

**Curriculum Vitae**  
**Samer N Narouze, MD, PhD, DABPM, FIPP**

**PERSONAL DATA:**

Date of Birth: September 14, 1966

Work Address: Center for Pain Medicine  
Western Reserve Hospital  
1900 23<sup>rd</sup> Street  
Cuyahoga Falls, OH 44223

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**EDUCATION:**

Medical School:	Ain Shams University, Cairo-Egypt	Years: 1983- 1989	Degree: <b>MD</b>
Post-Graduate School	Ain Shams University, Cairo – Egypt	Years: 1990- 1993	Degree: <b>MSc</b> , Masters in Anesthesia, pain and Intensive Care
Post-Graduate School:	Maastricht University, Netherland	Years: 2010- 2012	Degree: <b>PhD</b>

**CERTIFICATION:**

**1989** **MD** Ain Shams University, Cairo-Egypt  
**1993** **MSc.** Anesthesia and Critical Care Medicine, Ain Shams University, Egypt.  
**1996** ECEMG Certificate # 0-550-130-9  
**4/03** **American Board of Anesthesiology (ABA) Board Certification.** Recertified 2013  
**9/03** **ABA-Pain Subspecialty Certification.** Recertified 2013  
**3/04** **American Academy of Pain Medicine Diplomat (DABPM).** Recertified 2013  
**5/06** **Medical Acupuncture Certificate**  
**9/06** **Headache Medicine Board Certification- United Counsel of neurological subspecialties (UCNS)** Recertified 2016  
**3/09** **Fellow in Interventional Pain Management (FIPP) certificate**  
**6/12** **PhD** Maastricht University, Netherland

**TRAINING:**

Internship: Internal Medicine                      Years: 1/98 – 1/99  
The Cleveland Clinic Foundation,  
Cleveland, OH  
Residency: Anesthesia                              Years: 1/99 – 1/02  
The Cleveland Clinic Foundation,  
Cleveland, OH  
Fellowship: Pain Management                      Years: 1/02 – 1/03  
The Cleveland Clinic Foundation,  
Cleveland, OH

**PROFESSIONAL APPOINTMENTS/EMPLOYMENT HISTORY:**

**5/3/10-present** **Chairman, Pain Management Department, Western Reserve Hospital. Cuyahoga Falls, OH**  
**3/11-present** **Clinical Professor of Neurological Surgery, OSU**  
**7/10-present** **Clinical Professor of Anesthesiology and Pain Management, OUCOM**  
**1/11-present** **Associate Professor of Surgery, NEOMED**

**4/10- 5/10**                    **Associate professor of Anesthesiology, Cleveland Clinic Lerner College of Medicine, Case Western Reserve University**

**1/07-4/10**                    **Assistant professor of Anesthesiology, Cleveland Clinic Lerner College of Medicine, Case Western Reserve University**

**1/04/07 –5/2/10**            **Program Director, Pain Medicine Fellowship, Cleveland Clinic Foundation**

**10/08 - 5/2/10**            **Staff, Center for Neurological Restoration, Department of Neurosurgery, Cleveland Clinic**

**1/01/05 – 5/2/10**            **Staff, Pain Management Department, Anesthesiology Institute, Cleveland Clinic.**

**1/01/06 – 1/03/7**            **Associate Program Director, Pain Management Fellowship, Cleveland Clinic Foundation**

**1/30/03 – 12/31/04**        **Anesthesia and Pain Management Staff at Aultman Hospital, Canton, OH.**

**1/11/02 – 1/10/03**        **Pain fellowship, The Cleveland Clinic Foundation, Cleveland, OH  
Elective in **Regional Anesthesia at Yale University.****

**1/11/99 – 1/10/02**        **Anesthesiology Resident, The Cleveland Clinic Foundation, Cleveland, OH**

**01/98 – 01/99**            **Internship – Internal Medicine Program, The Cleveland Clinic Foundation, Cleveland, OH.**

**11/97 – 01/98**            Externship – Internal Medicine Program, The Cleveland Clinic Foundation, Cleveland, OH.

**05/94 – 11/97**            **Assistant Professor of Anesthesia and Critical Care Medicine, Ain Shams University, Cairo – Egypt.**

**03/90 – 04/94**            Anesthesiology Resident, Ain Shams University Hospitals, Cairo-Egypt.

**LICENSURE:**

- Ohio Medical License
- Florida Medical License

## MEDICAL SOCIETIES:

- American Society of Anesthesiologists (ASA)
- American Society of Regional Anesthesia (ASRA)
- American Interventional Headache Society (AIHS)
- American Academy of Pain Medicine (AAPM)
- International Society of Ultrasound in Regional anesthesia (ISURA)
- World Institute of Pain (WIP)
- American Institute of Ultrasound in Medicine (AIUM)
- International Neuromodulation Society (INS)
- North America Neuromodulation Society (NANS)
- American Medical Association (AMA)
- American Headache Society (AHS)
- International Headache Society (IHS)
- International Anesthesia Research Society (IARS)
- Ohio Society of Anesthesiologists (OSA)
- European society of Anesthesiologists(ESA)
- European society of Regional Anesthesia (ESRA)
- American Academy of Facial Esthetics (AAFE)

## HONORS AND AWARDS:

1. **Distinguished Service Award.** The European Society of Regional Anesthesia and Pain Therapy (ESRA) 2015.
2. **America's Top Pain Medicine Physicians** 2015 by the Consumers' Research Council of America.
3. **Master Educator Award.** Anesthesiology Institute, Cleveland Clinic 2009.
4. **Cleveland Clinic 2008 Innovator Award** for patent application "cervical sympathetic electrical stimulation for the treatment of medical conditions"
5. **America's Top Pain Medicine Physicians** 2007and 2008 by the Consumers' Research Council of America.

6. **Cambridge Collage Award for medical achievement.** Cambridge, UK 2005.
7. ASRA Pain Fellows Scholarship 2002.
8. Chief Fellow; Pain Management, The Cleveland Clinic Foundation, Cleveland, OH 2002
9. Midwest Anesthesia Resident Conference (MARC) 2002  
1<sup>st</sup> place in Case Reports
5. Ohio Society of Anesthesiologists-Resident Component Research Contest, 2002  
2<sup>nd</sup> place in clinical studies
6. Cleveland Clinic Foundation, Anesthesia Residents and Fellows research Day, 2002  
2nd place in clinical studies.
7. Midwest Anesthesia Resident Conference (MARC) 2001  
1<sup>st</sup> place in Case Reports
8. Midwest Anesthesia Resident Conference (MARC) 2000  
1<sup>st</sup> place in Case Report
9. Cleveland Clinic Foundation, Anesthesia Residents and Fellows research Day, 2000  
1<sup>st</sup> place in Case Reports

#### **EXTERNAL PROFESSIONAL ACTIVITIES:**

- **Founder and President;** American Interventional Headache Society (AIHS). 2015-present
- **Treasure , Executive Committee ;** American Society of Regional Anesthesia and pain Medicine (ASRA) 2017-
- **Director-at-large and board member;** American Society of Regional Anesthesia and pain Medicine (ASRA) 2013-2017
- **Founder and board member;** International Association of MSK Pain 2013-present
- **Editor-in-chief;** SAM-PM, American Society of Anesthesiology (ASA) and American Society of Regional Anesthesia (ASRA) 2013-present
- **Chair, Pain medicine education track committee,** American Society of Anesthesiology (ASA), 2016-
- **Chair Guidelines and Regulatory Advocacy Committee** of the American Society of Regional Anesthesia and pain Medicine (ASRA). 2015- present

