

Morgan McCreary

Contact Information

Address *The University of Texas Southwestern
Medical Center
Department of Neurology
5959 Harry Hines Blvd.
Dallas, TX 75390-8806*

Phone (214) 645 - 5598

Email Morgan.McCreary@UTSouthwestern.edu

Personal Statement

I am a statistician and Assistant Professor in the Department of Neurology and Neurotherapeutics. I have over five years of experience working in neurological research and currently provide statistical assistance to the Perot Foundation Neuroscience Translational Research Center, having aided over 20 clinician-investigators across several neurology specialties with study design and data analysis, as well as the presentation of results. Through such collaborations, I have developed an understanding of data elements commonly collected in the neurosciences and I have developed a knowledge of limitations in current statistical methods. This has allowed me to focus on the development of novel statistical approaches tailored to meet these issues. My research interests include analysis in the presence of informative censoring, Bayesian modeling, analysis of latent variables inferred from multivariate measurements, joint modeling of longitudinal and time-to-event data, and analysis of high-dimensional data.

Education

May 2011 B.S., Neuroscience - *Baylor University*

May 2014 Post Baccalaureate Coursework - *The University of Texas at Dallas*

Dec. 2016 M.S., Statistical Science (in passing)- *Baylor University*

Aug. 2018 Ph.D., Statistical Science- *Baylor University*

- Thesis: *On Inferring Cognitive Impairment from a Battery of Cognitive Tests and Predicting an Event-of-Interest from Longitudinal and Time-to-Event Data*
- Advisor: Professor Dennis Johnston
- Graduation: August 2018

Employment History

Sep. 2020 - Present University of Texas Southwestern Medical Center
Assistant Professor, Department of Neurology

Sep. 2019 - Sep. 2020 University of Texas Southwestern Medical Center
Instructor, Department of Neurology and Neurotherapeutics

Sep. 2018 - Sep. 2019 University of Texas Southwestern Medical Center
Senior Research Associate, Department of Neurology and Neurotherapeutics

Nov. 2017 - Sep. 2018 University of Texas Southwestern Medical Center
Student Intern, Department of Neurology and Neurotherapeutics

July 2011 - May 2013 University of Texas Southwestern Medical Center
Research Technician II, Department of Neurology and Neurotherapeutics

Teaching Experience

Aug. 2015 - Baylor University

May 2017 *Teacher of Record, Department of Statistical Science*

Other Experience and Professional Memberships

Sep. 2017 - American Statistical Association

Present *Member*

Sep. 2019 - Neuroscience Translational Research Center, UT Southwestern O'Donnell Brain Institute

Present *Statistician*

Published Peer Review Articles

12. Louis ED, **McCreary M**. How Common is Essential Tremor? Update on the Worldwide Prevalence of Essential Tremor. *Tremor Other Hyperkinet Mov (NY)*. 2021;11:28. doi: 10.5334/tohm.632. eCollection 2021. PubMed PMID: 34277141; PubMed Central PMCID: PMC8269764.
11. Greenberg B, Plumb P, Cutter G, Dean J, Desena A, Hopkins S, Krishnan C, Pardo C, Recio A, Schreiner T, Yeh EA, **McCreary M**. Acute flaccid myelitis: long-term outcomes recorded in the CAPTURE study compared with paediatric transverse myelitis. *BMJ Neurol Open*. 2021;3(1):e000127. doi: 10.1136/bmjno-2021-000127. eCollection 2021. PubMed PMID: 34079937; PubMed Central PMCID: PMC8137186.
10. Sethi A, Dilwali S, **McCreary M**, Dewey RB Jr. Oral Levodopa Formulation Does Not Affect Progression of Parkinson Disease. *Clin Neuropharmacol*. 2021 Mar-Apr 01;44(2):47-52. doi: 10.1097/WNE.0000000000000437. PubMed PMID: 33538517; PubMed Central PMCID: PMC8283796.
9. McGetrick ME, Varughese NA, Miles DK, Wang CX, **McCreary M**, Monson NL, Greenberg BM. Clinical Features, Treatment Strategies, and Outcomes in Hospitalized Children With Immune-Mediated Encephalopathies. *Pediatr Neurol*. 2021 Mar;116:20-26. doi: 10.1016/j.pediatrneurol.2020.11.014. Epub 2020 Nov 28. PubMed PMID: 33388545.
8. Sguigna PV, **McCreary MC**, Conger DL, Graves JS, Benson LA, Waldman AT, Greenberg BM. Utilization of Visual Acuity Retroilluminated Charts for the Assessment of Afferent Visual System Dysfunction in a Pediatric Neuroimmunology Population. *J Neuroophthalmol*. 2021 Mar 1;41(1):19-23. doi: 10.1097/WNO.0000000000001001. PubMed PMID: 32868561.
7. Harder L, Hernandez A, Hague C, Neumann J, **McCreary M**, Cullum CM, Greenberg B. Home-Based Pediatric Teleneuropsychology: A validation study. *Arch Clin Neuropsychol*. 2020 Nov 19;35(8):1266-1275. doi: 10.1093/arclin/aaa070. PubMed PMID: 33210719.
6. Okuda DT, Moog TM, **McCreary M**, Bachand JN, Wilson A, Wright K, Winkler MD, Ramos OG, Blinn AP, Wang Y, Stanley T, Pinho MC, Newton BD, Guo X. Utility of shape evolution and displacement in the classification of chronic multiple sclerosis lesions. *Sci Rep*. 2020 Nov 11;10(1):19560. doi: 10.1038/s41598-020-76420-8. PubMed PMID: 33177565; PubMed Central PMCID: PMC7658967.
5. Moog TM, **McCreary M**, Stanley T, Wilson A, Santoyo J, Wright K, Winkler MD, Wang Y, Yu F, Newton BD, Zeydan B, Kantarci O, Guo X, Okuda DT. African Americans experience disproportionate neurodegenerative changes in the medulla and upper cervical spinal cord in early multiple sclerosis. *Mult Scler Relat Disord*. 2020 Oct;45:102429. doi: 10.1016/j.msard.2020.102429. Epub 2020 Jul 28. PubMed PMID: 32805478.
4. Sivakolundu DK, Hansen MR, West KL, Wang Y, Stanley T, Wilson A, **McCreary M**, Turner MP, Pinho MC, Newton BD, Guo X, Rypma B, Okuda DT. Three-Dimensional Lesion Phenotyping and Physiologic Characterization Inform Remyelination Ability in Multiple Sclerosis. *J Neuroimaging*. 2019 Sep;29(5):605-614. doi: 10.1111/jon.12633. Epub 2019 May 30. PubMed PMID: 31148298.

