

# Erin I. McDonnell

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## EDUCATION

### Columbia University, Mailman School of Public Health

New York, NY

*Doctor of Philosophy in Biostatistics*

Expected 2021

- Pre-doctoral Trainee, TRANSFORM TL1 Precision Medicine Training Program
- Doctoral Council Representative, Graduate Student Association
- Co-organizer, Graduate Student Research Seminar Series for Columbia Biostatistics

### Harvard University, Harvard School of Public Health

Boston, MA

*Master of Science in Biostatistics*

March 2014

- Recipient, Harvard School of Public Health Central Grant

### Christopher Newport University

Newport News, VA

*Bachelor of Science in Mathematics, Minor in Leadership Studies*

December 2011

- Magna cum Laude
- Scholar, President's Leadership Program
- Member, Alpha Chi National Honor Society
- Member, Pi Mu Epsilon National Mathematics Honor Society

## PROFESSIONAL BIOSTATISTICS EXPERIENCE

### Analysis Group

Boston, MA

*Analyst, Health Economics and Outcomes Research Practice*

June 2016 – July 2017

- Designed several interactive web applications using R Shiny, allowing clients to modify analysis parameters.
- Applied causal inference techniques to estimate treatment effects on survival amidst informative censoring.
- Applied recurrent-event survival techniques to identify predictors of progression of a chronic disease.
- Analyzed health care costs and utilization from a large cloud-based insurance claims database.

### Massachusetts General Hospital Biostatistics Center

Boston, MA

*Biostatistician / Bioinformatics Specialist*

January 2014 – June 2016

- Performed advanced analyses (e.g. competing risk survival analysis, inverse probability weighting) primarily in oncology and autism research.
- Reviewed study protocols as member of the Dana Farber / Harvard Cancer Center Scientific Review Committee.
- Provided data management support for over 10 studies, including 2 large multi-institutional pediatric registries.

*Masters Level Intern Biostatistician*

May 2013 – December 2013

- Thesis project under the guidance of David Schoenfeld, PhD: Fit structural nested models to estimate the causal effects of feeding tube placement on survival in ALS patients in the presence of confounding by indication.

## SOFTWARE DEVELOPMENT EXPERIENCE

Wrobel, J., Goldsmith, J., McDonnell, E. (2020). *registr*: Curve registration for exponential family functional data. R package version 1.0.0. <https://cran.r-project.org/web/packages/registr/index.html>

## TEACHING EXPERIENCE

### Columbia University, Mailman School of Public Health

New York, NY

*Teaching Assistant, Statistical Practices and Research for Interdisciplinary Sciences* (doctoral level)

Spring 2020

*Teaching Assistant, Data Science II* (graduate level)

Spring 2020

### **SELECT PUBLICATIONS**

- **McDonnell EI**, Zipunnikov V, Schrack JA, Goldsmith J, Wrobel J. Scale-invariant time registration of 24-hour accelerometric rest-activity profiles and its application to human chronotypes. (Manuscript in preparation).
- McDonald CM, Sajeev G, Yao Z, **McDonnell E**, Elfring G, Souza M, et al. Deflazacort versus prednisone treatment for Duchenne muscular dystrophy: a meta-analysis of disease progression rates in recent multicenter clinical trials. *Muscle & Nerve*. 2020; 61(1):26-35.
- Neumeyer AM, Cano Sokoloff N, **McDonnell EI**, Macklin, EA, McDougale CJ, Holmes TM, et al. Nutrition and bone density in boys with autism spectrum disorder. *Journal of the Academy of Nutrition and Dietetics*. 2018; 118(5):865-877.
- **McDonnell E**, Schoenfeld D, Paganoni S, Atassi N. Causal inference methods to study gastric tube use in amyotrophic lateral sclerosis. *Neurology*. 2017; 89(14), 1483-1489.
- Hong TS, Wo JY, Borger DR, Yeap BY, **McDonnell EI**, Willers H, et al. Phase II study of proton-based stereotactic body radiation therapy for liver metastases: importance of tumor genotype. *Journal of the National Cancer Institute*. 2017; 109(9).
- Ferguson BJ, Marler S, Altstein LL, Lee EB, Mazurek MO, McLaughlin A, Macklin EA, **McDonnell E**, et al. Associations between cytokines, endocrine stress response, and gastrointestinal symptoms in autism spectrum disorder. *Brain, Behavior and Immunity*. 2016; 58:57-62.
- Hong TS, Wo JY, Yeap BY, Ben-Josef E, **McDonnell EI**, Blaszkowsky LS, et al. Multi-institutional phase II study of high-dose hypofractionated proton beam therapy in patients with localized, unresectable hepatocellular carcinoma and intrahepatic cholangiocarcinoma. *Journal of Clinical Oncology*. 2016; 34(5):460-8.
- Ferrone CR, Marchegiani G, Hong TS, Ryan DP, Deshpande V, **McDonnell EI**, et al. Radiological and surgical implications of neoadjuvant treatment with FOLFIRINOX for locally advanced and borderline resectable pancreatic cancer. *Annals of Surgery*. 2015; 261(1):12-7.

### **SELECT CONFERENCE POSTERS AND PRESENTATIONS**

- **McDonnell E**, Xie S, Marder K, Wang Y. Smooth time-varying Gaussian graphical models to study disease progression [Abstract]. To be presented at the Joint Statistical Meetings, Virtual, 2020.
- **McDonnell E**, Wrobel J, Goldsmith J, Zipunnikov V. Curve registration to identify circadian rhythm chronotypes in accelerometer data [Abstract]. Presented at the *Joint Statistical Meetings*, Denver, CO, 2019.
- Hong T, Wo J, **McDonnell E**, Yeap B, Drapek L, Wolfgang J, et al. A single arm phase 2 study of individualized proton-based stereotactic body radiation therapy (P-SBRT) of liver metastases [Abstract]. Presented at the *American Society for Radiation Oncology (ASTRO) Annual Meeting*; San Antonio, TX 2015.
- Hong T, Wo J, Yeap B, Ben-Josef E, **McDonnell E**, Drapek L, et al. Multi-institutional phase II study of high dose, hypofractionated proton beam therapy (HF-PBT) for unresectable primary liver cancers: Long term outcomes in patients (pts) with intrahepatic cholangiocarcinoma (ICC) [Abstract]. Presented at the *American Society of Clinical Oncology (ASCO) Annual Meeting*; Chicago, IL 2015.
- Kuhlthau K, **McDonnell E**, Payakachat N, Coury D, Delahaye J, Macklin E, editors. Correlates of cross-sectional and longitudinal health-related quality of life among children with autism spectrum disorders [Abstract]. Presented at the *International Meeting for Autism Research (IMFAR)*; 2015; Salt Lake City, UT.
- **McDonnell E**. Analyzing supportive care in ALS [Oral presentation]. Presented at *Statistical Issues in the Analysis of Neurological Studies: A Harvard Catalyst Biostatistics Symposium*; Boston, MA 2014.

### **TECHNICAL SKILLS**

**Statistical Software:** R (Markdown, Shiny, Package Development), SAS, GitHub, LaTeX.

**Electronic Data Capture (EDC) Systems:** StudyTRAX, REDCap, Inform.