- Member: Scientific Review and Guidelines Committee. The American Academy of Pain Medicine (AAPM). 2017-
- Lead; committee on “Guidelines for Interventional Spine and Pain procedures in patients on antiplatelets and anticoagulants”. The American Society of Regional Anesthesia and Pain Medicine (ASRA), the European Society of Regional Anesthesia and Pain Therapy (ESRA), the American Academy of Pain Medicine (AAPM), the International Neuromodulation Society (INS), the North American Neuromodulation Society (NANS) and the World Institute of Pain (WIP). 2012-2014
- Member: Annual Meeting Oversight Committee. American Society of Anesthesiology (ASA), 2016-
- Member: The Neurostimulation Appropriateness Consensus Committee (NACC) Safety Guidelines. INS 2013-present
- Vice chair, Pain medicine education track committee, American Society of Anesthesiology (ASA), 2012-2016
- Chair, special interest group on Ultrasound-guided procedures in Pain Medicine (USPM), American Society of Regional Anesthesia (ASRA) 2007-present
- Member; committee on “Guidelines for occipital nerve stimulation”. The American Academy of Neurological Surgery (AANS), the International Neuromodulation Society (INS), the North American Neuromodulation Society (NANS), The American Society of Regional Anesthesia and Pain Medicine (ASRA), the American Academy of Pain Medicine (AAPM). 2013-2015
- Anesthesiology/Pain subspecialty editor, Journal of ultrasound in Medicine (JUM) 2012-present.
- Editorial board, Regional Anesthesia Pain Medicine (RAPM) journal 2011-present.
- Editorial board, Neurology Journal 2015-present
- Editorial board, Pain Practice 2015-present
- Chair, special interest group on interventional management of head and face pain, American Headache Society (AHS) 2006-2007.
- American Academy of Pain Medicine (AAPM) Interventional pain committee, 2012-present
- American Academy of Pain Medicine (AAPM) Neuromodulation appropriateness consensus committee, 2012-present
- World Institute of Pain (WIP), scientific program committee. 2013-present
- American society of Anesthesiology (ASA), Pain medicine education track committee, 2010-present
- American Society of Regional Anesthesia (ASRA) Scientific program committee. 2010-present
- American Society of Regional Anesthesia (ASRA) Education committee. 2010-2013
- American Society of Regional Anesthesia (ASRA) newsletter committee. 2008-2011

- American Society of Regional Anesthesia (ASRA) web site committee. 2008-2012
- Medical Reviewer for Journal of Ultrasound in Medicine (JUM)
- Medical Reviewer for Journal of American Medical Association (JAMA)
- Medical Reviewer for Headache Journal
- Medical Reviewer for Cephalalgia Journal
- Medical Reviewer for Regional anesthesia and Pain Medicine Journal (RAPM)
- Medical Reviewer for Pain Medicine Journal
- Medical Reviewer for Pain Practice Journal
- Medical Reviewer for Pain physician Journal
- Medical Reviewer for Anesthesia & Analgesia Journal
- Medical Reviewer for Annals of Thoracic Surgery
- Medical Reviewer for Acta Anesthesiologica Scandinavia
- Medical Reviewer for Journal of Clinical Anesthesia
- Ohio Society of Anesthesiologists (OSA)  
Chair, OSA-Resident Component, 2001-2002  
Chair-elect, OSA-Resident Component, 2000-2001  
Secretary, OSA- Resident Component, 1999-2000
- Ohio Society of Anesthesiologists (OSA) Education Committee,2001-2002
- American Society of Anesthesiologists (ASA)  
ASA-Resident Component Committee House of Delegates, 1999-2002.
- American Society of Regional Anesthesia (ASRA)  
Member of the ASRA-Resident Component , 2002

## **INSTITUTIONAL ACTIVITIES:**

### **Committees:**

Medical Executive Board. Western Reserve Hospital, Cuyahoga Falls, OH. 2010-now.

Physician Performance Evaluation Committee (PPEC). Western Reserve Hospital, Cuyahoga Falls, OH. 2010-now.

Anesthesiology Institute Advisory Board. Cleveland Clinic 2009-2010

Chair, Pain Medicine Education Committee, Anesthesiology Institute, CCF 2007-2010

Pain Medicine Education Committee, Pain Management Department, CCF 2006-2010

Pain Fellows selection committee- Pain Management Department, CCF 2005-2010

Anesthesiology Resident selection committee- Division of Anesthesia, CCF 2005-2010

Anesthesiology Education Committee, CCF 2006-2009

Chair of the Acute Pain Service Task Force, Cleveland Clinic 2007

Chair; committee on Acute Pain Service, Aultman Hospital, 2003-2004.

Committee on Chronic Pain Management Aultman Hospital, 2003-2004

House Staff Association, The Cleveland Clinic Foundation (HSA-CCF)  
Anesthesia representative in The House Staff Association, 2000-2002

Joint Appointments: **President, Ohio Pain and Headache Institute (OPHI)** , Akron, OH  
5/2010-present

**Neurosurgery Department, OSU.**  
Clinical Professor of Neurological Surgery. 2011-present

**Anesthesiology Department, OSU.**  
Consultant. 2011-present

**Program Director, Pain Medicine Fellowship,** The Cleveland Clinic  
Foundation, 1/07-5/10

**Neurosurgery Department,** Center for Neuro Restoration, The  
Cleveland Clinic Foundation, 2008-5/10

**Associate Program Director, Pain Management Fellowship,** The  
Cleveland Clinic Foundation, 2006-2007

Chief Fellow; Pain Management, The Cleveland Clinic Foundation,  
Cleveland, OH 2002

## **Patents:**

**1. Ultrasound-guided delivery of a therapy guided device to the phrenic nerve. CCF-018614-US-ORD**

**2. Ultrasound-guided delivery of a therapy guided device to target nerve. CCF-018616-US-ORD**

20100204567 - Ultrasound-guided delivery of a therapy delivery device to a phrenic nerve

20100204568 - Ultrasound-guided delivery of a therapy delivery device to a nerve target

## **Book Editor:**

1. **Multimodal Imaging in Interventional pain Management.**  
Narouze, Samer N. (Ed.) 1st Edition. Oxford University Press 2016
2. **Atlas of ultrasound guided procedures in interventional pain management.**  
Narouze, Samer N. (Ed.) 1st Edition. Springer 2011, V, 356 p. 465 illus., 350 in color.  
ISBN: 978-1-4419-1679-2. 2<sup>nd</sup> Edition 2017.
3. **Interventional management of head and face pain: nerve blocks and beyond.**  
Narouze, Samer N. (Ed.). 1st Edition. Springer 2014
4. **Bedside Pain Management Interventions.** Souzalnitski D, Narouze SN, Lerman IR (Eds.) 1st Ed., Springer Science & Business Media, Inc.; 2016. In production.
5. **Regenerative Pain Medicine.** Souzalnitski D, Cheng J, Narouze SN. 1st Ed., Springer Science & Business Media, Inc.; 2018. In progress.
6. **Self-Assessment Module - Pain Medicine-2.** In: Narouze S. (Ed.) SAM-PM2. American Society of Anesthesiology. SAM-PM-2. Available online November 2014 at <http://education.asahq.org>
7. **Spinal Injections and Peripheral Nerve Blocks,** 1<sup>st</sup> Edition. Elsevier 2011  
Edited by; Honorio Benzon, Marc Huntoon, and **Samer Narouze**. It is one of 4 volumes with Timothy Deer as the series editor of Interventional and Neuromodulatory Techniques for Pain Management.
8. **Essentials of Pain Medicine,** 3<sup>rd</sup> Edition. Elsevier 2011, 4<sup>th</sup> Edition 2017  
Edited by, Benzon et al. Associate-editor: Samer Narouze

## **Publications:**

1. **Narouze S,** Souzalnitski D. Ultrasound-guided Percutaneous Cervical and Upper Thoracic Sympathetic Chain Neuromodulation for Upper Extremity Complex Regional Pain Syndrome. Ochsner Journal 2017 (in press).
2. Deer, T. R., **Narouze, S.**, Provenzano, D. A., Pope, J. E., Falowski, S. M., Russo, M. A., Benzon, H., Slavin, K., Pilitsis, J. G., Alo, K., Carlson, J. D., McRoberts, P., Lad, S. P., Arle, J., Levy, R. M., Simpson, B. and Mekhail, N. (2017), The Neurostimulation Appropriateness Consensus Committee (NACC): Recommendations on Bleeding and Coagulation Management in Neurostimulation Devices. *Neuromodulation: Technology at the Neural Interface*. doi:10.1111/ner.12542

