



Zachary D. Threlkeld, MD, FAAN

- Clinical Associate Professor, Adult Neurology
- Clinical Associate Professor (By courtesy), Neurosurgery

CLINICAL OFFICE (PRIMARY)

- **Stanford Neurocritical Care Program**

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Bio

BIO

Dr. Threlkeld cares for critically ill patients with acute neurologic illness, including traumatic brain injury, stroke, intracerebral hemorrhage, and epilepsy. He completed his residency training in neurology at the University of California, San Francisco, and joined the Stanford Neurocritical Care program after completing fellowship training in neurocritical care at Massachusetts General Hospital and Brigham and Women's Hospital in Boston. He has a clinical and research interest in traumatic brain injury and disorders of consciousness. In addition, he maintains a strong interest in improvement science, quality improvement, and patient safety.

CLINICAL FOCUS

- Neurocritical Care
- Quality Improvement
- Disorders of Consciousness
- Traumatic Brain Injury
- Functional MRI

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Adult Neurology
- Clinical Associate Professor (By courtesy), Neurosurgery

ADMINISTRATIVE APPOINTMENTS

- Co-Director, Unit-Based Medical Director / Patient Care Manager Program, Stanford Health Care, (2025- present)
- Associate Physician Improvement Leader, Inpatient Neurology, Stanford Department of Neurology, (2022- present)
- Patient Safety Director, Inpatient Neurology, Stanford Department of Neurology, (2025- present)
- Program Director, Neurosurgical Neurocritical Care Fellowship, (2021- present)
- Medical Director, Neuroscience ICU, Stanford Health Care, (2021-2025)
- Associate Program Director, Neurocritical Care Fellowship, Stanford Department of Neurology, (2019-2021)

PROFESSIONAL EDUCATION

- Board Certification: Neurocritical Care, American Board of Psychiatry and Neurology (2021)
- Board Certification: Neurocritical Care, United Council for Neurologic Subspecialties (2019)
- Board Certification: Neurology, American Board of Psychiatry and Neurology (2016)
- Fellowship, Neurocritical Care, Harvard Medical School, Massachusetts General Hospital, and Brigham & Women's Hospital (2018)
- Residency, Dept of Neurology, University of California, San Francisco (2016)
- Internship, Dept of Internal Medicine, University of California, San Francisco (2013)
- MD, University of Kentucky College of Medicine (2012)

Publications

PUBLICATIONS

- **SINGLE-CELL LANDSCAPE OF B7H3-CAR T THERAPY IN GLIOMA: MECHANISMS OF RESISTANCE AND SIGNATURES OF LONG-TERM RESPONSE**
Chen, Y., Song, K., Desai, M., Ehlinger, Z., Daghigh, H., Rietberg, S., Feeney, A., Tanner, K., Dyson, K., Stockdale, B., Dhapola, G., Lohman, C., Patil, et al
OXFORD UNIV PRESS INC.2025: v13
- **EVALUATION OF B7-H3 IMMUNOHISTOCHEMISTRY IN HIGH-GRADE GLIOMAS FOR CHIMERIC ANTIGEN RECEPTOR T-CELL PREDICTIVE TESTING**
Dyson, K., Zuraski, C., Solomon, D., Li, G., Stockdale, B., Song, K., Mahdi, J., Tanner, K., Bertrand, S., Iv, M., Threlkeld, Z., Ramakrishna, S., Sahaf, et al
OXFORD UNIV PRESS INC.2025: v49-v50
- **Traumatic brain injury (TBI) triage tool for low-risk patients: standardizing TBI care at a Level 1 trauma center.** *Trauma surgery & acute care open*
Villarreal, J. A., Anderson, M., Gallegos, K., Harris, O., Hirsch, K., Lumba-Brown, A., Ravi, S., Seifert, K., Spain, D., Staudenmayer, K., Threlkeld, Z., Forrester, J. D.
2025; 10 (4): e001892
- **A phase 1 study of B7H3 CAR-T cells administered intracranially in recurrent glioblastoma.**
Li, G., Stockdale, B. R., Song, K., Mahdi, J., Tanner, K., Bertrand, S., Iv, M., Threlkeld, Z., Ramakrishna, S., Sahaf, B., Egeler, E., Charu, V., Tunuguntla, et al
LIPPINCOTT WILLIAMS & WILKINS.2025: 2018
- **A scientific approach to diagnosis of disorders of consciousness.** *Handbook of clinical neurology*
Threlkeld, Z. D., Bodien, Y. G., Edlow, B. L.
2025; 207: 49-66
- **Psychosocial Support Needs and Preferences Among Family Caregivers of ICU Patients with Severe Acute Brain Injury: A Qualitative Thematic Analysis.** *Neurocritical care*
Hwang, D. Y., Reichman, M., Bannon, S. M., Meurer, K., Kubota, R., Kim, J., Baskaran, N., Zhang, Q., Fishbein, N. S., Lichstein, K., Presciutti, A. M., Woodworth, E. C., Motta, et al
2025
- **Correction: Common Data Elements for Disorders of Consciousness: Recommendations from the Working Group on Neuroimaging.** *Neurocritical care*
Edlow, B. L., Boerwinkle, V. L., Annen, J., Boly, M., Gosseries, O., Laureys, S., Mukherjee, P., Puybasset, L., Stevens, R. D., Threlkeld, Z. D., Newcombe, V. F., Fernandez-Espejo, D.
2024
- **Correction: Common Data Elements for Disorders of Consciousness: Recommendations from the Working Group on Neuroimaging.** *Neurocritical care*
Edlow, B. L., Boerwinkle, V. L., Annen, J., Boly, M., Gosseries, O., Laureys, S., Mukherjee, P., Puybasset, L., Stevens, R. D., Threlkeld, Z. D., Newcombe, V. F., Fernandez-Espejo, D.
2023

