


Sean Mackey, M.D., Ph.D.

Redlich Professor, Professor of Anesthesiology, Perioperative, and Pain Medicine (Adult Pain) and, by courtesy, of Neurology and Neurological Sciences

Anesthesiology, Perioperative and Pain Medicine

 NIH Biosketch available Online

 Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Stanford Pain Management Center**

450 Broadway St

Pavilion A 1st Fl MC 5340

Redwood City, CA 94063

Tel (650) 723-6238 **Fax** (650) 721-3417

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Wendy M. Schadle - Executive Assistant

Email wendy3@stanford.edu

Bio

BIO

I am the Redlich Professor and Chief of the Division of Stanford Pain Medicine. I am a physician-scientist trained and experienced in neuroimaging, psychophysics, public health, health policy, patient outcomes, and medical education. I am guided by our group's mission—"To Predict, Prevent and Alleviate Pain"—which encompasses my three primary goals:

1. Define the factors that cause pain to become chronic after injury or surgery.
2. Discover and implement novel methods to prevent the persistence or chronification of pain.
3. Discover and test novel therapies to alleviate chronic pain.

This vision informs the multidisciplinary group I have assembled and the tools my team and I use: advanced neuroimaging, psychophysical and neurobehavioral assessments, genomics, patient- and clinician-reported outcomes, and assessment of pro-inflammatory cytokines.

I have served as principal investigator on multiple NIH awards (P01, multiple R01s, U01, K24, T32). Additionally, I hold two endowments that provide flexible research funds to pursue innovative projects and support our junior investigators. I am the author of more than 200 journal articles and book chapters and have delivered numerous national and international lectures. Broadly, my current research falls into two categories:

1. Characterizing CNS mechanisms of the human pain experience and its modulation, and using this information to develop biomarkers.
2. Developing and utilizing an open-source learning healthcare system (CHOIR; <http://choir.stanford.edu>) to transform pain care and serve as a platform for innovative research in real-world clinical settings.

Additionally, we are investigating novel therapies for pain, including transcranial magnetic stimulation, virtual reality, and psychological and pharmacological therapies.

Clinical: Under my leadership, the Stanford Pain Management Center has been twice designated a Center of Excellence by the American Pain Society for our innovative, comprehensive, interdisciplinary, outcomes-based care. We have one of the largest academic pain centers in the country—Stanford Pain Management Center (<https://med.stanford.edu/pain.html>)—with multiple physicians from different disciplines, psychologists, physical therapists, nurses, nutritionists, and other professionals working together to understand and treat people in pain.

Mentorship: I am the program director for our NIH T32 postdoctoral training program, “Interdisciplinary Training in Pain and/or Substance Use Disorders.” I also hold an NIH K24 award that supports mentoring and the development of junior investigators. I have a long track record of mentoring researchers and clinicians as they build successful careers.

Leadership: I am a past president of the American Academy of Pain Medicine. I co-authored the Institute of Medicine’s report *Relieving Pain in America* and served as co-chair of the Oversight Committee for the HHS/NIH National Pain Strategy—an effort to establish a national health strategy for pain care, education, and research. I have received multiple awards for leadership, teaching, research, and clinical care.

CLINICAL FOCUS

- Chronic Pain
- Pain Management
- Pain Medicine
- Neuropathic Pain
- Complex Regional Pain Syndrome
- Back Pain
- Acute Pain
- reflex sympathetic dystrophy
- Facial Pain
- Headache

ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Anesthesiology, Perioperative and Pain Medicine
- Professor - University Medical Line (By courtesy), Neurology and Neurological Sciences
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Vice Chair for Clinical Science, Anesthesia & Pain Management, Neurosciences and (by courtesy) Neurology, Stanford University, (2022- present)
- Clinic Chief (Interim), Stanford University, Stanford Pain Management Center, (2015-2017)
- Redlich Professor, Anesthesia & Pain Management, Neurosciences and (by courtesy) Neurology, Stanford University, (2012- present)
- Chief, Division of Pain Medicine, Stanford University, (2007- present)
- Fellowship Program Director, Pain Medicine, Stanford University, (2007-2019)

- Associate Professor, Anesthesia & Pain Management, Neurosciences and (by courtesy) Neurology, Stanford University, (2007-2012)
- Co-Director, Pain Working Group, Neuroscience Institute, Stanford University, (2005- present)
- Co-Director, Stanford Pain Research and Clinical Center (SPARCC), (2004- present)
- Associate Director, Pain Management Division, Stanford University, (2004-2007)
- Director, Stanford Systems Neuroscience and Pain Lab (SNAPL), (2002- present)
- Director (and Co-Founder), Regional Anesthesia Services, (2000-2006)
- Assistant Professor, Anesthesia & Pain Management, Neurosciences, Stanford University, (1999-2007)

HONORS AND AWARDS

- Inaugural Inductee as USASP Fellow, United States Association for the Study of Pain (USASP) (2025)
- Helrich Lecture Award, Foundation for Anesthesia Education & Research (FAER) (2024)
- James E. Carter Memorial Award, International Pelvic Pain Society (IPPS) (2024)
- Founders Award, American Academy of Pain Medicine (2022)
- Robert G. Addison, MD Award, American Academy of Pain Medicine (2020)
- Pain Medicine Fellowship Excellence Award, American Academy of Pain Medicine (2019)
- Presidential Commendation, American Academy of Pain Medicine (2019)
- Distinguished Service Award, American Academy of Pain Medicine (2017)
- Pain Medicine Fellowship Award, American Academy of Pain Medicine (2017)
- Wilbert E. Fordyce Clinical Investigator Award, American Pain Society (2016)
- NIH Directors Award, National Institutes of Health (2015)
- Clinical Center of Excellence, American Pain Society (2012)
- Presidential Commendation, American Academy of Pain Medicine (2012)
- U.S. News and World Report Top 1% of Pain Management Specialists, U.S. News and World Report (2012)
- Stanford CAM Center for Chronic Back Pain, NIH P01 AT006651 (2011-2016)
- Stanford CAM Center for Chronic Back Pain Supplement, NIH P01 AT006651S1 (2011-2012)
- Neuroimaging and Mentoring in Translational Pain Research, NIH K24 DA029262 (2010-2015)
- Ellis Cohen Achievement Award, Department of Anesthesia, Stanford University (2010)
- Chris Redlich Endowment in Pain Research, Chris Redlich Endowment Fund (2009-forever)
- Learned Control of Frontal and Limbic Systems via Real-Time fMRI, NIH R21 DA026092 (2009-2011)
- Development and Applications of Real Time fMRI Technology, Stanford Bio-X (2009-2010)
- Central Mechanisms of Urologic Pelvic Pain: Functional and Structural Analysis by MRI, NIH U01 DK082316 (2008-2013)
- Prescription Opioid Use, Misuse, and Pain in Post-Surgical Patients, NIH K23 DA25152 (2008-2013)
- Low-Dose Naltrexone in the Treatment of Fibromyalgia, American Fibromyalgia Syndrome Association (2008-2009)
- Mechanisms of Opioid-Induced Hyperalgesia in Pain Patients: Examination via fMRI, NIH K99/R00 DA023609 (2007-2011)
- Mechanisms of Analgesic Response During IV Lidocaine Infusion in Neuropathic Pain Patients, Foundation for Anesthesia Education and Research (2007-2008)
- fMRI of Pain in the Human Spinal Cord, NIH R01 NS053961 (2006-2010)
- Duloxetine: Functional MRI Neural Correlates of Efficacy in Patients with Chronic Low Back Pain, Eli Lilly (2006-2009)
- Fellowship Grant, Arthritis Foundation (2006-2007)
- Applications of Real Time fMRI-Phase II, NIH R44 NS050642 (2004-2007)

- Imaging Neural Systems in Complex Regional Pain Syndrome, Foundation for Anesthesia Education & Research (2004-2006)
- Teacher of the Month, Stanford Department of Anesthesia (2003)
- Applications of Real Time fMRI, NIH R43MH067290 (2002-2004)
- Top Doctors in America, Published in "Guide to Top Doctors" (2002, 2004-2006, 2008, 2010, 2012-2015)
- Processing of Pain in the Human Central Nervous System: Analysis through fMRI, Stanford Office of Technology Licensing Grant (2001-2004)
- Use of NMDA-Antagonists and Opiates in the Treatment of Fibromyalgia, Oxnard Foundation (2001-2004)
- Dodie and John Rosekrans Pain Research Endowment Fund, Dodie and John Rosekrans Pain Research Endowment Fund (2001 - forever)
- Cognitive Neurosciences Grant, Clark Center for Bioengineering, Biomedicine & Bioscience (2000)
- Development of a Human Neuropathic Pain Model, Stanford University (1999-2007)
- Interventional Magnetic Resonance Imaging Applied to Regional Anesthesia and Pain Medicine, Stanford University (1999-2003)
- Electrical and Thermal Characterization of Radiofrequency Catheter Ablation, American College of Cardiology Research Grant (1994)
- TV Catheter Delivery of Elec Energy to Ablate Arrhythmogenic Tissue..., Alpha Omega Alpha Honor Society Research Fellowship (1991-1992)
- Characterization & Optimization of RF Catheter Ablation for the Treatment of Cardiac Arrhythmias, American Heart Association Fellowship (1990-1991)
- Optimal Control of Transvenous Catheter Ablation in the Treatment of Tachyarrhythmias, NIH Short Term Research Fellowship (1989-1994)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Nominating Committee, American Academy of Pain Medicine (2020 - present)
- Advisory Board Member HSRD Naloxone Distribution IIR, Veterans Affairs (VA) (2020 - 2020)
- Invited Member, FDA & Center for Devices & Radiological Health (CDRH) (2020 - 2020)
- Steering Group, Pain Registries SIG, International Association for the Study of Pain (IASP) (2020 - 2020)
- Technical Expert Panel Member PCOR TEP Pain/ODU, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) (2020 - 2020)
- Council Member, Council on Science & Public Health, (CMA) (2019 - present)
- Vice-Chair - Committee on Temporomandibular Disorders (TMD), National Academies of Sciences, National Institutes of Health, (NAS)/(NIH) (2019 - 2020)
- Delegate, California Medical Association, (CMA) (2018 - present)
- Advisory Committee Member, Drug Safety & Risk Mngt, Anesthetic & Analgesic Drug Products Advisory Comm (DSaRM/AADPAC)/(FDA) (2018 - 2019)
- Committee Member, Committee on Electronic Media & Informatics Technology (EMIT), ASA (2018 - 2018)
- Committee Member Innovations in Medical Devices to Prevent Opioid Use Disorder (ODU), Analgesic, Anesthetic, & Addiction Clinical Trial Translations, Innovations, Opportunities, & Networks (ACTION) (2018 - 2018)
- Reviewer, American Society of Anesthesiologists Committee on Research (ASA) (2017 - present)
- Committee Member - Marshaling Physician Leadership to Counter Opioid Epidemic, National Academy of Medicine (2017 - 2017)
- Oversight Committee, Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks (2017 - 2017)
- Panelist, National Academies of Sciences, Engineering, and Medicine (2017 - 2017)
- Working Group Member to add Pain and Opioid questions to National Health Interview Survey, Centers for Disease Control and Prevention (CDC) (2016 - 2017)
- Board Member, The Association of Pain Program Directors (2015 - present)
- Immediate Past-President, American Academy of Pain Medicine (2015 - 2016)
- Panelist - Healthy People 2020 Chronic Pain Workgroup, National Institute of Health (NIH) (2014 - 2016)
- President, American Academy of Pain Medicine (2014 - 2015)
- Committee Member, National Comprehensive Cancer Network, Adult Cancer Pain Committee (2013 - present)

- Co-Chair - Prevention and Care Working Group, National Pain Strategy Task Force (NPSTF) (2013 - 2016)
- Member - Pain Consortium Chronic Low Back Pain Research Task Force, National Institute of Health (NIH) (2013 - 2014)
- Chair, Department of Anesthesia; Stanford School of Medicine, Faculty & Development and Mentoring Committee (2013 - 2013)
- Committee Member, Department of Anesthesia; Stanford School of Medicine, Finance Committee (2012 - present)
- Co-Chair, National Pain Strategy Task Force (NPSTF) (2012 - 2016)
- Member - Inter agency Pain Research Coordinating Committee, National Institute of Health (NIH) (2012 - 2013)
- Co-Chair Annual Meeting, American Academy of Pain Medicine (2012 - 2012)
- Vice President Scientific Affairs, American Academy of Pain Medicine (2011 - 2013)
- Committee Member & Author, Institute of Medicine (IOM) (2010 - 2011)
- Member, American Academy of Pain Research Committee (2009 - present)
- Member - CME Oversight Committee, American Academy of Pain Medicine (2009 - present)
- Member, American Academy of Pain Medicine Executive Committee (2009 - 2015)
- Member, American Pain Society Nominating Committee (2009 - 2011)
- Member - Appointments & Promotions Committee, Department of Anesthesia; Stanford School of Medicine (2008 - present)
- Director at Large, American Academy of Pain Medicine (2008 - 2015)
- Committee Member, California Department of Workers Compensation (2007 - present)
- Member - Research Committee, Department of Anesthesia; Stanford School of Medicine (2005 - present)
- Member - Neuroscience Committee, Stanford University, Neuroscience (2004 - present)
- Member - Governance Committee, Department of Anesthesia; Stanford School of Medicine (2003 - present)
- Member - Residency Selection Committee, Department of Anesthesia; Stanford School of Medicine (1999 - present)

PROFESSIONAL EDUCATION

- Board Certification: Anesthesia, American Board of Anesthesiology (1999)
- Fellowship: Stanford University Pain Management Fellowship (1999) CA
- Residency: Stanford University Anesthesiology Residency (1998) CA
- Medical Education: University of Arizona College of Medicine Office of the Registrar (1994) AZ
- Internship: Tucson Medical Center Medical Education Program (1995) AZ
- Board Certification: Pain Management, American Board of Anesthesiology (2000)
- M.D., University of Arizona , Medicine (1994)
- Ph.D., University of Arizona , Electrical Engineering (1994)
- M.S.E, University of Pennsylvania , Bioengineering (1986)
- B.S.E., University of Pennsylvania , Bioengineering (1986)

PATENTS

- Sean Mackey, Ian Carroll, David Clark. "United States Patent 2005072433 Toxin Induced Sympathectomy", Jan 26, 2004
- Sean Mackey. "United States Patent 5837001 Radio Frequency Energy Delivery System for Multipolar Electrode Catheters", Nov 17, 1998

LINKS

- X/Twitter: <https://x.com/DrSeanMackey>
- Lab Website: <http://med.stanford.edu/pain/snapi.html>
- Personal Site: <https://drseanmackey.com>

- ResearchGate: https://www.researchgate.net/profile/Sean_Mackey

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I have several NIH funded projects ongoing and a large number of additional studies funded by philanthropy. Some, but not all of these include the following:

Characterization of central pain mechanisms using simultaneous spinal cord-brain functional imaging. NIH R01 (Mackey- PI) funded effort to use simultaneous fMRI of the spinal cord, brainstem and brain to understand the CNS mechanisms of pain and develop objective biomarkers.

Comparative Effectiveness of Pain Cognitive Behavioral Therapy and Chronic Pain Self-Management within the Context of Opioid Reduction - PCORI (PI-Darnall; Co-I Mackey) The EMPOWER study is a multisite pragmatic clinical trial conducted in 4 Western states in primary care and pain clinics. The goal is to help physicians and patients with chronic pain safely and effectively reduce opioid use. We will compare two evidence based group behavioral treatment classes (cognitive behavioral therapy and chronic pain self management) to facilitate opioid and pain reduction within the context of a patient-centered opioid tapering program. Total N = 1300 patients.

Single Session Pain Catastrophizing Treatment: Comparative Efficacy & Mechanisms

NIH R01 (Multi-PI: Darnall & Mackey): This project seeks to understand mechanisms of pain catastrophizing and optimize rapid delivery of targeted treatment. This comparative effectiveness trial studies a single-session 2-hour class developed to treat pain catastrophizing

Development and Implementation of an Open-Source Learning Healthcare System. I have developed and implemented CHOIR (<http://choir.stanford.edu>) to optimize pain care and serve as a platform for innovative research in real-world patients. We have published over 25 manuscripts using CHOIR with novel discoveries we have translated into improved patient care. Furthermore, we have disseminated CHOIR to multiple US and international sites with a collaborative network.

Stanford Center for Low Back Pain (PI: Mackey). This is an NIH P01 center grant funded effort to characterize the central mechanisms and predictors of treatment for several treatments for chronic back pain including cognitive behavioral therapy, mindfulness based stress reduction and acupuncture. We have deeply characterized several hundred patients pre-post treatment with data currently under analysis.

We have multiple additional projects including those involving transcranial magnetic stimulation, virtual reality, novel pharmacologic and psychological therapies, health policy research, patient- and clinician-reported outcomes and many others.

Please disregard the Clinical Trials section below. It is incorrectly pulling outdated information from sources unknown. In fact, several of the trials below incorrectly list my involvement or are closed. We have approximately 20 clinical trials ongoing in the Stanford Systems Neuroscience and Pain Lab. Please reach out to us for further details.