3. Deer, T. R., Provenzano, D. A., Hanes, M., Pope, J. E., Thomson, S. D., Russo, M. A., McJunkin, T., Saulino, M., Raso, L. J., Lad, S. P., **Narouze, S.**, Falowski, S. M., Levy, R. M., Baranidharan, G., Golovac, S., Demesmin, D., Witt, W. O., Simpson, B., Krames, E. and Mekhail, N. (2017), The Neurostimulation Appropriateness Consensus Committee (NACC) Recommendations for Infection Prevention and Management. *Neuromodulation: Technology at the Neural Interface*. doi:10.1111/ner.12565
4. Deer, T. R., Lamer, T. J., Pope, J. E., Falowski, S. M., Provenzano, D. A., Slavin, K., Golovac, S., Arle, J., Rosenow, J. M., Williams, K., McRoberts, P., **Narouze, S.**, Eldabe, S., Lad, S. P., De Andrés, J. A., Buchser, E., Rigoard, P., Levy, R. M., Simpson, B. and Mekhail, N. (2017), The Neurostimulation Appropriateness Consensus Committee (NACC) Safety Guidelines for the Reduction of Severe Neurological Injury. *Neuromodulation: Technology at the Neural Interface*. doi:10.1111/ner.12564
5. Deer, T. R., Pope, J. E., Hayek, S., Bux, A., Buchser, E., Eldabe, S., De Andrés, J. A., Erdek, M., Patin, D., Grider, J. S., Doleys, D. M., Jacobs, M. S., Yaksh, T. L., Poree, L., Wallace, M. S., Prager, J., Rauck, R., DeLeon, O., Diwan, S., Falowski, S. M., Gazelka, H. M., Kim, P., Leong, M., Levy, R. M., McDowell II, G., McRoberts, P., Naidu, R., **Narouze, S.**, Perruchoud, C., Rosen, S. M., Rosenberg, W. S., Saulino, M., Staats, P., Stearns, L. J., Willis, D., Krames, E., Huntoon, M. and Mekhail, N. (2016), The Polyanalgesic Consensus Conference (PACC): Recommendations on Intrathecal Drug Infusion Systems Best Practices and Guidelines. *Neuromodulation: Technology at the Neural Interface*. doi:10.1111/ner.12538
6. Souzdalnitski D, **Narouze SN**, Lerman IR, Calodney A. Platelet-rich Plasma Injections for Knee Osteoarthritis: Systematic Review of Duration of Clinical Benefit. *Tech Reg Anesth Pain Manag*, 2016. (In Print)
7. **Narouze S**. Occipital neuralgia diagnosis and treatment: The role of ultrasound. *Headache* 2016
8. Deer TR, Pope J, Hayek S, ..., **Narouze S**,... , Huntoon M, Mekhail N. The Polyanalgesic Consensus Conference (PACC) Recommendations on Intrathecal Drug Infusion Systems Best Practices and Guidelines. *Neuromodulation* 2016 (in press)
9. **Narouze S**, Benzon HT, Provenzano DA, Buvanendran A, De Andres J, Deer TR, Rauck R, Huntoon MA. Interventional spine and pain procedures in patients on antiplatelet and anticoagulant medications: guidelines from the American Society of Regional Anesthesia and Pain Medicine, the European Society of Regional Anaesthesia and Pain Therapy, the American Academy of Pain Medicine, the International Neuromodulation Society, the North American Neuromodulation Society, and the World Institute of Pain. *Reg Anesth Pain Med*. 2015 May-Jun;40(3):182-212.
10. **Narouze S**, Souzdalnitski D. Obesity and chronic pain: opportunities for better patient care. *Pain Manag*. 2015;5(4):217-9.
11. Sweet JA, Mitchell LS, **Narouze S**, Sharan AD, Falowski SM, Schwalb JM, Machado A, Rosenow JM, Petersen EA, Hayek SM, Arle JE, Pilitsis JG. Occipital Nerve Stimulation for the Treatment of

Patients with Medically Refractory Occipital Neuralgia: Congress of Neurological Surgeons Systematic Review and Evidence-Based Guideline. *Neurosurgery*. 2015 Sep;77(3):332-41.

12. Provenzano DA, Deer T, Luginbuhl Phelps A, Drennen ZC, Thomson S, Hayek SM, **Narouze S**, Rana MV, Watson TW, Buvanendran A. An International Survey to Understand Infection Control Practices for Spinal Cord Stimulation. *Neuromodulation*. 2015 Oct 22. doi: 10.1111/ner.12356.
13. **Narouze S**, Souzdalnitcki D. Obesity and chronic pain: systematic review of prevalence, and implications for pain practice. *Reg Anesth Pain Med*. 2015 Mar-Apr;40(2):91-111
14. Lerman IR, Souzdalnitcki D, Halaszynski T, Dai F, Guirguis M, **Narouze SN**. Ultrasound Guided Regional Anesthesia Simulation and Trainee Performance. *Tech Reg Anesth Pain Manag*, 2014; 18 (4): 110–117.
15. **Narouze S**. Neurostimulation at pterygopalatine fossa for cluster headaches and cerebrovascular disorders. *Curr Pain Headache Rep*. 2014 Jul;18(7):432.
16. Souzdalnitcki D, **Narouze S**. Evidence based approaches toward reducing cancellations on the day of surgery. *Saudi J Anaesth* 2014; 8:6-7.
17. Deer T, Pope J, Hayek S, **Narouze S**, Patil P, Foreman R, Sharan A, Levy R. Neurostimulation for the treatment of axial back pain: a review of mechanisms, techniques, outcomes, and future advances. *Neuromodulation*. 2014 Oct;17 Suppl 2:52-68.
18. Dodick DW, Silberstein SD, Reed KL, Deer TR, Slavin KV, Huh B, Sharan AD, **Narouze S**, Mogilner AY, Trentman TL, Ordia J, Vaisman J, Goldstein J, Mekhail N. Safety and efficacy of peripheral nerve stimulation of the occipital nerves for the management of chronic migraine: Long-term results from a randomized, multicenter, double-blinded, controlled study. *Cephalalgia*. 2014 Jul 30. pii: 0333102414543331.
19. Hakim S, **Narouze S**. Risk factors for chronic saphenous neuralgia following coronary artery bypass graft surgery utilizing saphenous vein grafts. *Pain Pract*. 2014 Sep 27. doi: 10.1111/papr.12246. [Epub ahead of print]
20. Sharan A, Huh B, **Narouze S**, Trentman T, Mogilner A, Vaisman J, Ordia J, Deer T, Venkatesan L, Slavin K. Analysis of Adverse Events in the Management of Chronic Migraine by Peripheral Nerve Stimulation. *Neuromodulation*. 2014 Oct 14. doi: 10.1111/ner.12243. [Epub ahead of print]
21. Deer TR, Krames E, Mekhail N, Pope J, Leong M, Stanton-Hicks M, Golovac S, Kapural L, Alo K, Anderson J, Foreman RD, Caraway D, **Narouze S**, Linderoth B, Buvanendran A, Feler C, Poree L, Lynch P, McJunkin T, Swing T, Staats P, Liem L, Williams K. The appropriate use of neurostimulation: new and evolving neurostimulation therapies and applicable treatment for chronic pain and selected disease states. *Neuromodulation*. 2014 Aug;17(6):599-615; discussion 615. doi: 10.1111/ner.12204.
22. Deer TR, Mekhail N, Provenzano D, Pope J, Krames E, Thomson S, Raso L, Burton A, DeAndres J, Buchser E, Buvanendran A, Liem L, Kumar K, Rizvi S, Feler C, Abejon D, Anderson J, Eldabe S, Kim P, Leong M, Hayek S, McDowell G 2nd, Poree L, Brooks ES, McJunkin T, Lynch P, Kapural L, Foreman RD, Caraway D, Alo K, **Narouze S**, Levy RM, North R. The appropriate use of

neurostimulation: avoidance and treatment of complications of neurostimulation therapies for the treatment of chronic pain. *Neuromodulation*. 2014 Aug;17(6):571-97

