/j.amepre.2015.07.027

## CONFERENCE ABSTRACTS

**Oral Presentations** 

- 1. <u>Gaber CE</u>. Evaluating Heterogeneity in the Comparative Effectiveness of Abiraterone and Enzalutamide on Skeletal-Related Events Amongst older Adult Men with Metastatic Castration Resistant Prostate Cancer. *International Society of Geriatric Oncology (SIOG) Annual Meeting,* October 2024.
- 2. **Gaber CE**, Okpara E, Abdelaziz AI, et al. Comparative Effectiveness and Cardiovascular Safety of Enzalutamide vs. Abiraterone in Metastatic Castration-Resistant Prostate Cancer. *International Society of Pharmacoepidemiology (ISPE)* Annual Meeting. August 2024.

#### **Poster Presentations**

- 1. **Gaber CE**, Okpara E, Abdelaziz AI, et al. Real-world comparative effectiveness and cardiovascular safety of abiraterone versus enzalutamide amongst older men diagnosed with metastatic castration-resistant prostate cancer. *American Society of Clinical Oncology (ASCO)* Annual Meeting, May 2024.
- 2. **Gaber CE**, Sarker J, Abdelaziz AI, et al. Pathologic complete response among patients with esophageal cancer receiving neoadjuvant chemotherapy or chemoradiation: A meta-analysis. *ASCO Gastrointestinal Cancers Symposium*, January 2024.
- 3. **Gaber CE**, Shaheen NJ, Edwards JK, Sandler RS, Nichols HB, Sanoff HK, Lund JL. Patterns of Care Among Older Adults Diagnosed with Locally Advanced Esophageal Cancer Eligible for Trimodal Therapy. Poster presentation at the 38th *International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE*), August 2022.
- 4. **Gaber CE**, Shaheen NJ, Edwards JK, Sandler RS, Nichols HB, Sanoff HK, Lund JL. The Comparative Effectiveness of Trimodal Therapy Versus Definitive Chemoradiation in Older Adults with Locally Advanced Esophageal Cancer. Poster presentation at the 38th *International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE)*, August 2022.
- 5. **Gaber CE**, Shaheen NJ, Edwards JK, Sandler RS, Nichols HB, Sanoff HK, Lund JL. Comparative effectiveness of trimodal therapy versus definitive chemoradiation in older adults with locally advanced esophageal cancer. Online publication abstract for *American Society of Clinical Oncology (ASCO)*, 2022.
- 6. **Gaber CE**, Edwards JK, Lund JL, Peery AF, Richardson DB, Kinlaw AC. Inverse probability weighting to estimate exposure effects on the burden of recurrent outcomes in the presence of competing events. Poster presentation at *Society of Epidemiologic Research (SER)*, June 2022.
- 7. **Gaber CE**, Lund JL, Cotton CC, Eluri S, Dellon ES, Shaheen NJ. Patterns and Predictors of Adherence to Prescription Proton Pump Inhibitor Therapy in a Population of Commercially Insured Barrett's Esophagus Patients. Poster presentation at *Digestive Disease Week (DDW)*, May 2022.
- 8. Layton JB, Ziemiecki R, Danysh H, <u>Gaber CE</u>, Gilsenan A, Johannes C. Graphical Representation of an Array of Quantitative Bias Analysis Scenarios for Differential Outcome Misclassification. Oral presentation at the 37<sup>th</sup> *International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE)*, August 2021.
- 9. **Gaber CE**, Cotton CC, Eluri S, Strassle PD, Farrell TM, Lund JL, Dellon ES. Associations Between Autoimmune and Viral Risk Factors for Achalasia: A Case-Control Study. Poster presentation at *Digestive Disease Week (DDW)*, May 2021.