CLINICAL TRIALS

- Diagnostic and Prognostic Biomarkers for High-impact Chronic Pain: Development and Validation, Recruiting
- Low-Dose Naltrexone for the Treatment of Complex Regional Pain Syndrome, Recruiting
- TMS for Complex Regional Pain Syndrome, Recruiting

- Acupuncture and Pain Processing, Not Recruiting
- Applications of Realtime Functional Magnetic Resonance Imaging (fMRI), Not Recruiting
- Imaging Study of Chronic Low Back Pain in Patients Taking Pain Medication, Not Recruiting
- Single Session Pain Psychology Treatment: Comparative Efficacy & Mechanisms, Not Recruiting
- Stanford Center for Back Pain, Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Troy Dildine, Mahbaneh Eshaghzadeh Torbati, Yasha Iravantchi, Samsuk Kim, Yiyu Wang, Chisondi Warrioba

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)
- Bioengineering (Phd Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **EVERYDAY EXPERIENCES OF THOSE WITH HIGH-IMPACT CHRONIC PAIN COMPARED WITH OTHERS WITH CHRONIC PAIN-INSIGHTS FROM THE COMPREHENSIVE ECOLOGICAL MOMENTARY ASSESSMENT OF PAIN**
Walentynowicz, M., Junghaenel, D., Mackey, S., Stone, A.
LIPPINCOTT WILLIAMS & WILKINS.2026
- **Evaluation of PROMIS Sleep Disturbance Item Bank for Postpartum Insomnia Disorder Screening**
Hidajat, N., Takenoshita, M., Michel, G., Jalali-Sohi, A., Manber, R., Lyell, D., Mhyre, J., Cella, D., Shaunfield, S., Mackey, S., Tian, L., Carmichael, S., Tang, et al
OXFORD UNIV PRESS INC.2026: A184
- **Single-session, virtual, pain relief skills class for adults with chronic pain on long-term opioids: A randomized controlled trial.** *The journal of pain*
Ziadni, M. S., Herrick, A., Sturgeon, J. A., Salmasi, V., Darnall, B. D., Mackey, S.
2026: 106286
- **REVEALING SYSTEMIC MUSCLE ADAPTATIONS IN KNEE OSTEOARTHRITIS USING NORMATIVE MODELING OF THE UK BIOBANK**
Holmes, S. C., Wesselink, E. O., Mackey, S., Kogan, F., Gold, G., Weber, K. A., Kaptan, M.
ELSEVIER SCI LTD.2026: S261-S262
- **Ecological Momentary Assessments of daily pain experiences in bothersome and high-impact chronic pain.** *medRxiv : the preprint server for health sciences*
Walentynowicz, M., Junghaenel, D. U., Mackey, S. C., Von Korff, M., Stone, A. A.
2026
- **Spatial distribution of spinal cord fMRI activity with electrocutaneous stimulation.** *medRxiv : the preprint server for health sciences*
Bédard, S., Kaptan, M., Indriolo, T., Law, C. S., Pfyffer, D., Lee, L., Ratliff, J., Hu, S., Tharin, S., Smith, Z. A., Glover, G. H., Mackey, S., Cohen-Adad, et al
2026
- **Differential Encoding of Noxious Heat and Self-Reported Pain Along Corticospinal Networks: A Simultaneous Brain-Spinal Cord Functional Magnetic Resonance Imaging Study**
Pfyffer, D., Wang, Y., Kaptan, M., Fundaun, J., Dildine, T., Oliva, V., Indriolo, T., Li, K., Glover, G., Law, C., Mackey, S.
CHURCHILL LIVINGSTONE.2026

- **Randomized Comparative Effectiveness Study of 1-Session vs. 8-Session Online Behavioral Treatment for Chronic Pain: Protocol for the national PROGRESS study.** *Pain medicine (Malden, Mass.)*
Adair Monson, E., Mardian, A., Saxena, K., Dorsonne, B., Hailu, A. Y., Heggan, E., Riazi, G., Slater, K., Poupore-King, H., Clifton, J., Perez, L., Tian, L., Porter, et al
2026
- **Yes, anger and injustice are important for the study and treatment of chronic pain - A response to Umasugi.** *The journal of pain*
Gilam, G., Granjon, M., Mackey, S. C., Vest, N.
2026: 106210
- **Beyond Headache: Non-cephalic Pain, Fatigue, and Post-Traumatic Stress Symptoms as Longitudinal Predictors of Chronic Migraine Outcomes.** *Pain medicine (Malden, Mass.)*
Sturgeon, J. A., Vest, N., Barad, M., Darnall, B., Mackey, S.
2025
- **Distinct multidimensional anger profiles predict current and long-term chronic pain outcomes.** *The journal of pain*
Granjon, M., Vest, N., Mackey, S. C., Gilam, G.
2025: 105611
- **Bridging the medical-dental divide: a public health imperative for temporomandibular disorders.** *BMC global and public health*
Prodoehl, J., Cowley, A., Durham, J., Lodes, M., Rindal, B., Mackey, S.
2025; 3 (1): 97
- **Digital twin learning health systems and multimodal biomarkers transform pain care.** *Pain*
Mackey, S., Darnall, B., Kao, M. C.
2025; 166 (11S): S106-S110
- **Differential encoding of noxious heat and self-reported pain along corticospinal networks: a simultaneous spinal cord-brain fMRI study.** *bioRxiv : the preprint server for biology*
Pfyffer, D., Wang, Y., Kaptan, M., Fundaun, J., Dildine, T. C., Oliva, V., Indriolo, T., Skare, S., Sprenger, T., Lee, P. K., Truong, M., Weber, K. A., Glover, et al
2025
- **Automated Segmentation of Forearm Muscles: Clinical Associations With Hand Function, Muscle Volume and Intramuscular Fat.** *JCSM communications*
Fundaun, J., Oliva, V., Bédard, S., Wesselink, E. O., Lynn, B. P., Pai S, A., Pfyffer, D., Kaptan, M., Berhe, N., Ratliff, J., Hu, S. S., Smith, Z. A., Hastie, et al
2025; 8 (2): e70015
- **Mapping hand function with simultaneous brain-spinal cord functional MRI.** *Imaging neuroscience (Cambridge, Mass.)*
Oliva, V., Bédard, S., Kaptan, M., Pfyffer, D., Chy, B., Aufrechtig, S., Berhe, N., Chaudhari, A. S., Tharin, S., Hu, S. S., Ratliff, J., Smith, Z. A., Smith, et al
2025; 3
- **EPISeg: Automated segmentation of the spinal cord on echo planar images using open-access multi-center data.** *Imaging neuroscience (Cambridge, Mass.)*
Banerjee, R., Kaptan, M., Tinnermann, A., Khatibi, A., Dabbagh, A., Büchel, C., Kündig, C. W., Law, C. S., Pfyffer, D., Lythgoe, D. J., Tsivaka, D., Van De Ville, D., Eippert, et al
2025; 3
- **Real-world data and evidence in pain research: an IMMPACT comprehensive review and best practice recommendations.** *Pain*
Vollert, J., Spivack, J., Adamson, B., Baron, R., Farrar, J. T., Gilron, I., Hohenschurz-Schmidt, D., Kerns, R. D., Mackey, S., Markman, J. D., McDermott, M. P., Parides, M., Rice, et al
2025
- **Defining chronic pain impact levels: a patient-clinician approach using PROMIS pain interference scores.** *Journal of patient-reported outcomes*
Cook, K. F., You, D. S., Korff, M. V., Mackey, S. C.
2025; 9 (1): 103
- **Baseline characteristics of participants in the Biomarkers for Evaluating Spine Treatments clinical trial: a sequential multiple assignment randomized trial for chronic low back pain†.** *Pain medicine (Malden, Mass.)*

- Rowland, B., Barth, K. S., Bell, K. M., Brooks, A. K., Chadwick, A. L., Cleven, A., Hurley, R. W., Mackey, S., Patel, K. V., Piva, S. R., Schneider, M. J., Al-Kadhi, F., Asante-Nketiah, et al
2025
- **Adult Cancer Pain, Version 2.2025** *JOURNAL OF THE NATIONAL COMPREHENSIVE CANCER NETWORK*
Swarm, R. A., Youngwerth, J. M., Agne, J. L., Anitescu, M., Are, M., Buga, S., Butler, T., Chwistek, M., Cleary, J., Copenhaver, D., Coyne, C., Craig, D., Finnes, et al
2025; 23 (7)
 - **Association Between Opioid Use Disorder and Healthcare Spending and Utilization in Emergency Surgical Patients: A Retrospective Analysis Using Commercial Claims.** *Annals of surgery open : perspectives of surgical history, education, and clinical approaches*
Dixit, A. A., Lagisetty, P. A., Odden, M. C., Bicket, M. C., Humphreys, K. R., Mackey, S. C., Sun, E. C.
2025; 6 (2): e568
 - **Revealing sleep and pain reciprocity with wearables and machine learning.** *Communications medicine*
Kim, S., Zeitzer, J. M., Mackey, S., Darnall, B. D.
2025; 5 (1): 160
 - **Body size and intracranial volume interact with the structure of the central nervous system: A multi-center in vivo neuroimaging study.** *Imaging neuroscience (Cambridge, Mass.)*
Labounek, R., Bondy, M. T., Paulson, A. L., Bédard, S., Abramovic, M., Alonso-Ortiz, E., Atcheson, N. T., Barlow, L. R., Barry, R. L., Barth, M., Battiston, M., Büchel, C., Budde, et al
2025; 3
 - **Body size and intracranial volume interact with the structure of the central nervous system: A multi-center in vivo neuroimaging study** *IMAGING NEUROSCIENCE*
Labounek, R., Bondy, M. T., Paulson, A. L., Bedard, S., Abramovic, M., Alonso-Ortiz, E., Atcheson, N. T., Barlow, L. R., Barry, R. L., Barth, M., Battiston, M., Buechel, C., Budde, et al
2025; 3
 - **Impact of Pain Self-Efficacy on Health Outcomes in High-Impact Chronic Pain: A Longitudinal Study.** *The Clinical journal of pain*
You, D. S., Lannon, E., Kim, S., Dildine, T. C., Weber, K. A., Raney, E., Mackey, S. C.
2025
 - **Beyond pain intensity: Validating single-item pain bothersomeness measures.** *The journal of pain*
Edwards, K. A., You, D. S., Lannon, E. W., Dildine, T. C., Darnall, B. D., Mackey, S. C.
2025; 31: 105395
 - **The Design and Rationale of the Biomarkers for Evaluating Spine Treatments (BEST) Trial: A Sequential Multiple Assignment Randomized Trial.** *Pain medicine (Malden, Mass.)*
Mauck, M. C., Barth, K. S., Bell, K. M., Brooks, A. K., Chadwick, A. L., Gunn, C. A., Hurley, R. W., Ivanova, A., Piva, S. R., Schneider, M. J., Bailey, J. F., Bagaason, S., Batorsky, et al
2025
 - **Assessing Pain Distributions in Spinal Conditions using the CHOIR Body Map**
Berhe, N., You, D., Jung, C., Weber, K., Mackey, S., Carmichael, J.
CHURCHILL LIVINGSTONE.2025
 - **Opioid Use May Enhance the Analgesic and Antidepressant Response to Ketamine: Preliminary Findings from a Small Observational Study**
Lii, T., Salmasi, V., Heifets, B., Mackey, S.
CHURCHILL LIVINGSTONE.2025: 54
 - **Robust Peritraumatic Immune System Activation Improves Pain Recovery Following Traumatic Stress Exposure**
Lii, T., Salmasi, V., Heifets, B., Mackey, S.
CHURCHILL LIVINGSTONE.2025
 - **Zoom-Delivered Empowered Relief for Chronic Pain: Observational Longitudinal Pilot Study Exploring Feasibility and Pain-Related Outcomes in Patients on Long-Term Opioids.** *JMIR formative research*
Edwards, K. A., Dildine, T. C., You, D. S., Herrick, A. M., Darnall, B. D., Mackey, S. C., Ziadni, M. S.
2025; 9: e68292

- **Innovations in acute and chronic pain biomarkers: enhancing diagnosis and personalized therapy.** *Regional anesthesia and pain medicine*
Mackey, S., Aghaepour, N., Gaudilliere, B., Kao, M. C., Kaptan, M., Lannon, E., Pfyffer, D., Weber, K.
2025; 50 (2): 110-120
- **Clinician and researcher responses to the term pain catastrophizing and whether new terminology is needed: Content analysis of international, cross-sectional, qualitative survey data.** *The journal of pain*
Boyd, H., You, D. S., Nguyen, A., Connoy, L., Ahuja, D., Chambers, C., Cowan, P., Cox, R., Crombez, G., Feinstein, A. B., Fuqua, A., Gilam, G., Mackey, et al
2025; 29: 105330
- **Leg Muscle Volume, Intramuscular Fat and Force Generation: Insights From a Computer-Vision Model and Fat-Water MRI.** *Journal of cachexia, sarcopenia and muscle*
Smith, A. C., Laguna, J. M., Wesselink, E. O., Scott, Z. E., Jenkins, H., Thornton, W. A., Wasielewski, M., Connor, J., Delp, S., Chaudhari, A. S., Parrish, T. B., Mackey, S., Elliott, et al
2025; 16 (1): e13735
- **Development and preliminary testing of a comprehensive Ecological Momentary Assessment of people with chronic pain.** *The journal of pain*
Junghaenel, D. U., Fillingim, R. B., Pratscher, S. D., Goldstein, S., Mackey, S., Stone, A. A.
2025: 105328
- **Problem of pain in the USA: evaluating the generalisability of high-impact chronic pain models over time using National Health Interview Survey (NHIS) data** *BMJ PUBLIC HEALTH*
Falasinnu, T., Hossain, M., Karim, M., Weber II, K., Mackey, S.
2025; 3 (1)
- **EPISeg: Automated segmentation of the spinal cord on echo planar images using open-access multi-center data.** *bioRxiv : the preprint server for biology*
Banerjee, R., Kaptan, M., Tinnermann, A., Khatibi, A., Dabbagh, A., Kündig, C. W., Law, C. S., Pfyffer, D., Lythgoe, D. J., Tsivaka, D., Ville, D. V., Eippert, F., Muhammad, et al
2025
- **Refining Chronic Pain Phenotypes: A Comparative Analysis of Sociodemographic and Disease-Related Determinants Using Electronic Health Records.** *The journal of pain*
Begum, T., Veeranki, B., Chike, O. J., Tamang, S., Simard, J. F., Chen, J., Chaichian, Y., Mackey, S., Darnall, B. D., Falasinnu, T.
2025: 104775
- **Problem of pain in the USA: evaluating the generalisability of high-impact chronic pain models over time using National Health Interview Survey (NHIS) data.** *BMJ public health*
Falasinnu, T., Hossain, M. B., Karim, M. E., Weber, K. A., Mackey, S.
2025; 3 (1)
- **The problem of pain in systemic lupus erythematosus: A comprehensive analysis of pain distribution using the CHOIR body map and PROMIS measures.** *Lupus*
Jiang, T. E., Mackey, S., Darnall, B. D., Simard, J. F., Falasinnu, T.
2024: 9612033241301176
- **Breaking barriers: addressing opioid stigma in chronic pain and opioid use disorder.** *Pain*
Edwards, K. A., Merlin, J. S., Webster, F., Mackey, S. C., Darnall, B. D.
2024
- **Evaluating a 30-day alcohol abstinence challenge in heavy-drinking individuals with and without chronic pain: feasibility, safety, and perceived benefits.** *Alcohol (Fayetteville, N.Y.)*
You, D. S., Ziadni, M. S., Vest, N., Megerdichian, N., Maronesy, T., Castro, R. J., Darnall, B. D., Mackey, S. C., Humphreys, K.
2024
- **PROGRESS: A Patient-centered Engagement Infrastructure and Multi-level Approach to Enrich Diversity, Equity, and Inclusion in a National Randomized Online Behavioral Pain Treatment Study.** *The journal of pain*
Clifton, J., Adair, E., Cheung, M., Torres, C., Andrews, W., Dorsonne, B., Hailu, A. Y., Heggan, E., Miefert, J., Riazi, G., Dildine, T. C., Spears, S., Greer-Smith, et al
2024: 104718

- **Interpreting Scores Using PRO Stories: New Shareware Supports Bookmarking and Idioscale Judgement**
Cook, K., Mackey, S., Bocell, F., Zhang, C., CERSI 63 Working Grp, CERSI 40 Working Grp
SPRINGER.2024: S185-S186
- **Bookmarking panels with people living with chronic pain to interpret PROMIS pain interference and sleep disturbance scores**
Rothrock, N., Cook, K., You, D., Bocell, F., Stone, A., Veasley, C., Zhang, C., Mackey, S.
SPRINGER.2024: S4-S5
- **The Problem of Pain in Systemic Lupus Erythematosus: A Comprehensive Analysis of Pain Distribution Using the CHOIR Body Map and PROMIS Measures**
Jiang, T., Mackey, S., Darnall, B., Simard, J., Falasinnu, T.
WILEY.2024: 2494-2497
- **Protocol for a randomised trial of a self-directed digital pain management intervention (Empowered Relief) tailored to adults with chronic pain and prescription opioid misuse/disorder: the MOBILE Relief study.** *BMJ open*
Edwards, K. A., Palenski, P., Perez, L., You, D. S., Ziadni, M. S., Jung, C., Adair, E., Tian, L., Mackey, S. C., Darnall, B. D.
2024; 14 (8): e086889
- **"Evidence-based" needs to be based on evidence - a response to Giddon's letter regarding Edwards et al., Is there an association between lateralization of chronic pain in the body and depression?** *The journal of pain*
Gilam, G., Darnall, B., Edwards, K. A., Lii, T., Mackey, S. C., Ziadni, M. S.
2024: 104617
- **Methods for pragmatic randomized clinical trials of pain therapies: IMMPACT statement.** *Pain*
Hohenschurz-Schmidt, D., Cherkin, D., Rice, A. S., Dworkin, R. H., Turk, D. C., McDermott, M. P., Bair, M. J., DeBar, L. L., Edwards, R. R., Evans, S. R., Farrar, J. T., Kerns, R. D., Rowbotham, et al
2024
- **Body size interacts with the structure of the central nervous system: A multi-center in vivo neuroimaging study.** *bioRxiv : the preprint server for biology*
Labounek, R., Bondy, M. T., Paulson, A. L., Bédard, S., Abramovic, M., Alonso-Ortiz, E., Atcheson, N. T., Barlow, L. R., Barry, R. L., Barth, M., Battiston, M., Büchel, C., Budde, et al
2024
- **Comprehensive overview of the anesthesiology research landscape: A machine Learning Analysis of 737 NIH-funded anesthesiology primary Investigator's publication trends.** *Heliyon*
Ghanem, M., Espinosa, C., Chung, P., Reincke, M., Harrison, N., Phongprecha, T., Shome, S., Saarunya, G., Berson, E., James, T., Xie, F., Shu, C. H., Hazra, et al
2024; 10 (7): e29050
- **Exploring Neuronal Underpinnings of Emotional Regulation of Pain in Fibromyalgia Patients**
Kaptan, M., Pfyffer, D., Law, C. S. W., Oliva, V., Weber, K., Glover, G., Mackey, S.
CHURCHILL LIVINGSTONE.2024: 47
- **CONSIDERING SOCIOCULTURAL BIASES IN CHRONIC PAIN TREATMENT AND PAIN OUTCOMES**
Dildine, T., Edwards, K. A., Lannon, E., Darnall, B., Mackey, S. C.
OXFORD UNIV PRESS INC.2024: S127
- **PROFILES OF CHRONIC PAIN STIGMA AND THEIR ASSOCIATION WITH HEALTH OUTCOMES**
Edwards, K. A., You, D. S., Mackey, S. C., Darnall, B.
OXFORD UNIV PRESS INC.2024: S127
- **Which Types of Ruminative Thinking Style Predict Worse Depression, Anxiety, and Anger Symptoms in Chronic Pain Patients?**
Konstantopoulos, C. G., Kaptan, M., Mackey, S. C., You, D. S.
CHURCHILL LIVINGSTONE.2024: 65-66
- **Assessing Differences in Healthcare Discrimination as a Function of High Impact Chronic Pain and Opioid Use**
Dildine, T. C., Lannon, E., Mackey, S., You, D. S.
CHURCHILL LIVINGSTONE.2024: 37