23. Deer TR, Mekhail N, Petersen E, Krames E, Staats P, Pope J, Saweris Y, Lad SP, Diwan S, Falowski S, Feler C, Slavin K, **Narouze S**, Merabet L, Buvanendran A, Fregni F, Wellington J, Levy RM. The appropriate use of neurostimulation: stimulation of the intracranial and extracranial space and head for chronic pain. *Neuromodulation*. 2014 Aug;17(6):551-70
24. **Narouze S**. Ultrasound Guided Stellate Ganglion Block: Safety and Efficacy. *Curr Pain Headache Rep*. 2014 Jun;18(6):424
25. **Narouze S**, Provenzano DA. Ultrasound- guided cervical facet nerve and joint injections: Why ultrasound? *J Ultrasound Med*. 2013 Nov; 2013 Nov;32(11):1885-96
26. Souzdalnitski D, **Narouze S**. Clinical expertise in regional anesthesia: Anesthesiologists voice their need for formal training. *Saudi J Anaesth*. 2013 Oct;7(4):371-2.
27. **Narouze S**. Neuromodulation of the Pterygopalatine Fossa for Cluster Headaches and Cerebrovascular Disorders. *Current Pain and Headache Reports* 2014 (in press)
28. **Narouze S**, Souzdalnitski D. Management of thyroid incidentalomas encountered by anesthesiologists and pain physicians. *Reg Anesth Pain Med*. 2013;38(5):431-5.
29. Souzdalnitski D, **Narouze S**. Clinical expertise in regional anesthesia: Anesthesiologists voice their need for formal training. *Saudi J Anaesth* 2013;7:371-2.
30. Provenzano DA, **Narouze S**. Sonographically guided lumbar spine procedures. *J Ultrasound Med*. 2013 Jul;32(7):1109-16
31. **Narouze SN**. Ultrasound-guided cervical spine injections: time to put "outcome" before "income". *Reg Anesth Pain Med*. 2013 May-Jun; 38(3):173-4.
32. **Narouze SN**, Souzdalnitski D. Occipital nerve entrapment within the semispinalis capitis muscle diagnosed with ultrasound. *Cephalalgia* 2013 Jun 25.
33. **Narouze SN**, Casanova J, Souzdalnitski D. Patients with a History of Spine Surgery or Spinal Injury may have a Higher Chance of Intrathecal Catheter Granuloma Formation. *Pain Pract*. 2013 Jan 30. doi: 10.1111/papr.12024.
34. **Narouze S**, Provenzano D, Peng PWH, Eichenberger U, Lee SC, Morriggl B. The American Society of Regional Anesthesia and Pain Medicine, the European Society of Regional Anesthesia and Pain Therapy, and the Asian Australasian Federation of Pain Societies Joint Committee Recommendations for Education and Training in Ultrasound-Guided Interventional Pain Procedures. *Reg Anesth Pain Med* 2012; 37(6):657-664
35. Silberstein SD, Dodick DW, Saper J, Huh B, Slavin KV, Sharan A, Reed K, **Narouze S**, Mogilner A, Goldstein J, Trentman T, Vaisma J, Ordia J, Weber P, Deer T, Levy R, Diaz RL, Washburn SN, Mekhail N. Safety and efficacy of peripheral nerve stimulation of the occipital nerves for the

management of chronic migraine: Results from a randomized, multicenter, double-blinded, controlled study. *Cephalalgia*. 2012 Oct 23. [Epub ahead of print]

36. **Narouze S.** Ultrasound-guided Cervical Spine Injections: Ultrasound “prevents” while contrast fluoroscopy “detects” intra-vascular injections. *Reg Anesth Pain Med* 2012;37(2):127-30
37. Lerman IR, Souzdalnitski D, **Narouze S.** A Low Cost, Durable, Combined Ultrasound and Fluoroscopic Phantom for Cervical Transforaminal Injections. *Reg Anesth Pain Med* 2012;37(3):344-8.
38. Hakim SM, **Narouze S**, Shaker NN, Mahran MA. Risk Factors for New-Onset Persistent Low Back Pain Following Non-Obstetric Surgery Performed with Epidural Anesthesia. *Reg Anesth Pain Med* 2012;37(2):175-82.
39. **Narouze S**, Peng P. Ultrasound-guided Interventional Procedures in Pain Medicine: A Review of Anatomy, Sonoanatomy and Procedures. Part II: Axial structures. *Reg Anesth Pain Med* 2010 Jul-Aug;35(4):386-96
40. Veizi IE, Hayek SM, **Narouze SN**, Mekhail N. Combination of intrathecal opioids with bupivacaine attenuates opioid dose escalation in chronic non-cancer pain patients. *Pain Med*. 2011
41. Oluigbo CO, Makonnen G, **Narouze S**, Rezai AR. Sphenopalatine ganglion interventions: technical aspects and application. *Prog Neurol Surg*. 2011;24:171-9.
42. Hayek SM, Veizi IE, Narouze SN, Mekhail N. Age-dependent Intrathecal Opioid Escalation in Chronic Noncancer Pain Patients. *Pain Med*. 2011 Aug 2. doi: 10.1111/j.1526-4637.2011.01188.x. [Epub ahead of print]
43. **Narouze S**, Peng P. Ultrasound-guided Interventional Procedures in Pain Medicine: A Review of Anatomy, Sonoanatomy and Procedures. Part II: Axial structures. *Reg Anesth Pain Med* 2010 Jul-Aug;35(4):386-96.
44. Blumenfeld A, Ashkenazi A, Grosberg B, Napchan U, **Narouze S**, Nett B, DePalma T, Rosenthal B, Tepper S, Lipton RB. Patterns of use of peripheral nerve blocks and trigger point injections among headache practitioners in the USA: Results of the American Headache Society Interventional Procedure Survey (AHS-IPS). *Headache*. 2010 Jun;50(6):937-42.
45. Ashkenazi A, Blumenfeld A, Napchan U, **Narouze S**, Grosberg B, Nett R, Depalma T, Rosenthal B, Tepper S, Lipton RB. Peripheral Nerve Blocks and Trigger Point Injections in Headache Management - A Systematic Review and Suggestions for Future Research. *Headache*. 2010 Jun;50(6):943-52.
46. **Narouze S.** Ultrasound-guided Interventional Procedures in Pain Management: Evidence Based Medicine. *Reg Anesth Pain Med* 2010 Mar-Apr;35(2 Suppl):S55-8.
47. Neal JM, Brull R, Chan VW, Grant SA, Horn JL, Liu SS, McCartney CJ, **Narouze SN**, Perlas A, Salinas FV, Sites BD, Tsui BC. The ASRA evidence-based medicine assessment of ultrasound-guided regional anesthesia and pain medicine: Executive summary. *Reg Anesth Pain Med*. 2010 Mar-Apr;35(2 Suppl):S1-9.

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## **Abstracts and Case Reports:**

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#### Invited Review Articles and Book Chapters:

1. Costandi S, Costandi J, Souzalnitski D, **Narouze SN**. Peripheral Nerve Block for the Management of Headache and Face Pain. In: Narouze SN (Ed.) *Interventional Management of Head and Face Pain. Nerve Blocks and Beyond*, 1st Ed. Springer Science+Business Media New York, 2014:17-27.
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42. Persistent idiopathic facial pain. . Puesta Al Dia En Anestesia Regional Y Tratamiento Del Dolor. ESEA-ESPANA. Vol X111, 2010
43. Ultrasound-guided Interventional Procedures in Pain Medicine: A Review of Anatomy, Sonoanaotmy and Procedures. Part II: Axial structures. Reg Anesth Pain Med 2010 Jul-Aug;35(4):386-96.
44. Ultrasound-guided Interventional Procedures in Pain Medicine: A Review of Anatomy, Sonoanaotmy and Procedures. Part I: Non-axial structures. Reg Anesth Pain Med 2009 Sep-Oct;34(5):458-74
45. Ultrasound guided cervical facet intrarticular injection. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
46. Ultrasound guided cervical nerve root block. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
47. Ultrasound guided caudal, ganglion impar and sacroiliac joint injections Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
48. Ultrasound guided transversus abdominus plane (TAP) block. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
49. Ultrasound guided celiac plexus block and neurolysis. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
50. Ultrasound guided occipital stimulation. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
51. Ultrasound guided groin stimulation. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
52. Ultrasound guided atlanto-axial and atlanto-occipital joint onjections. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
53. Ultrasound assisted cervical discography and intradiscal procedures. Atlas of ultrasound guided procedures in interventional pain management, 1<sup>st</sup> ed. Edited by; Samer Narouze, published by Springer 2011.
54. MILD procedure: to do or not to so. ASRA Newsletter August 2011
55. Renewed interest in Sphenopalatine ganglion. ASRA Newsletter May 2011
56. Differential epidural and TAP block. ASRA Newsletter May 2010
57. Trigeminal neuralgia. ASRA web site. Spring 2010
58. Cervicogenic headache. ASRA web site. Spring 2009
59. Certification for Ultrasound-guided regional anesthesia: yes or no. ASRA Newsletter Feb 2009

60. Ultrasonography in Pain Medicine: Research update. ASRA Newsletter Nov. 2008
61. Ultrasonography in Pain Medicine: A Sneak Peak at the Future. Pain Practice 2008
62. Complications of head and neck procedures. *Tech Reg Anesth Pain Manage.* July 2007; 11(3); 171-177
63. Pain Management in Chronic prostatitis. Current Clinical Urology Series, Chronic Prostatitis/Chronic pelvic Syndrome, edited by Daniel Shoskes. Humana Press Inc., Totowa, NJ 2007
64. Cervicogenic Headache: Diagnosis and Management. ASA Refresher Course Publications.2007
65. Medical Management of Chronic Shoulder Pain. Disorders of the Shoulder 2e, edited by Joseph P. Iannotti and Gerald R. Williams Jr. 2007.

