



## Einar Ottestad

Clinical Professor, Anesthesiology, Perioperative and Pain Medicine

### 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

### Bio

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#### BIO

Dr. Ottestad joined Stanford faculty in 2007 and became Director of the Acute Pain Service in 2009. As such, he manages acute, post-operative pain, acute-on-chronic inpatient pain consults, and cancer pain at Stanford Hospital. He is committed to the Stanford Pain Center's multidisciplinary, comprehensive approach when treating pain clinic patients with chronic pain. In the outpatient pain clinic, Dr. Ottestad possesses expertise in advanced interventions such as intrathecal medications, spinal cord stimulation, peripheral nerve stimulation, cryotherapy and cryoanalgesia, radiofrequency neuromodulation and ablation and ultrasound-guided procedures in general for the treatment of chronic pain. Ultrasound imaging allows accurate imaging of soft tissues such as muscles, tendons, and nerves that are difficult to identify using only x-ray imaging or anatomic landmarks. This imaging is useful both diagnostically as well as therapeutically when specific, targeted treatment is needed in an area of pain.

Dr. Ottestad has written multiple book chapters and papers on pain management and has been an invited lecturer and instructor for over 60 national and international conferences in the last 8 years. He will become the President of World Academy of Pain Medicine Ultrasonography (WAPMU) in 2017. Dr. Ottestad is board certified in anesthesiology and pain management, and is also an instructor and board examiner for the World Institute of Pain and the World Academy of Pain Medicine Ultrasonography, with secondary international qualifications FIPP (Fellow of Interventional Pain Practice) and CIPS (Certification in Pain Medicine Sonology).

#### CLINICAL FOCUS

- Pain Management
- Acute Pain Service
- Nerve Pain
- Interventional Ultrasound
- cryotherapy
- spinal cord stimulation
- Pain Medicine

## ACADEMIC APPOINTMENTS

- Clinical Professor, Anesthesiology, Perioperative and Pain Medicine
- Member, Wu Tsai Neurosciences Institute

## ADMINISTRATIVE APPOINTMENTS

- President, World Academy of Pain Medicine Ultrasonography, (2017-2018)
- Vice President, World Academy of Pain Medicine Ultrasonography, (2015-2017)
- Chairman of education committee, World Academy of Pain Medicine Ultrasonography, (2014- present)
- Director, Acute Pain Service, Stanford University Hospital, (2009- present)
- Member, Quality, Efficiency, Patient Satisfaction Committee, (2012- present)
- Member, Interdisciplinary Practice Committee, (2011- present)
- Member, Resident Education Committee, (2010- present)

## PROFESSIONAL EDUCATION

- Residency: Stanford University CAPS Postdoctoral Fellowship (2007) CA
- Medical Education: Baylor College of Medicine (2002) TX
- Board Certification: Pain Medicine, American Board of Anesthesiology (2010)
- Board Certification: Anesthesia, American Board of Anesthesiology (2009)
- Fellowship: Stanford Hospital and Clinics - Pain Mgmt (2008) CA
- Internship: The University of Texas Health Center @ Tyler (2003) TX
- Board Certification, ABA , Pain Management (2010)

## LINKS

- Pain Management: <http://outpatient.stanfordhospital.org/clinics/pain.html>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

I have a strong interest in ultrasound for chronic pain management for diagnostics as well as therapeutics. I also have strong interest in acute pain in the hospital setting, including post-operative as well as cancer pain.

### CLINICAL TRIALS

- Using Peripheral Nerve Stimulation (PNS) to Treat Chronic Post-surgical Pain (CPSP) After Knee Surgery, Not Recruiting

## Teaching

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### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)
- Pain Management (Fellowship Program)

## Publications

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### PUBLICATIONS

- **Superior Cluneal neuralgia-An underappreciated cause of low back pain?** *Interventional pain medicine*  
Ottestad, E., Machi, A.