- **The Severely Wounded Brain Healed: Outcome Prognostication in Neurology.** *Seminars in neurology*
Threlkeld, Z. D., Hwang, D. Y.
2023; 43 (5): 662-663
- **Recommendations from the Working Group on Neuroimaging.** *Neurocritical care*
Edlow, B. L., Boerwinkle, V. L., Annen, J., Boly, M., Gosseries, O., Laureys, S., Mukherjee, P., Puybasset, L., Stevens, R. D., Threlkeld, Z. D., Newcombe, V. F., Fernandez-Espejo, D., and the Curing Coma Campaign and its Contributing Members, et al
2023
- **An Electronic Health Record Intervention to Limit Viral Testing of Cerebrospinal Fluid.** *The Neurohospitalist*
Lyman, K. A., Madill, E., Thatikunta, P., Threlkeld, Z. D., Banaei, N., Gold, C. A.
2023; 13 (2): 173-177
- **Corrigendum to 'functional networks reemerge during recovery of consciousness after acute severe traumatic brain injury' Cortex 106 (2018) 299-308.** *Cortex; a journal devoted to the study of the nervous system and behavior*
Threlkeld, Z. D., Bodien, Y. G., Rosenthal, E. S., Giacino, J. T., Nieto-Castanon, A., Wu, O., Whitfield-Gabrieli, S., Edlow, B. L.
2023
- **Multifocal demyelinating leukoencephalopathy and oligodendroglial lineage cell loss with immune effector cell-associated neurotoxicity syndrome (ICANS) following CD19 CAR T-cell therapy for mantle cell lymphoma.** *Journal of neuropathology and experimental neurology*
Nie, E. H., Ahmadian, S. S., Bharadwaj, S. N., Acosta-Alvarez, L., Threlkeld, Z. D., Frank, M. J., Miklos, D. B., Monje, M., Scott, B. J., Vogel, H.
2023
- **Multifocal demyelinating leukoencephalopathy and oligodendroglial lineage cell loss with CD19 CAR T-cell lymphoma therapy**
Nie, E., Ahmadian, S., Bharadwaj, S., Acosta-Alvarez, L., Threlkeld, Z., Frank, M., Miklos, D., Born, D., Scott, B., Monje, M., Vogel, H.
OXFORD UNIV PRESS INC.2022: 464
- **Reemergence of the language network during recovery from severe traumatic brain injury: A pilot functional MRI study.** *Brain injury*
Coffey, B. J., Threlkeld, Z. D., Foulkes, A. S., Bodien, Y. G., Edlow, B. L.
2021: 1-11
- **Diffuse Axonal Injury Grade on Early MRI is Associated with Worse Outcome in Children with Moderate-Severe Traumatic Brain Injury.** *Neurocritical care*
Janas, A. M., Qin, F., Hamilton, S., Jiang, B., Baier, N., Wintermark, M., Threlkeld, Z., Lee, S.
2021
- **Neuro-Oncologic Emergencies.** *Neurologic clinics*
Threlkeld, Z. D., Scott, B. J.
2021; 39 (2): 545-63
- **Cryptogenic new-onset refractory status epilepticus (NORSE) following blood transfusion in a patient with severe anemia.** *Epileptic disorders : international epilepsy journal with videotape*
Wu, C. K., Culbertson, C. J., Von Stein, E. L., Walia, S., Krishnamohan, P., Threlkeld, Z. D.
2021
- **Feasibility and acceptability of virtually coaching residents on communication skills: a pilot study.** *BMC medical education*
Sasnal, M., Miller-Kuhlmann, R., Merrell, S. B., Beres, S., Kipp, L., Lee, S., Threlkeld, Z., Nassar, A. K., Gold, C. A.
2021; 21 (1): 513
- **Personalized Connectome Mapping to Guide Targeted Therapy and Promote Recovery of Consciousness in the Intensive Care Unit.** *Neurocritical care*
Edlow, B. L., Barra, M. E., Zhou, D. W., Foulkes, A. S., Snider, S. B., Threlkeld, Z. D., Chakravarty, S., Kirsch, J. E., Chan, S., Meisler, S. L., Bleck, T. P., Fins, J. J., Giacino, et al
2020
- **Early magnetic resonance imaging as a predictor of outcome in pediatric traumatic brain injury**
Janas, A., Threlkeld, Z., Wintermark, M., Lee, S.
LIPPINCOTT WILLIAMS & WILKINS.2020
- **Cryptogenic new-onset refractory status epilepticus (NORSE) following blood transfusion in a patient with severe anemia**
Wu, C., Von Stein, E., Culbertson, C., Walia, S., Krishnamohan, P., Threlkeld, Z.