- **Impact of Childhood Trauma History on Treatment Responses to Psychosocial Interventions for Chronic Low Back Pain: A Randomized Controlled Trial**
Kim, S., You, D., Mackey, S. C., Darnall, B. D.
CHURCHILL LIVINGSTONE.2024: 33
- **Which Types of Rumination Will Predict Longitudinal Physical and Psychological Status in Patients with Chronic Pain?**
Kaptan, M., Konstantopoulos, C. G., Mackey, S. C., You, D. S.
CHURCHILL LIVINGSTONE.2024: 65
- **Low Pain Self-Efficacy as a Psychological Factor Associated with High Impact Chronic Pain**
Raney, E., Weber, K., Mackey, S. C., You, D. S.
CHURCHILL LIVINGSTONE.2024: 5
- **Fostering Diversity, Equity, and Inclusion: A Patient-Centric Framework and Multifaceted Strategy in a Nationwide Online Behavioral Pain Treatment Study**
Dorsonne, B., Hailu, A. Y., Cheung, M., Adair, E., Clifton, J., Heggan, E., Riazi, G., Andrews, W., Morais, C., Greer-Smith, R., Pun, T., Williams, N., King, et al
CHURCHILL LIVINGSTONE.2024: 33
- **Investigating the Relationship Between Sleep Quality, Pain, and Physical Function in People with Chronic Neck and Upper Limb Pain**
Berhe, N., You, D., Mackey, S., Weber, K. A.
CHURCHILL LIVINGSTONE.2024: 69
- **People Prescribed Opioids for Chronic Pain Face Multiple Barriers to Ongoing Opioid Therapy: Baseline Characteristics from the VALUE National, Observational, Study**
Perez, L., Bright, V., You, D. S., Palenski, P., Dorsonne, B., Hailu, A., Anderson, A., Darnall, B. D., Mackey, S. C.
CHURCHILL LIVINGSTONE.2024: 29
- **Imaging Corticospinal Correlates of Aberrant Pain Processing and Modulation in Fibromyalgia Using Combined Brain-Spinal Cord Functional Magnetic Resonance Imaging**
Pfyffer, D., Kaptan, M., Law, C. S. W., Weber, K. A., Oliva, V., Bedard, S., Maronesy, T., Glover, G. H., Mackey, S.
CHURCHILL LIVINGSTONE.2024: 47-48
- **The Problem of Pain in Lupus: Epidemiological Profiles of Patients Attending Multidisciplinary Pain Clinics.** *Pain management nursing : official journal of the American Society of Pain Management Nurses*
Jiang, T. E., Pascual, A. P., Le, N., Nguyen, T. B., Mackey, S., Darnall, B. D., Simard, J. F., Falasinnu, T.
2024
- **Utilizing a learning health system to capture real-world patient data: Application of the reliable change index to evaluate and improve the outcome of a pain rehabilitation program.** *Pain practice : the official journal of World Institute of Pain*
You, D. S., Chong, J. L., Mackey, S. C., Poupore-King, H.
2024
- **Investigating the Associations between Lumbar Paraspinal Muscle Health and Age, BMI, Sex, Physical Activity and Back Pain using an Automated Computer-Vision Model: A UK Biobank Study.** *The spine journal : official journal of the North American Spine Society*
Wesselink, E. O., Pool-Goudzwaard, A., De Leener, B., Law, C., Fenyo, M. B., Ello, G. M., Coppieters, M. W., Elliott, J. M., Mackey, S., Weber, K. A.
2024
- **Is there an association between lateralization of chronic pain in the body and depression?** *The journal of pain*
Edwards, K. A., Lii, T., Schouten, T. D., Kearney, K. M., Ziadni, M. S., Darnall, B. D., Mackey, S. C., Gilam, G.
2024
- **Recent developments and future avenues for human corticospinal neuroimaging.** *Frontiers in human neuroscience*
Kaptan, M., Pfyffer, D., Konstantopoulos, C. G., Law, C. S., Weber, K. A., Glover, G. H., Mackey, S.
2024; 18: 1339881
- **Empowered Relief, cognitive behavioral therapy, and health education for people with chronic pain: a comparison of outcomes at 6-month Follow-up for a randomized controlled trial.** *Pain reports*
Darnall, B. D., Burns, J. W., Hong, J., Roy, A., Slater, K., Poupore-King, H., Ziadni, M. S., You, D. S., Jung, C., Cook, K. F., Lorig, K., Tian, L., Mackey, et al
2024; 9 (1): e1116

- **Patient engagement in designing, conducting, and disseminating clinical pain research: IMMPACT recommended considerations.** *Pain*
Haroutounian, S., Holzer, K. J., Kerns, R. D., Veasley, C., Dworkin, R. H., Turk, D. C., Carman, K. L., Chambers, C. T., Cowan, P., Edwards, R. R., Eisenach, J. C., Farrar, J. T., Ferguson, et al
2023
- **The Problem of Pain in Rheumatology: Variations in Case Definitions Derived From Chronic Pain Phenotyping Algorithms Using Electronic Health Records.** *The Journal of rheumatology*
Falasinnu, T., Nguyen, T., En Jiang, T., Tamang, S., Chaichian, Y., Darnall, B. D., Mackey, S., Simard, J. F., Chen, J. H.
2023
- **Establishing the interpretability and utility of the 4-item BriefPCS.** *Scientific reports*
You, D. S., Cook, K. F., Lannon, E. W., Ziadni, M. S., Darnall, B. D., Mackey, S. C.
2023; 13 (1): 21272
- **Prevalence and predictors for postpartum sleep disorders: a nationwide analysis.** *The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*
Sultan, P., Guo, N., Kawai, M., Barwick, F. H., Carvalho, B., Mackey, S., Kallen, M. A., Gould, C. E., Butwick, A. J.
2023; 36 (1): 2170749
- **Pain in U.S. Corrections Settings: The Promise of Digital Solutions for Better Data and Treatment Access.** *Pain medicine (Malden, Mass.)*
Banerjee, A., Mackey, S. C., Vest, N., Darnall, B. D.
2023
- **The Stanford Medicine data science ecosystem for clinical and translational research.** *JAMIA open*
Callahan, A., Ashley, E., Datta, S., Desai, P., Ferris, T. A., Fries, J. A., Halaas, M., Langlotz, C. P., Mackey, S., Posada, J. D., Pfeffer, M. A., Shah, N. H.
2023; 6 (3): ooad054
- **Links between brain neuroimaging and blood inflammatory markers in urological chronic pelvic pain syndrome.** *Physiology & behavior*
Martucci, K. T., Karshikoff, B., Mackey, S. C.
2023: 114358
- **Preoperative Versus Perioperative Risk Factors for Delayed Pain and Opioid Cessation After Total Joint Arthroplasty: A Prospective Cohort Study.** *Pain and therapy*
Hah, J. M., Vialard, J. D., Efron, B., Mackey, S. C., Carroll, I. R., Amanatullah, D. F., Narasimhan, B., Hernandez-Boussard, T.
2023
- **Characterization and burden of localized back pain versus back pain with chronic overlapping pain conditions.** *Pain practice : the official journal of World Institute of Pain*
Terkawi, A. S., Popat, R. A., Mackey, S.
2023
- **Pain Management: Optimizing Patient Care Through Comprehensive, Interdisciplinary Models and Continuous Innovations.** *Anesthesiology clinics*
Mackey, S. C., Pearl, R. G.
2023; 41 (2): xv-xvii
- **Blinded Pain Cocktails: A Reliable and Safe Opioid Weaning Method.** *Anesthesiology clinics*
Kwon, A. H., Colloca, L., Mackey, S. C.
2023; 41 (2): 371-381
- **Pragmatic Comparative Effectiveness Trials and Learning Health Systems in Pain Medicine: Opportunities and Challenges.** *Anesthesiology clinics*
Salmasi, V., Terkawi, A. S., Mackey, S. C.
2023; 41 (2): 503-517
- **A Longitudinal Investigation of the Impact of COVID-19 on Patients with Chronic Pain.** *The journal of pain*
Ziadni, M. S., Jaros, S., Anderson, S. R., You, D. S., Darnall, B. D., Mackey, S. C.
2023

- **Exploring Corticospinal Functional Connectome Using Resting-State Functional Magnetic Resonance Imaging**
Kaptan, M., Law, C. S. W., Weber, K., Pfyffer, D., Zhang, X., Maronesy, T., Glover, G., Mackey, S.
CHURCHILL LIVINGSTONE.2023: 17-18
- **EEG Power Spectrum Predict Concurrent And Future Depression In Chronic Pain**
Lannon, E., You, D. S., Mackey, S.
CHURCHILL LIVINGSTONE.2023: 76-77
- **Differential Association Of Pain Catastrophizing, Resilience And Interoceptive Awareness With Resting-State Functional Connectivity In Chronic Low Back Pain Patients**
Jarrahi, B., Huang, C., Glover, G., Mackey, S.
CHURCHILL LIVINGSTONE.2023: 75
- **Imaging Noxious Thermal Intensity Encoding Along The Neuraxis Using Simultaneous Spinal Cord-Brain Functional Magnetic Resonance Imaging**
Pfyffer, D., Law, C. S. W., Weber, K. A., Kaptan, M., Maronesy, T., Glover, G. H., Mackey, S.
CHURCHILL LIVINGSTONE.2023: 76
- **The Problem of Pain in the United States: A Population-Based Characterization of Biopsychosocial Correlates of High Impact Chronic Pain using the National Health Interview Survey.** *The journal of pain*
Falasinnu, T., Hossain, M. B., Weber, K. A., Helmick, C. G., Karim, M. E., Mackey, S.
2023
- **Research objectives and general considerations for pragmatic clinical trials of pain treatments: IMMPACT statement.** *Pain*
Hohenschurz-Schmidt, D. J., Cherkin, D., Rice, A. S., Dworkin, R. H., Turk, D. C., McDermott, M. P., Bair, M. J., DeBar, L. L., Edwards, R. R., Farrar, J. T., Kerns, R. D., Markman, J. D., Rowbotham, et al
2023
- **Real-world data and evidence in pain research: a qualitative systematic review of methods in current practice.** *Pain reports*
Vollert, J., Kleykamp, B. A., Farrar, J. T., Gilon, I., Hohenschurz-Schmidt, D., Kerns, R. D., Mackey, S., Markman, J. D., McDermott, M. P., Rice, A. S., Turk, D. C., Wasan, A. D., Dworkin, et al
2023; 8 (2): e1057
- **Pain acceptance and psychological inflexibility predict pain interference outcomes for persons with chronic pain receiving pain psychology.** *Scandinavian journal of pain*
Karayannis, N. V., Sturgeon, J. A., Kemani, M. K., Mackey, S. C., Greco, C. M., Wicksell, R. K., McCracken, L. M.
2023
- **Self-reported physical function is strongly related to pain behavior and pain interference and weakly related to physical capacity in people with chronic low back pain.** *Musculoskeletal science & practice*
Karayannis, N. V., Smuck, M., Law, C., Mackey, S. C., Gross, J. J., Darnall, B. D., Hush, J.
2023: 102721
- **Confounds in neuroimaging: A clear case of sex as a confound in brain-based prediction.** *Frontiers in neurology*
Weber, K. A., Teplin, Z. M., Wager, T. D., Law, C. S., Prabhakar, N. K., Ashar, Y. K., Gilam, G., Banerjee, S., Delp, S. L., Glover, G. H., Hastie, T. J., Mackey, S.
2022; 13: 960760
- **Association of cannabis and/or opioid with quality of life and healthcare utilization in patients with chronic pain.** *Frontiers in pain research (Lausanne, Switzerland)*
Salmasi, V., Nelson, L. M., Hong, J., Mackey, S. C.
2022; 3: 1015605
- **A literature review of the impact of exclusion criteria on generalizability of clinical trial findings to patients with chronic pain** *PAIN REPORTS*
Salmasi, V., Lii, T. R., Humphreys, K., Reddy, V., Mackey, S. C.
2022; 7 (6): e1050
- **Patient Responses to the Term Pain Catastrophizing: Thematic Analysis of Cross-sectional International Data.** *The journal of pain*
Webster, F., Conroy, L., Longo, R., Ahuja, D., Amtmann, D., Anderson, A., Ashton-James, C. E., Boyd, H., Chambers, C. T., Cook, K. F., Cowan, P., Crombez, G., Feinstein, et al

2022

- **Intensity of Chronic Low Back Pain and Activity Interference: A Daily Diary Study of the Moderating Role of Cognitive Pain Coping Strategies.** *Pain medicine (Malden, Mass.)*
Vertsberger, D., Talmon, A., Ziadni, M., Kong, J., Darnall, B. D., Manber, R., Mackey, S., Gross, J. J.
2022
- **CHOIRBM: An R package for exploratory data analysis and interactive visualization of pain patient body map data.** *PLoS computational biology*
Cramer, E., Ziadni, M., Scherrer, K. H., Mackey, S., Kao, M.
2022; 18 (10): e1010496
- **Association of pain catastrophizing longitudinally with pain severity and interference in patients with chronic pain and cancer: A CHOIR study**
Azizoddin, D., Wilson, J., Mackey, S., Flowers, K., Darnall, B., Edwards, R., Schreiber, K. L.
LIPPINCOTT WILLIAMS & WILKINS.2022: 213
- **Mindfulness-Based Stress Reduction, Cognitive Behavioral Therapy, and Acupuncture in Chronic Low Back Pain: Protocol for Two Linked Randomized Controlled Trials.** *JMIR research protocols*
Mackey, S., Gilam, G., Darnall, B., Goldin, P., Kong, J., Law, C., Heirich, M., Karayannis, N., Kao, M., Tian, L., Manber, R., Gross, J.
2022; 11 (9): e37823
- **Increased pain catastrophizing longitudinally predicts worsened pain severity and interference in patients with chronic pain and cancer: A CHOIR study.** *Psycho-oncology*
Wilson, J. M., Schreiber, K. L., Mackey, S., Flowers, K. M., Darnall, B. D., Edwards, R. R., Azizoddin, D. R.
2022
- **Altered resting-state functional connectivity within corticostriatal and subcortical-striatal circuits in chronic pain.** *Scientific reports*
Park, S. H., Baker, A. K., Krishna, V., Mackey, S. C., Martucci, K. T.
2022; 12 (1): 12683
- **The Problem of Pain in Rheumatology: Clinical Profiles Associated With Concomitant Diagnoses With Chronic Overlapping Pain Conditions.** *ACR open rheumatology*
Falasinnu, T., Nguyen, T., Jiang, T. E., Chaichian, Y., Rector, A., Darnall, B. D., Mackey, S., Simard, J. F.
2022
- **Effect of Perioperative Gabapentin on Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: A Randomized Clinical Trial (vol 153, pg 303, 2018) JAMA SURGERY**
Hah, J., Mackey, S. C., Schmidt, P.
2022; 157 (6): 553
- **Surgeon Variation in Perioperative Opioid Prescribing and Medium or Long Term Opioid Utilization After Total Knee Arthroplasty: A Cross-Sectional Analysis.** *Anesthesiology*
Cen, X., Jena, A. B., Mackey, S., Sun, E. C.
2022
- **Whole Body Pain Distribution and Risk Factors for Widespread Pain Among Patients Presenting with Abdominal Pain: A Retrospective Cohort Study.** *Pain and therapy*
Hah, J. M., Aivaliotis, V. I., Hettie, G., Pirrotta, L. X., Mackey, S. C., Nguyen, L. A.
2022
- **Effect of Perioperative Gabapentin on Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: A Randomized Clinical Trial (vol 153, pg 303, 2018) JAMA SURGERY**
Hah, J., Mackey, S. C., Schmidt, P.
2022
- **Clarification of Conflict of Interest Disclosures.** *JAMA surgery*
Mackey, S. C.
2022
- **The impact of COVID-19 on patients with chronic pain seeking care at a tertiary pain clinic.** *Scientific reports*
Ziadni, M. S., You, D. S., Cramer, E. M., Anderson, S. R., Hettie, G., Darnall, B. D., Mackey, S. C.

