

Meghan K. Gerety

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EDUCATION

University of Pennsylvania, Graduate Group in Epidemiology and Biostatistics Philadelphia, PA
PhD, Biostatistics [GPA: 4.0/4.0] Expected May 2028

- Completing dissertation work on methods for causal inference with complex longitudinal data. Advised by Nicholas J. Seewald, PhD

MS, Biostatistics [GPA: 4.0/4.0] May 2025

- Thesis: *Long-Term Comparative Effectiveness of Rituximab vs. Calcineurin Inhibitors for the Treatment of Membranous Nephropathy: A Retrospective Matched Cohort Study*. Advised by Jarce Zee, PhD

University of Virginia, College and Graduate School of Arts and Sciences Charlottesville, VA
MS, Statistics [GPA: 4.0/4.0] May 2023

BA, Double Major, Statistics and Global Public Health [GPA: 3.97/4.0] May 2022

RESEARCH EXPERIENCE

University of Virginia School of Medicine Charlottesville, VA
Graduate Research Assistant Sept. 2022 - Aug. 2023

Supervisor: Jennie Ma, PhD, Professor of Biostatistics

- Modeled anemia status and hemoglobin concentration in a cohort of pregnant women from Bangladesh
- Studied associations between first-trimester inflammatory markers and preterm delivery
- Utilized results from reverse transcriptase quantitative polymerase chain reaction analyses of maternal stool samples to study relationships between enteric pathogens, inflammatory markers, and preterm delivery

National Institute of Environmental Health Sciences, National Institutes of Health Durham, NC
Epidemiology Research Intern June - Aug. 2022

Supervisor: Donna Baird, PhD, Senior Investigator

- Investigated associations between scarring susceptibility and uterine fibroid development, which share similar fibrotic tissue structures, in a prospective cohort study
- Modeled fibroid incidence with Cox proportional hazards regression and fibroid growth with linear mixed regression

University of Virginia Charlottesville, VA
Undergraduate Research Assistant Feb. 2021 - May 2022

Supervisor: Robert Grainger, PhD, W. L. Lyons Brown Professor of Biology

- Analyzed single-cell RNA sequencing data in R using Seurat and in Python using Scanpy for the Grainger Lab, a developmental biology lab investigating the genes involved in the determination of lens and retina cells
- Compared the gene expression profiles of wildtype and mutant *Xenopus* embryos
- Spearheaded the recruitment, selection, and training of three new research assistants

MaineHealth Institute for Research Portland, ME
Biostatistics Research Intern June - Aug. 2021

Supervisor: Christine Lary, PhD, Senior Biostatistician and Faculty Scientist I

- Utilized transcriptomic data to explore the role of alpha-synuclein in both bone loss and dementia
- Conducted a weighted gene co-expression network analysis (WGCNA) to determine genes correlated with SNCA (gene that encodes alpha-synuclein) and investigate associations with bone loss and dementia phenotypes

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- Assessed associations between baseline bone mineral density as well as loss in bone mineral density with time to dementia diagnosis using mixed-effects Cox models

TEACHING EXPERIENCE

University of Pennsylvania Philadelphia, PA

Teaching Assistant

BSTA 6700: Programming and Computation for Biomedical Data Science Jan. - May 2026

BSTA 6300: Statistical Methods and Data Analysis I Aug. - Dec. 2024

- Held weekly office hours to clarify concepts and discuss applying these concepts using R and Python
- Evaluated and administered feedback on homework assignments

University of Virginia

Charlottesville, VA

Undergraduate Teaching Assistant

STAT 3220 Introduction to Regression Analysis Jan. 2021 - May 2022

STAT 3080 From Data to Knowledge Aug. 2021 - May 2022

- Held weekly office hours to clarify concepts and review SAS and R syntax
- Guided students through in-class lab assignments and responded to questions in real-time
- Evaluated and administered feedback on lab assignments, homework assignments, and final projects

SERVICE AND LEADERSHIP

Student Member, Biostatistics Qualifying Exam Student Support Committee Nov. 2025 -Present
Graduate Group in Epidemiology and Biostatistics, University of Pennsylvania

Student Member, Biostatistics Curriculum Committee Aug. 2025 - Present
Graduate Group in Epidemiology and Biostatistics, University of Pennsylvania

Student Buddy, GGEB Recruitment Day Winter of 2024, 2025, 2026
Graduate Group in Epidemiology and Biostatistics, University of Pennsylvania

- Student Leader* for GGEB Recruitment Day, 2026

Echols Ambassador, Echols Scholars Program Oct. 2019 - May 2023
University of Virginia

Inaugural Co-Director, Data Science Agency Oct. 2020 - April 2022
University of Virginia Student Council

PRESENTATIONS

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- “Target Trial Emulation for Comparing Repeated Treatment Schedules: Pitfalls and Key Decisions”, Joint Statistical Meetings (JSM). Indianapolis, IN, 2026.
 - “Tradeoffs of Target Trial Emulation for Comparing Repeated Treatment Schedules”, ENAR Spring Meeting. Indianapolis, IN, 2026.
 - “Long-term Comparative Effectiveness of Rituximab vs. Calcineurin Inhibitors for Membranous Nephropathy: A Matched Cohort Study in CureGN,” CureGN Consortium-wide Meeting. Virtual, June 2025. *Invited*.