- <u>Gaber CE</u>, Kinlaw AC, Edwards JK, Lund JL, Sandler RS. Effect of Amoxicillin-clavulanate Versus Metronidazole and a Fluoroquinolone on Hospital Admission Risk in Outpatients with Diverticulitis in the United States. Oral presentation at *Digestive Disease Week (DDW)*, May 2020.
- 11. **Gaber CE**, Eluri S, Strassle PD, Farrell TM, Lund JL, Dellon ES. Prevalence of Achalasia in the Medicare Population. Poster presentation at *Digestive Disease Week (DDW)*, May 2020.
- 12. Merlo A, Strassle PD, <u>Gaber CE</u>, Mody GN. Time to Malignant Pleural Effusion by Cancer Type and Stage at Presentation-An Analysis of the Surveillance, Epidemiology and End Results (SEER) Medicare Database. Abstract accepted at the *Scientific Forum of the American College of Surgeons*, 2020.
- Baldwin X, <u>Gaber CE</u>, Strassle PD, Maduekwe. Outcomes of Surgical Resection for Metastatic Cholangiocarcinoma. Presented at *Society of Black Academic Surgeons (SBAS)*, New York City NY, April 2019.
- 14. Louie R, Downs-Canner S, <u>Gaber CE</u>, Strassle PD, Gallahger K, Ollila D. Trends in Surgical Axillary Management in Early-Stage Breast Cancer in Elderly Women: Continued Overtreatment? Poster presentation at *Society of Surgical Oncology (SSO)*, San Diego, CA, March 2019.
- 15. Downs-Canner S, <u>Gaber CE</u>, Strassle PD, Louie R, Gallagher K, Ollila D. Nodal-Positivity Decreases with Age in Women with Early Hormone Receptor-Positive Breast Cancer. Poster presentation at *Society of Surgical Oncology (SSO)*, San Diego, CA, March 2019.
- Bryant M, Laks S, Strassle PD, <u>Gaber CE</u>, Kim L. Long-term Outcomes After Adrenalectomy for Solid Tumor Metastases: A Single-Center Perspective. Poster presentation at *Society of Surgical Oncology* (SSO), San Diego, CA, March 2019.
- 17. Jadi J, Nayyar A, <u>Gaber CE</u>, Strassle PD, Gerbe D, Toledo A, Serrano P. Predicted End-Stage Renal Disease Risk in Living Kidney Donors at an Academic Medical Center. Poster presentation at American Surgical Congress (ASC), Houston, TX, February 2019.
- 18. Reid TD, Mikhaylov-Schrank Y, **Gaber CE**, Strassle PD, Maine R, Higginson SM, Charles AG, Beckman C, Cairns BA, Raff L. The Feasibility of Extracorporeal Membrane Oxygenation (ECMO) in Burn and Inhalation Injury Patients. Poster presentation at the 14th Annual *Academic Surgical Congress (ASC)*, Houston TX, February 2019.
- 19. Schlottmann F, **Gaber CE**, Strassle PD, et al. Disparities in Stage at Diagnosis among Screening and Non-screening Mandated Gastrointestinal Cancers. Poster presentation at *American College of Surgeons* (ACS) Clinical Congress, Boston, MA, October 2018.
- 20. Schlottmann F, <u>Gaber CE</u>, Strassle PD, et al. Nationwide Analysis of Laparoscopic versus Open Inguinal Hernia Repair. Poster presentation at American College of Surgeons (ACS) Clinical Congress, Boston, MA, October 2018.
- 21. Yohann A, Reid T, Strassle PD, **Gaber CE**, Charles A, Maine R. Risk Factors for Inpatient Mortality among Fall Patients in sub-Saharan Africa. Poster presentation at the American College of Surgeons (ACS) Clinical Congress, Boston, MA, October 2018.

- 22. Schlottmann F, <u>Gaber CE</u>, Strassle PD, et al. Comparative Analysis of Cholecystectomy vs. Cholecystostomy for the Management of Acute Cholecystitis in Elderly Patients. Poster presentation at Digestive Disease Week (DDW), Washington, DC, June 2018.
- 23. Williams F, <u>Gaber CE</u>, Strassle P, et al. Trends in Pediatric Inpatient Burns: A Single Center Study. Poster presentation at the *American Burn Association (ABA)* 50th Annual meeting, Chicago, IL, April 2018.
- 24. Orgel RM, Strassle PD, <u>Gaber CE</u>, Caranasos T, Vavalle J, Rossi J. National Trends in Length of Stay and Discharge Disposition in 'Bundled Payment' CABG and AMI/PCI Patients: A National Inpatient Sample Analysis." Poster presentation at the *American College of Cardiology (ACC) 67th Annual Scientific Session & Expo*, Orlando FL, March 2018.