3. Narayan RN, **McCreary M**, Conger D, Wang C, Greenberg BM. Unique characteristics of optical coherence tomography (OCT) results and visual acuity testing in myelin oligodendrocyte glycoprotein (MOG) antibody positive pediatric patients. *Mult Scler Relat Disord*. 2019 Feb;28:86-90. doi: 10.1016/j.msard.2018.11.026. Epub 2018 Dec 15. PubMed PMID: 30576847.
2. **McCreary M**, Mealy MA, Wingerchuk DM, Levy M, DeSena A, Greenberg BM. Updated diagnostic criteria for neuromyelitis optica spectrum disorder: Similar outcomes of previously separate cohorts. *Mult Scler J Exp Transl Clin*. 2018 Oct-Dec;4(4):2055217318815925. doi: 10.1177/2055217318815925. eCollection 2018 Oct-Dec. PubMed PMID: 30559975; PubMed Central PMCID: PMC6293372.
1. Hansen MR, Pan E, Wilson A, **McCreary M**, Wang Y, Stanley T, Pinho MC, Guo X, Okuda DT. Post-gadolinium 3-dimensional spatial, surface, and structural characteristics of glioblastomas differentiate pseudoprogression from true tumor progression. *J Neurooncol*. 2018 Sep;139(3):731-738. doi: 10.1007/s11060-018-2920-7. Epub 2018 Jun 7. PubMed PMID: 29882044.

Conference Presentations

(**Bold** denotes presenter.)

Sivakolundu, D.K., Hansen, M.R., West, K.L., Wang, Y., Stanley, T., Wilson, A., McCreary, M., Turner, M.P., Pinho, M.C., Newton, B.D., Guo, X., Rypma, B., **Okuda, D.T.** “Three-Dimensional Lesion Phenotyping and Physiologic Characterization Inform Remyelination Capacity in Multiple Sclerosis.” The International Congress on Advanced Treatments & Technologies in Multiple Sclerosis (ATTMS2018), London, UK, December 13 - 14, 2018.

Conference Abstracts and Posters

Sguigna, P., Hardeman, P., McCreary, M., Greenberg, B. “More Than Meets the Eye: The Anti-Mog Antibody” 2019 American Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS) Dallas, Texas, USA, February 28 - March 2, 2019.

Sivakolundu, D.K., Hansen, M.R., West, K.L., Wang, Y., Stanley, T., Wilson, A., McCreary, M., Turner, M.P., Pinho, M.C., Newton, B.D., Guo, X., Rypma, B., Okuda, D.T. “Remyelinating Capacity of MS Lesions Is Predicted By Three-Dimensional Lesion Phenotyping and Physiologic Characterization” 2019 American Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS) Dallas, Texas, USA, February 28 - March 2, 2019.

Conger, D., Waldman, A., Graves, J, Benson, L., McCreary, M., Greenberg, B.M. “Comparison of 2-Meter and 4-Meter ETDRS Letter Score in Pediatric Multiple Sclerosis Patients” 2018 North American Neuro-Ophthalmology Society (NANOS) Annual Meeting Hilton Waikoloa Village, Waikoloa Village, Hawaii, USA, March 3 - 8, 2018.

Workshop Attendance

rstudio::conf. (2020) “Shiny from Start to Finish”. San Francisco, CA. January 27-28, 2020.

Current Research Support

4/1/2021- R01NS117745
 1/31/2026 *Deep Dive: Mapping the neuropathology of essential tremor and exploring the molecular underpinnings of neurodegeneration*
 Elan Louis (PI)
 Role: Statistician

Completed Research Support

5/22/2014 - CE-1304-7079

7/1/2019 *Pediatric Transverse Myelitis CAPTURE Study*

Greenberg (PI)

Role: Co-Investigator

Technical Skills

Programming: R, STAN, SAS, Wolfram (Mathematica), OpenBUGS, JAGS, MATLAB

Applications: RStudio, Shiny, REDCap, T_EX/ L^AT_EX, BibTeX, Microsoft Office, JMP, PowerBI

Operating Systems: MacOS, Microsoft Windows