2024; 3 (3): 100436

- **Peripheral nerve stimulation for saphenous neuralgia.** *Regional anesthesia and pain medicine*  
McCullough, M., Kenney, D., Curtin, C., Ottestad, E.  
2023
- **Role of peripheral nerve stimulation in treating chronic neuropathic pain: an international focused survey of pain medicine experts.** *Regional anesthesia and pain medicine*  
Li, A. H., Bhatia, A., Gulati, A., Ottestad, E.  
2023; 48 (6): 312-318
- **Transitional Pain Medicine; New Era, New Opportunities, and New Journey.** *Anesthesiology clinics*  
Terkawi, A. S., Ottestad, E., Altirkawi, O. K., Salmasi, V.  
2023; 41 (2): 383-394
- **Clinical Approach to Chronic Pain due to Perioperative Nerve Injury.** *Anesthesiology clinics*  
Terkawi, A. S., Altirkawi, O. K., Salmasi, V., Ottestad, E.  
2023; 41 (2): 489-502
- **Review of Ultrasound-Guided Procedures in the Management of Chronic Pain.** *Anesthesiology clinics*  
Aggarwal, A. K., Ottestad, E., Pfaff, K. E., Huai-Yu Li, A., Xu, L., Derby, R., Hecht, D., Hah, J., Pritzlaff, S., Prabhakar, N., Krane, E., D'Souza, G., Hoydonckx, et al  
2023; 41 (2): 395-470
- **Application of multidisciplinary team conference for neuromodulation candidates facilitates patient selection and optimization.** *Frontiers in pain research (Lausanne, Switzerland)*  
Salmasi, V., Rasouli, M. R., Kao, M. C., Ottestad, E., Terkawi, A. S., Morris, G., Qian, X., Coleman, S., Talavera, D. C., Poupore-King, H., Slater, K., Leong, M. S.  
2023; 4: 1331883
- **Assessment of outcomes in consecutive patients undergoing dorsal scapular nerve decompression.** *Journal of neurosurgery*  
Ottestad, E., Wilson, T. J.  
2022: 1-8
- **Application of the novel Nalu Neurostimulation System for peripheral nerve stimulation.** *Pain management*  
Kalia, H., Pritzlaff, S., Li, A. H., Ottestad, E., Gulati, A., Makous, J., Chakravarthy, K.  
2022
- **Considerations in Permanent Implantation of Peripheral Nerve Stimulation (PNS) for Chronic Neuropathic Pain: An International Cross Sectional Survey of Implanters.** *Pain practice : the official journal of World Institute of Pain*  
Li, A. H., Gulati, A., Leong, M. S., Aggarwal, A. K., Salmasi, V., Spinner, D., Ottestad, E.  
2022
- **Understanding the role of patient preference in the treatment algorithm for chronic low back pain: results from a survey-based study.** *Pain management*  
Staats, P., Deer, T., Ottestad, E., Erdek, M., Spinner, D., Gulati, A.  
2021
- **History of Peripheral Nerve Stimulation-Update for the 21st Century.** *Pain medicine (Malden, Mass.)*  
Ottestad, E., Orlovich, D. S.  
2020; 21 (Supplement\_1): S3-S5
- **Advances in Peripheral Nerve Stimulation: More Clinical Options, More Science.** *Pain medicine (Malden, Mass.)*  
Ottestad, E., Gulati, A.  
2020; 21 (Supplement\_1): S1-S2
- **Peripheral Nerve Stimulation for Occipital Neuralgia.** *Pain medicine (Malden, Mass.)*  
Salmasi, V., Olatoye, O. O., Terkawi, A. S., Hah, J. M., Ottestad, E., Pingree, M.  
2020; 21 (Supplement\_1): S13-S17
- **Therapeutic Ultrasound for Chronic Pain Management in Joints: A Systematic Review** *PAIN MEDICINE*  
Aiyer, R., Noori, S. A., Chang, K., Jung, B., Rasheed, A., Bansal, N., Ottestad, E., Gulati, A.  
2020; 21 (7): 1437-48