2022; 12 (1): 6435

- **Strategies to Promote Racial Healthcare Equity in Pain Medicine: A Call to Action.** *Pain medicine (Malden, Mass.)*
Telusca, N., Gaisey, J. N., Woods, C., Khan, J. S., Mackey, S.
2022
- **A review of potential national chronic pain surveillance systems in the United States.** *The journal of pain*
Duca, L. M., Helmick, C. G., Barbour, K. E., Nahin, R. L., Von Korff, M., Murphy, L. B., Theis, K., Guglielmo, D., Dahlhamer, J., Porter, L., Falasinnu, T., Mackey, S.
2022
- **Responding to the opioid crisis in North America and beyond: recommendations of the Stanford-Lancet Commission.** *Lancet (London, England)*
Humphreys, K., Shover, C. L., Andrews, C. M., Bohnert, A. S., Brandeau, M. L., Caulkins, J. P., Chen, J. H., Cuellar, M., Hurd, Y. L., Juurlink, D. N., Koh, H. K., Krebs, E. E., Lembke, et al
2022; 399 (10324): 555-604
- **Clarification of Conflict of Interest Disclosure.** *JAMA*
Mackey, S. C.
2022; 327 (16): 1617
- **Comparing Perceived Pain Impact Between Younger and Older Adults With High Impact Chronic Pain: A Cross-Sectional Qualitative and Quantitative Survey.** *Frontiers in pain research (Lausanne, Switzerland)*
You, D. S., Ziadni, M. S., Hettie, G., Darnall, B. D., Cook, K. F., Von Korff, M. R., Mackey, S. C.
2022; 3: 850713
- **Brain circuits for pain and its treatment.** *Science translational medicine*
Mercer Lindsay, N., Chen, C., Gilam, G., Mackey, S., Scherrer, G.
2021; 13 (619): eabj7360
- **Prediction of Cognitive Function with Multimodal Brain MRI**
Weber, K., Wager, T. D., Rosen, A., Ashar, Y. K., Law, C. S., Gilam, G., Upadhyayula, P. A., Zhu, S., Banerjee, S., Glover, G. H., Hastie, T. J., Mackey, S.
WILEY.2021: S42
- **Author Correction: Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers.** *Scientific data*
Cohen-Adad, J., Alonso-Ortiz, E., Abramovic, M., Arneitz, C., Atcheson, N., Barlow, L., Barry, R. L., Barth, M., Battiston, M., Buchel, C., Budde, M., Callot, V., Combes, et al
2021; 8 (1): 242
- **Engagement in Prescription Opioid Tapering Research: the EMPOWER Study and a Coproduction Model of Success.** *Journal of general internal medicine*
Mardian, A., Perez, L., Pun, T., Cheung, M., Porter, J., De Bruyne, K., Kao, M., Flood, P., Moore, N., Colloca, L., Cramer, E., Ashton-James, C. E., Lorig, et al
2021
- **Lack of Premeditation Predicts Aberrant Behaviors Related to Prescription Opioids in Patients with Chronic Pain: A Cross-Sectional Study.** *Substance use & misuse*
Hettie, G., Nwaneshiudu, C., Ziadni, M. S., Darnall, B. D., Mackey, S. C., You, D. S.
2021: 1-6
- **Characterization of chronic overlapping pain conditions in patients with chronic migraine: A CHOIR study.** *Headache*
Barad, M. J., Sturgeon, J. A., Hong, J., Aggarwal, A. K., Mackey, S. C.
2021
- **Chronic pain severity, impact, and opioid use among patients with cancer: An analysis of biopsychosocial factors using the CHOIR learning health care system.** *Cancer*
Azizoddin, D. R., Schreiber, K., Beck, M. R., Enzinger, A. C., Hruschak, V., Darnall, B. D., Edwards, R. R., Allsop, M. J., Tulskey, J. A., Boyer, E., Mackey, S.
2021

- **Assessing the Feasibility of an Open-Source Virtual Reality Mirror Visual Feedback Module for Complex Regional Pain Syndrome: Pilot Usability Study.** *Journal of medical Internet research*
Won, A. S., Barreau, A. C., Gaertner, M., Stone, T., Zhu, J., Wang, C. Y., Mackey, S.
2021; 23 (5): e16536
- **Customizing CAT administration of the PROMIS Misuse of Prescription Pain Medication Item Bank for patients with chronic pain.** *Pain medicine (Malden, Mass.)*
You, D. S., Cook, K. F., Domingue, B. W., Ziadni, M. S., Hah, J. M., Darnall, B. D., Mackey, S. C.
2021
- **Association of Postoperative Opioid Misuse with Prolonged Postoperative Pain, Opioid Use, and Delayed Recovery**
Nwaneshiudu, C., Cramer, E., Mackey, S., Carroll, I., Hah, J.
LIPPINCOTT WILLIAMS & WILKINS.2021: 634
- **Multi-Muscle Deep Learning Segmentation to Automate the Quantification of Muscle Fat Infiltration in Cervical Spine Conditions**
Weber, K., Abbott, R., Bojilov, V., Smith, A., Wasielewski, M., Hastie, T., Parrish, T., Mackey, S., Elliott, J.
CHURCHILL LIVINGSTONE.2021: 600-601
- **THE TEMPORAL RELATIONSHIP BETWEEN NEGATIVE AFFECT AND SLEEP BRUXISM IN PATIENTS WITH CHRONIC BACK PAIN**
Hettie, G., You, D. S., Ziadni, M., Kong, J., Law, C., Gross, J., Manber, R., Darnall, B. D., Mackey, S.
OXFORD UNIV PRESS INC.2021: S478
- **PSYCHOSOCIAL AND SOCIODEMOGRAPHIC MECHANISMS IN PAIN AND OPIOID USE AMONG CHRONIC PAIN AND CANCER**
Azizoddin, D. R., Schreiber, K., Hruschak, V., Beck, M., Enzinger, A. C., Allsop, M. J., Edwards, R. R., Darnall, B. D., Kizildag, D., Tulskey, J. A., Boyer, E. W., Mackey, S.
OXFORD UNIV PRESS INC.2021: S381
- **Stanford pragmatic effectiveness comparison (SPEC) protocol: Comparing long-term effectiveness of high-frequency and burst spinal cord stimulation in real-world application.** *Contemporary clinical trials*
Petrou, P. A., Leong, M. S., Mackey, S. C., Salmasi, V.
2021: 106324
- **Development and validation of the Collaborative Health Outcomes Information Registry body map.** *Pain reports*
Scherrer, K. H., Ziadni, M. S., Kong, J., Sturgeon, J. A., Salmasi, V., Hong, J., Cramer, E., Chen, A. L., Pacht, T., Olson, G., Darnall, B. D., Kao, M., Mackey, et al
2021; 6 (1): e880
- **Comparison of a Single-Session Pain Management Skills Intervention With a Single-Session Health Education Intervention and 8 Sessions of Cognitive Behavioral Therapy in Adults With Chronic Low Back Pain: A Randomized Clinical Trial.** *JAMA network open*
Darnall, B. D., Roy, A., Chen, A. L., Ziadni, M. S., Keane, R. T., You, D. S., Slater, K., Poupore-King, H., Mackey, I., Kao, M. C., Cook, K. F., Lorig, K., Zhang, et al
2021; 4 (8): e2113401
- **Effectiveness of a multidisciplinary rehabilitation program in real-world patients with chronic back pain: A pilot cohort data analysis** *JOURNAL OF BACK AND MUSCULOSKELETAL REHABILITATION*
You, D. S., Ziadni, M. S., Cooley, C. E., Talavera, D. C., Mackey, S. C., Poupore-King, H.
2021; 34 (6): 965-973
- **Spinal Cord Resting State Activity in Individuals With Fibromyalgia Who Take Opioids.** *Frontiers in neurology*
Martucci, K. T., Weber, K. A., Mackey, S. C.
2021; 12: 694271
- **Fatty infiltration in cervical flexors and extensors in patients with degenerative cervical myelopathy using a multi-muscle segmentation model.** *PLoS one*
Paliwal, M., Weber, K. A., Smith, A. C., Elliott, J. M., Muhammad, F., Dahdaleh, N. S., Bodurka, J., Dhaher, Y., Parrish, T. B., Mackey, S., Smith, Z. A.
2021; 16 (6): e0253863
- **Generic acquisition protocol for quantitative MRI of the spinal cord.** *Nature protocols*
Cohen-Adad, J., Alonso-Ortiz, E., Abramovic, M., Arneitz, C., Atcheson, N., Barlow, L., Barry, R. L., Barth, M., Battiston, M., Büchel, C., Budde, M., Callot, V., Combes, et al
2021

- **Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers.** *Scientific data*
Cohen-Adad, J., Alonso-Ortiz, E., Abramovic, M., Arneitz, C., Atcheson, N., Barlow, L., Barry, R. L., Barth, M., Battiston, M., Büchel, C., Budde, M., Callot, V., Combes, et al
2021; 8 (1): 219
- **Multi-muscle deep learning segmentation to automate the quantification of muscle fat infiltration in cervical spine conditions.** *Scientific reports*
Weber, K. A., Abbott, R., Bojilov, V., Smith, A. C., Wasielewski, M., Hastie, T. J., Parrish, T. B., Mackey, S., Elliott, J. M.
2021; 11 (1): 16567
- **Classifying chronic pain using multidimensional pain-agnostic symptom assessments and clustering analysis.** *Science advances*
Gilam, G., Cramer, E. M., Webber, K. A., Ziadni, M. S., Kao, M. C., Mackey, S. C.
2021; 7 (37): eabj0320
- **Individual Differences in Perceived Sleep Quality Do Not Predict Negative Affect Reactivity or Regulation.** *Biological psychology*
Zhang, J., Ten Brink, M., Kreibig, S. D., Gilam, G., Goldin, P. R., Manber, R., Mackey, S., Gross, J. J.
2021: 108149
- **Beyond pain, distress, and disability: the importance of social outcomes in pain management research and practice.** *Pain*
Ashton-James, C. E., Anderson, S. R., Mackey, S. C., Darnall, B. D.
2021
- **Relationship Between Blood Cytokine Levels, Psychological Comorbidity, and Widespreadness of Pain in Chronic Pelvic Pain.** *Frontiers in psychiatry*
Karshikoff, B., Martucci, K. T., Mackey, S.
2021; 12: 651083
- **Author Correction: Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers.** *Scientific data*
Cohen-Adad, J., Alonso-Ortiz, E., Abramovic, M., Arneitz, C., Atcheson, N., Barlow, L., Barry, R. L., Barth, M., Battiston, M., Büchel, C., Budde, M., Callot, V., Combes, et al
2021; 8 (1): 251
- **Association between temporal summation and conditioned pain modulation in chronic low back pain: baseline results from 2 clinical trials.** *Pain reports*
Kong, J. T., You, D. S., Law, C. S., Darnall, B. D., Gross, J. J., Manber, R., Mackey, S.
2021; 6 (4): e975
- **The factor structure and subscale properties of the pain catastrophizing scale: are there differences in the distinctions?** *Pain reports*
Cook, K. F., Mackey, S., Jung, C., Darnall, B. D.
2021; 6 (1): e909
- **A Brief Screening Tool for Opioid Use Disorder: EMPOWER Study Expert Consensus Protocol.** *Frontiers in medicine*
You, D. S., Mardian, A. S., Darnall, B. D., Chen, C. A., De Bruyne, K., Flood, P. D., Kao, M., Karnik, A. D., McNeely, J., Porter, J. G., Schwartz, R. P., Stieg, R. L., Mackey, et al
2021; 8: 591201
- **The problem of pain in lupus: an explication of the role of biopsychosocial mechanisms.** *The Journal of rheumatology*
Falasinnu, T., Drenkard, C., Bao, G., Mackey, S., Lim, S. S.
2020
- **Efficacy of motivational-interviewing and guided opioid tapering support for patients undergoing orthopedic surgery (MI-Opioid Taper): A prospective, assessor-blind, randomized controlled pilot trial.** *EClinicalMedicine*
Hah, J. M., Trafton, J. A., Narasimhan, B., Krishnamurthy, P., Hilmoe, H., Sharifzadeh, Y., Huddleston, J. I., Amanatullah, D., Maloney, W. J., Goodman, S., Carroll, I., Mackey, S. C.
2020; 28: 100596
- **Assessing the Spatial Distribution of Cervical Spinal Cord Activity during Tactile Stimulation of the Upper Extremity in Humans with Functional Magnetic Resonance Imaging.** *NeuroImage*
Weber, K. A., Chen, Y., Paliwal, M., Law, C. S., Hopkins, B. S., Mackey, S., Dhaher, Y., Parrish, T. B., Smith, Z. A.
2020: 116905

- **Clinical Profiles of Concurrent Cannabis Use in Chronic Pain: A CHOIR Study.** *Pain medicine (Malden, Mass.)*
Sturgeon, J. A., Khan, J., Hah, J. M., Hilmoe, H., Hong, J., Ware, M. A., Mackey, S. C.
2020
- **Baseline Characteristics of a Dyadic Cohort of Mothers with Chronic Pain and Their Children.** *The Clinical journal of pain*
Wilson, A. C., Stone, A. L., Poppert Cordts, K. M., Holley, A. L., Mackey, S. n., Darnall, B. D., Palermo, T. M.
2020
- **Magnetization Transfer Ratio and Morphometrics Of the Spinal Cord Associates with Surgical Recovery in Patients with Degenerative Cervical Myelopathy.** *World neurosurgery*
Paliwal, M. n., Weber, K. A., Hopkins, B. S., Cantrell, D. R., Hoggarth, M. A., Elliott, J. M., Dahdaleh, N. S., Mackey, S. n., Parrish, T. D., Dhafer, Y. n., Smith, Z. A.
2020
- **Efficacy and mechanisms of a single-session behavioral medicine class among patients with chronic pain taking prescription opioids: study protocol for a randomized controlled trial.** *Trials*
Ziadni, M. S., Chen, A. L., Winslow, T. n., Mackey, S. C., Darnall, B. D.
2020; 21 (1): 521
- **Preoperative Factors Associated with Remote Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: Post Hoc Analysis of a Perioperative Gabapentin Trial.** *Journal of pain research*
Hah, J. M., Hilmoe, H. n., Schmidt, P. n., McCue, R. n., Trafton, J. n., Clay, D. n., Sharifzadeh, Y. n., Ruchelli, G. n., Hernandez Boussard, T. n., Goodman, S. n., Huddleston, J. n., Maloney, W. J., Dirbas, et al
2020; 13: 2959–70
- **Effect of Electroacupuncture vs Sham Treatment on Change in Pain Severity Among Adults With Chronic Low Back Pain: A Randomized Clinical Trial.** *JAMA network open*
Kong, J. T., Puetz, C. n., Tian, L. n., Haynes, I. n., Lee, E. n., Stafford, R. S., Manber, R. n., Mackey, S. n.
2020; 3 (10): e2022787
- **AAAPT Diagnostic Criteria for Acute Low Back Pain with and Without Lower Extremity Pain.** *Pain medicine (Malden, Mass.)*
Nicol, A. L., Adams, M. C., Gordon, D. B., Mirza, S. n., Dickerson, D. n., Mackey, S. n., Edwards, D. n., Hurley, R. W.
2020
- **Perceived Injustice Mediates the Relationship Between Perceived Childhood Neglect and Current Function in Patients with Chronic Pain: A Preliminary Pilot Study.** *Journal of clinical psychology in medical settings*
Ziadni, M. S., You, D. S., Sturgeon, J. A., Mackey, S. C., Darnall, B. D.
2020
- **The Multidisciplinary Approach to The Study of Chronic Pelvic Pain (MAPP) Research Network*: Design and implementation of the Symptom Patterns Study (SPS).** *Neurourology and urodynamics*
Clemens, J. Q., Kutch, J. J., Mayer, E. A., Naliboff, B. D., Rodriguez, L. V., Klumpp, D. J., Schaeffer, A. J., Kreder, K. J., Clauw, D. J., Harte, S. E., Schrepf, A. D., Williams, D. A., Andriole, et al
2020
- **What Is the Relationship between Pain and Emotion? Bridging Constructs and Communities.** *Neuron*
Gilam, G. n., Gross, J. J., Wager, T. D., Keefe, F. J., Mackey, S. C.
2020
- **Self-reported traumatic etiology of pain and psychological function in tertiary care pain clinic patients: a collaborative health outcomes information registry (CHOIR) study.** *Scandinavian journal of pain*
Taub, C. J., Sturgeon, J. A., Chahal, M. K., Kao, M. C., Mackey, S. C., Darnall, B. D.
2020
- **The Decline in Task Performance After Witnessing Rudeness Is Moderated by Emotional Empathy-A Pilot Study.** *Frontiers in psychology*
Gilam, G. n., Horing, B. n., Sivan, R. n., Weinman, N. n., Mackey, S. C.
2020; 11: 1584
- **Magnetization Transfer Ratio and Morphometrics Of the Spinal Cord Associates with Surgical Recovery in Patients with Degenerative Cervical Myelopathy.** *World neurosurgery*

- Paliwal, M. n., Weber, K. A., Hopkins, B. S., Cantrell, D. R., Hoggarth, M. A., Elliott, J. M., Dahdaleh, N. S., Mackey, S. n., Parrish, T. D., Dhafer, Y. n., Smith, Z. A.
2020
- **Resting State Functional Connectivity Machine Learning Classification of Chronic Back Pain**
Weber, K. A., Law, C. S., Asher, Y. K., Martucci, K. T., Gilam, G., Lewis, B., Narayan, S., Hastie, T., Wager, T. D., Mackey, S.
WILEY.2019: S266
 - **Evaluation of the Preliminary Validity of Misuse of Prescription Pain Medication Items from the Patient-Reported Outcomes Measurement Information System (PROMIS)(R)** *PAIN MEDICINE*
You, D., Hah, J. M., Collins, S., Ziadni, M. S., Domingue, B. W., Cook, K. F., Mackey, S. C.
2019; 20 (10): 1925–33
 - **Implementation Challenges Using a Novel Method for Collecting Patient-Reported Outcomes After Injury** *JOURNAL OF SURGICAL RESEARCH*
Rosenberg, G. M., Shearer, E. J., Zion, S. R., Mackey, S. C., Morris, A. M., Spain, D. A., Weiser, T. G.
2019; 241: 277–84
 - **Adult Cancer Pain, Version 3.2019** *JOURNAL OF THE NATIONAL COMPREHENSIVE CANCER NETWORK*
Swarm, R. A., Paice, J. A., Anghelescu, D. L., Are, M., Bruce, J., Buga, S., Chwistek, M., Cleeland, C., Craig, D., Gafford, E., Greenlee, H., Hansen, E., Kamal, et al
2019; 17 (8): 977–1007
 - **Acyl-oxyacyl hydrolase modulates depressive-like behaviors through aryl hydrocarbon receptor** *AMERICAN JOURNAL OF PHYSIOLOGY-REGULATORY INTEGRATIVE AND COMPARATIVE PHYSIOLOGY*
Aguiniga, L. M., Yang, W., Yaggie, R. E., Schaeffer, A. J., Klumpp, D. J., Clemens, J., Hanno, P., Kirkali, Z., Kusek, J. W., Landis, J., Lucia, M., Moldwin, R. M., Mullins, et al
2019; 317 (2): R289–R300
 - **Neuroimmune modulation of pain across the developmental spectrum** *CURRENT OPINION IN BEHAVIORAL SCIENCES*
Karshikoff, B., Tadros, M., Mackey, S., Zouikr, I.
2019; 28: 85–92
 - **Perioperative Pregabalin and Intraoperative Lidocaine Infusion to Reduce Persistent Neuropathic Pain After Breast Cancer Surgery: A Multicenter, Factorial, Randomized, Controlled Pilot Trial** *JOURNAL OF PAIN*
Khan, J. S., Hodgson, N., Choi, S., Reid, S., Paul, J. E., Hong, N., Holloway, C., Busse, J. W., Gilron, I., Buckley, D., McGillion, M., Clarke, H., Katz, et al
2019; 20 (8): 980–93
 - **Neuroimmune modulation of pain across the developmental spectrum.** *Current opinion in behavioral sciences*
Karshikoff, B., Tadros, M. A., Mackey, S., Zouikr, I.
2019; 28: 85-92
 - **Electronic Versus Traditional Data Collection: A Multicenter Randomized Controlled Perioperative Pain Trial.** *Canadian journal of pain = Revue canadienne de la douleur*
Khan, J. S., Jibb, L. A., Busse, J. W., Gilron, I., Choi, S., Paul, J. E., McGillion, M., Mackey, S., Buckley, D. N., Lee, S. F., Devereaux, P. J.
2019; 3 (2): 16-25
 - **Neuroimaging-based pain biomarkers: definitions, clinical and research applications, and evaluation frameworks to achieve personalized pain medicine.** *Pain reports*
Mackey, S., Greely, H. T., Martucci, K. T.
2019; 4 (4): e762
 - **Response to BotulinumtoxinA in a migraine cohort with multiple comorbidities and widespread pain.** *Regional anesthesia and pain medicine*
Barad, M., Sturgeon, J. A., Fish, S., Dexter, F., Mackey, S., Flood, P. D.
2019; 44 (6): 660–68
 - **Optimization of DNA extraction from human urinary samples for mycobiome community profiling** *PLOS ONE*
Ackerman, A., Anger, J., Khalique, M., Ackerman, J. E., Tang, J., Kim, J., Underhill, D. M., Freeman, M. R., Clemens, J., Hanno, P., Kirkali, Z., Kusek, J. W., Landis, et al
2019; 14 (4): e0210306

