Elizabeth Anne Sigworth **Westerberg**

🎓 EDUCATION

2022 | 2016

Vanderbilt University
Ph.D. Biostatistics (anticipated Nov. 2022) 📍 Nashville, TN, USA

2016 | 2012

Saint Olaf College
B.A. Mathematics, concentration Statistics 📍 Northfield, MN, USA

🖥 EXPERIENCE

2022 | 2016

Biostatistics Ph.D. Candidate
Dept. Biostatistics, Vanderbilt Univ. 📍 Nashville, TN, USA
- Developed Bayesian meta-analytic method guiding medication switching, focused on chemotherapy
- Extensive experience with survival analysis, particularly time-dependent coefficient effects
- Completed coursework in mathematics, probability theory, computing (R and Python), and statistical modeling
- Served as teaching assistant for Regression Analysis, Survival Analysis, and Advanced Probability courses

2022 | 2018

Medical Economics Analyst
Wayspring (formerly axialHealthcare) 📍 Nashville, TN, USA
- Performed savings analyses for clients with sensitive data (medical claims and member demographics)
- Collaborated across departments, authored executive reports, and presented in client-facing meetings
- Utilized time-series trend forecasting, risk-adjustment, longitudinal analysis, and propensity-score designs in reporting
- Coded automated in-house implementation of risk adjustment methodology in R and SQL
- Began as intern in June 2018, with responsibilities shifted to part-time analyst level in May 2020

2022 | 2018

Graduate Research Assistant
Dept. Biomedical Informatics, Vanderbilt Univ. 📍 Nashville, TN, USA
- Focused on oncology data using clinical trial data, electronic health records, and genetic data
- Performed meta- and network analyses in R on clinical trial publishing and co-authorship trends over time
- Collaborated with clinicians for analyses, manuscript publication, and conference presentations
- Dedicated effort towards multisite NIH grant 1U24CA194215

2021 | 2020

Neuroscience Collaborator
Vanderbilt Brain Institute 📍 Nashville, TN, USA
- Devised statistical modeling strategies for cognitive neurophysiological datasets via Bayesian methods
- Coauthored high impact manuscript in multidisciplinary journal (see PNAS 2021 below)
- Provided ongoing statistical consultation and education to groups at the Vanderbilt Brain Institute

PERSONAL INFO

✉ elizabeth@westerberg.science

🆔 orcid.org/0000-0002-0865-0265

🚶 Family status: married (née Sigworth)

🌐 Nationality: American

🎂 Date of birth: 19-09-1993

SKILLS

Programming

R (dplyr, ggplot2, RStan, JAGS, etc.), Python (numpy, pandas, scikit-learn), SQL, Stata, Beamer, SLURM, bash, Markdown, LaTeX

Statistical Analysis

Bayesian analyses, descriptive statistics, EHRs, hypothesis testing, longitudinal analyses, meta-analyses, network analyses, regression modeling strategies, survival analyses, simulation studies

Data Tools

RMarkdown (reproducible reporting), Tableau (interactive dashboards), Jupyter, Excel

Development Tools

GitHub, RStudio Server Pro, JIRA, Confluence

Data Platforms

Exasol, Google BigQuery, PostgreSQL, Redshift

Last updated: 29 August 2022

Graduate Student Association Officer
Dept. Biostatistics, Vanderbilt Univ.   📍 Nashville, TN, USA

2021
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2016

• Organized trainee events, invited guest speakers, and liaised with faculty and staff on behalf of students
• Acted as Secretary from August 2018 - May 2019 then Vice President August 2019 - May 2021

📄 PUBLICATIONS

2022

Building a dose toxo-equivalence model from a Bayesian meta-analysis of published clinical trials
Annals of Applied Statistics (revision under review)
Sigworth, E.A., Rubinstein, S.M., Warner, J.L., Chen, Y., and Chen, Q.

2022

Assessment of a naloxone coprescribing alert for patients at risk of opioid overdose: a quality improvement project. ↗
Anesthesia & Analgesia (2022): 10-1213.
Nelson, S.D., McCoy, A.B., Rector, H., Teare, A.J., Barrett, T.W., **Sigworth, E.A.**, et al.

2022

Development of a bayesian toxo-equivalence model between docetaxel and paclitaxel. ↗
iScience 25, no. 4 (2022): 104045.
Sigworth, E.A., Rubinstein, S.M., Chaugai, S., Rivera, D.R., Walker, P.D., Chen, Q., and Warner, J.L.

2021

Pop-out search instigates beta-gated feature selectivity enhancement across V4 layers. ↗
Proceedings of the National Academy of Sciences 118, no. 50 (2021).
Westerberg, J.A., **Sigworth, E.A.**, Schall, J.D., and Maier, A.

2021

Imprecision and preferences in interpretation of verbal probabilities in health: a systematic review. ↗
Journal of General Internal Medicine (2021): 1-10.
Andreadis, K., Chan, E., Park, M., Benda, N.C., Sharma, M.M., Demetres, M., Delgado, D., **Sigworth, E.A.**, et al.

2020

Seven decades of chemotherapy clinical trials: a pan-cancer social network analysis. ↗
Scientific reports 10, no. 1 (2020): 1-13.
Li, X., **Sigworth, E.A.**, Wu, A.H., Behrens, J., Etemad, S.A., et al.

2019

Indication of measures of uncertainty for statistical significance in abstracts of published oncology trials: A systematic review and meta-analysis. ↗
JAMA Network Open 2, no. 12 (2019): e1917530-e1917530.
Rubinstein, S.M., **Sigworth, E.A.**, Etemad, S., Martin, R.L., Chen, Q. and Warner, J.L.

💬 INVITED TALKS AND SELECTED ABSTRACTS

2022

Building a dose toxo-equivalence model from a Bayesian meta-analysis of published clinical trials
2022 Eastern North American Region - invited talk
Sigworth, E.A., Rubinstein, S.M., Warner, J.L., Chen, Y., and Chen, Q.

2019

Real world investigation of hypermagnesemia in the setting of platinum exposure.
2019 ITCR Annual Meeting - poster
Sigworth, E.A., Niu, X., Chen, Q., Warner, J.L., Wuichet, K., Chaugai, S., and Dai, Q.

2018

A simultaneous PK/PD model for muscle relaxant using muscle twitch counts.
2018 Women in Statistics and Data Science - invited talk
Sigworth, E.A. and Shotwell, M.

2018

A simultaneous PK/PD model for muscle relaxant using muscle twitch counts.
2018 Joint Statistical Meetings - poster
Sigworth, E.A. and Shotwell, M.