#### **PRESENTATIONS / INVITED SPEAKER:**

1. Neck, Head and Face Pain: Clinical Dilemmas in Diagnosis and Management. Refresher course lecture at ASA annual meeting. Chicago 10/2016.
2. Obesity and chronic pain. Panel discussion at ASA annual meeting. Chicago 10/2016.
3. Ultrasound guided spine injections: Efficacy and outcomes. Panel discussion at ASA annual meeting. Chicago 10/2016.
4. Cervicogenic headaches. American Interventional Headache society (AIHS). Chicago 6/2016.
5. Occipital nerve entrapments. American Interventional Headache society (AIHS). Chicago 6/2016.
6. Interventional management for intractable headaches. Diamond headache Meeting Orlando 7/2016
7. Pain and Opioid Epidemic in Ohio. Tallmadge City Opioids Summit. Hosted by Tallmadge City. 3/ 2016
8. Pain and Opioid Epidemic in Ohio. Summit County Opioids Summit. Hosted by Cuyahoga Falls mayor. 2015.

9. Post dural puncture headache: Differential diagnosis. ASRA spring annual meeting. New Orleans 3/2016
10. Basics of ultrasound-guided nerve blocks. ASRA spring annual meeting. New Orleans 3/2016
11. Best Practice: management of infection with implantable devices. AAPM annual meeting. Palm Springs 2/ 2016
12. Interventional headache management. AAPM annual meeting. Palm Springs 2/ 2016.
13. Obesity and chronic pain. AAPM annual meeting. Palm Springs 2/ 2016.
14. The use of ultrasound in the diagnosis and management of headache disorders. London USPM 2016 Meeting. London 3/2016
15. Cervical spine sonoanatomy. London USPM 2016 Meeting. London 3/2016
16. Cervical spine sonoanatomy. Moderator and speaker. ASRA fall annual meeting. Miami 11/2015
17. Pain procedures risk stratification. Anticoagulation panel. ASRA fall annual meeting. Miami 11/2015
18. Cervicogenic headaches. American Interventional Headache society (AIHS). Chicago 11/2015.
19. Occipital nerve entrapments. American Interventional Headache society (AIHS). Chicago 6/2016
20. Trigeminal ganglion block and RFA. American Interventional Headache society (AIHS). Chicago 11/2015.
21. Sphenopalatine ganglion block and RFA. American Interventional Headache society (AIHS). Chicago 11/2015.
22. The new subspecialty: Interventional headache management. ESRA Spain, 11/2015
23. Head and neck pain: Clinical dilemmas in diagnosis and management. Refresher course lecture at ASA annual meeting. San Diego 10/2015.
24. ASRA pain anticoagulation guidelines. Panel at ASA annual meeting. San Diego 10/2015.
25. Knee joint RFA. ESRA annual meeting. Slovenia 9/2015
26. Hip joint sonoanatomy. ESRA annual meeting. Slovenia 9/2015

27. Interventional headache management. AAPM annual meeting 2/ 2015.
28. New cranial targets for neuromodulation treatment of headaches. AAPM annual meeting 2/ 2015
29. Occipital nerve stimulation. AAPM annual meeting 2/ 2015
30. Ultrasound guided neuromodulation: Safety and efficacy. NANS annual meeting. Las Vegas 12/2014
31. New guidelines for anticoagulation and pain procedures. ASRA fall annual meeting. San Francisco 11/2014
32. Ultrasound-guided cervical injections. Moderator and speaker. ASRA fall annual meeting. San Francisco 11/2014
33. Diagnostic and interventional Ultrasound for shoulder joint. ASRA fall annual meeting. San Francisco 11/2014
34. NSAIDs, ASA, antiplatelets management for pain procedures. Nurses and Physician Assistants program at ASRA fall annual meeting. San Francisco 11/2014
35. Head and neck pain: Clinical dilemmas in diagnosis and management. Refresher course lecture at ASA annual meeting. New Orleans 10/2014
36. Neuromodulation for cluster headache. ESRA annual meeting, Seville, Spain 9/2014
37. Ultrasound in interventional pain medicine: safety and outcome. ESRA annual meeting, Seville, Spain 9/2014.
38. Cervical facet RFA: pulsed or conventional. ESRA annual meeting, Seville, Spain 9/2014
39. Ultrasound guided lumbar and cervical spine injections. American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 6/2014
40. Headache session: moderator and speaker. Interventional headache management. World Institute of Pain (WIP) congress. Maastricht, Netherlands 5/2014
41. Headache: the common, can't miss, interventional amenable. American Academy of Pain Medicine (AAPM) annual meeting. Phoenix, AZ 4/2014.
42. Occipital nerve stimulation for headache. American Academy of Pain Medicine (AAPM) annual meeting. Phoenix, AZ 4/2014.
43. Facial and Cervical Facets Pain: thermal RFA. 16th annual Cleveland Clinic pain management symposium. Las Vegas 2/2014.
44. New Anticoagulation Guidelines for Interventional Pain Therapy. 16th annual

- Cleveland Clinic pain management symposium. Las Vegas 2/2014.
45. A New Role for the Pain Specialist: Diagnostic Ultrasound. 16th annual Cleveland Clinic pain management symposium. Las Vegas 2/2014.
  46. Ultrasound guided cervical spine injections. MSK Pain annual meeting. Hong Kong 12/2013
  47. A practical approach to head and neck pain. Refresher course lecture at the ASA annual meeting. San Francisco 10/2013
  48. Ultrasound guided procedures for pain medicine. Moderator. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix 11/2013.
  49. Ultrasound guided cervical spine injections. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix 11/2013.
  50. Anticoagulation guidelines for interventional pain procedures. Moderator and speaker. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix 11/2013.
  51. Interventional headache management. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix 11/2013.
  52. Management of chronic pain in obese patients. Special guidelines? Refresher Course Lecture. European Society of Regional Anesthesia and Pain Therapy (ESRA) annual meeting, Glasgow 9/2013
  53. Bipolar Radiofrequency Treatment: Do you know what it means? Chairperson/Moderator. European Society of Regional Anesthesia and Pain Therapy (ESRA) annual meeting, Glasgow 9/2013
  54. Cervical Spine is there a place for bipolar RF? European Society of Regional Anesthesia and Pain Therapy (ESRA) annual meeting, Glasgow 9/2013
  55. ASRA/ESRA Joint Session: Should we continue to teach non US guided techniques in RA & Pain Management? European Society of Regional Anesthesia and Pain Therapy (ESRA) annual meeting, Glasgow 9/2013
  56. US guided neuraxial spine interventional pain medicine procedures. European Society of Regional Anesthesia and Pain Therapy (ESRA) annual meeting, Glasgow 9/2013
  57. Ultrasound guided cervical spine injections. American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 7/2013
  58. Needles gone wild. American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 7/2013

59. Ultrasound guided pain medicine injections. World Institute of Pain (WIP) congress. Maastricht, Netherlands 6/2013
60. Cluster headache. World Institute of Pain (WIP) congress. Maastricht, Netherlands 6/2013
61. Headache: the common, can't miss, interventional amenable. American Academy of Pain Medicine (AAPM) annual meeting. Fort Lauderdale, FL 4/13.
62. Ultrasound guided cervical spine procedures for pain medicine. CCF annual meeting, Sarasota, FL 2/2013.
63. Safety of Ultrasound guided procedures. 15th annual Cleveland Clinic pain management symposium. Sarasota, FL 2/2013.
64. SPG stimulation. 15th annual Cleveland Clinic pain management symposium. Sarasota, FL 2/2013.
65. Ultrasound guided cervical spine injections. MSK Pain annual meeting. Hong Kong 12/2012
66. Ultrasound guided procedures for pain medicine. Moderator. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Miami 11/2012.
67. Ultrasound guided cervical spine injections. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Miami 11/2012.
68. Anticoagulation guidelines for interventional pain procedures. Moderator and speaker. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Miami 11/2012.
69. Headache and neck pain: nerve block and beyond. Refresher course lecture at the ASA annual meeting. Washington, DC 10/2012
70. Abdominal wall pain. Panel session at the ASA annual meeting. Washington, DC 10/2012
71. Interventional headache management. Panel session. ASA annual meeting. Washington, DC 10/2012
72. Ultrasound guided lumbar spine injections. American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 7/2012
73. Ultrasound guided cervical spine injections. World Institute of Pain (WIP) congress. Maastricht, Netherlands 6/2012
74. Ultrasound-guided cervical spine blocks. Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 2012.