LIPPINCOTT WILLIAMS & WILKINS.2020

- **Will We Ever Make Headway in Severe Traumatic Brain Injury Treatment Trials?** *JAMA neurology*
Murray, N. M., Threlkeld, Z. D., Hirsch, K. G.
2020
- **Early Head Computed Tomography Abnormalities Associated with Elevated Intracranial Pressure in Severe Traumatic Brain Injury.** *Journal of neuroimaging : official journal of the American Society of Neuroimaging*
Murray, N. M., Wolman, D. N., Mlynash, M. n., Threlkeld, Z. D., Christensen, S. n., Heit, J. J., Harris, O. A., Hirsch, K. G.
2020
- **Intact Brain Network Function in an Unresponsive Patient with COVID-19.** *Annals of neurology*
Fischer, D. n., Threlkeld, Z. D., Bodien, Y. G., Kirsch, J. E., Huang, S. Y., Schaefer, P. W., Rapalino, O. n., Hochberg, L. R., Rosen, B. R., Edlow, B. L.
2020
- **A state-space model for dynamic functional connectivity.** *Conference record. Asilomar Conference on Signals, Systems & Computers*
Chakravarty, S., Threlkeld, Z. D., Bodien, Y. G., Edlow, B. L., Brown, E. N.
2019; 2019: 240-244
- **Default mode network dynamics in covert consciousness** *CORTEX*
Bodien, Y. G., Threlkeld, Z. D., Edlow, B. L.
2019; 119: 571-74
- **Functional Reorganization of the Language Network During Recovery from Severe Traumatic Brain Injury: Longitudinal fMRI Study**
Coffey, B., Threlkeld, Z., Bodien, Y., Edlow, B.
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Non-electrographic Seizures Due to Subdural Hematoma: A Case Series and Review of the Literature.** *Neurocritical care*
Driver, J., DiRisio, A. C., Mitchell, H., Threlkeld, Z. D., Gormley, W. B.
2019; 30 (1): 16-21
- **Default mode network dynamics in covert consciousness.** *Cortex; a journal devoted to the study of the nervous system and behavior*
Bodien, Y. G., Threlkeld, Z. D., Edlow, B. L.
2019
- **A state-space model for dynamic functional connectivity**
Chakravarty, S., Threlkeld, Z. D., Bodien, Y. G., Edlow, B. L., Brown, E. N.
edited by Matthews, M. B.
IEEE.2019: 240-44
- **Recovery of Functional Independence After Traumatic Transtentorial Herniation With Duret Hemorrhages.** *Frontiers in neurology*
Edlow, B. L., Threlkeld, Z. D., Fehnel, K. P., Bodien, Y. G.
2019; 10: 1077
- **Functional networks reemerge during recovery of consciousness after acute severe traumatic brain injury.** *Cortex; a journal devoted to the study of the nervous system and behavior*
Threlkeld, Z. D., Bodien, Y. G., Rosenthal, E. S., Giacino, J. T., Nieto-Castanon, A., Wu, O., Whitfield-Gabrieli, S., Edlow, B. L.
2018
- **Collaborative Interventions Reduce Time-to-Thrombolysis for Acute Ischemic Stroke in a Public Safety Net Hospital** *JOURNAL OF STROKE & CEREBROVASCULAR DISEASES*
Threlkeld, Z. D., Kozak, B., McCoy, D., Cole, S., Martin, C., Singh, V.
2017; 26 (7): 1500-1505
- **Continuous Qualitative Electroencephalography as a Noninvasive Neuromonitor.** *The Neurohospitalist*
Threlkeld, Z. D., Kottapally, M., Aysenne, A., Ko, N.
2016; 6 (4): 157-60
- **Heat Shock Transcription Factor 1 Is Activated as a Consequence of Lymphocyte Activation and Regulates a Major Proteostasis Network in T Cells Critical for Cell Division During Stress** *JOURNAL OF IMMUNOLOGY*
Gandhapudi, S. K., Murapa, P., Threlkeld, Z. D., Ward, M., Sarge, K. D., Snow, C., Woodward, J. G.

2013; 191 (8): 4068–79

- **Isolated *Histoplasma capsulatum* Meningoencephalitis in an Immunocompetent Child** *JOURNAL OF CHILD NEUROLOGY*

Threlkeld, Z. D., Broughton, R., Khan, G. Q., Berger, J. R.

2012; 27 (4): 532–35

- **Task Deactivation Reductions and Atrophy within Parietal Default Mode Regions are Overlapping but Only Weakly Correlated in Mild Cognitive Impairment** *JOURNAL OF ALZHEIMERS DISEASE*

Threlkeld, Z. D., Jicha, G. A., Smith, C. D., Gold, B. T.

2011; 27 (2): 415–27