POSTERS

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- “Long-Term Comparative Effectiveness of Rituximab vs. Calcineurin Inhibitors for the Treatment of Membranous Nephropathy,” American Society of Nephrology (ASN) Kidney Week. Houston, TX, Nov. 2025.

2. “Matched Design with Re-entry and Missingness for Comparative Effectiveness in Membranous Nephropathy,” Joint Statistical Meetings (JSM). Nashville, TN, Aug. 2025.
3. “Long-Term Comparative Effectiveness of Rituximab vs. Calcineurin Inhibitors for the Treatment of Membranous Nephropathy,” DBEI Research Day. University of Pennsylvania, Philadelphia, PA, Feb. 2025.
 - One of three best poster award recipients
4. “Keloids, Hypertrophic Scars, and Uterine Fibroid Development: A Prospective Ultrasound Study of Black/African American Women,” NIH Summer Poster Day. National Institutes of Health, Virtual, Aug. 2022.
5. “A Systematic Review of Oral Contraceptive Use as a Risk Factor for Gallbladder Disease in Women Across Regions of High Prevalence,” Global Studies Symposium. University of Virginia, Charlottesville, VA, April 2022.
6. “Bone Loss Preceding Dementia and the Role of Alpha-Synuclein,” Summer Student Research Program Poster Day. Maine Medical Center, Virtual, Aug. 2021.

PUBLICATIONS (*DENOTES CO-FIRST AUTHORSHIP)

Peer-Reviewed Articles

1. **Gerety MK**, Charu V, Simmons M, Seewald NJ, Glenn D, Schaubel DE, Smith AR, Chen D, Laurin LP, Denburg M, Holzman L, Beck L, Mariani LH, and Zee J (2026). Real-World Long-term Comparisons of Rituximab vs. Calcineurin Inhibitors for Membranous Nephropathy in the Cure Glomerulonephropathy Study” (In Press). *Kidney360*.
2. **Gerety MK***, Kim DK*, Carpenter RM, Ma JZ, Chisholm C, Taniuchi M, Islam MO, Pholwat S, Platts-Mills JA, Siraj MS, Billah SM, Haque R, Petri WA (2024). Systemic inflammation, enteropathogenic *E. Coli*, and micronutrient insufficiencies in the first trimester as possible predictors of preterm birth in rural Bangladesh: a prospective study. *BMC Pregnancy and Childbirth* 24(1), 82.
3. Lary CW, Ghatan S, **Gerety M**, Hinton A, Nagarajan A, Rosen C, Ross RD, Bennett DA, DeStefano AL, Ikram MA, Rivadeneira F, Kiel DP, Seshadri S, & Beiser A (2024). Bone mineral density and the risk of incident dementia: A meta-analysis. *Journal of the American Geriatrics Society*, 72(1), 194–200.
4. Langton CR, **Gerety M**, Harmon QE, Baird DD (2023). Keloids, hypertrophic scars, and uterine fibroid development: a prospective ultrasound study of Black/African American women. *F&S Science*. 4(2), 172-180.

Under Review

1. Carpenter RM, **Gerety MK**, Ma JZ, Kabir MM, Hossain B, Siraj S, Billah SM, Chisholm C, Haque R, Petri WA (2025). Inflammation and low vitamin a stores along with iron deficiency drive anemia rates among pregnant women in rural Bangladesh: a cross-sectional study. Under Revision for *BMC Pregnancy and Childbirth*.

In Preparation

1. Liu X, **Gerety MK**, Wyatt N, Smith AR, Mariani LH, Zee J. Assessing Proteinuria as a Mediator of Treatment Effects of Calcineurin Inhibitors vs. Rituximab for Membranous Nephropathy.

PROFESSIONAL MEMBERSHIPS

- International Biometrics Society, Eastern North American Region (ENAR) Oct. 2025 - Present
- American Society for Nephrology (ASN) Aug. 2025 - Present
- American Statistical Association (ASA) Oct. 2024 - Present

HONORS AND AWARDS

- University of Virginia Dean's List Aug. 2019 - May 2022
- University of Virginia Echols Scholar Aug. 2019 - May 2022
 - Awarded to top 5% of incoming class at the University of Virginia
- University of Virginia Orange Stole Award May 2022
 - Awarded to University of Virginia undergraduates who complete their degree in less than 4 years

SKILLS

Technical skills: proficient in R, SAS, & Python; GitHub; remote desktop software; LaTeX; cluster computing; experience with SQL, Java, & C++;

Interpersonal skills: written and oral proficiency in Spanish