75. Ultrasonography in Pain Medicine. Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 2012.
76. Spine interventions: two views. Refresher course lecture at the World Institute of Pain meeting. Miami, FL 2/12.
77. Interventional management of intractable headache. Moderator and Panelist. American Academy of Pain Medicine (AAPM) annual meeting. Palm Springs, CA 2/12.
78. Ultrasound-guided joint injections. 14<sup>th</sup> annual Cleveland Clinic pain management symposium. Las Vegas 1/12.
79. Sphenopalatine ganglion stimulation. 14<sup>th</sup> annual Cleveland Clinic pain management symposium. Las Vegas 1/12.
80. Head and neck blocks. New York School of Regional Anesthesia (NYSORA) annual meeting. New York 12/2011
81. Ultrasound guided procedures for pain medicine: France regional anesthesia annual symposium. Clermont-Fernand, France 12/2011.
82. Ultrasound guided procedures for pain medicine: Are we safer?? New York Society of Interventional Pain Physicians (NYSIPP) annual meeting, New Jersey 11/2011.
83. Ultrasound guided procedures for pain medicine. Moderator. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, New Orleans 11/2011.
84. Ultrasound guided cervical spine injections. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, New Orleans 11/2011.
85. Ultrasound guided imaging for pain medicine. Luncheon round table discussion. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, New Orleans 11/2011.
86. Head and neck pain. Refresher course lecture at the ASA annual meeting. Chicago 10/2011
87. Ultrasonograohy in Pain Medicine. Panel discussion. At the ASA annual meeting. Chicago 10/2011
88. Ultrasound guided cervical spine injections. American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 7/2011
89. Cluster headache and atypical facial pain. World Institute of Pain (WIP) congress. Maastricht, Netherlands 6/2011
90. Ultrasound guided chronic pain blocks. World Institute of Pain (WIP) congress.

Maastricht, Netherlands 6/2011

91. Refresher course lecture: Headaches treatment 2010 style. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix, AZ 11/10.
92. Imaging for pain medicine. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix, AZ 11/10.
93. Trigeminal and sphenopalatine ganglion stimulation. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix, AZ 11/10.
94. Atypical facial pain. ESRA Spain meeting. Alicante, Spain 10/2010
95. SCS for visceral pain. ESRA Spain meeting. Alicante, Spain 10/2010
96. Disc biacuplasty (cooled RFA). ESRA Spain meeting. Alicante, Spain 10/2010
97. Ultrasonography in Pain Medicine. Are we moving towards a procedure specific imaging techniques? ASA annual meeting. San Diego 10/2010
98. SPG and trigeminal electric stimulation. Techniques taught by the experts. ASA annual meeting. San Diego 10/2010
99. Ultrasound-guided cervical spine injections. 13<sup>th</sup> World Congress of Pain. Montreal, QC 8/10.
100. Ultrasound-guided cervical spine blocks. 7<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/10.
101. Ultrasonography in Pain Medicine: Evidence Based medicine. 7<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/10.
102. Ultrasonography in Pain Medicine: Innovations and new indications. 7<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/10
103. Ultrasound guided pain blocks. Visiting professor, Joint grand rounds Departments of Anesthesiology and Neurosurgery. Ohio State University (OSU), Columbus 4/10.
104. Ultrasound guided pain blocks. Annual Regional Anesthesia Symposium. UPMC, Pittsburgh. 4/10
105. Diagnosis and treatment of headaches and trigeminal neuralgias. Comprehensive Anesthesiology Review. Cleveland Clinic. Cleveland, OH 3/10
106. Interventional management of intractable headaches. Headache session at the American academy of Pain Medicine annual meeting. San Antonio, 2/10

107. Panel session: Innovative techniques in Pain Medicine. New York society of Anesthesiologists annual meeting, Post graduate assembly (PGA). New York 12/09
108. Innovative techniques in Neuromodulation. Ultrasound guided neuromodulation. North American Neuromodulation Society (NANS) annual meeting, Las Vegas 12/09.
109. Ultrasound guided cervical spine injections. Weill Cornell Medical College, New York Presbyterian hospital. New York 11/09
110. Ultrasound vs Fluoroscopy in interventional pain management.. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, San Antonio, TX 11/09.
111. Panel Moderator: Interventional management of intractable headaches. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, San Antonio, TX 11/09.
112. Refresher course lecture. Ultrasonography in pain Medicine. American Society of Anesthesia (ASA) annual meeting, New Orleans10/2009
113. De Leon O. Point counterpoint session. Ultrasonography vs flouroscopy in pain Medicine. American Society of Anesthesia (ASA) annual meeting, New Orleans10/2009
114. Panel session: Peripheral Nerve Stimulation: Does it Work? How Can We Improve Outcomes? American Society of Anesthesia (ASA) annual meeting, New Orleans10/2009
115. Panel session: Imaging for Chronic Pain Medicine. American Society of Anesthesia (ASA) annual meeting, New Orleans10/2009
116. Evidence based Medicine: Ultrasonography in pain management.. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual spring meeting, phoenix. AZ 4/09.
117. An update on Cervicogenic Headaches. Internal Medicine Grand Rounds. Cleveland Clinic 5/09
118. Radiofrequency ablation for the treatment of clunealgia. World Institute of pain (WIP). New York 3/09
119. Acute Treatment of Medically Refractory Cluster Headache by Electrical Stimulation of the Sphenopalatine Ganglion (SPG). Annual meeting of the American Academy of Neurologists (AAN). Seattle, WA 2009
120. Headaches: Diagnosis and treatment. Comprehensive Anesthesiology Review. Cleveland Clinic. Cleveland, OH 3/09

121. Ultrasound-guided cervical spine blocks. 11<sup>th</sup> annual pain management symposium. Fort Lauderdale, FL 3/09.
122. New advances in Pain medicine: Sphenopalatine ganglion neuromodulation for intractable headache. 11<sup>th</sup> annual pain management symposium. Fort Lauderdale, FL 3/09.
123. Cervical facet blocks. Round table Discussion. Cleveland Clinic. Cleveland, OH. 3/31/09
124. Lumbar facet blocks. Round table Discussion. Cleveland Clinic. Cleveland, OH. 3/17/09
125. Sympathetic blocks. Round table Discussion. Cleveland Clinic. Cleveland, OH. 2/09
126. Spinal cord stimulation. Round table Discussion. Cleveland Clinic. Cleveland, OH. 1/09
127. Sphenopalatine Ganglion Stimulation for the Acute Treatment of Intractable Migraine. American academy of Pain Medicine Annual Meeting. Honolulu, HI. January 2009
128. Ultrasound- guided T2 Sympathetic Block with the Anterior Approach. American academy of Pain Medicine Annual Meeting. Honolulu, HI. January 2009
129. Occipital Nerve Stimulation with Self-anchoring Leads for the Management of Refractory Chronic migraine Headache. American academy of Pain Medicine Annual Meeting. Honolulu, HI. January 2009
130. Ultrasound-guided Lateral Atlanto-axial Joint Injection for the Treatment of Cervicogenic Headache. American academy of Pain Medicine Annual Meeting. Honolulu, HI. January 2009
131. Dorsal nerve of the penis electric stimulation for penile pain. A Case Report. American academy of Pain Medicine Annual Meeting. Honolulu, HI. January 2009
132. Ultrasound-guided cervical spine injections. Toronto Western Hospital. Toronto 12/08
133. Ultrasound-guided Pain Procedures. Refresher course lecture. New York School of Regional Anesthesia. New York 12/08
134. Ultrasound in Pain Procedures. Pain fellows lecture. Cleveland Clinic. Cleveland, OH 12/2/08
135. Ultrasonography in pain Medicine. Weill Cornell Medical College, New York Presbyterian hospital. New York 11/08.

136. Ultrasonography in pain Medicine. Problem based learning discussion. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual meeting, Huntington Beach, CA 11/08.
137. Ultrasound Guidance for Regional Anesthesia. Survey of current issues in surgical anesthesia. Daytona Beach, FL 11/08
138. Regional Anesthesia for Pain Control after Lower Extremity Surgery. Survey of current issues in surgical anesthesia. Daytona Beach, FL 11/08
139. The Multidisciplinary Pain Clinic. Survey of current issues in surgical anesthesia. Daytona Beach, FL 11/08
140. Treatment of Chronic Headache. Survey of current issues in surgical anesthesia. Daytona Beach, FL 11/08
141. Ultrasonography in pain Medicine. Panel discussion. American Society of Anesthesia (ASA) annual meeting, Orlando 10/2008
142. Clinical Case Assessment system. Pain fellows lecture. Cleveland Clinic. Cleveland, OH 10/27/08
143. Ultrasonography in pain Medicine. Refresher course lecture. European Society of Regional Anesthesia and pain Therapy (ESRA) annual meeting, Genoa, Italy 9/ 2008
144. Interventional procedures for intractable headache. Panel discussion. European Society of Regional Anesthesia and pain Therapy (ESRA) annual meeting, Genoa, Italy 9/ 2008
145. Recent advances in Interventional Pain Management. Panel discussion. European Society of Regional Anesthesia and pain Therapy (ESRA) annual meeting, Genoa, Italy 9/ 2008
146. Interventional management for intractable headache. Pain fellows lecture. Cleveland Clinic. Cleveland, OH 9/9/08
147. Ultrasound-guided cervical spine blocks. St. Luke's Roosevelt Hospital, Columbia University. NYC, NY 6/08.
148. Ultrasound guided procedures in Regional Anesthesia and Pain Medicine. What is new? Grand Round Lecture at Brookdale University Hospitals. Brooklyn, NY 6/08
149. Cervicogenic headache: Diagnosis and Management. Grand Round at Robinson Memorial Hospital, Summa Health System. Warren, OH 5/08.
150. Ultrasound-guided cervical spine blocks. 5<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 4/08.