- **Aberrant Functional Connectivity of the Dorsolateral Prefrontal Cortex and the Insula During Cognitive Control in Chronic Low Back Pain Patients on Opioids**
Jarrahi, B., Mackey, S.
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Multivariate Pattern Analysis of Emotion Regulation in Opioid-Dependent and Opioid-Naive Chronic Pain Patients**
Jarrahi, B., Mackey, S.
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Electronic Patient-Reported Outcomes: Semi-Automated Data Collection in the Interventional Radiology Clinic** *JOURNAL OF THE AMERICAN COLLEGE OF RADIOLOGY*
Hoang, N. S., Hwang, W., Katz, D. A., Mackey, S. C., Hofmann, L.
2019; 16 (4): 472–77
- **A Culture-Independent Analysis of the Microbiota of Female Interstitial Cystitis/Bladder Pain Syndrome Participants in the MAPP Research Network** *JOURNAL OF CLINICAL MEDICINE*
Nickel, J., Stephens-Shields, A. J., Landis, J., Mullins, C., van Bokhoven, A., Lucia, M., Henderson, J. P., Sen, B., Krol, J. E., Ehrlich, G. D., Clemens, J., Hanno, P., Kirkali, et al
2019; 8 (3)
- **Evaluation of the Preliminary Validity of Misuse of Prescription Pain Medication Items from the Patient-Reported Outcomes Measurement Information System (PROMIS).** *Pain medicine (Malden, Mass.)*
You, D. S., Hah, J. M., Collins, S., Ziadni, M. S., Domingue, B. W., Cook, K. F., Mackey, S. C.
2019
- **Managing twin crises in chronic pain and prescription opioids.** *BMJ (Clinical research ed.)*
Mackey, S., Kao, M.
2019; 364: I917
- **Perioperative pregabalin and intraoperative lidocaine infusion to reduce persistent neuropathic pain after breast cancer surgery: a multicenter, factorial, randomized controlled pilot trial.** *The journal of pain : official journal of the American Pain Society*
Khan, J. S., Hodgson, N., Choi, S., Reid, S., Paul, J. E., Hong, N. J., Holloway, C., Busse, J. W., Gilron, I., Buckley, D. N., McGillion, M., Clarke, H., Katz, et al
2019
- **Altered Cervical Spinal Cord Resting-State Activity in Fibromyalgia** *ARTHRITIS & RHEUMATOLOGY*
Martucci, K. T., Weber, K. A., Mackey, S. C.
2019; 71 (3): 441–50
- **Factors Associated With Acute Pain Estimation, Postoperative Pain Resolution, Opioid Cessation, and Recovery: Secondary Analysis of a Randomized Clinical Trial.** *JAMA network open*
Hah, J. M., Cramer, E., Hilmoie, H., Schmidt, P., McCue, R., Trafton, J., Clay, D., Sharifzadeh, Y., Ruchelli, G., Goodman, S., Huddleston, J., Maloney, W. J., Dirbas, et al
2019; 2 (3): e190168
- **Factors Associated With Acute Pain Estimation, Postoperative Pain Resolution, Opioid Cessation, and Recovery Secondary Analysis of a Randomized Clinical Trial** *JAMA NETWORK OPEN*
Hah, J. M., Cramer, E., Hilmoie, H., Schmidt, P., McCue, R., Trafton, J., Clay, D., Sharifzadeh, Y., Ruchelli, G., Goodman, S., Huddleston, J., Maloney, W. J., Dirbas, et al
2019; 2 (3)
- **International Stakeholder Community of Pain Experts and Leaders Call for an Urgent Action on Forced Opioid Tapering** *PAIN MEDICINE*
Darnall, B. D., Juurlink, D., Kerns, R. D., Mackey, S., Van Dorsten, B., Humphreys, K., Gonzalez-Sotomayor, J. A., Furlan, A., Gordon, A. J., Gordon, D. B., Hoffman, D. E., Katz, J., Kertesz, et al
2019; 20 (3): 429–33
- **Use of Immersive Learning and Simulation Techniques to Teach and Research Opioid Prescribing Practices** *PAIN MEDICINE*
Heirich, M. S., Sinjary, L. S., Ziadni, M. S., Sacks, S., Buchanan, A. S., Mackey, S. C., Newmark, J. L.
2019; 20 (3): 456–63
- **Association of Overlapping Surgery With Perioperative Outcomes** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*

- Sun, E., Mello, M. M., Rishel, C. A., Vaughn, M. T., Kheterpal, S., Saager, L., Fleisher, L. A., Damrose, E. J., Kadry, B., Jena, A. B., Kooij, F., Wilczak, J., Soto, et al
2019; 321 (8): 762–72
- **Dynamic per slice shimming for simultaneous brain and spinal cord fMRI** *MAGNETIC RESONANCE IN MEDICINE*
Islam, H., Law, C. S. W., Weber, K. A., Mackey, S. C., Glover, G. H.
2019; 81 (2): 825–38
 - **Effects of smoking on patients with chronic pain: a propensity-weighted analysis on the Collaborative Health Outcomes Information Registry.** *Pain*
Khan, J. S., Hah, J. M., Mackey, S. C.
2019
 - **The Impact of Social Isolation on Pain Interference: A Longitudinal Study** *ANNALS OF BEHAVIORAL MEDICINE*
Karayannis, N. V., Baumann, I., Sturgeon, J. A., Melloh, M., Mackey, S. C.
2019; 53 (1): 65–74
 - **Comparative Effectiveness of Cognitive Behavioral Therapy for Chronic Pain and Chronic Pain Self-Management within the Context of Voluntary Patient-Centered Prescription Opioid Tapering: The EMPOWER Study Protocol.** *Pain medicine (Malden, Mass.)*
Darnall, B. D., Mackey, S. C., Lorig, K. n., Kao, M. C., Mardian, A. n., Stieg, R. n., Porter, J. n., DeBruyne, K. n., Murphy, J. n., Perez, L. n., Okvat, H. n., Tian, L. n., Flood, et al
2019
 - **Evidence for decreased Neurologic Pain Signature activation following thoracic spinal manipulation in healthy volunteers and participants with neck pain.** *NeuroImage. Clinical*
Weber li, K. A., Wager, T. D., Mackey, S. n., Elliott, J. M., Liu, W. C., Sparks, C. L.
2019; 24: 102042
 - **Novel Characterization Of Thermal Temporal Summation Response By Analysis Of Continuous Pain Vs Time Curves And Exploratory Modeling.** *Journal of pain research*
Kong, J., Bagarinao, E., Olshen, R. A., Mackey, S.
2019; 12: 3231–44
 - **Implementation Challenges Using a Novel Method for Collecting Patient-Reported Outcomes After Injury.** *The Journal of surgical research*
Rosenberg, G. M., Shearer, E. J., Zion, S. R., Mackey, S. C., Morris, A. M., Spain, D. A., Weiser, T. G.
2019; 241: 277–84
 - **Succinylcholine Use and Dantrolene Availability for Malignant Hyperthermia Treatment: Database Analyses and Systematic Review.** *Anesthesiology*
Larach, M. G., Klumpner, T. T., Brandom, B. W., Vaughn, M. T., Belani, K. G., Herlich, A., Kim, T. W., Limoncelli, J., Riazi, S., Sivak, E. L., Capacchione, J., Mashman, D., Kheterpal, et al
2019; 130 (1): 41–54
 - **Deep Learning Convolutional Neural Networks for the Automatic Quantification of Muscle Fat Infiltration Following Whiplash Injury.** *Scientific reports*
Weber, K. A., Smith, A. C., Wasielewski, M. n., Eghtesad, K. n., Upadhyayula, P. A., Wintermark, M. n., Hastie, T. J., Parrish, T. B., Mackey, S. n., Elliott, J. M.
2019; 9 (1): 7973
 - **Evaluation of Candidate Items for Severe PTSD Screening for Patients with Chronic Pain: Pilot Data Analysis with IRT Approach.** *Pain practice : the official journal of World Institute of Pain*
You, D. S., Ziadni, M. S., Gilam, G. n., Darnall, B. D., Mackey, S. C.
2019
 - **Apparent Effects of Opioid Use on Neural Responses to Reward in Chronic Pain.** *Scientific reports*
Martucci, K. T., MacNiven, K. H., Borg, N. n., Knutson, B. n., Mackey, S. C.
2019; 9 (1): 9633
 - **Negative Affect-Related Factors Have the Strongest Association with Prescription Opioid Misuse in a Cross-Sectional Cohort of Patients with Chronic Pain.** *Pain medicine (Malden, Mass.)*
Gilam, G. n., Sturgeon, J. A., You, D. S., Wasan, A. D., Darnall, B. D., Mackey, S. C.

2019

- **Central mechanisms of real and sham electroacupuncture in the treatment of chronic low back pain: study protocol for a randomized, placebo-controlled clinical trial.** *Trials*
Kong, J., Maclsaac, B., Cogan, R., Ng, A., Law, C. S., Helms, J., Schnyer, R., Karayannis, N. V., Kao, M., Tian, L., Darnall, B. D., Gross, J. J., Mackey, et al
2018; 19 (1): 685
- **Striatal dopamine deficits predict reductions in striatal functional connectivity in major depression: a concurrent 11C-raclopride positron emission tomography and functional magnetic resonance imaging investigation.** *Translational psychiatry*
Hamilton, J. P., Sacchet, M. D., Hjernevik, T., Chin, F. T., Shen, B., Kampe, R., Park, J. H., Knutson, B. D., Williams, L. M., Borg, N., Zaharchuk, G., Camacho, M. C., Mackey, et al
2018; 8 (1): 264
- **International Stakeholder Community of Pain Experts and Leaders Call for an Urgent Action on Forced Opioid Tapering.** *Pain medicine (Malden, Mass.)*
Darnall, B. D., Juurlink, D., Kerns, R. D., Mackey, S., Van Dorsten, B., Humphreys, K., Gonzalez-Sotomayor, J. A., Furlan, A., Gordon, A. J., Gordon, D. B., Hoffman, D. E., Katz, J., Kertesz, et al
2018
- **Electronic Patient-Reported Outcomes: Semi-Automated Data Collection in the Interventional Radiology Clinic.** *Journal of the American College of Radiology : JACR*
Hoang, N. S., Hwang, W., Katz, D. A., Mackey, S. C., Hofmann, L. V.
2018
- **Dynamic per slice Shimming for Simultaneous Brain and Spinal Cord fMRI.** *Magnetic resonance in medicine*
Islam, H., Law, C. S., Weber, K. A., Mackey, S. C., Glover, G. H.
2018
- **Altered Cervical Spinal Cord Resting State Activity in Fibromyalgia.** *Arthritis & rheumatology (Hoboken, N.J.)*
Martucci, K. T., Weber, K. A., Mackey, S. C.
2018
- **The factor structure and subscale properties of the pain catastrophizing scale: are there differences in the distinctions?**
Cook, K., Darnall, B., Mackey, S.
SPRINGER.2018: S38
- **Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults - United States, 2016** *MMWR-MORBIDITY AND MORTALITY WEEKLY REPORT*
Dahlhamer, J., Lucas, J., Zelaya, C., Nahin, R., Mackey, S., DeBar, L., Kerns, R., Von Korff, M., Porter, L., Helmick, C.
2018; 67 (36): 1001–6
- **Use of Immersive Learning and Simulation Techniques to Teach and Research Opioid Prescribing Practices.** *Pain medicine (Malden, Mass.)*
Heirich, M. S., Sinjary, L. S., Ziadni, M. S., Sacks, S., Buchanan, A. S., Mackey, S. C., Newmark, J. L.
2018
- **Altered prefrontal correlates of monetary anticipation and outcome in chronic pain** *PAIN*
Martucci, K. T., Borg, N., MacNiven, K. H., Knutson, B., Mackey, S. C.
2018; 159 (8): 1494–1507
- **The Impact of Perceived Injustice on Pain-related Outcomes: A Combined Model Examining the Mediating Roles of Pain Acceptance and Anger in a Chronic Pain Sample.** *The Clinical journal of pain*
Carriere, J. S., Sturgeon, J. A., Yakobov, E., Kao, M. C., Mackey, S. C., Darnall, B. D.
2018; 34 (8): 739-747
- **Cold Water Pressor Test Differentially Modulates Functional Network Connectivity in Fibromyalgia Patients Compared with Healthy Controls.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference*
Jarrahi, B., Martucci, K. T., Nilakantan, A. S., Mackey, S.
2018; 2018: 578–82

- **Characterizing the Effects of MR Image Quality Metrics on Intrinsic Connectivity Brain Networks: A Multivariate Approach.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference*
Jarrahi, B., Mackey, S.
2018; 2018: 1041–45
- **Measuring the Influence of Physiological Noise Corrections on ICA Derived Intrinsic Connectivity Brain Networks in Rest and Task fMRI.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference*
Jarrahi, B., Mackey, S.
2018; 2018: 1046–49
- **Neuroimaging of Pain: Human Evidence and Clinical Relevance of Central Nervous System Processes and Modulation.** *Anesthesiology*
Martucci, K. T., Mackey, S. C.
2018; 128 (6): 1241–54
- **Advancing Transcranial Magnetic Stimulation Methods for Complex Regional Pain Syndrome: An Open-Label Study of Paired Theta Burst and High-Frequency Stimulation.** *Neuromodulation : journal of the International Neuromodulation Society*
Gaertner, M., Kong, J. T., Scherrer, K. H., Foote, A., Mackey, S., Johnson, K. A.
2018; 21 (4): 409-416
- **A Case-Crossover Study of Urological Chronic Pelvic Pain Syndrome Flare Triggers in the MAPP Research Network** *JOURNAL OF UROLOGY*
Sutcliffe, S., Jemielita, T., Lai, H., Andriole, G. L., Bradley, C. S., Clemens, J., Gallop, R., Hooton, T. M., Kreder, K. J., Krieger, J. N., Kusek, J. W., Labus, J., Lucia, et al
2018; 199 (5): 1245–51
- **The Impact of Social Isolation on Pain Interference: A Longitudinal Study.** *Annals of behavioral medicine : a publication of the Society of Behavioral Medicine*
Karayannis, N. V., Baumann, I., Sturgeon, J. A., Melloh, M., Mackey, S. C.
2018
- **Effects of Opioids on Causal Relationships Between Intrinsic Connectivity Brain Networks in Patients with Chronic Low Back Pain - A Resting-State fMRI Study**
Jarrahi, B., Mackey, S.
LIPPINCOTT WILLIAMS & WILKINS.2018
- **Altered prefrontal correlates of monetary anticipation and outcome in chronic pain.** *Pain*
Martucci, K. T., Borg, N., MacNiven, K. H., Knutson, B., Mackey, S. C.
2018
- **Predictors of Daily Pain Medication Use in Individuals with Recurrent Back Pain** *INTERNATIONAL JOURNAL OF BEHAVIORAL MEDICINE*
Sturgeon, J. A., Hah, J. M., Sharifzadeh, Y., Middleton, S. K., Rico, T., Johnson, K. A., Mackey, S. C.
2018; 25 (2): 252–58
- **Comparative Efficacy and Mechanisms of a Single-Session Pain Psychology Class in Chronic Low Back Pain: Study Protocol for a Randomized Controlled Trial.** *Trials*
Darnall, B. D., Ziadni, M. S., Roy, A., Kao, M. C., Sturgeon, J. A., Cook, K. F., Lorig, K., Burns, J. W., Mackey, S. C.
2018; 19 (1): 165
- **Scope and Nature of Pain- and Analgesia-Related Content of the United States Medical Licensing Examination (USMLE).** *Pain medicine (Malden, Mass.)*
Fishman, S. M., Carr, D. B., Hogans, B., Cheattle, M., Gallagher, R. M., Katzman, J., Mackey, S., Polomano, R., Popescu, A., Rathmell, J. P., Rosenquist, R. W., Tauben, D., Beckett, et al
2018; 19 (3): 449-459
- **The impact of perceived injustice on pain-related outcomes: A combined model examining the mediating roles of pain acceptance and anger in a chronic pain sample** *Clin J Pain*
Carrier, J., Sturgeon, J., Yakabov, E., Kao, M., Mackey, S., Darnall, B.
2018: 739–47