- **Therapeutic Ultrasound for Pain Management in Chronic Low Back Pain and Chronic Neck Pain: A Systematic Review** *PAIN MEDICINE*  
Noori, S. A., Rasheed, A., Aiyer, R., Jung, B., Bansal, N., Chang, K., Ottestad, E., Gulati, A.  
2020; 21 (7): 1482–93
- **Hearing the Call for Therapeutic Ultrasound.** *Pain medicine (Malden, Mass.)*  
Gulati, A., Ottestad, E.  
2020
- **INTRAVENOUS LIDOCAINE INFUSION FOR MANAGEMENT OF PAIN IN THE INTENSIVE CARE UNIT**  
Jung, S., Ottestad, E., Aggarwal, A., Flood, P., Nikitenko, V.  
LIPPINCOTT WILLIAMS & WILKINS.2020
- **Patients Maintained on Buprenorphine for Opioid Use Disorder Should Continue Buprenorphine Through the Perioperative Period** *PAIN MEDICINE*  
Lembke, A., Ottestad, E., Schmiesing, C.  
2019; 20 (3): 425–28
- **Patients Maintained on Buprenorphine for Opioid Use Disorder Should Continue Buprenorphine Through the Perioperative Period.** *Pain medicine (Malden, Mass.)*  
Lembke, A., Ottestad, E., Schmiesing, C.  
2019; 20 (3): 425–28
- **Therapeutic Ultrasound for Pain Management in Chronic Low Back Pain and Chronic Neck Pain: A Systematic Review.** *Pain medicine (Malden, Mass.)*  
Noori, S. A., Rasheed, A., Aiyer, R., Jung, B., Bansal, N., Chang, K., Ottestad, E., Gulati, A.  
2019
- **Therapeutic Ultrasound for Chronic Pain Management in Joints: A Systematic Review.** *Pain medicine (Malden, Mass.)*  
Aiyer, R. n., Noori, S. A., Chang, K. V., Jung, B. n., Rasheed, A. n., Bansal, N. n., Ottestad, E. n., Gulati, A. n.  
2019
- **A Case Report of Combined Ultrasound and Fluoroscopic-Guided Percutaneous Radiofrequency Lesioning of the Obturator and Femoral Articular Branches in the Treatment of Persistent Hip Pain in a Pediatric Patient** *PAIN PRACTICE*  
Khan, J. S., Krane, E. J., Higgs, M., Pritzlaff, S., Hoffinger, S., Ottestad, E.  
2019; 19 (1): 52–56
- **A case report of combined ultrasound and fluoroscopic-guided percutaneous radiofrequency lesioning of the obturator and femoral articular branches in the treatment of persistent hip pain in a pediatric patient.** *Pain practice : the official journal of World Institute of Pain*  
Khan, J. S., Krane, E. J., Higgs, M., Pritzlaff, S., Hoffinger, S., Ottestad, E.  
2018
- **Flare of CRPS symptoms after lidocaine infusion**  
Gong, Z., Fishman, M., Coleman, S., Ottestad, E., Navani, A.  
CHURCHILL LIVINGSTONE.2015: S75
- **Pain over the dorsum of third metacarpophalangeal joint: which nerve to block, radial or ulnar?**  
Gong, Z., Ottestad, E.  
CHURCHILL LIVINGSTONE.2015: S68
- **Ultrasound-guided genicular nerve block for persistent knee pain after knee surgery**  
Gong, Z., Ottestad, E.  
CHURCHILL LIVINGSTONE.2015: S69
- **Pulsed radiofrequency neuromodulation of a painful saphenous vein stump**  
Schmidt, P., Ottestad, E.  
CHURCHILL LIVINGSTONE.2014: S99
- **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
- **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

- **Ultrasound-guided injections of the knee and hip joints** *Tech Reg Anesth Pain Manag*  
Cheng P, Kim H, Ottestad E, Narouze S  
2009; 13 (3): 191-197
- **Evaluating the management of septic shock using patient simulation** *CRITICAL CARE MEDICINE*  
Ottestad, E., Boulet, J. R., Lighthall, G. K.  
2007; 35 (3): 769-775
- **Securing the airway of a 'super sized' patient: another use for the Aintree Catheter (R)** *EUROPEAN JOURNAL OF ANAESTHESIOLOGY*  
Schmiesing, C., Collins, J., Ottestad, E., Kulkarni, V., Brock-Utne, J.  
2006; 23 (12): 1064-1066
- **Central venous access in obese patients: A potential complication** *ANESTHESIA AND ANALGESIA*  
Ottestad, E., Schmiessing, C., Brock-Utne, J. G., Kulkarni, V., Parris, D., Brodsky, J. B.  
2006; 102 (4): 1293-1294