151. What is New? Ultrasonography in Pain Medicine. 5<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 4/08.
152. Headaches: Diagnosis and treatment. Comprehensive Anesthesiology Review. Cleveland Clinic. Cleveland, OH 4/0
153. Ultrasound guided cervical spine injections. Pain fellows lecture. Cleveland Clinic. Cleveland, OH 4/29/08
154. Orofacial pain. Pain fellows lecture. Cleveland Clinic. Cleveland, OH 4/10/08
155. Headaches: Diagnosis and treatment. Pain fellows lecture. Cleveland Clinic. Cleveland, OH 2/7/08
156. Intractable Headache. Panel at the American Academy of Pain Medicine (AAPM) annual Meeting, Orlando 2/08
157. Ultrasound-guided cervical spine blocks. 10<sup>th</sup> annual pain management symposium. San Diego 2/08.
158. Neuromodulation for intractable headache. 10<sup>th</sup> annual pain management symposium. San Diego 2/08.
159. Cervicogenic headache: interventional management. 10<sup>th</sup> annual pain management symposium. San Diego 2/08.
160. RFA of the lateral Atlantoaxial joints. 10<sup>th</sup> annual pain management symposium. San Diego 2/08.
161. The role of the anesthesiologist in interventional headache management. 23<sup>rd</sup> International Winter Symposium. Leuven University, Belgium 1/08.
162. Intrathecal medications: The future. Panel discussion. International Neuromodulation Society (INS) annual meeting, Acapulco 12/2007
163. Radiofrequency Treatment in Pain Medicine. Refresher Course Lecture. American Society of Anesthesia (ASA) annual meeting, San Francisco 2007
164. Cervicogenic Headache: Strategic approach to diagnosis and management. Panel moderator at the American Academy of Pain Medicine (AAPM) annual Meeting, New Orleans 2007
165. Moderator of Regional Anesthesia/Acute Pain Clinical Science Poster Discussion Session. American Society of Anesthesia (ASA) annual meeting, San Francisco 2007
166. Ultrasound guided procedures in Pain Medicine. The past, the present, and the future. Grand Round Lecture at Brookdale University Hospitals, NY 2007
167. Sacral nerve root stimulation for the treatment of pudendal nerve entrapment

- syndrome. American Academy of Pain Medicine (AAPM) annual Meeting, New Orleans 2007
168. Cervicogenic headache: diagnosis and management. Refresher course lecture. American Society of Anesthesia (ASA) annual meeting, Chicago 2006
  169. Intrathecal granuloma. Panel discussion. American Society of Anesthesia (ASA) annual meeting, Chicago 2006
  170. Moderator of Pain Basic Science Poster Discussion Session. American Society of Anesthesia (ASA) annual meeting, Chicago 2006
  171. New advances in the management of orofacial pain. The 12<sup>th</sup> Annual International Dental Society Meeting. Cairo 2006.
  172. Ultrasound-guided cervical nerve root block. 9<sup>th</sup> annual pain management symposium. Orlando 2007.
  173. Intrathecal granuloma. Risk Management. 9<sup>th</sup> annual pain management symposium. Orlando 2007.
  174. Cervicogenic headache: interventional management. 9<sup>th</sup> annual pain management symposium. Orlando 2007.
  175. Ultrasound-guided nerve blocks. The past, the present, and the future. WAC conference. 2006
  176. Atlanto-axial joint injection: My technique. 8<sup>th</sup> annual pain management symposium. Orlando 2006.
  177. Ultrasound-guided nerve blocks: My technique. 8<sup>th</sup> annual pain management symposium. Orlando 2006
  178. Cervicogenic Headache, interventional management: Panel discussion. 8<sup>th</sup> annual pain management symposium. Orlando 2006
  179. Orofacial pain. Pain Management Fellowship Lectures Series 2006
  180. Pain in the Neck. Pain Management Fellowship Lectures Series 2006
  181. Complications of intrathecal medication infusion systems. Pain Management Fellowship Lectures Series 2006
  182. Cervicogenic Headache. Pain Management Fellowship Lectures Series 2006
  183. The efficacy of propofol in the treatment of intractable chronic daily headache. 79<sup>th</sup> IARS congress 2005 and 8<sup>th</sup> America-Japan Anesthesia Congress 2005.
  184. Lumbar intrathecal granuloma complicating low-dose morphine intrathecal

- infusion. European Society of Anesthesiologists Annual Meeting, Lisbon, Portugal 2004.
185. Anesthetic management of Charcot-Marie-Tooth (CMT) disease. European Society of Anesthesiologists Annual Meeting, Glasgow, Scotland 2003.
  186. Genitofemoral and Ilioinguinal neuropathy after open versus laparoscopic inguinal herniorrhaphy. ASRA Annual Fall Meeting 2002.
  187. Horner's syndrome and Trigeminal nerve palsy after epidural analgesia for labor and delivery. ASRA Annual Spring meeting 2002.
  188. Efficacy and Complication Profile of Surgically Implanted Versus Percutaneously Implanted Spinal Cord Stimulation Systems. ASA Annual meeting 2002
  189. Subarachnoid catheter placement after wet- tap for analgesia in labor. Influence on the risk of headache in obstetric patients. ASA Annual meeting 2001
  190. Radiofrequency techniques in chronic pain management. Aultman Hospital, Pain Center. 7/04
  191. Perioperative epidural analgesia. State of the art. Aultman Hospital, Anesthesia Department, Wednesday Morning Meeting. 4/04
  192. An update of perioperative cardiac evaluation for non-cardiac surgery. Aultman Hospital, Anesthesia Department, Wednesday Morning Meeting. 11/03.
  193. Epidural anesthesia and anticoagulation. An update. Aultman Hospital, Anesthesia Department, Wednesday Morning Meeting. 7/03
  194. Unusual indications for narcotic antagonists. Presentation at the Psychopharmacology class, Department of Clinical Psychology, Cleveland State University (CSU) 2002.
  195. Management of life-threatening complication of central venous access. (Presentation) Midwest Anesthesia Resident Conference (MARC) 2002
  196. Anaphylactoid reaction during induction of anesthesia. (Presentation) Midwest Anesthesia Resident Conference (MARC) 2001. Awarded 1<sup>st</sup> place in case reports.
  197. Perioperative bleeding in a patient given glycoprotein IIb-IIIa receptor antagonists. (Presentation) Midwest Anesthesia Resident Conference (MARC) 2000 and PostGraduate Assembly in Anesthesiology (PGA54 – NY) 2000. Awarded 1<sup>st</sup> place in case reports.

198. Anesthetic management in charcot-marie-tooth (CMT) disease. (Presentation) Midwest Anesthesia Resident Conference (MARC) 2000
199. Pharmacokinetics and pharmacodynamic of new inhalational anesthetic agents. (Presentation) Morbidity and Mortality Conference, The Cleveland Clinic Foundation, 1999
200. Gastroesophageal reflux and aspiration pneumonia. (Presentation) Internal Medicine Grand Round, The Cleveland Clinic Foundation, 1998
201. Acid-base state of cerebrospinal fluid during pregnancy and its effects on spread of spinal anesthesia. Thesis submitted for the Ph.D. in Anesthesia, Ain Shams University, Cairo – Egypt, 1996
202. Anesthesia and Carcinoid Tumors. (Review Article). Thesis for the Master's Degree in Anesthesia, Ain Shams University, Cairo – Egypt, 1993.