- **Characterizing the Effects of MR Image Quality Metrics on Intrinsic Connectivity Brain Networks: A Multivariate Approach**
Jarrahi, B., Mackey, S., IEEE
IEEE.2018: 1041-1045
- **Measuring the Influence of Physiological Noise Corrections on ICA Derived Intrinsic Connectivity Brain Networks in Rest and Task fMRI**
Jarrahi, B., Mackey, S., IEEE
IEEE.2018: 1046-1049
- **Cold Water Pressor Test Differentially Modulates Functional Network Connectivity in Fibromyalgia Patients Compared with Healthy Controls**
Jarrahi, B., Martucci, K. T., Nilakantan, A. S., Mackey, S., IEEE
IEEE.2018: 578-582
- **Neuroimaging of Pain: Human Evidence and Clinical Relevance of Central Nervous System Processes and Modulation** *Anesthesiology*
Martucci, K., Mackey, S.
2018
- **Automatic Segmentation of Cervical Spinal Cord Damage in Incomplete Spinal Cord Injury using Three-Dimensional T₂-Weighted Magnetic Resonance Imaging and Convolutional Neural Networks: An Application of V-Net on the NiftyNet Platform** *Radiology*
Weber, K., Mackey, S.
2018
- **Radiofrequency Denervation for Chronic Low Back Pain** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
Kao, M., Leong, M. S., Mackey, S.
2017; 318 (22): 2256
- **Radiofrequency Denervation for Chronic Low Back Pain.** *JAMA*
Kao, M. C., Leong, M. S., Mackey, S.
2017; 318 (22): 2256
- **Pain catastrophizing mediates the relationship between trait happiness and depressive symptoms in individuals with current pain.** *Journal of applied biobehavioral research*
Tran, P., Sturgeon, J. A., Nilakantan, A., Foote, A., Mackey, S., Johnson, K.
2017; 22 (4)
- **Brain imaging tests for chronic pain: medical, legal and ethical issues and recommendations** *NATURE REVIEWS NEUROLOGY*
Davis, K. D., Flor, H., Greely, H. T., Iannetti, G., Mackey, S., Ploner, M., Pustilnik, A., Tracey, I., Treede, R., Wager, T. D.
2017; 13 (10): 624–38
- **Pain catastrophizing, perceived injustice, and pain intensity impair life satisfaction through differential patterns of physical and psychological disruption.** *Scandinavian journal of pain*
Sturgeon, J. A., Ziadni, M. S., Trost, Z., Darnall, B. D., Mackey, S. C.
2017; 17: 390-396
- **Brain signature and functional impact of centralized pain: a multidisciplinary approach to the study of chronic pelvic pain (MAPP) network study** *PAIN*
Kutch, J. J., IchESCO, E., Hampson, J. P., Labus, J. S., Farmer, M. A., Martucci, K. T., Ness, T. J., Deutsch, G., Apkarian, A., Mackey, S. C., Klumpp, D. J., Schaeffer, A. J., Rodriguez, et al
2017; 158 (10): 1979–91
- **Development and Validation of a Daily Pain Catastrophizing Scale.** *The journal of pain*
Darnall, B. D., Sturgeon, J. A., Cook, K. F., Taub, C. J., Roy, A., Burns, J. W., Sullivan, M., Mackey, S. C.
2017; 18 (9): 1139-1149
- **A prospective, multisite, international validation of the Complex Regional Pain Syndrome Severity Score** *PAIN*
Harden, R., Maihofner, C., AbouSaad, E., Vatine, J., Kirsling, A., Perez, R. M., Kuroda, M., Brunner, F., Stanton-Hicks, M., Marinus, J., van Hilten, J. J., Mackey, S., Birklein, et al
2017; 158 (8): 1430–36
- **Pain Catastrophizing Moderates Relationships between Pain Intensity and Opioid Prescription: Nonlinear Sex Differences Revealed Using a Learning Health System.** *Anesthesiology*

- Sharifzadeh, Y., Kao, M. C., Sturgeon, J. A., Rico, T. J., Mackey, S., Darnall, B. D.
2017; 127 (1): 136-146
- **Resting-state functional connectivity predicts longitudinal pain symptom change in urologic chronic pelvic pain syndrome: a MAPP network study.** *Pain*
Kutch, J. J., Labus, J. S., Harris, R. E., Martucci, K. T., Farmer, M. A., Fenske, S., Fling, C., Ichescio, E., Peltier, S., Petre, B., Guo, W., Hou, X., Stephens, et al
2017; 158 (6): 1069-1082
 - **Development and Validation of a Daily Pain Catastrophizing Scale.** *journal of pain*
Darnall, B. D., Sturgeon, J. A., Cook, K. F., Taub, C. J., Roy, A., Burns, J. W., Sullivan, M., Mackey, S. C.
2017
 - **The ACTION-APS-AAPM Pain Taxonomy (AAAPT) Multidimensional Approach to Classifying Acute Pain Conditions** *JOURNAL OF PAIN*
Kent, M. L., Tighe, P. J., Belfer, I., Brennan, T. J., Bruehl, S., Brummett, C. M., Buckenmaier, C. C., Buvanendran, A., Cohen, R. I., Desjardins, P., Edwards, D., Fillingim, R., Gewandter, et al
2017; 18 (5): 479-489
 - **A Randomized Trial of Perioperative Gabapentin to Promote Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort**
Hah, J., Mackey, S., Efron, B., Mccue, R., Goodman, S., Curtin, C., Carroll, I.
LIPPINCOTT WILLIAMS & WILKINS.2017: 813–17
 - **Association between concurrent use of prescription opioids and benzodiazepines and overdose: retrospective analysis** *BMJ-BRITISH MEDICAL JOURNAL*
Sun, E. C., Dixit, A., Humphreys, K., Darnall, B. D., Baker, L. C., Mackey, S.
2017; 356
 - **A Double-Blind Placebo Randomized Controlled Trial of Minocycline to Reduce Pain After Carpal Tunnel and Trigger Finger Release.** *journal of hand surgery*
Curtin, C. M., Kenney, D., Suarez, P., Hentz, V. R., Hernandez-Boussard, T., Mackey, S., Carroll, I. R.
2017; 42 (3): 166-174
 - **SIMULATION FOR CHRONIC PAIN OPIOID MANAGEMENT: SYMPATHY AFFECTS PHYSICIAN PRESCRIBING DECISIONS**
Heirich, M., Mackey, S., Newmark, J.
SPRINGER.2017: S534–S535
 - **Effects of a pain catastrophizing induction on quantitatively measured pain perception in women with chronic low back pain** *Pain Research & Treatment*
Taub, C. J., Sturgeon, J. A., Johnson, K. A., Mackey, S. C., Darnall, B. D.
2017: 7892494
 - **Pain interference and physical function demonstrate poor longitudinal association in people living with pain: A PROMIS investigation.** *Pain*
Karayannis, N. V., Sturgeon, J. A., Chih-Kao, M., Cooley, C., Mackey, S. C.
2017
 - **Effects of a Pain Catastrophizing Induction on Sensory Testing in Women with Chronic Low Back Pain: A Pilot Study** *PAIN RESEARCH & MANAGEMENT*
Taub, C. J., Sturgeon, J. A., Johnson, K. A., Mackey, S. C., Darnall, B. D.
2017
 - **Effect of Perioperative Gabapentin on Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: A Randomized Clinical Trial.** *JAMA surgery*
Hah, J. n., Mackey, S. C., Schmidt, P. n., McCue, R. n., Humphreys, K. n., Trafton, J. n., Efron, B. n., Clay, D. n., Sharifzadeh, Y. n., Ruchelli, G. n., Goodman, S. n., Huddleston, J. n., Maloney, et al
2017
 - **Brain signature and functional impact of centralized pain: a multidisciplinary approach to the study of chronic pelvic pain (MAPP) network study.** *Pain, October 2017, 158 (2017) 1979-1991.* *Pain*
Kutch, J., Ichescio, E., Hampson, J., Labus, J., Farmer, M., Martucci, K., Ness, T., Deutsch, G., Apkarian, A., Mackey, S., Klumpp, D., Schaeffer, A., Rodriguez, et al
2017

- **Thermal Stimulation alters Cervical Spinal Cord Functional Connectivity in Humans.** *Neuroscience*
Weber, K., Parrish, T., Bernadel-Huey, O., Sentis, A., Wang, X., Mackey, S.
2017
- **A case-crossover study of urologic chronic pelvic pain syndrome flare triggers in the MAPP Research Network.** *J Urology*
Sutcliffe, S., Jemielita, T., Lai, H. H., Andriole, G. L., Bradley, C. S., Clemens, J. Q., Gallop, R., Hooton, T. M., Kreder, K. J., Krieger, J. N., Kusek, J. W., Labus, J., Lucia, et al
2017
- **Factors associated with prescription opioid misuse in a cross-sectional cohort of patients with chronic non-cancer pain** *JOURNAL OF PAIN RESEARCH*
Hah, J. M., Sturgeon, J. A., Zocca, J., Sharifzadeh, Y., Mackey, S. C.
2017; 10: 979-987
- **Thermal Stimulation Alters Cervical Spinal Cord Functional Connectivity in Humans.** *Neuroscience*
Weber, K. A., Sentis, A. I., Bernadel-Huey, O. N., Chen, Y. n., Wang, X. n., Parrish, T. B., Mackey, S. n.
2017
- **First, Do No Harm - Marshaling clinician leadership to counter the opioid epidemic** *National Academy of Medicine - Special Publication*
Adams, S., Blanco, C., Chaudhry, H., Chen, H., Chou, R., Christopher, M., Harris, P., Levin, S., Mackey, S., McCance-Katz, E., Moore, P., Rathmell, J., Rieder, et al
2017
- **Psychological features and their relationship to movement based subgroups in people with low back pain.** *Archives of Physical Medicine and Rehabilitation*
Karayannis, N., Mackey, S.
2017
- **Predictors of Daily Pain Medication Use in Individuals with Recurrent Back Pain.** *International Journal of Behavioral Medicine*
Sturgeon, J., Hah, J., Sharifzadeh, Y., Middleton, S. K., Rico, T., Johnson, K., Mackey, S.
2017
- **Effect of Perioperative Gabapentin on Postoperative Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort: A Randomized Clinical Trial.** *JAMA surgery*
Hah, J. n., Mackey, S. C., Schmidt, P. n., McCue, R. n., Humphreys, K. n., Trafton, J. n., Efron, B. n., Clay, D. n., Sharifzadeh, Y. n., Ruchelli, G. n., Goodman, S. n., Huddleston, J. n., Maloney, et al
2017
- **Brain signature and functional impact of centralized pain: a multidisciplinary approach to the study of chronic pelvic pain (MAPP) network study.** *Pain, October 2017, 158 (2017) 1979-1991.* *Pain*
Kutch, J., Ichesco, E., Hampson, J., Labus, J., Farmer, M., Martucci, K., Ness, T., Deutsch, G., Apkarian, A., Mackey, S., Klumpp, D., Schaeffer, A., Rodriguez, et al
2017
- **Thermal Stimulation alters Cervical Spinal Cord Functional Connectivity in Humans.** *Neuroscience*
Weber, K., Parrish, T., Bernadel-Huey, O., Sentis, A., Wang, X., Mackey, S.
2017
- **A case-crossover study of urologic chronic pelvic pain syndrome flare triggers in the MAPP Research Network.** *J Urology*
Sutcliffe, S., Jemielita, T., Lai, H. H., Andriole, G. L., Bradley, C. S., Clemens, J. Q., Gallop, R., Hooton, T. M., Kreder, K. J., Krieger, J. N., Kusek, J. W., Labus, J., Lucia, et al
2017
- **Factors associated with prescription opioid misuse in a cross-sectional cohort of patients with chronic non-cancer pain** *JOURNAL OF PAIN RESEARCH*
Hah, J. M., Sturgeon, J. A., Zocca, J., Sharifzadeh, Y., Mackey, S. C.
2017; 10: 979-987
- **Brain white matter changes associated with urological chronic pelvic pain syndrome: multisite neuroimaging from a MAPP case-control study** *PAIN*

- Huang, L., Kutch, J. J., Ellingson, B. M., Martucci, K. T., Harris, R. E., Clauw, D. J., Mackey, S., Mayer, E. A., Schaeffer, A. J., Apkarian, A. V., Farmer, M. A.
2016; 157 (12): 2782-2791
- **Symptom Variability and Early Symptom Regression in the MAPP Study: A Prospective Study of Urological Chronic Pelvic Pain Syndrome** *JOURNAL OF UROLOGY*
Stephens-Shields, A. J., Clemens, J., Jemielita, T., Farrar, J., Sutcliffe, S., Hou, X., Landis, J., MAPP Res Network
2016; 196 (5): 1450-1455
 - **United States National Pain Strategy for Population Research: Concepts, Definitions, and Pilot Data** *JOURNAL OF PAIN*
Von Korff, M., Scher, A. I., Helmick, C., Carter-Pokras, O., Dodick, D. W., Goulet, J., Hamill-Ruth, R., LeResche, L., Porter, L., Tait, R., Terman, G., Veasley, C., Mackey, et al
2016; 17 (10): 1068-1080
 - **Perturbed connectivity of the amygdala and its subregions with the central executive and default mode networks in chronic pain.** *Pain*
Jiang, Y., Oathes, D., Hush, J., Darnall, B., Charvat, M., Mackey, S., Etkin, A.
2016; 157 (9): 1970-1978
 - **Incidence of and Risk Factors for Chronic Opioid Use Among Opioid-Naive Patients in the Postoperative Period.** *JAMA internal medicine*
Sun, E. C., Darnall, B. D., Baker, L. C., Mackey, S.
2016; 176 (9): 1286-1293
 - **Pediatric-Collaborative Health Outcomes Information Registry (Peds-CHOIR): a learning health system to guide pediatric pain research and treatment.** *Pain*
Bhandari, R. P., Feinstein, A. B., Huestis, S. E., Krane, E. J., Dunn, A. L., Cohen, L. L., Kao, M. C., Darnall, B. D., Mackey, S. C.
2016; 157 (9): 2033-2044
 - **Complex regional pain syndrome: evidence for warm and cold subtypes in a large prospective clinical sample.** *Pain*
Bruehl, S., Maihöfner, C., Stanton-Hicks, M., Perez, R. S., Vatine, J., Brunner, F., Birklein, F., Schlereth, T., Mackey, S., Mailis-Gagnon, A., Livshitz, A., Harden, R. N.
2016; 157 (8): 1674-1681
 - **Social Disruption Mediates the Relationship Between Perceived Injustice and Anger in Chronic Pain: a Collaborative Health Outcomes Information Registry Study.** *Annals of behavioral medicine*
Sturgeon, J. A., Carriere, J. S., Kao, M. J., Rico, T., Darnall, B. D., Mackey, S. C.
2016: -?
 - **Development of the Sensory Hypersensitivity Scale (SHS): a self-report tool for assessing sensitivity to sensory stimuli** *JOURNAL OF BEHAVIORAL MEDICINE*
Dixon, E. A., Benham, G., Sturgeon, J. A., Mackey, S., Johnson, K. A., Younger, J.
2016; 39 (3): 537-550
 - **Imaging Pain.** *Anesthesiology clinics*
Martucci, K. T., Mackey, S. C.
2016; 34 (2): 255-269
 - **Survalytics: An Open-Source Cloud-Integrated Experience Sampling, Survey, and Analytics and Metadata Collection Module for Android Operating System Apps** *JMIR MHEALTH AND UHEALTH*
O'Reilly-Shah, V., Mackey, S.
2016; 4 (2): 17-26
 - **(325) Pain catastrophizing correlates with neural activation in a maladaptive pain belief induction.** *journal of pain*
Sentis, A., Law, C., Sturgeon, J., Mackey, S.
2016; 17 (4S): S57-?
 - **(418) A novel glial cell inhibitor, low dose naltrexone, reduces pain and depression, and improves function in chronic pain: A CHOIR study.** *journal of pain*
Noon, K., Sturgeon, J., Kao, M., Darnall, B., Mackey, S.
2016; 17 (4S): S79-?
 - **(179) Depression mediates the relationship between pain intensity and effort in minor, but not major, decision making.** *journal of pain*

- Middleton, S., Sturgeon, J., RICO, T., Mackey, S., Johnson, K.
2016; 17 (4S): S20-?
- **(489) An examination of the roles of perceived injustice and pain acceptance on pain interference and pain intensity in patients with chronic pain: A Collaborative Health Outcomes Information Registry (CHOIR) Study.** *journal of pain*
Carriere, J., Darnall, B., Kao, M., Mackey, S.
2016; 17 (4S): S97-?
 - **(218) Characterization of patients with complex regional pain syndrome (CRPS) in a tertiary care pain management setting: A Collaborative Health Outcomes Information Registry (CHOIR) study.** *journal of pain*
Adelus, M., Sturgeon, J., RICO, T., Tawfik, V., Mackey, S.
2016; 17 (4S): S30-?
 - **(158) Cigarette smoking is a predictor of opioid use in a tertiary care pain clinic sample: a Collaborative Health Outcomes Information Registry (CHOIR) study.** *journal of pain*
MACKEY, I., Sharifzadeh, Y., Sturgeon, J., Mackey, S.
2016; 17 (4S): S15-?
 - **(162) Social disruption, but not pain interference, mediates the relationship between perceived injustice and anger in chronic pain: A Collaborative Health Outcomes Information Registry (CHOIR) study.** *journal of pain*
Sturgeon, J., Carriere, J., Darnall, B., Mackey, S.
2016; 17 (4S): S16-?
 - **(160) Body mass index is unrelated to concurrent clinical variables in a tertiary care pain clinic sample: a Collaborative Health Outcomes Information Registry (CHOIR) study.** *journal of pain*
Sharifzadeh, Y., Sturgeon, J., MACKEY, I., Mackey, S.
2016; 17 (4S): S15-S16
 - **(448) Perceived injustice, pain behavior and opioid prescriptions: a vicious circle? A Collaborative Health Outcomes Information Registry (CHOIR) Study.** *journal of pain*
Carriere, J., Darnall, B., Sullivan, M., Kao, M., Mackey, S.
2016; 17 (4S): S86-?
 - **(139) Risk factors for long-term prescription opioid therapy for chronic non-cancer pain.** *journal of pain*
Hah, J., Zocca, J., Sharifzadeh, Y., Mackey, S.
2016; 17 (4S): S10-S11
 - **(321) Enhanced secondary hyperalgesia following a pain catastrophizing induction in women with chronic low back pain.** *journal of pain*
Taub, C., Darnall, B., Johnson, K., Mackey, S.
2016; 17 (4S): S56-?
 - **(167) Predicting disability status in chronic pain: the role of psychosocial and demographic factors.** *journal of pain*
Dixon, E., Sturgeon, J., Mackey, S.
2016; 17 (4S): S17-?
 - **(118) Physical and psychological predictors of dysfunction in complex regional pain syndrome (CRPS): a Collaborative Health Outcomes Information Registry (CHOIR) study.** *journal of pain*
Adelus, M., Sturgeon, J., RICO, T., Tawfik, V., Mackey, S.
2016; 17 (4S): S5-?
 - **(180) Development and validation of a Daily Pain Catastrophizing Scale (Daily PCS) measure.** *journal of pain*
Darnall, B., Sturgeon, J., Cook, K., Taub, C., Kao, M., RICO, T., Mackey, S.
2016; 17 (4S): S20-S21
 - **(161) Differential daily effects of pain intensity, sleep, and mood on physical activity in chronic back pain.** *journal of pain*
Sturgeon, J., Middleton, S., RICO, T., Mackey, S., Johnson, K.
2016; 17 (4S): S16-?
 - **(163) Pain catastrophizing, perceived injustice, and pain intensity impair life satisfaction through differential patterns of physical and psychological disruption.** *journal of pain*
Sturgeon, J., Dixon, E., Darnall, B., Mackey, S.

2016; 17 (4S): S16-?

- **Effects of salience-network-node neurofeedback training on affective biases in major depressive disorder.** *Psychiatry research*
Hamilton, J. P., Glover, G. H., Bagarinao, E., Chang, C., Mackey, S., Sacchet, M. D., Gotlib, I. H.
2016; 249: 91-96
- **Future Directions for Pain Management: Lessons from the Institute of Medicine Pain Report and the National Pain Strategy** *HAND CLINICS*
Mackey, S.
2016; 32 (1): 91-?
- **Pain Psychology: A Global Needs Assessment and National Call to Action** *PAIN MEDICINE*
Darnall, B. D., Scheman, J., Davin, S., Burns, J. W., Murphy, J. L., Wilson, A. C., Kerns, R. D., Mackey, S. C.
2016; 17 (2): 250-263
- **Multisite, multimodal neuroimaging of chronic urological pelvic pain: Methodology of the MAPP Research Network.** *NeuroImage. Clinical*
Alger, J. R., Ellingson, B. M., Ashe-McNalley, C., Woodworth, D. C., Labus, J. S., Farmer, M., Huang, L., Apkarian, A. V., Johnson, K. A., Mackey, S. C., Ness, T. J., Deutsch, G., Harris, et al
2016; 12: 65-77
- **Social Disruption Mediates the Relationship Between Perceived Injustice and Anger in Chronic Pain: a Collaborative Health Outcomes Information Registry Study** *Annals of Behavioral Medicine*
Sturgeon, J. A., Carriere, J. S., Kao, M. J., Rico, T. J., Darnall, B. D., Mackey, S. C.
2016: 802-12
- **Overcoming barriers to implementing patient-reported outcomes in an electronic health record: a case report** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Harle, C. A., Linstead, A., Covarrubias, C. M., Schmidt, S. O., Mackey, S., Carek, P. J., Fillingim, R. B., Hurley, R. W.
2016; 23 (1): 74-79
- **Pain Duration and Resolution following Surgery: An Inception Cohort Study** *PAIN MEDICINE*
Carroll, I. R., Hah, J. M., Barelka, P. L., Wang, C. K., Wang, B. M., Gillespie, M. J., McCue, R., Younger, J. W., Trafton, J., Humphreys, K., Goodman, S. B., Dirbas, F. M., Mackey, et al
2015; 16 (12): 2386-2396
- **Contributions of physical function and satisfaction with social roles to emotional distress in chronic pain: a Collaborative Health Outcomes Information Registry (CHOIR) study** *PAIN*
Sturgeon, J. A., Dixon, E. A., Darnall, B. D., Mackey, S. C.
2015; 156 (12): 2627-2633
- **Unique Microstructural Changes in the Brain Associated with Urological Chronic Pelvic Pain Syndrome (UCPPS) Revealed by Diffusion Tensor MRI, Super-Resolution Track Density Imaging, and Statistical Parameter Mapping: A MAPP Network Neuroimaging Study** *PLOS ONE*
Woodworth, D., Mayer, E., Leu, K., Ashe-McNalley, C., Naliboff, B. D., Labus, J. S., Tillisch, K., Kutch, J. J., Farmer, M. A., Apkarian, A. V., Johnson, K. A., Mackey, S. C., Ness, et al
2015; 10 (10)
- **The posterior medial cortex in urologic chronic pelvic pain syndrome: detachment from default mode network-a resting-state study from the MAPP Research Network** *PAIN*
Martucci, K. T., Shirer, W. R., Bagarinao, E., Johnson, K. A., Farmer, M. A., Labus, J. S., Apkarian, A. V., Deutsch, G., Harris, R. E., Mayer, E. A., Clauw, D. J., Greicius, M. D., Mackey, et al
2015; 156 (9): 1755-1764
- **Acute Pain Medicine in the United States: A Status Report** *PAIN MEDICINE*
Tighe, P., Buckenmaier, C. C., Boezaart, A. P., Carr, D. B., Clark, L. L., Herring, A. A., Kent, M., Mackey, S., Mariano, E. R., Polomano, R. C., Reisfield, G. M.
2015; 16 (9): 1806-1826
- **Report of the NIH Task Force on Research Standards for Chronic Low Back Pain.** *International journal of therapeutic massage & bodywork*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2015; 8 (3): 16-33

- **Urological chronic pelvic pain syndrome flares and their impact: qualitative analysis in the MAPP network** *INTERNATIONAL UROGYNECOLOGY JOURNAL*
Sutcliffe, S., Bradley, C. S., Clemens, J. Q., James, A. S., Konkle, K. S., Kreder, K. J., Lai, H. H., Mackey, S. C., Ashe-McNalley, C. P., Rodriguez, L. V., Barrell, E., Hou, X., Robinson, et al
2015; 26 (7): 1047-1060
- **Nonlinear Effects of Noxious Thermal Stimulation and Working Memory Demands on Subjective Pain Perception** *PAIN MEDICINE*
Sturgeon, J. A., Tieu, M. M., Jastrzab, L. E., McCue, R., Gandhi, V., Mackey, S. C.
2015; 16 (7): 1301-1310
- **Nonlinear Effects of Noxious Thermal Stimulation and Working Memory Demands on Subjective Pain Perception** *PAIN MEDICINE*
Sturgeon, J. A., Tieu, M. M., Jastrzab, L. E., McCue, R., Gandhi, V., Mackey, S. C.
2015; 16 (7): 1301-1310
- **Altered resting state neuromotor connectivity in men with chronic prostatitis/chronic pelvic pain syndrome: A MAPP: Research Network Neuroimaging Study.** *NeuroImage. Clinical*
Kutch, J. J., Yani, M. S., Asavasopon, S., Kirages, D. J., Rana, M., Cosand, L., Labus, J. S., Kilpatrick, L. A., Ashe-McNalley, C., Farmer, M. A., Johnson, K. A., Ness, T. J., Deutsch, et al
2015; 8: 493-502
- **Utility of FDG PET/CT in patients with Myofascial Pain Syndrome**
Mitra, E., Marx, E., Biswal, S., Mackey, S.
SOC NUCLEAR MEDICINE INC.2015
- **Nonlinear Effects of Noxious Thermal Stimulation and Working Memory Demands on Subjective Pain Perception.** *Pain medicine (Malden, Mass.)*
Sturgeon, J. A., Tieu, M. M., Jastrzab, L. E., McCue, R., Gandhi, V., Mackey, S. C.
2015
- **Relationship between Chronic Nonurological Associated Somatic Syndromes and Symptom Severity in Urological Chronic Pelvic Pain Syndromes: Baseline Evaluation of the MAPP Study** *JOURNAL OF UROLOGY*
Krieger, J. N., Stephens, A. J., Landis, J. R., Clemens, J. Q., Kreder, K., Lai, H. H., Afari, N., Rodriguez, L., Schaeffer, A., Mackey, S., Andriole, G. L., Williams, D. A.
2015; 193 (4): 1254-1262
- **Physical and Psychological Correlates of Fatigue and Physical Function: A Collaborative Health Outcomes Information Registry (CHOIR) Study.** *journal of pain*
Sturgeon, J. A., Darnall, B. D., Kao, M. J., Mackey, S. C.
2015; 16 (3): 291-298 e1
- **The "Continuum of Pain" and the American Academy of Pain Medicine** *PAIN MEDICINE*
Mackey, S.
2015; 16 (3): 413-415
- **Perspective: Peripheral Nerve Stimulation and Peripheral Nerve Field Stimulation Birds of a Different Feather** *PAIN MEDICINE*
Deer, T. R., Levy, R. M., Verrills, P., Mackey, S., Abejon, D.
2015; 16 (3): 411-12
- **Report of the NIH Task Force on research standards for chronic low back pain.** *Physical therapy*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2015; 95 (2): e1-e18
- **Increased Brain Gray Matter in the Primary Somatosensory Cortex is Associated with Increased Pain and Mood Disturbance in Patients with Interstitial Cystitis/Painful Bladder Syndrome** *JOURNAL OF UROLOGY*
Kairys, A. E., Schmidt-Wilcke, T., Puiu, T., Ichesco, E., Labus, J. S., Martucci, K., Farmer, M. A., Ness, T. J., Deutsch, G., Mayer, E. A., Mackey, S., Apkarian, A. V., Maravilla, et al
2015; 193 (1): 131-137
- **Factors Associated with Opioid Use in a Cohort of Patients Presenting for Surgery.** *Pain research and treatment*
Hah, J. M., Sharifzadeh, Y., Wang, B. M., Gillespie, M. J., Goodman, S. B., Mackey, S. C., Carroll, I. R.

2015; 2015: 829696-?

- **Preliminary structural MRI based brain classification of chronic pelvic pain: A MAPP network study** *PAIN*
Bagarinao, E., Johnson, K. A., Martucci, K. T., Ichesco, E., Farmer, M. A., Labus, J., Ness, T. J., Harris, R., Deutsch, G., Apkarian, A. V., Mayer, E. A., Clauw, D. J., Mackey, et al
2014; 155 (12): 2502-2509
- **A Message from AAPM's President** *PAIN MEDICINE*
Mackey, S.
2014; 15 (12): 1991
- **Neuroimaging chronic pain: what have we learned and where are we going?** *Future neurology*
Martucci, K. T., Ng, P., Mackey, S.
2014; 9 (6): 615-626
- **Focus article: report of the NIH task force on research standards for chronic low back pain** *EUROPEAN SPINE JOURNAL*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 23 (10): 2028-2045
- **Alterations in resting state oscillations and connectivity in sensory and motor networks in women with interstitial cystitis/painful bladder syndrome.** *journal of urology*
Kilpatrick, L. A., Kutch, J. J., Tillisch, K., Naliboff, B. D., Labus, J. S., Jiang, Z., Farmer, M. A., Apkarian, A. V., Mackey, S., Martucci, K. T., Clauw, D. J., Harris, R. E., Deutsch, et al
2014; 192 (3): 947-955
- **REPORT OF THE NATIONAL INSTITUTES OF HEALTH TASK FORCE ON RESEARCH STANDARDS FOR CHRONIC LOW BACK PAIN** *JOURNAL OF MANIPULATIVE AND PHYSIOLOGICAL THERAPEUTICS*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 37 (7): 449-467
- **The Appropriate Use of Neurostimulation of the Spinal Cord and Peripheral Nervous System for the Treatment of Chronic Pain and Ischemic Diseases: The Neuromodulation Appropriateness Consensus Committee** *NEUROMODULATION*
Deer, T. R., Mekhail, N., Provenzano, D., Pope, J., Krames, E., Leong, M., Levy, R. M., Abejon, D., Buchser, E., Burton, A., Buvanendran, A., Candido, K., Caraway, et al
2014; 17 (6): 515-550
- **The MAPP research network: a novel study of urologic chronic pelvic pain syndromes** *BMC UROLOGY*
Clemens, J., Mullins, C., Kusek, J. W., Kirkali, Z., Mayer, E. A., Rodriguez, L. V., Klumpp, D. J., Schaeffer, A. J., Kreder, K. J., Buchwald, D., Andriole, G. L., Lucia, M., Landis, et al
2014; 14: 57
- **AAPM Shared Interest Groups (SIGs): Bringing Together Members with Shared Interests** *PAIN MEDICINE*
Mackey, S.
2014; 15 (8): 1245-1246
- **Focus Article Report of the NIH Task Force on Research Standards for Chronic Low Back Pain** *CLINICAL JOURNAL OF PAIN*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 30 (8): 701-712
- **In reply.** *Anesthesiology*
Schmidt, P. C., Ruchelli, G., Mackey, S. C., Carroll, I. R.
2014; 121 (2): 424-426
- **Report of the NIH Task Force on Research Standards for Chronic Low Back Pain** *SPINE JOURNAL*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 14 (8): 1375-1391

- **The MAPP research network: design, patient characterization and operations** *BMC UROLOGY*
Landis, J. R., Williams, D. A., Lucia, M. S., Clauw, D. J., Naliboff, B. D., Robinson, N. A., van Bokhoven, A., Sutcliffe, S., Schaeffer, A. J., Rodriguez, L. V., Mayer, E. A., Lai, H. H., Krieger, et al
2014; 14
- **Report of the NIH Task Force on Research Standards for Chronic Low Back Pain** *PAIN MEDICINE*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 15 (8): 1249-1267
- **National Pain Strategy Task Force: The Strategic Plan for the IOM Pain Report** *PAIN MEDICINE*
Mackey, S.
2014; 15 (7): 1070-71
- **Report of the NIH Task Force on Research Standards for Chronic Low Back Pain** *SPINE*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 39 (14): 1128-1143
- **Self-Loathing Aspects of Depression Reduce Postoperative Opioid Cessation Rate** *PAIN MEDICINE*
Hah, J. M., Mackey, S., Barelka, P. L., Wang, C. K., Wang, B. M., Gillespie, M. J., McCue, R., Younger, J. W., Trafton, J., Humphreys, K., Goodman, S. B., Dirbas, F. M., Schmidt, et al
2014; 15 (6): 954-964
- **The IOM Pain Report Revisited: Setting the Stage for What's Next in Transforming Pain Care, Education and Research** *PAIN MEDICINE*
Mackey, S.
2014; 15 (6): 885-886
- **Report of the NIH Task Force on Research Standards for Chronic Low Back Pain** *JOURNAL OF PAIN*
Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Carrino, J., Chou, R., Cook, K., Delitto, A., Goertz, C., Khalsa, P., Loeser, et al
2014; 15 (6): 569-585
- **Preoccupation in an Early-Romantic Relationship Predicts Experimental Pain Relief** *PAIN MEDICINE*
Nilakantan, A., Younger, J., Aron, A., Mackey, S.
2014; 15 (6): 947-953
- **Response to letter to the editor.** *Pain*
Dworkin, R. H., O'Connor, A. B., Kent, J., Mackey, S. C., Raja, S. N., Stacey, B. R., Levy, R. M., Backonja, M., Baron, R., Harke, H., Loeser, J. D., Treede, R., Turk, et al
2014; 155 (5): 1045-1046
- **Untitled** *PAIN MEDICINE*
Gallagher, R. M., Mackey, S.
2014; 15 (5): 730-731
- **Multivariate Classification of Structural MRI Data Detects Chronic Low Back Pain** *CEREBRAL CORTEX*
Ung, H., Brown, J. E., Johnson, K. A., Younger, J., Hush, J., Mackey, S.
2014; 24 (4): 1037-1044
- **Identifying Erythema Migrans Rash in Patients with Lyme Disease** *REPLY AMERICAN FAMILY PHYSICIAN*
Juckett, G.
2014; 89 (6): 424
- **Complex regional pain syndrome is associated with structural abnormalities in pain-related regions of the human brain.** *journal of pain*
Barad, M. J., Ueno, T., Younger, J., Chatterjee, N., Mackey, S.
2014; 15 (2): 197-203
- **Conditioned pain modulation is minimally influenced by cognitive evaluation or imagery of the conditioning stimulus** *JOURNAL OF PAIN RESEARCH*
Bernaba, M., Johnson, K. A., Kong, J., Mackey, S.