#### **ONGOING FUNDED RESEARCH**

1. Sphenopalatine ganglion stimulation for the treatment of intractable cluster headache.
2. Sphenopalatine ganglion stimulation for the treatment of chronic migraine headache.
3. Ultrasound-guided electric stimulation of the cervical sympathetic chain.
4. Percutaneous placement peripheral nerve stimulator leads with ultrasound guidance for the treatment of entrapment neuropathy.
5. The efficacy of occipital nerve stimulation in chronic migraine. Multicenter Randomized Controlled Trial.
6. The efficacy of intrathecal Prial. Multicenter Randomized Controlled Trial.

## **WORKSHOPS:**

1. Interventional head and Neck procedures. Meeting director and moderator. American Interventional Headache society (AIHS). Akron 8/2016.
2. Interventional head and Neck procedures. Meeting director and moderator. Diamond Headache Annual Meeting society. Orlando 7/2016.
3. Interventional head and Neck procedures. Meeting and moderator. American Interventional Headache society (AIHS). Chicago 6/2016.
4. Ultrasound guided spine injections. Cleveland Clinic annual meeting. San Diego 3/2016.
5. Ultrasound guided cervical spine injections. ASRA fall annual meeting. San Diego 11/2015.
6. Ultrasound guided hip joint injections. ASRA fall annual meeting. San Diego 11/2015.
7. Interventional head and Neck procedures. Meeting and moderator. American Interventional Headache society (AIHS). Chicago 11/2015.
8. Ultrasound guided cervical spine injections 17th annual Cleveland Clinic pain management symposium. Sarasota, FL 3/15.
9. Ultrasound guided shoulder joint injections 17th annual Cleveland Clinic pain management symposium. Sarasota, FL 3/15.
10. Ultrasound guided cervical spine injections. ASRA fall annual meeting. San Francisco 11/2014.
11. Ultrasound guided shoulder joint injections. ASRA fall annual meeting. San Francisco 11/2014.
12. Ultrasound guided lumbar and cervical spine injections. .American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 6/2014
13. Ultrasound guided cervical spine injections 16th annual Cleveland Clinic pain management symposium. Las Vegas 2/14.
14. Ultrasound guided shoulder joint injections 16th annual Cleveland Clinic pain management symposium. Las Vegas 2/14.
15. Ultrasound guided cervical spine injections. MSK Pain annual meeting. Hong Kong 12/2013

16. Moderator: Ultrasound guided procedures for pain medicine workshops. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Phoenix 11/2013.
17. Ultrasound guided pain injections. European Society of Regional Anesthesia and Pain Therapy(ESRA) annual meeting, Glasgow 9/2013
18. Ultrasound guided neuroaxial injections. European Society of Regional Anesthesia and Pain Therapy(ESRA) annual meeting, Glasgow 9/2013
19. Ultrasound guided lumbar and cervical spine injections. AIUN Mayo Clinic MSK annual meeting/ Rochester, MN 7/2013
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21. Ultrasound guided cervical spine injections. World Institute of Pain (WIP) congress. Maastricht, Netherlands 6/2013
22. Ultrasound guided cervical spine injections. 15th annual Cleveland Clinic pain management symposium. Sarasota, FL 2/13.
23. Ultrasound guided cervical spine injections. MSK Pain annual meeting. Hong Kong 12/2012
24. Moderator: Ultrasound guided procedures for pain medicine workshops. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, Miami 11/2012.
25. Ultrasound-guided cervical spine blocks. International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/12.
26. Ultrasound shoulder and elbow examination and injections. International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/12.
27. Ultrasound guided cervical spine injections. 14<sup>th</sup> annual Cleveland Clinic pain management symposium. Las Vegas 1/12.
28. Ultrasound guided spine injections. New York School of Regional Anesthesia (NYSORA) annual meeting. New York 12/2011
29. Ultrasound guided neuroaxial injections. France regional anesthesia annual symposium. Clermont-Fernand, France 12/2011.
30. Ultrasound guided procedures for pain medicine. New York Society of Interventional Pain Physicians (NYSIPP) annual meeting, New Jersey 11/2011.
31. Moderator: Ultrasound guided procedures for pain medicine workshops. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual fall meeting, New Orleans 11/2011.
32. Ultrasound guided cervical spine injections. American Institute of Ultrasound in Medicine (AIUM) Mayo MSK course. Rochester, MN 7/2011

33. Director of the American society of Regional Anesthesia and Pain Medicine (ASRA) Ultrasound pain blocks workshops. Boston, 6/11
34. Moderator of the Ultrasonography in Pain Medicine course. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual meeting, Phoenix 11/10.
35. Ultrasound guided cervical spine injections. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual meeting, Phoenix 11/09.
36. Director of the American society of Regional Anesthesia and Pain Medicine (ASRA) Ultrasound pain blocks workshops. Cleveland, 9/10
37. Director of the American society of Regional Anesthesia and Pain Medicine (ASRA) Ultrasound pain blocks workshops. Chicago, 5/10
38. Co-director of the Comprehensive Anesthesiology Review workshop. Cleveland Clinic. Cleveland, OH 2008, 2009 and 2010
39. Ultrasound-guided cervical spine injections. 13<sup>th</sup> World Congress of Pain. Montreal, QC 8/10.
40. Ultrasound-guided cervical spine injections, Live model workshop. 7<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/10.
41. Ultrasound-guided head and neck blocks, Live model workshop. 7<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 6/10.
42. Ultrasound-guided spine injections. UPMC, Pittsburgh 4/10
43. Spinal cord stimulation. North American Neuromodulation Society (NANS) annual meeting, Las Vegas 12/09.
44. Ultrasonography in Pain Medicine. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual meeting, San Antonio 11/09.
45. Ultrasound guided cervical spine injections. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual meeting, San Antonio 11/09.
46. Ultrasound-guided Pain Blocks, Live model workshop. 11<sup>th</sup> Annual Pain Symposium, Fort Lauderdale 3/09
47. Ultrasound-guided Regional Anesthesia. Comprehensive Anesthesiology Review. Cleveland Clinic. Cleveland, OH 3/09
48. Ultrasound-guided stellate ganglion block and cervical spine injections. Toronto Western Hospital. Toronto 12/08
49. Ultrasound-guided Pain Procedures. New York School of Regional Anesthesia. New York 12/08

50. Ultrasonography in pain Medicine. American Society of Regional Anesthesia and Pain Medicine (ASRA) annual meeting, Huntington Beach, CA 11/08.
51. Regional Anesthesia Workshop. Survey of current issues in surgical anesthesia. Daytona Beach, FL 11/08
52. Interventional procedures for intractable headache. Panel discussion. European Society of Regional Anesthesia and pain Therapy (ESRA) annual meeting, Genoa, Italy 9/ 2008
53. Cadaver Workshop: lumbar facets and SIJ. ASA, Orlando 2008
54. Ultrasound-guided Chronic Pain Blocks, cadaver and Live model workshop. Master classes in ultrasonography in pain medicine. Toronto, ON 7/08
55. Ultrasound-guided Chronic Pain Blocks, Live model workshop. New York School of Regional Anesthesia (NYSORA). NYC, NY 6/08.
56. Ultrasound-guided Chronic Pain Blocks, Live model workshop. 5<sup>th</sup> Annual International Symposium of Ultrasound in Regional Anesthesia (ISURA). Toronto, ON 4/08.
57. Ultrasound-guided Regional Anesthesia. Comprehensive Anesthesiology Review. Cleveland Clinic. Cleveland, OH 4/08
58. Ultrasound-guided Pain Blocks, Live model workshop. 10<sup>th</sup> Annual Pain Symposium, San Diego 2008
59. Head and Neck Cadaver Workshop. 9<sup>th</sup> Annual Pain Symposium, San Diego 2008
60. Ultrasound-guided pain procedures. Leuevn University, Belgium 1/08.
61. Head and Neck Cadaver Workshop. ASA, San Francisco 2007
62. Ultrasound-guided Nerve Blocks, Live model workshop. 9<sup>th</sup> Annual Pain Symposium, Orlando 2007
63. Head and Neck Cadaver Workshop. ASA, Chicago 2006
64. Head and Neck Cadaver Workshop. 9<sup>th</sup> Annual Pain Symposium, Orlando 2007
65. Head and Neck Cadaver Workshop. ASA, Atlanta 2005
66. Head and Neck Cadaver Workshop. 8<sup>th</sup> Annual Pain Symposium, Orlando 2006
67. Ultrasound-guided Nerve Blocks. 8<sup>th</sup> Annual Pain Symposium, Orlando 2006
68. Ultrasound-guided Nerve Blocks, cadaver workshop. Pain Management Department, Cleveland Clinic Foundation 2005
69. Radiofrequency Techniques, cadaver Workshop. Pain Management Department, Cleveland Clinic Foundation 2005.

**REFERECES:** Available on request.