2014; 7: 689-697

- **Pilot study of a compassion meditation intervention in chronic pain.** *Journal of compassionate health care*
Chapin, H. L., Darnall, B. D., Seppala, E. M., Doty, J. R., Hah, J. M., Mackey, S. C.
2014; 1
- **From Catastrophizing to Recovery: a pilot study of a single-session treatment for pain catastrophizing** *JOURNAL OF PAIN RESEARCH*
Darnall, B. D., Sturgeon, J. A., Kao, M., Hah, J. M., Mackey, S. C.
2014; 7: 219-226
- **Proinflammatory cytokines and DHEA-S in women with fibromyalgia: impact of psychological distress and menopausal status** *JOURNAL OF PAIN RESEARCH*
Sturgeon, J. A., Darnall, B. D., Zwickey, H. L., Wood, L. J., Hanes, D. A., Zava, D. T., Mackey, S. C.
2014; 7: 707-716
- **Optimizing real time fMRI neurofeedback for therapeutic discovery and development.** *NeuroImage. Clinical*
Stoeckel, L. E., Garrison, K. A., Ghosh, S., Wighton, P., Hanlon, C. A., Gilman, J. M., Greer, S., Turk-Browne, N. B., deBettencourt, M. T., Scheinost, D., Craddock, C., Thompson, T., Calderon, et al
2014; 5: 245-255
- **Response to: Letter from Paul Eugene Summers, Federico Giove, and Carlo Adolfo Porro.** *Pain*
Nash, P., Glover, G., Mackey, S.
2013; 154 (11): 2574-2575
- **Perioperative Gabapentinoids Choice of Agent, Dose, Timing, and Effects on Chronic Postsurgical Pain** *ANESTHESIOLOGY*
Schmidt, P. C., Ruchelli, G., Mackey, S. C., Carroll, I. R.
2013; 119 (5): 1215-1221
- **Interventional management of neuropathic pain: NeuPSIG recommendations** *PAIN*
Dworkin, R. H., O'Connor, A. B., Kent, J., Mackey, S. C., Raja, S. N., Stacey, B. R., Levy, R. M., Backonja, M., Baron, R., Harke, H., Loeser, J. D., Treede, R., Turk, et al
2013; 154 (11): 2249-2261
- **Functional magnetic resonance imaging identifies somatotopic organization of nociception in the human spinal cord.** *Pain*
Nash, P., Wiley, K., Brown, J., Shinaman, R., Ludlow, D., Sawyer, A., Glover, G., Mackey, S.
2013; 154 (6): 776-781
- **Perioperative Interventions to Reduce Chronic Postsurgical Pain** *JOURNAL OF RECONSTRUCTIVE MICROSURGERY*
Carroll, I., Hah, J., Mackey, S., Ottestad, E., Kong, J. T., Lahidji, S., Tawfik, V., Younger, J., Curtin, C.
2013; 29 (4): 213-222
- **Central Neuroimaging of Pain** *JOURNAL OF PAIN*
Mackey, S. C.
2013; 14 (4): 328-331
- **Low-dose naltrexone for the treatment of fibromyalgia: findings of a small, randomized, double-blind, placebo-controlled, counterbalanced, crossover trial assessing daily pain levels.** *Arthritis and rheumatism*
Younger, J., Noor, N., McCue, R., Mackey, S.
2013; 65 (2): 529-538
- **Personalized Medicine and Opioid Analgesic Prescribing for Chronic Pain: Opportunities and Challenges** *JOURNAL OF PAIN*
Bruehl, S., Apkarian, A. V., Ballantyne, J. C., Berger, A., Borsook, D., Chen, W. G., Farrar, J. T., Haythornthwaite, J. A., Horn, S. D., Iadarola, M. J., Inturrisi, C. E., Lao, L., Mackey, et al
2013; 14 (2): 103-113
- **Understanding Central Mechanisms of Acupuncture Analgesia Using Dynamic Quantitative Sensory Testing: A Review** *EVIDENCE-BASED COMPLEMENTARY AND ALTERNATIVE MEDICINE*
Kong, J., Schnyer, R. N., Johnson, K. A., Mackey, S.
2013
- **Test-Retest Reliability of Thermal Temporal Summation Using an Individualized Protocol** *JOURNAL OF PAIN*

- Kong, J., Johnson, K. A., Balise, R. R., Mackey, S.
2013; 14 (1): 79-88
- **Development of the Stanford Expectations of Treatment Scale (SETS): A tool for measuring patient outcome expectancy in clinical trials** *CLINICAL TRIALS*
Younger, J., Gandhi, V., Hubbard, E., Mackey, S.
2012; 9 (6): 767-776
 - **Outcomes in Pain Medicine: A Brief Review** *PAIN AND THERAPY*
Malhotra, A., Mackey, S.
2012; 1 (1): 5
 - **A Pilot Cohort Study of the Determinants of Longitudinal Opioid Use After Surgery** *ANESTHESIA AND ANALGESIA*
Carroll, I., Barelka, P., Wang, C. K., Wang, B. M., Gillespie, M. J., McCue, R., Younger, J. W., Trafton, J., Humphreys, K., Goodman, S. B., Dirbas, F., Whyte, R. I., Donington, et al
2012; 115 (3): 694-702
 - **Real-time fMRI applied to pain management** *NEUROSCIENCE LETTERS*
Chapin, H., Bagarinao, E., Mackey, S.
2012; 520 (2): 174-181
 - **Sensory Pain Qualities in Neuropathic Pain** *JOURNAL OF PAIN*
Mackey, S., Carroll, I., Emir, B., Murphy, T. K., Whalen, E., Dumenci, L.
2012; 13 (1): 58-63
 - **Strategy-dependent Dissociation of the Neural Correlates Involved in Pain Modulation** *ANESTHESIOLOGY*
Lawrence, J. M., Hoeft, F., Sheau, K. E., Mackey, S. C.
2011; 115 (4): 844-851
 - **Towards a Physiology-Based Measure of Pain: Patterns of Human Brain Activity Distinguish Painful from Non-Painful Thermal Stimulation** *PLOS ONE*
Brown, J. E., Chatterjee, N., Younger, J., Mackey, S.
2011; 6 (9)
 - **Prescription opioid analgesics rapidly change the human brain** *PAIN*
Younger, J. W., Chu, L. F., D'Arcy, N. T., Trott, K. E., Jastrzab, L. E., Mackey, S. C.
2011; 152 (8): 1803-1810
 - **Morphine and its metabolites after patient-controlled analgesia: considerations for respiratory depression** *JOURNAL OF CLINICAL ANESTHESIA*
Sam, W. J., Mackey, S. C., Loetsch, J., Drover, D. R.
2011; 23 (2): 102-106
 - **Human Response to Unintended Intrathecal Injection of Botulinum Toxin** *PAIN MEDICINE*
Carroll, I., Fischbein, N., Barad, M., Mackey, S.
2011; 12 (7): 1094-1097
 - **Development of a severity score for CRPS** *PAIN*
Harden, R. N., Bruehl, S., Perez, R. S., Birklein, F., Marinus, J., Maihofner, C., Lubenow, T., Buvanendran, A., Mackey, S., Graciosa, J., Mogilevski, M., Ramsden, C., Schlereth, et al
2010; 151 (3): 870-876
 - **Viewing Pictures of a Romantic Partner Reduces Experimental Pain: Involvement of Neural Reward Systems** *PLOS ONE*
Younger, J., Aron, A., Parke, S., Chatterjee, N., Mackey, S.
2010; 5 (10)
 - **Validation of proposed diagnostic criteria (the "Budapest Criteria") for Complex Regional Pain Syndrome** *PAIN*
Harden, R. N., Bruehl, S., Perez, R. S., Birklein, F., Marinus, J., Maihofner, C., Lubenow, T., Buvanendran, A., Mackey, S., Graciosa, J., Mogilevski, M., Ramsden, C., Chont, et al
2010; 150 (2): 268-274

- **Chronic myofascial temporomandibular pain is associated with neural abnormalities in the trigeminal and limbic systems** *PAIN*
Younger, J. W., Shen, Y. F., Goddard, G., Mackey, S. C.
2010; 149 (2): 222-228
- **Healthy young women with serotonin transporter SS polymorphism show a pro-inflammatory bias under resting and stress conditions** *BRAIN BEHAVIOR AND IMMUNITY*
Fredericks, C. A., Drabant, E. M., Edge, M. D., Tillie, J. M., Hallmayer, J., Ramel, W., Kuo, J. R., Mackey, S., Gross, J. J., Dhabhar, F. S.
2010; 24 (3): 350-357
- **Assessment and Treatment of Psychosocial Comorbidities in Patients With Neuropathic Pain** *MAYO CLINIC PROCEEDINGS*
Turk, D. C., Audette, J., Levy, R. M., Mackey, S. C., Stanos, S.
2010; 85 (3): S42-S50
- **Recommendations for the Pharmacological Management of Neuropathic Pain: An Overview and Literature Update** *MAYO CLINIC PROCEEDINGS*
Dworkin, R. H., O'Connor, A. B., Audette, J., Baron, R., Gourlay, G. K., Haanpaa, M. L., Kent, J. L., Krane, E. J., LeBel, A. A., Levy, R. M., Mackey, S. C., Mayer, J., Miaskowski, et al
2010; 85 (3): S3-S14
- **A Novel CT-Guided Transpsoas Approach to Diagnostic Genitofemoral Nerve Block and Ablation** *PAIN MEDICINE*
Parris, D., Fischbein, N., Mackey, S., Carroll, I.
2010; 11 (5): 785-789
- **Subcutaneous Injection of Botulinum Toxin A Is Beneficial in Postherpetic Neuralgia** *PAIN MEDICINE*
Xiao, L., Mackey, S., Hui, H., Xong, D., Zhang, Q., Zhang, D.
2010; 11 (12): 1827-1833
- **Pain Quality Predicts Lidocaine Analgesia among Patients with Suspected Neuropathic Pain** *PAIN MEDICINE*
Carroll, I. R., Younger, J. W., Mackey, S. C.
2010; 11 (4): 617-621
- **Randomized Clinical Trial of Acupuncture for Myofascial Pain of the Jaw Muscles** *JOURNAL OF OROFACIAL PAIN*
Shen, Y. F., Younger, J., Goddard, G., Mackey, S.
2009; 23 (4): 353-359
- **Fibromyalgia Symptoms Are Reduced by Low-Dose Naltrexone: A Pilot Study** *PAIN MEDICINE*
Younger, J., Mackey, S.
2009; 10 (4): 663-672
- **Forebrain pain mechanisms** *BRAIN RESEARCH REVIEWS*
Neugebauer, V., Galhardo, V., Maione, S., Mackey, S. C.
2009; 60 (1): 226-242
- **Sympathetic Block with Botulinum Toxin to Treat Complex Regional Pain Syndrome** *ANNALS OF NEUROLOGY*
Carroll, I., Clark, J. D., Mackey, S.
2009; 65 (3): 348-351
- **Pain outcomes: A brief review of instruments and techniques** *CURRENT PAIN AND HEADACHE REPORTS*
Younger, J., McCue, R., Mackey, S.
2009; 13 (1): 39-43
- **Spinal cord stimulation compared with medical management for failed back surgery syndrome** *CURRENT PAIN AND HEADACHE REPORTS*
Coleman, S. D., Mackey, S.
2009; 13 (1): 1-2
- **Serratus muscle stimulation effectively treats notalgia paresthetica caused by long thoracic nerve dysfunction: a case series.** *Journal of brachial plexus and peripheral nerve injury*
Wang, C. K., Gowda, A., Barad, M., Mackey, S. C., Carroll, I. R.
2009; 4: 17-?

- **Reduced Cold Pain Tolerance in Chronic Pain Patients Following Opioid Detoxification** *PAIN MEDICINE*
Younger, J., Barelka, P., Carroll, I., Kaplan, K., Chu, L., Prasad, R., Gaeta, R., Mackey, S.
2008; 9 (8): 1158-1163
- **Toward optimal health: A discussion on sex, gender, and pain** *JOURNAL OF WOMENS HEALTH*
Godfrey, J. R., Mackey, S.
2008; 17 (6): 917-920
- **Your pain or mine? Common and distinct neural systems supporting the perception of pain in self and other** *SOCIAL COGNITIVE AND AFFECTIVE NEUROSCIENCE*
Ochsner, K. N., Zaki, J., Hanelin, J., Ludlow, D. H., Knierim, K., Ramachandran, T., Glover, G. H., Mackey, S. C.
2008; 3 (2): 144-160
- **Pulsed radiofrequency for chronic pain** *CURRENT PAIN AND HEADACHE REPORTS*
Byrd, D., Mackey, S.
2008; 12 (1): 37-41
- **Role of neuroimaging in analgesic drug development** *DRUGS IN R&D*
Lawrence, J., Mackey, S. C.
2008; 9 (5): 323-334
- **Mexiletine Therapy for Chronic Pain: Survival Analysis Identifies Factors Predicting Clinical Success.** *Journal of Pain and Symptom Management*
Carroll, I., Kaplan, Mackey
2008; 35 (3): 321-6
- **Multivariate analysis of chronic pain patients undergoing lidocaine infusions: Increasing pain severity and advancing age predict likelihood of clinically meaningful analgesia** *CLINICAL JOURNAL OF PAIN*
Carroll, I., Gaeta, R., Mackey, S.
2007; 23 (8): 702-706
- **Different circuits for different pain: Patterns of functional connectivity reveal distinct networks for processing pain in self and others** *SOCIAL NEUROSCIENCE*
Zaki, J., Ochsner, K. N., Hanelin, J., Wager, T. D., Mackey, S. C.
2007; 2 (3-4): 276-291
- **Pulsed radiofrequency for the treatment of chronic ilioinguinal neuropathy.** *Hernia*
Mitra, R., Zeighami, A., Mackey, S.
2007; 11 (4): 369-371
- **Potential clinical applications for spinal functional MRI.** *Current pain and headache reports*
Kornelsen, J., Mackey, S.
2007; 11 (3): 165-170
- **Pharmacologic therapies for complex regional pain syndrome.** *Current pain and headache reports*
Mackey, S., Feinberg, S.
2007; 11 (1): 38-43
- **The role of adrenergic receptors and pain: The good, the bad, and the unknown.** *Seminars in Anesthesia and Perioperative Pain*
Carroll I, Mackey S, Gaeta R
2007; 26 (1): 17-21
- **Imaging the Spinal Cord** *Current Pain and Headache Reports (accepted)*
Mackey S
2007
- **Neural correlates of individual differences in pain-related fear and anxiety** *PAIN*
Ochsner, K. N., Ludlow, D. H., Knierim, K., Hanelin, J., Ramachandran, T., Glover, G. C., Mackey, S. C.
2006; 120 (1-2): 69-77

- **Control over brain activation and pain learned by using real-time functional MRI** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
deCharms, R. C., Maeda, F., Glover, G. H., Ludlow, D., Pauly, J. M., Soneji, D., Gabrieli, J. D., Mackey, S. C.
2005; 102 (51): 18626-18631
- **A vaccine to prevent herpes zoster** *NEW ENGLAND JOURNAL OF MEDICINE*
Carroll, I., Gaeta, R., Mackey, S.
2005; 353 (13): 1414-1415
- **Continuous peripheral nerve blocks. Current pain and headache reports**
Shinaman, R. C., Mackey, S.
2005; 9 (1): 24-29
- **Reflecting upon feelings: an fMRI study of neural systems supporting the attribution of emotion to self and other** *JOURNAL OF COGNITIVE NEUROSCIENCE*
Ochsner, K. N., Knierim, K., Ludlow, D. H., Hanelin, J., Ramachandran, T., Glover, G., Mackey, S. C.
2004; 16 (10): 1746-1772
- **Functional imaging and the neural systems of chronic pain** *NEUROSURGERY CLINICS OF NORTH AMERICA*
Mackey, S. C., Maeda, F.
2004; 15 (3): 269-?
- **Mechanisms of inflammatory pain - Therapeutic implications** *67th Annual Scientific Meeting of the American-College-of-Rheumatology/38th Annual Scientific Meeting of the Association-of-Rheumatology-Health-Professionals*
Mackey, S.
LIPPINCOTT WILLIAMS & WILKINS.2004: S5-S11
- **Low Back Pain: Management Across a Spectrum of Presentations (book chapter)** *Current Issues in Pain Management for the Primary Care Physician*
Mackey S
2004
- **Mechanisms of inflammatory pain: therapeutic implications** *Journal of Clinical Rheumatology*
Mackey S
2004; 10 (3S): S5-11
- **Perioperative Pain Management (book chapter)** *Anesthesiologist's Manual of Surgical Procedures*
Mackey S, Gaeta R
2003; 3rd ed.
- **MR guidance of sympathetic nerve blockade: Measurement of vasomotor response-initial experience in seven patients** *RADIOLOGY*
Sze, D. Y., Mackey, S. C.
2002; 223 (2): 574-580
- **Delayed subdural block after a stellate ganglion block** *ANESTHESIOLOGY*
Leong, M. S., Mackey, S.
2001; 94 (2): 358-359
- **Selection and placement of the double-lumen tube in the Asian patient** *Asian Cardiovascular & Thoracic Annals*
Mackey S, Brodsky JB
1998; 6 (3): 199-202
- **Selecting the correct size left double-lumen tube** *JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA*
Brodsky, J. B., Cannon, W. B.
1997; 11 (7): 924-925
- **Bilateral vocal cord paralysis after radical cystectomy in a patient with a history of bulbar polio** *ANESTHESIA AND ANALGESIA*
Macario, A., Mackey, S., Terris, D.
1997; 85 (5): 1171-1172

- **Reduction of propofol injection pain with a double lumen IV set** *JOURNAL OF CLINICAL ANESTHESIA*
Angst, M. S., Mackey, S. C., Zupfer, G. H., Tataru, C. D., BROCKUTNE, J. G.
1997; 9 (6): 462-466
- **Selecting a double-lumen tube after lung transplantation** *ANESTHESIA AND ANALGESIA*
Habibi, A., Mackey, S., Brodsky, J. B.
1997; 84 (4): 940-940
- **Isolation techniques - advances in thoracic anesthesia and postoperative care** *Seminars in Cardiothoracic and Vascular Anesthesia*
Brodsky JB, Mackey S
1997; 1 (3): 225-35
- **Simultaneous multipolar radiofrequency ablation in the monopolar mode increases lesion size** *PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY*
Mackey, S., Thornton, L., He, D. S., Marcus, F. I., LAMPE, L. F.
1996; 19 (7): 1042-1048
- **Comparison of gold versus platinum electrodes on myocardial lesion size using radiofrequency energy** *PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY*
Simmons, W. N., Mackey, S., He, D. S., Marcus, F. I.
1996; 19 (4): 398-402

PRESENTATIONS

- Fibromyalgia: Is this a Brain Problem? - Irish Association for the Study of Pain (September 2012)
- Opiates: The Bad and the Ugly - Irish Association for the Study of Pain (September 2010)
- How Functional Neuroimaging Will Transform the Diagnosis and Treatment of Central Neuropathic Pain Conditions - American Academy of Neurology (April 2010)
- Prefrontal Cortical Systems in Chronic Low Back Pain Versus Generalized Anxiety Disorders (April 2008)
- Functional Neuroimaging of Pain (4/2007)
- Neuropathic Pain (April 2007)
- What's New in Regional Anesthesia? (April 2007)
- Current Concepts of Perioperative Pain (April 2007)
- Pain and the Brain: What has Neuroimaging Taught Us? - European Federation of Neurological Societies (10/2006)
- Changing Pain in the Brain - International Conference on the Mechanisms and Treatment of Neuropathic Pain